Number.	Castes.	Chupperbund Assamees cultivating in their own villages.				Cultivating as Pahis in other villages.				Total.			
		Assamees.	Holdings.	Land in pucka beegahs.		Assamees.	Holdings.	Land in pucka beegahs.		Assamees.	Holdings.	Land in pucka beegahs.	
1	Kisans, ...	1,301	1,445	10,087	1	710	647	4,784	19	...	2,092	14,872	0
2	Moraos, ...	1,221	1,148	5,002	0	225	208	1,176	19	...	1,356	6,178	19
3	Chamars, ...	830	757	4,565	0	231	212	787	2	...	969	5,352	2
4	Thakoors, ...	776	686	6,826	4	456	323	4,124	8	...	1,009	10,950	12
5	Brahmins, ...	550	500	3,894	10	306	277	2,059	15	...	777	5,954	5
6	Kahars, ...	496	469	1,991	19	172	156	516	3	...	625	2,508	2
7	Pathans, ...	262	235	2,096	2	181	165	828	17	...	400	2,924	19
8	Aheers, ...	260	225	2,028	4	136	124	803	5	...	349	2,831	9
9	Barbers, ...	171	155	483	6	59	52	132	9	...	207	615	15
10	Sweepers, ...	128	134	465	12	28	26	66	18	...	160	532	10
11	Carpenters, ...	174	145	833	7	68	59	184	9	...	204	1,017	16
12	Shepherds, ...	125	127	532	6	26	21	79	8	...	148	611	14
13	Oilmen, ...	117	112	429	15	35	30	163	9	...	142	593	4
14	Sheikhs, ...	115	100	641	3	59	53	211	15	...	153	852	18
15	Kayeths, ...	113	87	428	16	115	104	524	13	...	191	953	9
16	Dhobees, ...	100	98	334	18	44	40	110	17	...	138	445	15
17	Khanzadahs, ...	90	83	390	19	14	7	50	11	...	90	441	10
18	Fakeer Mussulmans, ...	83	81	222	1	33	31	74	6	...	112	296	7
19	Blacksmiths, ...	88	85	295	12	24	21	83	0	...	106	378	12
20	Bilochs, ...	89	56	348	13	36	28	128	12	...	84	477	5
21	Weavers, ...	73	66	214	13	23	21	170	13	...	87	385	6
22	Mewatees, ...	68	52	515	1	52	42	339	10	...	94	854	11
23	Goshaeens, ...	35	51	308	2	30	28	155	15	...	79	463	17
24	Buneeahs, ...	35	37	327	1	23	25	225	0	...	62	552	1
25	Lodhas, ...	42	37	231	13	8	7	21	6	...	44	252	19
26	Tailors, ...	44	33	140	19	14	12	52	12	...	45	193	11
27	Mahajuns, ...	31	29	127	2	39	27	261	16	...	56	388	18
28	Dhooneeahs, ...	30	28	78	1	8	8	20	3	...	36	98	4
29	Kalals, ...	30	30	226	3	8	7	19	2	...	37	245	5
30	Curriers, ...	27	27	110	15	5	5	29	15	...	32	140	10
31	Khuttrees, ...	25	20	119	11	6	6	43	13	...	26	163	4
32	Gaddees, ...	18	17	164	6	2	2	4	3	...	19	168	9
33	Syuds, ...	13	11	52	18	7	7	31	3	...	18	84	1
34	Hunters, ...	12	8	55	14	...	...	...	...	...	8	55	14
35	Monihars, ...	12	8	42	16	...	...	...	...	...	8	42	16
36	Gardeners, ...	12	11	34	12	6	6	24	4	...	17	58	16
37	Abkars, ...	16	13	45	13	4	4	4	6	...	17	49	19
38	Bhoorjees, ...	19	22	50	2	12	12	45	2	...	34	95	4
39	Korees, ...	8	8	42	8	5	5	22	3	...	13	64	11
40	Bhistees, ...	6	6	15	2	1	1	10	5	...	7	25	7
41	Dhanuks, ...	5	6	32	15	5	5	10	17	...	11	43	12
42	Jats, ...	7	7	19	12	...	...	...	...	...	7	19	12
43	Koormees, ...	5	5	13	10	...	...	...	...	...	5	13	10
44	Goldsmiths, ...	4	4	27	16	7	6	19	3	...	10	46	19
45	Butchers, ...	4	4	11	10	4	4	14	17	...	8	26	7
46	Moghuls, ...	3	1	12	18	...	...	...	...	...	1	12	18
47	Dulehras, ...	2	3	15	9	3	3	4	9	...	6	19	18
48	Byragees, ...	3	3	13	18	1	1	2	9	...	4	16	7
49	Jugahs, ...	2	2	4	14	..	...	...	...	...	2	4	14
50	Dyers, ...	2	2	4	7	...	...	...	...	...	2	4	7
51	Ghosees, ...	2	2	4	0	...	...	...	...	...	2	4	0
52	Innkeepers, ...	1	1	...	13	9	9	35	11	...	10	36	4
53	Meerasees, ...	1	1	3	10	1	1	1	17	.	2	5	7
54	Dancing Girls, ...	...	...	...	...	2	2	2	7	...	2	2	7
53	Kumbohs, ...	...	...	...	...	4	5	22	13	...	5	22	13
56	Putwahs, ...	...	...	...	...	2	2	12	3	...	2	12	3
57	Surgeons, ...	...	...	...	...	1	1	1	9	...	1	1	9
58	Bhudrees, ...	...	...	...	...	1	1	0	15	...	1	0	15
59	Goojurs, ...	11	12	55	6	7	6	25	12	...	18	80	18
60	Bards, ...	12	11	18	3	7	5	13	9	...	16	31	12
	Grand Total, ...	7,709	7,306	45,038	1	3,265	2,860	18,539	17	...	10,166	63,577	18

Inclusive of muafee villages.

REPORT

ON THE

SETTLEMENT OF THE BAREILLY DISTRICT,

NORTH-WESTERN PROVINCES.

By S. M. MOENS, C.S.,

Settlement Officer.

ALLAHABAD:

PRINTED AT THE NORTH-WESTERN PROVINCES' GOVERNMENT PRESS.

1874.

No. $\frac{216}{1-96}$ OF 1881.

FROM

J. S. MACKINTOSH, ESQ.,

SECRETARY TO THE BOARD OF REVENUE,

NORTH-WESTERN PROVINCES,

To

R. SMEATON, ESQ.,

OFFG. SECRETARY TO GOVERNMENT,

NORTH-WESTERN PROVINCES AND OUDH.

Dated Allahabad, the 30th April, 1881.

SIR,

PARTMENT I.

LEMENT OF LAND REVENUE.

Present:
. S. REID, ESQ.

I AM directed by the Board of Revenue to submit, for the orders of His Honor the Lieutenant-Governor, the report on the revision of settlement of the present district of Bareilly and of Bisalpur tahsíl now forming part of the district of Pilibhít.

2. The district of Bareilly in 1869, when the settlement was revised, comprised six tahsíls which were sub-divided into 19 parganas.* The Pilibhít tahsíl was separately settled and reported on between the years 1866 and 1871 by Mr. E. Colvin, and his assessments were sanctioned for a term of 30 years from October, 1875, by Government Resolution No. 1849, dated 9th November, 1880. The settlement of the rest of the district was entrusted to Mr. Moens in 1865, and brought to a conclusion by that officer in 1872. It is with his report that the present review has to deal. His assessments of the several parganas were successively reviewed and sanctioned by the Board, and the settlement has now been working ten years. But various causes, amongst which was an enquiry instituted at the wish of Government into the alleged severity of the assessments of parganas Chaumehla and Richha, have delayed the submission of the final report by the Board to Government.

Tahsíl.	*Pargana.*
Farídpur	Faridpur.
Karor	Karor.
Aonla	Aonla. Ballia. Saneha. Sarauli (South).
Mirganj	Shahi. Sarauli (North). Ajaon.
Baheri	Sirsawan. Kabar. Chaumehla. Richha.
Nawábganj	Nawábganj.
Bisalpur	Bisalpur. Marauri.
Pilibhít	Pilibhít. Jahánabad. Puranpur.

3. The seven tahsíls with which Mr. Moens had to deal cover an area of 1,971 square miles, in latitude 28° 01′—28° 54′ and longitude 79° 02′ 30″—80° 05′ 30″. They are bounded on the north by Pilibhít and the province of Kumaun; on the east and south by Sháhjahánpur; and on the west by the district of Budaun and the territory of the Nawab of Rámpur. Since Mr. Moens' report was written one of the seven tahsíls (Bisalpur) was, together with the Pilibhít tahsíl, formed into the separate district of Pilibhít. The remaining six constitute the present Bareilly district.

Physical features.

4. The northern portion of this tract, comprising the parganas of Chaumehla and Richha, presents features similar to those of the Tarái district of Kumaun, which it adjoins. Damp, unhealthy, and sparsely cultivated, it is known as the "már" tract, the "land of death." To this succeeds the "des" or the old cleared country, which is described "as a level tract intersected by numerous streams and studded with noble groves of trees." Receding from the Himalayas the country slopes by imperceptible degrees from north to south. It is traversed in the same direction by numerous streams and rivers and innumerable watercourses, which display the usual characteristics of mountain streams. Among these the chief are the Rámganga, the Deoha, the Bahgul, the Nakatiya, and the Kichhaha. These river systems give to the district two well-marked features—the uplands, locally known as the *bangar*, and the riverain valleys or *khadir*. The soil of the uplands is usually good alluvial earth, with a

subsoil of sand ; that of the khadir varies from the richest loam to mere sand-beds, on which nothing but thatching grass will grow. Extreme examples of these varying degrees of fertility are found in the Rámganga valley, which in its widest part is 16 miles broad. Mr. Moens classifies the natural soils into loams (dúmat), clays (matyár), and sand (bhúr). By manuring, bhúr or matyár can be converted into loams. The alluvial soils of the khadir he classified in the same way, according to the proportion of clay, sand, or vegetable mould, which they contain. In the earlier settlements the classification of the soils was so faulty that it was practically useless.

Irrigation.

5. The district, from its sub-Himalayan position, enjoys an abundant rainfall, heavy dews, and a damp climate. The average fall for ten years is 42 inches. In fact excessive rain rather than drought is the fear of the farmer. Except in the extreme west of the district, water is so near the surface that irrigation is an easy and simple matter. The wells are mere holes averaging 3 feet in diameter and 12 in depth, and are worked by the common lever or pulley. The numerous brooks which intersect the country are also often dammed up and their water drawn off in channels. The Rámganga, owing to the lowness of its channel, is useless for irrigation purposes ; but on several of the other streams, the Bahgul, Kichhaha, Kailas, and Paha, masonry dams have been made, and a system of small canals constructed by the Irrigation Department.

The extension of irrigation since the settlement of 1837 is shown in the following table :—

			Total cultivated area. Acres.	Irrigated. Acres.	Unirrigated. Acres.
1837	...	...	693,501	277,296	416,205
1867	...	...	883,993	493,032	390,911

The increase is 154,448 acres, or 55·7 per cent. In every pargana except Ballia and Saneha the increase in irrigation more than kept pace with the increase in cultivation. Of the total irrigated area of 431,744 acres, the canals in 1867 irrigated 91,143 acres : the other irrigation is from wells, tanks, and rivers.

6. While means of irrigation thus abound, it is less needed by the crops than in the drier tracts of the Doáb. One watering for the *rabi* crop and two or three for the cane are thought sufficient, and often wheat is left unirrigated. That irrigation increases the produce in Bareilly Mr. Moens admits, but the increase is far less marked than in the Doáb. "In the latter, irrigation is required to *ensure* a crop at all. Here only to *ensure* it against drought. Even in the tracts traversed by the canals, and at the present very low rates, many cultivators prefer irrigating their more valuable crops by the lift or *dhenkli*, as they then can get as much water as they require, *at the exact time they want it*, and at little or no money outlay, without risk of being exposed to extortion." After showing that over-cropping and careless cultivation are engendered by canal flush irrigation, Mr. Moens gives his opinion that an extension of canal irrigation is not required, and would prove a great evil. Since his report was written the canals have in places been re-aligned and defects in drainage removed. The area irrigated by them has not increased, as in 1880 it was 85,258 acres.

Population.

7. The population has increased considerably during the last thirty years. In 1853 the population of the present districts of Bareilly and Pilibhít was 1,316,830. In 1865 this had risen to 1,381,334. The census of 1872 gave 1,506,265, of whom 1,197,583 were Hindus and 308,682 were Muhammadans. The density per square mile is therefore 536 persons for the whole district, though it is much exceeded in the populous parganas of Karor (893) and Saneha (696). In Chaumehla it is least, being 483, and in the northern tracts there is still a large margin of culturable waste. The agricultural classes are almost all Hindus, among whom Kurmis, Kisáns, Muraos, and other industrious castes are exceptionally strong. The census of 1872 returned 38 per cent. of the entire population as non-agricultural ; but from the confusion made between castes and occupations in that census little reliance can be placed on these figures.

8. Communications have also greatly improved. The Oudh and Rohilkhand Railway has connected the district with the East Indian trunk line and the Rajputana system. Foreign marts have thus been gained for the sugar, cotton, and rice, for which Bareilly is noted. A bridged and metalled road to Naini Tal has also created a large traffic with the Tarái district and the interior of Kumaun. Good roads connect the town of Bareilly with Moradabad, Pilibhít, and Farukhabad. But in the northern parts of the district communications are still defective. The soil is against the road-maker; kunkar cannot be got; and in the rains a network of watercourses, nálas, and streams, make the country almost impassable. Communications.

9. The increase in cultivation is shown by the following figures :— Increase of cultivation.

	Total area.	Barren.	Revenue-free.	Old waste.	New fallow.	Baghs.	Cultivated.	Total assessable.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
1837 ...	1,256,467	143,362	106,218	262,717	43,669	...	693,501	999,887
1867 ...	1,261,149	126,927	53,257	138,393	15,131	43,448	883,993	1,080,965

In the returns for the former settlement baghs were classified under "barren." The decrease in the revenue-free area is due to the resumption of many life-free tenures between 1841 and 1845. Compared with the figures for 1837, the cultivated area increased by 190,492 acres, and the assessable or *malguzari* area by 81,078 acres; 81·77 of the assessable area is cultivated.

10. The chief *kharíf* crops are rice, bajra, sugarcane, cotton, and maize : the chief rabi crops are wheat, gram, and barley. Kharíf occupies two-thirds of the whole area, and one-third of the kharíf area is re-sown for the *rabi*, chiefly with wheat, gram, barley, and linseed. In 1870 the cultivated area was 883,993 acres, of which 50,078 were under sugarcane, 193,840 under rice, 150,809 under bajra, and 206,875 under wheat. The best rice comes from the northern parganas ; in the southern inferior kinds only are grown. It is notoriously a gambling crop, and on an average there is only one first-rate harvest every five years; and during the same period there is sure to be one complete failure. Most of the rice lands are held on *batai*. Mr. Moens does not attempt to calculate the total amount of food produced in the district, nor does he furnish any statistics of import or export. But it is probable that sugar, rice, and wheat are in good years exported in large quantities. A good deal of the sugar finds its way to Rajputana in return for salt. Chief staples.

11. Mr. Moens gives a full account of the history of the district from its occupation in the 12th century by the Katherya clan of Rajputs, to its cession to the British by the Nawab of Oudh in 1801. The Katherya rule may be said to have lasted until the middle of the 15th century, as, despite many Moslim invasions in the times of the early Emperors of Delhi, the Rajput sept appears to have successfully upheld its freedom. With Akbar the country was pacified, and an Imperial Nazim at Bareilly administered its affairs without opposition. The Katheryas, however, retained their stronghold at Kather, and enlarged their lands by encroachments on the territories of the Rajas of Kumaun. The turbulent spirit of the race survived, and when the Mogul empire fell to pieces in the early years of the 18th century, the tract now known as Rohilkhand was the scene of anarchy and bloodshed, in which each petty Hindu chief strove to assert his own independence and to deprive his neighbours of theirs. Amid this turmoil an obscure Afghan adventurer, Daod Khan, rose from the service of a Katherya zamindar to the command of a predatory band of Afghans and obtained possession of many villages. His adopted son and heir, Ali Muhammad, extended the Afghan rule by force and fraud over Bareilly and the adjoining districts, and became the founder of the Rohilla dynasty. The power of the Rohillas rose to its height under his successor, the famous Hafiz Rahmat. It is unnecessary to dwell on the intricate Previous history.

politics of his reign, which was one long struggle against the jealousy of the Nawab Nazims of Oudh and Mahratta invasions from the south. With his defeat and death in 1774 the power of the Rohillas was broken. The province was annexed to Oudh, and after 27 years of misrule was ceded by the Lucknow Durbar to the British. The desolation of the country is graphically described by the Revd. Mr. Tennant, who travelled through it in 1799.

Fiscal history under British rule.

12. The revenue assessed on the district from 1801 to 1833 is shown in the margin. The numerous short-term settlements of steadily increasing severity denote as many unsuccessful experiments in fiscal administration. As the Rohillas had practically stamped out the proprietary rights which the zamindari policy of Akbar had respected or created, it was difficult for the new comers to determine the persons from whom engagements for the revenue should be taken. Estates accordingly were either farmed to the highest bidder, or settled with the *mukaddams* of the village. No attempt was made to ascertain the real assets of the property thus leased, and a suspicion that less than its real value was obtained led the Collector and the Board of Commissioners to tighten the assessments by every means in their power. In 1218 and 1219 heavy balances accrued: in 1220 the revenue was collected with great difficulty and numerous farmers threw up their estates. The difficulty went on increasing until in 1830 the Board directed the Collector (Mr. Boulderson) to re-settle under Regulation VII. of 1822 all the estates which had broken down or been resigned. This gave substantial relief to the revenue-payers, and on the completion of his revision the first regular settlement of the district under Regulation IX. of 1833 was commenced. Mr. Boulderson's revision had reduced the revenue of the 6th settlement to Rs. 15,61,169. The regular settlement of Mr. Conolly, Mr. Money, and Mr. Head, still further reduced it to Rs. 14,87,236. Of their work and the general character of their assessments Mr. Moens writes: "The jamas were, as experience has shown, generally fair, and in most of Mr. Muir's parganas very light. Hence it is, I think, a fair conclusion that the statements of over-assessment and depression were somewhat exaggerated. A few estates may have been heavily assessed; the majority could not have been, or the decrease would have been heavier. From the papers I have seen, it appears to me that there was little or no enquiry into the real rental assets of the time. The enquiry was chiefly confined to the points whether the former assessments had been realized with or without difficulty and resort to the severer coercive processes, and whether the rate of incidence on the cultivated area was above or below the average rate of incidence, and the *jama* was slighty lowered or raised accordingly." During the currency of this settlement only 18 out of 3,326 estates were sold and 203 farmed. This, as Mr. Moens says, shows that the settlement, as a rule, worked well. The profits arising from future extension of cultivation were left by it to the zamindar, and when the rise in prices came after 1859, the revenue, especially in the batai parganas, became very light. After the mutiny a large tract of country, parganas Sarauli, Ajaon, and Sirsawan, assessed at Rs. 1,19,158, were granted to the Nawab of Rámpur in reward for his services during the mutiny. This, together with other minor alterations in the assessments, reduced the revenue of the tract settled by Mr. Moens to Rs. 13,78,320.

				Rs.
1st	Settlement,	1210-12	...	9,06,697
2nd	ditto,	1213-15	...	9,27,118
3rd	ditto,	1216-19	...	13,08,213
4th	ditto,	1220-24	...	16,26,438
5th	ditto,	1225-29	...	16,25,873
6th	ditto,	1230-43	...	16,22,600

Cultivating and proprietary tenures.

13. The cultivating class is divided by Mr. Moens into the *pahis* or non-residents and the *chapparbands* or resident ryots. The *chapparband*, again, may be either a *mukaddam*, a *ruqmi*, or an ordinary cultivator. This nomenclature even in the Bareilly district must be now to a great extent obsolete, as the simple division of all tenants into occupancy tenants and tenants-at-will which the Rent Act prescribes is rapidly superseding all local usages. But as a description of a state of things now passing away, Mr. Moens' chapter is interesting. Previous to Act X. of 1859 the *pahi* or non-resident cultivator was not considered to have any right of occupancy whatever.

He did not live in the village, he did little for the land, and his relations with the landholder were purely contractual. On the other hand this absence of sentiment was in his favor. Unless treated with consideration, he would throw up his holding and escape the various *zamindari* dues and cesses which custom imposed on the resident cultivator. Of these Mr. Moens gives a long list, and though they have rightly been excluded from the village administration papers and cannot be legally enforced, they are no doubt generally paid. The *mukaddami* tenure is peculiar to Rohilkhand. As the headman of the village, the *mukaddam* in the absence of the zamindar ordinarily became his agent. His services were acknowledged by a lower scale of rent and by exemption from manorial dues; but these privileges are understood to be matters of grace, not of right. Investigations made by British officers at the cession showed that the *mukaddami* tenure was a purely cultivating and not a proprietary one. But in the general dearth of zamindars which Rohilla tyranny had produced, mukaddams were often recognised by us in the earlier settlements as proprietors, and in this way have in many cases developed into zamindars. The *rāqmi* tenant is the second sub-division of the chapparbands. He is simply a privileged tenant, who in deference to tribal feeling, superstitious or religious motives, or official position, is allowed to pay a lower rent than the ordinary cultivator. Sometimes he is the old proprietor, who under the present Rent Act would be known as an "ex-proprietary" tenant. The ordinary resident cultivator, or "*chapparband asami*," is the last in the series. Mr. Moens traces his position from the days of the cession. The earliest authorities agree that the zamindar had unlimited powers to oppress or oust the tenant, but that he seldom exercised them. In 1830 Mr. Boulderson's proposal to bind the landholders not to increase the rents of resident ryots during the settlement was negatived by the Board, as opposed to the rights of a proprietor. In 1833, Mr. Conolly satisfied himself that the landlord's demand on the tenants was only restricted "by usage, common interest, and good feeling." This continued to be the law until the passing of Act X. of 1859, which, converted, according to Mr Moens, "nearly all our cultivators, whether resident or non-resident, into occupancy tenants." That it has irritated landlords and conferred new rights on the cultivating classes, as Mr. Moens contends it has, may be admitted. But the time had come for giving tenants a protection more valid than that of local usage or common interest, and opposition on the part of landholders to any restriction of their privileges was inevitable.

The area held respectively by occupancy tenants and tenants-at-will at the time of Mr. Moens' settlement was—

	No.	Area in acres.
Occupancy tenants	132,103	609,547
Tenants-at-will	79,155	191,065

The amount of land held by occupancy tenants is therefore three times as much as that held by tenants-at-will. In Kabar the occupancy tenants are strongest, holding 82 per cent. of the land: they are weakest in Chaumehla, where they only hold 57·17 per cent.

14. In the thirty years preceding Mr. Moens' revision of settlement, the condition of the cultivating class had greatly improved. He found two cultivators out of every three (66 per cent.) in debt, but in the majority of cases the debt was a running account cleared off at harvest time. As Rs. 40, or a year's income, is the common cost of a wedding, marriage ceremonies have much to say to the cultivator's indebtedness. The general substitution of metal for earthen vessels is noticed as a sign of progress. On the subject of clothing Mr. Moens cites the testimony of a retired native official: "formerly hardly any cultivator had more than a blanket and a very small *dhoti*; now every *asami* dresses like a Brahman or zamindar of old days. Most of the *mukaddams* have a small cart to ride in, or a pony, and some of them have been able to save money and buy villages."

Rents and prices.

15. Of the 800,112 acres held by tenants 286,114 acres, or 36 per cent. of the whole area, pay kind rents. In 1830 cash rents were paid over 20 per cent. only of the cultivated area. There has thus been a steady progress towards cash rents, and in the southern parts of the district rent in kind is almost unknown. The parganas in which kind rents are paid over more than 10 per cent. of the area held by tenants are—Karor (25·62), Mírganj (24·36), Kabar (72·03), Sirsawan (61·81), Chaumehla (96·16), Richha (95·45), Nawábganj (73·32). In the northern parganas rent in kind is almost universal and the uncertainty of the rice crop,—the staple of those tracts—and the comparative backwardness of agriculture make its continuance desirable. The landlord's share varies from one-fifth to one-half the gross produce, the latter rate being in Mr. Moens' opinion more than can be fully realised through a series of years. In this the Committee on the Bengal Rent Law are with him, as they consider half the gross produce a rack rent. One-fifth is paid in the *már* tracts of Chaumehla and Ritcha, where the climate is bad and tenants scarce. Mr. Moens enumerates six kinds of money-rents, of which the most noteworthy is *zabti*, or rates fixed on different classes of crops, irrespective of the soil on which they are grown. This kind of rent is often paid on certain crops in tracts where kind rents usually prevail, and seems the transitional stage between them and the ordinary money-rent. Mr. Moens discusses the relative advantages of cash and kind rates and gives ten reasons for considering the latter, under certain circumstances, to be the better suited to the cultivator. It is not necessary to argue out the question, as the principle advanced by him, that commutations should not be forced on the people by the settlement officer, is admittedly sound and in accordance with the law. Money rents mark a distinct stage of advance in agriculture, and when there is a general wish for them on the part of the cultivating body, it is desirable that they should be allowed. It is only in backward tracts, or where the harvests are precarious, that the change from kind to cash rents proves fatal to the tenant. The Hasanpur pargana of the Moradabad district is a case in point.

Rise in rents and prices.

16. The rental of the district and the area under cultivation in 1837 and in 1867 are thus contrasted—

	Cultivated area. Acres.	Rental. Rs.	Rate per acre. Rs. a. p.
1837	686,683	21,12,368	3 1 2
1867	883,993	A.—27,54,829 B.—31,68,743	3 1 10 8 9 4

These figures, however, are somewhat hypothetical. In 1837 rent was paid in kind over four-fifths of the district, and even in 1867 over one-third of it. The money-value of the district rental in any year has consequently to be inferred from prices and other indications, and must always be rather doubtful. The settlement officer's rent-rate report on Kabar well illustrates the method by which the rental of the district in 1837 was arrived at. He *assumed* that the revenue then assessed represented, as it should have done, two-thirds of what the landlord received as rent. On this premise it was easy to deduce the value in money of the rental of the district at the time of the former settlement. The rental of 1867, so far as it was not paid in cash, was obtained by applying to the area under kind-rents the rent-rates assumed by the settlement officer for the purpose of assessment. How these rates were arrived at will be noticed hereafter. The important point here is that, so far as the district rental consists of kind-rents, its value in money is as much a matter of estimate as the rates assumed by the settlement officer when preparing to assess. Thus calculated the rental of the district in 1867 was Rs. 27,54,829, or after corrections for sir-land, rent-free and service holdings and erroneous entries in the patwáris' papers, Rs. 31,68,743. The average rent is thus shown to have increased from Rs. 3-1-2 to Rs. 3-9-4 per acre, or by 16·6 per cent. The increase is most marked in the parganas where the bulk of the rental is still paid in kind. Thus in Kabar the average rent per acre in 1837 was Rs. 2-15-3 : in 1869 it is said to be Rs. 4-8-6. In this pargana the assessing officer's rent-rates were primarily based on experiments

of cutting and weighing selected crops, so that the reality of a rise of Re. 1-9-3 per acre in the rents actually paid depends on the accuracy of these experiments and of the inferences drawn from them. The Board in sanctioning the rent-rate reports were satisfied that rents when paid in kind had actually risen to the amount assumed.

The following table shows the rise in prices :—

	1805-31.	1832-59.	1860-71.
Wheat ...	... 87 lb.	77 lb.	56 lb.
Barley ...	... 145 „	124 „	86 „
Bajra ...	... 106 „	102 „	67 „

Between the mutiny and 1871 prices rose between 30 and 40 per cent., the rise being greatest in the case of the commoner food grains. The money value of all kind rents therefore rose during the period to this extent, and as the rise may be considered a permanent one, Mr. Moens was justified in computing a large increase in the rental of the *batai*-paying parts of the district when turned into money. He shows (page 126) why cash rents did not increase to a like extent between 1837-71. The rise in prices did not begin till 1859, and its effect on rents regulated greatly by prescription must be slow. The natural tendency of cash rents to rise was further checked by legal restrictions, the increased cost of seed-grain and plough-cattle, the competition among landlords for cultivators. The extent to which they actually have risen is further obscured by the low rents paid for the waste land brought under tillage since the mutiny.

Proprietary tenures.

17. The tenures in this district are simple as compared with those of other districts. Of 3,326 mahâls, 2,611 were in 1871 pure zamindari, 323 perfect pattidari, and 318 imperfect pattidari. Sub-division and partition since that date must have changed these numbers. The total number of proprietors was 23,122; of these 8,623 are classified as Thakurs or Rajputs of different clans, 5,180 are Muhammadans, and 2,773 are Kayaths. Nearly all the zamindars are of modern growth. Some few can trace their estates back to pre-Rohilla times, but the Rohillas, as far as they could, obliterated all proprietary rights in the districts over which they ruled. "In Bisalpur alone, so late as the last settlement and up to 1849, there were no less than 104 villages with no recorded proprietors, and in almost every pargana there were numerous villages without proprietors. All these were granted away by Government, very frequently on the most slender grounds, such as for instance to a farmer who, without a shadow of claim to proprietary right, had paid his rent to Government for 12 or 15 years regularly. * * * The policy of the day was to get rid of such Government rights, to create zamindars if they could not be found. The *mukaddams* were usually vested with the character of proprietors, irrespective of any prescriptive rights that might have been enjoyed by the village community." During the last settlement 35 per cent. of the entire area of the district changed hands either by auction or private sale. The whole of Chaumehla seems to have been transferred, but the correctness of the kanúngos' records is doubted. The large number of transfers Mr. Moens attributes as much to speculation as to severity of assessment. Many of the new zamindars are said by him to have been "mere land speculators with not much attachment to their property." Within the last forty years the price of land has enormously risen. In the first decade of the last settlement land fetched one year's rent, or from Rs. 3 to Rs. 5 an acre. At its close the price had risen to Rs. 12. The sales in parganas Farídpur, Karor and Mírganj for three years after Mr. Moens' assessments were given out gave an average of Rs. 18 an acre.

39,624 acres of land are held revenue-free in perpetuity and 1,184 for life. In the 24 villages in which taluqdari tenures exist engagements have been taken from the inferior proprietors (*biswadars*) for the revenue and cesses and for the allowance of 10 per cent. to the taluqdars. The latter are neither concerned with nor responsible for the management of the villages.

Commencement of settlement operations.

18. Measurements were commenced and completed in the several tahsíls on the following dates:—

Farídpur	...	... November, 1865	...	... February, 1867.
Karor	...	... Ditto	...	... September, 1866.
Mírganj	...	... October, 1866	...	... April, 1867.
Nawábganj	...	... Ditto	...	... Ditto.
Bisalpur	...	... May, 1867 ...	...	... June, 1868.
Aonla	...	... October, 1867	...	... Ditto.
Baheri	...	... September, 1869	...	... June, 1870.

The measurements were made by patwáris, supervised by amíns; the patwáris having previously received instruction in plane-table surveying at the tahsíls. The cost of the work, exclusive of the pay of the European Officers and Deputy Collectors, was Rs. 20-5-6 the square mile, and the average rate of progress was 576 square miles per annum. The accuracy of the work is proved by the exceedingly close correspondence of the areas according to the patwáris' measurements with those given by the revenue survey when the district two years later was scientifically surveyed. The plane-table survey was thus proved to have been sufficient for all practical purposes, and even after a proportionate part of the settlement officer's pay is included it probably did not cost one-fourth of what a cadastral survey would have done.

Assessment.

19. As soon as the measurements of each pargana were completed, the work of inspection and assessment was vigorously taken up. Farídpur was surveyed by the spring of 1867, and in the autumn of that year Mr. Moens' rent-rate report was before the Board. An equal promptitude was shown in assessing the rest of the district, and in October, 1871, the last rent-rate report (for pargana Richha) was submitted and sanctioned. That the assessment of sixteen revenue sub-divisions, occupying an area of 1,951 square miles, should have been completed in less than four years, speaks well for the officer in charge, and Mr. Moens is entitled to the higher praise, insomuch as during half this period he was without any European Assistant. In March, 1867, Mr. J. S. Porter was appointed Assistant Settlement Officer and assessed, under Mr. Moens' supervision, parganas Ballia, Kabar, Sirsawan, and Richha.

20. Both officers in framing their assessments worked on the same plan. It is thus described by Mr. Moens:—"Every village in the district was carefully inspected by myself and by Mr. Porter, my Assistant. My system was to go over the entire village attended by the mukaddam and most of the cultivators. I inspected every *har*, corrected the entries of soil and irrigation where necessary, and made notes of the rents paid on the different classes of soil, the crops, and any special circumstances affecting the village, such as the style of cultivation, liability of the crops to damage from floods or wild animals, indebtedness or otherwise of the cultivators, and so on. Any patch of any particular soil differing considerably in value either above or below the average was marked off on the field map, on which also the general *lie* of the soils was marked out. All the villages composing a similar tract were then arranged into one class or circle. Then the statistical *muharrirs* worked out the average rents on soils, which I was able to compare with the tables of enhancements in Act X. suits and with the rates in the neighbouring villages. By this method, picking up experience from day to day as I went over new villages, I was enabled to work out rates in the money-paying *parganas*. Where the rents were taken in kind I had the actual rates paid for *zabti* and for *nijkari*. I worked out crop rates, based on the average produce, derived from a vast number of experiments; from this I deducted one-sixth to allow for reductions before division; from the remainder I took the average share received in the tract by the *zamindar*, and commuted the grain rent to money at the average price of 20 years, omitting the famine years. I thus obtained average money rates for each crop. I applied these rates to the areas of each crop in each soil, and the total divided by the area gave soil rates in money. These were compared with the results of the rent-rates fixed in the numerous suits for commutation from kind to money rates, and which had been accepted by both parties to the suits; and, finally, a conclusion was arrived at as to the fair rent-rates for each soil.

The rates when reported and sanctioned were applied to the soil rates in each estate, and the result compared with the *jamabandis*—(1) by the actual village rent-rates; (2) by crop rates; (3) by the circle average cultivated rate; and after all the modifying circumstances, noted down at the inspection of the village or deducible from its previous history, had been carefully weighed and taken into account, a final *jamabandi* was arrived at, of which 50 per cent. was taken as *jama*, and 5 per cent. as cesses. The rates of incidence on *malguzari* and cultivated area were then noted on a large pargana map. When the assessments of all the villages of the *pargana* had been completed and the rates noted on the map, I usually laid aside the papers for a fortnight or so, and then taking the map carefully compared the assessment rates of each village with those of the neighbouring villages, and reconsidered the grounds of assessment, where there were marked differences, to see whether the difference in the rates of assessment were fully justified by actual facts. I usually regarded the *jamabandi* by crop-rates as a minimum amount, unless I had noted at inspection that the village had been under-cropped in the year of measurement, a fact very easily ascertainable. Supposing, however, I had noted that the village was above or below the average of its circle, the crop jamabandi, taken in connection with the results of the soil rates, gave a very good gauge of the *amount* by which the village differed from the average. Where the crop-rate results differed very materially from those by soil rates, I made careful enquiry for the cause of the difference. In fine, though I did not actually assess on the crop-rates, they formed a very useful check and guide to enquiry."

21. In the tracts where cash rents were the rule the rent-rates were obtained by the ordinary process of induction from the rents actually paid. They represented the average rent actually paid on each class of soil within the circle. In classifying the soils Mr. Moens confined himself to the three natural divisions of *dúmat*, *matyár*, and *bhúr*. Sometimes he sub-divided them into first and second *dúmat*, *matyár*, and *bhúr*. In some parganas he further worked out separate rates for irrigated and unirrigated land: in others, as in Nawábganj, where irrigation has little effect on the produce, he disregarded the distinction. Where kind-rents were commonly paid the process was more elaborate. Estimates of outturn are proverbially liable to error, and average prices are difficult to ascertain. The general account of Mr. Moens' method of ascertaining the average money value of kind-rents, which is given in the above extract may be supplemented by details from the rent-rate report on pargana Nawábganj. The result of his experiments gave the average outturn of the several staple crops as follows:—

							Price per rupee.	
					M.	s.		M. s.
Rice	...	...	...	...	9	37	the acre	0 33
Bajra	...	...	...	...	4	38		0 30
Wheat	...	...	...	...	9	24		0 27
Barley	...	...	...	...	13	17		1 3
Gram	...	...	...	...	6	32		0 28

In the case of rice and gram he made a deduction of about one-seventh on account of the uncertainty of these crops. The share of the zamindar being ascertained, it was commuted to cash according to the prices specified. These prices were averages for the 28 years succeeding the great famine (1839-1867), which were 20 per cent lower than those for the ten years ending 1867.

The great check on this method of appraisement and commutation was the constant comparison of the results with the money-rents paid in adjoining tracts and those fixed in commutation suits. Mr. Moens fully availed himself of these and other tests, and thus gave validity to his somewhat empirical method.

22. In illustration of these remarks a brief account may be given of the assessment of pargana Karor, in which one-fourth of the rents were paid in kind. The revenue of the former settlement was Rs. 1,66,017 on a cultivated area of 101,964 acres. Assuming that this represented two-thirds of the rental, Mr. Moens found the rental of 1837 to have been Rs. 2,59,025, which gave an average rent of Rs. 2-8-5 an acre. The cultivated area had increased to 140,597 acres, of which 96,319 paid cash-rents, at an average

rate of Rs. 3-3-10 an acre. Applying this rent-rate to the 44,278 acres which paid kind-rents, he found the rental of the pargana Rs. 4,55,476. But from the rise in prices and other facts he concluded that kind-rents had risen fully 50 per cent. since 1837, whereas the rate applied, Rs. 3-3-10, assumed a rise of only 28 per cent. on the average rate (Rs. 2-8-5) of 1837. He therefore applied to the area under kind-rents a rent-rate of Rs. 3-8-9. This added to the ascertained cash rents of the district gave a total of Rs. 4,69,389, which he thereupon assumed to be the actual rental of the pargana. He then divided the pargana into seven circles according to differences of soil and physical features, and laid down for each circle the average rents which he considered each class of soil paid. These soil-rents had been arrived at partly by inductions drawn from cash rents actually paid and partly by experiments in cutting and valuing crops. These rent-rates applied to the area of the pargana gave results which tallied closely with his estimate of the actual rental of the pargana. In this coincidence he found an independent proof of the accuracy of his soil-rents.

In the assessment of each village Mr. Moens took into account any waste land in excess of the ordinary requirements of the tenants for their cattle. If it was likely to be brought or capable of being brought under tillage, he assessed a certain portion of it as cultivated land. If there was a probability of its remaining pasture land, he assessed it at its actual value for grass or grazing.

He also made allowances for (1) the caste of cultivators, so far as it affected the class of cultivation; (2) the absence of waste; (3) capital spent by the owner on improvements; (4) liability of crops to floods or to ravages of wild animals; (5) non-residence of zamindars—this only in a few special cases; (6) excessively light previous assessments; (7) a numerous body of poor co-sharers; (8) unhealthy climate or distance from markets. In specifying some of the circumstances which determined the amount of revenue assessed Mr. Moens merely illustrates the principle that the assessment of a village is not purely a matter of mathematics. The rent-rates furnish a rough index of what a village can pay. But every circumstance affecting it must be considered before the precise amount can be correctly fixed.

Financial results.

23. The result of the re-assessment in each paragna is shown below :—

Pargana.	Expiring demand.	New demand.			Increase per cent. of new over old land revenue.
	Rs.	Rs.	a.	p.	
Faridpur	1,45,694	1,61,604	0	0	10·9
Karor	1,78,969	2,44,941	8	0	36·8
Ballia	24,402	33,680	0	0	38·0
Saneha	56,578	73,230	0	0	29·4
Aonla	64,207	93,285	0	0	45·2
Sarauli	37,858	45,400	0	0	19·9
Mirganj	1,17,065	1,34,890	0	0	15·2
Kabar	48,118	60,910	0	0	26·5
Sirsawan	38,274	36,910	0	0	3 5
Chaumehla	59,580	75,620	0	0	26·9
Richha	1,51,412	1,66,237	0	0	9·7
Nawábganj	1,78,381	2,28,032	8	0	27·8
Bisalpur	2,77,783	3,07,930	0	0	10·8
Total ...	13,78,320	16,62,670	0	0	20·4

These figures are exclusive of local cesses. Under the expiring settlement these amounted to Rs. 17,251. Mr. Moens raised them, under the provisions of the law, to Rs. 1,74,770. The expiring demand for revenue and cesses thus amounted to Rs. 13,95,571, and the revised demand to Rs. 18,37,440, giving an increase of Rs. 4,41,869, or 31·6 per cent. According to Mr. Moens' calculations the rental in 1837 was Rs. 21,12,368. Two-thirds of this would have been Rs. 14,06,245, whereas Rs. 13,95,571 was actually assessed. In 1867, the rental of the district,

according to Mr. Moens, had risen to Rs. 31,68,743. Half of this, the proportion to which the Government demand is now limited, is Rs. 15,84,371. The sum actually assessed is Rs. 16,62,670, which postulates a rental of Rs. 33,25,360, or Rs. 1,56,617 more than that found to actually exist when the revised assessments took place. In thus going above the actually existing rental Mr. Moens took into account the extent to which it was likely to be enhanced within a few years after settlement. He put the increase at between 4 and 5 per cent., a sufficiently moderate estimate if it be considered that during the former settlement prices had risen between 30 and 40 per cent., while rents had as yet only risen by 16½ per cent. With prices stationary a further rise of rent within the next decade might be confidently expected. To have assessed on a strict one-half of the existing rental would have excluded the State for a term of thirty years, if the new settlement be sanctioned for that time, from its share in a considerable portion of the profits. "In a vast number of cases," says Mr. Moens, "the *zamindars* and *asámis* made up the *jamabandis* to the full amount without coming into court." This is a strong proof that the assumption of a speedy increase in the rental was not unwarranted.

24. Turning now to the assessment of the several parganas, the increase in Aonla, Ballia, Karor, exceeds 50 per cent. of the old demand and cesses, and in Suneha, Kabar, Chaumehla, and Nawábganj 37 per cent., while in Richha it is only 9·7 and in Sirsawan 3·5. The remarks of the settlement officer on pages 181 and 182 will show that these widely varying results are not due to unequal methods of assessment, but to the peculiar conditions of each tract. In Karor the cultivated area had increased 30 per cent., the irrigated area by 5 per cent., and the population by 21 per cent. The rent-rate had also risen from Rs. 2-7-0 to Rs. 3-4-6 per acre. In Ballia the cultivated area had increased by 27 per cent., and the rent-rate by 16 per cent. The previous assessment also was proved to have been extremely light. In Aonla cultivation had increased by 71 per cent. and irrigation had been largely extended. In these three cases a very large increase in the assessment was inevitable. In the case of the next four parganas the increase of 37 per cent. in the demand was similarly justified by extension of cultivation and rise in rentals. In Sirsawan, where the land-revenue proper was actually reduced, the rates employed in Kabar were used. The reason of the decrease was that in the former settlement Sirsawan had been very heavily assessed. On the cultivated area of the whole district the revenue newly assessed fell at the rate of Rs. 2-1-1. The incidence of the former demand was Re. 1-14-11 in 1837, but owing to increase of cultivation had dropped by 1867 to Re. 1-8-11. It is noticeable that the revenue-rate is highest in the parganas in which kind rents mostly prevail.* Similarly the rent-rates on soils which form the basis of the revenue-rates are there also highest.

	Rs. a. p.	Rs. a. p.	Rs. a. p.
Average for money-paying parganas... ...	4 4 10	3 5 6	2 2 7
For kind-rent parganas	4 12 9	3 10 9	2 5 8

One reason for this is that where rents are paid in kind, they have naturally kept pace better with the rise of prices. But, apart from this, Mr. Moens shows by an elaborate analysis that Kabar, Sirsawan, and Nawábganj are in every respect superior to the rest of the district.

Revision in Chaumehla and Richha.

25. Mr. Moens' assessments taken as a whole have well stood the tests of appeal to the Commissioner and to the Board. In the two parganas of Chaumehla and Richha, however, appeals were so numerously preferred that the Government, acting on the advice of the Board, deputed a special officer, the late Mr. R. Currie, to report on Mr. Moens' assessments. It has already been noted in this review

	Rs. a. p.
* Kabar	2 7 6
Sirsawan	2 9 9
Chaumehla	1 14 2
Richha	2 5 3
Nawábganj	2 5 2

that the northern portion of these two parganas is an unhealthy, sparsely-peopled tract, locally known as the "*már*" country. Mr. Moens' revision had increased the revenue demand and cesses of pargana Chaumehla from Rs. 59,580 to Rs. 75,620, and of pargana Richha from Rs. 1,51,412 to Rs. 1,66,237. The allegations against his assessments were that he had excluded from his "már circle," and its low scale of rent-rates, some villages which properly belonged to it; that in commuting his rent-rates from the kind-rents prevailing he had fixed their commuted value too high; and that, having inspected the tract in an extremely good year, he had assumed the cultivated area to be larger than it is in average years. On receiving Mr. Currie's preliminary report, the Government decided that it was unnecessary to interfere with Mr. Moens' classification of the villages into *már* and *des* circles; that the rent-rates used by him were not excessively heavy, but that in some cases he had estimated too highly the area under cultivation and anticipated too steady an extension of it; the assessments of certain villages in this respect were ordered to be revised. The final result was that the revenue of Chaumehla was reduced by Rs. 2,150, and that of Richha by Rs. 2,160, from the amounts fixed by Mr. Moens. In sanctioning these small reductions the Government remarked that the result seems amply to justify Mr. Currie's conclusions, "that while there was perhaps some slight severity in the demand towards the northern part of the Taráí-bordering parganas, it was not at all commensurate with the outcry raised by the protesting zamindars of Bareilly. The test to which the settlement has been subjected is very severe one, and the assessments have unquestionably stood the ordeal satisfactorily."

Present working of settlement.

26. With this exception the new settlement has worked well during its first ten years of existence, and the revenue has been collected without any difficulty. The largest balance at the close of any revenue year amounted to Rs. 47,602, but this was due to suspensions and remissions on account of hail. The balance outstanding at the close of 1879 was only Rs. 3,584, of which a portion was nominal. A statement of coercive processes employed during the last five years shows only 94 cases of distraint, 41 of attachment of movable property, 2 of direct management, 3 of transfer, and 5 of farms.

The sales of estates by order of the Civil Courts during the last seven years are marginally noted. During two years of the period the number of sales was undoubtedly affected by the drought and general badness of the seasons. Allowing for this the figures do not indicate an abnormal rate of transfer, while the prices realised are as high as are usually obtained in auction sales.

		Aggregate land revenue. Rs.	*Price.* Rs.
1281	...	10,315	90,020
1282	...	16,717	1,17,197
1283	...	15,512	1,33,142
1284	...	22,832	1,94,432
1285	...	22,754	1,93,280
1286	...	7,577	20,153
1287	...	9,414	22,862

Period of settlement.

27. Mr. Moens recommended that the settlement should be confirmed for twenty years only. His reason appears to be, not that the district had been under-assessed by him, but that the extension of canal irrigation and increased canal dues might prove disastrous to agriculture and demand a revision of the land revenue. Otherwise he believed that so long as "the prices of produce do not fall for any long time below 26 to 27 seers of wheat, and canal-rates are not exorbitantly raised," his assessments would stand. Mr. Moens' fears that the district would be overrun with canals, or that the water-rates would be unnecessarily raised, have proved unfounded. The area watered by canals remains much as it was in 1871, and the chief changes have been confined to re-aligning them and providing drainage where it was defective. Nor have the prices of produce varied much from the standard assumed by Mr. Moens, so as to make his assessment either very light or extremely heavy. The Senior Member, therefore, has no hesitation in recommending that the settlement be confirmed for the full term of thirty years from the dates the revised assessments came into force in each tahsíl (see table L., page 188).

28. In conclusion the Board express their high opinion of the work done by Mr. Moens. The thoroughness of it is beyond question, and to his energy and devotion the completion of settlement operations within five years, from the preliminaries of survey to the record of rights, in this important district is mainly due. He was ably seconded by his Assistant Settlement Officer, Mr. J. S. Porter, C.S., and by Deputy Collector Mirza Vikar Ali Beg, whose services he has fully acknowledged in the concluding paras. of his report.

29. The cost, Rs. 3,93,428, will compare favorably with that of any other settlement, especially when it is borne in mind that in this sum all the charges of a survey are included. The enhanced revenue with cess resulting from the settlement was Rs. 4,41,869, so that the cost was more than repaid in the first year of the new demand. Cost.

I have the honor to be,

SIR,

Your most obedient servant,

J. S. MACKINTOSH,

Secretary.

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PART I.

BAREILLY SETTLEMENT REPORT.

No. 960 of 1872.

From

R. SIMSON, Esq.,
Commissioner of the 3rd or Rohilkhund Division,

To

A. COLVIN, Esq.,
Secretary, Board of Revenue, N.-W. Provinces.

Dated Bareilly, the 30th November, 1872.

Sir,

I have the honour to forward herewith the final report on the completion of the Bareilly Settlement, with its Appendices, received from Mr. S. M. Moens with his letter of the 19th ultimo.

2. The Nos. II., III., and IV. Statements of each pergunnah in bound volumes, and the Statement of lands exempt from revenue, were sent by Mr. Moens direct to my office at Bareilly. I have directed that they be packed up carefully and forwarded to Allahabad by rail.

3. The settlement of this district having been completed before I have had any opportunity of examining into its details, it would be useless for me to make any remarks as to the manner in which Mr. Moens has carried out the important work entrusted to his care.

4. An inspection of the Settlement records, however, sufficiently shows that Mr. Moens has expended much care and labour on his work, and he also deserves much credit for the expedition with which he has brought it to a conclusion.

I have the honour to be,
Sir,
Your most obedient Servant,
R. SIMSON,
Commissioner.

From

S. M. MOENS, Esq., B.A.,
Settlement Officer, Bareilly,

To

R. SIMSON, Esq.,
Commissioner, Rohilkhund Division.

Dated 19th October, 1872.

Sir,

I have the honour herewith to forward to you my final report, with its Appendices, on the completion of the Bareilly Settlement, together with the Nos. II., III., and IV. Statements for each pergunnah in bound volumes, and the statement of lands exempt from revenue, whether permanently or for lives, for the whole district.

2. I have unfortunately had no opportunity of seeing any other report on other districts, and I am consequently unaware whether mine contains all the information required, or in a convenient shape. I have aimed at giving all that is necessary for the formation of a judgment on the settlement operations carried out by me, and at the

same time the necessary statistical details bearing on the agriculture of the district, the tenures and the condition of the classes dependant on the land, together with a few notes on the history, political and financial, of the district. I had intended to give a full account of the different tribes by which it is inhabited, and their history since they entered the district, as I had collected some notes on the subject; but the preparation of the report, as it is, has involved more time and labour than I had expected. As I am anxious to reach England as soon as possible, I have left the tribal history for another opportunity. Probably it will be done far better by the compiler of the *Gazetteer*. I the less regret the necessary omission, as tribal history does not properly form part of a Settlement report. I think the information on all other points will be found fairly complete.

3. I have as far as possible avoided disquisitions on disputed topics and all writing "for effect:" my object has been to give the necessary information as concisely as possible. In the Appendices to the report will be found statements too bulky to enter in the body of it; all the necessary maps are also sent. Owing to the extreme mixture of castes of both cultivators and landlords, I have found it impossible to prepare tribal maps. They would have been of no use whatever. The level map is from one kindly furnished by the Revenue Survey Department. I have finished the settlement before those of smaller districts commenced before that of Bareilly have yet been concluded. For that at least I claim some slight credit. Had I started with any experience of settlements, I should have been able to have lowered the cost of the work; still I trust it will even now compare not disadvantageously with that incurred in other districts. Time, I have no doubt, will bring errors to light, but I trust that a lenient judgment may be passed on them: for no one, European or Native, can say that I have not worked hard to avoid them, or to reduce them to a minimum: for errors there must be in all settlements by whomsoever conducted.

I have the honour to be,

SIR,

Your most obedient Servant,

S. M. MOENS,

Settlement Officer.

BAREILLY SETTLEMENT REPORT:

By S. M. Moens, Esq., C.S., *Settlement Officer.*

CHAPTER I.

The settlement operations under my charge covered 16 pergunnahs, or the whole district of Bareilly as now constituted, with the exception of the three pergunnahs of Jehanabad, Pillibheet, and Poorunpore, which form the tehseel and sub-division of Pillibheet.

2. These three pergunnahs have been separately settled and reported on by Mr. E. Colvin, to whose report I refer for all information concerning them. In my report, where I use the word "district," I wish it to be understood as meaning only *the district committed to me for settlement*, excluding the Pillibheet Tehseel and including the following 16 pergunnahs:—1, Fureedpoor; 2, Crore; 3, Aonlah; 4, Suneha; 5, North Serowli; 6, Bulleea; 7, Shahi; 8, South Serowli; 9, Ajaon; 10, Sirsawan; 11, Kabur; 12 Choumahla; 13, Ritcha; 14, Nawabgunj; 15, Beesulpore; 16, Muroree. These comprise seven Tehseels, *viz.*:—

1.	Fureedpoor,	containing	Pergunnah	Fureedpoor.
2.	Crore,	ditto	ditto	Crore.
3.	Aonlah,	ditto	ditto	Aonlah, Suneha, South Serowli, and Bulleea.
4.	Meergunj,	ditto	ditto	Shahi, Ajaon, and North Serowli.
5.	Buheree,	ditto	ditto	Sirsawan, Kabur, Chowmahla, and Ritcha.
6.	Nawabgunj,	ditto	ditto	Nawabgunj.
7.	Beesulpoor,	ditto	ditto	Beesulpoor and Muroree.

3. The entire tract of country covers 1,971 square miles, and is situated between 28° 01′ and 28° 54′ latitude, and 79° 02′ 30″ and 80° 05′ 30″ longitude.

4. It is bounded to the north by the Terai Pergunnahs, Jehanabad, Pillibheet, and Poorunpore; to the east by Poorunpore and Powain in Shahjehanpore—the line of demarcation being the Kunhout river; to the south by the district of Shahjehanpore; to the west by the district of Budaon and the Rampoor territory.

The khadir tracts.

5. There is no hill or natural eminence throughout the tract. There are, however, upland and lowland tracts locally known respectively as "bangur" and "khadir." The latter are formed by the valleys of the Kunhout, the Deoha, the Bygool, and the Ramgunga. The rise from the lowland to the upland is everywhere perceptible and usually very marked. The largest of these tracts is in the valley of the Ramgunga, which in one place extends from the Cantonments of Bareilly almost to Aonlah, or over 16 miles in width. Over the whole of this the Ramgunga has wandered at different periods, fertilising the land with alluvial deposits wherever it has passed.

6. There are small isolated patches of khadir along the other rivers, but they are of such small extent as to be of no importance.

Their general character.

7. The surface of the soil in the higher levels is good alluvial earth, with a subsoil of river sand, which is found at a depth varying from two or three inches to several feet. The lower levels close by the rivers, where the current has more force, are usually composed of pure sand, over which fine mud is gradually deposited in subsequent years.

8. All the four tracts of khadir are very similar to one another in their general character, that of the Bygool being the best and most productive. It is usually, though not always, found in four distinct levels:—

1,—The highest, oldest, and farthest removed from inundation. This grows all crops without irrigation, and is extraordinarily productive, usually giving two crops in the year, and sometimes, as in the east Bygool, two or even three crops of sugar-cane in succession.

2,—The land about one or two feet lower than the last, generally similar in character and growing all crops, but far less sugar-cane, and with more risk from inundation; it consequently pays lower rents.

3,—A still lower level annually inundated in the rains, and consequently growing rubbee crops only, but those of the better kinds.

4,—The lowest regularly culturable level of all, in which alluvial deposits, or, as they are locally called "kamp," have been formed imperfectly. This also is annually inundated, is more sandy in soil than the last, and grows only musoor, ajwain, linseed, or melons; the latter only where there is a substratum of clay two or three feet below the sand from which the roots of the plant can imbibe moisture and nourishment.

9. All the khadir tracts when uncultivated produce thatching-grass ("senta" and "gandur") most abundantly. This, especially where near Bareilly, is of considerable value. In all, the value for cultivation depends first on the level; and secondly, on the depth of "kamp." In the Ramgunga and Dooha khadir tracts there are many creeks and old channels of the rivers (locally known as "dubris") full of fine Rohoo, Bouseni, and other fish. In seasons of drought elsewhere, the khadir is in its glory and produces magnificent harvests. With ordinary rains the moderate inundations do more good than harm by destroying the white-ants and by their rich deposits which act instead of manure, but with heavy rains the autumn crops are destroyed, and the ground remains saturated for so long that the rubbee sowings can only take place very late in the season, and the yield is stunted and scanty, and frequently affected by rust (rutta).

Levels.

10. The difference in level between the lowland and upland tracts ranges from 10 to 25 feet, but along the west bank of the Kunhout it is higher, and in places presents somewhat the appearance of a very low range of hills. The general level of the upland tract gradually and regularly falls from a height of 658·7 feet above the sea level on the extreme north of the district, to 520·3 feet at the extreme south at Futtehgunj. The level map which accompanies this report shows at a glance how gradual the fall is from north to south, and how evenly it runs, parallel points to the east and west differing scarcely at all in average level.

The upland.

11. Still the upland is not a dead flat: it is composed of gentle undulations—in some places scarcely perceptible to the eye, in others, more especially to the south of the district, well-defined and occasionally rising into sand-hills. As a whole, however, the district may be described as a level tract intersected by numerous streams, and thickly studded with noble groves of trees. The greater part of it partakes of the nature of the alluvial valleys of the Ganges and Jumna, and never presents such high arid plains as those that form a large part of the Doab and of the country west of the Jumna; almost everywhere water lies near the surface, the verdure and the frequent rivers recalling the aspect rather of Bengal than of Upper India.

The "des" and the "mar."

12. Besides upland and lowland, there is another local division into "des" and "mar." This latter word is supposed by many to refer to the unhealthiness of the climate, and suppose the "ilaqua mar" to mean "the land of death," as it has been translated recently by some of the Canal officers, who have made a great point of the name. The Rajah of Kashipore, however, assures me that the term is derived from an old local Hindi word, and means simply the tract lying below the mountains, and contains no reference whatever to climate. The "des" includes all the old cleared country; the "mar" the old Sub-Himalayan forest tract, of which a very small portion only is included in the district. It is situated to the extreme north of Pergunnahs Chowmahla and Ritcha, and is noted for the extreme unhealthiness of its climate. This is apparently due to the proximity of the forest and uncleared lands, the highness of the spring-levels, the greater amount of the annual rain-fall, and the badness of the water. In the wells in this tract a reddish oily scum may be observed on the surface of the water, and not even boiling and careful filtering will entirely remove the unpleasant oily taste. The line of the "mar" is gradually receding with the extension of population, and the

consequent spread of the cultivation. At the close of the thirteenth century, in allusion to some revenue reforms introduced by Jellal-ood-deen, the first of the Khiljee Dynasty, Kabur is noted as the boundary of cultivation, and in an old family history of the Kazis of Muwuee, I find Serowli itself noted as situated in the "mar ka ilaqua" in Homaioon's reign.

The wells and depth to the springs.

13. In the extreme west of the district, beyond the Nawal Nuddi and Aril, in the western parts of the pergunnahs of Aonlah and South Serowli, the land lies high, the soil is dry, and irrigation is generally used for the superior spring crops. The depth from the surface of the ground to the spring-level here ranges from 16 to 26 feet. The wells are all worked with a rope and leathern bucket (chursa) drawn up by bullocks, which are used nowhere else in the district for the purpose. The wells are all kutcha except in the kusbahs, where some fine old pukka wells are to be found. The kutcha wells last according to the substratum from two to twenty or thirty years. In the rest of the district water is very near the surface. In the khadir, the depth to water ranges from two to seven feet. In some parts, where a buffalo rolls on the ground, the depressions will in a short time become filled with water, and a hole made by pushing a common walking stick into the ground fills at once; about five to six feet is the average depth. In the remaining upland the following statement shows the average depth to water from measurements of the wells made in February, 1871, khadir villages being excluded ;—

Name of Tehseel.	No. of villages from which the average is deduced.	Average depth from surface of the ground to the spring.	
		Feet.	*Inches.*
Fureedpore, ...	180	13	4½
Crore, ...	134	11	8
Nawabgunj, ...	170	9	6
Meergunj, ...	75	13	2
Buheree, ...	143	10	10½
Beesulpore, ...	99	11	5½

14. The general average was 11 feet 8 inches. The wells in general use are mere holes averaging three feet in diameter, and worked by the common lever (dhenkli) or pulley (churkhi)—the water being lifted in common earthen pots. In Beesulpore and the south-west of Fureedpore the lao and chursa are used—worked not by bullocks, but by men as in Oudh. This may seem a waste of labour, but the cultivators assured me that it was cheaper than keeping extra well bullocks, to be used only for a week in the year, where the spring crops, as here, only require one watering. Besides this, the men can irrigate a given area in a shorter time than bullocks could do, and the labour is given when it can most easily be spared, and when the plough cattle are being utilised at the sugar-mills. The practise, therefore, is not so irrational as it appears at first sight.

Order of the pergunnahs in natural fertility.

15. Classing the pergunnahs in order of natural fertility, I should place Suneha, the greater part of Beesulpore, Nawabgunj, Ritcha, Kabur, and Sirsawan in the first class; Shahi, Ajaon, North Serowli, Bulleea, the khadir, and all the des of Chowmahla in the second class; and the uplands of Aonlah, Crore, and South Serowli, East Beesulpore, and Fureedpore, and the mar of Chowmahla in the third—the mar ranking thus low in the scale on account of its extreme unhealthiness.

Rivers.

16. As might be expected from its Sub-Himalayan position, the district is traversed by numerous rivers, of which, however, two only, the Ramgunga and the Deoha, are large and important streams. The rest are of lesser note.

The Ramgunga.

17. The Ramgunga rises in the Himalayas, in the Kumaon District, and, after passing through Moradabad and Rampore, strikes into Bareilly at Shahpore, in Pergunnah Serowli, just north of the town of Serowli. It then forms the boundary between the Tehseels of Meergunj and Aonlah, and Aonlah and Crore, and Fureedpoor and the Budaon District. In Bareilly it acts as a catch-water drain to the rivers coming from the north-east, and carries them all off into the great Ganges, which it joins between Kanouj and Bilgram in the Futtehgurh District.

18. Its affluents in Bareilly are the Dojora, the Sunkha, the Siddha, the Deorunneean, and the Nakuteea—all of which join at the east bank, and the Andhareea and Hirun Phoondun nullahs on the west bank. The highest flood-level attained was on the 20th July, 1871, with a surface velocity of nine miles an hour. The average temperature of the water at Akha during September was 84°.

19. The banks are clearly defined being vertical; indeed, they really overhang at about one-fourth to one slope for the current running down undermines them until the superincumbent earth by its own gravity falls into the water. At other parts, again, and on the opposite bank, it is frequently found sloping by means of little vertical steps made by the current as the floods subside.

20. The bed is shifting river sand. The railway engineer, who furnished this information writes,—"I have taken several sections across the river, and, as an illustration of how rapidly it will alter in the course of the current in 24 hours, I have known the bottom silt up at a certain spot as much as 30 feet. The strata passed through in sinking the wells for the railway bridge at Ungooree were sand for the first 20 feet, then a bed of hard kunkur and sand, and below that clay." The river is very variable in its course, as from the slight nature of its bed, and the alluvial nature of the soil on either bank, it may cut out a fresh bed for itself at any time. Twenty years ago it had its main stream below Gynee, 10 miles to the west of Bareilly. Then it cut into the Dojora, and ran past the city of Bareilly, and in the rains of 1871 it again returned to its old channel. Throughout the whole distance, between the Bareilly Cantonments and the Aril, or some 15 miles, its old beds are traceable. The lowness of its bed, as compared with the neighbouring upland, and the width of its khadir, render the river throughout its course in Bareilly quite useless for irrigation purposes. There is a little boat-traffic on it in the rains though the amount is very variable, mainly depending on the prices ruling for cereals down country. The boats are usually laden with grain, sâl logs, and bamboos. Bamboo rafts, some 200 feet long, are now and then floated down the river to Cawnpore. During the hot weather the river becomes fordable at most places. There are pontoon bridges at the Eedgah-ghât below the city of Bareilly, and at Sirdarnuggur on the Bareilly and Budaon road, and boat-bridges at Serowli, Gynee, Keara, and Kadir Gunj Nugureea.

21. The floods are very considerable, spreading out not in defined drainage lines but in wide sheets; as a rule, the deposits are fine alluvial mud. In places, however, where the current is strong, river sand is left, rendering the land barren until it has been fertilized by subsequent deposits.

Deoha.

22. The Deoha, known in the hills as the Nunda, rises in the Choubeesee Bhabur in Kumaon. Its water there, like that of the streams to the east of it, contains a large quantity of lime in solution, and after rain its water from this cause is of a milky whiteness. The springs from the hills immediately above where it debouches are very strongly impregnated, and deposit it either pure or in stalactites in large quantites. This is exported to Bareilly, Pillibheet, and Shahjehanpore, where it is highly esteemed for its excellent quality.

23. The river enters the Pillibheet Pergunnah near Gungapore, and, flowing due south with a rapid current, forms for some miles the western boundary of that pergunnah. Then, traversing Beesulpore, it passes into Pergunnah Julalpoor in Shajehanpore, where it is known as the Gurrah, and eventually joins the Ramgunga near Sandi, in the District of Hurdui in Oudh.

24. Being subject to violent floods from the mountains, its channel is at times very broad and deep, whilst in the hot weather it does not carry above 200 cubic feet a second. During the rains it is navigable by boats of 400 maunds burden. As its bed is much below the level of the surrounding country, and is of considerable width, it is useless for purposes of irrigation. Its khadir is not so uniformly good for agricultural purposes

as that of the Ramgunga, as it is more variable in soil according to the depth of "kamp." The bed and banks are similar to those of the Ramgunga. There is a bridge-of-boats at Beesulpore, which is maintained only in the cold and hot seasons. Boats ply during the rains.

East Bygool.

25. The east Bygool rises near Lalhur, in Pergunnah Kilpooree, in the Terai District, and, after traversing that pergunnah, enters Ritcha at its northern point near Hurhurpore Sumkha; then flows through Ritcha, Nawabgunj, Crore, and Fureedpore, and eventually joins the Ramgunga at Mouzah Dhukeea in Pergunnah Mhairabad in Shahjehanpore. The formation of the river bed is alluvial. The soil of the bed itself is sand. The strata passed through in sinking the railway wells were sand, then pebbles, next clay, and finally kunkur. The river is crossed by the Rohilkhund Trunk Road at Futtehgunj, over an old pucca bridge built by the Rohillas. There is another pucca bridge between Nawabgunj and Hafizgunj on the Bareilly and Pillibheet road, and a public ferry on the Bareilly and Beesulpoor road. The water is largely used for irrigation purposes. It is under the Canal Department as far as the Girem Dam in Nawabgunj; below this there are numerous zemindaree kutcha dams, for the construction and maintenance of which a number of villages combine—each being held liable to supply the labour of one man per plough, or his hire for the time required to construct the dam. In Pergunnahs Crore and Furreedpore there is a narrow *khadir*, in which the soil is of most superior quality, growing very fine wheat and sugar-cane: above this on the upland bank is sand of the poorest quality. North of Pergunnah Crore the upland on the bank usually called the Dhaia is exceptionally good, while what little *khadir* there may be is poor and sandy. The water of this river is considered by the cultivators as peculiarly suited to sugar-cane, wheat, gram, and musoor. In the northern parts, according to Captain Tickell, the Executive Engineer in charge of the canals, "considerable diluvial and erosive action is going on, owing to the admission of the Sookhee—a Terai stream. The tendency of this is to raise the bed of the Bygool, widen the channel, and form a *khadir*, and gradually to convert the section of the Bygool into one suitable to hill-streams." Since the admission of the Sookhee, the zemindars of the villages near the Bygool in Ritcha and Nawabgunj have complained, and with good reason, of the terrible damage to their autumn crops from the increased violence of the Bygool floods. It is impossible to calculate the loss caused to the zemindars of the old settled and well-cultivated pergunnahs by this piece of engineering. Formerly, the Sookhee did a little damage, but only in the comparatively unpopulated and poorly-cultivated Terai. To remedy this, many valuable estates in Bareilly have been injured needlessly.

Nakutia.

26. The Nakutia rises in a jheel near Burour in Pergunnah Nawabgunj. After traversing that pergunnah and Crore it falls into the Ramgunga at its left bank near Khulpore in Fureedpore. It was on the banks of this stream that Lord Clyde's army was opposed in 1858 by the united rebel forces under Feroze Shah and Khan Bahadoor Khan.

27. The banks are at places clearly defined, and at others gently sloping. The temperature of the water during September, 1871, varied from 84° to 86° F. The highest recorded flood level was on the 31st July, 1871, when it was 9·29 feet above low water. The soil of the bed is alluvial and the bottom clay. In sinking the railway bridge wells the strata passed through were 3 feet of clay, then 6 feet of sand, then 13 feet of clay, below which was a thick bed of kunkur. The river is not navigable at any time of the year. Properly speaking, it is a drain for an area of about 92 square miles, and is almost dry in the cold season. It is crossed by the Bareilly and Futtehgurh roads, and the Bareilly and Pillibheet roads over old masonry bridges, and by the Bareilly and Beesulpore roads by a ford. Throughout its whole length the water is utilised for irrigation by kutcha zemindaree dams. The best kunkur beds in the district lay along the banks of this river on the upland and between it and the Deoruneean. They are now, however, nearly worked out.

The Deoruneean.

28. The Deoruneean rises at Ferozepore, in Pergunnah Roodurpore in the Terai, traverses Ritcha and Crore, and falls into the Ramgunga just to the north-west of the

town of Bareilly, near the Eedgah Bridge. It is crossed by the Nynee Tal and Moradabad roads over masonry bridges. The latter was built in 1842 by Dewan Bahadoor Singh, an ex-Serishtehdar of the Bareilly Collectorate. During the hot weather the current is hardly perceptible. The height of the floods in 1871 was 10 feet above low water level. The river then overtopped its banks and flooded the surrounding country. In sinking the wells for the bridge on the Nynee Tal road, the strata passed through were alternately sand and clay down to a depth of 27 feet, when boulders were met with. Throughout its length the river is dammed at intervals for purposes of irrigation. The mukka and cotton on its banks are peculiarly good, but the water is said to be bad for all legumes and vetches.

The Sunka.

29. The Sunka is formed by the junction of the Gora and Leela nullahs to the north-west of Pergunnah Crore, and, after traversing the pergunnah, falls into the Ramgunga near Bahjooeea. It is crossed by a masonry bridge on the Moradabad road south of Futtehgunj. The banks are clearly defined, the bed stiff clay; it is dammed at intervals throughout its length for irrigation.

The Siddha.

30. The Siddha rises in the Rampore territory, and, after passing through the Pergunnahs of Serowli and Shahi, joins the Ramgunga on its left bank near Lubhera. It is crossed by boats in the rains; at other seasons it is fordable. The banks are clearly defined; in most places sloping; the bed is of sand and clay. The floods in the rains are heavy, and do much damage to the autumn crops of the neighbouring villages. I am not aware of any dam on this river.

The Dojora.

31. The Dojora, as its name implies, is formed by the junction of two pairs of streams, the Kitcha and west Bygool on the west side, and the Dhukra and Bhukra on the east. They join below Dibni Pouncha to the north-west of Pergunnah Crore, whence, taking a south-easterly course, the river joins the Ramgunga on its left bank near Hybutpore. The old point of junction was some miles lower down, but a few years before the mutiny, the Ramgunga left its old bed and broke into the Dojora. The banks are high, and the water cannot be utilised for irrigation. It is not navigable, but occasionally timber and bamboo rafts are floated down during the rains.

The Kitcha.

32. The river Kitcha debouches from the mountains at Bhamouree. It is the recipient of the floods from Nynee Tal, Malwa Tal, and Bheem Tal, and forms one of the principal lines of drainage to the lower Himalayas between the Kosilla on the west, and the Deoha on the east, when the rains on the mountains have been sufficiently violent to cause the lakes to overflow, considerably, floods come down this river 14 feet, and it is even said 17 feet deep, carrying with them large trees. After traversing the Pergunnahs of Kilpooree and Roodurpore, and receiving the supply of the Gola—another hill stream—it enters Chowmahla at Moondeea; thence taking a due southerly course passes on into Kabur, where it receives the Khulooa and Burour rivers on its right and the Khulooa on its left, and joins the west Bygool at Bureepoorah in Kabur. Captain Jones, in 1847, gave the volume of water opposite the village of Kitcha in the dry months at 120 feet per second. The ordinary discharge at the point of its entering this district is 40 to 60 feet per second; but the Gola floods cause it to rise about 10 feet, and discharge about 16,000 cubic feet per second, with a surface velocity of 10 feet per second. The banks are abrupt on the side where erosive action is taking place, shelving on the other side. The bed is generally of river sand. The river is not navigable, the bed is narrow, and there is no khadir tract.

The west Bygool.

33. The west Bygool is a Terai stream flowing through the Rampore Jageer: it enters Sirsawan to the north-west near Dhukeea. After receiving the Kitcha on its left bank, it forms for some distance the western boundary of Pergunnah Kabur; passing through Shahi, it receives the Koollee on its right bank, and a little further down the Dhora on its left bank, and joins the Dojora at Dibni Pouncha. It is crossed by the Moradabad road near Pipureea by a ferry in the rains, and a bridge-of-boats in the rest of the year. During the hot season it is fordable throughout its length.

34. The Bhukra rises in Kumaon, passes through Gudduipore and Roodurpore and the Rampore territory, then enters Ajaon, which it divides from Shahi; and, receiving the Dhukra on its right bank, joins the west Bygool below Dibni Pouncha. The banks are steep; the bed sand. There is no khadir. The river is not utilised for irrigation. The Bhukra.

35. The Dhukra rises in the Rampore territory, enters Ajaon near Mundunpore, and, receiving the Nahil on the right bank, empties itself into the Bhukra near Jouner. The Dhukra.

36. The Dhora is a Terai Spring which receives the supply of a similar stream called the Kutna before leaving the Terai District. It enters Chowmahla at its north-east angle, and, traversing Chowmahla, Ritcha, and part of Shahi, falls into the west Bygool near Biphree. The village of Itowa—where there is a grand Trigonometrical Survey Station—is on the left bank: it is crossed by the Nynee Tal road by a masonry bridge with three arches. In sinking the wells the strata passed through were alternately clay and sand down to 20 feet below the surface, where boulders were met with. The bed and banks are of clay. The river is dammed throughout its course by the Canal Department for irrigation purposes. The ordinary supply of the Dhora, where it enters this district, is from 20 to 30 cubic feet per second, but both the Dhora and the Kutna receive some hill-water during the rains from two torrents which break away from the Gola below Huldwani. Owing to this, the floods rise 10 feet, and the discharge is then 2,200 cubic feet per second, with a surface velocity of 3½ feet. The water is considered peculiarly favourable for vegetable and *huldee* cultivation, of which there is a good deal on its banks. The Dhora.

37. The Burour is a Terai Stream which rises at Durow in Pergunnah Roodurpore, and falls into the Kitcha in Chowmahla: it is much used for irrigation. The Burour.

38. The Nahil rises in Rampore, and, passing through Ajaon, falls into the Dhukra near Sindholi. The Nahil.

39. The Aril rises in Moradabad near Amroha, enters south Serowli at its south-western angle near Gukureea, forming the boundary between Serowli and Bisowli in Budaon. After traversing Pergunnah Aonlah from the north-west to the south-east, it goes on through the Budaon District and falls into the Ganges. It is crossed by the Aonlah and Budaon roads over masonry bridges. The one over the former was built 125 years ago by Futteh Khan, Khansamah, one of the Rohilla Chiefs. The river answers all the purposes of a large irrigation-canal. At many places ducts are cut, and the water is taken to villages at a considerable distance from its banks. It is dammed in several places, but the dam management is not good, and the water is not utilised to its fullest extent. I should recommend that the management and distribution be made over to a special officer on Rs. 40 or 50 a month, under the direct orders of the Collector. The velocity of the stream at high flood on the 30th June, 1871, was 320 feet a second, and at low water 1·4 feet. The floods rose to 8·02 feet above low water mark. The bed is tortuous, with a flooded width in high floods of from 600 to 1,200 feet on an average, but extending in some places to 1,800 feet, with an average fall of 2·31 feet per mile. The valley is about 2,600 feet in width; it is well defined, and the sides are moderately steep. The channel is about 30 feet wide, the banks are generally vertical. The river frequently rises 5 or 6 feet after a couple of hours' rain, and falls again as rapidly. In sinking the wells for the Railway Bridge, the strata pierced through were about 3 feet of top soil, then 2 feet of blue sand, 3 feet of kunkur, and 25 feet blue sand. The temperature of the water on 1st September, 1871, at 6 A.M., was found to be 82°F. The Aril.

40. The Nawab Nuddee was originally a canal, cut from the Aril by Ali Mahomed Khan, 140 years ago. It runs close to the town of Aonlah, and rejoins the parent stream about 7 miles south-east of that town. The banks are gently sloping, as a rule; but in some places are very undefined. The bottom is silt. The formation met with in sinking the wells for the Railway Bridge was from surface to 3 feet loamy earth, 3 to 10 feet sloshy blue clay, 10 to 25 feet sand, 25 to 30 feet indurated sand in sheets, 30 The Nawab Nuddee.

to 35 feet kunkur and sand. The velocity at high-flood is 300 feet per minute, rising to a height of 10·44 feet above the low water level. In the cold season, owing to the construction of the Irrigation dams, there is hardly any current at all.

The Pairea.

41. The Pairea is a small stream rising near Ramnuggur in Pergunnah Serowli. After passing through the Pergunnahs of Serowli and Aonlah it falls into the Aril near Khujoordandi in Aonlah. It is crossed by the Aonlah road by a masonry bridge between the Aril and Nawab Nuddee.

Bujja.

42. The Bujja rises near Bisharutgunj in Suneha, and flows on through that pergunnah into the Budaon District. It is crossed by a masonry bridge at Bhumoura on the Aonlah road.

Apsurha.

43. The Apsurha is a Terai Stream: it enters Pergunnah Jehanabad near Balpore, passes through that pergunnah and Nawabgunj, and joins the Pungeilee near Mouzah Moondeea Chowdhree; below this point the united streams are called the lower Kylas, which fall into the east Bygool at Amilea, about 6 miles to the north-east of the town of Fureedpore. The river is dammed at intervals throughout its course for irrigation. In sinking the wells for a bridge on the Pillibheet and Buheree road, boulders were met with 16 feet below the low water level.

Pungeilee.

44. The Pungeilee rises in a jheel near Mouzah Bhugnera in Pergunnah Jehanabad, traverses Jehanabad and Nawabgunj, and joins the Apsurha at Moondeea. It is fed by springs in its bed which is of clay and sand. The strata pierced through in sinking the wells of the bridge on the Pillibheet road were alternately clay and sand down to 20 feet below the surface, when boulders were met with.

The Kandoo.

45. The Kandoo is a small stream which rises near Aspore in Pergunnah Nawabgunj, and falls into the east Bygool and Bhursur in Crore. It is crossed by the Pillibheet road by an old masonry bridge near Sithra in Nawabgunj. The banks are steep, and there is very little irrigation from it.

The Amerhi.

46. The Amerhi rises in a tank in Mouzah Pota-kulan in Pillibheet, and, flowing through Beesulpore, joins the Mala. The river is dammed for irrigation, and is fed by springs.

The Mala.

47. The Mala rises in a swamp in the Poorunpore forest, passing through the eastern part of Pillibheet into Beesulpore. After receiving the Amerhi it flows under the name of the Kutna into Shahjehanpore where it empties itself into the Deoha.

The Kunhout.

48. The Kunhout rises in the Poorunpoor forest passing through that pergunnah, and, forming the eastern boundary of Beesulpore, it joins the Deoha below Shahjehanpore. In its upper course it is a series of swamps, but lower down, the bed becomes well defined between high banks. It is subject to violent floods, rising occasionally 12 feet above low water level. It has a velocity of 300 feet per second in the rains, and 2 feet in the cold season.

Canals.

49. The old canals in the district are the Bygool Canals, 108 miles in length; the Kitcha Dhora 32 miles; the Paha 13 miles.

The Bygool Canals.

50. The Bygool Canals take their origin from the Roodpore and Bhanpore earthen dams, and the Chooreyli and Giram masonry dams. After leaving the Terai, they run through the Jehanabad, Ritcha, and Nawabgunj Pergunnahs. They consist of a group of small water-courses known as the Burha feeder, and the Sisona, Bhanpore, Nukutpore, Suseynia, Chooreylee, Girem, and Oogunpore Rujbuhas. None of them are more than about 10′ in width, and their velocity is 3′ per second. They can irrigate about 30,000 acres in the year.

The Ritcha Dhora.

51. The Kitcha Dhora Canals derive their chief supply from an earthern dam on the river Kitcha near the village of Kitcha. This dam is carried away by the first flood, so that the khurreef supply of the Kitcha, which is considerable, cannot be utilised.

The canals are supplemented by earthen dams on the river Dhora, the chief of which are at Jussainagur, Simra, Bhojpore, Toorsumpore, Dundeea Nugla, and Shurreefnuggur. The canals run through Chowmahla, Ritcha, and a part of Kabur, and can irrigate about 18,000 acres a year.

The Paha Canal.

52. The Paha Canal takes its supply from a masonry dam on the Paha--a Terai Stream a short distance above Nugla. It runs into a small stream, the Beni, from which it receives a slight addition to its supply, and is then thrown into several branches of a small stream called the Khulwa, from which irrigation is carried on by means of earthen dams. After leaving the Terai, the Paha water runs through the Chowmahla and Sirsawan Pergunnahs. It can irrigate about 8,000 acres in the year. A new high level canal to replace the old Paha has been commenced. The channels have been excavated, and most of the masonry falls have been built.

53. There are no navigation returns, and the irrigation at present is carried on in a very unsatisfactory manner at a dead loss to Government in a financial point of view. The history of the old canals is given very fully in a "Report on the canal-irrigation of Rohilkhund," by Captain W. Jones, of the Bengal Engineers, printed at the Roorkee College Press in 1855. Most of them are badly aligned and incapable of irrigating without stop-dams. A general project for remodelling the whole irrigation system of the district is in course of preparation by the Canal Department. The detailed projects for remodelling the Paha and Kitcha Canals, and a project for a canal from the Deoha, are before Government.

54. The general principles of the new scheme are said to be—(1) opening out the natural drainage lines of the country, supplementing them where necessary; (2) carrying the water for irrigation on the water-sheds of the country; (3) utilising the whole of the available supply, including the hill water, which is not touched at present; (4) obtaining the rest of the water required for the thorough irrigation of the district from the Sardah.

55. It is extremely doubtful, however, whether the new canals will pay financially, and their effect, in a sanitary point of view, on a country where the average depth of the spring level is already only 11½ feet below the surface in the month of February, remains to be seen. The observed effect of canals in other districts is to raise the spring level. If this should be their result in Bareilly the consequences can only be disastrous.

"Dubris" and Jheels.

56. There are no lakes in the district, but there are several large "dubris" of the Ramgunga and Deoha, and a few large jheels. These are all well stocked with fish. They all produce Pusaee—a kind of wild rice,--the grain of which is gathered with a small basket attached to the end of a stick; Singhara, and occasionally Bhusenda, and the edible root of the lotus. Most of the jheels in the district have a good depth of water. There are none which exercise a particularly injurious influence on the health of the neighbourhood,--none even distantly resembling the swamps of Pillibheet and Poorunpore.

Forests.

57. Of forest there is not much in the district, if we exclude the Pillibheet sub-division. There is one tolerably extensive tract to the north-east of the Beesulpore Tehseel between the Mala and Kunhout rivers. This is a continuation of the Bilheri forest in Pillibheet. It is mostly composed of stunted Sâl, Sheeshum, Huldoo, and Dhâk trees, with a thick undergrowth of coarse jungle standing in poor light soil, which would not repay the cost of clearing and cultivating. The wood is of little or no value as timber, while the badness of the roads, the distance of any market, and the cost of carriage, prevent the clearance of the forest for fire wood. There are cuttings to a small extent for this purpose, on which the zemindars charge from 2 to 4 annas per hackery load. The forest, however, is of some value to the neighbourhood for pasturage. It shelters numerous nilghiee, spotted deer, pig, and an occasional tiger or leopard; but it offers few inducements to the sportsmen as the jungle is very dense. The only method is to

stalk along the edge of the forest just before daybreak, and to intercept the deer as they return from their nightly trespasses on the neighbouring cultivated fields. The depredations of the jungle animals extend to a mile or two from the edge of the forest. Within this limit I have seen fields of young wheat, which have been carelessly watched, looking as if herds of cattle had been driven over them in the night. Rents consequently are low in consideration of the expense and labour required for fencing and watching. To the south of Beesulpore, and in the Aonlah Tehseel, there are still large patches of old stunted dhâk jungle, intermixed with thorny scrub—in places so dense as to be almost impenetrable. These are the last remains of the jungle with which, as we know from tradition, nearly the whole district was covered. In the reign of Ferozeshah, as we learn from the Tarikh-i-Ferozeshahi, "the imperial chase of deer and nilgaie was carried on principally in the neighbourhood of Budaon and Aonlah, where these animals were found in great numbers. This district was waste, but well furnished with water and grass: no other such waste was to be found near Delhi."

58. The open spaces covered with grass are now carefully preserved, and the grass is sold at good prices to the tâlwalas of Bareilly and Aonlah for thatching. The price fetched is usually from one-half to two-thirds of the price ruling at the time in Bareilly. The dhâk is cut every seven or eight years for firewood—the annual net return being about five and a half annas per acre. The Oudh and Rohilkhund Railway, now under construction, passes through the centre of the Aonlah tract, and in a few years no doubt the whole of the jungle will be cleared to meet its demands for firewood.

ıur. 59. Of oosur there is very little in the district. It is chiefly confined to a large plain south of Islamabad in Suneha on the borders of the Budaon District, and to some land on the Sunka to the west of Crore, north-west of Hyderabad. After heavy rains there are a few traces of reh in small spots in the northern pergunnahs, but these are comparatively rare, and, where they exist, are of small extent.

ves. 60. The numerous groves dotted over the wide stretching plains form a special and beautiful feature in a Rohilkhund landscape; almost every inhabited village has two or three in its area, affording welcome shade to the cattle in the hot summer days, and wood and fruit to the villagers. They are chiefly composed of country mangoes, jamun, goolur, semul, and sheeshum trees, and are occasionally surrounded by a belt of bamboos, which thrive here most luxuriantly. Except in the vicinity of a large town, the fruit is rarely preserved, and is eaten by any of the villagers who may choose to pick it. The mangoes are a great help to the poor in years of drought and famine when even stones are carefully collected, ground down, and used as food. The wood is chiefly used for the village sugar-mills and agricultural implements, or as firewood at the village weddings. There are few trees which afford a better or safer shelter than the jamun. The leaf is polished and always green. The boughs which droop gracefully are of so elastic a texture as to threaten no peril to the person beneath during the roughest tempests of April. The peepul and goolur are particularly unsafe, as also are mango trees, which have been little agitated by the wind. A storm sometimes makes wild work in an old mango grove, uprooting and snapping the trees as if they were reeds. Natives generally take the first tree that offers, and sit on the lee side of it. If it stands they are all right, if it falls they are crushed, but they are saved the trouble of thinking, which they abhor. The finest bamboo grove in the district is at Sydpore, close to Buheree. A space about 300 yards by 100 is planted with bamboos in regular ranks, forming a succession of aisles, supported on either hand by clusters of slender columns, and roofed overhead by the arch formed by the intersecting stems. Near one extremity of the grove, but completely walled in on all sides by the bamboo masses, is a small space occupied by the dwelling of some Goshains and their cemetery. For, contrary to the usage of other Hindoos, the corpse of the Goshain is not burned, nor even cast to the waters, those great purifiers of unholiness, but is buried in a sitting posture in a layer of salt. In the cemetery are collected daily, by the sound of the conch, some fifteen to twenty jackals to receive an allowance of food, being whatever remains over and above the

necessities of the resident Goshains. The jackal is esteemed by them to be one of Kali's dogs, and is never molested. The same superstition prevails in a much higher degree with respect to the wolf, which in this district it is deemed exceedingly unlucky to kill. Other fine groves are at Futtehgunj and Kooandanda in Fureedpore, at Poornapore, Sydoopore, and in the northern suburbs of the city of Bareilly, in Crore at Deureea, and Beesulpore in Beesulpore Pergunnah, in Shahi in Meergunj, at Aonlah and Serowli in Aonlah Tehseel, and at Sukrus and Chitonian in Buheree.

61. The growing demand for wood caused by the closing of the Government forests, and the ruin of the Pilibheet timber trade which resulted from the grant of the Trans-Sardah Terai to Nepal, and the construction of the railway, has caused great destruction of the old groves of late years, and it will take many a long year to repair the damage.

62. Sentiment has not sufficed to preserve the baghs, though here as elsewhere in Northern India they are regarded by the Hindoos with almost as much affection as their children; and a regular marriage ceremony (Banot Sarg) has to be performed in honor of the grove before it is considered proper to eat of its fruit (see Elliott's Glossary, S. O. Banot Sarg). It is still considered not respectable to omit to plant a new grove in place of the one that has been felled. Had not Government, with wise foresight, consented to exempt the *baghs* from assessment, there is little doubt that the greater number would have been felled in a few years, and the district would have been deprived of its chief ornaments, while the climate and amount of annual rain-fall would have been considerably affected for the worse. The present area under groves is 43,448 acres, or 3·4 per cent. of the total area.

Climate.

63. The meteorological phenomena of the district, and notably those attendant on the rainy season, are largely influenced by its proximity to the Himalayas and the Terai to the north. Indeed, the Oudh Terai to the eastward, lying as it does almost in the direct course of the south-east monsoon towards Bareilly (for the winds are here directed by the line of the hills into a course nearly due east) contributes not a little to determine our climate. Bareilly city itself, and all the northern pergunnahs, are fully within the limits of the heavier storms of the hills, and the rainy season consequently commences a few days earlier, and terminates a little later than in the districts more to the south, while the cold weather is of rather longer duration. The climate may therefore be termed Sub-Himalayan, and presents the corresponding features of dampness, moderate heat, and partial immunity from violent hot winds which rarely blow after sunset, and are never prolonged through the night. They usually commence to blow towards the middle or end of April, and last with frequent intermissions of east winds until early in June. Usually in the first fortnight of May there are storms, sometimes accompanied by rain, which temporarily lower the temperature. Early in June the west winds are displaced by southerly breezes, clouds gradually collect, and violent storms succeeded by the regular rains reduce the day temperature from 95° to 85° F. From this time till the middle of August is enjoyable weather. The breaks in the rains at this time are showery, cloudy, windy days, admitting of open air exercise all day long. From the middle of August to the end of September the weather is close, windless, and steamy, with occasional heavy rain, and the days and nights are oppressively hot. Gradually the temperature lessens, till, from the second week of October, a camp life in tents becomes tolerable, and from the beginning of November to the end of March the weather is unsurpassable. Clear bright days, and nights exceedingly cold from sunset to 10 A. M., render the large camp fires exceedingly enjoyable up to the first or second week in March. About Christmas time, and again at the end of January there are two or three days of heavy rain, effectually irrigating the cold weather crops. Occasionally there are heavy mists or fogs (koer) which come on during the night and last sometimes as late as noon. These are considered very injurious to the spring crops in which they produce rust (rutta). The accompanying table gives the chief meteorological phenomena for the three years from June, 1868, to June,

1871, at Bareilly station, latitude 28° 21′ 30″ north, longitude 79° 27′ 30″ E. Height of barometer cistern 570 feet above sea level :—

TABLE I.

Month.	Barometer reduced to 32°.				Thermometer in shade.		Humidity saturation 100.				Rain-fall in month.
	4 A. M.	10 A. M.	4 P. M.	10 P. M.	MAX.	MIN.	4 A. M.	10 A. M.	4 P. M.	10 P. M.	
January, ...	29·382	29·484	29·394	29·412	70·3	44·5	85	68	53	76	·98
February, ...	—·295	—·368	—·280	—·321	78·1	53·5	83	57	43	71	·58
March, ...	—·187	—·298	—·199	—·242	86·3	59·6	77	57	40	65	1·27
April, ...	—·114	—·201	—·090	—·136	98·5	66·8	66	48	34	51	·60
May, ...	28·985	—·061	28·937	28·929	105·6	77·6	63	41	35	53	·98
June, ...	—·916	28·979	—·865	—·911	102·2	81·0	74	49	45	65	8·52
July, ...	—·933	29·015	—·905	—·952	95·2	78·6	88	62	59	83	9·37
August, ...	—·994	—·658	—·960	29·025	95·2	79·0	89	63	64	83	4.91
September, ...	29·102	—·182	29·079	—·125	92·6	76·0	89	74	63	87	9·43
October, ...	—·254	—·338	—·240	—·264	91·3	65·8	90	62	54	79	1·55
November, ...	—·391	—·470	—·382	—·403	84·1	50·9	89	61	50	78	...
December, ...	—·462	—·539	—·448	—·478	75·4	45·1	90	66	51	77	·12
Means, ...	29·168	29·249	29·148	29·183	89·6	64·8	82	59	49	72	38·31

General average barometer reading, 29·189 inches.
Mean temperature, ... 77·2° F.
Humidity, ... ·65

The Rain-fall.

64. The rain-fall averages, however, were much disturbed and diminished by the dry year of 1869. The following is a general abstract of the results on the whole period, 1860-61 to 1870-71, in inches and decimals for each tehseel :—

TABLE II.

Name of Tehseel.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total for year.
Fureedpore, ...	·77	·6	·7	·25	1·4	7·4	13·5	8·75	8·45	1·2	...	·12	43·14
Crore, ...	·65	·7	·9	·45	1·9	5·5	13·7	7·4	7·7	·8	...	·3	40·00
Aonlah, ...	1·0	·4	·7	·22	·8	5·8	10·5	8·1	6·3	1·0	...	·12	34·94
Meergunj, ...	·8	·9	·8	·30	·95	7·3	11·8	11·8	8·0	·9	...	·1	43·65
Buheree, ...	1·05	2·05	·55	·80	1·35	5·9	15·25	11·8	6·6	·8	...	·2	46·35
Nawabgunj, ...	1·0	·8	·6	·3	1·3	7·5	12·6	11·2	7·2	1·8	...	·2	44·50
Beesulpore, ...	·6	·6	·5	·2	1·2	6·1	12·6	12·8	7·0	1·3	...	·1	41·00
Average for District.	·84	·86	·68	·36	1·27	6·5	12·85	10·26	7·32	1·1	...	·12	41·94

65. From this it will be observed that the least rain-fall is in Aonlah, the most westerly Tehseel, and the greatest in Buheree, the most northern, and that the average for the district is 42 inches. The whole tract, excepting pergunnahs south Serowli and Aonlah, is so favoured, both in climate and the abundant means for irrigation, that a year of drought is productive of less than usual damage to agriculturists, whose profits on the contrary are largely increased by the high prices and great demand for produce ruling in the towns. Thus, the dry years of 1860-61 and 1869-70, during which famine raged elsewhere, are spoken of by the agricultural classes in Bareilly as the years of greatest profit to them. Only the non-agricultural and town population suffered.

66. The variation of the magnetic needle is 2·25° east of the true meridian.

Health.

67. The accompaning table gives an abstract average of the returns of mortality as published by the Sanitary Commissioner during the years 1868—1871 inclusive. The population in column 2 is according to the census of 1865.

TABLE III.

Month.	Population.	Small-pox.	Cholera.	Fever.	Other causes.	Total.	Percentage of deaths to population.	Percentage of ditto for N.-W. P.
January. ...	1,464,200	61	50	881	456	1,448	·09	·09
February, ...		82	47	635	326	1,090	·07	·07
March, ...		137	71	789	380	1,377	·08	·09
April, ...		330	97	1,054	466	1,947	·13	·12
May, ...		516	93	1,147	635	2,391	·16	·13
June, ...		335	77	815	470	1,697	·11	·12
July, ...		222	61	800	498	1,581	·10	·11
August, ...		148	136	1,177	687	2,148	·14	·13
September, ...		60	120	1,426	687	2,293	·15	·13
October, ...		34	261	2,473	780	3,548	·23	·20
November, ...		22	185	3,214	768	4,189	·28	·19
December, ...		83	96	2,340	446	2,965	·20	·15
Average per annum.		2,030	1,294	16,751	6,599	26,674	1·82	1·60

68. These returns are not very reliable, but probably not less so than those of other districts. They suffice to show that the district, as a whole, is up to the average of the North-Western Provinces, except in the months of September, October, November, and December. During this period, fever of a malarious type is very prevalent in the villages all along the north of the district, and along the forest to the east of Beesulpore. The heavier the rain-fall has been the worse is the fever afterwards. Buheree has always been notorious for its unhealthy climate. There is much sickness also in the *khadir* tracts owing to over-saturation of the soil caused by the river floods. The rest of the district is healthy enough, and the sudder station particularly so. The hospital percentages in cantonments are much below the average, and epidemics of cholera are almost unknown, though there are a few sporadic cases occasionally.

Dispensaries.

69. The establishment of dispensaries in this district is interesting, both from the early date at which they were founded, and from the fact of their being held up as examples for imitation by other districts. A grant was originally made by the Nawab Wuzeer's Government of 1,000 *rukabi* Rupees per annum to an hukeem, in lieu of a cess of 8 annas levied on each village in the district, for the purpose of affording medical aid to the indigent sick of Bareilly. This grant was renewed from time to time to his heirs by the former, as well as by the British Government until the year 1815, when one of the two then incumbents having died, two-thirds of the allowance were placed at the disposal of the local agents to be appropriated to the purposes of the original grant, the remaining third being continued to the other incumbent as a life-pension. The Government order was allowed to remain in abeyance until 1822, when Mr. Glyn started a dispensary from the resources formed by the accumulation of the annuity, and a donation from Government of Rs. 3,800 made in 1821, being the proceeds of the sale of a *nuzool* house. In 1838 the remaining one-third of the original pension was made over to the local agents, with arrears from 1834. In 1842, the present dispensary was built by Mr. Clarke, from the accumulated funds. Since the mutiny, a fever and a lock hospital have been added, and a female medical school has been established from funds supplied by Baboo Gunga Pershad, supplemented by a grant-in-aid from Government.

70. In connection with the main dispensary are two branches in the *killah* and in the old city. Both were founded in 1855 by private individuals; the former by Lala Doorga Pershad, and the latter by Peetum Rai. In 1843, Mr. Clark opened a branch dispensary at Pillibheet, and in 1846 another at Buheree ; the latter is in a neat pukka two-storied building with good out-offices. The next branch opened was in 1847, at Beesulpore, where the residents had expressed their readiness to subscribe an endowment fund. In order to give the institution a fair start, Mr. S. Fraser, then Officiating Judge, maintained it at his own expense for six months. The requisite funds were soon subscribed, and the institution is now on a permanent footing.

71. The last branch dispensary was opened at Aonlah in 1855. It was endowed by Hukeem Saadut Ali Khan, who assigned for its support by deed of gift 10 biswas of Bheemlour in Aonlah, and 10 biswas of Oodeybhanpore in Serowli.

72. There is still room for several more dispensaries at Bulleea, Serowli, Furreedpore, Nawabgunj, and Meergunj ; they would be valuable. Two small branches, one at Deuria, in Pergunnah Beesulpore, and one to the north-east of Pergunnah Ritcha, are urgently required, as they would assist materially in checking the ravages of the fever after the rains in the tracts which chiefly suffer from it, and which are at present too far removed from existing institutions to derive any benefit from them. The Deuria branch might be established from the surplus funds of the Beesulpoor Dispensary.

Roads and Communications.

73. The Oudh and Rohilkhund Railway strikes into the district at Futtehgunj east, in Pergunnah Fureedpore, and leaves it at Jungteerah in Pergunnah Aonlah. The entire distance from one end to the other is about 48 miles. It is proposed to build stations

at Futtehgunj, 22 miles from Bareilly; Fureedpore (12) Bareilly; Bisharutgunj, 10 miles to west; Aonlah 17. Only a corner of the district is traversed by this line.

74. The principal lines of road are:

(1) The Bareilly and Futtehghur Road, of which 24 miles are in this district, passing through the towns of Fureedpore and Futtehgunj, at both which places there are encamping grounds for troops.

(2) Bareilly and Moradabad Road, of which 24 miles are in this district. Camping grounds are at Futtehgunj west and Meergunj.

(3) Bareilly and Budaon Road (15 miles, or 21, if the cantonment branch be included), crossing the Ramgunga at Sirdar Nuggur; camping ground at Alumpore.

(4) Bareilly and Nynee Tal Road (35¼ miles) runs north and south through the town of Buheree; camping grounds at Bhojoopoorah, Deorunee an and Buheree.

(5) Bareilly and Pillibheet road (30 miles) through Nawabgunj, terminating in Pillibheet, the town next in importance in the district to Bareilly; camping grounds at Rathora, Nawabgunj, and Pillibheet.

(6) Bareilly and Chundowsee Road (17 miles) through Aonlah.

The first five are all metalled, the sixth is at present unmetalled; all except the fourth are important lines for traffic. The roads of secondary importance are—

(7) Aonlah and Budaon Road. This will be an important line when the railroad is open: it is proposed to culvert and metal it.

(8) Bareilly and Beesulpore Road (28 miles).

(9) Pillibheet, Beesulpore, and Shahjehanpore Road (30 miles).

(10) Pillibheet to Buheree, *viâ* Jehanabad and Ritcha.

(11) Shahi to Buheree (19 miles).

(12) Shahi to Sheeshgurh (24 miles).

(13) Fureedpore to Poorunpore (44 miles).

75. With the exception of Nos. 1 to 6 and 8 and 9, these roads are mostly unbridged, and the majority of them are almost impassable after the rains have set in. There are besides the usual village tracks; but the greater part of the district north of Bareilly is so cut up by a net work of old water-courses, nullahs, and streams, that it is almost impossible to traverse it during the rainy season except by the main roads.

76. The badness of the roads generally is not due to any remissness on the part of the district authorities, but to the nature of the soil and the comparative scarcity of kunkur. This is only found near the surface in quantities that repay quarrying at Futtehgunj, at one or two places between Bareilly and Bhojoopoorah, at one village between Jehanabad and Ritcha, and north and south of Choorha on the Beesulpore Road, just on the border of the Beesulpore and Fureedpore Pergunnahs. Brick-metal does not appear to have been tried, and would not answer under the heavy description of carriage in use. Tramways have several times been proposed for the Pillibheet road: but in a Native cart the bullock goes exactly in front of the wheel, so that it would have to travel on the tram as well as the wheel, unless the form of Native cart could be altered: and that it is hopeless to expect.

Stone.

77. No stone is procurable; stone for mortar mills is imported from Agra and Delhi. Bricks are burnt in flame kilns; bricks 9″ × 4½″ × 3″ cost about Rs. 800 per lakh.

Lime.

78. Lime is made from kunkur, price Rs. 20 to 25 per 100 maunds, or from jheel mud heavily mixed with fresh water shells at Rs. 16 per 100 maunds, or from stones brought from the foot of the hills; this, however, is very expensive. Excellent lime is also dug from the pits in the khadir at Kerpeea and Khunpoorah in Fureedpore, but the supply from this source is nearly exhausted.

HISTORY.

I.—Before the Mahomedan conquest of Kanouj.

1. The early history of Bareilly is involved in the same deep mist of obscurity which rests upon everything Indian, prior to the Mahomedan conquest. In these early times all the country east of the Ganges was called Kuther, but when Sumbhul and Budaon were made separate Governments by the Mahomedans, this term appears to have been restricted by them to the country east of the Ramgunga. The eastern limit is doubtful, though it probably agreed at first with the present boundaries of Rohilkhund, and afterwards with the line of the Kunhout river. According to General Cunningham, it formed a part of the great Panchâla des, which is said, in the Mahabharut, to have extended from the Himalayas to the Chumbul river. He identifies Ahichhatra, whose remains exist at Ramnuggur in Serowli, as the capital of the kingdom. Just before the great war of 1430 B.C., Drupada, the king of Panchâla, was conquered by Drona, the preceptor of the Pandu princes. He retained north Punchâla for himself, but restored the southern half of the kingdom to Drupada, whose capital was at Kampilya (now Kampil), on the old Ganges, between Budaon and Futtehgurh. To Gooroo Drona is attributed the foundation of the large village of Goorgaon in the Aonlah Khadir. According to General Cunningham, the name of Ahichhatra is many centuries anterior to the rise of Boodhism. The grand old fort, he says, was built by Rajah Adi, an Ahir, whose future elevation to sovereignty was foretold by Drona when he found him sleeping under the guardianship of a serpent with expanded hood. This statement however is rather at variance with the former one of Ahichhatra, being in Drona's time the *capital* of Drupada's kingdom of Panchâla before its conquest by Drona. Ahichhatra is also known as Adi Kot, and is indentified by the General with the "Adisadra" of Ptolemy, which proves, he says, that the legend of Adi is at least as old as the beginning of the Christian era. Fa Hian, the first Chinese traveller who visited India in the beginning of the 5th century, does not appear to have visited Ahichhatra, for his route lay through Muttra to Sunkisa on the banks of the Kali Nuddí, about 25 miles from Futtehgurh, thence to Kanouj, Ajoodhia, and Srâvasti; but Hwen Thsang, who spent several years in India at the beginning of the 7th century, has left a short and disappointingly meagre account of it, which General Cunningham has given in his archæological report. He describes the town as 3 miles in circuit and defended by natural obstacles. It possessed 12 Boodhist monasteries, containing about 1,000 priests, and 9 Brahmanical temples, "with about 300 worshippers of Iswara Dewa (Siwa), who smeared their bodies with ashes." The circuit of the walls, as they stand at present, is 19,400 feet, or upwards of 3½ miles. No information is given by Hwen Thsang as to the race who inhabited the town. Further explorations would probably yield some information. Statues and coins (copper asokas) are constantly being dug up in the rains. As Mr. Porter, my assistant, was shooting through the jungle—covered ruins of the old fort,—he found a well-executed bas relief of two lions, apparently a votive offering, with a partially defaced inscription, the date of which, however, 1060 S. = 1004 A. D., was perfectly legible. A colossal statue of Boodha in black stone, the head of which only is above ground, exists a few miles off at Gulurea; unfortunately a Sewala has been built over it, and it is now impossible to excavate it and uncover the inscription, which to a certainty would be found on the pedestal. From Chand the Chouhan Bard, we learn that at about the time of Hwen Thsang's visit, Kuther was under the feudal supremacy of "Ram, the Pramar, the Chukw-lord of Oojein," who held his court in Telinganaha bout 714 A. D. He is invested by the poet with the dignity of paramount sovereign of India and head of a splendid feudal association, which however fell to pieces at his death. "When the Pramar of Tilung took sanctuary with Har to the 36 tribes, he made gifts of land. To Kehur he gave Kuther, to Rae Puhar the coast of Sind, to the heroes of the shell the forest lands. Ram Pramar, the Chukwalord of Oojein, made the gift. He bestowed Indra-presthaon the Tuaars and Patan on the Chawurahs, Sambhur on the Chouhan, and Kanouj on the Kamdhuj, Mârdes on the Purihar, &c., &c."

Ahichhatra.

2. The bard makes this a voluntary act of Pramar; but, coupled with the Gehlote's violent acquisition of Chitor, we may suppose, says Tod, that the successor of Ram was unable to maintain his supremacy; besides, Indra-prestha was not rebuilt and peopled by Anungpal Tuar till 792 A.D. The main question, as far as we are concerned, is who was Kehur and of what race, and that I am not in a position to solve. I leave it until the publication of Mr. Beame's promised translation of Chand's Poems.

Devul.

3. Devul, or Devala, about 3 miles from Deureea in Beesulpore, was another ancient and important city as shown by a valuable inscription in Sanskrit or Hindi letters, engraved in great beauty on polished stone, which was discovered by Mr. H. S. Boulderson. It is preserved in a modern temple built on an ancient foundation, together with numerous other statues and bas reliefs which were dug up at the same spot, under the large peepul tree east of the old canal which runs just under the temple.

4. The inscription has been translated by Mr. Prinsep. In the Appendix will be found a rubbing of the inscription and the translation. General Cunningham visited both Deuria and Devul. In his archæological report, he says, "that Deuria formed part of the old nameless capital of the Bachal Rajahs, who ruled over Eastern Rohilkhund and Western Oudh before the time of the Kutheryas. Devul, 3 miles north of Deuria, was the country residence of Rajah Lalla, who made the beautiful and holy Kutna Nuddee to flow under the walls of his capital below the old fort of Gurha Khera; an old inscription was found at the Gurh Gajna. In this inscription, Rajah Lalla calls himself the nephew of Mans Chandra Pratâpa, and the grandson of Vira Varmma, who is said to be of the race of Chindee, and descended from the great Rishi Chyavana (Chimun Rishi). This sage is mentioned in the Vishnu Purana as having married Sakanya, the daughter of Saryâti, the son of Manu. He is also mentioned in the Bhagvata and Pudma Puranas as appropriating a share of the marriage offerings to the Aswini Kumâras, which entailed the quarrel with Indra, that is alluded to in the 4th verse of the inscription. The family therefore was reputed to be of ancient descent; but if Vira Varmma, the grandfather of Lalla, was the first Rajah, the establishment of the dynasty cannot be dated earlier than A.D. 900. Now the Bachul Rajpoots claim descent from Rajah Vena, whose son was Verât, the founder of Bari Khar or Virat Khera. To Rajah Vena or Ben is attributed the erection of the great forts of Gurha Khera and Shahgurh, and to his queen, Ketapi Rani, is assigned the excavation of the Ranital at the old town of Kabur. The town and fort of Murrori (on the Kunhout to the east of Beesulpore Tehseel) are attributed to Moradhwaj, and Berkhera to Hurmal Rajah, but neither of these names appears in the very imperfect list of their family which the Bachuls now possess. It is admitted by every one that the Kutheryas themselves state that they did not settle in Kuther until Sumbut 1231, or A.D. 1174. Up to this date, therefore, the Bachul Rajahs may be supposed to have possessed the dominant power in eastern Rohilkhund beyond the Ramgunga, while western Rohilkund was held by the Bhidar Gwala and other tribes from whom the Kutheryas profess to have wrested it. Gradually the Bachuls must have retired before the Kutheryas until they had lost all their territory to the west of the Deoha. Here they made a successful stand, and though frequently afterwards harried by the Mahomedans, they still managed to hold their small territory between the Deoha river, and the primeval forests of Pillibheet. When hard pressed, they escaped to the jungles which still skirt their ancient possessions of Gurh Gajna and Gurha Khera."

5. Now, no one can entertain a higher respect than I do for General Cunningham's authority as an archæologist, but, with all deference to his learning, I must submit that the above quotation contains mere theories, which, owing to the authority on which they are promulgated, may give currency to erroneous ideas as to the ancient history of the district. There is no mention of Rajah Vena or Ben, nor anything to countenance the assertion that Devala was merely the country residence of the Rajah, or that Deuria or Gurha Khera was his capital. The "Chindu race" is a mistranslation of "Chundrabunsi," and there is nothing to justify the conclusion that Sri Lalla was a Bachul,

except the solitary fact that he was a Chundrabunsi; but there are numerous other tribes of Lunar descent besides the Bachuls. There is nothing to show that Vira Varmma was the *first* of his dynasty. Four Rajahs are mentioned—Vira Varmma, Bhookun, Mulhun and Lalla, and the date of the inscription is Sumbut 1048 = 992 A.D., while the date of the first entry of the Bachuls under Daro Pad into the south of Shahjehanpore is given by their own family records as 1000 A.D. All the tribes of Beesulpore are unanimous in saying that the Bachuls never crossed the Kunhout, and never held land to the west of the river. There is not a single trace of them or tradition about them in this part of the district. They did hold land in Subna, but that was many miles to the east of the Kunhout. It is clearly recorded in the Junghara family history, that when the Jungharas, under Rao Mahroop Sah, first entered Beesulpore, they expelled the Ahirs from Mudra and Chitee in 1462 Sumbut = 1405 A.D., and in 1570, Rao Busunt Sah, his descendant, captured Deuria from the Bunjarahs and Gurha Khera in the forest 4 miles east of Deuria from the Bhilz, whom they also expelled from Kurelee and Murori. All Pillibheet and the forest up to the Chooka was held till Ali Mahomed's time by the Bunjarahs, who still own many villages there. "Hirmal Rajah," who founded Berkhera was Hurimul Junghara, whose name is well known over the whole Pergunnah to this day. Central Bareilly, between the Deoha and Kunhout, was occupied by Ahirs and Bhooihars till they were conquered by the Kutheryas at the beginning of the 15th century. In fine, neither records, nor tradition, nor inscription, give support to the theory that the Bachuls ever at any time held one inch of territory west of the Kunhout and north of the Shahjehanpore border. I allow that the Bachuls do claim descent from a Rajah Vena, and also I allow that the common people attribute all the old *kherahs* north and north-east of the district to Rajah Ben; but, "Rajah Ben, according to the Brahmins, was the son of Ang, ruler of Ajoodhia; an enemy to their priestly order, from whose curse he at last died. Pirth, the first Soorujbuns Rajah, issued from the arm of the corpse, and 'Nikhad' from the foot. The latter name literally signifies mean, and from the possessor of it the lower orders, such as the *Kols*, *Bheels*, &c., sprung." The Bachuls being Sombunsis could not have sprung from Pirth, and being Chhuttrees could not have sprung from Nikhad. The Rajah Vena of their Bunsawalis cannot therefore be the Rajah Ben of Ajoodhia and Rohilkhund. We have found Bheels to the east of Beesulpore to a late date. Bheels were expelled from Bisowlee in Budaon by the Chouhans in the 16th century. There was a great Bhurraj in western Oudh at an early period. There were Bhihars and Bhidars, who were probably the same as the Bhurs in western Rohilkhund. Hence, my view is that when the common people attribute any old *kherah* or fort to Rajah Ben, it is equivalent to saying that it is an old Bhur or Bheel stronghold, such as we know existed in very many other parts of the country. But to return to the inscription, the curious point about it is the high state of civilisation which it forcibly depicts. The Mansurâwar lake, the home of the wild swans, to the far north, is mentioned as well known, and also the distant ocean. The stone must have come either from the quarries about Agra and Delhi or from far south Mirzapore, the nearest point at which such stone is found. The Rajah is praised for his piety, good education, intellectual gifts, truthfulness, liberality, and military skill. The groves, gardens, and flowers of the suburbs, and the lofty white buildings of the city are described. Gold ornaments and pearl necklaces are mentioned as used; wells, baolis, tanks, and irrigation-canals are constructed. There are alms-houses where the poor are clothed and fed, and there are temples for the Gods. Lands are assigned revenue-free to the priestly orders. The villages are well populated and productive. Poetry is appreciated, and the sculpture and engraving are such as Bareilly could not produce now, nearly 1000 years later in the world's history. Who were this powerful and civilised people, and what has become of them? They only lived 280 years after Ram Prama gave Kuther to Kehur; they have passed away, and the name of the race is unknown, and one old stone is the only trace that they ever existed. Sir H. Elliott, on the strength of the mistranslation "Chindu race," conjectures that they may have been the Chandels of Mahoba or Sheorajpore, resting on their way to their far distant principality of Chumpawat. We find one of the Bunafur heroes boasting in the Ala Udal Prastao (Chand Bk. 20).

Carnegy's Notes on the Tribes of Oudh, P. 1.

"Our heads were the pillars of Mahoba, by us were the Gonds expelled, and their strongholds, Deogurh and Choubari, added to his sway. We maintained the field against the Jadon, sacked Hinduon, and planted our standards upon the plains of Kuther." This, says Elliott, refers to a period long antecedent to the defeat of Brimaditya by Pirthiraj. The conjecture, however, that the Chundrabunsis of the inscription are the Chandels, rests only on the similarity of the word to Chindu, which is an evident error in translation. The principality of Chumpawut was founded by Somchund in A.D. 1178. The inscription points to a residence at Devala of at the very least three generations, which carry us back to 900 A.D. There seems no sufficient reason for a stay of 280 years, and the Chandels of Kumaon would certainly have preserved a record of so long a settlement; but they have not even a tradition on the subject, and not an allusion to it in their family history. We are left altogether in the dark. We cannot identify this mysterions race. We only know—

> "That their good swords are rust and their bones are dust,
> And their souls are with the Saints we trust."

Kabur.

6. Kabur is another very old city attributed to Rajah Ben, and to this is attached the following old legend, which is still current in the vicinity:—

"In the days of old, more than 2,000 years ago, the good Rajah Ben was king over all the land from the Himalayas, to far off Lunka, and his capital was at Surat, and he came to the dark forests by the Sardah river, than which there was no forest in the whole world more gloomy or more full of things of dread, to perform the rite of Tapasa, and thereby to acquire all knowledge and all power over the spirit world; and the terrible rite being duly performed, he dwelt awhile at Shahgurh, where he built a lofty castle, and meditated on that delusion which men call life and the universe, but which is only an impression on the senses, which soon vanishes away; and good Rajah Ben saw that the rich man was decked out with useless jewels, and eat the finest food, and was discontented therewith, while the poor man was barely covered with rags, and scarcely satisfied his craving hunger with the coarsest of diet, and was happy withal. He marvelled greatly at these delusions, and, casting off his costly and priceless jewels, he arrayed himself in the poor dress of a peasant and refused all food but that which fell to the lot of husbandmen; and his young bride, Soondri, through love for her Rajah, did even as he: and, abandoning all vanity of gorgeous array and of jewels that were vain show, clothed herself as a girl that had never known riches, and came down to the court to draw water with her own hands, and she looked long for a vessel wherewith to draw the water, but could find none save only a ghurra of unbaked clay, and no rope save a thread of untwisted cotton—not knowing that the water must dissolve the clay, and the thread must snap with the weight of even the empty vessel. But men know not the ways of the Gods. In the innocence of her heart, she went down to the deep pool of ice-cold water, where the lotus flowers had just unfolded themselves to greet and welcome the rising sun; and, she stepped on the first flower which kissed her tiny bared feet and scarcely marvelled that it bore her weight, and thus in all innocence she passed on lightly, from flower to flower, till she reached the darker depths, and there she plunged in the unbaked vessel and drew it up by the untwisted thread, and, setting it on her head, returned singing in happiness to the castle; and so she lived on happy in her daily task, still happier in her husband's love, and he, the great Rajah, whom all the world obeyed, wove, the while, mats and baskets, and by their sale earned his daily food. But the mind of a woman is constant to one thing never, and is always desirous of new things. So Soondri grew a-weary of the coarse garments, and the daily task, and the poor food of a peasant girl, and she longed for her delicate apparel and her priceless gems; and one morning rising early she arrayed herself in her queenly robes and her glittering jewels, and came down to the lotus pool, and she placed the vessel on her head and walked as before on the petals of the flowers, but they seemed both to bear her till she reached the dark depths of the mid-pool, and she marvelled much at her own beauty as she saw it reflected in the still waters, and she plunged in the vessel, but when she would have drawn it out it melted in the water, and the untwisted thread broke, and she herself sank

deep in the ice-cold water; but she was saved, and henceforward learned the evil of vanity and pride in riches, and the strength of innocence and a pure mind; and in all the reign of the good Rajah Ben gold and silver were as dross, and as plentiful as pebbles in the Sardah stream; and the lotus pool, in memory of the good queen Soondri, was called by all men the Rani's Tal, and is to be seen even unto this day just outside of the town of Kabur, though the lotus have perished and the castle of Shahgurh has sunk into dust."

7. Lilour is said to be mentioned in the Mahabharut. There is a fine large old pucka tank here. The bricks in the masonry at the sides are to be seen when the water is low. They are of the same large type as those of the ruins of Ahichhatra, from which Lilour is only a few miles distant.

8. To the south of Crore extending from Simra Rumpoorah, along the old bank of the Ramgunga as far as Khulpoora, a distance of about seven miles, in an almost unbroken line of *kheras*, are the remains of another old city, which must have been far larger than Ahichhatra. Tradition has preserved the name as Gwala Prasiddh. Like all remains in this part of Bareilly, it is attributed to the Ahirs or "Goblis." An old *baoli* or large well was discovered by the villagers while I was camped in the neighbourhood. It was said to be filled with human bones, which fell into dust immediately after being exposed to the air. The well was built of the large old bricks, and at the top bore evident traces of fire. I heard afterwards that the villagers filled in and closed it again on account of the discovery of the bones. These remains have never been scientifically examined. Asoka coins are occasionally found in them. I am inclined to attribute the destruction of the city to the time of Feroz Toghluk, who for several years successively harried and laid waste this part of Rohilkhund. Gwala Prasiddh.

9. A few miles to the east of Gwala Prasiddh was an ancient town, of which the original appellation, Panchbhoomi, is preserved in the modern corruption of Puchomi. The *khera* is a very high one, and in it, too, after heavy rains, numerous copper Asoka coins are found.

10. Another very large old city is said to have existed at Lilour Guzranpore on the Deoha, but to have been destroyed by that river, and there are several other large old nameless *kheras* in different parts of the district.

11. Sir H. Elliott says that in western Rohilkhund the Burgoojurs were very early settlers. They came from Rajore, the capital of Deoti in the Macheri country, under Rajah Pertab Singh; and settled at Choundera, near Puhasoo, whence they extended their rule to the eastward exterminating the Meos and Bhihars (? Bhooihars). Pertab Singh left two sons, Jutoo and Ranoo. Jutoo migrated to Kuther, while Ranoo remained as Chief of Choundera. The antiquity of the Kuther Burgoojurs may be surmised from a passage in the Rathor Genealogies. "Bhurut, the 11th grandson of Nainpal, the Rathor, at the age of 61 conquered Keneksir under the Northern Hills, from Roodursen, the Burgoojur." Nainpal is supposed to have lived in the 6th century, and must, at any rate, have long preceded the final Mahomedan conquest of Kanouj. In Budaon, the Burgoojurs seem to have largely givenp lace to the Ahirs. The present Rathors of Bareilly, though chiefly confined to the northern pergunnahs, are comparatively recent immigrants, as they only represent themselves to have come ten generations back under Singh Suroop, and to have cleared the jungle. Elliott's Glossary, S. O. Burgoojur.

or Bhars as in the preceding page?

12. The Kutherya traditions do not agree as to the time of their first entry into Kuther. One account is, that when Pirthiraj was reigning at Indra-prestha, and Jeychund, the Rathor, at Kanouj, Bheem Sen, a Soorujbuns Nimbunsi, was driven out of Kasi by his enemies; he emigrated into Kuther, drove out the Ahirs from Lukhnor, and established his rule over the neighbouring country as far as Aonlah. One of his sons having quarrelled with his father, went to the court of Pirthiraj, where he was killed in a private quarrel by Ganddeo, uncle to the Rajah. After the conquest of Mahoba, Pirthiraj sent a force Kutherya traditions.

against Kuther, which was then under the supremacy of Kanouj, but it was defeated by Kesri Singh, grandson of Bheem Sen. The same Kesri is said to be mentioned in the Kanoujkhund as having carried off some of Jeychund's elephants from Mhow, which were subsequently recovered by Oodul. The same traditions say that the tribe did not establish themselves east of the Ramgunga till the beginning of the 15th century, when they exterminated the robber Bhooihars and Ahirs from all the country between the Ramgunga and the Deoha. General Cunningham, as we have seen, fixes the date of their entry into Kuther not earlier than 1231 S.=1174 A.D., which agrees fairly with the above account. Another tradition is, that two brothers, Bijyraj and Ajyraj, came from Kasi and settled down at Pipli; after driving out the Bhooihars and killing their Rajah in 1396 S.=1339 A.D., that Ajyraj, leaving his brother at Pipli, went on pilgrimage to Dwarkanath, and then established his rule in Kattiawar. This account, however, is an improbable one, and either the date given is incorrect or a second immigration is spoken of.

Tomur traditions.

13. The Tomur or Jungara traditions and family records show that the clan, under Hunsraj, drove the "Gwalas" out of Khera Bujhera in 1444 S.=1388 A. D. Hence they spread north. In 1405 A.D., under Mahroopsah, they captured the forts of Mudra and Chitu (near Beesulpore) from the Ahirs and Kureli and Murori from Bheels. Rao Busunt Sah, in 1570 A.D., captured the lands of Deoria from the *Bunjarahs*, and founded and named the present village, and expelled the *Bhils* from Gurha Khera. Gradually the Jungharas spread over and populated the whole of Beesulpore. They say that at their occupation the whole country was jungle, with only a few Ahirs and Bhil forts scattered over it. They have no tradition even about Devul. In the extreme west of Bareilly, in Pergunnahs Aonlah and Bisowli, is a Chourassi of Chouhan villages. The bunsawali of the clan records that 10 generations back (*i.e.*, about 1500 to 1550 A. D.) Nandhur Deo and Gandhur Deo came with 500 followers to their "nunsar" at Puroli, in Kot Salbahun of Budaon; thence they moved on, expelled the *Bhils* from Bisowli, and then spread over the country about Oorla and Munona.

Chouhan tradition.

The Pandes.

14. The Pandes of Sirowli state that Ooderaj and Bijeraj Pandes migrated 800 years back from Hustnapore to Ajmere in Sirowli, but were killed in action by the Bhooihars of Rampoorah.

15. Thus, all the chief tribes in every part of the district of Bareilly concur in stating that on their arrival they found no Rajpoot tribes. The previous occupants are always either Ahirs, Bhooihars, Bhihars, or Bhils, or else the land is unoccupied jungle, and, as late as the time of Feroz Toghluk, Budaoni mentions the country, for 24 coss round Aonlah, as being dense jungle. The Ahirs, we know, ruled in Nepal at the beginning of the Christian era.

Mr. Elliott's theory.

16. I think the author of the chronicles of Oonao has supplied the clue to the destruction of the ancient cities, and the expulsion of the civilised Aryan colonists. His theory is so exactly supported by the state of things in Bareilly (which adjoins western Oudh) in the time before the Mahomedan conquest of Kanouj, that I cannot do better than quote at length from Mr. Elliott.

17. "When the Aryan race invaded the Gangetic valley, and the Soorujbunsis settled in Ajoodhia, the natural resource for the aborigines would be to fly to the hills, and find refuge in their impenetrable fastnesses girded about with the deathly Terai. To the borders of that Terai the invaders would pursue them, and garrisons stationed here to check their encroachments would naturally grow into towns. It has been before remarked that the mythic legends leave no impression of a large subject population existing in Oudh, but rather of a vast solitude inhabited by a scanty race employed in pasturing cattle. The scene before us, at the fall of the historic curtain, is an uninhabited forest country, and a large colony of Soorajbunsis occupying Ajoodhia as their capital. When the curtain rises again, we find Ajoodhia destroyed, the Soorujbunsis utterly vanished, and a great extent of country ruled over by aborigines, called Cheeroos,

in the far east, Bhurs in the centre, and Raj Pusis in the west. This great revolution seems to be satisfactorily explained by the conjecture that the Bhurs, Cheeroos, &c., were the aborigines whom the Aryans had driven to the hills, and who, swarming down from thence, overwhelmed the Aryan civilisation, not only in Sahetan and the other northern towns, but in Ajoodhia itself; drove the Soorujbunsis, under Kunuk Sen, to emigrate into distant Goojerat, and spread over all the plain between the Himalayas and that spur of the Vindhyan range which passes through the south of Mirzapore." Chronicles of Oonao, P. 27.

18. This, too, I conceive to have been the course of events in Bareilly; the Ahirs from the Nepal Hills, the Bhils from the jungles to the south, the Bhurs from the forests of Oudh, must have poured into east Kuther, after driving out the Aryans from Oudh, and either exterminated or driven out the civilised Rajpoot tribes, just as they had done from Ajoodhia.

19. Before I close this chapter, I must note what may be nothing more than a curious coincidence about the Kutheryas. They, too, are Soorujbunsis tracing from Ajoodhia as their original seat. They say they come from Kasi, but from Fa Hian it is clear that, at the time of his visit to India, Kasi was the name of the *country*, of which Ajoodhia was the capital. *Kunuk Sen* led the Soorujbunsis from Ajoodhia to distant Goojerat. Bheem Sen led the Kutheryas to their new seat in Kuther. All the Kutheryas have traditions connecting them with Goojerat. All say that, when they migrated from their original seats, one body went to Goojerat and Kattiwar, and they say the connection is still kept up with the Soorujbunsi Rajpoots of those parts. Are the Kutheryas a remnant left behind by the emigrating Soorujbunsis of Ajoodhia?

CHAPTER II.

Annals from the Mahomedan conquest until the Rohilla Rule.

1. In the last chapter we have seen that, at the end of the 12th century, the greater part of the district must have relapsed into forest. There must have been a few scattered settlements of pastoral Ahirs to the south, while all to north and east was occupied only by wandering tribes of Bhooihars and Bhils, only a few old ruined *kherahs* remaining to testify to the former prosperity of the country; west of the Ramgunga, the country was held by the Khutheryas. There was little, therefore, to tempt the invader. The early notices of Kuther in the Mahomedan histories are consequently very meagre.

2. According to Abdul Kadir, Budaoni, Shahaboodin crossed the Ganges and captured the forts of Budaon and Bungurh in 591 H.=A.D. 1194. Farishta puts the date two years later, and attributes the capture not to Shahaboodin, in person, but to his famous general, Qootub-ood-din. Bungurh was probably Ahichhatra, as in this part of the country there are no remains of any other fort sufficiently large to merit notice at the hands of the historians; and further, Ahichhatra certainly was known as Bungurh in the time of Ali Mahomed, who attempted, though in vain, to make a stand here against the imperial forces. Budaon, even at that early date, must have been a place of great importance, for it is recorded that Altumush, Kootub's son-in-law and adopted son, was *promoted* from the governorship of Gwalior to that of Budaon. He and his Budaon troops are said to have highly distinguished themselves in Kootub's expedition against the Gukhars in 602 H. (A.D. 1205.)

3. In 1552 A.D., Mahmood II. is said to have crossed the Ganges at Mirzapore, and to have marched along the foot of the hills to the banks of the Ramgunga. In the course of the campaign, Izz-ud-din Daramshi was killed at Tankala Bali. In revenge

*Elliott's Historians of India, Vol. II., P. 853—and Budaoni, P. 89.—The word used is Kaithar, which the editor of "Elliott's Historians" explains as Kaithal, but the direction of the march, the mention of the Ramgunga, and the return to Budaon—all show clearly that Kuther is meant and not Kaithal, which was far away in the rear of the army by very many marches. In Budaoni, Kuther is spelt indifferently as کتهیر and کیتهر which words, owing to the ignorance of the transcribers of the old Hindoo name of Rohilkhund, have constantly been erroneously corrected to کیتهل as that place was better known to them.

for his death, the Sultan ordered an attack to be made on Kuther, "such that the inhabitants might not forget for the rest of their lives." *

4. This is the first mention of Kuther in the Histories. Mahmood then marched to Budaon, at which place he arrived "with great pomp and display." In 665 H. = 1266 A.D., Gheias-ood-din Balban marched with a large force to the neighbourhood of Kampil and Putiâli. There he remained for six months, putting all rebels to the sword. The roads to Hindustan were thus cleared, so that merchants and caravans could pass, and great spoil was secured in slaves, horses, and cattle. Kampil, Putiâli, and Bhojpore had been the strongholds of the robbers, so the Sultan erected in these places three strong forts in which he placed Afghan garrisons. Under the protection of these forces, robbery was suppressed and the roads to Hindustan made safe. While the Sultan was engaged in these duties, news arrived from Kuther that disturbances had broken out in that district, and that the districts of Budaon and Amroha were also disturbed."

5. This shows that at this time the word Kuther was confined solely to east Rohilkhund or what is now Bareilly, east of the Ramgunga. The news was evidently considered important, for Mahmood at once broke up his camp and returned to Delhi. He then ordered the main body of his army to be prepared for service, and spread the report that he was going to the foot of the hills on a hunting excursion. He left the city with his army, leaving the royal tent-equipage behind. In two nights and three days he crossed the Ganges, and, sending forward a force of 5,000 archers, he gave them orders to lay waste Kuther, and to slay every male above 8 years of age.

6. "The blood of the Hindoos ran in streams, heaps of slain were to be seen near every village and jungle, and the stench of the dead reached as far as the Ganges. This severity spread dismay among the rebels, and many submitted. The whole district was ravaged, and so much plunder was made, that the royal army was enriched, and even the people of Budaon were satisfied. Wood-cutters were sent out to cut roads through the jungles, and the army passing along these brought the Hindoos to submission. From that time to the end of the glorious reign no rebellion made head in Kuther; and the countries of Budaon, Sumbhul, Amroha, and Kanwari, continued safe from the violence and the disturbance of the Kutheryas."

Elliott's History, Vol. III., P. 106, and Budaoni, P. 129.

7. The Kutheryas were, indeed, quieted by their crushing defeat, but their country was not thoroughly conquered, and their Rajahs rendered subject to tribute till some years afterwards.

8. In 690 H. = 1290 A.D., Sultan Feroz invaded Kuther with a large army, and marched as far north as Kabur, where a severe action was fought. "The Musulmans made their swords red with the blood of the Hindoos: whatever live Hindoo fell into the king's hands was pounded into bits under the feet of elephants. The Musulmans, who were country-born, had their lives spared, and were distributed among the chiefs as slaves. When the Shah had made the country over to his own friends (this shows that till then it was independent), he determined to proceed towards Hindustan, and to open a way through the forest. He cut down the Terai jungle that intercepted his passage, and cleared the roads of the robbers that infested it."

Ghurrutul Kamal of Amir Khusro, quoted in Elliott's History, Vol. III., P. 539.

9. In 708 H. = 1308 A.D., Ali Beg Gurgan, a descendant of Chungez Khan, invaded Kuther with an army of 30,000 men. He marched along the foot of the mountains into the territory of Amroha, and thence into the country between Budaon and Oudh, of which he expected to make an easy conquest; but his army was cut to pieces by a royal force of 80,000 veteran cavalry, under Malik Kafur, Huzar Dinari; and Ali Beg himself was taken prisoner to Delhi and trodden to pieces by elephants before the Court.

Elliott's Historians, Vol. III., pp. 47 and 198.

10. During these Mogul disturbances, the Kutheryas probably recovered Kabur: for it is said to have been recaptured by the Mahomedans in 1313 A.D., during the reign

of Ala-ood-din Ghiljee. It again fell into the hands of the Kutheryas in the reign of Feroz Toghluq, and was recaptured by Sher Shah, who built the fort of Shergurh to the south of the old fort, for the purpose of keeping the townspeople in check. To the south of Shergurh there is a fine tank called the "Khawâs Tal," which no doubt belongs to the same period, as Khawas Khan was Sher's most trusted General. That portion of the town, called Islampore, is said to have been built by Islam Shah, the son of Sher Shah, but was probably only renamed by Khawas Khan, in honour of his master's son, during the lifetime of Sher Shah himself.

Cunningham's Archæological Report.

11. These vicissitudes of Kabur show how weak was the hold of the Mahomedans on the Bareilly District until the time of Akbar; but to continue our annals.

12. In 1345 A.D., the Governor of Sumbhul revolted, but was reduced to subjection by Ain-ool-Mulk, the Governor of Oudh, who in 1375 is recorded as Governor of Oudh, Sumbhul, and Gola (or Shahjehanpore).

13. In 782 H.=A.D. 1380, in the reign of Feroz III., it is related by Farishta (Dow's Translation, Vol. I., page 371) that "the Zemindar of Kuther, whose name was Khirgoo, invited Syud Mahomed, Governor of Budaon, with a number of his family, to his house, where he basely assassinated them. The Emperor, enraged at this villany, marched at once into Kuther, and took severe vengeance upon the associates and kindred of the assassin, putting them, without distinction, to the sword. Khirgoo himself made his escape into Kumaon (probably to the Kumaon Terai), where he received protection from the Indian princes of those parts. Feroz ordered a force against them, who brought back nearly 30,000 prisoners, who were all condemned to slavery. "The Emperor's justice," says the chronicler, "in this instance degenerated into extreme severity. Neither did the misfortunes of those miserable captives satisfy his thirst for revenge. He returned every year, under pretence of hunting, to that unhappy country, but the people and not the beasts of the forest were his prey. He by degrees cut off all the inhabitants and converted whole provinces into wilderness."

14. These successive invasions are also mentioned by Budaoni, page 251. He says that Feroz ordered Khisal Khan, grandson of Sultan Ala-ood-din, Budaoni, to punish Lukhookoo, Mokuddum of Kuther, the murderer of Syud Mahomed and Syud Ala-ood-din, Hakeems of Budaon. Khizr took him prisoner and put him to death, and then made over Budaon to Mulik Kubool. Every year afterwards, for several years in succession, Khizr Khan came into Kuther to hunt, and laid the country waste, and built a fort at Babooli, seven coss from Budaon, which he called Ferozepore. This, says Budaoni, was in ruins in Akbar's time. In the latter account, the name Lukhookoo seems to be an error of the transcribers. Ferishta's Khurgoo is the colloquial for Khurug. Now Khurug Singh and Huri Singh are mentioned in the Kutherya family history as the two leaders, who, in 1420 A.D., drove out the Ahirs and Bhooihars from the country between the Ramgunga and Deoha. Khurug Singh was the elder brother, and had the title of Rajah. It seems from this as if Ferishta's account was the correct one; that Khurug Singh fled across the Ramgunga and escaped to the Kumaon territory at the foot of the hills, while the whole country was wasted by Khizr. Khurug probably took advantage of the anarchy caused by Timour's invasion, moved south again, easily conquered the weakened Ahirs, and occupied their ravaged territory. Khizr's plundering expeditions must have been east of the Ramgunga: for we learn from the Tarikh-i-Feroze-shahi, that the country between Budaon and Aonlah was already waste. "The royal chase of deer, nilgai, &c., says the author, was carried on principally in the neighbourhood of Budaon and Aonlah, where these animals were found in great numbers. This district was waste, but well furnished with water and grass. No other such waste was to be found near Delhi. Orders were given for its being retained for hunting purposes, otherwise it

Elliott's History, Vol. III., P. 353.

would quickly have become peopled and cultivated, under the fostering government of Feroz."

15. After the invasion of Timour, we find the Kutheryas again practically independent. They recoverd all Bareilly east of the Ramgunga, and established themselves in the jungle tracts round Aonlah, which they commenced to clear. Atur Chhendee, a strong village in the difficult country between the Aril and Nawab Nuddee, was founded about this time. They did not, however, remain long undisturbed; for in 803 H.=1401 A.D., Ikbal Khan, after defeating Shums in Biana, and being joined by his army, marched into Kuther. The Hindoo Chief, Rae Nur Singh, at once submitted, and agreed to pay revenue and service ("*mal wa khidmut;*" Budaoni, page 272). In 813 H.=1410 A.D., Mahmood III. made another expedition into Kuther, to collect revenue and to put down the rebellion of Asud Khan Lodee, who had captured Sumbhul three years before. After recapturing Sumbhul and spending some time in hunting, he returned to the capital. The whole business of the State had fallen into the greatest disorder. In 1412 A.D., he again came to Kuther to hunt. On his way back to Delhi he was seized with sudden illness and died. In 1413 A.D., Dowlut Khan Lodi succeeded Mahmood. A few days after his accession, he marched towards Kuther on a hunting expedition, and was met by Rai Nur Singh and the other Kutherya Chiefs, who acknowledged his title (Dow's Ferishta, Vol. II., P. 18). Budaoni, P. 283, says he carried them prisoners to Putiâli, but this seems improbable; for in the very next year, 1414, we find Nur Singh in full rebellion. Khizr Khan sent his Wuzeer, Tájool Mulk, with a large army into Kuther. He met and defeated Nur Singh at Aonlah, and laid all the neighbouring country waste. Nur Singh offered to surrender, and, on his agreeing to pay "khiraj" and "peshkush" every year, he was reinstated in possession of the country. Tájool Mulk then marched south along the Ramgunga to Surgdwari, crossed the Ganges, and put down insurrections which had broken out at Shumshabad, Kumpila, and Putiâli. The pacification of Kuther was of a very short duration; for in 1414 we find the irrepressible Nur Singh again in full rebellion, and apparently stronger than ever. Again Tájool Mulk was despatched to quiet him; but he only plundered and laid waste the country, and, without ending the war, returned to Budaon; thence he marched to Etawah, and, after recruiting his army, returned to Delhi. Khizr then took the field in person, as Nur Singh had overrun the whole of Kuther ("*tamam Kuther ra kharab gurdanida*").

Elliott, Vol. IV., P. 44.

16. On Khizr's approach, Nur Singh took refuge "in the jungles of Aonlah, which extend for 24 coss round that place;" but Khizr succeeded in bringing him to an engagement. Nur Singh was defeated with the loss of all his baggage, arms and horses, and fled across the Ramgunga to the foot of the Kumaon Hills, hotly pursued by 20,000 cavalry for five days, but he succeeded in making his escape. Khizr himself, with the main body of the army, marched north towards Lukhnor and Sumbhul, "scoured the jungles of the Ramgunga and of Sumbhul," overthrew the rebels, and restored the country to order, and then returned to Delhi. After a few days' stay there, he marched back to Budaon, crossing the Ganges at Puttiâli; but Mohubbat, the Governor, closed the gates, and refused him admission. Khizr beseiged the fort ineffectually for six months, and then, alarmed at the discovery of a conspiracy against his life by the old adherents of the Emperor Mahmood, he broke up his camp and returned to Delhi. In 1420, his Wuzeer, Tájool Mulk, again marched into Kuther, and levied revenue and tribute from "Rai Singh, the possessor of that country." Khizr Khan died in A.D. 1421, and was succeeded by his son, Mobarik Shah.

Dow's Ferishta, Vol II. pp. 21-23. Badaoni, pp. 283-287.

17. The invasion by the Gukkurs prevented Mobarik Shah from at once turning his attention to Kuther; but in 1422 A.D., he sent his Wuzeer, Suroor-ool-Mulk, against the Kutheryas, and shortly afterwards followed in person with a larger army. The Kutheryas were completely subdued, and a heavy tribute exacted from them. Mobarik having settled affairs with Mohabbut, the Governor of Budaon, despatched him against "the rebellious Tomours" (Jungharas), whom "he plundered and took prisoners to a man." (Ferishta, Vol. II., p. 27.) To this expedition of Mohabbut's is apparently due the

emigration of the Jungharas from Ooseith and Datagunj to Khera Bujhera, whence they gradually spread over the whole of Fureedpore and Beesulpore. In their own family history, the date of the expulsion of the Ahirs from Khera Bujhera, by Oode Singh, is given as 1444, Sumbut, or 1387 A.D. It may be that the date is correct; that a body of them crossed the Ramgunga immediately after the country had been wasted by Feroz Toghluq in 1380, and took up the lands lying without owners; and that this band, under Oode Singh, were not involved in the troubles of their tribesmen in Budaon. At any rate, the period of the Junghara emigration, east of the Ramgunga, where they now hold several hundred villages, is fixed between the definite limits of 1387 and 1422 A.D. It was in all probability the accession of strength, which they received from the bands of their brethren flying before the wrath of Mobarik Shah, that enabled them so rapidly to extend their territory throughout Fureedpore and Beesulpore. In 1424, the Sultan made another march towards Kuther; but Rajah Nur Singh had had enough of fighting, and came to the banks of the Ganges to meet Mobarik, and to pay his respects. As he had not paid the revenue (*mahsul*) due from him for three years back, he was confined for a few days till his accounts were settled, and then he was released. The royal army then crossed the Ganges, and having chastised the recusants of the neighbourhood, proceeded towards the hills of Kumaon. When the weather became hot, it marched homewards by the banks of the Rahab (Ramgunga), crossed the Ganges at Gang, and the Sultan then marched off to Mewat. This is the last mention of Nur Singh in history. His name is included in the Kutherya genealogies fifteen generations back. From his time forward, for many a long year, the Kutheryas remained quiet. All their gallant efforts at maintaining their independence had failed, and they seem to have resigned themselves submissively to their fate, after carrying on a brave and almost unremitting struggle against their Mahomedan conquerors for 230 years. Occasionally, henceforward, we hear of isolated outbreaks, but these were only attempts to avoid payment of the revenue due—not combined efforts to throw off the Mahomedan yoke. For years the country enjoyed comparative rest. The jungle was gradually cleared, and population, and with it cultivation, extended.

18. In 1448, Ala-ood-din, the ex-Emperor, was appointed Governor of Budaon, with all the country between the Ganges, the foot of the Himalayas, and Khyrabad in Oudh. He retained this charge till his death in 1478. The only thing recorded during his rule is that he built a palace, and laid out pleasure-gardens in Budaon.

19. In the Tarikh-i-Sher-shahi it is recorded that, " as the headmen and cultivators of Sirkar Sumbhul had fled from the oppression of Nasir Khan, Sher Shah sent there Masnad Ali Isa Khan; and said to him,—" I have given to you the Pergunnahs of Kaint, Gola, Tilhur, for your family, and your old horsemen; enlist 5,000 new cavalry, for the Sirkar of Sumbhul is full of disaffected and riotous people, and the cultivators of that Sirkar are for the most part rebellious and contumacious, and they are always given to quarelling with and resisting their rulers." When Musnad Ali Isa Khan came to that Sirkar, he being a lion in valour and gallantry, so humbled and overcame by the sword the contumacious zemindars of those parts, that they did not rebel even when he ordered them to cut down their jungles, which they had cherished like children, but cut them with their own hands, though drawing deep sighs of affliction: and they reformed and repented them of their thieving and highway robberies, and they paid in at the city their revenue according to the measurements; and Sher Khan said,—" By reason of the two Sarwanis, Isa Khan and Mian Ahmed, I have no cause for anxiety from the Sirkar of Delhi to the Sirkar of Lucknow." Tarikh-i-Sher-shahi: Elliott's History, Vol. IV., P. 416.

20. For a time the Kutheryas lost their old turbulence, and seem to have risen into favour; for shortly before 1553 A.D., we find Rajah Mittur Seyn, Kutherya, Hakim of Sumbhul. He was probably appointed to this office by Sher Shah after his march to Kabur. Its importance and dignity are shown by the fact that Baber gave Sumbhul in Jagheer to his son Humayoon, who resided there for some years before his accession in 1603 A.D. Akbar gave Mirza Mozuffur Hossein the title of Farzand, with a munsub of Rs. 5,000, and the Jagheer of Sumbul, " which is worth more Budaoni, P. 306

than all Kandahar." Again, the famous Bairam Khan, after Humayoon's defeat at Kanouj, fled for refuge to Mittur Seyn, the Kutherya Rajah of Luknor (Budaoni, P. 315). He subsequently received Sumbhul as Jagheer, but did not retain it long, as he was promoted to the guardianship of Prince Akbar, with whom he went to the Punjab against Sekunder Khan. In 1554, Ali Kuli Khan (Khan Zaman Khan) was Governor of Sumbhul. It was during his tenancy of this office that he defeated and killed Kumbur Dewana at Budaon. In 1576, Meer Mahomed Khan, one of the famous Atgali Khail, was Governor, and in 1580, Sueed Khan, Governor of the Punjab, was transferred to Sumbhul. Rajah Mittur Seyn was superseded by Mobariz Khan, Urfadili, Meer Ahya, but refused to resign his office. He opposed the new Governor by force, but was defeated in a great battle at Koondurkhi. At the beginning of the 16th century, Jugut Singh, Kutherya, founded Jugutpore in Crore, adjoining the city of Bareilly; and in 1537, his sons, Bas Deo and Barel Deo, founded Bareilly itself, which was called after the two brothers Bas Bareli. They built a large masonry fort, the remains of which are still visible in the old city. Bas Deo must have ruled over a considerable extent of territory; for his son, Rajdeo, is recorded as the founder of Jellalpore, in Shahjehanpore. Bas Deo rose in rebellion against Humayoon, and probably took part in the action at Koondurkhi. This rising was not put down until after Akbar's succession, when Abbas Ali Khan was sent with a large force to quiet the turbulent Kutheryas. He defeated and killed both Rajah Bas Deo and his brother, and captured their fort. From this time forward, there seems to have been a regular succession of Governors at Bareilly. In 1568 A.D., Bareli and Sumbhul were given in Jagheer to Hossein Kuli Khan. In 1573, he marched to Kant and Gola, to suppress a rebellion of the Hindoos there, defeated and punished the rebels, and then, "hearing of the arrival of Ibrahim Hossein at Lukhnor, 15 coss from Sumbhul, he returned to Kusbeh Bareilly, and thence marched in one day to Sumbhul. Ibrahim retreated by Amroha to Ahar, and thence, hotly pursued by Hossein Khan, to Sirhind (Budaoni)." This passage shows that in the short time of 37 years Bareilly had expanded from a mere fort into a flourishing kusbah. Mirza Ain-ool-Mulkh was appointed Nazim of Bareilly by Akbar. He left memorials of his rule in the Mirzai Musjid in the old city of Bareilly and in the Mirza Bagh, adjoining Madhobari. He was succeeded by Bahramund Khan. In 1627 A.D., Sultan Ali Khan, and in 1628, Ali Kuli Khan were Governors of Bareilly. Notwithstanding their defeats, the Kutherya Chiefs seem not to have been permanently weakened. Though they ventured no more to resist the Imperial Governors, they were quite strong enough to make themselves unpleasant neighbours. Between A.D. 1625 and 1638, they seem to have looked with envy on the prosperity of the Terai, and to have made steady encroachments on the Sub-Himalayan territories of the Rajahs of Kumaon. Baz Buhadoor Chund, the Rajah, finding himself in danger of total dispossession from these fertile lowlands repaired to Delhi, and entered the military service of Shajehan. He succeeded in distinguishing himself in the imperial expedition against Kandahar and Kabul, and in reward procured a full recognition of his right to the "Chourasi-mal," together with an order addressed to the Soobah for effectual assistance against the Kutheryas. Roostum Khan, who had recently expelled them from Choupala, and refounded the place under the name of Moradabad, willingly joined the Rajah against his old enemies, and succeeded in expelling them from the Terai, and in confining them to their old limits.

Budaoni, P. 425. The author says he was then 12 years old, and had just come to Sumbhul with his father to be educated.

Elliott's Glossary, S. O. Dustoor.

Budaoni. This is the first mention of Bareli in the histories.

Batten's Notes on the Kumaon Terai.

21. The next Governor of Bareilly that we hear of was Abdoolah Khan, of Mulliabad. Nothing worthy of note is recorded of him. He was succeeded by Rajah Manik Chund, Khuttri, of Shahjehanabad, and he by his son, Rajah Mukrund Rae, in 1657. He is noted for having cut down the great Sâl forest to the west of the old city, and as being the founder of the new city of Bareilly. Mohulla Mukrundpore is named after him, and he called the Alumgeereegunj in honour of his master. He also built the Jumma Musjid at his own expense, and a large fort on the Deoruncean river close by, where the Killa-ki-Chowki is now situated. This fort was still in existence at the session in 1802, but it rapidly fell to ruins. It was destroyed, and the ground sold

for building by Mr. S. M. Boulderson, during his term of office as Collector. The Kutheryas again made a disturbance while Mukrund Rae was Nazim; but he soon quelled it, put to death all Bas Deo's descendants, and expelled all the Kutheryas from the city. They then founded several villages on the Ramgunga, of which they still hold four—Choubari, Angooree, Muheshpore, and Fureedpore. Mukrund Rae must have been a man of great vigour and energy; but, according to tradition, he came to an unfortunate end in this wise. Kullean Rae was one of the most powerful of the Junghara clan in Fureedpore. On his death, his sons being all minors, his nephew, Dharoo Khan, a nau-muslim, seized on his whole ilaqua. Kullean Rae's eldest son, Dhian Dass, on coming of age, stabbed the usurper in the Amil's Kutcherry at Fureedpore. He was seized, imprisoned for some time, and finally, in contravention of a direct order from Delhi for his release, blown away from a gun at Bareilly by the orders of Mukrund Rai. His relatives represented the facts at Delhi, and one of them, Lall Singh, to obtain the imperial favour, turned Mahomedan, and was sent to Bareilly, with a strong force and orders for the arrest and punishment of the Nazim. The latter surrendered, and was given up to Lall Singh, who is said to have cut off all his fingers one after the other. At the end of the reign of Shajehan, Budder Jehan of Pehani (now in Oudh) refused to pay revenue, or to obey the summons of the Nazim of Bareilly, and took possession of all the east part of the district. Imperial forces were sent against him, and he was soon captured. There is still a saying about him in the mouths of the people—

"Suddur Jehan ke Budder Jehan,
Chhore Pehani jae kuhan."

22. During Alumgir's expedition to Ajmere, the Kutheryas in the centre of the district, and the Jungharas of Beesulpore, again gave trouble. They refused to pay revenue, and burnt and plundered the villages of all who did not join them. With considerable difficulty the disturbances were suppressed by the Nazim, Mahomed Rufee, by whom the Jungharas were defeated, and most of the heads of their clan killed in an action at Khurduha, near Deuria; and Deuria itself was taken and burnt. The Bunjaras to the north, who had also joined in the insurrection, were defeated and severely punished.

Family History of Chowdhry Noubut Rai, of Bareilly.

23. During the utter anarchy which ensued on the death of Alumgir in 1707, the authority of the Amils was completely set at defiance. The Hindoo Chiefs again found themselves almost independent. Though they paid occasionally some small dues to the Jagheerdars, they entirely withheld the tribute due to the Royal Treasury. There was now, however, no bond of union among them, and no one head whose leadership all would agree to follow. Each Hindoo Rajah was jealous of the rest; all aimed solely at aggrandising themselves at the expense of their neighbours, and the whole district was reduced to a state of anarchy and confusion by their petty wars. It was a favourable time for any determined adventurer, with a few followers, to rise rapidly into power by taking advantage of the general confusion and the jealousies and dissensions of the Hindoo Chiefs. Such a man soon rose to the surface.

CHAPTER III.

The Rohillas.

1. Shah Alum Khan was a respectable Baraitch Affghan of Kandahar. On the death of his father, Mahmood Khan (commonly known as Sheikh Mootee), and the consequent division of his property among his sons, a slave named Daood fell to the share of Shah Alum Khan, who educated him as his son, and, after some years, placed him in charge of his estates. Daood, however, being of an aspiring, resolute character, determined to seek his fortunes in Hindustan, and, quitting his master, after some wanderings, found his way to Kuther, where he entered into the service of Madar Sah, the Kutherya Zemindar of Mudhkur in Pergunnah Burser (now south Serowli); other Affghans joined him; and, after a time, he found himself at the head of 200 men. On one occasion Madar Sah despatched him to attack and capture the village of Bakoli,

in Pergunnah Kabur. The expedition was successful. Among the prisoners taken was a handsome Jât boy of 7 or 8 years of age. Daood became much attached to him, made him a Mahomedan, and, after a time, adopted him as his son, and gave him the name of Ali Mahomed Khan. This account of Ali Mahomed's origin is highly distasteful now-a-days to the Puthans, but it is shown to be the true one.

1*st*,—By the unimpeachable testimony of Nawab Mustajah Khan, son of Hafiz Rahmut Khan.

2*nd*,—By the old popular saying among the Hindoos—

"Aise se aise kare dekho Pirbhoo ke thât,
Aonlah ka Rajah bhayo Bakoli ka Jat."

3*rd*,—In the Sair-ool-Mutakhireen it is noted, "since the defeat of the Affghans at Shiraz, that body remained without a leader, and many came to Hindustan and settled there. Among these was Ali Mahomed, a Hindoo herdsman, who had been adopted by an Affghan." (Brigg's Translation, P. 411).

2. As the news of Daood's success spread abroad, more and more Affghan adventurers flocked to his standard. He obtained the grant of numerous villages in Shahi to pay his levies, and the Jagheer of Nibia Bouli in Budaon. At length, leaving the service of Mudarsah, he entered that of Debi Chand, the Rajah of Kumaon, who placed under his command the force stationed to guard the pergunnahs at the foot of the hills. Azmut-oollah Khan was about this time sent from Delhi to take possession of Pergunnahs Roodurpore and Kashipore. The Rajah marched from Almorah with his whole army to support Daood, but the latter had in the *interim* taken a bribe from Azmut-oollah, and in the first action he and all his followers held aloof, and then quitted the field, after an ineffectual attempt to seize the person of Debi Chand as a hostage for the payment of the arrears due to his troops. The Rajah retreated to Kakur-durra, and then, pretending complete ignorance of Daood's treachery, invited him to attend to receive his arrears of pay. Daood fell into the snare, and, on reaching the Rajah's camp, was put to death, together with all those who accompanied him. Ali Mahomed Khan was elected as his successor by the Affghan force, which was then entertained by Azmut-oollah Khan, who, after the easy occupation of Roodurpore and Kashipore, fixed his residence at Moradabad. Tranquillity having been established, the troops were dismissed. Ali Mahomed having acquired the confidence of Azmut-oollah and of his son, Moin-ood-deen Khan, the Governor of Bareilly, occupied himself in the management of the estates he had inherited from Daood, and of those which had been assigned for the payment of the troops. Some years elapsed, when Mahomed Saleh, a Court Eunuch, obtained a sunnud from Delhi for the farm of Pergunnah Munonah. Munonah is a large village a short distance to the north of Aonlah. The pergunnah is included in Pergunnah Aonlah. Relying on his interest at Court, and jealous of Ali Mahomed's influence, he attempted to oust the latter from his Jagheer of Nibia Bouli. Ali Mahomed applied for advice to his friend Azmut-oollah Khan, who told him to act as he thought proper. Considering this to be an indirect permission to make away with the eunuch, he assembled his followers, marched to Munonah, surprised Mahomed Saleh's camp, put him to death, and, after plundering all his property, took possession of the pergunnah. He then procured the assassination of Dooja Singh, Khutherya, zemindar of the neighbouring important town of Aonlah, and, in the confusion which ensued, occupied the town. Shortly afterwards he was summoned by the Wuzeer, Kumur-ood-din Khan, to join the imperial forces, which were marching against Syf-ood-din Mahomed and the Syuds of Barah. He at once obeyed the order; and in the battle of Janseth he so greatly distinguished himself by his gallantry, and by killing Syf-ood-din with his own hand, that the Wuzeer obtained for him the title of Nawab, with permission to use the "nobut;" at the same time the possession of the pergunnahs he had acquired was confirmed to him, and the revenue payable was reduced as a reward for his services. Soon after this, he was joined at Aonlah by Hafiz Rahmut Khan, son of Daood's old master, Shah Alum, who received twelve villages in jagheer. Many other Affghans flocked to his

standard, attracted by his character as a skilful and enterprising leader. Daily he increased in power. He obtained large farms in Ritcha and the adjoining pergunnahs, and encroached on the estates of all the weaker zemindars. At length the complaints of the amils and zemindars against him became so vehement, that the Emperor Mahomed Shah issued orders to Rajah Hurnund, Khuttree, the Fouzdar of Moradabad, to expel him and all his Afghans from Kuther. Hurnund at once wrote to Abdool Nubbi Khan, the Amil of Bareilly and Shahabad, to join him ; and refusing to listen to any offers of accommodation, marched from Moradabad with a large army, and encamped near the Aril river. Here he was surprised by Ali Mahomed, who had marched from Aonlah with a well-equipped force of 12,000 men to meet him. The Imperial army was utterly defeated. Hurnund himself, his son Moti Lall, Abdool Nubbi Khan, and his brother Diller Khan, were among the slain, and the Rajah's whole camp and equipage were captured. Ali Mahomed at once despatched amils to take possession of Moradabad, Sumbhul, Shahabad, and Shahjehanpore, and all the pergunnahs dependent on Bareilly ; but did not enter the town himself till he had succeeded in obtaining a full pardon and his appointment as Hakim of Kuther, through the influence of his friend the Wuzeer, to whose son Meer Munnoo he had given his daughter in marriage. Under his order the Pergunnah of Pillibheet was wrested from Desput Bunjarah by a force under Painda Khan, and added to the jagheer of Hafiz Rahmut. In 1744, two years after the defeat of Hurnund, Dooli Chund, a relation of the Rajah of Kumaon, who for some offence had been punished with the loss of his nose, ears, and hands, solicited Ali Mahomed's aid. Glad of an opportunity to avenge the death of his patron Daood, he despatched an army against Kumaon under the command of Hafiz Rahmut, Doonde Khan, and Painda Khan. Dooli Chund accompained them to point out the easiest route. They defeated the Rajah's troops at Roodurpoor, and leaving an amil there, marched to the Pass of Burrokhurri, where they were again victorious. Surmounting all opposition, and the natural difficulties of the country, they forced their way to Almorah, which they captured. The Rajah escaped to Guhwarl. The victorious progress of the Afghans was only arrested in the very heart of the hills, on the downs of Ghyr Mandi, near the sources of the Ramgunga. Here Pertab Singh, the Rajah of Gurhwal, checked them, and then turned them back by a bribe of three lakhs of rupees to their leaders. Though the stay of the Afghans in the province was short, its ill-results are still bitterly remembered, and its fanatically zealous character is still attested by the noseless idols and trunkless elephants of many of the Kumaon temples.* Ali Mahomed, discontented at the small spoil brought down to him, attempted a second invasion in the next year, but was stayed at the very entrance of the hills at the Burrokhurri Pass, between Bhamouree and Bheem Tal, where the Rohilla force was routed by the minister, Seeldeo Joshee, and his highlanders, who had seen too much of such visitors in the previous year to allow them again to surmount the Ghagur Range.

Batten's Notes on the Kumaon Turai.

3. The rapid rise to power of Ali Mahomed had greatly alarmed the Imperial Government, which had been already so weakened by the incursions of the Mahrattas, and the invasion of Nadir Shah. In 1746, Mahomed Shah, the Emperor, at the instigation of the Nawab Sufdur Jung, marched in person with a large army to Sumbhul with the intention of expelling the Rohillas from Kuther. Rajah Kullian Chund, of Kumaon, himself repaired to the Imperial camp, and implored for aid to drive the common enemy from the open plains of the Turai. Twenty-two descendants of the old Kutherya Rajahs, headed by the Chiefs of Thakoordwara, also came clamouring for protection. Ali Mahomed, alarmed at the danger, took refuge in the old Fort of Bungurh (now Ramnuggur), five coss from Aonlah, and surrounded by thick jungle. His overtures for terms were rejected, and the army of the Emperor advanced to the skirts of the jungle. The Afghan Sirdars saw that resistance was hopeless, and either retired to their homes or deserted to the enemy ; and at length Ali Mahomed gave himself up as a prisoner, and was consigned to the charge of the Wuzeer Kumur-ooddin. Mahomed

* *Batten's Notes on the Kumaon Turai.*—"According to Edward's Book of Treaties, Ali Mahomed plundered the Kumaon Rajah of all his women, and among them his daughter, who was afterwards mother of Fyzoollah Khan ; but the last part of the story is impossible, as in the next year Fyzoollah is mentioned as being captured at Sirhind by Ahmed Shah Douranee."

Shah appointed Budur-ool Islam Khan of Gopamow, and Fureed-ooddin Khan, son of Azmutoollah, amils of Kuther; expelled the Rohillas from the Turai, for which a new sunnud was granted to Kullian Chund; and issued a *firman* prohibiting all Afghans from crossing the Ganges into Rohilkhund; and then marched away to Delhi, taking Ali Mahomed with him as a State-prisoner. Six months afterwards the latter was pardoned at the intercession of the Wuzeer, and appointed to the difficult charge of Sirhind, for which place he took his departure accompanied by Hafiz Rahmut and a force of 7,000 men whom he summoned from Kuther. He soon reduced the rebellious zemindars of Sirhind to subjection, collected all arrears of revenue due, and increased his force to 20,000 men. In 1750 A.D., to prevent his joining Ahmed Shah Douranee, who had tempted him by the offer of the Wazarut, he was re-appointed to the Governorship of Kuther, for which place he immediately set out. He did not retain his post long, as in 1751 he died of a carbuncle in the back, and was buried at Aonlah, where a splendid tomb is erected to his memory.

4. According to Nawab Mustajah Khan's account, he nominated Hafiz Rahmut as his successor during the minority of his son, Saadoollah. The elder sons, Abdoollah and Fyzoollah, had been carried away as prisoners by Ahmed Shah Douranee from Sirhind the previous year. Hamilton says that Hafiz and his cousin Doonde Khan were appointed guardians, and Neamut Khan and Salabut Khan, joint guardians of Ali Mahomed's sons; but I believe the former to be the correct account. Hafiz was forty years of age when he became ruler of Kuther. He was highly popular among all the Sirdars, who cheerfully acknowledged him as their chief. Two months after the death of Ali Mahomed, Kootub-ooddin Khan, grandson of Azmutoollah Khan, was appointed Soobah of Kuther by the Emperor, under the advice of Nawab Sufdur Jung, who was ever on the watch to lessen the power of the Rohillas. Hafiz Rahmut warned the new Governor that he would not allow him to take possession of his appointment; and on his venturing to cross the Ganges with a small force, he was attacked and killed at Dhampore by a party of Rohillas headed by Doonde Khan. The Wuzeer then appointed to the office Kaim Khan Bungush, the Nawab of Furruckabad, remarking that if he failed, there would be one Afghan the less, and if he succeeded, the province would again become subject to the King. He probably also hoped that in any case the appointment would prevent any danger of a combination between the Afghans of Kuther and those of Furruckabad. As soon as Kaim Khan's troops crossed the Ganges, Hafiz marched from Aonlah to meet him: the action took place at Douree Rusoolpoor, three miles south-east of Budaon. Though Hafiz was vastly outnumbered, he obtained a most complete victory. Both Kaim Khan and his brother Mahmood Khan were killed, and their camp was taken and plundered. As the immediate results of this victory, Hafiz at once annexed the Pergunnahs of Budaon, Ooseith, Khyrabad, and Purum Nuggur, east of the Ganges, which had belonged to the Nawab of Furruckabad.

5. Having appointed Futteh Khan Khansamah as Amil of Budaon and Ooseith, and arranged for the collection of the revenues of other conquered districts, Hafiz proceeded to Pillibheet, whence he sent Sheikh Kubbeer with an army to annex the tract of country lying at the foot of the hills near the Sardah river. Poorunpoor and Subna were conquered almost without opposition. Sheikh Kubbeer then crossed the Sardah, and after a short action defeated a rabble of 10,000 undisciplined Rajpoots and Bunjarahs, who had collected to oppose him, and captured the town and Pergunnah of Khyragurh: his forces, however, suffered so severely from malaria, that he was compelled to return to Subna, leaving Ikhtear Khan as Amil of Khyragurh. After recruiting his army he re-crossed the river and annexed the Pergunnahs of Mulwarah and Mujhialli; the former belonged to the Bunjarahs, and the latter to the Rajah of Doti, to whom the pergunnah was restored on condition of his paying an annual tribute.

6. Immediately on hearing of the defeat and death of Kaim Khan, Sufdur Jung seized on all the property of the Furruckabad Nawabs, imprisoned their families, and stripped them of their jewels. Ahmed Khan, however, the younger brother of Kaim Khan, who had hitherto resided at Delhi, succeeded in making his escape to Mhow, collected some

adherents, and killed Nuwul Rae, the agent of Sufdur Jung's tyranny, and then re-occupied Furruckabad. The Kuther Rohillas agreed to make common cause with him, and Hafiz Rahmut despatched Permal Khan and other Sirdars to his assistance, promising to join him in person if requisite. Thus reinforced he marched to meet Sufdur Jung, and completely defeated him at Putialli, 12 miles from Furruckabad. The action was decided by Soorujmul Jât, who had joined Sufdur, withdrawing his Bhurtpoor forces from the field: Sufdur himself was wounded, and had to fly for his life. Ahmed Khan despatched his son Mahmood to invade Oude, while he himself besieged Allahabad; and the Kuther Rohillas, under Sheikh Kubbeer and Permal Khan, took possession of the Oude Pergunnahs of Khyrabad and Shahabad, which adjoined Kuther. Sufdur checkmated the allies by calling in the aid of the Mahrattas, and defeating Azim Ahmed Khan's brother at Etawah. Ahmed Khan was compelled at once to raise the siege of Allahabad and retreat to Furruckabad, where he was rejoined by Mahmood. Sadoollah Khan, third son of Ali Mahomed Khan, who had marched from Aonlah at the head of 12,000 men to join Ahmed Khan, was intercepted and utterly defeated by the Mahrattas as soon as he crossed the Ganges, and, with difficulty, succeeded in making his escape back to Aonlah, accompanied by three men only of his entire force. There he was soon joined by Ahmed Khan and the Sirdars of Mhow and Furruckabad with their families. At the end of the rains Sufdur Jung and the Mahrattas under Mulhar Rao, who had re-captured Furruckabad, crossed the Ganges by Ramghât into Kuther, and defeated the Rohillas at Islam Nuggur in Aonlah, 14 miles from Bisowli. The latter were compelled at once to retreat from Aonlah, and made their way to Chilkea, near the foot of the hills, where they entrenched themselves in the jungles. The conquerors, leaving Amils in Bareilly and Aonlah, marched on in pursuit, but were detained for four months before the entrenchments at Chilkea, without gaining any decisive advantage, while their forces were decimated by sickness. The Mahrattas were weary of the contest in which no plunder was to be gained, and Sufdur Jung hearing of the advance of Ahmed Shah Douranee to Lahore, and the utter confusion of affairs in Oude, was anxious to have his hands disengaged. A treaty was consequently signed, by which the Rohillas obtained favourable terms, and the restitution of Ahmed Khan's estates was one of the stipulations. After four days Sufdur commenced his march to Lucknow, and was accompanied by Hafiz Rahmut as far as Mahanee, 7 coss from Lucknow. On taking leave he was presented by the Wuzeer with a valuable khillut and a sunnud from the King for the Pergunnahs of Poorunpoor and Subna, which were granted in jahgeer to his family. On his return Hafiz directed his attention to the management of the revenues and police of the country, and particularly to the Pergunnahs of Mehairabad and Jellalabad, where a military force was required to bring some refractory zemindars to order. In 1753, Abdoollah Khan and Fyzoollah Khan, the elder sons of Ali Mahomed Khan, were released by Ahmed Shah, and returned to Kuther. Hafiz Rahmut, according to his son, offered to resign the government to Abdoollah, but the other Sirdars seeing his utter unfitness for the office, refused to accept him as their chief. After more than one unsuccessful attempt to assassinate Hafiz, Abdoollah Khan was compelled to quit the country, but, at the intercession of Ahmed Khan, was allowed to return; and the town of Oojhanee, with lands yielding 3¼ lakhs of rupees, were assigned to him. He resided there quietly till his death from a snake-bite in 1761. Fyzoollah Khan received the Pergunnah of Shahabad yielding 3 lakhs of rupees per annum: 4,000 horse and foot were appointed to attend him, and his residence was fixed at Rampoor, but he generally lived with Hafiz in the fort at Bareilly. During this year Hafiz built a new mahl-surae, dewan-khass, and dewan-i-am at Pillibheet, and changed the name of the town from Pillibheet to Hafizabad. At this time he received an urgent request for assistance from Sufdur Jung, who had fallen into disgrace in consequence of his having murdered the eunuch Javeid Khan from jealousy of his court influence. Hafiz marched with 40,000 men to his aid, but on reaching Haupper received a royal *firman* ordering him to return. Nothing loth, he wrote to Sufdur Jung pleading the royal order as an excuse for his desertion, and marched back to Kuther. Great temptations were held out to his men to enlist in the royal army.

7. The offers made induced Nujeeb Khan, then commanding only 100 men, to desert Hafiz, and about 2,000 men followed his example. He subsequently greatly distinguished himself at the battle of Kotela, slaying with his own hand Indur Gir Goshaen, who commanded Sufdur's forces, for which he was rewarded with the title of Nawab, and the Pergunnahs of Saharunpore, Bouria, and some of the Barah villages in jahgeer. Sufdur's defeat was mainly attributable to his desertion by Hafiz, which was in all probability a chief cause of the subsequent treatment of the latter by Shujaooddowla, son of Sufdur, who succeeded his father in 1754. Ghazee-ood-din, the new Wuzeer, after murdering Ahmed Shah, and setting up Alumgeer II., led a royal army to collect tribute from Shuja-ood-dowla for the provinces of Oude and Allahabad. As soon as he crossed the Ganges he was joined by Hafiz Rahmut and all the Rohillas. The united forces marched to Sandi Pali in Shahabad, where after some negotiations the claims of the Wuzeer were satisfied by Shuja-ood-dowla with an immediate money-payment of 5 lakhs, and a bond for the annual payment of the same sum. In 1757 the Mahrattas again threatened an invasion of Kuther, and one body crossed the Ganges near Sookur Tâl, but were driven back by Bukhshee Sirdar Khan; and the news of the invasion of Hindustan by the Douranee Chief forced them at once to break up their camp, and march with all speed to oppose him. As soon as Ahmed Shah entered the Doab, Hafiz and all the Rohillas at once joined him, and accompanied him to Delhi, whence Hafiz was despatched to Bhurtpoor to demand *peshkhush* from Rajah Soorujmul. At the great battle of Paniput, Hafiz being ill, the Rohillas were commanded by his eldest son, Inayet Khan, and by his cousin Doonde Khan. They behaved with the greatest gallantry in the action, after which Ahmed Shah rewarded Inayet Khan with a *mansub* of Rs. 7,000, permission to use the *noubut*, and the district of Etawah; while to Doonde Khan was assigned the district of Shekohabad, both of which, however, were still in the possession of the Mahrattas. Hafiz was appointed the Shah's "*Vakeel-i-mootlaq*," or special agent, at the Court of Delhi. To expel the Mahrattas from Etawah, Moolla Mohsin marched from Kuther with 10,000 horse. Near the town he was opposed by the Mahrattas under Kishen and Bala Pundit, but they were defeated, and retreated across the Jumna. Mohsin Khan then occupied the fort of Etawah, but could collect no revenue, till the arrival of Sheikh Kubbeer and Moola Baz Khan, with a reinforcement of 5,000 men, and a train of artillery, enabled him to attack the forts of the zemindars with effect. Many of the smaller forts were then captured and destroyed. At this time a severe famine in Mewat caused a vast emigration of the inhabitants: many of them reached Kuther, and were employed by Hafiz for two years in raising a mud fortification round Pillibheet. Many became converts to Mahomedanism, and settled down permanently in Bareilly, where they are known as Mewattis, and are noted for their thieving, turbulent, and lawless character. In 1760 Hafiz marched to Furruckabad to aid his old friend Ahmed Khan Bungush against an invasion threatened by Shuja-ood-dowla, but hostilities were averted, and Hafiz returned to Bareilly, leaving Inayet Khan at Furruckabad. At the end of the same year Saad-oollah Khan died of consumption—according to Hamilton of consumption: of strong drink according to Nawab Mustajah Khan. In 1763 Hafiz and Inayet Khan marched to Etawah to reduce the refractory zemindars of Pergunnah Koomait, who, relying on their strong forts among the ravines on the right bank of the Jumna, which they deemed inaccessible to artillery, had entirely withheld the payment of revenue. They defended themselves with great bravery, but the Afghans stormed their forts, and put several of their principal men to the sword, when an annual tribute was agreed to, and the arrears paid up. Hafiz and his son then returned to Bareilly, whence Inayet Khan, with a contingent of 6,000 men, marched to join Shuja-ood-dowla in his expedition to Patna, against the English force under Major Carnac. He was present at the battle of Patna on the 3rd May, 1764, but returned to Bareilly at the commencement of the rains. In the course of this year a tremendous fire broke out in the town of Bareilly, by which more than half the houses were consumed, and 1,500 persons are said to have been burnt to death. Hafiz afforded every assistance in his power to the sufferers. When the new buildings were rising apace, many of the largest houses were destroyed by an earthquake, large fissures opened in the earth, the tanks and

reservoirs were left dry, and water was thrown up in places which before were dry. The shock was felt with equal severity throughout the whole province of Oudh, and for violence and duration is said to have been exceeded by none on record except that which occurred in 1506 A.D., in the reign of Secunder Lodi. After the battle of Buxar, on the 23rd October, 1764, Shuja-ood-dowla, who no longer considered his own dominions secure, sent his family and treasures to Bareilly, whither he himself followed in hopes of inducing the Rohillas to join him; but both Hafiz and Ahmed Khan Bungush declined to act. Shuja then called in the Mahrattas under Mulhar Rao, but was utterly defeated at Korah in May, 1765; and, after another fruitless attempt to get the Rohillas to move, he signed the treaty of peace of August, 1765, and his family returned to Lucknow accompanied by Ikhtear Khan, the Amil of Crore. In 1769, notwithstanding the strong opposition of all the Sirdars, Hafiz abolished all duties on merchandize throughout his dominions. He also levelled the mud fortifications of Pillibheet, and raised a strong brick wall round the town, built a strong mud fort at Jellalabad, and founded the town of Hafizgunj between Bareilly and Pillibheet. At the end of the year he paid a visit to Shah Alum at Allahabad, and on his return built a fine mosque at Pillibheet which cost him three lakhs of rupees. In the next year his troubles recommenced. In 1770, Nujeeb-ood-dowla joined the Mahrattas, intending to attack Furruckabad, but died at Haupper, and was succeeded by his son Zabita Khan, who advanced with the Mahratta army commanded by Mahajee Scindhia, Tookajee Holkar, and Ram Chunder Gunesh. Hafiz at once joined Ahmed Khan at Furruckabad with 15,000 men. Zabita Khan left the confederacy and returned home. Hafiz was defeated by the Mahrattas in several skirmishes, and at length agreed, much to the disgust of Inayet Khan, to cede Etawah, which had been gallantly defended by Sheikh Kubbeer, while Doonde Khan gave up Shekohabad. In 1770 Doonde Khan, Hafiz's first cousin, the bravest and best of all the Rohilla Chiefs, died at Bisowli at 70 years of age. Ahmed Khan Bungush died at Furruckabad, and was succeeded by his son Mozuffer Jung. Zabita Khan claimed his father's post at Delhi, but was refused, on which he prepared to attack the King, who called in the Mahrattas to his aid. Fyzoollah Khan and Sheikh Kubbeer were despatched to hold the east bank of the Ganges and watch the course of events. Zabita Khan was attacked by the Mahrattas, who drove him from Sookurtal to Nujeebabad, which they captured, taking his family and treasures, plundering the town, and destroying all the mosques, and a beautiful monument which had been erected to Nujeeb-ood-dowla. All his troops were dispersed: Fyzoollah Khan went off to Rampore, and Sheikh Kubbeer with his force returned to Bareilly. Here all was in consternation. It was foreseen that the Mahrattas would certainly overrun the whole of Kuther, and neither Pillibheet nor Bareilly were capable of offering a prolonged resistance. All the Sirdars with their families fled to Nanukmutta in the Turai at the foot of the hills; while first Zabita Khan and then Inayet Khan, son of Hafiz, went to solicit aid from Shuja-ood-dowla against the invaders, who had meanwhile taken Amroha, Sumbhul, and Moradabad. Shuja declined to interfere unless Hafiz Rahmut came to him in person, and Mr. Harper (Collector of the *Peshkush*) was sent to bring him. Negotiations were opened, and the Mahrattas agreed to restore Zabita's family and to evacuate Rohilkhund on receipt of 40 lakhs of rupees, provided Shuja-ood-dowla made himself responsible for the payment. This he declined to do, unless Hafiz Rahmut gave him a bond for the money. The whole of the Afghan Sirdars entreated Hafiz to consent, promising to contribute their quota, on which the deed was executed; and Shuja having made himself responsible to the Mahrattas, they quitted Kuther, leaving Zabita Khan's family at Bareilly, and the Afghan Sirdars returned to their homes, having lost no less than 8,000 persons from the effects of the climate during their four months' stay at Nanukmutta. When Hafiz reached Bareilly, he at once sent five lakhs of rupees from his own treasury to Shuja-ood-dowla; but all the other Sirdars shirked sending their quotas, pleading poverty in excuse for the non-fulfilment of their engagements. Early in 1773 Bukhshee Sirdar Khan, one of Daood's original followers, died at Aonlah at the age of 100, and his eldest son, Ahmed Khan, was appointed his successor on promise of sending to Hafiz a nuzzur of Rs. 60,000, which promise he never fulfilled. Hafiz also in this year lost one of the best of his officers—Sheikh Kubbeer. He granted such large pensions to the fami-

lies of those who died at Nanukmutta that he could not afford to fill up the gaps in his army. The Rohillas were weakened by internal feuds, and even between Inayet Khan and his father, Hafiz, disputes arose, fomented by the other Sirdars. Inayet resisted his father's authority, but finally gave himself up, and was imprisoned for a few days, and then ordered to leave the country. He proceeded to Oudh where he was well received by Shuja, but discovering the plans entertained by the latter of annexing Kuther, he went first to Furruckabad and then returned to Bareilly, where he died shortly afterwards. At the commencement of the rains the Mahrattas again approached the Ganges with the intention of attacking Shuja. They proposed to Hafiz to join them, offering him as an inducement half the territory which they might wrest from the Nawab; or if he preferred to remain neuter, to make over to him Shuja's bond for 40 lakhs of rupees, if he would give them a free and unopposed passage through Kuther. Hafiz declined both proposals, which he at once communicated to the Governor-General and to Shuja, demanding at the same time the cancelment of his bond. This Shuja promised to do as soon as the Mahrattas were defeated, and then moved his army, accompanied by an English force under General Champion, into Kuther. Hafiz joined him with all the men he could muster, but most of the Sirdars held aloof. The Mahrattas crossed the Ganges, captured Bukhshee Ahmed Khan and a force which had been sent to guard the fords, plundered the cities of Moradabad and Sumbhul, overran a great part of the country, and then retired. Shuja then repudiated his promise to give up to Hafiz his bond; and induced many of the Rohilla Sirdars to agree to desert Hafiz Rahmut and join him in his plans against Kuther. Among them were Bukhshee Ahmed Khan and the two sons of Doonde Khan. The Governor-General agreed to lend Shuja the aid of the English troops in return for a money payment of 40 lakhs on the accomplishment of the enterprise, and the expenses of the troops engaged. After driving out the Mahrattas from Etawah and Shekohabad, which he annexed without listening to the claims of Hafiz, Shuja-ood-dowla made a demand for immediate payment of the 35 lakhs due on the old bond given him by Hafiz. The service for which it had been given had never been performed, and Hafiz offered to pay Shuja as much as the latter had paid to the Mahrattas, but all was in vain. A pretext for the destruction of the Rohillas was what was wanted; no amicable settlement would have been acceptable to Shuja. In January, 1774, the second of the three brigades into which the Company's army in Bengal was divided, received orders to join the Nawab Wuzeer. On the 24th February the brigade commanded by Colonel Champion joined Shuja. The united forces marched *viâ* Shahabad into Shahjehanpore. Hafiz and Fyz-oollah Khan were almost unsupported by their own Sirdars, but succeeded in collecting a force which daily increased by the accession of large bodies of Rajpoots and of the Pathans from Mhow and Furruckabad. They in vain offered to agree to any reasonable terms, but Shuja refused to accept anything except the immediate payment of two crores of rupees. On the 23rd April, 1774, the English advanced and attacked Hafiz, whose army was posted at Kuttra, and Bukshee Ahmed Khan and his forces at once deserted Hafiz. "Hafiz and his army," wrote Colonel Champion, "consisting of about 40,000 men, showed great bravery and resolution, annoying us with their artillery and rockets. They made repeated attempts to charge, but our guns being so much better served than theirs, kept up so constant and galling a fire, that they could not advance, and where they were closest, was the greatest slaughter. It is impossible to describe a more obstinate firmness of resolution than the enemy displayed; numerous were their gallant men who advanced and often pitched their colours between both armies in order to encourage their men to follow them, and it was not till they saw our whole army advancing briskly to charge them, after a severe cannonade of two hours and twenty minutes, and a smart fire of musketry for some minutes on both flanks, that they fairly turned their backs. Of the enemy above 2,000 fell in the field, and amongst them many Sirdars. But what renders the victory most decisive is the death of Hafiz Rahmut, who was killed while bravely rallying his people to battle."

8. The Rohilla force dispersed to their homes with the exception of a small body, who accompanied Fyzoollah Khan and Ahmedyar Khan in their flight, first to Bareilly and

then to Lalldhang: others of the Sirdars went straight to Pillibheet. Shuja and his forces, said Colonel Champion, behaved with the greatest pusillanimity: gave no assistance whatever in the action, but were very active in plundering afterwards. "The inhumanity with which the late proprietors of this country and their families have been used is known all over these parts. I could not help compassionating such unparalleled misery. The Wuzeer did not cease to overspread the country with flames till three days after the fate of Hafiz was decided. Above a lakh of people have deserted their abodes. The whole army were witnesses of scenes that cannot be described." Immediately after the victory, Shuja occupied Bisowli, Bareilly, and Pillibheet, spent the hot weather at Bisowli, and thence marched to Lalldhang, where Fyzoollah Khan had been joined by many of the Afghan Sirdars. After petty skirmishing, as his troops began to suffer from sickness, and the Nawab himself was much indisposed, he offered terms to the Rohillas, proposing to make Fyzoollah Collector of the Revenues of Rohilkhund, allowing six lakhs of rupees per annum for his own expenses. This offer, and even that of a jahgeer of 10 lakhs of rupees in Rohilkhund, were rejected. Fyzoollah obtained from all the chiefs their consent to entrust him with the sole management of the negotiations; and swore to make the release of Hafiz Rahmut's family, who had all been captured, his first condition; the restoration of the jahgeers of all the Sirdars, his second; after which he would secure the best terms procurable for himself. He was introduced to the Nawab Wuzeer by Colonel Champion, and forgetting all his promises agreed to sign a treaty of peace on being secured a jahgeer of 15 lakhs per annum. A treaty was accordingly drawn out, signed by all parties, and witnessed by Colonel Champion, on the 25th October, 1774, whereby Fyzoollah Khan received Pergunnahs Rampoor, Bilaspoor, Ajaon, Thakoordwara, Rehur, Surkura, Shahabad, Chowmaila, and Sirsawan, and surrendered half of all his effects to Shuja. He bound himself to retain in his service 5,000 troops and no more; that with whomsoever the Wuzeer should make war, Fyzoollah should send two or three thousand of his troops, according to his ability, to join him; and that if the Wuzeer should take the field in person, Fyzoollah Khan should attend him with all his forces. Fyzoollah then returned to camp, and stated that he had failed in his first demand, but had succeeded in every other, and would hereafter show the treaty. As he was liberal in his promises, the Sirdars accompanied him to Rampoor. Bukhshee Ahmed Khan and about 20,000 Rohillas, unconnected with Fyzoollah, were expelled from Rohilkhund and crossed the Ganges. Shuja after appointing Mahomed Busheer to the charge of Moradabad, the Nawab Saadut Ali to Bareilly, and Himmut Bahadoor to Etawah, and paying over 15 lakhs of rupees to the English from his share of Fyzoollah Khan's effects, returned to Lucknow, where he died in January, 1775,* after giving his son Asf-ood-dowla stringent instructions not to release the family of Hafiz who were confined in the fort of Allahabad. These instructions, however, he was compelled to disobey, as the release of the family was insisted on by the Resident at Lucknow, Mr. Bristow, under instructions from Calcutta. After much discussion the Nawab in 1776 agreed to grant an annual pension of one lakh of rupees to the families of Hafiz Rahmut and Doonde Khan, in the proportion of 65,000 to the former, and 35,000 to the latter. Futteh-oollah Khan and Mohib-oollah Khan, the sons of Doonde Khan, joined Nawab Nujuf Khan at Delhi in the hope that he would provide for them; but being disappointed, they fixed their residence at Rampoor, while the majority of Hafiz Rahmut's family remained at Lucknow, subsisting on the small allowance procured for them by the British Government.

CHAPTER IV.

The Oudh Government.

1. Asufooddowla had always been jealous of Saadut Ali, and suspected that the English Government had entertained the idea of making him Shuja's successor, and

* Two accounts seem to be given of the cause of his death,—one is that he died of venereal disease: another that he brought the daughter of Hafiz Rahmut to Lucknow. She refused to marry him; and when he attempted to violate her person, stabbed him in the thigh, wounding him mortally. Nawab Mustajab Khan, the lady's brother, does not notice either story.

that it was only through the influence of Syud Moortiza Khan Mookhtiar-ood-dowla that the plan failed. One of his first acts, therefore, was to remove Saadat Ali from Bareilly, and to send him to Benares. He appointed his own father-in-law, Soorut Singh, as Chukladar of Bareilly. In 1778, the treaty of Lalldhang was renewed under British guarantee. In 1780, the Governor-General and Council, through the Nawab Wuzeer, demanded of Fyzoollah Khan to furnish a body of 5,000 cavalry as the quota stipulated by treaty for the service of the Wuzeer. Fyzoollah represented that his whole force was limited by treaty to 5,000 men, of which 2,000 were horse and 3,000 foot; that he required 3,000 for the business of his Government and the collections, but that the whole was at the command of the Wuzeer and the British Government. On the receipt of this answer, the Government resolved that Fyzoollah had evaded performance of the treaty of Lalldhang, and a deputation was sent to demand the immediate delivery of 3,000 cavalry. Fyzoollah pleaded his inability to comply with the demand and the express words of the treaty, but offered 2,000 cavalry and 1,000 infantry, together with one year's pay in advance, and funds for their regular payment in future. His offer was rejected, and Mr. Hastings met the Nawab Asuf-ood-dowla at Chunar, and signed an article permitting the Nawab Wuzeer to resume Fyzoollah's jahgeer, and to pay him in money, through the Resident, the amount stipulated by treaty after deducting the charges for the troops he was bound to furnish. For several months after the return of the Governor-General to Calcutta, he was importuned both by the Wuzeer and the Resident to permit the immediate expulsion of Fyzoollah, but he, as he left on record, never intended to allow the execution of the article. It was only meant apparently to be used as a screw to extract money. From the improving cultivation of the country under Fyzoollah's good management, it was generally believed that he had acquired immense riches. Nawab Moostajah Khan (page 130) says that, "when Fyzoollah Khan took possession of the territory granted him by the treaty of Lalldhang, he adopted every means in his power for increasing the cultivation, and in a few years so improved the country, that the produce was treble or perhaps quadruple the former amount. Being prudent in his expenditure, his coffers were well-filled, and he was enabled to entertain a large proportion of the Afghans of Bareilly, Pillibheet, and Aonlah—all of whom eagerly flocked to his standard." Accordingly, towards the end of 1782, a negotiation was opened for a pecuniary commutation of the military aid. Major Palmer was deputed to Rampore, and spent a month, as he expressed it, "in order to effect by persuasion what he could have obtained in an hour by threats and compulsions," that is, a sum of 15 lakhs, on condition of exemption from all future claims of military service. Endeavour was used to obtain from him a further sum of 15 lakhs, in exchange for which his jahgeer, which was only a life-tenure, was to be converted into a perpetual hereditary possession. Apparently he did not rely on the guarantee, for he declined the offer.* In 1788, by the treaty of the 25th July, negotiated with Lord Cornwallis by Hyder Beg Khan, the Nawab was allowed to re-impose transit duties.

2. The chief conditions were—

I.—No traders, English or Native, to be free from transit duties.

II.—*Rowannahs* to be granted on all goods crossing the border, specifying their quantity and value.

III.—Cloth, silk, metals, and cotton-goods to be liable to a duty of 2½ per cent., salt 5 per cent., and raw-cotton 5 per cent., on a fixed value of Rs. 6, per maund of Rs. 96 to the seer: everything else was to be charged 5 per cent.

IV.—Goods imported in transit and not for sale to pay the *rowannah* duty, but not the local *choongees*.

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* Mill's History of India, Vol. III., p. 337. In the text and Wilson's Notes are given all the arguments by which this whole discreditable translation was defended at the time and subsequently by Mr. Hastings.

3. On the 18th July, 1794, Fyzoollah Khan died, leaving eight sons, of whom Mahomed Ali, the eldest, succeeded to his father's dignities. He was a man of a haughty, overbearing disposition, and of a most ungovernable temper. In a few days he rendered himself so unpopular that Umr Khan, Nujjoo Khan, and Mahomed Sueed Khan, three of the Sirdars, proposed to Gholam Mahomed Khan, the fourth son of Fyzoollah, to depose his brother, and assume the government. He readily came into the plot, and, on the 14th of August, got into the fort with about 500 men. Mahomed Ali was wounded by a sword-cut, taken prisoner, and removed to the fort of Doongurpoor; while Gholam Mahomed, after solemnly swearing to spare his brother's life, was acknowledged as their chief by all the Sirdars. Asuf-ood-dowla on receiving the news at once sent orders to Gholam Mahomed to send his brother to Lucknow without delay, and threatened vengeance if the order were not obeyed. The conspirators determined at once to put Mohomed Ali out of the way, and he was accordingly shot during his sleep by one Ahmed Khan. On hearing of the murder, the Nawab with his forces, attended by Mr. Cherry, the Resident, marched from Lucknow, while eight regiments of infantry and 500 cavalry, under General Abercrombie, advanced by forced marches from Futtehgurh to the bridge over the Sunka river, about seven miles north of Bareilly, where it was intended to await the junction of the Lucknow forces. It was the purpose of the Governor-General to wrest the country entirely from the family of Fyzoollah Khan, but the rapidity of the events made the arrival of the instructions, forwarded to this effect to General Abercrombie, too late for the plan to be carried out.* Gholam Mahomed in a few days collected round him a rabble of 25,000 men, with whom he proposed to march to Bareilly. In three days he reached Meergunj, and on the fourth (the 28th October, 1794), he crossed the Dojora, and took up a position with the village of Bhitoura in his rear. He at once attacked four regiments and the cavalry, who were posted under the command of Colonel Barrington, on the north side of the Sunka Bridge. At the same time the Afghan horse, under Nujjoo Khan, Umr Khan, and Bulund Khan, charged the left wing. Colonel Barrington ordered the cavalry to advance in front of the infantry to skirmish with the enemy, and then retreating on the infantry to draw the Afghans within range of the guns.

4. The enemy's horse, however, charged so rapidly that they overtook the British cavalry, who fled in the greatest confusion, and coming back pell-mell on the infantry, without leaving room for the fire of the artillery, the whole left wing was thrown into disorder, and Colonel Barrington, Colonel Bolton, and another Colonel, with several officers of inferior note, were among the killed. The triumph of the Rohillas, however, was of short duration, as the right wing under General Abercrombie stood firm. The Afghan cavalry was annihilated by the fire of the artillery; and after a short struggle, during which many of the Rohilla resaldars were killed or wounded, there was a general flight. Gholam Mahomed, who had been posted during the action on the eminence where now stand the tombs of the officers who were killed, dismounted from his elephant, and gallopped off on horseback straight to Rampoor, whence he and his family fled to Futtachore. General Abercrombie marched on to the Dojora, and there halted for a day, and then advanced to Meergunj, where he was joined by Mr. Cherry and the army of the Wuzeer, which had been at Tissooa, 17 miles south of Bareilly, during the action. The combined forces marched on through Tanda, Thakoordwara, and Rehur to Futtachore, where Gholam Mahomed, seeing the futility of further resistance, surrendered himself to Mr. Cherry, and was sent off under guard to Benares. The army returned *viâ* Rampoor to Bareilly, where final arrangements were concluded. One-half of the territory held by Fyzoollah Khan was resumed, all his effects were given up to the Wuzeer, and the remaining territory was granted to Ahmed Ali, the son of Mahomed Ali, under the express guarantee of the British Government; but as he was only seven years of age, Nusroollah Khan, his maternal uncle, was appointed his

* Mill's History, Vol. VI., p. 33.

guardian, with a sala ry of Rs. 40,000 per annum. Each of the three elder sons of Fyzoollah received an annual pension of Rs. 24,000, the three younger 20,000, and Gholam Mahomed 18,000 per annum. The British force then returned to Futtehgurh, and the Nawab Wuzeer to Lucknow. Between 1794 and 1798 the Oudh Durbar was inspired with extreme anxiety by the incursions of the Goorkhas on the northern frontier of Rohilkhund. They captured and retained Kilpoory for some time, but were eventually driven out by the forces sent from Bareilly under Ata Beg and the Nazim, Shimbhoo Nath. Asuf-ood-dowlah died in 1797, and was succeeded by Wuzeer Ali: he was displaced after a few months on a charge of illegitimacy, and succeeded by Nawab Saadut Ali on the 1st January, 1798. The administration of the Nawab Wuzeer's amils appears from all accounts to have been tyrannical and exacting in the extreme, and the district seems to have lost its former prosperity, and large tracts of land fell out of cultivation. The general appearance of the country is well described by the Reverend Mr. Tennant, an apparently unprejudiced observer, who accompanied a British force which was sent across the Doab and through Rohilkund to Lucknow in 1799, after Wuzeer Ali's outbreak at Benares. The route lay through Chundousi, Besouli, Aonlah, Alligunj, Bareilly, and Fureedpoor. His remarks are so graphic that I transcribe some of them in detail, as his book (Tennant's Indian Recreations) is now, I believe, out of print. Writing on the 2nd February, 1799, he says,—" Bareilly is a large town, the capital of Rohilkhund. This fine country we have passed through has within the last 20 years become a vast desert. Extensive wastes everywhere meet the eye, which were lately in cultivation, but which are now covered with long grass, which in the hot season becomes so parched as to be easily combustible. Such an extent of desolate and rich fields is nowhere to be met with but in Rohilkhund: amidst the present solitude and gloom of this province, you see evident traces of its former cultivation. The clods left by the plough are not yet melted down so as to assimilate with the surface: nor is the grass of that extraordinarily coarse and reedy species which rises upon fields in their primeval wildness, or that have been long out of tilth—a very little effort would again bring it back to its productive state were there inhabitants to cultivate the soil. But, from the quantity of land under crops, the population of Rohilkhund must be very small. The wild animals are in danger of devouring the people and their subsistence. You here scarcely ever see a barley field that has not several huts of straw to accommodate watchmen in the night. The deer invade the crops in such numbers that without this precaution they would be destroyed. It was, I believe, one of the charges against Mr. Hastings that he lent a brigade to Asuf-ood-dowlah for the extermination of the Rohillas. The face of the country offers but too strong evidence of the fact of depopulation, but it must have been owing to a rigorous policy afterwards that the country remains desolate. Bareilly is a large town, and crowded with inhabitants, who loiter or wander through the streets without much appearance of business. It is probable that the want of protection forces a great number into the town; but how they support themselves there does not admit of an easy solution. Few manufactures are vended in a country where the inhabitants are scanty, and where even these are so poor as not to aspire at any of the luxuries of life. Sweetmeats and confections, different kinds of grain and ornaments for the women, seem a great part of the commodities that are exposed for sale in the shops. Brazen water-pots are here manufactured, but in smaller quantities, since the ruin or emigration of all the wealthy chiefs. The fort is a large irregular mass of building, equally destitute of elegance or strength. It may, however, prove a check on an irregular army without a battering train. Like all the other forts in India, it has no bastions for guns. The sugar-cane, which thrives remarkably throughout the country in Rohilkhund, is more luxuriant than perhaps in any part of India.

"The first march from Bareilly to Fureedpoor conveyed us for 14 miles through fields almost entirely waste. Two bridges of brick facilitated our passage over two small rivers, which water this once plentiful region. Near the line of march lies Kuttera—a

motley assemblage of ruinous mud-houses, not one-tenth part of which are at present inhabited." Again, after speaking of the sandy barren character of the country about sandy point on the Oudh frontier, he says,—"The protection of Government, slight as it may be, has rendered this comparatively barren sand to become more productive than the rich plains of Rohilkhund, where the people seem to feel no other effects of the Oudh Government than its oppressions or its vengeance." By the Treaty of 10th November, 1801, between the English Government and the Nawab Saadut Ali, the Province of Rohilkhund, together with the rest of the Ceded Provinces, was made over to the Company, and placed under the administration of a Board of Commissioners under the presidency of Mr. Henry Wellesley, brother of the Governor-General, sitting at Bareilly.

CHAPTER V.

1. THE transfer of the district to British rule was made without disturbance. Indeed, any change of government at the time must have been for the better. Among the charges of mis-government preferred against the Nawab Wuzeer by the Governor-General, the two following were the chief—

Mill and Wilson's History of India, Vol. VI., p. 179.

I.—The want of a judicial administration for the protection of the lives and property of the subjects, for the detection and punishment of crimes, for the redress of grievances, and for the adjustment of disputed claims.

II.—The abuses prevailing in the administration of the revenues, arising principally from the destructive practice of anticipating the revenues, of assigning the charge of the collections to persons who offered the highest terms or the largest amount of *nuzzurana;* from the uncertain tenure by which the amils held the charge of their respective districts; the violation of the engagements contracted between the amils, zemindars, under-renters, and ryots; the arbitrary and oppressive exactions which pervaded the whole system of the revenue through every gradation from the amil to the ryot; and the injurious mode of making the collections.

2. The result of the system above described was, that many of the inhabitants had emigrated to Rampore, and many more to the Turai; large tracts had fallen out of cultivation; and all the people were in hopes of getting a little breathing time under the strong English rule. The first disturbance of tranquillity was in 1805. While the English army was engaged in the siege of Bhurtpoor, Ameer Khan, a Rohilla adventurer, who had found the means of collecting a predatory force, made an incursion into Rohilkhund, of which province he was a native. He was hotly pursued by General Smith with six regiments of cavalry and some horse artillery. At Moradabad Ameer Khan did some mischief; but he was detained before the house of the Judge which had been prepared for resistance, and in which the English residents had taken refuge. They defended themselves here for two days, when they were relieved by the approach of General Smith. Ameer Khan then moved off to the north, destroying and plundering the villages that lay in his route; he was intercepted and defeated at Afzulgurh. After the plunder of a few more villages, and some fruitless operations against our detachments and convoys, his force was completely broken up and scattered, and he re-crossed the Ganges attended only by 100 men, with whom he rejoined Holkar's army. In the same year, in the east of Bareilly, Man Singh and Bhujja Singh, Junghara zemindars of Eentgaon in Beesulpoor, fell into arrears of revenue, and took to the jungles. They soon collected a band of adherents, and for some months kept all the eastern pergunnahs in a state of alarm. During the rains they settled at Poorunpoor and plundered in every direction. Out of 123 villages in Poorunpoor Subna, all but 37 were deserted. Pergunnah Murori was thoroughly harried, and, out of a revenue of Rs. 39,577,

it was only found possible to collect Rs. 15,800. When pursued the rebels took refuge in Mohomdi in the Nawab Wuzeer's territory, where they were sheltered by the zemindars of Moti Khera and Gopa Mow Peekanee. In 1806, after giving a good deal of trouble, the band was dispersed, and the leaders killed,* and the district remained at peace till 1816. At that time there was a general spirit of discontent throughout the whole district. The Rohillas, notorious for their military propensities and impetuous disposition, were compelled to live in a state of irksome tranquillity. Among them were representatives of families formerly of rank and consideration, which had been reduced to insignificance by the change of government, and who where utterly deprived of all hope of recovering their lost position. The system that sought to render all alike amenable to justice, and to put them on an equality before the law, even with their old Hindoo subjects, was peculiarly distasteful to men who regarded themselves as superior to all law, able to protect their own rights, and avenge their own wrongs if they were only left free to do so. The defects of the judicial administration, its expensiveness and delays, the unrelenting pressure of the assessments on the land, and their recent, sudden, and excessive enhancement in 1812, and the failure on the part of Government to fulfil their distinct promises of a permanent settlement*--all these causes enhanced the unpopularity which difference of origin and religion affixed to a foreign government: neither was the past forgotten. The defeat of the Rohillas at Bithoura, 22 years before, which was currently attributed not to the superior valour and discipline of the victors, but to the treachery of their own leaders, and the still fresh recollections of their past power under the loved Hafiz Rahmut—all rankled together in the hearts of the Mahomedans. The Magistrate, too, Mr. Dumbleton, was exceedingly unpopular owing to his reserved disposition and uncourteous manners. In this temper of men's minds, Regulation XVI., 1814, for the imposition of a new house-tax, was promulgated. Few of the principal men would undertake the apportionment and collection of the tax in their respective mohullas; and those who at first assented were compelled by pasquinades and popular songs, by abuse and threats, to decline the fulfilment of the duty. Frequent assemblages of the people were held, especially at the house of Mufti Mahomed Evaz—an individual of great age and reputed sanctity, who was held in profound veneration throughout Rohilkhund. Business stood still, the shops were shut, and multitudes assembled near the cutcherry to petition for the abolition of the tax. The Magistrate, finding the people unwilling to assist, ordered the assessment to be made by the kotwal—a Hindoo of an overbearing and tyrannical disposition. His harsh measures aggravated the popular discontent. On the 16th April mobs of both Mahomedans and Hindoos assembled in the streets and in the vicinity of the Mufti's house. The Magistrate went down to the city attended by a few horsemen and 30 sepoys of the Provincial Battalion: as he advanced clearing the streets, the mob fell back; but when near the Mufti's residence, they turned to cover his flight. The sowars who went forward to clear the road were resisted by the people, who were armed with swords and pikes, and two of the troopers were killed and several wounded. The sepoys then fired, but though many fell, the mob stood their ground until the escape of Mahomed Evaz was secured. He received a slight wound in the affray, but he succeeded in reaching the Hoseinee Bagh, where the green flag of Islam was hoisted, and it was proclaimed that the religion of the Faithful was in danger. He was at once joined by a number of armed Mahomedans from the town; and letters having been despatched to the neighbouring districts, Mahomedans from Pillibheet, Shahjehanpore, and Rampore began to flock in. In the course of two days about 5,000 men were assembled, armed with swords and match-locks. The force at the disposal of the Magistrate consisted of only 270 men of the 27th Native Infantry, 150 of the Provincial Battalion, and two guns. Troops were sent for from the neighbouring stations, and a regiment of irregular cavalry under Captain Cunningham, and a 2nd Battalion of the 13th Native Infantry under Major Richards, started by forced marches from Moradabad, and the former arrived on the 19th. Repeated conferences were held with the Mufti and his chief adherents by officers deputed by the Magistrate. The Mufti was willing to treat, but he could not control his adherents: and many of the more respectable individuals, including

*Collector to President of Board of Revenue, letters dated 7th and 11th March, 1806, &c.

*See Board of Commissioners letter to Governor-General dated 27th October, 1818, para. 15.

the family of Hafiz Rahmut, who had at first joined the insurgents, withdrew. The rioters claimed the abolition of the chowkeedaree tax, the surrender to them of the Kotwal to suffer the law of retaliation for the blood shed on the 16th, provision for the families of those who fell on that occasion, and a general amnesty. As compliance with these terms was refused, they hastened to decide the struggle before the arrival of the 13th Native Infantry, of whose approach they were aware. On the morning of the 21st they commenced proceedings by murdering the son of Mr. Leycester, one of the Judges of the Court of Circuit, as he was passing unarmed from one post to another. This was followed by a general charge on the sepoys, who were greatly outnumbered and surrounded. Captain Cunningham with his cavalry at once charged the rebel masses, and threw them into confusion. They then took up a position in a grove surrounded by low walls, but were soon driven out by the troops, who pursued them into the old town, and set fire to the huts in which they had taken shelter. The conflict was soon over, and the insurgents dispersed leaving between three and four hundred dead, and a large number of wounded and prisoners, while the loss to the troops was only 21 killed and 62 wounded. The arrival of the 13th Native Infantry settled the matter, and the town submitted peaceably to the regulations. Of the rioters, the Mufti and some of the principal ring-leaders quitted the Company's territories, and retired to Tonk. Of those apprehended the greater number were at once pardoned and set at liberty on promise of good behaviour, at the suggested intercession of their countrymen in the ranks of the Provincial Battalion and the Rohilla horse, who had faithfully discharged their duty, although in deadly conflict with many of their relatives and friends. The numerous bodies of Mahomedans who were on the march from all sides to join the insurgents at once returned to their homes when news of the result of the action reached them, and the district was gradually restored to its former tranquillity.*

3. The peace of the town was again disturbed in 1837, when the Hindoo festival of the Ramnoumi fell at the same time as the Mohurrum. On the 6th, Mohurrum, all the tazeas were taken out to the Karbela, where the taziadars remained. On the 8th the Ramnoumi procession was taken out. On the 10th, the tazeas were buried and the taziadars returned to the city. Bitter disputes then arose between the Hindoos and Mahomedans: neither would sell nor render any service to the other, nor hold any communication. At length after protracted discussion the two parties were outwardly reconciled by Mr. Clarke, the Magistrate. Ill-feeling, however, still rankled, and on the 16th February, 1842, Chowdhree Busunt Rae, a Kanoujea Brahmin, and the leading Hindoo of the city, who had defrayed all the expenses of the Ramnoumi, was assassinated by a Mahomedan carpet-maker, who stabbed him as he was taking a pretended petition. The assassin was hanged on the 4th April. During the famine of 1838-39 there were numerous gang-robberies and food riots, but these came to an end with the first good harvest, and tranquillity was maintained till 1857. The troops in Bareilly mutinied on the 31st May, 1857, and from that date till the city was recaptured by Lord Clyde, on the 5th May, 1858, the chief authority over the district was held by the rebel Khan Bahadoor Khan, grandson of Hafiz Rahmut Khan, and a pensioned Principal Sudder Ameen. He was given up by the Nepalese in 1860, and hanged in front of the Kotwali in the presence of an immense crowd of scowling Mahomedans. Events since 1858 are too recent for comment. A full account of the outbreak of the mutiny and rebellion in Bareilly, and the events of 1857-58, will be found in the printed narratives of the Commissioner of Rohilkhund and the District Officers.

* The above account is taken from Mill's History, Vol. VIII.

CHAPTER VI.

Administrative Sub-divisions of the District.

1. In the time of Akbar, Rohilkhund or Kuther was divided into two Sirkars, containing 60 mehals or pergunnahs, as follows :—

TABLE. 4.

Sirkar.	Mehals.	Area in Bigahs.	Area in Acres.	Revenue in Dams.	Revenue in Rupees.	Rate of Revenue per acre.
Budaon forming one Dustoor, containing 13 mehals.	Budaon ba Huveli,	1,958,601	1,224,125	73,57,571	1,83,939	0 2 4¾
	Sutasi Moondia, ...	309,758	193,599	7,95,315	19,883	0 1 7¾
	Kant, ...	627,500	392,187	24,39,369	60,984	0 2 6
	Gola, ...	29,666	18,541	11,36,631	28,416	1 8 6¼
	Kote Salbahun, ...	355,584	222,240	12,29,165	30,729	0 2 2½
	Ajaon, ...	382,461	239,038	13,62,867	34,072	0 2 3¾ B
	Aonlah, ...	114,701	71,688	6,90,620	17,265	0 3 10½ B
	Burser, ...	606,701	379,188	21,47,324	53,683	0 2 3 B
	Suneya, ...	150,810	94,256	13,15,722	32,893	0 5 7 B
	Bareli, ...	2,761,227	1,725,767	1,25,07,434	3,12,686	0 2 10¾ B
	Balai, ...	75,972	47,483	10,77,811	26,945	0 9 1
	Punar, ...	70,749	44,218	2,60,340	6,509	0 2 4¼
	Saheswan, ...	650,122	406,326	24,93,398	62,335	0 2 5½
	Total, ...	8,093,852	5,058,656	3,48,13,567	8,70,339	0 2 9
Sumbhul containing three Dustoors, Sumbhul, Chanapoor, Luknor, and 47 mehals.	Amroha, ...	320,354	200,221	63,42,000	1,58,550	0 12 8
	Azumpoor, ...	55,467	34,667	23,89,478	59,737	1 8 8
	Islampoor Bahra, ...	66,096	41,310	13,30,640	33,266	0 12 10½
	Ujhari, ...	122,021	76,263	6,97,609	17,440	0 3 8
	Akbarabad, ...	53,791	33,620	6,40,264	16,007	0 7 7½
	Islampoor Dargu, ...	11,217	7,011	4,29,675	10,742	1 8 6¼
	Islamabad, ...	25,261	15,788	3,46,348	8,659	0 8 9¼
	Bijnour, ...	60,362	37,726	33,55,425	83,885	2 3 7
	Buchhraon, ...	115,227	72,017	8,28,322	20,708	0 4 7¼
	Birori, ...	15,028	9,393	1,50,000	3,750	0 6 4¾
	Bisarah, ...	69,436	43,398	2,00,000	5,000	0 1 10
	Chandpoor, ...	77,200	48,250	41,31,071	1,03,278	2 2 2¾
	Jellalabad, ...	49,390	30,869	14,70,072	36,752	1 3 0½
	Choupala, ...	216,199	135,124	13,40,312	33,508	0 3 11½
	Jhalu, ...	26,795	16,747	2,37,809	5,945	0 5 8
	Jadwar, ...	76,751	47,969	8,28,348	20,709	0 6 11
	Huveli Sumbhul, ...	206,400	129,000	33,22,448	83,061	0 10 3½
	Deora, ...	96,965	60,603	19,24,837	48,121	0 12 8½
	Dhakah, ...	130,124	81,328	6,70,364	16,759	0 3 3½
	Dabharsi, ...	80,693	50,433	10,80,306	27,007	0 8 7
	Dudila, ...	30,031	18,769	2,10,000	5,250	0 4 5¾
	Rajpoor, ...	189,600	118,500	7,00,000	17,500	0 2 4
	Rujubpoor, ...	40,646	25,404	6,12,978	15,324	0 9 8
	Sumbhul, ...	46,400	29,000	8,50,953	21,274	0 11 9
	Seohara, ...	27,945	17,465	13,33,732	33,343	1 14 6½
	Sirsi, ...	201,620	126,012	9,58,769	23,969	0 3 0½
	Sahaspoor, ...	52,410	32,756	6,44,804	16,120	0 7 10½
	Sher Kot, ...	93,870	58,669	49,21,051	1,23,026	2 1 6½
	Kundarkhi, ...	66,184	41,365	6,74,936	16,873	0 6 6¼
	Kiratpoor, ...	81,973	51,233	24,10,609	60,265	1 2 10
	Kachh, ...	99,668	62,292	12,48,995	31,225	0 8 0¼
	Gundaur, ...	18,577	11,610	7,51,520	18,788	1 9 10¾
	Gunaur, ...	51,035	31,897	2,67,919	6,698	0 3 4¼
	Khankari, ...	31,546	19,716	2,00,000	5,000	0 4 0¾
	Lukhnor, ...	246,440	154.025	24,99,208	62,480	0 6 6
	Liswah, ...	1,871	1,170	1,00,000	2,500	2 2 2
	Moghalpoor, ...	168,674	105,421	35,80,300	89,508	0 13 7
	Mujhaulah, ...	142,460	99,037	7,37,556	18,439	0 3 0
	Mandawar, ...	65,710	41,069	12,56,995	31,425	0 12 3
	Naginah, ...	99,233	62,020	26,47,242	66,181	1 1 1
	Nehtaur, ...	35,975	22,484	17,38,160	43,454	1 14 6
	Neodhuna, ...	73,000	45,625	34,675	7,617	0 2 8
	Neroli, ...	181,821	113,638	14,08,093	35,202	0 4 11½
	Sirsawah, ...	37,502	23,439	3,08,065	7,702	0 5 3 B
	Kabur, ...	33,232	20,670	5,66,539	14,163	0 10 11½ B
	Shahi, ...	82,417	51,510	9,00,496	22,512	0 7 0 B
	Hatmanah, ...	5,703	3,565	2,50,000	6,250	1 12 0½ B

2. In the above the bigah is taken as the Akbari bigah of 60 guz of 33 inches each to the side: the area is then 3,025 square yards, or ⅝th of an acre. 40 Dams = one rupee, which in Akbar's time contained 175 grains of pure silver: at present it contains 165 grains. Akbar's rupee therefore was intrinsically worth 1·06 of the rupees now current. The pergunnahs now included in Bareilly are marked B. Their revenue aggregated Rs. 5,02,226, or Rs. 5,32,359 of our currency.

3. On the cession of Rohilkhund in 1801, the province contained the following pergunnahs:—

Sumbhul, Moradabad, Moghulpoor, Amroha, Neroli, Bijnour, Sirsi, Koondurkhi, Maloli (?), Hassanpoor, Dhaka, Dabharsi, Oojhari, Sirsa, Salimpoor, Islampoor, Bahru, Dunra, Sudra, Tigree, Nujeebabad, Sherkot, Afzulgurh, Nagina, Keerutpoor, Mundawar, Daranuggur, Byjore, Chandpoor, Azimpoor, Bashta, Jhaloo, Akbarabad, Huldour, Nallour, Saheswan, Asudpoor, Rajpoorah, Budaon, Aonlah, Bisowli, Sutasi, Oojhaini, Bareilly, Richa, Shahi, Sunka, Pillibheet, Jehanabad, Sulempoor, Jhooksa, Fureedpoor, Baragaon, Kote Salbahun, Seroli, Meeranpoor-Kutra, Tiswa, Beesulpoor, Negohi, Murori, Tilhur, Jellalpoor, Powain, Subna, Poorunpoor, Kote, Kashipoor, Roodurpoor, Hassanpoor, Bazpoor, Kilpoory, Guddurpoor, Bilheri, Shahjehanpoor, Kant, Mhairabad, Purumnuggur, Khyragurh, Rehur, Thakoordwara, Surkura, Ajaon, Sheregurh, Sirsawan, Chowmahla.*

*Mr. H. Wellesley to Governor-General, dated March, 23rd 1802.

4. Rohilkhund was then divided into two districts, Bareilly and Moradabad. The former contained the following pergunnahs:—

Bareilly, Richa, Shahi, Sunka, Pillibheet, Jehanabad, Poorunpoor-Subna, Fureedpoor, Suneha, Meeranpoor-Kutra, Tiswa, Beesulpoor, Baragaon, Negohi, Murori, Tilhur, Jellalpoor, Powain, Kashipoor, Roodurpoor, Kilpoory, Guddurpoor, Bilheri, Shahjehanpore, Kant, Mhairabad, Purumnuggur, Khyragurh, Rehur, Ajaon, Sheregurh, Sirsawan, and Chowmahla.†

† Mr. Wellesleys letter, March 23rd, 1802.

5. In 1805, Aonlah, Budaon, Kote Salbahan, Oojaini and Sulempoor, Jhooksa were transferred from the Moradabad to the Bareilly District. In 1813 a separate district of Shahjehanpore was formed from Pergunnahs Shahjehanpore, Murori, Powain, Byramnuggur, Meeranpoor-Kutra, Khyragurh, Tilhur, Mhairabad, Kant, Jellalabad, Khera Bujhera, Gola, Poorunpoor-Subna. Byramnuggur was then transferred to Furruckabad, and forms part of Tehseel Aligunj. Gola now belongs to Lukhimpoor in Oudh.

6. In 1821 the Budaon District was formed out of Pergunnahs Kote Salbahun, Oojhaini, and Sulempoor from Bareilly, and Saheswan, Sutasi, Judwar, Asudpoor, Rajpoorah, and Goonour from Moradabad. In the same year Pergunnah Nawabgunj was formed out of Crore Bareilly. In 1823, the Pergunnahs of Pillibheet and Jehanabad, Ritcha, and Roodurpoor, and Bilheree were detached from Bareilly, and formed into a separate district; but, in 1841, were again included in Bareilly. In 1835, North Serowli, and in 1842 the rest of the pergunnah, was transferred from Moradabad to Bareilly. In 1842, Pergunnah Murori was transferred with some other border villages from Shahjehanpore to Bareilly, and considerable alterations were made in the pergunnah boundaries by transfer of villages. In 1858 the Pergunnahs of Gudderpoor, Kilpooree, Bilheree, Roodurpoor, and Nanukmutta were severed from Bareilly, and formed into the Turai District. In 1861, a large strip of country, comprising 133 mouzahs, assessed at Rs. 1,19,158, was taken from Pergunnahs Chowmahla, Sirsawan, Ajaon, and Serowli, north and south, and granted to the Nawab of Rampore in reward for his services in 1857. In 1865, Poorunpoor was transferred from Shahjehanpore to Bareilly. In 1870, Bilheree and Nanukmutta were taken from the Turai and rejoined to Bareilly, and in 1872 were re-transferred to the Turai District.

7. The pergunnahs which now compose the district of Bareilly are Crore, Fureedpoor, Beesulpoor, Murori, Nawabgunj, Aonlah, Suneha, Bullia, South Serowli, North Serowli, Shahi, Ajaon, Chowmahla, Ritcha, Kabar, Sirsawan, Pillibheet, Jehanabad, Poorunpoor.

8. Pergunnah Crore formed part of the Old Akbari Pergunnah of Bareilly. It received its name in the Rohilla times, as its revenue was a crore of dams. Fureedpoor was a part of the old mehal of Bareilly, originally known as Tuppa Khulilpore. Sheikh Fureed, Amil, erected a fort at Pura, and called it Fureedpoor, and as the collections from all the Khulilpore and Tissooa villages were made here, the pergunnah received the name of Fureedpoor in the Rohilla times.

9. Beesulpore was part of the old mehal of Bareilly. It became a separate pergunnah in the Rohilla times, when Sher Khan, Amil, erected a fort at Beesulpoor, and made the collections there.

10. Murori also formed part of Bareilly. Hafiz Rahmut separated Murori and about 35 other villages from Tehseel Beesulpoor, and granted them in jahgeer to his Dewan Rao Puhar Singh. The jahgeer was resumed by the Nawab Wuzeer's orders, and the villages composing it have since been known as a pergunnah.

11. Nawabgunj was originally a portion of Bareilly. It was mostly included in Crore, until the fourth settlement, when a tehseeldaree was established at Nawabgunj, and a new pergunnah formed by taking villages from Crore, Beesulpore, and Pillibheet.

12. Aonlah is an old pergunnah.

13. Suneha originally included also Bullia and Sulempoor. Bullia Pergunnah originally belonged to Suneha, then to Crore. In 1814 it was included in Sulempoor; in 1821, when Sulempoor was separated from Bareilly, some villages adjoining Bullia were separated from Sulempoor and placed under a separate Suzawul Tehseel. Since then these villages have been considered a pergunnah, and called after Bullia, the largest of the separated villages.

14. Serowli is the new name for the old pergunnah of Burser. The name was changed at the commencement of the British rule, as the collections were made at the tehseel, which was in Kusbeh Serowli, a few miles from the old town or rather village of Burser. Till 1835 this pergunnah was in Moradabad. In that year Meergunj and the other Serowli villages east of the Ramgunga were joined to Bareilly under the name of Pergunnah North Serowli. In 1842 the western villages were also separated from Moradabad, and called Pergunnah South Serowli.

15. Shahi is an old Akbari Pergunnah, but the old limits have not been preserved. Part is now included in Pergunnah Crore, the rest is in Meergunj Tehseel.

16. Ajaon is also an old pergunnah, but very few villages of it now remain, as the greater part of the pergunnah was transferred to the Nawab of Rampore in 1861.

17. *Chowmahla-Ritcha.*—In the Rohilla times Hutmunah, Sirsawan, and Kabur were divided into two circles,—one with some Kumaon villages was called Ritcha, and the other, with some villages from Roodurpoor, was called Chowmahla. Hutmuna Khas is a village to the north-east of Chowmahla. Ritcha has been but little altered: some of the Chowmahla villages were transferred to Rampoor in 1861.

18. Kabur is the old pergunnah, and has been less altered than any other in the district. Sirsawan is also an old pergunnah, but many of its villages were included in the grant to the Nawab of Rampore.

19. Pillibheet, Jehanabad, and Poorunpoor form the separate sub-division of Pillibheet, which has been separately settled and reported on by Mr. E. Colvin.

Tehseels.

20. In 1813 there were 19 tehseels in the district—*viz.*, Crore, Fureedpoor, Beesulpoor, Nawabgunj, Pillibheet, Ritcha, Jehanabad, Kabur, Buheree, Shahi, Sirsawan, Ajaon, Aonlah, Bullia, Tissooa, Budaon, Kote Salbahan, Oojhaini, and Sulempoor.

21. In 1834, after the formation of the District of Budaon, the tehseeldaries were remodelled as follows:—

Tehseel Crore containing pergunnahs			Crore.
Nawabgunj,	...	...	Nawabgunj.
Fureedpoor,	...	...	Fureedpoor.
Beesulpoor,	...	...	Beesulpoor and Murori.

Buheree,	...	...	Choumahla, Guddurpoor, Roodurpoor, Kilpoory, and Nanukmutta.
Purewa,	...	...	Ritcha and Jehanabad,
Doonka,	... ...	... ...	Ajaon, Sirsawan, Kabur, Shahi, and North Serowli.
Aonlah,	...	...	Aonlah, Suneha, Bullia, and South Serowli.
Pillibheet,	...	...	Pillibheet and Bilheree.

22. In 1851-52 Guddurpoor, Kilpoory, Roodurpoor, Nanukmutta, and Bilheree were separated off, and held Kham Tehseel, while Buheree was reduced to a Peshkari. In 1863 Buheree was again raised to a Tehsildaree with Ritcha, Kabur, and Sirsawan. Doonka was reduced to a Peshkari, and the head-quarters transferred to Meergunj, and the Tehseel of Purewa was abolished, Jehanabad being transferred to the Pillibheet Tehseel. In 1865 Poorunpoor was also included in the Pillibheet Tehseel. In 1870 another independent Peshkari, with head-quarters at Kutemar, was made out of the Pergunnahs of Bilheree and Nanukmutta, which were transferred from Turai. This has since been retransferred to that District.

23. In 1871 Meergunj was again raised to a Tehseeldaree, and Poorunpoor detached from Pillibheet, and created into an independent Peshkari.

24. Besides the Judge and Principal Sudder Ameen, there is a Sudder Ameen for the town of Bareilly, and a Moonsiff for the Tehseel of Pillibheet. The civil work in Tehseels Buheree, Meergunj, Aonlah, and Crore is under a Moonsiff, called the "Moonsiff of the Suburbs," while the Tehseeldarees of Nawabgunj, Furreedpoor, and Beesulpoor form another Moonsiffee. **Civil Court jurisdictions.**

25. The Police force of the district is as follows at the present time :— **Police.**

1	District Superintendent.	
1	Assistant to ditto.	
1	European and 3 Native Inspectors, 2nd grade.	
2	Native Inspectors, 4th grade.	
4	Sub-Inspectors,	1st ditto.
14	Ditto,	2nd ditto.
4	Ditto,	3rd ditto.
12	Head constables,	1st ditto.
24	Ditto,	2nd ditto.
36	Ditto,	3rd ditto.
36	Ditto,	4th ditto.
182	Constables,	1st ditto.
242	ditto,	2nd ditto.
182	ditto,	3rd ditto.

26. These are distributed in the following Stations, with a reserve in the lines :—

1st Class Stations.

		Sub-Inspectors.		*Head Constables.*		*Constables.*
Bareilly,	...	1	...	10	...	62
Shahi,	...	1	...	2	...	12
Meergunj,	...	1	...	2	...	12
Futtehgunj, West,		1	...	1	...	9
Aonlah,	...	1	...	2	...	12
Serowli,	...	1	...	2	...	12

1st Class Stations.—(*concluded*).

	Sub-Inspectors.	Head Constables.	Constables.
Bhamora, ...	1 ...	2 ...	12
Beesulpoor, ...	1 ...	2 ...	12
Bilsunda, ...	1 ...	1 ...	9
Burkhera, ...	1 ...	1 ...	9
Fureedpoor, ...	1 ...	2 ...	12
Hafizgunj, ...	1 ...	2 ...	12
Buheree, ...	1 ...	2 ...	12
Pillibheet, ...	1 ...	2 ...	12
Jehanabad, ...	1 ...	2 ...	12
Poorunpoor, ...	1 ...	2 ...	12
2nd Class Stations.			
Cantonments, ...	0 ...	2 ...	6
Rathora, ...	0 ...	2 ...	6
Bhojoopoorah, ...	0 ...	2 ...	6
Sheeshgurh, ...	0 ...	2 ...	6
Gynee, ...	0 ...	2 ...	6
Bhoota, ...	0 ...	2 ...	6
Futtehgunj, East,	0 ...	2 ...	6
Ritcha, ...	0 ...	2 ...	6
Deoruneean, ...	0 ...	2 ...	6
Noorea Hoseinpoor,	0 ...	2 ...	6
Amureea, ...	0 ...	2 ...	6
3rd Class Stations.			
Chobari, ...	0 ...	1 ...	3
Hardaspoor, ...	0 ...	1 ...	3
Bhuroleea, ...	0 ...	1 ...	3
Tissooa, ...	0 ...	1 ...	3
Burour, ...	0 ...	1 ...	3
Khumureea, ...	0 ...	1 ...	3
Huldee Kulan, ...	0 ...	1 ...	3
Madho Tanda, ...	0 ...	1 ...	3

27. In addition to the above there are Police paid by the Municipalities in the following places:—

I.—Under Act VI., 1868.

	Sub-Inspectors.	Head Constables.	Constables.
Bareilly City, ...	1 ...	5 ...	50
Pillibheet City, ...	0 ...	2 ...	16

II.—Under Act XX., 1856.

Cantonments, ...	1 ...	4 ...	30

28. There are also Municipal Chowkeedars:—

I.—Under Act VI., 1868.

	Jamadars.	Chowkeedars.	
At Bareilly City, ...	10	218 @ Rs. 4 and 5 per month.	
„ Pillibheet City, ...	4	70	ditto ditto.
„ Beesulpoor, ...	2	18 @ Rs. 3-8-0	ditto.

II.—Under Act XX., 1856.

Aonlah, ...	1	24
Serowli, ...	0	7
Peeas, ...	0	2
Alligunj, ...	0	4
Bisharutgunj, ...	0	5
Shahi, ...	0	8

II.—UNDER ACT XX., 1856.—*(concluded).*

Burkhera,	...	0	3
Bilsunda,	...	0	4
Burour,	...	0	5
Nawabgunj,	...	0	7
Fureedpoor,	...	0	8
Futtehgunj, East,	...	0	4
Noorea Hoseinpoor,		1	10
Jehanabad,	...	0	6

29. There are also 2,970 village chowkeedars, and 30 road chowkeedars. Thus, including *all* grades, there is a Police force of 4,274 men to a total population by the last census (1865) of 1,381,334 souls, of which 466,895 were adult males, or 3 police per 1,000 of population, and 9 per 1,000 of adult males.

CHAPTER VII.

POPULATION.

1. It is population which in the first instance gives land its value. Without population there can be no market for agricultural produce, and without a market the produce and the land from which it is raised are alike valueless. The further removed the land is from a market, the less is its value: the nearer and better the market, the more valuable is the land. I propose therefore in this chapter to shew how the population of the district has gradually increased, and of what elements it is at present composed.

2. In the years 1828-1830 a revision of settlement under Regulation VII., 1822, was carried out by Mr. H. S. Boulderson in 412 villages, from every part of the district, and in almost every pergunnah, as shewn in the margin. The area covered was sufficiently wide and diversified as to situation, soil, fertility, and cultivation, to admit of the facts elicited being accepted as giving approximately true average results for the district at the time. For the accuracy of the observations, Mr. Boulderson's high character is a sufficient voucher. On a total area of 205,170 acres he found a population of 104,166 souls, or an average of 325 per square mile of area. This refers only to the rural districts, and is exclusive of the town populations. The first general census of the district was in 1846-47. This was followed by the census of 1853, and that by the one of 1865, on which my calculations have been based. I have as yet been unable to obtain the results of the census of 1872. Detailed tables shewing the results of each census will be found in appendix.

Pergunnah.		*No. of villages.*
Crore,	...	88
Fureedpoor,	...	31
Nawabgunj,	...	61
Aonlah,	...	30
Suneha,	...	14
Kabur,	...	4
Sirsawan,	...	61
Chowmahla,	...	21
Ajaon,	...	5
Shahi,	...	84
Beesulpoor,	...	13

3. The following is a comparative abstract shewing at one view the specific population per square mile of area in each pergunnah by each general census :—

TABLE V.

Pergunnah.	Specific Population by Census of 1846.	Ditto by 1853.	Ditto by 1865.	Increase from 1846-1853 per square mile.	Ditto from 1853-1865.	Ditto from 1846-1865.	Cultivated area per male adult agriculturist.	Percentages of females to every 100 males.
Fureedpoor, ...	343·7	403·3	464·0	95·6	60·7	120·3	3·4 acres.	82·99
Crore, ...	727·9	878·6	883 0	150·7	4·4	155·1	3·9	87·49
Bulleea, ...	542·6	573·3	675·4	30·7	102·1	132·8	3·3	88·52
Suneha, ...	516·2	561·6	665·9	45·4	104·3	149·7	2·8	89·20
Aonlah, ...	423·4	535·1	586·8	111·7	51·7	163·4	3·4	87·98
South Serowli, ...	428·0	440 0	556·1	12·0	116·1	128·1	3·9	90·98
Meerganj, ...	510·4	541·5	637·1	31·1	95·6	126·7	3·0	88·36
Sirsawan, ...	553·3	580 7	704·3	27·4	123·6	151·0	3·3	88·38
Kabur, ...	538·6	578·2	645 0	39 6	66·8	106·4		90·50
Chowmahla, ...	321·0	421·5	472·3	100·5	50·8	151·3	4 3	87·30
Ritcha, ...	426·4	540·2	583 5	113·8	43 3	157·1	3·2	87·87
Nawabgunj, ...	413·3	485·4	541·0	72·1	55·6	127·7	3·6	85·76
Beesulpore and Murori, ...	384·2	415·4	532·0	31 2	116·6	147·8	2·9	84·83
Total average, ...	466·5	528 7	615·7	62·2	87·0	149·2	3·0	87·1

4. In 1853, of the entire population 26·1 per cent. were non-agricultural; in 1865 the proportion was 32·8 per cent., or a difference of 6·7 per cent. This means a larger demand and a better market for agricultural produce and consequent rather higher prices, and this result agrees with actual facts.

5. The following are the towns and large villages with a population of over 2,000.

Name of Town.	*Pergunnah.*	*Population.*
Bareilly, ...	Crore, ...	1,05,649
Aonlah, ...	Aonlah, ...	9,947
Beesulpoor, ...	Beesulpoor, ...	9,005
Fureedpoor, ...	Fureedpoor,... ...	4,940
Serowli, ...	Serowli, ...	4,585
Nawabgunj, ...	Nawabgunj,... ...	4,418
Sheopooree, ...	Aonlah, ...	4,316
Senthul, ...	Nawabgunj,... ..	4,145
Shahi, ...	Meergunj, ...	4,089
Ritcha, ...	Ritcha, ...	3,879
Bimroli, ...	Beesulpoor, ...	3,331
Bisharutgunj, ...	Suneha, ...	2,924
Burour, ...	Nawabgunj,... ...	2,996
Gynee, ...	Suneha, ...	2,906
Ramnuggur,... ...	Serowli, ...	2,715
Goorgawan, ...	Aonlah, ...	2,604
Futtehgunj, East, ...	Fureedpoor,... ...	2,557
Futtehgunj, West, ...	Crore, ...	2,451
Bullia, ...	Bullia, ...	2,451
Bilsunda, ...	Beesulpoor, ...	2,429
Salehnuggur, ...	Crore, ...	2,337
Fureedpoor, ...	Ritcha, ...	2,333
Sindholi, ...	Meergunj, ...	2,135
Huldi, ...	Meergunj, ...	2,068
Doonka, ...	Meergunj, ...	2,013

6. The following gives the agricultural or cultivating population per square mile of area at the two periods, 1846 and 1865. Unfortunately we have no record of the population at the time of last settlement, which was made between the years 1835 and 1840.

TABLE VI.

Pergunnah.	Density of agricultural population per square mile in 1846.	Density of agricultural population per square mile in 1865.	Increase between 1846—1865.
Fureedpoor, ...	279·8	377·6	97·8
Crore, ...	283 6	426·3	142·7*
Bullia, ...	388·3	467·5	79·2
Suneha, ...	401·5	495·4	93·9
Aonlah, ...	281·5	385·9	104·4
South Serowli, ...	318·2	370·1	51·9
Meergunj, ...	381·5	423·7	42·2
Sirsawan, ...	434·3	500·2	65·9
Kabur, ...	361·3	431·0	69·7
Chowmahla, ...	277·3	324·0	46·7
Ritcha	300·6	422·2	121·6
Nawabgunj, ...	319·3	386·5	67·2
Beesulpoor and Murori, ...	283·6	413·1	129·5
Total average, ...	321·9	420·7	98·8

7. Mr. Boulderson, as we have seen, gave the rural average as 325 per square mile in 1830. Between that year and 1846 there was a slight decrease, caused probably by the famine of 1838-39. Between 1846 and 1865 there was an increase of 98·8 souls

* Excluding area of city and cantonments.

of cultivating population per square mile, or 30·6 per cent., notwithstanding the rebellion of 1857. This represents a vast increase in cultivating power. In 1860-61, and again in 1869-70, when there was great drought and scarcity elsewhere, there was a great immigration from the west; and I expect that the census of this year will show a considerable increase in the northern and eastern pergunnahs.

8. The following shows the number of houses and persons to a house. This will be useful hereafter as showing approximately the number to a family:—

TABLE VII.

Pergunnah.	Number of Houses.	Population.	Average number of persons per house.
Fureedpoor, ...	21,817	115,557	5·29
Crore, ...	37,018	275,819	7·45
Bullia, ...	4,756	24,314	5·11
Suneha, ...	10,668	55,273	5·18
Aonlah, ...	15,417	75,119	4·87
Serowli, ...	6,812	32,254	4·73
Meergunj, ...	22,678	97,479	4·29
Sirsawan, ...	4,139	22,538	5·44
Kabur, ...	6,251	34,835	5·57
Chowmahla, ...	8,140	43,452	5·33
Ritcha, ...	18,283	98,025	5·36
Nawabgunj, ...	20,442	122,264	5·98
Beesulpoor and Murori, ...	35,917	196,839	5·48
Total, ...	212,338	1,193,768	5·62

9. Next to the actual number of population we have to consider how the cultivating population is composed, of what castes chiefly, and the proportion in which the land is cultivated by the industrious and the less laborious cultivating castes. This is a point of very great importance. The Coormi women and children, for instance, work in the fields with the men, who have the benefit of so much additional unpaid labour, which Brahmins, Thakoors, Mahomedans, and others, have to hire. The best cultivators in Bareilly are the Coormis, Lodhas, Kisans, Moraos, Chamars, Raeens, and Jâts. The latter are by no means as good as their brethren in the Meerut Division. The Lodhas are considered the best cultivators of all in *muttyar* or heavy clay soils. While the Coormi is *facile princeps* in loam or sandy soil. The Kisans come near them where rents are paid in money; but where kind-rents are in force, they are not nearly so industrious. The Moraos devote themselves chiefly to vegetables, tobacco, and garden cultivation generally: they are not specially first-rate at *nijkari*, or ordinary crops. There are two branches of the Moraos in the district—

(1) *The Suksena.*—These cultivate all crops, and are good cultivators as a whole, though hardly ranking above the Coormi in the long run.

(2) *The Huldia.*—So called from their fondness for cultivating *huldi*, for which they pay the highest rents known in the district. They are first-rate at all garden crops; very industrious, quiet, and tractable; hence they are highly valued by the zemindars. They are found chiefly in the villages along both banks of the Dhora.

10. The following table shows for each pergunnah the proportions per 100 acres, in which the cultivated area is held by the chief cultivating classes, and the proportion of land held by the more and less industrious castes :—

TABLE VIII.

Pergunnah.	Ahirs.	Thakoors.	Brahmins.	Chumars.	Coormis.	Kisans.	Lodhas.	Racens.	Jats.	Moraos.	Other castes.	Percentage of land held by good cultivators.	Percentage of land held by inferior.	Order in which pergunnah stands with reference to column 13.
Fureedpoor, ...	19·1	15·7	9·7	9·2	11·0	5·6	...	...	·1	3·9	25·7	29·8	70·2	XII.
Crore, ...	9·7	3·7	6·4	6·8	29·3	5·7	·1	·1	·8	6·4	31·6	49·2	50·8	VIII.
Bullia, ...	9·3	18·4	14·8	6·2	...	10·6	...	...	...	8·7	32·0	25·5	74·5	XIII.
Suneha, ...	4·4	17·2	9·3	8·4	...	23·3	·4	...	...	9·7	27·3	41·8	58·2	IX.
Serowli, ...	11·5	8·6	20·3	8·4	...	17·3	...	...	...	4·6	29·3	30·3	69·7	XI.
Meergunj, ...	2·3	8·3	11·2	6·2	14·3	18·2	...	·4	5·1	7·3	26·7	51·5	48·5	VI.
Sirsawan, ...	...	1·6	3·2	5·1	31·5	13·9	...	...	9·3	6·8	28·6	66·6	33·4	I.
Kabur, ...	·5	5·0	5·1	6·4	30·4	7·9	...	...	8·1	5·5	31·1	58·3	41·7	IV.
Chowmahla, ...	5·2	3·9	3·6	6·3	32.0	1·0	..	·3	6·0	4·9	36·8	50·5	49·5	VII.
Ritcha, ...	5·3	1·6	4·8	7·1	30·6	·9	·8	11·4	6·6	4·4	26·5	61·8	38·2	III.
Nawabgunj, ...	5·0	2·4	8·6	6·6	47·1	3·3	·2	...	·5	4·4	21·9	62·1	37·9	II.
Beesulpoor, ...	2·4	7·4	16·7	5·2	24·2	14·9	3·1	...	...	4·9	21·2	52·3	47·7	V.
Aonlah, ...	5·7	23·3	5·6	14·0	2·4	19·1	...	...	...	5·8	24·1	41·3	58·7	X.

11. Fureedpoor is last but one in the list, Bullia being the last; but here the inferiority of cultivation is counterbalanced by the superiority of its soil: while in Fureedpoor not only are the cultivators inferior in cultivating power, but nearly 50 per cent. of the area is poor sandy soil; what *muttyar* there is is all of the poorest quality, and most of the *doomut*, too, has a large admixture of sand. It is sandy loam rather than true loam, and inferior in productiveness to the *doomut* of most of the other pergunnahs.

Education.

12. In an educational point of view the district is very backward. The following shows the numbers of boys and girls under education at the different institutions at the close of 1870-71 :—

Pupils at the close of the year 1870-71.

Institutions.	Hindoo.	Mahomedan.	Others.	Total.	Cost to Government. Rs.	a.	p.
Bareilly College, ...	255	31	9	295	46,566	0	0
Middle Class School, ...	106	14	2	122	2,400	0	0
Tehseelee Schools, ...	244	58	...	302	1,554	1	11
Hulqabundi Schools, ...	869	173	...	1,042	2,023	6	4
Private Aided Boys' Schools, ...	436	228	89	753	5,496	0	0
Government and Aided Girls' Schools,	72	418	25	515	4,914	0	0
Unaided ditto, ...	80	...	...	80	...		
Unaided indigenous, ...	2,020	1,458	...	3,478	...		
Total, ...	4,082	2,380	125	6,587	62,950	8	3

13. The Government and aided private schools give a good English and vernacular education. The tehseelee schools give a good but purely vernacular education; while in the hulqabundi schools the vernacular only is taught. In the first the fees charged to each pupil are from two annas to five rupees per month; in the tehseelee schools two annas per pupil; in the hulqabundi schools education is gratis. These are quite a new institution in Bareilly; they were only introduced gradually as funds for their maintenance were provided by the progress of settlement. In this district, for a long time to come, they should be confined to teaching thoroughly reading, writing, and arithmetic in Hindee; the upper classes only should read Urdu, general history; algebra and mensuration should be cut out of the programme altogether. The people in the district

are miserably illiterate; and if these schools aim too high at first, they will fail to attract pupils, or to do any general good: we want to reach the masses and give them a thorough education suitable to their station in life. For a cultivator reading, writing, and arithmetic are all that can be useful, and all that a boy can have time to learn, as he is sure to be withdrawn from school as soon as he is old enough and strong enough to help his father in the field. That there is a decided need for education is shown by an illustration of the intelligence of the people which I received in the Ahir village of Dhukia, in Nawabgunj. The residents told me, with some pride, that it was utterly impossible for a Coormi to live in Dhukia, or an Ahir in the adjoining village of Busenga, as in each place a "bhoot" promptly disposed of intruders of the obnoxious castes. "He rushes at them and kills them at once." On my receiving the story with perfect gravity, and asking the Ahirs how they managed to keep on good terms with the very unpleasant and summary demon of their village, they replied in all good faith,—"Oh we are all right. We keep another private devil of our own (*ham to apne nij ke shaitan pál rukhte hain*), who is stronger still than the other, and keeps him in order." Not one cultivator in a hundred can sign his name to a lease in Hindi, and consequently they get terribly done by the putwarees and mahajuns.

Standard of Living.

14. We have shown the number and progress of the population, and their want of education: the next point is the standard of living of the agricultural classes.

15. I made many inquiries as to the food in use, and its daily amount. The principle I followed was to ask men who came up before me in rent cases what they had eaten the day before, and what their women and children had had, and to tabulate the results. They wondered at my inquisitiveness, and probably thought me a mad sort of *Feringhee bhoot*, devising some new mode of taxation; but I think the information I received was reliable. Two meals a day—at midday and after sunset—are the rule. For seven months in the year rice in the northern pergunnahs, and *bajra* in the southern, is the staple article of food; for the remaining five those who are comfortably off eat wheat and flour, the rest barley. With their *chupaties* they eat *dal* of either *mash*, *urhur*, *or musoor*; and occasionally a few pot herbs, peas, and chillis, and little ghee or oil. The young shoots of gram, and a wild weed called *buthooa*, are largely consumed. In the hot weather, and when the appetite is not good, the food is *dullia or khichre*, with sugar, mostly in the form of *goor*, refuse *khand*, red unrefined sugar, *girawat*, and *sheera* are chiefly consumed. The average expenditure by a family of five is rated by the *khundsaris* at three maunds of *mitthai* per annum, including festivals. Taking *lall shukkur*, the expenditure at the average price of the last five years would be Rs. 17-5-9. If second class *goor* is expended, the cost would be Rs. 15-10-6. If *sheera* is used, the cost would be Rs. 5-0-0. The average of the three kinds of *mitthai* is Rs. 12-10-9, or Rs. 2-8-6 per head. The middling and poorer urban population usually eat goor and *lall shukkur*, and occasionally *chini*. The very poorest eat *sheera*, or the drainings of molasses. All classes will expend as much money as they can spare in the purchase of sweets, and the amount of money so spent depends on the rise and fall in prices of grain, so that it is impossible to make a perfectly correct estimate. As to the daily average quantity of food we have the following data:— Diet.

(1) Detailed inquiries made by me in the cold season in Ritcha from 21 families aggregating 42 men, 44 women, 45 children, total 129, or 6·1 souls per family—gave the following average results per diem. Of grain, chiefly rice and *bajra*, the men consumed per day— ·976 seer=2·44 lb. avoirdupois.

Women,	...	...	... ·793	„ =1·98 „	„
Children,	...	...	... ·444	„ =1·11 „	„
The average per *head* per day was grain,			... ·743	„ =1·85 „	„
Dal,	...	...	... ·109	„ =·272 „	„
Salt,	...	...	... ·008	„ =·020 „	=140 grains.

(2) Similar inquiries in the warm weather gave on 45 men, 40 women, 41 children—total 126 souls—

		lbs.	
Men per day, of grain,	1·05 seer	=2·62	(chiefly wheat and barley).
Women, ...	·79 „	=1·97	
Children, ...	·47 „	=1·17	

The average per head per day was—

Grain, ...	·784 seer	=1·96 lbs.
Dal, ...	·143 „	=·35 „
Salt, ...	·0089 „	=·022=154 grains.

It is rather odd that these averages come out larger than in (1), though in more expensive grains; but these inquiries were made just after the harvest, when wheat and barley were plentiful and cheap, while the former were made when the rice and *barja* were getting scarce.

(3) Inquiries made in the same way in April and May in Pergunnah Beesulpoor, by Deputy Collector Vicar Ali Beg, gave for men, per day of grain, 2·05 lbs.

Women, ...	2·02 lbs.
Children, ...	1·00 „

Average per head per day was—

Grain, ...	1·64 lbs.
Dal, ...	·27 „
Salt, ...	·019=134 grains.

The general average per head on all inquiries is—

Grain, ...	1·81 lbs.
Dal, ...	·29 „
Salt, ...	·0203 „ =142 grains.

16. The above is certainly not under the mark, and contrasts advantageously on the whole with the Jail dietary for labouring prisoners, which is—

	Wheat and Barley.	*Bajra, Jowar, and Mukka.*	*Dal and Gram.*	*Salt.*
Atta for men,	1·25 lbs.	1·5 lbs.	·375	150 grains.
„ Women,	1·0 „	1·25 „	·375	„
„ Boys, ...	1·0 „	1·25 „	·375	„
Average, ...	1·08 „	1·13 „	·375	150

Reducing atta to grain in the proportion of 2⅔ lbs. grain to 2 lbs. atta, the result is—

Grain, ...	1·44 per head.
Dal, &c., ...	·375 „
Salt, ...	·150 grains.

17. But it must be remembered that in the Jail there are no infants, and a full allowance of food has been given to counteract the effects of confinement, regular labour, and depression of spirits. Dr. Tomkyns, the Jail Superintendent, informs me that 100 grains of salt daily is enough to keep a full-grown Native in health. The average price of salt for the five years 1866-1870 in Bareilly was 6 seers or 86·100 grains per rupee; 142 grains per day gives 51,830 grains per annum, or about annas 9-8 per head; 150 grains per day gives 54,750 grains per annum, or about annas 10-2 per head. Calculating in a different way, several cultivators gave me their allowance of salt as a *chedam* per day per family=7½ pice per month, or Re. 1-6-6 per annum: taking two adults and one child getting salt to the family, this closely agrees with the other estimates. For tobacco we may reckon on an *adhela* per day per man, or Rs. 2-13-0 per annum. Ghee is supplied by the cultivator's own cows or buffaloes. Firing in the villages costs nothing in cash.

18. I made detailed inquiries in Ritcha and Chowmahla as to the last two years' expenditure in clothing, my inquiries covered 59 families, composed of 168 men, 152 women, 117 children. The results were— Dress.

	English Clothes.	Country Clothes.	Total.	Average per head on the two years.	Average per head per annum.
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Men, ...	30 12 0	835 14 0	866 10 0	5 2 6	2 9 3
Women, ...	173 0 0	646 12 0	819 12 0	5 6 3	2 11 1
Children, ...	44 9 0	86 15 0	131 8 0	1 2 0	0 9 0
Total, ...	248 5 0	1,569 9 0	1,817 14 0	4 2 7	2 1 3½

19. Similar inquiries carried on by Deputy Collector Vicar Ali Beg in Beesulpoor gave an average per head per annum of Rs. 2-1-10½; about Rs. 2-2-0 per head per annum, therefore, may be taken as a full average expenditure. In the *North-Western Provinces Gazette*, for the 11th May, 1870, is given an interesting report by Deputy Collector Luchmun Singh on the average consumption of cotton for clothing by the different classes of the Native population. His final result was an average of 1 seer 13 chitacks per head per annum, or about Re. 1-12-0, which agrees very closely with my average, though it was obtained by an entirely different method. His is a little lower, as he includes all the poorest urban residents. My inquiries show that here as elsewhere the women spent rather more on dress than the men. What little English cloth is consumed in the villages is used chiefly by the women or children; it is neither strong enough nor durable enough for the men's daily wear. They only use it for festivals or marriages.

20. The great burden on the cultivator is the marriage of his children. On 13 marriages in the ryot class, which occurred in villages where I was encamped last season, the total expenditure was Rs. 521-13-0, giving an average of Rs. 40-3-0 per marriage. The largest amount spent was Rs. 79-11-3, the smallest Rs. 6-2-3, which a liberal-minded Morao expended on the marriage of his sister. The greatest number of persons in a *barât* was 94, and that was at a Jât wedding. True a part of the first outlay is reimbursed for the time through the presents received from the *neutihars*, but an equivalent has to be given on a similar event in the giver's family, so there is no real saving. The items of expenditure are chiefly for the food of the *barât* people, ornaments and clothes for the bride, *nuzur* to the bridegroom and his mother, and the dowry. The largest sum under the latter head in the 13 marriages was Rs. 51. Marriage expenditure.

21. Most of the cultivating classes are in debt to a greater or less extent either to their mahajuns or their zemindars or *mokuddums* for advances of seed-grain or food, or for money for purchase of cattle or marriage expenses; but they all seem to look on indebtedness as the natural state of affairs. It is rather creditable than otherwise to be down for a good round sum in the *bunneah's* books, as showing how much a man is considered to be good for. Debt.

22. I took 93 villages at random from every part of the district. Out of 4,741 *asamis*, 3,169, or 66·8 per cent., borrowed their seed-grain; the remainder were independent. The majority of these borrowers, however, repaid the advances of either money or grain at the next harvest. The *bunneahs* cannot screw their debtors too hard for fear of driving them to emigrate to the Turai—a safe haven of refuge where the *bunneah* dare not follow them, and where they can scoff at the decree which the creditor cannot realize; but I shall have to return to this subject of indebtedness of the *asami* in considering the subject of advances.

23. As a whole the cultivating classes are not, according to their own standard of living, badly off. Their wants are few, and are mostly satisfied. They have, as a rule, an ample allowance of good food. There are few families without some silver ornaments for the wife to wear on high days and holidays. Since the last settlement the earthen

vessels which were almost universal have entirely been replaced by brass or other metal. Their clothing is better, and they have more of it. According to Lalla Gulzaree Lall, a retired Deputy Collector, who has been in the district since 1828, the improvement in this respect is extraordinarily marked. Formerly he says hardly any cultivator had more than a blanket and a very small *dhotee*, "now according to him, every *asami* dresses like a Brahmin or a zemindar of old days:" most of the *mokuddums* have a small cart or *lehroo* to ride in when they go abroad, or at least a pony. And some of them, since last settlement, have been able to save money, and buy villages for themselves. The houses, though all with mud walls and thatched roofs, are as a rule tolerably good; many are neatly plastered outside. I doubt much whether the cultivating class will ever be better off than they now are. Act X. of 1859, which was meant to protect the cultivator in Bengal, is a curse to him here, by the power it gives to the landlord to enhance the rents. Population is rapidly increasing, and with it a fierce competition for land must set in, as in Bareilly we have nearly reached the limit of cultivation.

Measures and weights.

24. The mode of measurement formerly practised by the officers of Government was by using a rope containing 20 *guttas* or knots, the space between each two knots being three Akbari *guz*, of 33 inches (English) to the *guz*. A *pukka beegah* was theoretically a square of 20 guttas each way, or 3,025 square yards (English), but the custom had long prevailed to allow in practice only 18 *guttas* to the side of a *beegah*, when the land was under what were called *nuqshi* crops, and 19 where it was under *nijkari*. The origin of the custom is not known. *Nuqshi* crops were those which always paid money rates, *viz.*, sugar-cane, cotton, maize, safflower, tobacco, hemp, *kacheana* of all kinds, and melons, while all the other ordinary crops were included under *nijkari*.

25. Assignees of Government revenue always claimed a measurement with the full 20 *guttas*, though they could never prove their right to exemption from the custom. The *pukka beegah* of the 18 *gutta* side contained 2,450¼ square yards, and that of 19 *guttas* 2,730 square yards. This eccentric system of measurement was continued till the year 1828, when Mr. S. M. Boulderson, the Collector, seeing the confusion that was introduced into the accounts, and that a field with defined boundaries would nominally vary in area every year according to the way in which it was cropped, directed that in future all lands should be measured with 19 *guttas* to the side, and this was the measurement used to obtain the *pukka beegah* at the VII. (1822) Settlement. In all agricultural concerns, however, the *pukka beegah* was never used. The *beegah* of record and rent was the *kutcha beegah*. In Pergunnahs Crore, Nawabgunj, Beesulpoor, Fureedpoor, Bullia, Shahi, Sirsawan, Kabur, and Chowmahla, the *pukka beegah of* 19 *guttas*, or 2,730 square yards, was divided into 3½ *kutcha beegahs*, each equal to 780 square yards. In Aonlah, Suneha, and Ajaon, it was divided into three *kutcha beegahs*, each = 910 square yards. At last settlement confusion was worse confounded. In Ajaon and south Serowli the surveyors used a *pukka beegah* of 3,025 square yards; in Aonlah and Suneha of 2,450 yards, and in all other pergunnahs one of 2,730 yards; and the *kutcha beegah*, on which the *jummabundees* were prepared, was assumed in all cases at the same proportion of the new *pukka beegah*, that it had borne to the old one of 19 *guttas*, or 2,730 square yards; and all the time the actual *kutcha beegah* in use from time immemorial among the people on which rents and all calculations of seed and produce were based was a totally distinct one. It was a square of 20 *quadams* or paces to the side, each pace being reckoned at 1½ *Elahi guz*. The resultant *beegah* was 82½ feet in the side, and 756¼ square yards in area, or exactly one-fourth of the *pukka beegah* of 20 *guttas*, or 3,025 square yards. This is what every *asami* (except in Aonlah and Suneha) understands by a *kutcha beegah*. The accuracy with which the *mokuddums* and cultivators pace out and get the area is astonishing. On one occasion I made 40 men pace out the side of a *beegah*, and I measured up in each case, and found the variation never more than a few inches. The zemindars, to restore their rents to the amounts actually taken previously, either added *dobiswi* or two biswas in the *beegah* to the area in the *jummabundee*, or added one-tenth to the rent, or put on an extra cess to the village expenses, or, where they were strong enough, remeasured the land with their own rope *jureebs*, and calculated the rents accordingly; while in many cases the old surveyor's measurements and rents were left unaltered in the village

papers. In Aonlah and Suneha, owing to the efforts made by the cultivators to retain the erroneous *kutcha beegah* of last settlement, and by the zemindars to abolish it, and return to the real *kutcha beegah*, I found the village papers in horrible confusion. The *beegah* of rent varied in every village from one-third to one-fourth of the *pukka beegah* of 3,025 square yards; and in assessment, and in all enhancement suits, I was compelled to calculate rents on the *pukka beegah* to ensure correct comparisons. In this report, unless the contrary is distinctly stated, by "*pukka beegah*" is always meant the *beegah* of 3,025 square yards, or five-eighths (=·625) of an acre; and by the *kutcha beegah* is meant one of 756¼ square yards=one-fourth of a *pukka beegah*: 6·4 *kutcha beegahs* form an acre.

26. The Bareilly *pukka* maund is of 40 seers, each *seer* weighing 104 Bareilly rupees. The Bareilly rupee weighed 171·9 grains; the *pukka* seer therefore is 171·9 ×104 grains=178,776=2·55 lb. avoirdupois; and the maund=2·55lb ×40=102lb. Like the *kutcha beegah*, the *kutcha* maund and seer are used for all agricultural transactions, and all grain purchases from zemindars and cultivators. In Chowmahla, Ritcha, Kabur, Sirsawan, Shahi, Ajaon, Nawabgunj, and Crore the *kutcha* weight is equal to two-fifths of the *pukka*. In Serowli, Aonlah, Suneha, Bullia, Beesulpoor, Murori, and Fureedpoor it is half. In other articles besides grain the bazaar weights of the different pergunnahs vary. The *kutcha* weight is theoretically as follows :— Weight.

	Weight in Bareilly rupees per seer.	Weight in Bareilly rupees per maund.	Weight of maund in lb. avoirdupois and decimals.	Weight of seer in decimals of a lb.
Ritcha, ...	36	1,440	35·361	·884
Chowmahla, ...	38	1,520	37·327	·933
Nawabgunj, ...				
Kabur, ...				
Sirsawan, ...	42	1,680	41·256	1·031
Shahi, ...				
Ajaon, ...				
South Serowli, ...	48	1,920	47·149	1·178
Fureedpoor, ...	50	2,000	49·114	1·228
Aonlah, ...				
Suneha, ...				
Bullia, ...				
North Serowli, ...	52	2,080	51·079	1·277
Crore, ...				
Beesulpoor, ...				
Murori, ...				

The following is a detail of the coins that have been in use since the cession :— Coins.

TABLE IX.

Number.	Description of Coin.	Standard weight in grains.	Standard weight of pure silver in grains.	Alloy.	Remarks.
1	Bareilly rupee, ...	171·9	160·8	11·1	
2	Furrukabad, ...	169·2	158·2	11·0	
3	Chundosi rupee of Zabita Khan, ...	171·1	160·5	10·6	Rare, out of use.
4	Nujeebabadi, years 20-29, ...	173·	167·20	5·8	Ditto.
5	Ditto ditto 30-35, ...	171·	161·	10·0	Ditto
6	Ditto ditto 41-43, ...	169·3	155·9	13·4	Ditto.
7	Lucknow rupee of Nawab Wuzeer,...	172·3	166·5	5·8	Ditto.
8	Ditto Muchleedar, year 1845,...	173·0	165·2	7·8	
9	Sher Shahi rupee of Nawab Asf-ood-doula.	172·1	165·6	6·6	
10	Lucknow rupee, years 1839-40, ...	...	...	...	
11	Ditto ditto, year 1831, ...	...	...	...	
12	"Single rupee,"	172·	164·	8	
13	"Double rupee,"	180·	165·	15	
14	Current Victoria rupee, ...	180·	165·	15	

27. The Lucknow Muchleedar rupees are in much demand for making silver-lace and ornaments, but the current rupees are chiefly used for the purpose, as the others are becoming scarce.

28. The copper coins in use besides the Government coins are the following:—

1. Munsoori pice, issued by Nawab Munsoor Ali Khan, of Lucknow, chiefly in use in the Tehseeldarees of Crore, Fureedpoor, and Aonlah.

2. Kuturdar pice, issued by Nawab Ali Mahomed Khan, 17 *mashas* in weight, chiefly used in the north of Nawabgunj.

3. Jhar Shahi pice, a Jeypoor coin, 18 *mashas* in weight, in use over the greater part of the district.

4. Muddhoo Shahi pice, 10 *mashas* 4 *ruttis* in weight.

29. The value of these is constantly changing according to the market price.

30. The following denominations are constantly in use. Payment is actually made in cowries:—

1 *dumri*=⅛ of a pice.

2 „ =1 *chhedam*=¼ pice.

4 „ =2 *chhedams*=1 *adhela*=½ pice.

Bazaar.

TABLE X.

Pergunnah.	No. of *Pents* in 1846.	No. of *Pents* 1872.
Crore, ...	15	18
Fureedpoor, ...	12	17
Bullea, ...	3	3
Suneha, ...	4	5
Aonlah, ...	5	7
Serowli, ...	3	4
Meergunj, ...	21	22
Kabur, ...	4	5
Sirsawan, ...	7	4
Chowmahla, ...	4	7
Ritcha, ...	18	12
Nawabgunj, ...	9	15
Beesulpoor and Murori,	16	27
Total, ...	121	146

31. The main bazaars of the district are the towns of Bareilly and Pillibheet. Besides these, in every pergunnah there are village bazaars or *pents*, usually held twice a week. These serve to carry off the cotton and grain of the neighbouring country, which is bought up by the Bunjaras and others, and then carried off to Bareilly, Pillibheet, Rampoor, and Chundosi. They also supply the villagers with cloths, metal pots, and pedlars' wares. The number of these small bazaars in 1846 and at the present time is thus shown in the margin.

32. The market towns in Crore are Ghungora Kulan, Dhimri, Padaruthpoor, Rathora, Douli, Jadounpoor, Bundeea, Madhopor, Agras, Choupara, Khanpoor, Kureli, Dhonrehrah, Manpoor, Chokutia, Poornapoor, Kesurpoor, Itowa, Sookhdeopoor, Luchmipoor-urf, Hurbunspore.

33. In *Fureedpoor*—Soonean, Bhoota, Nugrasa, Boodhouli, Pipurthura, Mehterpoor, Khulpoor, Qusbeh Surae, Pachomi, Loungpoor, Tissooa, Sindhoa, Nukkigunj, Khujooreea, Sumput, Futtehgunj, Mulhpoor, Bhugotipoor, Fyznuggur.

34. In *Bullia*—Bullia, Kymooan, Singha.

35. In *Suneha*—Bisharutgunj, Aligunj, Gynee, Mudona, Majhgawan.

36. In *Serowli*—Serowli, Ramnuggur, Beondhun Khoord, Hurdaspoor.

37. In *Meergunj*—Meergunj, Mogra, Chouraie, Guhbura, Busuntpoor, Mahomedgunj, Thirea Khoord, Bahroli, Tilmas, Kashinathpoor, Puroura, Mundunpoor, Sindholi, Hurdi Kulan, Purchaie, Shahi, Ondh, Busye, Doonka, Ferozepoor, Nuguria, Burrehpoorah.

38. In *Kabur*—Shergurh, Muwaie, Jam, Nugureea, Mohomedpoor.

39. In *Sirsawan*—Bulli, Manpoor, Sheeshgurh, Jafirpoor.

40. In *Chowmahla*—Buheree, Sukrus, Amdanda, Chachait, Burora, Doonda, Mirzapoor, Runjeet.

41. In *Ritcha*—Bichoura, Girdhurpoor, Goonhan, Huttoo, Puchpera, Moondia, Jokhunpoor, Dumkhoda, Busdhurun, Ritcha, Oodra, Sillees, Fureedpoor.

42. In *Aonlah*—Mahmoodpoor, Goorgawan, Sheopooree, Rajpoor, Aonlah, Munona, and Kusoomra.

43. In *Nawabgunj*—Nawabgunj, Senthul, Hafizgunj, Hurhurpoor, Muddoonugla, Purusrampoor, Bhowanugla, Nukti, Khutowa, Chynam, Burour, Tah, Kuteya, Pygah, Kotha, Mukhun.

44. In *Beesulpoor*—Akholi, Akbergunj, Simra, Adhkuta, Pudhera, Burkhera Kulan, Bilsunda, Bumroli, Bilaspoor, Baidkhera, Pipra, Puhargunj, Tighree, Mynee, Murori, Chundpoorah, Deuria, Ainah, Sohas, Shergunj, Beesulpoor, Kishni, Kureli, Khudunka, Lilhur, Moondea, Bilhera, Meerpoor, Babunpoor, and Nooranpoor.

45. The shop-keepers and pedlars usually pay a small sum to the zemindars of the village who also take *choongi* from all the grain-sellers. In some of the bazaars these receipts are of considerable value. In Bilsunda, for instance, the annual receipts to the zemindars from the bazaar average Rs. 1,500 to 1,600. In Goonhan, in Ritcha, they are Rs. 800 to 900. A regular market for the sale and purchase of cattle is called a *nikhasa*. In these the name of buyer and seller, the description of cattle, and the price fetched, are regularly registered for all transactions, and the zemindar receives a small percentage on the sale price in return for the supposed security afforded to the buyer against having stolen cattle sold to him, and the facilities offered for tracing the seller. These *nikhasa* are held at.

Bundeea and Luchhminpoor, in ...	Tehseel	Crore,
Busye, ...	Tehseel	Meergunj.
Hurhurpoor Mutkuli, ...	„	Nawabgunj.
Aonlah, Goorgawan, Singha, ...	„	Aonlah.
Bichoura, Girdhurpoor, Goonhan, Hutto, Puchpera, Chachait, Buroura, ...	„	Buheree.
Beesulpoor and Bilsunda, ...	„	Beesulpoor.

46. The extension of the village markets of late years is a good proof of the increasing prosperity of the country.

Prices of Produce.

47. Appended is a table showing the prices in the city of Bareilly of the three main articles of food from 1805 to 1871 inclusive. To 1832 the prices are taken from Mr. Boulderson's tables; from 1833 to 1871 they are taken from papers of the last settlement, the prices furnished by the grain-dealers' books, and the published statements. They are given in lbs. avoirdupois to facilitate comparison with other districts. The reason why rice is not included in the lists is, that the price varies according to the kind or class of rice, and consequently accurate lists could not be obtained. The omission is the less to be regretted, as prices are usually governed by the rates for wheat. The rates in the district at harvest time are from 5 to 10 per cent. cheaper than in the city according to distance and the cost of carriage.

TABLE XI.

Year.	Price of wheat in lbs. and decimals per rupee.	Price of Barley.	Price of Bajra.	Year.	Price of wheat in lbs. and decimals per rupee.	Price of Barley.	Price of Bajra.
1212 F. S.=1805,	92·3	135·2	...	1227 F. S., ...	37·4	72·3	66·9
1213, ...	93·7	151·3	139·2	1228, ...	88·3	133·8	65·6
1214, ...	99·0	147·2	115·1	1229, ...	110·4	167·7	139·2
1215, ...	109·7	171·3	117·8	1230, ...	64·2	93·7	58·9
1216, ...	74·9	103·1	96·3	1231, ...	87·0	133·8	97·0
1217, ...	78·9	115·1	...	1232, ...	62·9	133·8	100·4
1218, ...	131·2	220·9	190·1	1233, ...	45·5	66·9	53·5
1219, ...	112·4	190·1	74·9	1234, ...	74·9	120·5	61·5
1220, ...	74·9	107·1	123·1	1235, ...	96·3	180·7	91·0
1221, ...	113·8	192·8	153·9	1236, ...	113·8	240·9	187·4
1222, ...	147·2	227·6	187·4	1237, ...	93·7	147·2	120·5
1223, ...	113·8	174·8	133·8	1238=1831, ...	77·6	120·5	140·5
1224, ...	87·1	133·8	120·5	1239, ...	57·8	162·5	102·5
1225, ...	52·2	69·6	48·2	1240, ...	81·7	162·5	102·5
1226, ...	46·8	72·3	77·6	1241, ...	64·5	137·5	92·5

Year.	Price of Wheat.	Price of Barley.	Price of Bajra.	Year.	Price of Wheat.	Price of Barley.	Price of Bajra.
1242, ...	63·5	95·0	105·0	1262, ...	69·6	112·3	83·2
1243, ...	68·4	37·5	97·5	1263, ...	93·8	160·6	174·7
1244, ...	45·3	105·0	60·0	1264, ...	75·0	91·0	70·2
1245, ...	35·6	75·0	35·0	1265, ...	93·8	160·6	160·6
1246, ...	44·2	57·2	85·8	1266=1859, ...	99·1	160 6	91·0
1247, ...	58·9	93·6	83·2	1267, ...	77·7	120·1	72·8
1248, ...	58·9	88·4	72·8	1268, ...	53·6	78·0	28·6
1249, ...	117·8	93·6	98·8	1269, ...	37·5	28·6	31·2
1250, ...	83·4	130·1	98·8	1270, ...	80·4	160·6	153·1
1251, ...	92·4	133·1	107·1	1271, ...	88·4	146·1	72·8
1252, ...	87·1	151·3	101·4	1272, ...	56·2	78·0	57·2
1253, ...	71·0	112·3	85·2	1273, ...	52·9	72·8	59·8
1254, ...	74·3	88·4	98·8	1274, ...	52·2	78 0	67·6
1255, ...	89·7	133·1	98·8	1275, ...	46·2	62·4	65·0
1256, ...	86·0	140·9	93·6	1276, ...	45·0	62·0	65·0
1257, ...	98·1	135·7	160·6	1277, ...	30·0	50·0	47·5
1258, ...	96·8	151·3	133·9	1278, ...	42·5	107·1	76·5
1259, ...	105·5	214·2	133·9	1279, ...	67·5	76·5	74·0
1260, ...	61·6	96·2	107·1				
1261, ...	83·0	120·1	98·8				

48. Taking average prices for the terms of the different settlements we have the following:—

Grain.	1st Settlement, 1212.	2nd Settlement, 1213-15.	3rd Settlement, 1216-1219.	4th Settlement, 1220-1224.	Summary and VII., 1822, Settlement, 1225-1244.	IX., 1833, Settlement, 1245-1274.	New Settlement, 1275-1279.
Wheat, ...	92·3	100·8	99·5	107·4	71·7	75·8	46·2
Barley, ...	135·2	156·6	157·3	167·0	127·7	115·0	71·6
Bajra, ...	...	124·0	120·4	143·7	93·4	93·8	65·7

49. This shows why, as we shall see afterwards, the assessments of the 4th Settlement broke down at first, but in most instances were collected, though with some difficulty, afterwards.

50. Prices have nothwithstanding violent fluctuations increased steadily as shown by the following averages:—

	1805-1831.	1832-1859.	1860-1871.	Increase per cent. in 2nd period.	Increase per cent. in 3rd period over the 2nd.	Increase per cent. in 3rd period over 1st.
Wheat, ...	87·0	77·8	56·1	10·57	27·89	34·3
Barley, ...	145·3	124·5	86·1	13·62	30·84	40·7
Bajra, ...	106·1	102·5	67·0	3·39	34·63	36·8

51. This shows—(1)—That the rise has been in all the grains.

(2)—That the chief rise has been since 1859.

(3)—That the rise has been greater in barley and *bajra* relatively than in wheat.

52. This last fact is important as showing a greater demand for barley and *bajra*. They are more consumed as food by the lower classes than formerly. Before the communications were improved, and the roads opened out, much of the wheat could not be exported, and all of this not required for the consumption of the richer classes was used by the poorer. Now the export of wheat has increased, and consequently the demand for barley and *bajra* for food by the poorer classes has increased, and the price has risen accordingly. I took the above three periods, because a glance at the tables shows that 1831 was the year in which prices began to rise permanently nothwithstanding occasional fluctuations, and also because the Regulation VII., 1822, Settlements began to come into effect in that year. The prices of the same three periods show that the

increase in price from 1832 to 1859 was so small that it could hardly be expected to affect rents. The average price of wheat from 1805 to 1851 was 82·6 lbs. and from 1852 to 1859 82·2 lbs. As a matter of fact, the rents in the money-paying pergunnahs altered little if at all till 1860. The increase in wheat prices in the years 1860—1871, as compared with 1852—1859, inclusive, is 26·1lbs. per rupee, or 31·7 per cent., and rents commenced to rise at once. The increase in prices then has been chiefly since 1859, and is mainly attributable to four causes:—

(1)—To the vastly increased expenditure of coin in the district owing to the cantonment here of European troops and the public works constantly in progress since then.

(2)—To the great improvements in communications, facilitating the export of grain.

(3)—During the short time of 13 years there have been three years of drought and two partial failures of harvests elsewhere in the North-Western Provinces, causing a heavy demand for grain from the west and south, and a considerable emigration of cultivators into Bareilly.

(4)—The increased area as compared with former years devoted to the cultivation of cane and cotton, and the consequent comparative diminution of the area devoted to food grains.

53. I am inclined to believe that, with a succession of abundant harvests, the tendency of grain to fall in price will be checked to a considerable extent by the great export trade which has sprung up; and that prices will not fall permanently much below their present average. This is the opinion of the leading grain merchants also, who have frequently told me that, provided internal peace is maintained, they never expect the average price of wheat on a series of years to fall again below 25 Bareilly seers per rupee, or 62½lbs. per rupee. I have based my settlement on an average of 26 seers. If prices fall below that on an average of five years, then difficulty will be experienced, and a temporary relief should be given by a remission for a term of years. The financial history of the district will show how invariably cheap prices and abundant harvests have interfered with the collections of the revenues, and the lesson ought to be taken to heart. Drought elsewhere means prosperity in Bareilly to the landholders, not always however to the cultivators; for the zemindars and *bunneahs* seize the opportunity to collect all they can possibly screw out of the balances and debts of past years.

CHAPTER VIII.

The Agriculture and Tenures of the District.

1. The district settled by me contains 2,570 villages and 3,362 estates. The average size in each pergunnah is shown in the following statement:—

TABLE XII.

Pergunnah.	Number of Villages.	Average area per village in acres.	Number of estates or mehals.	Average per mehal in acres.
Fureedpoor, ...	389	383	476	335
Crore, ...	444	408	554	361
Bullia, ...	50	482	68	353
Suneha, ...	126	423	180	296
Aonlah, ...	125	657	190	431
Seroli, ...	56	680	82	464
Meergunj, ...	172	571	221	445
Kabur, ...	63	556	84	417
Sirsawan, ...	41	506	62	335
Chowmahla, ...	134	443	183	324
Ritcha, ...	190	571	258	420
Nawabgunj, ...	324	444	433	334
Beesulpoor, ...	456	513	535	443
Total, ...	2,570	490	3,326	379

2. The areas of all settlements before Mr. Boulderson's in 1828-31 were purely obtained by estimate, and are therefore worthless for present purposes, more especially as they were found by Mr. Boulderson on comparison with the actual measurements to be utterly incorrect. In 1832, according to the statistics furnished by that gentleman, the "*minhae*" or barren and revenue-free areas were 30·3 per cent. of the total area, culturable waste was 18·7 per cent., and cultivated 51 per cent. Taking the total area of last settlement, and graduating it in these proportions, we get a rough approximation to the areas in 1829-1831 as follows:—

Total area, ...	1,261,149 acres.
Minhae, ...	382,128 „
Waste, ...	235,834 „
Cultivated, ...	643,187 „

3. The amount of barren was largely swollen (1) by the amount of revenue-free land, much of which was subsequently resumed between 1841 and 1845; and (2) by Mr. Boulderson's somewhat liberal interpretation of "barren."

4. The following are the areas of the villages settled by me as they stood at last settlement, and at the new measurement. The statistics have been drawn up from the English No. II. and III. Statements after all final corrections. The areas of the City, Cantonments, and Civil Lines are excluded from both, to render a comparison possible.

TABLE XIII.

A.—At last Settlement.

Pergunnah.	Total area in Acres.	Barren.	Lakhiraj.	Old waste.	New fallow.	Cultivated.	Total malgoozaree.
Fureedpoor, ...	159,857	17,631	5,081	34,314	10,623	92,208	137,145
Crore, ...	202,619	27,488	27,853	31,993	7,848	107,437	147,278
Bullea, ...	23,675	4,272	1,589	3,229	189	14,396	17,814
Suneha, ...	59,919	3,813	6,154	16,901	982	25,069	42,952
Aonlah, ...	79,618	5,340	7,552	34,377	762	31,587	66,726
South Seroli, ...	37,621	7,378	1,630	8,214	1,064	19,335	28,613
Meergunj, ...	100,485	9,622	10,700	22,585	1,684	55,894	80,163
Sirsawan, ...	20,608	1,687	1,189	2,151	316	15,265	17,732
Kabur, ...	34,175	3,125	3,370	4,076	667	22,937	27,680
Chowmahla, ...	58,030	4,234	1,574	16,535	3,308	32,379	52,222
Ritcha, ...	105,289	8,164	18,013	12,029	3,468	63,615	79,112
Nawabgunj, ...	142,412	18.175	12,697	18,129	5,541	87,870	111,540
Beesulpoor, ...	232,159	32,433	8,816	58,184	7,217	125,509	190,910
Total, ...	1,256,467	143,362	106,218	262,717	43,669	693,501	999,887

TABLE XIV.

B.—At the present Settlement.

Pergunnah.	Total area in Acres.	Barren.	Lakhiraj	Old waste.	New fallow.	Baghs.	Cultivated.	Total malgoozaree.
Fureedpoor, ...	159,721	16,531	855	18,239	3,907	7,307	112,882	142,335
Crore, ...	200,124	19,767	15,495	4,425	3,543	16,206	140,688	164,862
Bullea, ...	23,986	3,048	412	2,152	71	331	17,972	20,526
Suneha, ...	53,283	4,670	2,848	6,608	217	908	38,032	45,765
Aonlah, ...	81,898	9,630	2,451	14,090	455	1,106	54,166	69,817
South Seroli, ...	38,108	4,140	1,968	2,501	223	740	28,536	32,000
Meergunj, ...	98,352	10,025	5,859	13,532	631	1,234	67,071	82,468
Sirsawan, ...	20,758	383	247	1,407	289	2,889	15,543	20,128
Kabur, ...	35,056	3,960	497	2,726	233	511	27,129	30,599
Chowmahla, ...	59,407	6,949	429	6,537	909	700	43,883	52,029
Ritcha, ...	108,512	10,616	11,944	4,745	1,167	1,460	78,580	85,952
Nawabgunj, ...	144,829	13,550	7,406	11,680	1,636	2,392	108,165	123,873
Beesulpoor, ...	237,115	23,658	2,846	21,567	1,850	7,664	151,346	182,427
				Jungle, 28,184				
Total, ...	1,261,149	126,927	53,257	138,393	15,131	43,448	883,993	1,080,965

5. There was comparatively small increase in cultivation up to last settlement. The following table shows the increase and decrease in each detail of the area in acres and percentages since last settlement. The uncultivated baghs were then entered as barren for the sake of comparison; they have also been included in barren in the table.

The measurement at last settlement was by scientific survey, the remeasurement was by Native agency, with the plane-table.

	Increase in acres.	Decrease in acres.	Increase per cent.	Decrease per cent.
Total area, ...	4,682	...	·37	...
Barren, ...	27,013	...	18·84	...
Lakhiraj, ...	...	52,961	...	49·86
Old waste, ...	..	124,324	...	47·32
New fallow, ...	...	28,538	...	65·35
Cultivated, ...	190,492	...	27·47	...
Malgoozaree, ...	81,078	...	8·10	...

6. The difference in the total area is due to variations in measurement; that in barren is chiefly caused by the areas taken up for canals and gools, the increase in the ravines and barren land along some of the rivers, and a more correct classification generally. The great decrease in Lakhiraj is caused chiefly by the action of the Special Commissioners under Regulation II., 1819, between the years 1840 and 1848.

7. At the present time of the total area the really barren lands occupy 10·07 per cent:—

Lakhiraj, ...	4·22
Old waste, ...	10·98
New waste, ...	1·19
Uncultivated groves, ...	3·45
Cultivated land, ...	70·09
Malgoozaree, ...	85·71

8. Of the entire malgoozaree area 81·77 per cent. is cultivated. The above areas differ slightly from those given in the rate reports, as they have been all re-totalled from the English Statements and all arithmetical errors that were detected in the vernacular statements have been corrected. The greatest possible care was taken in testing and retesting the measurements, and I believe them to be as correct as it is possible for them to be with the plane-table. Sir William Muir himself tested the measurements of two villages in Nawabgunj taken at random, and was pleased to pronounce them absolutely exact. The Senior Member of the Board, the Honorable Mr. Inglis, also himself tested the measurements and khuteonees of several villages, and no error, however small, was discovered.

9. *Irrigation.*—The increase in irrigation since last settlement is shown in the following statement:—

TABLE XV.

Pergunnah.	Cultivated area at last Settlement.				At present Settlement.				Increase of irrigation in acres.	Increase in percentage of wet to total cultivated.
	Wet area.	Dry area.	Total cultivated.	Percentage of wet cultivated to total.	Wet area.	Dry area.	Total.	Percentage of wet to total.		
Fureedpoor, ...	37,479	54,729	92,208	40·6	54,502	58,380	112,882	48·2	17,023	7·6
Crore, ...	35,330	72,107	1,07,437	32·9	53,430	87,258	140,688	37 9	18,100	5·0
Bullea, ...	4,502	9,894	14,396	31·2	2,766	15,206	17,972	15·4	...	...
Suneha, ...	8,254	16,815	25,069	32·9	10,510	27,522	38,C32	27·6	2,256	...
Aonlah, ...	8,653	22,934	31,587	27·3	14,898	39,268	54,166	27·5	6,245	·2
South Seroli, ...	2,031	17,304	19,335	10·5	4,928	23,608	28,536	17·2	2,897	6·7
Meergunj, ...	6,028	49,866	55,894	10·8	17,798	49,273	67,071	26·5	11,770	15·7
Sirsawan, ...	8,531	6,734	15,265	55·9	9,604	5,939	15,543	61·7	1,073	5·8
Kabur, ...	4,589	18.348	22,937	20·0	13,045	14,084	27,129	48·0	8,456	28·0
Chowmahla, ...	9,227	23,152	32,379	28·5	22,429	21,454	43,883	51·1	13,202	22.6
Ritcha, ...	27,784	35,831	63,615	43·6	48,321	30,259	78,580	61·4	20,537	17·8
Nawabgunj, ...	46,036	41,834	87,870	52·4	61,139	47,026	108,165	56·5	15,103	4·1
Beesulpoor, ...	78,852	46,657	125,509	62·8	77,541	73,805	151,346	51·3	...	...
Total, ...	277,296	416,205	693,501	39·9	390,911	493,082	883,993	44·2	113,615	4·3

10. There has then been an actual increase in the irrigated area in every pergunnah but Bullea, and here I believe the Settlement Officer at last settlement must have entered *khadir* as wet. I have only entered in that pergunnah as irrigated those lands which were found actually irrigated at measurements. We have now altogether 431,744 acres irrigated as against 277,296 at last settlement, the increase being 154,448 acres, or 55·7 per cent. above the former amount. In every pergunnah, but Bullea and Suneha, the increase in irrigation has more than kept pace with the increase in cultivation. On the whole the increase in the percentage of wet to total cultivation has been 8·9 per cent. Of the land entered as unirrigated 82,741 acres in Pergunnahs Furreedpoor, Crore, Bullea, Suneha, Serowli, Meergunj, Nawabgunj, and Beesulpoor, are *khadir* lands, which only require irrigation in most exceptionally dry seasons.

11. Of the total irrigated area the canals irrigate as follows :—

In Nawabgunj,	...	...	...	23,924 acres.
Ritcha,	...	...	...	40,871 „
Chowmahla,	...	...	...	15,772 „
Kabur and Sirsawan,	...	...	...	10,576 „
		Total,	...	91,143 acres.

All other irrigation is from rivers, tanks, and wells. I had intended to give the detail of each kind of irrigation, but I have discovered errors in the Statement prepared in the office; and to re-prepare it for the whole district, would take more time and money than it is worth.

12. *Soils.*—The following table shews the percentages of loamy, clayey, and sandy soils in the assessable cultivated area of each pergunnah. The best *khadir* has been for the purposes of this table included under "loam," and the worst under "sand," as the most nearly approximate to those soils in productiveness and rents.

TABLE XVI.

Pergunnah.	Loam.	Clay.	Sandy Soils.
Fureedpoor, ...	39·1	11·4	49·5
Crore, ...	42·7	18·7	38·6
Bullea, ...	55·2	22·6	22·2
Suneha, ...	55·2	30·4	14·4
Aonlah, ...	54·0	21·1	24·9
Serowli, ...	38·4	6·4	55·2
Meergunj, ...	43.7	37·4	18·9
Sirsawan, ...	56·6	40·9	2·5
Kabur, ...	64·2	32·4	3·4
Chowmahla, ...	55·4	44·1	.5
Ritcha, ...	53·6	45·8	·6
Nawabgunj, ...	42·8	37·0	20·2
Beesulpoor, ...	67·1	22·9	10·0

13. The worst sandy soils are in Fureedpoor, Crore, Aonlah, Serowli, and Nawabgunj. In the other pergunnahs they are of a moist alluvial character, and are nearly as productive as second-rate loam.

14. The clay and loam soils improve steadily as one gets to the north; the worst *muttyar* is in Aonlah, Crore, Fureedpoor, Serowli, and a few villages to the south of Nawabgunj, and a strip in Beesulpoor, west of the Kutna, and again to the extreme west of the pergunnah, west of the Deoha. The loam is very variable in quality, the best being in the northern pergunnahs and in Beesulpoor, the worst in Fureedpoor and Serowli. It is impossible to compare the soils as now entered with those recorded at last settlement, as most of the old *khusrahs* were destroyed in the mutiny; and Mr. J. W. Muir recorded all soils under two classes only—*bhoor* and *khadir*,—the latter including all loam and clay, which differ very considerably in value. The soils were entered as above, but a more correct description perhaps of the principle of classification then adopted would be to say that all *high-lying land*, whether loam, clay, or sand, was entered as *bhoor*, with all level sandy land—all other lands being entered under

the name of *khadir*. This principle of classification was erroneous in itself, and would have led to mischievous results if used at all in assessment. But as Mr. Muir states in his reports, he threw over soil-rates altogether, and used a general rate on the cultivated area, raising or lowering it as circumstances and his local inquiries seemed to demand.

15. Here as elsewhere the natural soils may be classified agriculturally into the *sandy*, *clayey*, *loamy*, *gravelly*, and alluvial soils, which I will proceed to notice in order:—

(1)—Sandy soil, or that which contains more than 75 per cent. of sand, is known here as *bhoor*. In its natural state it is of very little value. It becomes parched during the hot weather, and being too porous to retain moisture, is incapable of affording sufficient nourishment for the better crops. Hence the staples are the coarser *khurreef* crops, such as *bajra* and pulses, with occasionally barley or gram in the *rubbee*. It may be easily recognized by its not binding in the hand when squeezed, even when wet. It may be permanently improved for tillage by an admixture of clay, silt, or mud, from rivers and tanks, or vegetable earth: when manured, sugar-cane and wheat are occasionally grown. Where the surface soil is of little depth, it is occasionally swept away by the fierce May winds, leaving a barren substratum of indurated sand or clay exposed to view: a four or five years' fallow is then required to make the land again culturable.

(2)—Clay soils are formed by the mixture of silex and alumina. They present many varieties, according to the amount of alumina present. Where this exceeds 50 per cent. the land is only fit for brick-making. The clay soils are slow to absorb moisture, but are very retentive of it. During the hot weather they dry up and split into deep cracks or fissures, and become so hard as to be quite impenetrable to the plough, until they have been softened by the first fall of rain. They require more tillage than any other soil, otherwise the roots cannot penetrate to a sufficient depth, nor can the air gain access to them. These soils may be recognized when dry by their colour, weight, cohesiveness, and the fissures in them: when pulverized by their greasy, soapy, sticky feeling, when rubbed in the hand. From this peculiarity they are sometimes known as *chiknot*. The whitish heavy clay with traces of iron is called here *khaput*. It is difficult to work, rendered pasty by rain, and as hard as iron by heat. It absorbs moisture from the air only on its surface, which rapidly dries; but it imbibes abundantly the rain water, and retains it by so strong an affinity, that it remains till it stagnates and rots the roots of the plants. This is very unproductive soil, growing as a rule only the poorest kinds of rice. It is of hardly more agricultural value than poor *bhoor*. The bluish or blackish clay soil is the best. This is what is usually called *muttyar* by the cultivators; it grows freely all crops, except *bajra* and the *khurreef* pulses. For cotton it is not nearly so good as loam. Wheat, oats, gram, linseed, *musoor*, sugar-cane, and rice are the staple crops. *As a rule*, owing to the difficulty of tilling it sufficiently, it is not as valuable as loam; but where water and manure are available, and the cultivators are either Lodhas, Coormis, or Raeens, it is considered quite as good as, if not better than, loam. The best *muttyar* in the district is in the northern pergunnahs and in Beesulpoor, east of the Kutna River. A clay soil in a low-lying situation in a drainage line, where the crops are exposed to injury from sudden floods in the rains, is known as *jhada* or *jhabur*. It differs slightly in value in such a situation, according as the natural soil is *khaput* or true *muttyar*; everything which will tend to soften the earth, to render it more light and porous, to facilitate the passage of water and air through it, will improve these clay soils,—a mixture of earth or sand, deep and frequent ploughing, turning in green crops, and the use of well fermented manures, will all be found beneficial.

16. The loamy soils present many varieties. Loam may be generally described as a mixture of sand, carbonate of lime, clay, and *humus*, or vegetable mould. It is moderately cohesive, less so than clay, and more so than sand. The rain filtrates easily

through it, and it throws off moisture readily by evaporation. The air can penetrate readily to the roots of the plants, and supply them with moisture; and this, in a hot climate, conduces greatly to fertility. Tillage is easy, and it does not require nearly so much labour as clay. As the soil is light and porous, the roots of the plants can penetrate deeply. As a rule a good loam is the most desirable of all soils, as it will grow all crops without exception, bears all the vicissitudes of season, and can be cultivated in almost any weather, except during or immediately after rain, and does not demand an excessive labour. A clayey loam is known here as *dorus*; it is the best of all the loams, and grows very fine sugar-cane, wheat, and gram. It is found chiefly in the north pergunnahs, along the high banks of the Bygool and Deoha Rivers, and in Beesulpoor east of the Kutna, on the edges of the *muttyar*.

17. A sandy loam is called *doomut*, and varies in quality and value according to the proportion of sand in it. Where it contains less than about 60 per cent. of sand it is first class *doomut*; where that proportion is exceeded, it is second class, and is known as *milaoni* or *bhoor milaoni*. This last grows all crops but rice, whose place in the rotation is taken by *bajra* and the pulses. There is another variety known as *siwaiee*. This is a calcareous loam, very finely divided, and of a yellowish white colour. With water and manure, under good tillage, it is as good as first-class *doomut*. Without these requisites it is hardly better than good *bhoor*, from which it is difficult to distinguish it by the eye, when it is under a *khurreef* crop. In the hand it is readily distinguished by its greasy, smooth, velvety feel, and absence of grittiness when rubbed, and by its cohesiveness. *Bhoor*, by free and constant manuring, may be converted artificially into *doomut*, and *muttyar* by the same process into *dorus*.

Alluvial soils.

18. The alluvial soils or *khadir* are formed by inundations of rivers, or by streams that have taken new channels. At first, as a rule, they are mere river sand, but the successive inundations deposit a rich mud, containing the remains of all those animal and vegetable substances which muddy waters carry with them. Soil of this kind requires no manuring, its fertility is constantly renewed by the floods, and the level is raised till at length it is only subject to floods when the river is unusually high. It has been distributed into two classes—*khadir* (1), where there is over a foot of alluvial soil, and the level is such as to prevent its being annually flooded; and the *khadir* (2) where the rich soil, or, as it is locally known, the *kamp*, has been imperfectly deposited, and the sand is close to the surface, or where the level is very low. There might have been a third class, the almost pure sand, in which only linseed, *musoor*, *ajwain*, or melons are sown. Sugar-cane is grown largely in the *khadir*, but the juice is watery, and the produce in *goor* or *rab* is less, and of worse quality than that of the upland sugar.

19. The *khadir* thrives best in seasons of drought, where the rains are heavy, or the floods late in the season; the ground is so saturated that the sowings for the spring crops have to be deferred till very late in the season, and the produce is then thin, and frequently half destroyed by rust (*rutta*). No irrigation is required in the *khadir*, and water is usually found at a depth of from three to eight feet from the surface. The best lands of this description are in the valley of the Bygool. Then come the *khadirs* of the Ramgunga and Deoha, and last of all that of the Kutna and Kunhout.

Subsoils.

20. The subsoils in this district are usually clay, sand, or *kunkur*. The clay retains the water, and allows it to stagnate, thereby injuring the roots of the growing plants. The *kunkur*, if, as in some places, it is near the surface, is still more injurious; and in a few villages of Crore, Fureedpoor, and Beesulpoor, renders the land almost barren. The people have no knowledge of the fact that by burning it they can obtain excellent lime for manure. The sand is either a coarse-grained red sand, or the ordinary whitish, or the blue sand; all (except for well-sinking) form a good porous subsoil when the surface stratum of soil is of sufficient depth.

Implements of agriculture.—Plough (1).

21. The plough used is the common plough of Hindustan for drill-sowing. A hollow bamboo, with a broad wooden cup at the top, is attached to the *purhaiee* or wooden

boot, in which the iron share is fixed. The cap is fed with seed which drops into the furrow. For sugar-cane sowing two wide mould boards are attached to the plough to widen the furrow.

22. To drive the bullocks a thin bamboo stick is used (*pyna*), with a twisted leather lash (*santa*), and a sharp nail or point (*araiee*) at the end of the stick. This, combined with a judicious twisting of the tails of the bullocks, is very efficient. Goad (2).

23. To gather the weeds together a *khilwaie*, or heavy wooden rake, is used. This is sometimes also used to rake the surface of a field which has been sown, and become hard and compact after rain or irrigation. For harrowing, the *putela* or heavy beam, or the *rari* or cylindrical roller, or the *sohal* or two parallel beams joined together. Khilwaiee (3). For harrowing.

24. For weeding and hoeing we have the ordinary *kussi* (hoe), *phoura* (spade hoe), *khurpi* (spud), *gundasi*, and *daranti* or *hussia* (sickle), the former differing from the latter in being toothed like a saw. For weeding and hoeing, and reaping.

25. For irrigation are required the *doogla bheri*, or a boat-shaped basket, in which the water is thrown up; *kurwarahs* or earthen pots, a *denkhli* or weighted lever, a *birt* or *lao*, a *chursa*, a *churk*, or wheel and ropes. The use of all these will be shown hereafter. For irrigation.

26. For thrashing and winnowing the *purchaiee*, or small wooden five-pronged rake to rake up the *lak*, the *tipai*, or three-legged stool, the *soorhet* or broom, and a common basket, are all the implements required. For thrashing and winnowing.

27. The price of all these in 1830 and the present time is shown thus:—

	In 1830.	In 1872.
Plough—haras,	... ...	... 8 as.
Phala,	... ...	8 as. to 1 Re.
Purchaiee,	... ...	... 2 as.
Jooa,	... 1 Re. to 1 Re. 4 as., complete,	2 as. to 1 Re. 4 as.
Santa and pyna, always given free by chumars,		... 2 as.
Putela,	... 1 Re.	1 Re. 8 as.
Khilwai,	... 8 as.	8 as. to 1 Re. 4 as.
Phoura,	... ...	1 Re. to 1 Re. 4 as.
Kussi,	... 8 as.	... 12 as.
Khurpi,	... 2 as.	... 3 as.
Duranti,	... 2 as.	... 4 as.
Gundasi,	... 1 Re.	... 6 as.
Doogla,	... ...	... 4 as.
Churk,	... ...	8 as. to 1 Re., according as it has spokes or not.
Dhenkli,	... ...	... 8 as.
Birt or lao,	... ...	1 Re. 8 as.
Chursa,	... ...	... 2 Rs.
Kurwaras (2),	... ...	... 2 as.
Purchaiee,	... ...	... 2 as.
Basket,	... ...	... 2 as.

28. The cattle used for ploughing are either bred in the district, or purchased from the graziers and breeders in the Turai forests: a few are bought at fairs from Mewattis and Goojurs, who have brought them from the west. These last are mostly stolen property. They are all a small, weak, inferior breed, but suited to the country plough. Till the breed of cattle is immensely improved, it will be impossible to introduce deep ploughing, or subsoil drainage, or improved ploughs. They are put to work at about 3½ to 4 years old; a good bullock is said to last at work from 11 to 12 years, and a buffalo from 9 to 10. I made inquiries as to the cost of actual purchases made Cattle.

last year in fifty villages. The average cost of a good pair of plough bullocks was Rs. 18 to 22 and of buffaloes Rs. 15 to 18. I was assured that a pair of plough cattle that now costs Rs. 20 could have been got 10 years ago for Rs. 12. The increase in price is attributed (1) to the prevalence of late years of *vedan* or cattle disease, (2) to the gradual extension of cultivation, and disappearance of waste lands, which renders it impossible to keep up or feed the stock of cattle that formerly existed, and by diminishing their numbers, has of course increased their price.

29. A yoke of bullocks is usually worked at ploughing for six hours at a spell; a yoke of buffaloes for 4½ hours. During these times the bullocks will plough over 2 *kutcha beegahs* of *muttyar*, or 2½ to 2¾ of *doomut* or *bhoor* (light lands); the buffaloes will do in the 4½ hours 1½ *kutcha beegahs* of *muttyar*, or 2 of light lands. On a broad average, a yoke of plough cattle may be considered to last a cultivator eight years in average seasons, and to cost him Rs. 20. Of course I am only speaking of the rural parts of the district. The price at which the better classes of bullocks kept for traffic, or for carriages in the towns, far exceeds what I have given above.

Food of Cattle.

30. The following is the nature and quantity of food which the cattle usually get in the villages. The cows and calves get nothing except what they can pick up about the fields. From Cheyt to the middle of Suwan the bullocks get five seers of *bhoosa* a day, besides what they can pick up in the stubble fields. They also get a little *khuli* or oil-cake, about half a seer per day. During the rains there is ample grazing for them on the fresh grass, and they require nothing extra but a little salt about twice a month. At the middle of Aghun the grass begins to run short, and they get four *poolahs* of *churri* a day till the end of Aghun; from that time till Cheyt they either get *churri* or rice-straw; while working at the sugar-mills they get into very good condition from the green leaves of the cane, and the odd bits they manage to pick up. In Phagoon, besides the rice straw, they get all the *hura* which is weeded from the *rubbee* fields; and in the *khadir* they get *chouputta*, a kind of weed something like clover, which grows in the wheat fields, and is a most excellent fodder. The *chouputta* in a *beegah* (*kutcha*) of wheat is generally worth near the city about Re. 1-8, but in the dry season of 1869-70, I had to pay Rs. 3. I could only get one *kutcha beegah*, and that only as a favour. *Akra* (*Vicia sativa*) is another weed, which is carefully picked as fodder. At the end of the rains some of the villages send all their superfluous cattle to graze in the forests to the north and north-east of the district, under the charge of two or three herdsmen (*nurha*). They get as *nurhai* one *kutcha* maund of grain for each buffalo, and 15 *kutcha seers* for each cow for every six months.

The plough area.

31. The area which can be properly cultivated by one plough is:—

30 kutcha beegahs		=4·7	acres for a	two-bullock plough.
40	„	„	=6·2	„ „ three-bullock ditto.
50	„	„	=9·3	„ „ four-bullock ditto.

32. There are some cultivators who have no plough cattle at all, but work with a *kussi* only; seven *kutcha beegahs* in the year is the outside area for a *kussi*. These men pay rather higher rates than the plough cultivators, probably because of their poverty and need for land on any terms to get a subsistence.

Wages of ploughmen

33. A hired ploughman's or *hali's* wages vary: in Aonlah he gets one-sixth of the produce. If a second labourer is kept, he gets Rs. 2 to 2-8 per month. In Ritcha, Chowmahla, and Fureedpoor, he gets Rs. 2 per month, or 20 *kutcha* maunds per harvest.

34. In Nawabgunj he gets Rs. 2 to Rs. 2-8 per month, or 20 *kutcha* maunds per harvest, besides a blanket and pair of shoes every year. In Kabur and Sirsawan, Rs. 2 per month, or 22 *kutcha* maunds per *fusl*.

Number of ploughs and area per plough in each pergunnah.

35. When paid in kind his wages are called *bhanta*, and he is called a *bajidar*. The number of ploughs, the average cultivated area per plough, and the average

per male adult agriculturist, is shown for the assessable area of each pergunnah in the following table :—

TABLE XVII.

Pergunnah.	Number of agricultural male adults.	Average cultivated acres per male adult.	Number of ploughs of sorts.	Average cultivated area per plough.
Fureedpoor, ...	32,992	3·4	13,551	8·3
Crore, ...	72,980	3·9	17,229	8·7
Meergunj, ...	21,705	3·0	7,794	8·6
Serowli, ...	7,261	3·9	3,178	8·9
Aonlah, ...	16,296	3·4	7,030	7·7
Suneha, ...	13,276	2·8	5,349	7·1
Bullia, ...	5,396	3·3	2,486	7·2
Nawabgunj, ...	29,392	3·6	13,436	8·0
Kabur and Sirsawan, ...	12,635	3·3	5,177*	8·2
Ritcha, ...	24,107	3·2	9,260	8·4
Chowmahla, ...	10,164	4·3	4,669	9·4
Beesulpoor, ...	51,804	2·9	21,727	7·0
Total, ...	298,008	3·0	110,886	7·9

* Kabur, 3,351; Sirsawan, 1,826,

36. About eight acres therefore may be taken as the average plough area. The muhoorut.

37. Two or three days before Akhtij, the orthodox cultivator consults his Pundit as to the favourable day and time to commence ploughing (*huraita lena*). The calculation of the auspicious day depends on the days of the week, and the lunar monsoon in some unintelligible way which I cannot make out. The person appointed goes before daybreak on the day fixed to one of his fields, which must be either square or oblong in shape, and either with a *kussi* or a plough-share makes five scratches in the ground, turning his face to the north or east, keeping the moon to his front or right. He then returns home, carefully watching the omens. If he hears a cuckoo, or sees a *domuṅh* snake, or meets a woman carrying a *ghura* full of water, or a *māli* with flowers, these are all very good omens. The cry of a jackal, a hare or fox crossing his path, are bad. When he gets home, some female member of the family, but not a widow, presents him with curds and silver for good luck. He then stays in the house all day and rests, does no work, and does not even go to sleep, and avoids quarrels or disputes of all kinds. He will give neither grain nor money nor fire to any one, eats sweet food, curds, and balls of *atta*, toasted with curds and sugar, but carefully abstains from milk. After this business is over, he works at thrashing his corn, manuring his field, thatching his roof for the coming rains, and puts all his agricultural implements into good order. The people are said to be getting lax about taking the *muhoorut*. Some without consulting a Pundit at all go early in the morning to a field, on the second of the Holi (the Dhoondheli), make a few scratches with the plough-share, and then return home and eat *poories* and *mithaies*. Others, on the first day after the Dhoondheli that they hear *koel* at twilight, immediately go in silence to a field, and make a few scratches. Just as the *muhoorut* is taken before ploughing for the *khurreef*, so it is taken before sowing the *rubbee*. It may be taken all Bhadon. In the first 15 days of Kwar, is the *kanagut* devoted to acts of charity, feeding Brahmins, and the performance of funeral rites to ancestors. During this time no *muhoorut* can be taken. From the 17th Kwar to the 15th Kartick is a lawful time again.

mansion ?

38. The ploughings for *rubbee* commence usually in Asar, and go on regularly, weather permitting, till the 12th of the bright half of Bhadon, when a harrowing with the *putela* is given; then after every ploughing the land is harrowed till Kartick, by which time the land will have been ploughed over 18 to 20 times, and there will be a perfect tilth. The land is ploughed over in every direction, the first ploughing is called *eksiri jot lena*, the secend *dobar*, the third *tabar*, fourth *chouhar*, fifth *puchwar*, and so on. Taking 30 *beegahs kutcha* as the plough area for two bullocks, their cost

Rs. 20, and that they last for eight years, the annual cost of fully ploughing the 30 beegahs is Rs. 2-8, or rather less, as the cattle are also worked at the sugar-mill. For *khurreef* the ploughings commence as soon as possible after the first fall of rain in Asar.

Sowing.

39. Sowing is usually done in one of three ways—*si, bans, or hira.* In *si*, a plough goes in advance of the sower who has the seed in a basket. He drops it into the furrow as soon as it becomes visible immediately behind the plough. By this method the seed is sown deep, and the stalk is stronger, and not so liable to be laid by high winds. The second is the ordinary drill sowing. In this district only a single *nul* or *bans* is used, attached to the *punhaee* of the plough.

40. The third method, *hira*, which is also called *puvera bona*, is to sow broadcast in the evening, and next morning to plough the land over (*koour kirna*). Wheat, barley, *gojee*, and oats are sown by all three methods; *mukka* by *si*; and the other *khurreef* and the inferior *rubbee* crops broadcast with all methods; the sowing is followed by a harrowing, and occasionally by a subsequent final ploughing.

41. In the rice-fields, gram, linseed, or *musoor* are usually sown *dosahi*, as a second crop. If the field is not ploughed over first, this is called *baithe par bona*, or *chinta*. The seed is sown and then the land has one ploughing and a harrowing. After *mukka* most *rubbee* crops are sown, but principally wheat. The land is then ploughed four or five times and harrowed once. The seed is then sown in the usual method, and the final ploughing and harrowing succeed, but in very cold or very dry lands the final harrowing is omitted. If *joar* or *bajra* have been sown in a moist low-lying soil, or if there has been rain between Aghun and Kartick (*mahawut*), then *musoor* or *kussa* are sown broadcast *baithe par*. The land is then ploughed twice, and harrowed once or twice. The *mahawut* is only occasionally favourable, whence the proverb—

"Bhoora hathi, chundli joe,
Poos mahawut, birli hoe;"

i.e., a white elephant, a bald woman, and rain in Poos, are not often to be met with.

42. All the seed which remains over after the day's sowings are completed becomes the perquisite of the labourers employed, if any, and is called *bijwar*. The day on which the sowing is completed is called the *duleeajhar**, or cleaning out of the sowing basket, and sometimes the *niboni*. It is usual to devote this day to festivity, and amongst other ceremonies to decorate the ploughs and to make the residue of the seed-corn into a cake, which is given away to brahmins or *faqueers*.

Manuring.

43. There are two great points on which our agriculturists require instruction—(1) growing green crops for cattle, (2) the proper management of their manure. In collecting the latter from the roads, camping grounds, and even the fields where the cattle have been grazing, they display a most praiseworthy assiduity. They collect leaves, and all the sweepings and ashes of the house, and all the cow-dung obtainable, and put it all in one heap exposed to the air, where it remains till it is completely decomposed. By this system nearly all the gases and nutritive juices are dissipated and lost, and nearly all the salts are washed away by the rain. The heap, when sufficiently dry, is then burnt, and the ashes are spread over the fields: a more wasteful system could hardly be conceived. Bones, than which few manures are more valuable, are never used for the purpose, but are allowed to lie about the outskirts of the village. Of all artificial manures they are of course utterly ignorant, and they are very disinclined to try anything new. Lalla Luchmin Narain offered the cultivators of Sydpoor, where he has an indigo factory, all the refuse of the factory as manure, and the cultivators at first would not take the trouble to carry it away. Three-quarters of the available cow-dung of every village has to be consumed as fuel for want of wood. True, its ashes are returned to the earth, but there is vast waste—*pace* Mr. R. H. Elliot. The canals are irrigating large areas, which are becoming over-cropped, yet there is neither manure enough to restore to the earth the

* Elliot's Glossary, S. O.

phosphates of which it has been deprived, nor deep ploughing to get at a new unexhausted soil from the subsoil: and there are no means of teaching the people ; and if there were, it would take a generation to produce even a slight effect. Deterioration in soil and crops must come; there is no prospect of improved agricultural knowledge, and the population is already pressing on the land, while every facility has been given by law to the landlord to raise his rents. The prospects of the district therefore are somewhat gloomy for the future. All the manure collected from the sweepings of the houses of non-agricultural residents is by custom the property of the zemindar, who either puts it down on his own seer fields, or makes it over to *asamis* for increased *zabti* cultivation. Sheep are occasionally penned in a field for the sake of the manure given by the droppings, but the people have no idea of growing green crops to be fed down by sheep. This penning is called locally *khatana*. The benefit of ploughing in a green crop is quite unknown here, though I believe it is occasionally done in other parts of India. Thus in Bombay hemp is grown and ploughed in green before sugar-cane, with great advantage to the latter crop; all the *megass* or squeezed sugar-cane trash, which makes an excellent manure, especially for cotton, is burned as fuel in the boiling houses or *bels*, and it would be impossible to replace it with wood-fuel. The system of manuring with us in Bareilly differs totally from that pursued in many of the Doab districts. With us there is no well defined *gouhan*, with easily recognizable limits, which is always thoroughly manured, and rents at from two to three times the rate of the unmanured *har*, or even more. There are no zones or belts of fertility depending on the distance from the village site, and consequent facilities for applying the manure. With us the manure follows the cane, which is put down in the soil which is naturally best suited to its growth, and this *may* be at the farthest point from the site. The best land, wherever it is situated, is the best manured, without reference to its situation as regards the site. Consequently with us manure is not so concentrated ; it is more evenly diffused, though in less quantity, over the whole area of naturally good soil. Hence there is not the extraordinarily large difference between the rents of the *gouhan* and the *har*, which is to be found in the Doab districts. There *is* a *gouhan* in many villages, but it differs in rents from land of a similar soil in the *har* by only 2 to 4 annas per *kutcha beegah*, or 13 annas to Re. 1-9 per acre. I recollect in a commutation case in Kabur where there was a real *gouhan* proposing to the cultivators Rs. 4-12 per acre as rent for ordinary *doomut*, and Rs. 8 for *gouhan doomut*: my proposal was received as a good joke. They could not believe I was serious. The *gouhan* rate finally fixed was Rs. 6-6 per acre, and that was considered high ; usually where *har doomut* pays 12 annas per *kutcha beegah* (Rs. 4-12 per acre), 14 annas (or Rs. 5-10 per acre) is the rate for *gouhan doomut*. The difference is greater in *bhoor* : where 4 to 6 annas is the *har* rate, the *gouhan may* be rented at 8 annas to 10 annas. In perhaps the majority of villages, however, there is no difference between the *gouhan* and *har* rates for land of a similar natural quality.

44. Sugar-cane and *bijwa* rice for the *khurreef*; vegetables, wheat, barley, gram, *gojie* and *bijra* are the only crops usually irrigated. **Irrigation.**

45. Owing to the abundant annual rain-fall, the regularity of a fall of rain about Christmas time, and nearness of water to the surface irrigation, is not nearly so necessary with us as in the Doab. *There* we hear of three waterings for *rubbee* and eight for cane bein the rule; *here* one for *rubbee* and two or three for cane are customary, while in the northern pergunnahs fine wheat and even sugar-cane are grown without any irrigation at all. In 1870, in the Buheree Tehseel, I saw miles of fine *rubbee*, much of it wheat, as a second crop after *mukka*, and but little of it irrigated, though *kutcha* wells were practicable; whereas in this part of the district rents are chiefly paid in kind by division of the crop ; the cultivators will not expend their time and labour in well-irrigation to share the resulting profits with their landlords, when they can secure a fair crop without the extra labour. Hence well-irrigation here is reserved for the more valuable crops only *viz*, sugar-cane, garden produce, and tobacco, which are invariably paid for at fixed money rates, and in which consequently the cultivator reaps the whole extra benefit resulting from extra labour. The great danger to the *rubbee* crop in these pergunnahs

is not from drought, but from "*rutta*," a red rust caused by excessive damp. The rice is chiefly grown in the low lands; and excepting the *gaja*, *koondher*, and *bijwa* sowings, is rarely irrigated: its greatest danger is from floods. In the *rubbee* of 1867-68 in Tehseel Crore, which lies to the south of the district, I made a series of experiments on produce by cutting and weighing the actual crop in a measured area. This tehseel is on a high level, is drier and in more need of irrigation than the northern pergunnahs: 103 trials of wheat in irrigated doomut give an average produce of 861·90lbs. avoirdupois per acre; 123 trials in dry *doomut* gave 650·25 lbs.,—the difference in favour of the irrigated lands was 211·65 lbs., or about 32 per cent. These peculiarities of Bareilly have not escaped the notice of the canal officers; and as they have avery important bearing on the question—whether new canals through Bareilly will ever prove remunerative—I quote Captain Tickell's remarks from his report for 1867-68:—

"Para. 4.—During the *khurreef* the floods in the rivers were the heaviest that "have been known for years. The natural irrigation that the country received was "too much in many places even for rice. Except for sugar-cane and *bijwa*, in April "and May there was scarcely any demand for water during the *khurreef*; and during "these months the rivers are all so low, that very little irrigation can be done from the "canals.

"Para. 6.—In the parts of the district traversed by these canals cloudy weather, "especially when following a heavy rainy season, is almost as fatal to *rubbee* irrigation "as rain. In the upper part of the division the *rubbee* is grown without any irrigation "at all. In the lower part more than one watering is never given. As long as there "are clouds hanging about, the zemindar will not take even this one watering. They "say if we take a watering from the canal, and then rain falls, our crops will be ruined "from excess of water. If we do not irrigate and rain falls, we get a first-rate crop. "If the rain holds off, we shall still secure a very fair crop.

"Para. 7.—During the *rubbee* I saw great quantities of wheat injured by the excessive moisture of the ground. This affected the grain with a species of smut even in "fields that had received no artificial irrigation."

46. I do not deny that irrigation as a rule increases the produce; and that where he pays money rates, a cultivator will irrigate as much cane and *rubbee* as he can find time and labour for. What I wish to point out is the marked differences in the *necessity* for irrigation between the Doab and Bareilly. In the former irrigation is required to *ensure* a crop at all. Here only to *insure* it against drought. Even in the tracts traversed by the canals, and at the present very low rates, very many cultivators prefer irrigating their more valuable crops by lift or *dhenkli*, as they then can get as much water as they require, *at the exact time they want it*, and at little or no money outlay, and without risk of being exposed to extortion. *Pukka* wells, except in the immediate neighbourhood of a large village or *kusbeh*, are very rare in this district. Those that do exist are all old, and were built for drinking purposes, not for irrigation. The nature of the subsoil is such that *kutcha* wells are almost everywhere practicable; the water-supply is tolerably abundant, and, as shewn before, is very near the surface. In one instance, in Beesulpoor I found that the cultivators had broken down the side of an old masonry well, and were irrigating from it by one lift! *Kutcha* wells are distinguished into *sotihai* and *burrhai*. The first are those in which the sot or perennial spring is reached. The spots where such wells can be sunk are generally of small extent, and scattered about very irregularly. The *burrhai* or percolation wells are those in which the sot is not reached, but which are dependant on the drainage of the subsoil. In these last the depth of water in the well averages about three feet. They are worked out in a few hours, and then the cultivator has to wait until the well is filled by percolation. They usually last only one season. The sot wells are either in *mota*, or in sand. The former is when the subsoil is all clay or firm loam down to the sot. These will last for many years, even when no framework of any description is used. The latter is when a substratum of hard soil is succeeded by one

of sand, and that again by the stratum in which the spring is found In this case the well requires an interior lining as it were, made with a thick rope *(beendi)*, made from twisted *urhur* and *bajra* stalks, wound round the inside of the well. The object is to prevent the water reaching and undermining the sand, in which case the whole well would fall in. These wells last from one to three years. In some places the sand is so fine and moist, that it is impossible to dig a firm side through it all, and it falls in at once. Sand of this description is locally known as *lailwa*: where the sot is good and the subsoil reliable, the well is worked by *lao* and "*churus*," or the rope and leather bucket.

47. These wells are to be found only—

(1) In Aonlah Pergunnah, west of the Nawab Nuddi.

(2) In South Serowli.

(3) In a few fields adjoining the city of Bareilly.

(4) In Beesulpoor, east of the Deoha.

(5) In the south-east corner of Fureedpoor.

48. In the first three cattle are used to work the *lao:* in the last two men only, in gangs of ten—four working, four as a relief, and two distributors, one at the bucket and one at the field. This practice is, I believe, common in Oudh, and may have been introduced thence into the east part of our district, as most of the better cultivating classes there have originally emigrated from Oudh. It is said to be cheaper and quicker in the long run, where labour rates are low and frequent irrigation is not required, than keeping an extra stock of cattle for the purpose, where green crops are not much grown, and there is little or no available waste land for grazing. The average area actually irrigated in the season from one of these wells is about 6½ *pukka beegahs*, or 4 acres: under ordinary circumstances of soil, and distance from the well, slighthy under 4 *kutcha beegahs* will be watered in a day. The area, however, varies according to the nature of the soil and its retentiveness of water. Over the remainder of the district the *churkhi* and the *dhenkli* are more commonly used. The *churkhi* is an ordinary wooden pulley, either with or without spokes, over which is passed a hempen rope with an earthen *ghura* at each end: as the full one comes up the empty one goes down. The *dhenkli* is an ordinary long lever, working on a cross bar between two uprights. The short end is weighted, at the other end is a rope and earthen pot, which is depressed into the well by the person irrigating, and is elevated when full by the gravitation of the weight at the short arm. Two men are usually required—one at the well and one at the field--to let the water into the *kearies* in succession. Both these methods are slow and laborious, but they as a rule involve no direct money outlay to the cultivator, who has usually either a partner or male member of the family to help him. He digs his own well, makes his own rope of *sunn* grown by himself, and works it himself. The village carpenter is paid for his labor in making, fitting, or repairing the *churkhi* or *dhenkli* by his *huq*, or share in the produce. Hence as no money passes, the cultivator considers that irrigation has cost him nothing but labour, and his vocation is labor, and he does not grudge that, as long as he receives the benefit of it.

94. Irrigation from rivers is by means of temporary earthen dams, by which the water is raised to such a height as to admit of its being distributed either flush through the *gools* or by lift. There are three chief methods of meeting the labour and cost of construction:—

(1) The irrigating villages contribute the labour (or its cost) of one man per plough for as long a time as may be required to construct the dam. They then receive the water free. This is the more ordinary plan.

(2) The dam is made by the zemindars of the villages in which the two ends of the dam are situated. They undertake all the responsibility for its construction and maintenance. The average money cost of this is fixed and collected from the zemindars of the irrigating villages

rateably according to the area irrigated in each village from the dam in the year in which the arrangement was originally made. The money contributions are then fixed once for all. This is the system followed on the great Kutna dams in Beesulpoor.

(3) The zemindars of the villages in which the dam is situated make the dam as in No. 2; but they by consent of all levy a cess usually of 2 per cent. on the jumma of the irrigating villages, without any reference to the actual cost of construction or the actual area irrigated. This system is chiefly prevalent in Aonlah on the Aril dams.

50. In the last two cases the zemindars of the irrigating villages charge their cultivators a cess on each beegah that they irrigate. The amount is usually 1 anna for *nijkari*, and 2 annas for cane irrigation; but in some villages 1½ annas per beegah is fixed, whatever the crop is. In all cases the zemindars collect considerably more than they have to pay. This system prevails to some extent in the canal-irrigated villages also. In three villages in Chowmahla I succeeded in getting accounts which shewed that more than double the amount entered in the canal *jummabundis* was collected by the zemindars from the cultivators in the form of a cess called the *udhar abpashi*, of 6 annas per two-bullock plough, whether the cultivators have irrigated or not. The parties stated that this was a regular custom to meet the expenses of feeding, and "making comfortable" the native officials and *chuprasies* of the Canal Department whenever they come to the villages. Tank and *jheel* irrigation is entirely by lift with the common *dooglas* or baskets. The method is too well known to require description here. The local terms in use will find their appropriate place in a glossary. The average height of each lift is about 3½ feet: 6 men are usually employed at the *dooglas*—4 to work the baskets, and 2 as a relief, while two more distribute the water to the *kearies*. This party can irrigate 1¾ to 2½ *pukka beegahs* per day according to soil and distance from the lift. Where two or more lifts are required, the area irrigated is rather less—2 *pukka beegahs* per day is usually a fair average. It is very unusual for a zemindar to charge the cultivators of his *own* village for the use of tank water, but he usually claims the right to have his *seer* fields irrigated first by free labour: where there is surplus water, and it is taken by cultivators of other villages than his own, he usually charges then for the water from 1 to 2 annas per *kutcha beegah* irrigated.

51. The last method of irrigation is from the canals, either by flow or lift. The question has been much discussed of late whether canal-irrigation deteriorates the land. In Bareilly the canal-water is all derived from the rivers. It is highly charged with silt and fine mud; and like the river water in flood, though not to so great an extent, usually leaves behind fertilizing alluvial deposits. Where the water is as pure as in the Ganges Canal, I can believe in its doing harm to the land. Here it certainly is not the case *when used fairly*. It is terribly wasted, and the fields are quite swamped with water, receiving far more than is required. The result is that the inorganic constituents of the soil are dissolved with great rapidity —all that the plants can consume is taken up, and the rest is carried down to the sub-soil out of reach of the roots. Henceforward the land requires either free manuring, or the silt deposits from the canal-water to produce an average crop. Where the subsoil is retentive, such as clay or *kunkur*, there the land has a tendency to deteriorate from the flooding it receives year after year. The water stagnates in the pan and rots the roots of the plants, while the upper soil becomes cold and soured. The natives call the first of these two-conditions *akorhai*; and say that when the land formerly unirrigated has been freely watered for a few years in succession, it cannot get on at all without water. "As a cow will not give down its milk properly without having its calf before it, so land in this condition will not give a crop without water;" and even with it the crops are not much better than they were formerly without water, while if water be withheld, the produce is far less than before when the land was unirrigated. This evil is not confined to use of canal-water: it will be found wherever there is a free command of water from dams. Where lift or well-irrigation are practised, the water is necessarily economised, and no more given than the field absolutely requires.

The remedy is obvious. Deep ploughing and subsoil drainage, with a use of lime and bone manures, would at once remedy the evil; but this would require an improved breed of cattle, an alteration in the structure of the plough, and increased agricultural knowledge. I am not sanguine enough to hope even for the introduction of these requisites for many a year. Over-cropping and consequent deterioration of the land are also fostered by canals. Owing to the rapidity with which a field can be irrigated, and the consequent amount of labor liberated, a cultivator can have a larger area under the better crops or more *dosahi* cultivation, while he has no more manure to put down than he had before. Water is so near the surface, and natural streams are so numerous already, that considering the rise in the spring-level that always follows flush canal-irrigation, and the extortions and vexations always attendant on canals, and the over-cropping that they encourage, I doubt whether an extension of canals in Bareilly will not eventually prove a vast evil: whether they will not induce malarious fever and all its evils here as they are said to have done in Saharunpore and Boolundshuhur; and whether they will not eventually deteriorate the land. There are only two tracts in the district where I should like to see them made—*viz.*, in South Serowli and the west parts generally of the Aonlah Tehseel, where the soil is sandy and the spring level low, and in the sandy tracts of Pergunnahs Crore and Fureedpoor.

52. We can now calculate the theoretical cost of irrigating by well, or lift by hired labor; but it must be borne in mind that the calculation is more curious than useful; for irrigation as a rule costs nothing in hard cash, even in the case of lift-irrigation, as the cultivators combine usually and help each other: occasionally, however, hired labor is required. The usual labor rate for irrigation work is 1¼ anna per day with 4 *chittacks pukka* of parched grain or *chubena*, or 1½ anna and 2 *chittacks*, or 2 annas without food. Sometimes in dry years the rate without food is as high as 2½ annas. The ordinary times for working are from daylight till 9 A.M., and again from 3 P.M. till sunset. I have, however, known them work in times of emergency day and night by relief gangs. We will not charge for the labor of the owner of the field, who we will suppose is engaged in distributing the water to the "*kearis.*" The soil shall be clay or loam.

I.—By *lao* and *churrus* worked by men—

	Rs.	a.	p.
Cost of sinking the well 20 feet deep, 3 men for 6 days, at 2½ annas per day, ...	2	13	0
Churrus, with making, ...	3	0	0
1 rope or *birt*, ...	1	8	0
Churkhi, ...	0	8	0
Beendee, 2 men for one day, ...	0	4	0
Total cost of well, ...	8	1	0
But the well and materials will last at least two years, so the annual charge is, ...	4	0	6

Then for labour—

9 men at 2 annas per day for 8½ days, irrigating 6½ *pukka beegahs* in all, ...	9	9	0
Total, ...	13	9	6

Therefore, for 1 *pukka beegah* for one watering the cost is Rs. 13-9-6÷6½, which is Rs. 2-1-6 nearly, or Rs. 3-5-7 per acre, for rubbee. For cane, which requires at most three waterings, the cost will be per *pukka beegah* $\frac{\text{Rs. } 4\text{-}0\text{-}6 + 9\text{-}9\text{-}0 \times 3}{6\frac{1}{2}}$ = Rs. 5-0-6 or per acre Rs. 8-1-0.

II.—By *churkhi* or *dhenkli*—

	Rs.	a.	p.
Cost of sinking well 12 feet, 3 men for 3 days, at 2½ annas per day each, ...	1	5	6
Churkhi, ...	0	8	0
Sunn or *baib* for rope, ...	0	4	0
Ghurras, ...	0	1	0
2 men for one day for making *beendi*, ...	0	4	0
Total cost of well, ...	2	6	6

But the rope and *churkhi* last two years; taking half their cost therefore the actual cost of the well is Rs. 2-0-6. Taking the amount irrigated per day as 12 *kutcha biswas*, which is about the average, and the *dhenkli* well area as 6 *beegahs kutcha*, the cost of irrigating is—

	Rs.	a.	p.
1 man for 10 days, at 2 annas per day, ...	1	4	0
Cost of well, ...	2	0	6
Total, ...	3	4	6

Average per *beegah kutcha* Re. 0-8-2, or per acre Rs. 3-4-3, for one watering for *rubbee*. Then cane will be for 6 *kutcha beegahs* Rs. 2-0-6 + 1-4-0 × 3 = 5-12-6, which give 15 annas and 5 pies for one *kutcha beegah*, or Rs. 6-2-6 per acre: Of course if the well has to be sunk for less than the full area of 6 *kutcha beegahs*, the cost of irrigating falls heavier. In practice an average field is only about 3 *kutcha beegahs*.

III.—By lift from a natural stream or tank where no charge is made for the water. At each lift of 3½ feet 8 men are employed, 4 at the baskets, 2 as a relief, and 2 to distribute the water, of whom one is—*ex-hypothesi*—the owner of the field. This party will irrigate on an average 7 *kutcha beegahs* per day. Then the cost will be—

	Rs.	a.	p.
7 men, at 2 annas per day, ...	0	14	0
Baskets and ropes, ...	0	4	0
Total, ...	1	2	0

Average per *kutcha beegah* Re. 0-2-7, or Re. 1-0-6 per acre, three waterings will cost per *kutcha beegah* $\frac{4 \text{ as.} + 3 \times 14 \text{ as.}}{7}$ = Re. 0-6-7, or per acre Rs. 2-10-1. Where two lifts are employed, 14 men are required,—12 to work the baskets, and 2 for distribution. They will irrigate on an average 6 *beegahs* per day.

	Rs.	a.	p.
Then we get baskets, &c., ...	0	8	0
Wages of 13 men, ...	1	10	0

Total on six *kutcha beegahs* ... 2 2 0 = 0-5-4 per *kutcha beegah* or 2-2-2 per acre, for one watering; and for three waterings per *kutcha beegah*, $\frac{8 \text{ as.} + 3 \times 1\text{-}10\text{-}0}{6}$ = As. 14-4 per *kutcha beegah* = Rs. 5-11-9.

53. Owing to the shorter time required, irrigation from two lifts is preferred usually to well-irrigation, where the water itself has not to be paid for. In rent no difference is made in practice for the difference in the method of irrigation. But lately I have found in commutation suits a slight tendency to charge land irrigated from wells at a slightly higher rate than tank-irrigated land. Thus in two villages in Crore, where the rents were commuted by a very good *punchayat*, the rate fixed on ordinary *doomut* irrigated from wells was Rs. 4-12-0 per acre, and on the same land irrigated from *talaos* at Rs. 4-0-0 per acre. The *punahayet* explained to me that well-water, from its comparative warmth, grew better crops than the cold tank-water: especially in the case of sugar-cane.

54. Weeding and hoeing are usually done chiefly by hired labor. The rates generally are for men 1 anna per day and "*chubena*," but for the "*Asarhi kod*" for cane from 1¼ to 1½ annas is paid, as there is at that time a general demand for labor in the cane and rice-fields, and every man is busy getting ready his fields for the *khurreef*: 10 men can weed over an acre in a day. Hence rating *chubena* at ¼ anna, the rates are for men 1¼ annas ordinarily, and 1½ to 1¾ annas for *Asarhi kod;* and the cost of weeding an acre is 12½ annas, and for the *Asarhi kod* Re. 1-1-6 per acre: where the weeding is done by women and children, the former get ¾ anna and *chubena*, or 1 anna in all; the latter ½ anna per day: 16 women can weed an acre in a day, at a cost of Re. 1. The operation is usually done with a "*kurpi*" or spud: hoeing generally with a *kussi*—this is men's work. Narai and Kodai.

55. Watching is usually done by the cultivator and his family. *Bajra, jowar, mukka*, and cane are, as a rule, the only crops that require watching; though in the neighbourhood of the jungle the *rubbee* has to be watched at night from the time the young blades appear above ground, otherwise they would be utterly destroyed by the wild animals. In such situations there is a "*tand*" or "*machan*" to almost every field. Under ordinary circumstances watching is required for cane for one and a half to two months: for other crops for one, as they are ripening. One watcher can take care of 5 *pukka beegahs if the fields are adjacent*. If he is a hired laborer, he gets Rs. 2 per month, and is allowed by custom to pick and eat as much grain as he likes in the field, but to carry none away. Taking three *pukka beegahs* as the average area, "*rukhwali*" may be put down at Re. 1 per acre on ordinary crops; Rs. 2 for cane. Rukhwali.

56. The *leharas* or reapers are paid either in kind—which is the most usual custom all over the district—or in money by time or area. For coarse *khurreef*, gram, and *masoor* wages in kind are one "*dibia*" or heap in 15, that is one-fifteenth of the gross produce. This includes carriage as well. For rice, wheat, barley, *gojee, bijra*, oats, &c., the *lehara* gets one sheaf in 20 if he cuts and carries, and one in 25 if he only cuts and binds into sheaves, while the carrying is done by the cultivator. He is however allowed by custom to select his own sheaf, which he takes care to make rather larger than the rest; consequently the cost of cutting and carrying may be put down as one-seventeenth of the produce where wages are paid in kind. Lahi.

57. If money wages are given, the usual rate is 2 annas per day per *lehara* for men, 1½ for women—the carrying being done by the cultivator. By contract, which is not uncommon in Aonlah, the rate is 1½ annas per *kutcha beegah* for cutting, or 2½ annas for cutting and carrying. For cutting sugar-cane the "*chhola*" gets 5 *gunnas* per day and the leaves. For cotton-picking by hired labor either the pickers (*paihari*) are paid in money at 1½ annas per day, or in kind by a very peculiar and expensive system. At the first picking the *paihari* gets 1 handful in every two, then 1 in 3, 1 in 4, and so on up to the twentieth picking,—the share of the picker decreasing at every "*osra*" as the produce increases and becomes easier to pick. After the twentieth picking, the picker's share increases again—1 in 19, 1 in 18 handfuls, and so on, increasing as produce decreases. The average of the whole arithmetically is one-twelfth of the produce; in practice, with reference to the number of pickings, it is about one-fifteenth: 12 women are reckoned to pick an acre per day, or 16 can do it before noon.

58. The first cuttings of *shamakh* in the *khurreef* and barley in the *rubbee* are not taken to the threshing-floor, but are brought home to be eaten by the family, and presented to Brahmins. The grain is taken out of the ear, mixed up with milk and *goor*, and every member of the family tastes it seven times. The season of course is one of festivity. (Elliott's Gloss., S. O., Arwan).

59. The "*tak*" or grain or straw are brought to the threshing-floor (*pair* or *khirmangah*), and the unbound sheaves are arranged in heaps. These when dry are trodden out by cattle (*dain chalana*), which always have on a muzzle ("*mushka*" or "*chinka*"), and are always driven from right to left. The heap having been three times tossed Thrashing and winnowing. Gahai and Sailahi.

over and trodden, is winnowed with a basket: whatever straw has not been sufficiently trodden out, is again worked over by the cattle. This second treading out is called "*khoord dain*," and the heap is called the "*khajoora*." It is again winnowed, the heap of corn being carefully cleared from dust, &c., with the *soorhet* or broom, which has been carefully kept for the purpose since the Goberdhan. When the whole of the *khajoora* has been winnowed, all the dressed corn is collected into a heap ("*ras*"). The winnower with his basket in his right hand goes from the south towards the west, and then towards the north, till he reaches the pole to which the treading out cattle have been fastened. He then returns the same way, goes to the east till he reaches the pole, and back again to the south; then places his basket on the ground, and utters some pious ejaculation. Then an iron sickle, a stick of *kusa* grass, *madar* flowers, and a cake of cow-dung (*oopla*), in a cleft stick are placed on the heap, and four *ooplas* at the four corners, and a line is traced round it with cow-dung. A *hom* is then burnt, and some *ghee* and *goor* offered in sacrifice. Water is then thrown round the *ras*, and the remainder of the *goor* distributed to those present.

60. The entire ceremony is gone through in perfect silence, for fear lest "*bhoots*" or evil spirits should injure the corn if any talking or inattention takes place.

61. All the grain that in winnowing has fallen behind the winnower becomes the perquisite of the *chumars*, as it is supposed to be (and is) of an inferior quality and light. The work is always done if possible during a west wind, as grain winnowed while an east wind is blowing is supposed to be peculiarly liable to injury from weevils, &c. To tread out one *kutcha beegah* of average wheat is said to take four bullocks and two men for two days. Hired labor is very rarely employed: when it is, the wages of the men are 1 anna each per day, the cattle being the cultivator's own.

Choongi huqs.

62. When the grain has been dressed and prepared, the first deduction from the heap in the pergunnahs where rent is paid in *kind* is for the "*choongi huqs*." The amount of deduction varies according to local custom, and its distribution also varies. The lowest amount I have found was 1 maund 10 seers *per* 100 *maunds of produce*, which I found divided in the following ways:—

		Seers.
Kootwar,	...	5 or 6¼
Kahar,	...	5 or 3
Kheraputti,	...	5 or 3¼
Sweeper,	...	5 or 0
Chowkidar,	...	5 or 0
Chumar,	...	12½ or 12½
Weighman,	...	12½ or 25

But sometimes the *kootwar* gets 10 seers instead of 5, and the weighman 25 seers, of which the zemindar appropriates 12½; besides this the "*thaneyt*," or the resident managing agent of the zemindars, gets usually four *pukka* seers per plough in each harvest. To this 1¼ maunds per 100 maunds of gross produce the zemindars have in many cases added additional charges,—thus I have found from 10 to 12½ seers per 100 maunds for the zemindar's "*bawarchikhana*," 10 seers per 100 maunds for "*Brahmpooja*," or the support of a "*thakoordwara*," 10 seers per 100 maunds for the "*gariban*" to pay for conveying the landlord's share of grain to his house or granary. Sometimes the *chumars* get 25 seers per 100 maunds, and there is an additional 6¼ seers for the village *bhishtis*. In the village of Buheree the following are the *choongi huqs*:—

Kootwar,	...	...	8 seers per plough.
Mali,	...	...	5 „ 100 maunds.
Kahar,	...	...	5 „ „
Sweeper,	...	...	5 „ „
Kheraputti,		...	5 „ „
Joshi,	...	...	5 „ „
Chumar,	...	...	12½ „ „
Weighman,	...	...	12½ „ „
Bawarchikhana,	...	...	10 „ „

63. In fact the amount varies according to the local custom, the weakness or strength of the cultivator to resist imposition, and the terms on which they are with their zemindars. In some villages the *asami's* share of these "*choongi huqs*" is commuted to a payment of Rs. 2 per 100 *kutcha* maunds. In villages where rent is taken in money the "*gaon khurch*" is always paid by the cultivator by a cess of so many annas in the rupee of rent. The amount is usually from 1 to 2 annas, but in some villages 4 annas per rupee is not uncommon; and in Beesulpoor I have found the "*gaon khurch*" as high as 6, and in one village 8 annas per rupee. Where it is above 2 annas, it has been put on by the zemindar as a mere enhancement of rent, to which the cultivators would agree with less difficulty than if their actual rent-rate per *beegah* were increased. In these money-rented villages the *asami* is not freed by the "*gaon khurch*" from his own payments to village servants, from which the above *choongi* and *gaon khurch* are totally distinct. The *choongi* is taken on the gross produce before division between the zemindar and the cultivator.

64. After the deduction of the *choongi* in the *butai* villages, the zemindar takes his share of grain whatever it may be. This is divided in various ways—

(1) The grain is *weighed* out in the respective shares.

(2) It is *measured* out in *ghurras* or baskets. The object being to prevent the *putwarry* from filing a correct statement of the amount of grain paid by each cultivator in his papers, which are sent to the Collector's office.

(3) The same object is attained in a more ingenious manner by some zemindars in Tehseel Buheree. Suppose the zemindar's rent is "*tihara*," or one-third of the produce. The cultivator divides the dressed grain into three equal heaps. When all the grain is ready for division, the zemindar comes round and chooses his own heap; all the zemindar's heaps of the same kind of grain are collected and carried off to his granary, where the gross amount of each kind of grain is weighed. Here it is clearly impossible for the *putwarry* to make out a jummabundee field by field. Where the method of weighing is used, the zemindars always get heaped weights of grain, and a few additional handfuls are thrown in under the name of "*khakina*," which the *asami* is told is an allowance to compensate the zemindar for the dust and dirt in his share. In these ways the zemindar manages to get certainly 10 per cent. more grain as rent than he is fairly entitled to. A favourite method of lowering the *jummabundee* filed in these villages is to use the "*burra punseri*," *i.e.*, a weight nominally five seers, but really eight or even ten, or to use for weighing a *pukka* five seer weight, and to enter the weight as *kutcha* in the village papers;—thus entering five *kutcha seers* (which equal to two *pukka*), instead of five *pukka*, and reducing the quantity in the rates of 5:2. Besides this, the rates at which the grain is sold are seldom if ever entered correctly in the village papers. To return to our cultivator;—having paid his rent, the next thing is to repay in grain any advances he may have received from the zemindar, either for food or seed-grain, or purchase of cattle, or advances for "*rus*." Having done this, he is still not free to carry away his grain. He has to pay the village servants their "*huqs*."

65. The recipients are usually the following:—

The *baraie* or carpenter gets according to village custom 7½ to 12 *pukka* seers per plough in each harvest, usually of "*anjuna*," "*sathi*," "*seorhi*" (kinds of rice), or *kodon* in the *khurreef*, and barley or oats in the *rubbee*. This pays for the construction and repair of all agricultural implements during the year. The wood is found by the cultivator. If he has trees on the "*merh*" of any of his fields, he is entitled to take the wood from them with the permission of the zemindar, which, as a matter of custom, is always given. If there are no such trees, then the *asami* has either to get wood for himself from the jungle or buy it. The *baraie* also gets 2½ seers of new grain per plough in each harvest as "*niboni*," and one sheaf (*poola*) per plough, which is called the "*phiri*." He also gets two for each sugar-mill, two seers of *goor* and

five gunnas per "*merh*" or field of sugar-cane, and his share of the thirteenth *nand* of "*rus*," which is divided between the workers at the *kolu*, as will be seen under "Sugar."

The *lohar* does all the blacksmith's work of the village, and gets the same *huqs* as the *baraie*.

The *chowkidar* gets 5 seers *pukka* per plough in each harvest—rice or *bajra* in the *khureef*, and wheat or grain in the *rubbee*.

The *nyee* or barber gets from 8 to 12 seers per plough per harvest.

Dhobi gets the same, and does all the washing free.

Putwarry gets 1¼ seer per maund on the rent, two seers of *goor* and five *gunahs* per "*merh*" of cane, and usually from the owner of the "*bel*" or sugar boiling-house one "*kulsi*" or pot of *rab* or molasses. In the money-rented villages he gets half-anna per rupee of rent; and besides this always exacts a fee *(farigkhutana)* from the *asami*, when he writes him a receipt in full (*farigkhutti*) for the year. The amount varies, but may be averaged at Re. 1 per holding.

66. Besides this the *gooroo* or *pundit* have to get their dues. These vary according to the superstition and liberality of the giver. Having paid all his *choongi* rent, advances, and dues, the cultivator removes all the grain left to him. Then he has his debts to settle, and his *bunniah* is too knowing a man not to dun his debt or while the latter has still his grain. This is a convenient place to describe the systems of loans. They are either in grain for seed and food, and are then called "*bijkhad*," or in money for wedding expenses, purchases of cattle, &c., and are called *tuccavi*. For the latter the *bunniahs* usually charge half-anna per rupee per month, which equals 37½ per cent. per annum. The zemindars usually lend at two annas in the rupee on the "*fusl*—" 24 per cent. per annum. In Aonlah they often take three annas per rupee per harvest, 37½ per cent. per annum; and in Buheree four annas per rupee per *fusl* for agricultural wants, and six annas per one rupee per "*fusl*" for other necessities,—are not uncommon rates of interest. Grain-loans are made on several systems, nearly all of which are in use all over the district:—

Bijkhad.

Tuccavi.

The first is the ordinary "*deora*" system. A. borrows from B. 5 maunds of grain in *Kartich*: he repays 7½ maunds in *Jeth*, without reference to the selling-price of grain at the time of borrowing or repayment. This is a very common system, and no doubt the extra half repaid was intended to cover the fluctuations of price and the interest.

2. "*Deora nirikh katke*."—This is exactly on the system described in Mr. Beame's edition of Elliott's Glossary, S. O. Bisar. A. borrows in *Kartik* 5 maunds of grain, value in money (seed grain being then dear), say Rs. 10. He repays in *Jeth*, when grain is very cheap, just after harvest, Rs. 15 *worth* of grain, which four months afterwards will be lent out again at *Kartik* rates. This is considered a very iniquitous system as it is. It is not common, and is practised only by a few zemindars, who are greater extortioners than usual. It will be found in Beesulpoor and some of the villages belonging to the Nekpoor zemindars.

3. "*Bhao oop siwaia*."—This is a common custom all over the district. A. borrows 5 maunds in *Kartik*, value, say, Rs. 10, and repays Rs. 12½ *worth* of grain in *Jeth*. This is usually a worse system for the cultivator than No. 1.

4. Is practised chiefly by Mahomedan lenders, who profess to be forbidden by their religion to take interest. A. borrows from B. Rs. 10 *worth* of grain in *Kartik*; B. takes back Rs. 10 *worth* in *Jeth*, but calculated at 2½ seers per rupee cheaper than the market price. Then supposing the market price is 30 seers, B. gets 10 × 32½ = 325 seers, value at market price, Rs. 10-13-4. B. has made on the six months annas 13-4 on a loan of Rs. 10, or 8⅓ per cent. interest per annum: when the prices are high of course, the rate of interest on this system rises also.

5. In Buheree the Raiens, the Mahomedan zemindars of Fyzgunj, and the Brahmins of Juwahirgunj, lend seed-grain, rating it at 5 seers per Re. 1 dearer than the market price, and take in grain at harvest time an equivalent to the assumed money value of the grain lent.

6. Sometimes we find "*Bhao bikta lena* and *bhao bikta dena*," *i. e.*, an *asami* returns at harvest time an equivalent in grain to the real money value of the grain lent at the time of borrowing, no interest being given. It may be supposed to be covered by the difference in price between the time of lending and time of borrowing. This is a very fair system

67. The above are the systems I have met with, though there may be others which I do not know. Loans made in *Asar* are repaid in *Kartik*, and if made in *Kartik* are re-paid in *Jeth*. Cultivators, who make a little money, usually take to lending to their poorer neighbour money at 25 per cent. per annum, and grain at "*deora*," (No 1,) as I have noted under the head of sowing. Only 33·1 per cent. of the cultivating population are in such easy circumstances as not to be compelled to borrow seed. And from this may be conjectured the large portion of the produce which finds its way into the hands of the *bunniahs*. Mr. Knight, of the *Indian Economist*, argues that this is rather a ground for increasing the land-revenue, as it is better that the cultivator's profits should go to the State than the *bunniah*; but raising the revenue brings with it a rise in rent while the cultivator living from hand to mouth must still continue to borrow his seed-grain, and to devote much of what is left to him after payment of rent and *choongi* to re-paying in grain these seed-advances and his other debts, and then will probably have to borrow a few maunds more of grain to fill his families' bellies for a month or so before the harvest comes round again. It is difficult to see how by raising his rent, and thereby decreasing the small stock of grain now left to him, he is to be made less dependant than before on the *bunniah*: all that is now left to him is not more than is sufficient to enable him to live up to the standard of his class, *i.e.*, to give him just enough to fill his belly, to cover his back, and have his smoke when he wants it, and now and then in very good seasons to give his wife a bangle, which will be sold again when times get bad. One thing is certain, the *bunniah* is a very useful and important personage, and without him half our land could not be cultivated. If he could be re-placed, if the people could once for all be freed from their debts, and taught sufficient self-restraint and industry and agricultural knowledge as to prevent them from running into debt again, and from over-populating till they sank to their old low standard, then the *bunniah* could be abolished; but not till then, and that time can never come.

68. Having at last satisfied all the harpies who come to devour his crop, the cultivator carries the small stock of grain remaining to him to his home. If he has paid his rent by "*butai*," he then stores it for food, otherwise he sells as much as is necessary to the *beoparis* and *bunjaras*, who buy up the grain in the villages, and convey it to the large markets for sale. The village prices differ of course according to distance from a market, but about two to three seers per rupee below the market rate may be taken as the average difference.

Area under each kind of crop.

69. We have gone through the main processes of agriculture. We can now proceed to show the assessable area in the district under each crop, and the way each crop is cultivated.

70. The statistical crop tables for each pergunnah will be found in the appendix; they are too voluminous to introduce here.

71. The total area of the district is 1,261,149 acres; of this 1,080,965 acres are culturable assessable land, of which there are—

Old waste, ...	...	138,393 acres.
New fallow, ...	...	15,131 „
Baghs not assessed,	...	43,448 „
Cultivated, ...	...	883,993 „

72. The following table shows the area under each crop, and its percentage of the total cultivated and assessed area:—

TABLE XVIII.

Khurreef Crops.		Area in acres.	Percentage of cultivated area.
Sugar-cane, ...	Saccharum Officinarum, ...	50,078	5·664
Pundra, or land prepared for Cane.	...	28,356	3·207
Vegetables and Garden Crops, ...	...	8,246	·932
Cotton, ...	Gossypium Indicum, ...	33,981	3·844
Sunn, ...	Crotalaria Juncea, ...	1,568	·177
Mukka, ...	Zea Mays, ...	42,292	4·784
Rices, ...	Oryza sativa, ...	193,840	21·928
Bajra, ...	Penicillaria Spicata, ...	150,809	17·059
Jowar, ...	Sorghum Vulgare, ...	47,927	5·421
Indigo, ...	...	420	·047
Shamakh, ...	Panicum frumentaceum, ...	7,718	·873
Kodon, ...	Paspalum frumentaceum, ...	12,307	1·392
Mash or Oord, ...	Phasiolus Radiatus, ...	10,530	1·191
Moth, ...	Phasiolus Aconitifolius, ...	4,082	·461
Moong, ...	Phasiolus Mungo, ...	571	·064
Arhur, ...	Cajanus Indicus, ...	3,963	·448
Mundwa, ...	Eleusine Coracana, ...	602	·068
Kungni, ...	Panicum Italicum, ...	41	·004
Lobia, ...	Dolichos Sinensis, ...	44	·004
Til, ...	Sesamum Indicum, ...	139	·016
Singhara, ...	... ...	40	·004
Chena, ...	Panicum Miliaceum, ...	9	·001
	Total, ...	597,563	67·598
Pural Rubbee Crops.			
Wheat, ...	Triticum Vulgare, ...	206,875	23·401
Wheat, Barley, Gram, mixed crop,	...	8,462	·957
Gram, ...	Cicer Arietinum, ...	32,642	3·692
Barley, ...	Hordeum Hexastichon, ...	16,417	1·857
Bijra, Barley, and Gram, or Barley, Gram, and Peas—a mixed crop.	...	12,087	1·367
Garden Crops and Tobacco, ...	...	161	·018
Melons, ...	...	714	·080
Oats, ...	...	138	·015
Kussa, ...	...	344	·039
Musoor, ...	Ervumlens, ...	3,784	·428
Peas, ...	Pisumarvense, ...	740	·084
Linseed, ...	Linum Usitatissimum, ...	3,496	·395
Surson, ...	...	114	·013
Sehoon, ...	...	48	·005
Lahi, ...	Sinapis Glauca, ...	312	·035
Ajwain, ...	...	71	·008
Koondher, or hot weather Rice,...	...	25	·003
	Total, Pural Rubbee, ...	286,430	32·402
Dosahi Rubbee Crops.			
Garden Crops, ...	...	7,508	...
Pundra, ...	...	11,261	...
Wheat, ...	...	28,903	...
Gram, ...	...	52,087	...
Barley, ...	...	8,002	...
Gojye, ...	...	3,150	...
Bijra, ...	...	8,976	...
Oats, ...	...	190	...
Musoor, ...	...	14,113	...
Linseed, ...	...	12,890	...
Peas, ...	...	412	...
Melons, ...	...	1,612	...
Surson, ...	...	86	...
Lahi, ...	...	437	...
Sehoon, ...	...	25	...
Koondher, ...	...	18	...
Chena, ...	...	98	...
	Total, Dosahi Rubbee, ...	149,768	...

73. The staple *khurreef* crops, then are rice, *bajra*, sugar-cane, cotton, and *mukka*; and the chief *rubbee* crops are wheat, gram, and barley, and their combinations: *khurreef* occupies almost exactly two-thirds of the area, and one-quarter of the *khurreef* area is re-sown for the *rubbee*, chiefly with wheat, gram, barley, *musoor*, and linseed. Of the *rubbee* about two-thirds is "*pural*" or cultivated from *Asar* with a *khurreef* fallow, and the rest *dosahi*, or sown after a *khurreef* crop has been taken off the land. The whole area sown for *rubbee*, including *dosahi*, is to the *khurreef* area as 73 : 100.

74. We can now take up the chief crops in detail, and show the method of cultivation and the produce per acre.

METHODS OF CULTURE OF THE DIFFERENT CROPS AND THEIR PRODUCE PER ACRE.

75. Commencing with *bajra*, there are two kinds sown in the district—*bajra* and *bajri*. The former has a greenish seed, the latter is rather smaller in size with a reddish seed, and ripens rather sooner than *bajra*. On an average about 2 *pukka* seers, or about 5 lbs. of seed, is sown per acre broadcast after the land has been ploughed over from 6 to 8 times. The field is never manured and never irrigated. It is weeded once, and sometimes hoed once. Sometimes, instead of weeding, a plough is driven through the lines when the *bajra* is about a foot high. *Til*, *moong*, *mash*, *moth*, or *oord* are usually sown with the *bajra* as "*utera*." The crop is sown in *Sawun*, and is ripe in *Kartik*. If cut green before seeding it is valuable as fodder. After seeding the stalks are too hard for that purpose. It is watched for about one month as it is ripening. If sown three years running in the same field, or if the land is ploughed either too deep or insufficiently, a white spot appears in the leaf, and the *bajra* withers up. This disease is called "*baguliya jana*." It comes on before the ear forms. There is no known remedy. It is also subject to the disease called "*kundooa jana*," when the stalk gets reddish, and the seed turns into a black dust. This too is incurable. The best *bajra* is grown in the *khadir*, where it reaches a height of 12 or even 13 feet, and I have known it yield as much as 1,280 lbs. per acre. The experiments in produce made at this settlement gave the following results:— Bajra.

Pergunnah.	Year.	Average in lbs. avoirdupois per acre.	Remarks.
Buheree, ...	1869-71	816	
Ditto, ...	1870	673	
Beesulpoor, ...	1870	441	This was a very bad year for *bajra* in the south and east of the district. The *utera* crops failed altogether.
Crore, ...	1867	403	
Ditto, ...	1871	518	
Fureedpoor, ...	1871	432	
Meergunj, ...	1870	826	Average 587 lbs. per acre.

76. The *highest* produce in any field was 1,102 lbs. in the *khadir*. Mr. Boulderson made numerous experiments in the different pergunnahs between the years 1828-1831. In reducing to lbs., however, he made a mistake in the weight of the Bareilly seer, which he took to be 104 *current* rupees, whereas it is 104 old *Bareilly rupees*. I have corrected this error all through. His results were—

Pergunnah.	Year.	lbs. per acre.	Remarks.
Crore, ...	1828-29	190	
Ditto, ...	1830	489	
Beesulpoor, ...	1828-29	480	
Ditto, ...	1831	584	
Ajaon, ...	1828-29	477	
Kabur, ...	1829	279	
Ditto, ...	1830	227	
Chowmahala, ...	1829	572	
Shahi, ...	1828	558	
Sirsawan, ...	1828	800	
Fureedpoor, ...	1828	504	
Ditto, ...	1830	651	
Aonlah khadir, ...	1830	1,118	Average 533 lbs. per acre on all experiments made by him.

77. He got by examination of some reliable *putwary's* papers an average of ... ... 362 lbs.

78. The *kham* tehseel papers of two villages in Sirsawan give an average of ... ... 580 „

79. Experiments at last settlement gave in Sirsawan an average of ... ... 574 lbs.

80. Similar experiments gave in Meergunge an average of ... ... 462 „

81. I obtained the genuine *butai* papers for four years of 12 villages in Nawabgunj of whose accuracy I satisfied myself. They gave an average of 414 lbs., adding one-sixth for deductions before weighing the *lahi*, &c., the resultant gross produce is ... ... 483 „

82. An examination of the Act X. suit files in suits for illegal distraint, rent by *kunkoot*, &c., gave an average of ... ... 548 „

83. The cultivators in Nugurea, in the Fureedpoor *khadir*, gave an average produce in the *khadir*, ... 820 „

84. The average on all accounts is 549 lbs.; a full and fair average would be for *khadir* in an average year 850 lbs., on the uplands in fair *doomut* 550 lbs., and in *bhoor* 420 lbs. per acre, would be found very close to the mark. In the Sydapet farm in Madras the produce in grain was 668 lbs. per acre in poor soil, but manured. In Bareilly manure is never used for this crop.

85. *Jowar.*—The different kinds sown in the district are—

(1) *Pairea.*—The head bends down considerably. The grain grows compactly and ripens late. The stalk is tall but thin, and is very good for fodder. This is reckoned the best kind.

(2) *Latphikra* or *Latooghur.*—Somewhat similar to the above, but rather inferior in quality.

(3) *Lall* or *Jogynia.*—A large variety, the stalk is hard and woody, and not of much use for fodder unless cut green.

(4) *Jeyti.*—These are mostly sown together for fodder.

(5) *Singhia.*—The stalk is long, thin, and softish. The grain of *singhia* is very white.

(6) *Soormoonki.*—The head bends down, and is supposed to resemble somewhat a pig's head. The grain is large and good, but the stalk is thick and hard. This kind is not often grown alone, but is mixed with other varieties.

(7) *Dogudda or Duleria.*—This has two grains in one husk. The grain is good, but the stalk is not good for fodder.

86. *Jowar* is chiefly grown in loam and clay soils, but is best in the *khadir*. It is largely grown to the north of the district in *muttear* in alternate years with rice. In Bareilly it is very carelessly cultivated, never manured, and never irrigated. If sown in a field that has been under *rubbee*, the land is ploughed only 3 to 4 times, otherwise 6 or 7 times.

87. For "*jowar*," *i. e.*, when the grain is the chief object, about 5¾ lbs. per acre is sown as seed. For *churri* or fodder 10 seers per acre, or 25 lbs. is usual. With *jowar*, *til*, *mash*, or *moong*, are sown as "*utera*" crops. It is hoed once and weeded once, or as an alternative the ground is ploughed between the lines with muzzled cattle when the plant is about a foot high. This process is called "*gural*:" occasionally it is neither hoed nor weeded. It is sown in *Sawun*, and is ready for cutting in *Kartik*. It "ratoons" or yields a second crop if allowed to grow after being cut. It is watched like *bajra*, and at the same cost, and is subject to the same diseases. Its cultivation as a green fodder requires stimulating, here it is generally allowed to seed before it is cut,

which dries up the stalk and deprives it of most of its nutritious qualities. Its value as fodder is shown by Dr. Voelcker's analysis of *churri* and turnips, given in the report on the Sydapet Farm, re-published in the *Agricultural Gazette*, 21st September, 1871.

	Churri.	*Turnips.*
Water, ...	85·17	90·43
Flesh-forming matters, ...	2·55	1·04
Fatty or heat-producing matters, ...	11·14	7·89
Inorganic matters, ...	1·14	·64
Total, ...	100·00	100·00

88. If *jowar* is checked in its growth, shortly after it comes up by dry weather or want of water, it is poisonous to cattle if eaten before it is two or three feet high, but does not seem to hurt them when it has grown higher. At the Sydapet Farm it was found (1) that it was suited to all soils; (2) that weight for weight the fodder was more nutritious than turnips; (3) it is best cut for fodder when only two-thirds grown; (4) when irrigated it will give 24 tons of fodder per acre by successive cuttings; (5) as a dry crop it will grow for seven or eight months, and yield four cuttings and about eight tons of fodder per annum, at a cost of Rs. 2-14-1 per ton.

PRODUCE IN GRAIN.

89. By my experiments in Meergunj 671 lbs. per acre in average up land.
„ „ „ Kabur 1,120 „ „ most *khadir* land.
„ reliable village papers in Nawabgunj and Ritcha } 1,202 „ „ *Turaien* land.

90. By Mr. Boulderson's experiments—

(1)	In Crore, ...	508	lbs. per acre.
(2)	„ Ajaon, ...	347	„
(3)	„ Kabur, ...	464	„
(4)	„ Sirsawan, ...	394	„
(5)	„ Fureedpoor *khadir*,	1,202	„
(6)	„ Nawabgunj, ...	763	„

91. By experiments made at last settlements results were—in Meergunj, 490 lbs., in Sirsawan, 691 lbs. The average result from all the inquiries is 1,175 lbs. for *khadir* and *turaien* lands, and 541 lbs. per acre for uplands. On an average 63 per cent. will be dressed grain, and 37 per cent. husk. I have made no experiments as to the weight of fodder per acre, but the cultivators reckon the value of an average *kutcha beegah* of green fodder, at from Rs. 2 to Rs. 3-8, according to the price at the time. This would give from Rs. 12-12 to Rs. 23-6 per acre: Rs. 16 to Rs. 17 may be considered a fair average. This is low, but this must be borne in mind, that the cultivation here is bad, that the crop is usually allowed to seed, and that more than one cutting is not taken. In many villages it is the custom for the zemindars to allow the *asamis* to cultivate 10 *kutcha biswas* $=\frac{9}{64}$ lbs. of an acre of *churri* per plough free of rent.

Oord, OR *Mash.*

92. Two kinds are grown—(1) the *kutchia* or small green variety; (2) the *siah* or *khoojooa*, the black kind. It is generally sown as "*utera*," with *bajra*, *jowar*, or *urhur*; occasionally it is sown alone. It is never hoed, weeded, manured, or irrigated; three ploughings are given the land in preparation. It is sown in *Sawun* and ripe in *Aghun*; the quantity of seed sown is $3\frac{1}{2}$ seers $=9\frac{3}{4}$ lbs. per acre. The straw makes good fodder. The pulse is largely eaten and much esteemed as *dal*. The root is said by Royle to contain a narcotic principle. Lightning withers the bloom and injures the crop. "*Toka*," or moths, attack and injure the young shoots: an east wind shrivels the pods, and prevents them from filling.

93. For produce we have the following data :—

Experiments at last settlement,	Sirsawan,	...	385 lbs. per acre.
	Meergunj,	...	383 „
	Aonlah,	...	562 „

94. Genuine *kutcha* papers of Nawabgunj villages, adding as in the case of *bajra*, $\frac{1}{6}$th., 485 lbs. per acre.

95. The general average is 451 lbs. per acre.

96. *Moong* is chiefly cultivated with other crops as *utera*. There are several varieties. The pulse is much eaten as *dal*. The crop is subject to the same injuries as "*mash*," and the produce is much the same.

97. *Mote* is chiefly grown in the sandy soils of Crore, Furreedpoor, and Aonlah.

98. For both these last, if sown separately, 3 to 3½ seers of seed (7½ to 8¾ lbs.) per acre are required: three ploughings are given to the land, which is never hoed, weeded, manured, or irrigated. They are sown in *Sawun*, and cut in *Aghun;* or if "*utera*," in *Kartik*. The produce of *moong*, *mote*, or *mash*, as "*utera*," is reckoned at thirty *kutcha* seers per *kutcha beegah* = 196 lbs. per acre.

99. *Lobia* is a leguminous plant. The produce is eaten as *dal*. There are several varieties, of which those with the white seeds are reckoned the best. It is usually sown "*utera*" produce: mode of cultivation, &c., the same as the last.

100. *Mukka* is largely grown in all the north-western pergunnahs of the district: where *mukka* with *dosahi* wheat takes the place, that in the rest of the district is occupied by sugar-cane. It thrives best in a light loam soil. If the field to be sown has had *rubbee* in it, it is ploughed three or four times, otherwise six or seven times. If "*zabti*," the field is manured sometimes, but not irrigated. The seed is sown by "*si;*" *kungni* and *mundooa* are sometimes sown "*utera*," between the lines, and *oord* and sometimes *sunn* on the borders of the field. The crop is well weeded once when about two feet high, and hoed about the roots and earthed up when the ear begins to form. It is requisite to the thriving of the plants that the soil should be well stirred, and that very near to them, while they are growing. It is sown in *Asar*. It begins to ripen ("*chabaon hona*") at the end of *Sawun*, when the secondary crops come into flower. At the end of *Bhadon* cutting commences, and the secondary crops are weeded with a *kurpi*. Sometimes in cold lands, or with excessive rains, the *mukka* turns red and withers ("*sunneana mukka sunneai gye*"). The crop is watched like *bajra*. In most pergunnahs *mukka*, with its *dosahi*, is rated at *zabti* rates, usually Rs. 6-6 to Rs. 7-4 per acre. The cultivator then takes the *rubbee* crops: sometimes the *mukka* is charged at 8 to 10 annas rent per *kutcha beegah* (=Rs. 3-3 to Rs. 4-0 per acre), and the second crop is divided by *butai*. All *rubbee* crops are sown after *mukka* as *dosahi*, but wheat, gram, and barley, chiefly where the *mukka* is *zabti*, and *kussa* or *musoor* in the *mukka* sown at *butai*. Produce data are as follows. The grain is almost invariably half the weight of the cobbs :—

Last settlement experiments in Sirsawan gave 763 lbs. per acre.

Meergunj,	1,147	„
Aonlah,	1,028	„
Reliable *kutcha butai* papers of Kutera in Ritcha,	1,042	„
Inquiry from Native cultivators,	1,092	„

The average is 1,014 lbs. per acre. For "*zabti*" *mukka* a fair average would be about 1,250 lbs., for that cultivated at *butai* 950 lbs. per acre. Sukrus in Buheree is noted for its *mukka;* there the value of the produce is said by the cultivators to run up as high sometimes as Rs. 26 per acre. The subsequent wheat crop in "*zabti*" *mukka* is about two-thirds of the produce of ordinary *pural* wheat in the same land. The dry cobbs of *mukka* make excellent fuel. The stalks are good fodder, especially when green, as they

are then very soft and juicy. The crop is not subject to mildew, and is not liable to be beaten down by rain.

102. Only the *desi* or indigenous kind is grown. The experiments made in this district with the Nurma or American and Hingunghat varieties have, almost without exception, proved failures. According to general opinion it thrives best in a high table-land, and requires a soil neither too dry nor too humid; dung manure is supposed to be essential to the rapid development of the stems and branches, and accordingly fields in the immediate vicinity of a village, where cattle are generally collected at night and morning, are the best. *Muttear* is too liable to bake and cake before the rains come on. The land is ploughed from 6 to 8 times; usually cotton comes in rotation between two cereal crops; 20 lbs. of seed sown by "*si*" is the allowance for an acre. The seed is rubbed in moist cattle-dung, and then dried in the sun. By rubbing the remains of the fibre adhering to the seed are removed, and the cow-dung acts in quickening germination. Between the drills *urhur* is usually sown to give shade to the young plants. Black *mash* or *khujoora* is also sown between the lines as "*utera*." Cotton is never sown three years running in the same field, as it withers (*teora marna*). It is sown in *Asar*, the land having been well manured with from 6 to 9 tons of manure per acre. The red bud (*sui*) generally appears 8 days after sowing; 8 days after germination the land is weeded with a *kurpa*, and the soil loosened about the roots. In all the crop is either weeded three times, or hoed once and weeded twice. It is very rarely irrigated: about two and half months after sowing the plants begin to bud, and in about 15 days more the yellow blossoms appear. In 7 or 8 days more the pod forms, which in one month afterwards bursts. In good land, well prepared, the plants grow about 5 feet high. "*Pairi*" cotton buds in *Cheyt*; but there is a prejudice against using the cotton among the Hindoos; it is supposed to bring bad luck. Hence it is either sold or given away to Brahmins. Picking has been already described; it generally commences in the *Noudoorga* (from 16th to 25th of *Kooar*). The time usually chosen is from dawn till noon, when the cotton being moistened by the night dews yields easily to the hands, and there is little or no dust flying about. The quality of the *kapas* is described as *chountali*, where the fibre is one-fourth of the uncleaned cotton, *tihai* where it is one-third, and *pachduli* in the rare cases, where it is two-fifths: cotton is always cleaned with the common *churka*. That prepared for exportation is not "bowed," but this process is always applied to cotton for local or immediate sale. The cleaner gets "*chubena*" and the "*binola*;" when money wages are given, the *dhuna* gets half anna per *suvaia*, or 1¼ *pukka* seer of cleaned cotton: 4 maunds of *kapas* usually yield one of the clean staple. Bareilly cotton is of inferior quality, short-stapled, and dirty. As a rule the seed is never changed, the crop is carelessly cultivated, though its success depends on its being well weeded and looked after in the early part of the season. At that time, however, the sugar-cane and rice are demanding the cultivator's whole time and attention. The plants are overcrowded in a way which stunts their growth and diminishes their productiveness, added to which the cotton itself is full of impurities from careless gathering. In 1848 the Collector reported that the quantity grown in the district was not sufficient for local consumption, and had to be supplemented by importation. He put the produce in cleaned cotton per acre at 105 lbs. after careful inquiry, and the area under crop at 29,711 acres for the whole district as it then stood. The present average for the pergunnahs settled by me was 33,981 acres; considering that the latter does not include the cotton of Pergunnahs Pillibheet, Jehanabad, Bilheree, Rooderpoor, Guddurpoor, Kilpoorie, and Nanukmutta, and the large tract of country granted to the Nawab of Rampore, it is clear that the cultivation has very largely extended. Cotton.

103. When the cotton has sprung up, the owner of the field on a Saturday goes before noon to his field with some *ghee*, "*mithai*," and "*poaris*." He burns a *hom*, offers up some of the *ghee*, &c., and eats the remainder in silence. When the cotton comes into flower, on a Wednesday or Friday, "*kheel*" or parched rice is taken to the field, some is thrown over it broadcast, and the rest given to children—the object being that the cotton may swell like the "*kheel*." When the cotton is ripe and ready for picking, Poojas.

the *paikaris* or women-pickers go to the north or east corner of the field with "*kheel*" and *mithai*, pick two or three large pods, and then sit down and pull out the cotton as long as possible without breaking it. These are then hung on to the largest and tallest cotton stalk, which is called the *bhogaldai*. They then sit round the stalk, fill their mouths as full as possible with the parched rice, and blow it out as far as they can in every direction; a *hom* is then burnt and picking commences. This operation is called *phoorakna*.

Produce.

104. By inquiry of 1848 the average amount of *cleaned cotton* per acre was found to be, ... 105 lbs.

By inquiries at last settlement in			Islamabad, in Aonlah,	... 107	,,
,,	,,	,,	Lilour, in Serowli,	... 64	,,
,,	,,	,,	Sirsawan, ...	... 90	,,
,,	,,	,,	Meergunj, ...	... 96	,,
			Average,	... 92½	lbs.

105. By inquiries made by the Collector from tehseeldars between 1861 and 1870, the average was 50 to 70 lbs. This, I believe, to be too low, as much too low as the estimate of 1848 was too high. I should put the average as certainly not lower than 80 to 90 lbs. per acre. In the northern pergunnahs, and generally where rents are taken in kind, cotton is always a "*zabti*" crop, and pays money rents, which range from Rs. 5-10 to Rs. 7-2 per acre. The cultivator's usual estimate of a fair average crop is a "*kutcha* maund (=sixteen *pukka* seers) per *kutcha beegah*," of cleaned cotton, or 40¾ lbs.; but this is too low, as at an average village selling price of two seers, or 5·1 lbs., it would only give a produce of Rs. 8 per acre to pay rent and all expenses, including picking; while if the price was cheaper, as not unfrequently is the case, the cultivator on such low produce could not pay his rent at all. Rs. 25 per acre would be much nearer the real average.

Kookni.

106. *Kookni* is much esteemed by Natives for cakes or porridge. It is grown in a light soil usually as "*utera*," and without manure or irrigation; it is sown in *Asar*, ripe in *Bhadon* or *Kooar*: seed 10 lbs. per acre. Produce, about 260 lbs. of grain, 1,100 lbs. of straw, which is worth as much as rice-straw, which it much resembles in appearance. The straw for sale would be worth about Rs. 2 to Rs. 2-8 per acre.

China.

107. *China* is sown and reaped in the hot seasons after the *rubbee* crops have been cut. It is not much grown, as it is a very precarious crop, and requires much irrigation, hence the proverb—

"China ji ka lena, choudah pani dena,"
"Byar chale to na lena na dena."

108. The produce is worth about the same as that of *Kookni*.

Mundwa.

109. *Mundwa* is the *raggi* of Madras; it is a very prolific grain, but not much cultivated here. It is grown in light sandy soils without irrigation. When grown as the sole crop, the land has six ploughings: ten seers or 25 lbs. of seed per acre are given. It is sown in *Asar*, and is ripe in *Kartik*. It is often sown as *utera*.

110. Produce by Native estimates,...	...	823 lbs.	per acre.
,, ,, Kutterra *kutcha butai* papers,	...	812	,,
,, ,, Nawabgunj ditto, ...	...	485	,,

111. The average is 716 lbs. The crop is worth much about the same as *bajra*.

Shamakh.

112. *Shamakh* is sown only in light soils without irrigation. The land gets from 3 to 6 ploughings, according to the time the cultivator has to spare: 20 lbs. of seed is given per acre. It is sown in *Jeth* or *Asar*, and cut in *Aghun*. It is never weeded, hoed, or manured.

113. Produce by Native estimates, ... 685 lbs. per acre.

Experiments at last settlement—

In Islamabad, in Aonlah,	...	722	„
„ Lelour, in Serowli,	...	514	„
„ Sirsawan Pergunnah,	...	900	„
By Nawabgunj *kutcha* papers,	...	499	„
„ Kutterra, ...	...	375	„

114. General average is 616 lbs. per acre. I have never made any actual experiments by weighing; but from all I have seen and heard, I should be inclined to think 500 lbs. per acre was a fair average in loam, and 350 lbs. in sandy soils. The straw is used as fodder, and 1,250 lbs. per acre may be taken as a fair average amount. The grain is much eaten by the cultivators until the *bajra* ripens.

115. *Kodon* is sown in light sandy soil without irrigation. The land gets 4 to 6 ploughings; 17 to 20 lbs. of seed is sown per acre in *Asar*. The crop is cut in *Aghun*. **Kodon.**

116. Produce according to Native information, ... 685 lbs. per acre.

„ „ Kutterra *kutcha* papers,	...	749	„
„ „ Nawabgunj, ...	...	500	„
„ „ Experiments at last settlement in Aonlah, ...	...	722	„
„ „ Ditto in *bhoor* in Serowli,	...	514	„

117. The general average is 614 lbs. per acre, about 750 lbs. in good soil, and 500 lbs. in *bhoor*, will be found a close approximation.

118. *Til* is here chiefly cultivated as "*utera*" with *bajra*, *jowar*, *mukka*, and cotton. It is sown in *Asar*, ripe in *Kartik* and *Aghun*. The black variety is chiefly grown. The produce as *utera* is 70 to 80 lbs. per acre. The new oil usually sells at 4 to 5 seers (Bareilly) per Re. 1. **Til.**

119. *Arhur* is usually sown between the rows of cotton, occasionally in *bhoor* soil it is sown as the only crop. The number of ploughings in this case are the same as for *bajra*. If not frost-bitten the average produce is from 500 to 550 lbs. per acre; as "*utera*" the produce is so variable, that it is impossible to make an estimate. The grain is much esteemed and held third in rank among the leguminous plants: cattle are very fond of the young green shoots. **Arhur.**

120. Is cultivated in the same way as *mash*; 24 lbs. of seed per acre is the rule; produce 450 to 500 lbs. per acre. It is a remunerative crop, as during the ripening process the leaves, which like those of all leguminous plants absorb from the atmosphere a large quantity of ammonia, fall to the ground, and by their decay add considerably to its fertility by restoring ammonia to the soil. **Moong.**

121. *Sunn* is always a *zabti* crop, paying money rents. It is sown in the best lands only, and is grown to a considerable extent in the first-class *khadir* of the Deoha and Ramgunga. The plant is pulled up by the roots, not cut. The seeds are beaten out: the stems are steeped for a week, then beaten, and the fibre is separated with the fingers. I am not aware of any scutching instrument being employed. The produce in hemp is from 550 to 650 lbs. per acre. The seeds are given to the cattle. The crop is a very exhausting one to the soil. If ploughed in green it forms an excellent preparation for sugar-cane. This however is not practised in Bareilly. **Sunn.**

122. Rice occupies a larger area than any other crop in Bareilly. The following are the kinds chiefly grown:— **Rice.**

Hunsraj, Basmutti, Sunkhercha, Rae Moonia, Oosbas, Jhilma, Tilok Chundun, Bandli, Raebhog, Sankharad, Kamora, Motichur, Jabdi, Sohag Mutti, Anjuna, Seorha, Seorhi, Dhani, Brinjphool, Sui, Kermali, Jedi, Muchooa, Jhunooa, Sikhanund, Beora,

Dulgunjuna, Pandri, Chumpawuti, Tapsi, Than, Kalma, Deomuri, Koondia, Suiya, Gye, Ranikajul, Kathounda, Motha, Krori, Anundi, Batya, Dhuringa, Jurela, Sathi, Bunki, Dhurilla, or 47 in all. There probably are other kinds with which I am unacquainted. The seed is first steeped thoroughly for a day, then wrapped in straw or cloth for three days, and usually sown on the fourth; but if the field is not ready by that time, it is re-dried in the sun, and will remain for 15 or 20 days fit for sowing.

123. The sowings are called according to the time and method of cultivation employed.

(1) "*Gaja.*" These are the first sowings made in *Bysakh.* The field is filled with water, and thoroughly ploughed four or five times over with the water on it till the earth is converted into a fine mud (till it is "*gauj*"). The water is then let off, and the field allowed to become half dry (ساوا)—*i.e.*, the surface is allowed to dry to a depth of three or four inches. It is then sown and thoroughly irrigated every third day till the rains. The crop is cut in *Sawun.* The produce is heavy, but the cultivation is expensive and laborious, and only possible where water is close at hand.

(2) "*Bhijooa.*" If a *rubbee khet* has been selected, two ploughings are given in the ordinary way, otherwise four or five. The field is then irrigated, and when the land is half dry (ساوا), the seed is sown in *Bysakh* or *Jeth*, and left. If the weather keeps hard and dry the seed germinates but does not spring up till the first rains. If, however, rain falls shortly after sowing the seed springs up; the young shoots are parched and killed by the hot weather that follows, and the crop is lost. It succeeds best in a year when the rains set in late. The crop is cut in *Bhadon*, and the field can then be thoroughly prepared for a *dosahi rubbee* crop. This method is chiefly prevalent to the north of the district, and is much encouraged by the zemindars. Where rents are taken in kind, and water is easily obtainable, *anjuna*, *sathi*, and *seorhi* are the kinds chiefly sown thus.

(3) *Koondher.* This is very similar to *Gaja.* Land is selected on the very edge of a *jheel*, or pond, and thoroughly dug up with a "*kussi*," and divided in "*kearis*:" water is then let in, and the land ploughed three or four times. The seed is then sown and ploughed in. The sowing is in *Phagoon*, and the field kept constantly wet. The crop is ripe in *Asar.* *Sathi* is usually selected for this kind of cultivation. The land is usually let for *koondher* in bits or "*pars*" of about two *kutcha beegahs* each, at so much per *par*: money rates are almost always paid.

(4) *Rutiha* or *rasota.* These are the regular sowings in the ordinary "*rut*" or season, hence the name. They are either—(1) "*khundhar*," where the rain of flood-water is collected in the *kearis*, the ground ploughed, and the seed sown wet on the water and ploughed in. The water is let off when the seed sprouts, and for four days afterwards no water is given; after that any amount is beneficial, so long as the top of the shoot is not covered; or (2) *sookhunna*, where the ground is ploughed and sown broadcast in the ordinary manner.

124. The *rutiha* sowings are between the last 10 days *Jeth* of and the middle of *Sawun*, not later; and the crop is ripe in *Kooar*, *Kartik*, or *Aghun*, according to the kind of rice and time of sowing—four to seven ploughings are given. The land is very rarely manured as the rice would then run to straw, and be laid, and weeds would be encouraged: five seers per *kutcha beegah*, or 86 lbs. per acre, is the usual allowance of seed. *Rutiha* sowings are rarely irrigated artificially, the rain-fall gives sufficient water. Well-irrigation is never used for rice. For a full crop water is required up to 15 days before the commencement of harvest. The necessary amount is generally supplied by the natural

rain-fall. If "*jharooa*" grass springs up, the field is weeded once, otherwise not. Rice is sown as a rule in *muttear* soils, but *sathi bunki*, *dhurilla*, and even *sunkhercha*, are also sown in *doomut*. If possible the sowings commence on a Wednesday, the cutting on a Sunday. At the first cutting the produce of one *kutcha biswa* is given to the *khera-putti*, or a *fakir*. The seed is either sown broadcast, which is the ordinary method, or in a nursery or "*panir*," and the young plants transplanted. No delay must take place in this work, so that the plants may be as short a time as possible above ground: a calm day is selected for the purpose. As soon as the transplanting is completed in a "*keari*," the water is let in to overflow the plants. The harvest time is regulated by the time of sowings, which is early or late according to the rain-fall. Broadly speaking, the coarse rices are sown and cut early, the finer kinds are sown early and cut late.

125. The rice is cleared ("*chhatao*") from the husk by the *bunjarahs*. They usually do this work by contract, engaging to return five-eighths of the quantity received as clean rice, the surplus, together with the chaff, is taken in payment for the labor. It is usually reckoned that in 40 seers of paddy there are 27½ seers of clean rice, 2½ seers of broken rice ("*kinki*" or "*khunda*"), and 10 seers of husk ("*chanus*" or "*ghoot*"). The last is usually given by the bunjarahs to their ponies.

126. Rice is injured by—(1) "*tirha*," a moth which injures the flower: the remedies are (1) the smoke of burnt *ajwain*; (2) the smoke of "*kurwa*" oil on a lighted "*oopla*," which is carried through the field so as to smoke the tops of the rice. **Weeds, diseases, &c.**

(2) *Agaya* is a disease by which the whole plant is withered and dried up. There is no remedy.

(3) *Bakoli*, a green caterpillar.

(4) *Dhonda* or bat, a weed which grows in rice-fields, and chokes the plant. The seed is eaten by cultivators.

(5) "*Bhungra*" (*verbesina prostrata*), a small creeping weed, with a white flower.

(6) *Bandsi* or *bansi*, a kind of wild grass, grows about two feet high, has an ear, but produces no grain. It is used green as fodder.

(7) *Gargwa*, a wild grass, very injurious to rice, which it quite chokes. Buffaloes eat it, but other cattle refuse it.

127. I have made a vast number of experiments by cutting a measured area, and weighing the produce in the years 1867-71. The results on all were— **Produce.**

In Crore, ...	... 981 lbs. of paddy per acre.
„ Kabur and Sirsawan, ...	... 1,456 „ „ „
„ Nawabgunj, ...	... 1,066 „ „ „
„ Ritcha, ...	... 1,204 „ „ „
„ Beesulpoor, ...	... 1,435 „ „ „
„ Meergunj, ...	... 1,507 „ „ „
„ Chowmahla, ...	... 1,200 „ „ „
Average of all my experiments is ...	... 1,136 lbs.

Mr. Boulderson's experiments between 1828 and 1831 gave—

Crore, ...	... 1,008	Chowmahla,	... 796
Kabur, ...	... 975	Sirsawan,	... 1,150
Nawabgunj,	... 1,348	Fureedpoor,	... 1,078
Beesulpoor,	... 1,545	Aonlah, ...	... 1,392
Meergunj,	... 724	Suneha, ...	... 1,238
Ajaon, ...	... 1,217		

The general average is	1,134 lbs. per acre.
The result of inquiries from Natives was	1,167 lbs.
Experiments at last Settlement in Aonlah gave	1,371 lbs.
Reliable *kutcha* village papers of Nawabgunj for three years gave	1,282 lbs.

The average on all the results of different methods of getting at the produce is 1,218 lbs., which is a very fair result on an average of years. Of this 837 lbs. will be cleaned rice; 76 lbs. will be *kinki*; 305 lbs. will be husk.

128. The straw will average about 1,300 to 1,400 lbs. per acre. This is not sold, the cultivators reserve it to feed their plough cattle.

129. The best rice is grown in the northern pergunnahs. In the southern, *sathi* and the other very inferior kinds only are grown. Where rents are paid in money, land suited only for *sathi* rents at 5 to 8 annas per *kutcha beegah* = Rs. 2 to 3-3 per acre. Land fit for *anjuna* and similar rices rents at Rs. 3-6 to 4-6 per acre. Land fit for *jhilma*, *oosbas*, and the superior rices at Rs. 4-12 to 7 per acre. As a rule, however, rice-lands in the district generally are held at "*butai*," at rates varying from one-third to one-half the produce. The crop is a very variable one, and on an average there is only a *first-rate* harvest once in about five years, according to the rainfall. In the same period there will be three second-rate and one failure.

Sugar-cane.

130. Sugar-cane is almost the last and quite the most important of the *khurreef* crops requiring notice, as the cultivators say,—"*Ikh tuk kheti, hathi tuk bunj.*"

131. The kinds grown in Bareilly are—

(1) White *pounda*, ... This is the best of all canes. It is grown only as a curiosity in gardens, and is used only for eating.

(2) Black *pounda*, ... Is grown as the above, and used only for eating.

(3) *Thoon*, ... A very thick and heavy cane. The juice is thin, very sweet, and makes a capital *rab*.

(4) *Pandia*, ... A first-class cane, much grown, makes very good *rab*.

(5) *Dantoor*, ... A very soft cane, is good for eating, and makes first-class *rab*.

(6) *Rakri*, ... Similar to the *dantoor*, but rather harder.

(7) *Chun*, ... A small hard red cane.

(8) *Dhour*, ... A hard, thin, whitish cane; stands water and floods well. This and *chun* are grown largely in *turaien* lands. It has been to a great extent superseded of late years by *agholi*, but is coming back to its former place in popular estimation.

(9) *Agkoli*, ... This is a soft, large, whitish cane—a good kind for eating. The juice is abundant but thin, and yields a comparatively small proportion to its weight of *goor* or *rab*. It is very largely sown, but has often failed of last years, owing as I believe to a want of change in the seed.

(10) *Mittan*, ... Similar in quality to *agholi*; *rab* is second rate.

(11) *Kaghazi*, ... Ditto ditto ditto.

(12) *Neula*, ... A soft sweet cane, only grown in small quantities for eating.

(13) *Katara*, ... As above.

132. There are several methods of cultivation. In the upland the following is the most usual:—The field has a *khurreef* and *rubbee* fallow, during which it is continually ploughed over, except in the month of *Poos*, when it is considered unlucky to plough it. The land is well manured with from 8 to 10 tons of manure per acre, which is well ploughed in. The sowings are from *Magh* to *Cheyt*. The seed is either a whole cane cut into 5 or 6 pieces (*belka bij*), or only the top cut off (*agaund ka bij*), or (*phunka bij*). When the cane was cut, and buried till used in the corner of the field, and covered lightly with earth, the place is called the "*bij gaddha*" or seed trench; sometimes it is covered with a heap of "*putai*" or dead leaves, which in this case are

watered every 3 or 4 days. The land is usually irrigated first, and then sown in *Cheyt*, when the surface has dried, in the following manner:—An ordinary plough, which has first been *poojaed*, and had a red *teeka* put on it, goes first; this is followed in the same furrow by a second, with mould-boards attached to widen and deepen the furrow; behind this comes the sower wearing silver ornaments, a necklace ("*hasli*") and flowers on his neck, and a red *teeka* on his forehead. He is usually well fed with *ghee*, *mitthai*, &c., before commencing. He is called the "*hathi*." He throws the bits of cane cross-wise (*tirchha*) into the furrow immediately behind the second plough, at intervals of about a foot. Behind the *hathi* comes a second man, called the "*kowa*" or crow, to pick up the bits which have not fallen into the furrow, and to put them in properly. There is occasionally a third man called the "*guddha*" or donkey, who accompanies the *hathi* with a basket tied to his waist, full of bits with which he supplies the *hathi*. It is considered a very favourable omen if a man on horseback comes into the field when the sowing is going on. After the sowing is completed, all who have been engaged in the work come to the house of the cultivator of the field, and have a good dinner of "*kurhee*" (a dish prepared with milk, ground gram, and *musalah*), rice, *dal*, and *chupaties*. The cost of seed where it has to be purchased is reckoned at Rs. 6 to 8 per acre; *mash* and melons are sometimes sown with the cane; along the outside *merh*, *sunn*, and *andowa* (*ricinus communis*), or castor-oil plant, are generally sown.

133. If rain falls in *Jeth* the cane is watered once afterwards, otherwise twice; but in the *khadir* no irrigation is required, and to the north of the district, even in the uplands, cane is grown in many places without artificial irrigation, and depending solely on the rains. **Irrigation.**

134. The earth is hoed once after sowing, and before the cane has sprouted. This is called "*andheria kirna*." It is hoed again after the young shoots have appeared, and again when the plant is about a foot high, again in *Jeth*, and again in *Asarh*, when the musk-melons are ripe. This is the most important of all. It is called the "*asarhi kod*," and is never omitted. Hence the saying— **Hoeing.**

"Kod Asarhi ikhen de,
Bhoor upra rus malik le."

185. Altogether cane is hoed from four to seven times, and then left to grow.

136. When the seed germinates, the owner of the crop does *poojah* at his field on the first Saturday before noon. On one of the days of the *Noudoorga* in *Kooar* the owner, either himself or by his *purohit*, again burns a *hom* in the field, and offers a prayer. In *Kartik* the *sui-ka-poojoh* takes place to avert the disease called *soondi*. The *asami* takes from his house *pooris*, *ghee*, *mitthai*, and five or six *suis* of *ata* pressed into the shape of a pear, and some clean water; goes to the field and burns a *hom*, and sacrifices some of the *pooris*, &c. He then buries one of the *suis* at each corner of the field, eats the remainder of the *pooris*, &c., and goes home happy. On the *ekadasi*, or 11th of the bright half of *Kartik*, is the *Deothan;* the owner of the crop then does *poojah* at his field, and breaks off some *gunnas* which he puts on the *merh*. He distributes five canes each to the *Brahmin*, *lohar*, *barai*, *dhobi*, and *kahar*, and takes five home. Then on a wooden board, about 1½ feet long, two figures of *Vishnoo* and *Parbuti* are drawn with *ghee* and cow-dung. On the board are placed some cotton, *mash*, *singhara* nuts, and *butashas*—a *hom* is burnt, prayers offered to the figures, then the five canes are placed round the board and tied together at the top. The *Saligram* is then lifted up, and the women of the house repeat the following words five times:— **Poojas.** **Deothan.**

"*Ootho Deo, baitho Deo, paonwurean chutkawo Deo, Gya, Gujadhur, Prag Sagur, oonhen theeko Kumpila Rameshur. Ootho Deo, Sahnsar oothan.*"

Then all move round. The process is supposed to represent the waking of Vishnu from his slumber of four months, during which he was with *Rajah Bul* in Patali. The tops (*juri*) of the canes are then broken off and hung up from the roof till the *Holi*,

when they are burnt. The *gunnas* are taken by the *purohit* as his "*huq*." When the worship has been duly performed, and the officiating Brahmin declares that the fortunate moment has arrived, the cutting may commence. The whole village is a scene of festivity, and dancing and singing go on frantically. Till this day no Hindoo will eat or touch the crop. They believe that even jackals will not eat the cane till then. The real fact is that till then the juice has not properly come up, and the cane is not worth eating. On the first day that the cane is cut, the owner eats none of it, it would bring him bad luck. The above is the regular process of cultivation, but in the northern pergunnahs as a rule there is only a *rubbee* fallow, rice, *shamakh*, *kodon*, *bajra*, or *jowar* being sown in the *khurreef*. The cane is then called *kharik*. The produce is rather less than in *pural*. In this case either the whole of the *khurreef* crop is left to the cultivator, who pays full cane rates, or else the *khurreef* crop is divided by *butai*, and *kharik* rates charged on the cane. The old custom was to charge *kharik* at two-thirds of the *pural* rate for cane; now occasionally as much as three-fourths are taken. The reason why the cane rates given by the *putwaries* in Kabur, Sirsawan, Ritcha, Chowmahla, and parts of Nawabgunj are so much lower than in the rest of the district is because the cane grown is all *kharik*, and the rates given are *kharik* rates. In Aonlah, Suneha, and some parts of the Buheree Tehseel, *pairi* cane is grown to a considerable extent—*i.e.*, it is allowed to *ratoon* after the first cutting. The produce in *rus* is not above one-half or even a third of *pural* cane, but the juice is of better quality, and there is less trouble in clearing and concentrating it. *Pairi* cane is opposed to *nouluf*—*i.e.*, when new seed is sown. Land sown with cane after a rice crop is sometimes called *bartush*. The best cane is grown in Nawabgunj to the north-east and along the Deoha to the east, and in Beesulpoor about the Kutna, and in Gurgeya in Ritcha. The *rab* here is better, and fetches about 10 to 12 per cent. higher price on the average than that of the rest of the district; after the *Deothan*, the *kolus* or sugar mills are set up, and as soon as they are ready cutting and pressing commences. The *cholas* or cutters get five *gunnas* per day and the leaves as their wages.

Kharik cane.

137. The cane having been cut, the next question is its final disposal. If the cultivator owing the field is out of debt, he works up the cane juice into *goor* at his own expense, and sends it into the market for sale, or into *rab* which he sells to the *khundsaries* or sugar-boilers. The greater proportion of the cultivators, however, are not able to wait so long for their money, and grow the cane on advances from the *khundsaries*. The number of these in 1848 and 1872 is shown thus:—

Number of khundsars.

TABLE XIX.

Name of Pergunnah.	1848.		1872.	
	Number of khundsars.	Number of arrahs in ditto.	Number of khundsars.	Number of arrahs in ditto.
Fureedpoor,...	8	11	36	66
Crore, ...	21	37	170	234
Aonlah, ...	12	22	42	73
Suneha, ...	2	2	11	12
Bullia, ...	...	...	...	...
South Serowli, ...	13	19	22	38
Meergunj, ...				
Kabur, ...	6	9	24	57
Sirsawan, ...				
Ritcha, ...	13	17	10	22
Chowmaila,...	...	...	11	27
Nawabgunj,...	26	47	79	122
Beesulpoor,...	73	182	156	297
Total, ...	174	346	561	948

138. It is clear that as the number of *khundsaries* has more than tripled, the advances system must have immensely extended since 1848. Many zemindars now engage in the business, and work up the juice of their own and the neighbouring villages. It is a very profitable employment to them, as their advances are made at less risk than those of the *khundeari* who is unconnected with the land. For where rents are by *butai*,

they collect balances due on the threshing-floor before the cultivator is allowed to remove his grain ; and where rents are in money, the zemindar *khundsari* will, as far as he can, credit all payments made by the cultivator to *rus* balances, and only after the liquidation of the latter to the rent. For otherwise he would have to sue for the former in the Civil Courts, while the realization of his rents is simple and easy under the procedure of Act X. of 1859. The advance system is worked as follows :—The bargains for *rus* commence in *Jeth*, and are usually all concluded by *Kooar*. The price per 100 *kutcha* maunds of *rus* is agreed on between the parties, and the amount of advances per *beegah* sown to be made by the *mahajun* or *khundsari*. This amount varies according to the season, the necessities of the cultivator and the quality of the cane grown in the village. Thus in Crore, the usual rate of advance is Rs. 100 for every 15 *kutcha beegahs* sown. In Buheree, where the cultivation is inferior, and the *rus* second rate, from Rs. 5 to 6 at most per *kutcha beegah* is usually given. In Beesulpoor, where the cane is good, Rs. 10 per *kutcha beegah* sown is the general rate, and Rs. 15 to 18 is not unknown. Sometimes if the *asami* is badly off, or an inferior cultivator, less than Rs. 10 is given. A bond is then executed by the *asami*, specifying the price per 100 *kutcha* maunds of *rus*, the amount of advance, and the rate of interest, which is usually 1 per cent. per month ; occasionally, however, Rs. 2 and even 2-8 per month is charged. The field of cane is hypothecated as security for the advance, and there is a condition usually added by which the cultivator binds himself to repay 1½ times the amount of advance, if he sells the *rus* to any other party, or works it up himself into *goor*. As soon as the bond is executed, the cultivator receives Rs. 5 per *beegah* (*kutcha*) down in cash, and a "*rooqa*" for the remainder, to be paid when his November, December and February instalments of rent fall due. But if there is a great demand for *rus*, and prices are high, the *khundsari* sometimes has to pay down the whole amount of advance at once. After the *Deothan* the *bel* or boiling-house is put up. Boiling is all over between the beginning and end of March. As soon as the *bel* is removed the accounts between the *khundsari* and *asami* are made up, the latter being credited with the amount of juice received at the price specified in the bond. If, as is usually the case, a balance remains against the *asami*, he is charged interest at 1 per cent. per month on the balance from the date of the execution of the bond, and the total sum due is deducted from his advances in the next year. Though convenient in some ways to the cultivator, as giving him the command of a few rupees just when he wants them to pay his rent, yet the system is runious to him in the long run. Once in debt he can hardly ever extricate himself ; for then the *price* of the *rus* in future is always fixed by the *khundsari* below the market price, and the rate of interest is raised. The cultivator must consent, or be sued in the Civil Courts for the balances due, sold up, and ruined. I have known as low a price as Rs. 16 per 100 *kutcha* maunds entered in the bonds, when the ruling price in the open market was Rs. 26 and 27. I have known in the same year, at the same time, and in the same village, one *asami* get only Rs. 21 another Rs. 28 for the 100 *kutcha* maunds. The system is profitable to the zemindar, who has a good security for his rent ; for he will not allow the cane to be cut until his demands are satisfied, and the *khundsari* must see that the rent is paid, or he will be a heavy loser. Besides this the zemindar often acts as the distributor of the advances taking so much per cent. from the *khundsari* and the *asamis*. This item is often considerable, especially in Beesulpoor ; but it is never shown in the village papers. This plan is advantageous to the *khundsari*, as it then becomes the zemindar's interest to get as many cultivators as possible to grow cane on the advance system ; but is injurious to the tenant, as he receives less by the amount of percentage, and is thrown more into the power of the *khundsari* who has the whole strength and influence of the zemindar to back him. In the long run, therefore, the extension of the advance system, which is shown to have taken place by the increase in the number of *khundsars*, cannot be considered to have been productive of any real benefit to the district, as it has tended to render the cultivator less independent and to have increased his indebtedness.

The system of advances for sugar-cane.

139. I will now describe the system of working the *kolus* or village sugar-mils, taking first the case where the cultivator works up the *rus*, and next the bel system. The *kolu* is either made of *koron*, in which case it costs Rs. 4 to 5, and lasts two or three

The kolu.

years, with a little repair when necessary; or of mango wood, when it costs Rs. 2-8, and lasts one year only. The other parts are made either of *babool*, *jamun*, or mango-wood, and cost accordingly; the *lat* or crushing beam Re. 1 to 2; the *mulkhum* or upright supporting the *lat* 8 to 12 annas; the *chireya* or cross-bit at the top 2 to 4 annas; the *pat* or beam on which the driver sits 8 to 10 annas. The total cost, therefore, is from Rs. 4-10 to Rs. 8-10, besides Rs. 2 in money to the *barae*. The cost for one year is about Rs. 6-8.

Men employed at the kolu.

140. To each *kolu* there is—

(1) A "*moothia*," whose duty is to cut the canes as they are brought in from the field into lengths of four or five inches, which he takes in baskets full to

(2) The "*piraha*," who feeds the *kolu*, and *pats* down the pieces of cane with a wooden bat, or with his hands, which are guarded by a leather "*thapa*."

(3) The "*jhokia*" feeds the fire under the boiling pans with fuel, and regulates the heat. The fuel is derived from the crushed bits of cane, or the "megass," as they are called in the West Indies.

141. These men are paid in different ways in different pergunnahs, thus:—

Moothia, half seer of *goor* per day; *jhokia*, quarter seer; *piraha*, half seer.

Ditto as above, or *Moothia*,	Re. 1	...	per 100 *kutcha*	maunds of	*rus*.
Jhokia,,	8 annas	...	,,	,,	,,
Piraha,	Re. 1	...	,,	,,	,,

142. In whichever of the above methods, the men they get besides one *nand* of *rus* in every thirteen, which is divided half to the *jhokia*, and quarter each to the *piraha* and *moothia*; and five seers *kutcha* of *rus* each when the work is completed. Sometimes they also get five *gunnas* or stalks of cane on each field. Sometimes, instead of the five seers (*kutcha*) of *rus*, one *nand* of *rus* is given, which is divided half to the *piraha*, quarter to the *moothia*, and one-eighth each to *jhookia* and *barae*.

143. The *putwary*, *zemindar*, *thaneyt*, and *barae* generally get five *gunnas* per field, and one *ghurra* = five seers (*kutcha*) of *rus* per *kolu*. Sometimes *gunnahs* are not given, but in lieu one "*bheli*" = two *pukka* seers of *goor* per field.

Method of making goor and rab.

144. The expressed juice is carried into the boiling-house by the *moothia*. It is there strained through a cloth into the *kurao* or large iron-pan, where it is kept boiling and constantly skimmed. The scum or *mailia* is the *huq* of the *jhokia*. If the *rus* is poor, then in every three *pukka* maunds of *rus* half a seer of *reh* is mixed; if the *rus* is good, no *reh* is required. When boiled sufficiently, which is known by the appearance of the bubbles, the whole is well stirred round, and then poured into a round flattish earthen vessel (*chakgilli*) to cool for an hour, and is then worked with a wooden spoon till it is cold. It is then *goor*, and is made into "*bhelis*," weighing two *pukka* seers each. If the maker is dishonest, he will put quarter seer of "*khoorchun*," or the burnt juice, and earth into the middle of the *bheli*. The best *rus* is made into *goor* in preference to *rab*, for this reason that in making *rab* the *rus* is *cleaned* very much more than when it is made into *goor*. Poor *rus*, well cleaned with *reh*, *sujji*, and oil, will make good *rab*, while without the cleaning process it would make but poor *goor*. If the owner wishes to make "*lall shukkur*," he boils the juice a little more, and puts one and a quarter seer of *reh* to every three maunds (*pukka*) of *rus*, or less, if the *rus* is very good. He then stirs the boiled juice, and cools it by working it with the spoon. When cold he powders it down with his hands, dries it in the sun, and then wraps up the sugar in a cloth for sale.

"Lall Shakkar."

145. A private *kolu* of this description is usually worked day and night for four and a half months, and will work up on an average nine *kutcha beegahs* of cane per month, or

40 *beegahs* during the time of working. It is reckoned also that one *kolu* thus worked will press out 100 *kutcha* maunds of *rus* in five days, or 600 in a month; whence we get an estimate of average produce—*viz.*, 600 ÷ 9 *beegahs* (*kutcha*) = 66⅔ *kutcha* maunds per *kutcha beegah*; or, taking Rs. 20 as the average price of *rus* per 100 maunds *kutcha*, we get produce = ⅔ × 20 = Rs. 13-5-4 per *kutcha beegah*. Supposing the cattle to be the cultivator's own, which is always the case, and that he gives his own labour in driving them, the cost of working for the 4½ months will be, in money wages,—

				Rs.	a.	p.
Five *cholas*, at Re. 1¼ per month, ...	...	...	...	28	2	0
Moothia, *jhookia*, and *gankatta*, at Re. 1-8 per 100 maunds (*kutcha*) of *rus*, ...	...	...	...	40	8	0
Khandnewalla to make the *goor*, at Rs. 2 per month, ...	...	...	...	9	0	0
One man to carry canes from the field at Rs. 2 per month, ...	...	...	...	9	0	0
Cost of *kolu* and *barae's* wages, at Rs. 2,	...	...	...	6	8	0
Total, besides the "*huqs*" in kind,	...	...	...	93	2	0
Add to this cost of *thapa*,	...	...	0 1 0			
Chakgilli, ...	...	...	0 2 0			
Blanket or cloth for straining,	...	...	0 2 0			
Churooa or stirrer, ...	...	...	0 2 0			
Hatta or skimmer, ...	...	...	0 4 0			
Nands, ...	...	...	0 8 0			
Rent of *kurhao*, ...	...	...	8 0 0			
				9	3	0
Total cost of working up 40 *beegahs* (*kutcha*) is,				102	5	0

Produce in *rus* 2,700 maunds *kutcha*, or 1,080 *pukka* maunds, which will make 6,260 *bhelis* of *goor*, or 312 *pukka* maunds. Taking five *bhelis* of *goor* per rupee as the average price at which he can sell, the value of the manufactured produce will be Rs. $\frac{6260}{5}$ = Rs. 1,252 on 40 *beegahs*, = Rs. 31-4-9 per *beegah* (*kutcka*); deducting $\frac{102\text{-}5\text{-}0}{40}$ or Rs. 2-8-11 per *beegah* (*kutcha*,) cost of manufacture, leaves net Rs. 28-11-10 per *kutcha beegah*, from which the rent, the various *huqs* in kind, and cost of cultivation, have to be defrayed. The above calculation is for *pural* sugar-cane, not *kharik*, in which the produce would not be more than two-thirds of the amount of *rus* at most. It is based on the calculation, which I have derived from the *khundsaris'* books in Beesulpoor, that 100 maunds of average *rus* will work up into 29 maunds of average *rab*, or 17½ maunds of *goor*. If the *rus* be below average and watery, as it is in the *khadir* and the north of the district, there that percentage of *goor* will not be obtained.

146. The ordinary *bel* of the *khundsari* usually works 9 to 12 *kolus*. Each *kolu* works from two hours before sunrise to one hour before dark, and works up on an average 6½ *beegahs* (*kutcha*) of cane per month. It is needless for me to go into all the cost and details of working up the *rus* into *rab*, and the *rab* into *khand*, and that again into "*chinee*," or *kund*, the latter being the white loaves in which Europeans generally see the sugar. These are processes distinct from cultivation in which the *asami* has no part. Suffice it to say here that I find by careful inquiry and search in *khundsaris'* books, that 100 maunds of average good *rus* will make 29 maunds of *rab*, or 17½ of *goor*. The same quantity of juice should make 7 maunds of khand. The bel.

Khand is	7	per cent. of the	*rus*.
or	24	„ „	*goor*.
or	40	„ „	*rab*.

While *goor* is three-fifths of the *rab*—*i.e.*, 5 maunds of *rab* will make 3 of *goor*.

147. For produce value of *pural* sugar-cane per *beegah* (*kutcha*) we have—

(1) The above calculation giving Rs. 13-5-4 per *kutcha beegah*, or Rs. 85-5-4 per acre.

(2) The cultivators of Nawabgunj everywhere gave me Rs. 12-0 per *kutcha beegah*, or Rs. 77-0 per acre, as the value of the produce in *rus* of average good sugar-cane.

(3) In Beesulpoor, where the cane is very similar to that of Nawabgunj, the general rate of advances is Rs. 10 per *kutcka beegah*, or Rs. 64 per acre, and sometimes higher.

(4) An analysis of the books of Tirbohun Singh, a large *khundsari* in Fureedpoor, gave the following results on the cane of the three villages of Sookuteea, Dhonrehra, and Meerpoor, in *kutcha* maunds :—

	Area, beegahs (kutcha).	Rus, maunds (kutcha).	Price per 100 maunds (kutcha).	Value credited to asamis.
			Rs.	Rs. a. p.
1271 Fuslee, ...	273·18	18,142	18-19	3,062 0 0
1272 „	152·10	12,336	16-18	2,043 8 0
1273 „	143·	10,226	16-18	1,790 0 0
Total, ...	569·8	40,704	16-15	6,895 0 0

This gives average produce 72½ *kutcha* maunds per *kutcha beegah*, value Rs. 12-2, or Rs. 77-9-7 per acre, when the average price of *rus* was Rs. 17 per 100 *kutcha* maunds. This estimate also agrees closely with the others.

(5) An analysis of the *khundsar* books of Sheikh Hidayet Ali, of Aonlah, gave on three villages in the *khadir* the following results :—

	Area, beegahs (kutcha).	Rus, maunds (kutcha).	Average rus per beegah (kutcha), maunds kutcha.
1271 Fuslee, ...	265	9,249	34·6
1272 „	349	13,509	38·7
1273 „	198	5,857	29·5
Total, ...	812	28,615	35·2 at Rs. 20 per 100 k. mds.

This gives Rs. 7 per *kutcha beegah* for *khadir* cane, which is always *kharik*. This agrees closely with the advances of Rs. 6 per *kutcha beegah*, which prevail in the moist lands to the north of the district in Chowmahla and Ritcha. On the whole I think we may be justified in estimating good cane—*i. e.*, the cane of Nawabgunj, Beesulpoor, and the best parts of Fureedpoor and Crore—at Rs. 13 per *kutcha beegah* when the *rus* is sold. Medium cane at Rs. 9 to 10 in Crore and Aonlah Tehseels, and *khadir* cane at all the *kharik* cane, and the cane in Tehseel Buheree at Rs. 7 per *kutcha beegah*.

148. Here I think we may leave cane, and I hope that the reader will not be so tired of the subject as I am.

Indigo.

149. The cultivation of indigo is rapidly extending in the district, and small Native factories are springing up in Aonlah and Crore. In a few villages in Beesulpoor, belonging to the factory of Mewna in Shahjehanpoor, indigo is grown to some extent. The area under this crop is much understated in the produce statement, as it is usually sown after the measurements for the season are over, and cut before they recommence. The seed sown is always fresh seed of the year. The amount varies from 1 to 1¼ seer per *kutcha beegah*, or from 16 to 20 lbs. per acre. It is sown either—

(1) At the end of *Phalgoon* or beginning of *Cheyt*. These are called *jumowa* sowings, and are irrigated twice.

(2) In *Asar* the best plant is in fields that have had a crop of cane or cotton taken out of them in the preceding season. The land is ploughed twice and irrigated once. Those fields which are irrigated from rivers and tanks are harrowed, but not those which are watered from wells; where indigo is sown after a *rubbee* crop has been taken from the land, the field is irrigated once before sowing, and three or four times afterwards according to the season. The indigo obtained from fields sown after *rubbee* is inferior in quality to that obtained from plant sown after cane or cotton. Both the above sowings are cut in *Sawun* or *Bhadon*.

(3) Indigo is also sown in *Asar* along with *mukka* or *jowar*, and, if the soil is good and the rains favourable, is cut in *Bhadon*, otherwise the crop is left out for the next year, and gives a fair produce; this is called *khootti*. The fields sown in *Asar* produce a less weight of plant, but the indigo obtained from them is superior in grain, weight, and color to any other, and is thus more profitable to the manufacturers and less so to the *asami*.

(4) Indigo sown in *Sawun* with *bajra* or cotton is left out after the other crops are off the ground. It flowers in *Kartik*, and the plant is cut for seed, much of which is exported to Bengal.

150. The plant is cut when it is about a foot to a foot and a half high. The produce is from 5 to 20 factory maunds of plant per *kutcha beegah*. Mr. Gardner, of the Mewna Factory, gives 6 to 10 factory maunds as a fair average to the *beegah*, the factory maund being of 40 seers each of 110 rupees to the seer, but the produce depends largely on the rains, being best when the rains are light. The price given to the *asami* is from Rs. 16 to 20 per 100 factory maunds of plant delivered at the factory, every 1,000 maunds of plant should give 2 to 4 maunds of dry indigo. Mr. Gardner gives 3 maunds as the average, selling at from Rs. 200 to 260 per factory maund. The native-made indigo only fetches from Rs. 120 to 220 per maund, about Rs. 180 being the average. The cost of manufacture in the Native factories is reckoned at 75 per cent. on the cost of the plant, *e. g.*:—

1,000 maunds of plant at Rs. 18 per 100,	=	180	0	0
Manufacture, three-fourths of 180,	=	135	0	0
Total,	...	315	0	0

produce 3 maunds of dry indigo, value at Rs. 180 per maund, Rs. 540, from which cost of transport to Calcutta and sale charges have to be deducted.

151. The seed is advanced to the cultivators, who repay 1¼ maunds for every maund advanced. It is retailed at from Rs. 5 to 45 per maund, according to the demand for seed from Bengal.

152. The *rubbee* sown in indigo fields is always very superior in consequence of the fine manure afforded by the fallen leaves. The plant refuse, after it has been steeped and the waste water from the vats, are also used as manure.

153. Indigo is usually sown on advances. There is a condition in the bond binding the cultivator to repay 2½ to 3 times the balance against him should he fail to deliver a sufficient value of plant to cover the money advances. This makes the cultivation unpopular; for the *asamis* say that if they once take advances they can never free themselves from debt, and are henceward compelled to sow indigo whether they like it or not. The first advances made by the Native factories to any *asami* are always in excess of the value of plant, which it is possible for him to deliver, and henceforward he has no resource if he wishes to get feer of debt but emigration or rather flight to the Turai—that safe haven of refuge from Civil Court decrees.

154. Having completed the *khurreef*, I now take up the *rubbee* crops, commencing with wheat.

Wheat.

155. The following kinds are grown in Bareilly:—

(I.) Beardless—

(1) *Moondia.*—Of this there are two kinds—red and white; the average is 30 grains to the ear. This is a first-class wheat, grown chiefly in the best soils.

(2) *Hansa.*—A very white first-class wheat. The grains are long, thick, and heavy, and average 30 to the ear. The very best flour is made from this kind, but it is not very extensively grown.

(II.) *Tikurari* or bearded—

(3) *Samulia.*—A white wheat of good quality and largely grown; averages 30 grains per ear.

(4) *Ruttooa.*—Of this there are two kinds—the red and white. This is a fair middling small-grained wheat, averaging 32 grains to the ear. It is largely grown in all pergunnahs.

(5) *Kuchera.*—A small-grained red wheat, of about the same stamp as *ruttooa*, and largely grown.

(6) *Kattiya.*—A small-grained inferior red wheat, averaging 38 grains to the ear; much grown in the northern pergunnahs.

156. The best wheat is grown in the Aonlah Tehseel and in Beesulpoor, the worst in Chowmahla. Wheat is grown in all soils but the most worthless *bhoor*. The number of ploughings is from five to twenty according to the industry of the cultivator. The amount of seed is from 84 to 114 lbs. per acre. In England one bushel of seed per acre sown by drill is considered sufficient in well-cultivated soils; but where there is liability to loss by wire-worm, weather, or insufficient drainage, two bushels=116 lbs., is not considered too much. The seed with us is sown in *Kartik*, and the crop is ripe in *Bysakh*. In the northern pergunnahs it is not entirely off the ground till the 15th of April; in the southern it is usually cut a fortnight or ten days earlier. The crop is usually irrigated once, but to the north it is very largely grown without any artificial irrigation at all. There is no regular weeding, but in February and March the cultivator picks out the "*akra*," "*lumkhassia*," and "*chouputta*" as fodder for his cattle. The chief diseases and injuries to wheat are—

(1) *Teosar*, when the wheat is frost-bitten. This is remedied by irrigation.

(2) *Rutta*, or red smut. This is brought on by excessive damp, either from rain or fogs, and a continuance of cloudy wet weather. It affects chiefly the worst cultivated fields, or those in poor unmanured soil. There is no remedy known.

(3) Rats. It is wonderful what damage these will do to a field of wheat. One method of destroying them is to fill a *ghurra* with *bhoosa*, making a small hole in the bottom. The *bhoosa* is then lighted, the mouth of the *ghurra* put to the rat's hole, and the smoke blown in by means of a hollow bit of bamboo put to the hole in the bottom. Another method is to kill them by "*dubkas*," traps something on the old "figure four" principle: the falling down bit being about one foot round, heavy, and made of clay.

(4) White-ants. These are destroyed by irrigation.

(5) "*Byar marna*:" A high west wind blowing continuously night and day in March as the grain is ripening shrivels it and very largely diminishes the produce: the best remedy is irrigation.

(6) "*Chida*," or weevil (*calandria granaria*). After the young crop has sprouted the owner makes the "*sui-ka-pooja*" (See under cane).

157. For produce we have the following data:—

(I.) Last Settlement experiments.

In Sirsawan Pergunnah		1,028 lbs. per acre.		
„ Meergunj	„	874 „	„	
„ Aonlah	„	1,028 „	„	
„ Seroli	„	685 „	„	(in *bhoor*)
General average,		904 lbs. per acre.		

(II.) Mr. H. M. Boulderson's experiments in 1828-31:—

In Crore, ...	850	lbs.
„ Aonlah, ...	961	„
„ Chowmahla, ...	743	„
„ Kabur, ...	914	„
„ Sirsawan, ...	676	„ mostly *dosahi*.
„ Fureedpoor, ...	1,253	„
„ Beesulpoor, ...	1,320	„
„ Shahi, ...	912	„
„ Suneha, ...	1,115	„
„ Nawabgunj, ...	1,310	„
„ Ajaon, ...	1,456	„
General average, ...	1,046	lbs. per acre.

(III.) Reliable *kutcha* papers of—

Ritcha villages, ...	1,032	lbs.
Nawabgunj „	953	„
Average, ...	993	lbs. per acre.

(IV.) Actual experiments at this Settlement—

Crore, ...	822	lbs.
Anolah, ...	1,079	„
Chowmahla, ...	956	„
Kabur-Sirsawan, ...	975	„
Ritcha, ...	921	„
Fureedpoor (*bhoor*), ...	615	„
„ (*doomut*), ...	1,122	„
General average, ...	928	lbs. per acre.

(V). Result of inquiries from experienced Natives, ... 914 lbs.

158. The general average from all sources is 957 lbs. per acre on all kinds of soils—irrigated and dry taken together. The highest amount by actual experiment in any village was in a field of manured and irrigated *doomut* in Katsari in Aonlah, where the rate was as high as 2,249 lbs. per acre. The highest average in any one village was also in Katsari, where 9 fields cut, of which 5 were irrigated and 4 dry *doomut*, gave an average of 1,686 lbs. per acre; here the rate on the wet land was 1,869 lbs., on the dry 1,293—or wet : dry :: 100 : 69. The lowest average in any village was in Sitargunj—a *bhoor* village in Fureedpoor, where the rate per acre derived from 11 fields of *bhoor* of bad quality, but all irrigated, was only 377 lbs. per acre. In Fureedpoor generally the ratio of wet to dry was 100 : 67 by experiments.

159. In Aonlah *generally* the average produce of wheat in the wet lands was 1,096 lbs. per acre; in the dry lands, 1,045. The fact was that the experiments here were made in April, 1870. The cold weather rains had been so abundant that the low-lying fields, which had been artificially irrigated, were injured by getting too much water and suffered extensively from "*rutta.*" Generally the produce of the artificially-irrigated fields was below, and that of the dry fields above the average. In Crore in 1867-68, when the cold weather rains were favourable, on a large number of experiments in similar soils, irrigated lands gave 906 lbs., and the dry lands 702 lbs. Here wet : dry :: 100 : 77. The cultivators in the southern pergunnahs generally gave the ratio of wet to dry in an average year as 5 : 3 or 100 : 60, which I suspect is very correct. In Meergunj, more to the north, they gave the ratio 4 : 3 or 100 : 75; and in Tehseel Buheree as 5 : 4 or 100 : 80, while the experiments in Tehseel Buheree gave in *doomut* the ratio 100 : 85; while in *muttear*, which is more retentive of moisture, the dry crops were heavier than the wet.

160. The results of my experiments in wheat do not compare so very unfavourably with the average produce in European countries. In 1780, according to Arthur Young, the general wheat average was in England 1,344 lbs. per acre, in Ireland 1,044 lbs.

161. In 1,850 according to Parliamentary returns, the average in England was 1,532 lbs., and according to Mr. Lawes the general average from 1852 to 1868 was 1,670 lbs. In Ireland in 1868 the Parliamentary returns gave 1,392 lbs. per acre. Mr. Lawes, from a long series of experiments in all kinds of soil, and under almost every condition, carried on from 1852 to 1869, found the following results for England—

In unmanured land,	...	...	843 lbs. per acre.	
Farm-yard manured,	...	...	2,066 „	„
Artificially manured,	...	...	2,130 „	„

162. Now, it is unfair to compare English high-farming carried on with the large amount of capital per acre which is necessary there, with the farming of a Bareilly *ryot*, cultivating 7 acres of land, with a capital in his stock of about 12 shillings an acre. The one has a command of the best artificial manures, and a vast amount of chemical and agricultural knowledge. The other has only his own labour to rely on, cannot read or write, and has only an empirical knowledge of agriculture, which has been handed down for generations. He has no command of artificial manure, and what he can collect he manages badly for want of scientific knowledge. He has an insufficient amount of manure for his fields; for he is compelled to burn much of his cow-dung as fuel; yet the average produce of wheat is 957 lbs. per acre, or higher than the English unmanured average; while I have found as high a rate of produce as 2,249 lbs. in a single field, and 1,686 lbs. over a whole village. In the 45 southern departments of France, "partly from bad husbandry, but chiefly owing to the dryness of the climate, in spring the average yield per acre is but 600 to 720 lbs." In Prussia it is 993 lbs., or very nearly the same as our average. My experiments show that it is quite possible to grow as good wheat here as in England at a lower cost, and also how very large is the margin for possible improvement in produce by scientific agriculture. I doubt, however, whether any improvement will take place. Our landlords as a rule are useless honey-eating drones. Their only idea of "improving" a village is raising its rents; while the cultivators, from whom alone any real improvement could come, can get nothing but a bare subsistence—all their profits being swallowed up by the interest on their debts for seed, food, purchase of cattle, and marriage expenses. Till they can be taught frugality and abstention from early marriages, till they cease to populate down to starvation limits, till they are taught to improve their breeds of cattle and to grow green crops, and till they cease to burn their manure as fuel, no permanent improvement in agriculture is possible; and these things they never will be taught and never will learn. Till lately it was the *asami* who was in demand to cultivate the land, now population is pressing on the land, and the people *must* cultivate to live; they have no other resource open to them: competition must set in, the rents must rise, and poorly

off as the cultivator now is I fear he will be worse off hereafter. To return to our wheat. *Dosahi* in indigo fields gives a full average crop. If sown in *mukka* "*zabti*" fields, the crop is quite three-fourths of an average. *Doshai*, under other circumstances, rarely gives more than a half crop. On a broad average, there will be about 1,500 lbs. of straw to the acre.

163. There are two kinds of barley—the larger or "*jou*," and the smaller "*jai*." Oats are *wilayeti jai*. As the crop of the year barley is only sown either in the manured lands near the village site, or in very poor soils not fit for wheat. It is much sown as a second crop after *mukka* or rice. In stiff cold clays it does not thrive; there oats or gram are to be preferred. Most of the *rubbee* "*huqs*" of the village servants are given in this grain. Dressed barley is often parched and made into "*suttoo*," which is considered very cooling in the hot weather. In preparation for the crop the land is ploughed from 4 to 12 times according to the industry of the cultivator, the time he has at his disposal, and as the sowings are *pural* or *dosahi*; 80 lbs. up to 128 lbs. of seed to the acre are sown generally in *Kartik*. The crop is ripe in *Cheyt*, a little before the wheat. It is occasionally irrigated once, but often receives no water at all. **Barley.**

164. In England the allowance of seed is given at 2 to 3 bushels per acre, and the produce on land well prepared as from 30 to 50 bushels per acre,—the bushel weighing from 45 to 55 lbs. according to quality. Mr. Halsey's experiments in Cawnpore gave the average weight in the North-Western Provinces as 50 to 53 lbs. per bushel.

165. For produce we have the following data :—

(I.) My experiments in Chowmahla gave 1,007 lbs. per acre (in clay soil).

,,	,,	Crore,	,,	1,045	,,	,, (in sandy loam).
,,	,,	Do., in 1870	,,	1,114	,,	,, (in ditto.)
,,	,,	Nawabgunj,	,,	1,438	,,	,, (in good soil).
,,	,,	Fureedpoor,	,,	706	,,	,, (in sandy bad *bhoor*.)

General average, ... 1,062 lbs.

In Kabur and Sirsawan the *dosahi* average in good soil was 897 lbs. per acre.

(II.) Reliable *kutcha butai* papers of Nawabgunj gave 1,087 lbs. as average.

(III.) Mr. Boulderson's experiments in 1828-31 gave :—

In Kabur, ...	1,072 lbs.
,, Crore, ...	1,255 ,,
,, Beesulpoor, ...	1,394 ,,
,, Chowmahla, ...	512 ,,
,, Shahi, ...	1,155 ,,
,, Sirsawan, ...	1,021 ,,
,, Aonlah, ...	1,101 ,,
,, Suneha, ...	914 ,,
,, Nawabgunj, ...	838 ,,
,, Fureedpoor, ...	1,728 ,, (in *gouhan* land).
General average, ...	1,099 lbs.

(IV.)—Experiments at last settlement :—

In Sirsawan, ...	1,286 lbs.
„ Meergunj, ...	808 „
„ Aonlah, ...	1,063 „
„ Serowli, ...	685 „ (in *bhoor*).
General average, ...	810 lbs.

166. The produce sometimes is very high. I cut three fields of barley *dosahi* in *mukka* on the *khera* lands of Deorunean in Ritcha, on the 23rd March, 1870; the fields had been manured but not artificially irrigated. The average rate on the three fields was 2,250 lbs. per acre. In 1828-29 Mr. Boulderson had nine fields in Ajaon thrashed out, and they averaged 2,261 lbs. per acre; such produce, however, is very exceptional.

167. The resultant average on all the data is 1,014 lbs.; on different soils I should put as fair *pural* averages—

1. *Gouhan*, or manured land, ...	1,680 lbs.
2. Average loam or sandy *doomut*, ...	1,050 „
3. Poor land, ...	750 „

168. For *dosahi* I take 520 lbs. as a broad average in the second class, and 1,200 to 1,300 lbs. in the first. In poor lands *dosahi* is not grown. About 1,500 lbs. of straw per acre, or a little over, will be a fair estimate.

Gram.

169. Two kinds of gram are sown in the district—one "*pila*," with a yellow and somewhat pointed grain, the other and inferior kind is "*kussa*." It has a small roundish black grain. *Surson* or linseed are usually sown with the gram. Eight to twelve ploughings are given for *pural*, two to three for *dosahi* sowings. *Pural* gram is sometimes sown by "*si*," but broadcast ("pavera bona") is the more usual method. It is sown in all soils. The best gram is in Beesulpoor, Aonlah, and the *khadir*. From 50 to 80 lbs. of seed are sown per acre in *Kooar*. The crop is ripe in *Phagoon* or *Cheyt*. *Pural* gram is sometimes but not always irrigated once. *Dosahi* is hardly ever irrigated. The pod is known locally as "*ghittri*" when ripe, "*ghegara*" when immature. Gram is never sown in *Kartik*; it is supposed to bring bad luck. After it springs up till the end of *Poos* the young shoots are broken off or thinned to prevent the plant running to leaf. This is alluded to in the saying—

"Chuna Cheyt ghuna,
"Jo Magh rahe buna."

170. These young leaves and shoots are very much relished as pot herbs with *dal mash*. They are also dried and put by for use. The young gram, before it is ripe, is parched. In this form it is called *holah*, and with pepper and salt is much approved of by natives.

Produce.—I. By my experiments in—

Crore, ...	804 lbs. per acre.
Buheree, ...	857 „ „ „
Nawabgunj, ...	874 „ „ „
Kabur and Sirsawan, ...	816 „ „ „
Fureedpoor, ...	589 „ „ „ (*dosahi.*)

Experiments in *dosahi* gram in Chowmahla in 1870 gave 616 lbs. per acre. General average of *pural*, 832 lbs.

II. Mr. Boulderson's experiments gave an average of 1,069 lbs., but his average is swollen by the exceptional produce of his Nawabgunj cuttings, or 1,549 lbs. per acre; omitting this; his average is 990 lbs.

III. Native informants give 784 lbs. per acre for *pural.*

IV. Experiments at last settlement gave :—

In Sirsawan, ...	... 771	lbs.	These were chiefly *dosahi.*
„ Meergunj, ...	... 650	„	
„ Aonlah, ...	.. 1,148	„	
„ Seroli, ...	... 686	„	Soil chiefly *bhoor.*

171. On the whole, for *pural* gram 900 lbs. may be taken as a fair average, but in Beesulpoor, Aonlah, and the *khadir* it would run rather higher ; for *dosahi* 500 to 600 lbs. would be fair if the land has been regulary cultivated for "*chinta,*" or that sown "*baithe par,*" where the seed is sown on the land without a preliminary ploughing, the produce would be much less. The crop is very subject to injury from *chida* or weevil, and from frost.

172. The practise of sowing leguminous and culmiferous plants together has the sanction of the best agriculturists in Europe, who similarly sow clover with barley, oats, and flax. Dew readily forms on the leguminous plant, which would not form on the culmiferous, and in seasons of drought the practise is often the means of saving both crops. Besides this the spreading leaves of the leguminous crop check the growth of weeds, which would otherwise spring up. The chief mixed crops with us are— Mixed crops.

(1) *Gojee,* wheat and barley.

(2) *Bijra,* barley and gram, sometimes wheat and peas are added.

(3) *Gochnna,* wheat and gram.

173. It is unnecessary to go into these in detail; the land is prepared as for barley or gram, and the produce may be reckoned as of about the same value.

174. So much time and space have been taken up already by this head of my subject, that I do not propose to enter into further details about the minor *rubbee* crops than is given in the following table for *pural.* The amount of produce in *dosahi* may be taken at half the *pural.*

TABLE XX.

Name of crop.	Number of ploughings.	Seed per acre.	Sown in	Reaped in	Produce per acre.
Peas, ...	3 to 8	16 to 20 lbs.	Koer and Kartik,	Phagoon, ...	510 lbs.
Musoor, ...	3 to 6	16 to 20 „	Koer to Aghun,	Bysakh, ...	510 „
Linseed, ...	3 to 4	16 to 20 „	Koer and Kartik,	Bysakh, ...	163* „
Surson, ...	3 to 6	16 „	Kartik,	Bysakh, ...	326 „
Lahi, ...	3 to 4	20 „	Koer,	Poos, ...	326 „

* As *dosahi* ; hardly ever sown *pural.*

175. None of these crops receive weeding or irrigation. They are not often sown as *pural,* except in poor *khadir* lands, and are always sown broadcast. The produce is very variable, as it depends so largely on the amount of preparation the land has received, and it is not worth the cultivator's while to devote much labour to such inferior crops.

176. In *dosahi* half the amount of *pural* produce may be reckoned on all crops with the following exceptions:—

(1) Wheat or barley *dosahi* in indigo should be rated at full *pural* produce, or even rather above the average.

(2) Wheat *dosahi* in *mukka* should be rated at three-fourths of full average *pural* produce.

(3) All *dosahi* in *khadir* should rate at two-thirds of average produce, and in all the lowest amount of seed per acre may be reckoned.

177. In the above estimates of produce I have not reckoned the value of the straw. It is impossible to ascertain how much is sold and how much is retained for home consumption by the cultivator. The larger portion certainly is retained, but a considerable amount must be sold to supply the wants of the towns and of non-agricultural residents, who keep cattle for their carts, and also to supply traders' carts passing through the district.

S. M. MOENS,
Settlement Officer.

PART II.

BAREILLY SETTLEMENT REPORT.

1. FROM the field we pass on to the cultivator, his rights and liabilities. The cultivators are first broadly distinguished into resident and non-resident, or *chuppurbund* and *pahi*. As a rule, the land cultivated by *pahis* or non-residents is worse cultivated and rented lower than that held by the *chuppurbunds*, for the following obvious reasons:—

I.—The *asami* is usually not allowed to take manure out of his own village in which he resides. Consequently the land cultivated by him in other villages is usually unmanured, and only the inferior crops are grown in it.

II.—He puts all his best crops which require most labour in the land nearest to his home, and which he can most easily cultivate. This is, as a rule, the land in his own village.

III.—He irrigates these lands first, and only devotes any time and labour that he can spare from them to the lands he holds in other villages.

IV.—He has no special attachment to his *pahikasht* lands, and the *zemindar* can exert no pressure on him. He will give them up readily unless they are let to him at a remunerative rate of rent, whereas if a *chuppurbund* resigns his land and refuses to pay the enhanced rent decreed, he must give up his home and leave the village or starve, as he will get no other land except at the enhanced rates.

2. The amount of *pahi* cultivation in a village is therefore a very important element to be taken into consideration in assessment. The exceptions to the general rule, that land held by *pahis* is worth less rent than that held by *chuppurbunds*, are the following:—

I.—Where an uninhabited or "*wiran*" village originally belonged to the area of an inhabited one, from which it was originally separated for assessment purposes, both villages being cultivated by the same set of *asamis*, who in this case look on the *wiran* village as a mere "*har*" of the village in which they reside, and pay the same rents for it. This is not an uncommon case.

II.—Where the uninhabited village belongs to the same *zemindar* as the village by whose *asamis* it is cultivated. In this case there is no prohibition against removing manure, though the evils of the greater distance to carry it and to go for work still remain in operation.

III.—Where the site of a village is close to the border, and the *pahikasht* fields of the other village run up close to the site, the latter are often as well cultivated if rents are paid in money, as the *gouhan* land of the village by whose *asamis* they are cultivated, and if these *pahi asamis* are *Muraos* or *Kormis* they often pay higher rates than are paid by the *chuppurbunds* of the less industrious castes.

3. The *pahi asami* usually pays no cess for village expenses where rents are taken in money, unless the cess has been put on only as a method of enhancing the rent, and renders no services to the *zemindars*.

4. The *chuppurbunds*, besides rent, are bound by village custom to render service and fees to the *zemindar* according to their caste. The services are as follows—they are not the same in all villages, but these are the general rule of the district:—

(1)—"*Sahel.*"—Each cultivator is bound to give the *zemindar*, when summoned, one day's free ploughing in the *seer* land with his own plough and oxen, in *Asarh*, and one day in *Koar* or *Kartik*. From this service *Brahmins*, *Kyaeths*, and *Thakoors* are generally exempted.

(2)—"*Oogahi.*"—The cultivator gives to the *zemindar* on each plough one basket or head-load of rice straw in the *Khureef*, one "*phansi*" or head-load of *bhoosa* in the *Rubbee*, and one basket or 100 "*ooplas*," one *bheli* of goor and one *ghurra* of *rus* per field of cane; besides five *gunnahs* or canes at the *Deothan*. These are the usual items of *oogahi*. They are always taken where rents are paid in kind, and generally, but by no means universally, where rents are paid in money. No caste is exempt as a rule; occasionally *Brahmins*, *Thakoors* and *Kyaeths* are exempted as a favor, though not by right. There is a reason for all these items, *e. g.*, the cane items are taken as ground rent for the land required for the sugar mill and boiling shed. The *ooplas* as rent on the waste land where the cattle are grazed. The straw, &c., as rent for the land occupied by the cultivators in treading out the grain, &c.

5. If these dues are not given the *zemindar* takes their value in money, charging two annas per *ghurra* of *rus*, four annas per harvest for the *bhoosa* and straw; and two annas, for the *ooplas*. Some cesses added to the above in some villages are pure extortions *e. g.*—in Surkura, in Fureedpoor, *zemindar* takes 4 annas per 100 of rent as "*hisabana*," for the pay of his writer to keep accounts. Every three years he takes grain to meet one day's consumption of his whole establishment in food.

6. In some villages, the village collectively is bound to supply thatching grass, *e. g.*, in Mudhkurpoor, in Nawabgunj, 250 bundles (*poolis*) of *bhurra* and 35 of *sentha*, and 15 *seers* of *moonj* is the amount fixed.

7, In Khangawan, in Aonlah, the *zemindar* takes Rs. 2 worth of grain per plough at 25 per cent. cheaper than the market rate and credits Rs. 2 to the rent. In Pempoor and Rusoolpoor, in Aonlah, the *zemindar*, besides *bhoosa*, &c., takes the produce of one *kutcha biswa* of wheat or barley per plough, and Re. 1 worth of grain at 25 per cent. cheaper than the market rate and credits Re. 1 to the rent, and also five *poolis* or bundles of *churri* per plough. In Banaiya Meergunj, in *tehseel* Meergunj, each plough is bound to cultivate five *kutcha beegahs* free for the *zemindar* who finds the seed. Sometimes the cultivator is bound to give the *zemindar* one handful of new wheat and one of gram to make "*moorkhis*" and "*holas*". In five villages in Crore, but in no others in the district, I found the *asamis* bound to give one rupee to the *zemindar* when he had a birth or a marriage in his family. In some Beesulpoor villages the *mocuddum* is bound to give Re. 1 on similar occasions, while the *zemindar* gives Re. 1 to the *mocuddum* when births or marriages occur in his family.

8. *Muraos* are generally bound to give "*turkari*" free, sometimes the amount is fixed. Thus in Jessoli, Beharipoor, and Benipoor, in Crore, they are each bound to give 2½ *pukka seers* of onions, 1¼ seer of garlic, and 15 *gunnas*. The *gudurya* gives one blanket in the year.

(3).—*Begár.*—*Begár* is almost universal, each caste giving a certain amount of labor, *e. g.*—

9. The *chamars* grind corn daily for the *zemindar*, *putwaree*, or *karinda* as long as they are in the village. They "*les*" or plaster the houses of the *zemindar* and *putwaree*, bring grass daily in turn for their horses, and if the *zemindar* buys grain, they convey it to his house. Sometimes, however, for this latter work the *chamars* get

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either "*chubena*," or else one *pukka seer* of the grain per day per man. They thatch the *choupal* and keep it in order. Sometimes, however, they get eight *kutcha chittacks* of grain per man for this work. When there is a marriage in the *zemindar's* family they grind all the *atta* required free, and carry the chain at measurements, and give one *chursa* or hide per annum and a pair of shoes. *Dhoonas, and joolahas* work for nothing when required, but get "*chubena.*" The *dhobi* washes for the *zemindar's* family free. The *telis* supply all the oil required by the *zemindar* or for the *choupal.* The *burrai* cuts wood for him when required. The *hujjam* shaves him for nothing. The *kahar* and *dhimar* carry loads, whenever required, for nothing. Sometimes, but not always, they get "*chubena,*" eight to ten *kutcha chittacks* of grain per day. In some villages, especially in Beesulpore, the *kahar* is only bound to give one day's free labor per *fusl*, but is entitled to *chubena.* They also give one-half of all fish they may catch in the tanks, and one or two maunds of *singhara* if it is grown.

10. If, however, a non-cultivating resident pays "*chanti*" or ground rent, he is exempt from *begár* and *vice versâ.* If any one in the village keeps a *gari* he is usually bound to give one day's free labor every six months, if required with his cart and cattle, or to pay the hire of cattle for a day. The *zemindar* if of a liberal disposition gives the food of the man and cattle while employed.

11. (4.) *Bhent.—Bhent*, as a rule, is paid only by the *mocuddums*, who give Re. 1 or Rs. 2 *nuzurana* to their *zemindars* in recognition of their proprietary rights at the *Holee* and *Dusehra*, but a practice has been growing up of late years of enhancing the rents of *asamis* cultivating at low rates by making them pay "*bhent,*" or a cess of so many rupees in the year in a lump sum, while their old rent-rates are maintained nominally unaltered. The amount of cess thus received is not entered in the *jummabundee.* I have found this practice even in the villages in which rent is taken by *butai.*

12. All these cesses and services have frequently been declared illegal. So early as 1805 it was expressly laid down in the settlement *pottahs* granted to the zemindars and farmers "that the *ryots* are not to be charged with any expense save and except that of the putwarees."

13. The *zemindars* were "prohibited from demanding any cess on account of charges of *kunkoot*, &c., or from taking *bhents* or *nusurs* from the *ryots*, everything of that sort having been abolished by Government. Your *pottah* gives you no right to make any collections on account of *rahdari, zemindari*, or *chokiyat*, or taxes upon looms, stills, &c., and other articles belonging to the *sayer.* You are to give the *ryots* fresh *pottahs*, liable to no *abwab* or vague demands of any kind," and so on. (See form of *pottah* in Mr. Seton's letter to Secretary to Government of India, Revenue Department, dated 31st December, 1805). Yet so soon afterwards as 1816, we find Mr. Low, the Collector, writing to the Board of Commissioners in his letter, dated 21st February, 1816, as follows :—

"Over and above the payments stipulated in the *pottah* the tenant has to answer a demand made upon him by the landholder on account of village expenses equal to one-fourth of his stipulated payments. The amount is in general more than sufficient for the purposes required, which include the allowances of a *putwari.* *Batta*, or percentage on the rupee, if not paid in the established coin, expenses of measurements and wages of *shanas*, or people to watch the crops, subsistence money to the persons employed in serving writs for the payment of revenue, charity and diet of indigent travellers, beggars, and *Brahmin's* presents, which latter consist of a few rupees given by the landholder at the period of harvests to the *tehseeldar*, to his *amla*, and to the police establishment in the *pergunnah* ; as these presents are given agreeably to the established customs of the country, it would be difficult wholly to put a stop to the practice."

14. The *bhent*, *oogahi* and *begar* have been forbidden; the landholder has no means of legally enforcing their payment unless, which was never the case, they were entered in the *wajib-ool-urz*, and yet the cultivators continue to give these dues and services uncomplainingly as long as their old rent-rates remain unaltered. So great is the vitality of a real custom, neither party wishes the custom to be entered in the *wajib-ool-urz*. The cultivator is afraid of the payment becoming stereotyped, and that henceforward he will be deprived of all powers to refuse compliance with the demand. The *zemindar* is afraid; (1) of the endless disputes which a demand for entry of the custom would excite; and (2), lest a refusal of entry should be followed by a general refusal of the *asamis* to give the dues and services.

15. The following table shows the total assessable cultivated area for each *pergunnah*, and the proportion of that area which is cultivated by *pahi asamis*:—

TABLE XXI.

Pergunnah.	Total assessable cultivated area in acres.	Area cultivated by *pahis* in acres.	Percentage of *pahikasht*.
Fureedpore, ...	1,12,882	32,556	28·8
Crore, ...	1,40,688	19,064	13·5
Meergunj, ...	67,071	10,206	15·2
Bullia, ...	17,972	4,187	23·3
Suneha, ...	38,032	11,587	30·4
Aonlah, ...	54,166	18,741	34·6
South Seroli, ...	28,536	7,214	25·2
Kabur, ...	27,129	6,441	23·7
Sirsawan, ...	15,543	1,620	10·4
Choumahla, ...	43,883	3,655	8·3
Ritcha, ...	78,580	15,270	19·4
Nawabgunj, ...	1,08,165	13,667	12·6
Beesulpore, ...	1,51,346	28,290	18·6
Total, ...	8,83,993	1,72,498	19·5

16. The above shows a large percentage of *pahi* cultivation, and there is no doubt that there is very much more than there need be, or than there would have been had it not been for the working of Act X., 1859.

17. Previously to the passing of that Act no *pahis* were considered in the opinion of the country to have any rights of occupancy whatever. The *zemindar* was held to have an unquestionable right to take land from the *pahis* whenever he required it, either for his *chuppurbunds* or for his own *seer* cultivation, and the *pahis* always acknowledged this right, which was only reasonable. They could not cultivate the land properly themselves, and when by the natural increase of population or by the location of new residents, more land was required for resident cultivators who could do justice to it, it was hard to refuse the *zemindar* the power to dispose of his land to the best advantage, and to force the resident cultivators to take their surplus labour out of their own village and to become *pahis* elsewhere, when there was plenty of land for them in their own village held by *pahis* who, contrary to the custom of the country, had by mere lapse of twelve years acquired rights of occupancy under Act X. It is a very common thing now to find villages whose *asamis* cultivate largely as *pahis* in other villages, while much land is held in their own village by *pahis* which they could cultivate to better advantage. It is no very uncommon thing to find village *zemindars* and their sons cultivating as *pahi asamis* in other villages, because they could not get land enough for their actual wants in their own, owing to the occupancy rights created by Act X. I found a very marked instance of the operation of the Act in a small Crore village not far from the city of Bareilly. It was formerly *wiran*, cultivated by *Thakoor pahis* at a rent of Rs. 2-6-0 per acre. The *zemindar*, a *Goshaen*, owning no other property, got a little land out of the hands of the *pahis*, and located a number of ploughs of *kisans*, who agreed to pay Rs. 4-12-0 to 5-4-0 per acre. He was put to some expense in building huts for them, making a permanent well for

drinking water, and in advances for food, till the first harvest was ripe. The *kisans* came; there was not land enough for their requirements. The *Thakoor pahis* refused to give up any of their land, and as they had acquired occupancy rights they could not be ousted. The *zemindar* was compelled to sue them singly for enhancement of rent, as the only way to get the land. Each suit was contested and a year was lost; decrees for very inadequate rates were passed, the *Goshaen* losing heavily in law expenses. Meanwhile most of the *kisans*, seeing no probability of getting as much land as their plough cattle could cultivate, left the village, and the *Goshaen* lost nearly all the money he had laid out in settling them. Act X. therefore has to a certain extent operated in checking the development of agriculture and improvement of villages.

Nowabad Asamis.

18. Where new cultivators are settled in a village hitherto *wiran*, the *zemindar* usually provides them with new huts complete, and gives advances for food to keep their families till the first harvest is got in. These advances he gradually recovers with interest. Should the new comer settle in a village already existing, the custom varies in different villages. In the south, and generally where the demand is for land, and not for cultivators, no assistance at all is given by the *zemindar*, and in some cases the new comer has to pay one rupee and one *bheli* of *goor* as *nuzurana* for permission to build a new house. In the centre and north of the district, the *zemindar* gives the thatch and the wood uprights and cross beam (*thoona* and *bundeli*) which support it, while the new comer builds the walls. Sometimes the *zemindar* builds the mud walls at his own expense, and the *asami* finds the woodwork and thatch. In this latter case only can the *asami* claim the thatch and wood-work if he removes from the village, after satisfying all claims for rent. If there are any balances against him, or if the *zemindar* has found the wood-work and grass for the thatch, while the *asami* has only given labor, then the latter cannot remove any part of the materials of the hut on leaving the village. On first settling the new comer, provided that there is a demand for cultivators, is allowed to hold his land at favorable rates for a few years, three or four being the general rule. After the expiration of the term, he pays the village rates, whatever they may be.

19. Having distinguished between *chuppurbund* and *pahi asamis*, we go on to the classes among the *chuppurbunds*. These may be broadly distinguished into—

(1) The *mocuddum*; (2) the *ruqmi*; (3) the ordinary cultivator.

20. The *mocuddum* or *mahtia*, or, as he is called in the northern villages, the *purdhan*, is a person of considerable importance in the village society. He is the head cultivator, and in the absence of the *zemindar* or his *karinda*, the head of the village, whose lead is followed by almost all the cultivators. We find him sometimes holding office for generations, and his possession more regular than that of the *zemindars* themselves. If the latter sell or mortgage their property the new comers are glad to gain the good will of the village and a knowledge of all the little local customs and peculiarities, of which the *mocuddum* is the depository, by maintaining him in possession of the rights and immunities which he had previously enjoyed in payment for services rendered. These generally consist either in an allowance of so many annas in the rupee of rent or in a reduction of the rate per *beegah*, or in the grant of from five to ten *kutcha beegahs* free of rent. The allowance per rupee usually is from one to two annas, the latter being the more general; if the deduction is per *kutcha beegah*, then one anna below the village rate is the usual allowance. Where rents are paid in kind the village rate being half the produce, the *mocuddums* will be one-third; if the *ryoti* rate is five-twelfths, then the *mocuddum's* will be one-fourth, that is, the *mocuddum's* rate will generally be two shares less than the *ryoti* rate. He is also generally exempt from "*gaon kherch*" and cesses, and has a grove on land which has been given him for the purpose free of rent. These little privileges, however, are purely dependant on services rendered. He can be removed by the *zemindar* at pleasure for incapacity or any other reason, and is then not entitled to hold at lower rates than are paid

by other *asamis*. His immunities are simply payment for services, and not *rights* independent of the *zemindar's* pleasure. The *mocuddumi* does not by any means connote the posses sion at any previous period of proprietary rights. Mr. Seton in 1805, writes in his letter, dated 31st December, above quoted—" the *mocuddums* are only *purdhans* or head *ryots*, and have no proprietary rights whatever in the soil." Mr. Head, the Settlement Officer of Ritcha, Pillibheet, and Jehanabad, wrote thus in 1840, and his words are as true now as they were then :—

"Having made every enquiry on the subject, I am convinced, that with the exception of the Turaien, there is no one village in this district where anything like a *mocuddumi right* exists, *i. e.*, where any individual can declare that he is *mocuddum* by right of descent, independently of the *zemindar's* pleasure. In this district a *mocuddum* means a respectable *ryot* who is chosen by the *zemindar* to look after the crops and occasionally to collect the rents. It often happens that the son succeeds the father to his office, but he only does so by consent of the *zemindar*, whose accredited agent he is, and by whom he is liable to be dismissed whenever his conduct gives dissatisfaction. The usual way in which a *mocuddum* is here paid is by allowing him to hold his land at a somewhat lower rent than the resident *raees asamis* : he has no further concern in the village than the *zemindar* chooses to allow him. It does sometimes happen that a non-resident *zemindar* will let his estate in *kutkina* to the *mocuddum* upon good security, but that is only because the *mocuddum* being a resident of the village can give him more than any one else. It is true that in some of the *lawaris* villages respectable resident *ryots* calling themselves *mocuddums* have obtained the settlement ; but it has always been as farmers giving good security, and generally on account of their being able as residents to give a better offer than a stranger.

S. O. to Commissioner No. 41, dated 8th May, 1840.

"There are people called *mocuddums* in almost every village, but they are only respectable *asamis* employed by the *zemindar* as agents, and removable at his pleasure."

21. The question of the "*mocuddumi*" was an important one. The *Rohillas* recognized no proprietary rights, and succeeded in stamping them out over most of the district, and either let out the villages on lease to whoever would take them, or managed them directly through the *mocuddums* as representatives of the cultivators. At and subsequently to the cession, there being no proprietors, many villages were farmed, the first offer being made, in accordance with the then law, to the *Purdhans*. After last settlement enquiries were held into these "*lawaris*" or *khana khali* villages, and in most instances the proprietary rights were conferred on the *mocuddums* erroneously, instead of on the whole community of cultivators. The *mocuddums* held no rights whatever superior to those of the cultivators whose representatives they were, independently of the farm from Government and the power it conveyed. About 100 villages were so granted in Beesulpoor, and about 50 more in Ajaon and Sirsawan, to persons who, by the custom of the country and in native opinion, had no more *right* to them than a *kutkinadar* has to the proprietary right of the village of which he holds a lease under the *zemindar*. The proprietary right belonged in the *khana khali* villages to Government, who undoubtedly had a right to do what it liked with its own. A very large sum might have been realized by sale of the proprietary right, which would now have fetched on those 150 villages about 10 or 15 *lakhs* of rupees. If the rights were *given* away they should have been given to the cultivators and not only to the *mocuddums*.

The "Rukmi."

22. The next grade below the *mocuddum* and between him and the ordinary *asami*, is the "*rukmi*," the same man that is called by Mr. Head the "resident *raees asami*," and known in the Turaien and some of our northern villages as the "*bhalamanus*."

23. The class of "*rukmis*" is composed chiefly of men who in deference to tribal feeling, superstitious or religious motives, or official position, have been allowed to hold at slightly lower rates than ordinary cultivators. *Thakoors* form a considerable proportion both of *zemindars* and cultivators ; though very hard landlords to men of other castes, they are usually very unwilling to raise the rents of their fellow tribes.

men. Tribal feeling is against it, and a respect for tribal feeling is very strong still among our *kutheryas* and *jungharas*. The deference paid to tribal feeling in the matter of rents is a totally different thing from what is known as *caste* allowance. I can point out many instances where *kisans*, *mraos*, and *barrais* hold at light rates, but only where the *zemindaree* is held by men of their own tribe. Mr. Conolly wrote at the last settlement of Aonlah, recognizing the influence of tribe on rents—"in Rajpoot estates, the brethren of the caste, whether concerned in the management or not, held their fields at lower rents than other *asamis*, and retained their tenures at least as long as the village remained in the hands of their community." When the village changed hands their low rents frequently have remained unaltered, either from the difficulties in the way of enhancement until the passing of Act X., or because of the new settlement being at hand, or from the *Rajpoot* cultivators being too strong for the *zemindars* owing to their turbulence, their power of combination, and their readiness to resort to the *ultima ratio* of the iron-bound *lathi*. In this class, then, where low rents are due to tribal feeling, may be placed relatives of existing or former *zemindars*, or connections by marriage, whose rents have been fixed at a low rate from personal motives, and have remained unenhanced either because the reasons for which the reduction was originally granted are still in force, or because of the difficulties which have been placed in the way of enhancement. The *rukmis* whose low rates are due to superstitious or religious motives are generally *Brahmins* in the villages held by old fashioned Hindoo *zemindars*, or the *Purohit*, *Goshaens*, and *Faqueers*. Here the low rates originally were due to and dependant on the personal favor and feelings of the *zemindar* of the time, and have frequently not been respected by his successors. In other words, the low rates were due to favor and not a matter of right.

24. The third case where the low rates are due to the position, is where land is cultivated by the present or former *putwaree* and his relatives, or by a well-off *bunneeah*, or by a former *zemindar* who has lost his proprietary right by a Civil Court sale in execution of decree. Very often the new proprietor will allow the old one to cultivate his former *seer* lands at the old *seer* rates. He is anxious to prevent the old ousted *zemindar* from setting all the cultivators against him, and causing difficulties in the collection of the rents, and until he has become firmly seated in his new position and his authority is thoroughly recognized in the village, regard for his own interest will induce him to make the fall of his predecessor as light as possible. The difficulty sometimes experienced by an auction-purchaser is well illustrated by the case of two villages in Beesulpore, Nuvudeea, and Rumpoorah Runnan. The former proprietors were *Kutheria Thakoors* whose rights were sold at auction and bought by the *Goojurs* of Burseea Bale. When I was inspecting the pergunnah the *Goojurs* accompanied me to the border of the villages, but utterly refused to cross the border, even in my company, as they said the *Thakoors* had sworn to murder them if they ever succeeded in catching them in the area of the villages, and the *Thakoors* were likely men to keep their word, for in the previous five years four had been hanged and several transported for murder. The Goojurs even entreated me not to go over these villages without a Police force at my back. I found the *Thakoors* inclined to be rather surly at first, but we got on very well together afterwards. The difficulty of collecting rent at all in such villages, much more that of enhancing rent, may be easily imagined. *Thakoor* Jymul Sing, of Keara, in Crore, one of the most powerful *Thakoor zemindars* in the district, tried the experiment of raising the rents of some illegitimate descendants of his grandfather and got decrees from the Collector's and Judge's Courts. The defendants waylaid Jymul Singh and his two brothers as they were coming back with their decree from the Judge's Court, and literally cut them all three to pieces with *tulwars*, and for this crime all escaped punishment for want of legal evidence against the culprits.

25. The *Thakoor rukmis* have had a very quiet time of it in the district ever since.

26. The allowance usually made to the *rukmi* is one share less than the ordinary *asami* where rents are paid in kind, *e. g.*, if the village rate is six-twelfths or half, he

will pay five-twelfths or "*tihara siwaia*;" if the latter is the general rate he will pay four-twelfths or *tihara*," but free of cesses, *gaon kerch*, or esrvice.

Caste Allowances.

27. The cases where allowances are made in rent purely and simply on account of high caste and no other consideration are by no means the custom, and indeed are rather uncommon. Where rents are taken in kind the high caste *asami* usually pays the same share of his produce that the low caste man gives as rent. Thus, in the *pergunnahs* of Kabur, Sirsawan, Ritcha and Chowmahla, and Nawabgunj, it is very exceptional to find a *Brahmin* or *Thakoor* paying lower rates than other *asamis* on account of caste. In Dhukeea, in Nawabgunj, in an estate where the *zemindar* was a *Hindoo*, the high caste *Brahmins* pay six-twelfths of the produce, while the *Koormis* in the same estate pay five-twelfths, the reason given being this, that as the *Brahmins* were worse cultivators than the *Koormis*, the *zemindar* required a larger share of the produce to give him the same average rent. Where rents are paid in money, the high caste men sometimes will be found paying lower rents than others, and generally for this reason, that under Act X. the *zemindar* is obliged to proceed against each cultivator separately, and he picks out the least influential men to go against first, and having got his enhancement against them, he will often be contented with a rather smaller enhancement from the high caste men by private arrangement than run the risk and trouble of separate suits against them, and have caste pleaded in bar of his suit by sharp *mookhtars* of the Courts. In all my settlement experience Beesulpoor and Aonlah are the only *pergunnahs* where caste has been pleaded by the cultivator himself uninstructed by a *mookhtar*, and in most cases the plea was finally dropped. Where the low castes are *rack-rented*, there necessarily the high caste man must receive some allowance, as in some cases he is compelled to keep a ploughman, and in almost all caste feeling prevents his women and children from working in the fields. Consequently *he* is compelled to employ hired labor for work which the low caste man gets done by his own family. His expenses of cultivation being higher, the high caste man consequently cannot pay the same rack-rent as the low caste tenant. Sometimes *Kayeths* have the impudence to plead caste. This is simple nonsense. Where they have held at low rates it is due to their relationship to a present or former *putwaree*, with whom the *zemindar* naturally wished to keep on good terms as long as he remained in office and no longer. In the exceptional cases where a caste custom has really been found to prevail I have always recognised it. The allowance usually given in such cases where rents are paid in money is from one to two annas per rupee of rent or from half anna to two annas per *beegah kutcha*. As a rule, where the high caste men pay appreciably lower rates than others the case may be resolved on enquiry into one of the following:—

(1)—Where the high caste men are connections of the *zemindars* former or present by blood or marriage.

(2)—Where they themselves are the old *zemindars* who have lost their proprietary rights by sale, and have been permitted by the new proprietors to hold on at their old *seer* rates.

(3)—Where they are the family priests or servants of the *zemindar*.

(4)—Where the low caste men are the later comers, who have taken their land at slightly higher rates.

(5)—Where the numerical strength and unity of the high caste men has enabled them to resist the *zemindar's* attempts at forcible enhancement, while he has gained his object with the low caste men.

28. We now come down to the ordinary *asami*, and we will first see what his *status* was before the passing of Act X. In his letter to the Board of Commissioners, dated 21st February, 1816, Mr. Francis Low, the Collector writes thus:—"No landholder can

legally dispossess his tenant during the period of the lease, provided the latter fulfils his engagements, but on the expiration of the lease the landholder is at liberty to let the farm to whoever he pleases. It is generally, however, relet to the same tenant, unless circumstances should have arisen to render the landholder dissatisfied with him. In stating that where leases are granted, the landholder possesses not the right of ousting his tenant where the latter fulfils his engagements, I do not mean that this never takes place; on the contrary, I believe it frequently to occur and to be patiently submitted to by the tenant. To the oppressive conduct of the landholders is to be ascribed the frequency of desertions among the tenants, by which means it is not uncommon to find villages uninhabited and almost wholly uncultivated. Instances of this kind are most frequent amongst farmers of estates who, possessing only a temporary interest in the same, are not in an equal degree with proprietors concerned for the comfort and welfare of their tenants."

29. In other words, the landlord, whether theoretically rightly or wrongly, yet possessed the power of enhancement and ouster even during the term of a lease; a power which he frequently exercised, and the only remedy the tenant had practically was emigration to another estate. This was quite incompatible with any rights of occupancy. Of the neighbouring district of Moradabad, to which *pergunnahs* South Seroli and part of Meergunj and Aonlah then belonged, the Collector, Mr. S. M. Boulderson, wrote in 1818:—

"I consider the only real description of the *khudkasht ryot* to be of the family of the *zemindar*, and he cannot be dispossessed, for he will never suffer himself to be so (*sic*) without bloodshed. Every other *ryot*, it appears to be the general opinion, can be ousted without any infringement of justice should he refuse to pay the rent demandable from him."

30. In Shahjehanpore the Collector wrote in the same year:—"In every *pergunnah* the *zemindar* has the power from established usage to dispossess a resident or *khudkasht ryot* who has regularly paid the customary rent for his lands, to make way for another person who may be willing to pay more."

31. *Pergunnahs* Poorunpoor and Murori, and a good many villages of Jallalpoor and Negohi and Meeranpoor Kuttra, which then belonged to Shahjehanpore, have since been transferred to Bareilly. At the VII., 1822 Settlements in 1828-1831, Mr. Boulderson wrote in his report:—"The only claim of the cultivators has been that they were not liable to be ousted from their holdings as long as they paid the customary rent, with this proviso in estates cultivated by *zemindars* that when the families of the latter increased so as to require more land for their own cultivation they had the right to take it." But in his reports on different villages numerous instances are given where the *zemindars* of their own authority enhanced rents, imposed cesses, and ousted cultivators. This is all described as "oppression," "bad management" and so on, but still it proves the power of the *zemindar* at the time. Mr. Boulderson's own views and the innovations he introduced are well brought out in the Board's report on his Settlement, dated 14th November, 1834. In their 51st para. they say:—

"Throughout the Bareilly Settlement Proceedings resident *ryots*, whatever may have been the period of their connexion with the villages in which they reside, have been regarded as entitled to hold the lands they cultivate during the ensuing term of settlement at the rent rates assumed for the regulation of the Government *jumma*, so soon as they shall desire to pay rent in money instead of by *butai*. When this principle is acted on any inquiries into the rights of *ryots* are of course superfluous, since all are made in a manner proprietors of the fields they cultivate, and rendered independent of the will of the persons to whom they pay rent.

"Mr. H. Boulderson has observed that those who are now called *proprietors* of estates in Rohilkund are merely contractors for the revenue: a mode of expression used

to indicate that the parties have no proprietary interest in the soil, and are not therefore entitled to disturb the cultivators in the occupation of their land, or to enhance at pleasure the rents payable by them. As the practice of paying rent in kind has been very generally adhered to by the *ryots*, Mr. Boulderson's arrangements in regard to rents have been in a great measure inoperative. The provision for limiting rents inserted in the Settlement *roobakaris* is that every *ryot* shall be at liberty to demand a *pottah* at the money rates fixed by the Collector in supersession of the *butai* practice whenever he may choose to apply for it." The Board then remark that the measures adopted by the Collector in respect to the rents payable by *ryots* who do not claim any possessory right in the land they occupy is opposed to the rules which the Revenue authorities are required to observe in future when revising the assessment of estates.

"The only relation in which *zemindars* or *malgoozars* can stand to their estates is that of receivers from tenants-at-will or tenants holding according to local usage. The Collector in his proceedings has sought to place these persons in a state of security by limiting the demand which the former may make upon them. In this respect the future arrangements will not correspond with those already effected." a few of the "*Jooz-o-kool*" village Statements of Mr. Boulderson's Settlement have escaped destruction. In most of these no mention is made of any *rights* enjoyed by *asamis*, but in five villages it is entered that resident cultivators cannot transfer their holdings, but cannot be ousted by the *zemindar* as long as they pay the Settlement rates. *Pahis* are said to have no rights whatever, and can be ousted by the *zemindar* whenever he pleases. I suspect that the condition barring ouster of resident cultivators embodied the Collector's opinions as to what the custom should be theoretically, rather than the actually existing custom.

32. Passing on to the Settlement under IX., 1833, Mr. Money in his report on the Moradabad Settlement says:—"The *zemindars* of this district had constantly usurped the right of arbitrarily changing the rates of rent payable by the cultivators. There were *zemindars* who in a productive season would make the cultivators pay rent in kind and in an ordinary or bad season in money. Previous to the present Settlement the rights of cultivators were very undefined. There was no prevailing rule regarding the succession of those who might be termed hereditary. If a cultivator died old his sons or heirs generally had possession of the land before his death and remained in possession. If one died young, and his heirs were minors, the *zemindar* disposed of the land as he thought fit."

33. In Bareilly we find the following remarks by Mr. Conolly, the Settlement Officer of Fureedpoor, Aonlah, and Suneha:—"I was unable to trace anything like right to permanent occupancy at a fixed rent on the part of the *ryots* in either *pergunnah*. In most villages there were old residents to be found who considered themselves entitled to indulgence, though I think there was hardly one single instance that came before me in which the same *khet* had been in the *same* family for any very long period. Such a thing as transferable property of this nature was evidently quite unknown, and I am satisfied that the notion of any restriction to the demand of the *zemindar* beyond that imposed upon him by usage, common interest, and good feeling, was never thought of here till the introduction of Regulation VII., 1822, when *pottahs* were first distributed by the Collector. In the present Settlements I considered the *asamis* according to the usage of the *pergunnah* tenants-at-will, till they advanced claims to the contrary, and left the distribution of the rents to the *zemindars* and themselves after the Government *jumma* had been fixed. Generally speaking no claims were made, and the parties declared themselves satisfied with the rents put down to them in the *asamiwar jamma-bundee*." In Fureedpoor he attempted no interference in settling the leases between landlords and tenants. "The general enquiries I made satisfied me that any attempt to bind down the landlords to the demand of a specific rent for the term of their own lease would be a direct innovation on established usage and a creation of new rights in favor of the *ryots*."

34. In the reports on the other *pergunnahs* no mention is made of any rights of the *ryots*. The *zemindars* filed *jummabundees* after the assessment of the *jumma*. These were published for 10 days and then sanctioned. The *wajib-ool-urzs* were subsequently drawn up after the completion of the settlement by a Mr. MacCutchan, a Deputy Collector, who entered a condition stereotyping the rent rates and debarring the *zemindars* from enhancement for the term of Settlement. From the old *canoongoes* and others who were alive when the Settlement was made, I find that no enquiry whatever was made in rights of cultivators. All residents were entered as '*mouroosis*,' all non-residents as '*pahis*;" length of occupancy had nothing to do with the entries. The only distinction was between *resident* and *non-resident*, and the rents of all alike were fixed for the term of settlement by a summary order, and the power of ouster was withdrawn from the *zemindar* subsequently. In 1859, Act X. created a right of occupancy in favor of the *asamis* by mere cultivating possession for 12 years consecutively, and thus converted nearly all our cultivators, whether resident or non-resident, into occupancy tenants. The *zemindars* as soon as they discovered the results of the new Act were bitterly discontented with it, and have thenceforward striven by every method in their power to destroy the occupancy right in cases where it had accrued under the Act, and to prevent its growing up hereafter. Until Act X. was passed and the High Court decisions as to the meaning of the words "of the same class," in Clause 1st, Section 17, Act X., began to become known, no cultivator ever thought of claiming to hold at privileged rates on *account of length of occupancy*. He would have thought it a hardship to have the rents of his holding alone enhanced above the village rates, but if all were enhanced together, newcomers and old, he would not have thought of objecting if the new rates were fair. I think the intent of the words "of the same class" was rather to distinguish between cultivators with hereditary and transferable rights and the common class without those rights. The interpretation given by the High Court has no doubt had a considerable effect in preventing the rents of occupancy tenants from rising to a fair amount. They were made a law to themselves. The *zemindar* was compelled to sue each man separately, and of course found the greatest difficulty in getting any enhancement, as the rates of the unenhanced tenants were brought up against him. This was a difficulty to be overcome only by fraud and payments to the person usually (*canoongoes*) to whom "commissions" were issued. Until these suits are tried in the village in the cold weather real justice to both parties is not to be hoped for. The ordinary Revenue Courts, as a rule, have not raised the rates of occupancy tenants to the amount that was fair and equitable.

35. I have never known considerations of value of produce or prices entertained by a Revenue Court, and rates paid for similar land by cultivators in neighbouring villages were hardly ever taken into consideration: each village was taken by itself, and each class and caste in that village where rents might fairly have been raised by from Re. 1 to Rs. 1-8-0 per *pukka beegah*. A *zemindar* with the greatest difficulty and at much expense obtained decrees for from two to four annas. Since the new settlement much of this has been changed, but there is still far too much of the old evil of issuing commissions in all enhancement cases. The Act X. has caused violent antagonism between landlord and tenant, and has thereby made the latter more dependent than before on the *bunneahs* and money-lenders, and it has transferred a part of the real rent to the tenant, thereby injuring the landlord. We have destroyed all identity of interest between landlord and tenant and created new rights in favour of the tenant opposed to the ancient custom of Rohilkhund; and without conferring any real benefit on the tenant, as he is utterly unable in the long run to resist the pressure exerted by the landlord, whom we have turned into his enemy, to destroy his occupancy rights.

36. The following statement shows the areas held by cultivators with and without rights of occupancy in each *pergunnah*—many men hold some fields with and some without occupancy rights. In such cases the fields held by them as tenants-at-will have been entered in this statement as a separate holding, as it really is:—

TABLE XXII.

Pergunnah.	Number of cultivators with rights of occupancy.	Area cultivated in acres.	Average area per cultivator held with rights of occupancy in acres and decimals.	Tenants-at-will.	Area held by tenants-at-will in acres.	Average area held by tenants-at-will in acres and decimals.	Percentage of area cultivated with occupancy rights.	Ditto by tenants-at-will.
Fureedpoor, ...	17,210	71,892	4·17	14,759	28,744	1·95	71·44	28·56
Crore, ...	21,829	105,557	4·84	12,108	23,40	1·93	81·85	18·15
Bullia, ...	3,600	10,650	2·96	2,304	2,803	1·22	79·17	20·83
Suneha, ...	7,207	26,270	3·64	3,820	6,590	1·72	79·95	20·05
Aonlah, ...	11,076	37,099	3·35	3.270	8,232	2·51	81·84	18·16
South Seroli, ...	3,099	17,637	5·69	3,187	7,316	2·29	79·07	20·93
Meergunj, ...	11,084	49,899	4·50	6,227	12,909	2·07	79·45	20·55
Sirsawan, ...	1,309	9,785	7·47	991	3,906	3·94	71·48	28·52
Kabur, ...	2,986	20,854	6·98	1,159	4,542	3·91	82·12	17 88
Chowmahla, ...	4,054	23,943	5· 9	4,417	17,943	4·06	57·17	42·83
Ritcha, ...	9,853	52,602	5·33	4,504	21,340	4·73	71·14	28·86
Nawabgunj, ...	12,083	81,110	6·71	9,818	21,274	2·16	79·23	20·77
Beesulpoor, ...	26,713	103,461	3·87	12,591	31,436	2·49	76·70	23·30
Total, ...	132,103	610,759	4·62	79,155	190,441	2·40	76·24	23·76

Service Lands.

37. Service lands are generally granted rent-free to *Brahmins*, village servants, or personal dependants of the *zemindars*, in consideration for services to be rendered, and are only tenable as long as the conditions are fulfilled. Any number of years occupancy can convey no rights to the occupant, according to the usage of the district. His wages for defined services are paid in land instead of money, as this system is more convenient to the *zemindar*. A service ten ant has no more right to claim an occupancy right in lan ds held by him on a service tenure for even 20 or 30 years than a London footman has after 12 years' service to claim a perpetual right to his wages and to deny the right of his master to dismiss him from service. I note this, as the Calcutta High Court in their decision No. 3,495 of 1865, dated 6th June, 1866, have ruled that a service tenant cannot be evicted, notwithstanding the determination of the service, if he has held for more than 12 years, and that he is to be regarded as an occupancy tenant. This is totally at variance with the custom of this district.

Rents.

38. I.—*Modes of payment.*—Rents are paid in the following ways :—

(1) *Pair butai*, or actual division on the threshing floor of the dressed grain, all the expenses of cultivation, cutting, carrying, thrashing, and winnowing being borne by the cultivator. The different rates in use are the following :—

Name of share.	Zemindar's share per maund of grain.
Nisfi, ...	20 seers.
Nouana, ...	17½ ,,
Tihara Siwaia, ...	16 ,, 5 chittacks.
Puchdoo, ...	16 ,, ,,
Tihara Punseri, ...	14 ,, 15 ,,
Tihara, ...	13 ,, 5 ,,
Sareh Chouhara, ...	12 ,, 8 ,,
Chouhara Punseri, ...	11 ,, 4 ,,
Chouhara, ...	10 ,,
Pachhara, ...	8 ,,

39. In the southern *pergunnahs* and Nawabgunj and Ritcha, Kabur and Sirsawan, the rates chiefly prevalent are *tihara siwaia* and *nisfi*. In Choumahla and the Mar villages of Ritcha *tihara* is the most general rate; in *wiran* or very unhealthy villages in the latter tract, *chouhara* and even *puchhara* are occasionally found, though *nisfi* is a very common rate. I doubt much whether it can be accurately realized through a series of years. The *malgoozars* where this rate prevails are always obliged to advance

food, seed, and *tuccavi* to the *asamis*, and these accounts go on accumulating and are rarely realized when the half of the produce is rigorously exacted. They are a set-off against the impayable share of the produce. *Tihara siwaia* is generally considered a fair share, and leaves enough to the *asami* to keep him in tolerable comfort. Only the *nijkari* crops are divided; on the *zabti* crops money rates are always levied.

(2) Amul Butaie or Kunkoot.

40. Here there is an estimate of the gross produce of the standing crop, and on this estimate the amount of grain payable by the cultivator as the landlord's share is fixed. The estimate is made either by the landlord or his agent in concert with the tenant, or by a *punchayet* composed of the *mocuddum*, landlord's agent, and three *bhalamanus*. In case of dispute one *biswa* of the best portion of the field and one of the worst are cut, and the average of the two taken as the rate of produce. Sometimes the cultivator pays the rent in grain when it is ready, but more often a price is struck from three to five seers cheaper than the market rate, and the *asami* pays the money value of the *zemindar's* share of the produce after he has cut and disposed of his crop.

II.—Money-rates.

41. Rents are paid in money either—

(1) By a lump sum on the holding or a *chookouta faisila*, irrespective of the crop grown, the cultivator taking all the risk of seasons.

(2) By a rate of so much per *beegah* all round, irrespective of the crop grown or the soil.

(3) By rates per *beegah* on soils, but irrespective of crops.

(4) By rates per *beegah* varying with the crop grown, irrespective of soils.

(5) By a combination of soil and crop rates.

(6) By a complicated system between *kunkoot* and *beegahwar* money rates. Here there is a nominal rate of so many annas per *beegah*, but per *beegah* of *full* produce. When the crop is ripe, the field is appraised and an estimate formed of the number of *fully productive beegahs*, on which number the nominal rate per *beegah* is charged. Thus the rate being 10 annas per *kutcha beegah* and the field five *beegahs* in area, yet it may only be charged for one or two or three *beegahs* as the case may be, according to the estimate. This is a custom which is now almost extinct. The other methods are all very common. *Nabood*, or allowance for deficient produce, is occasionally given, but not very often, where the rents are taken on the *full kutcha beegah*. The allowance is either *nawadusi*, a fixed deduction of 10 per cent., or varying with the produce and season, in which case it is estimated by agreement of parties or by the *mocuddum*. The former mode is the most common.

Advantages and disadvantages of the Butai system.

42. It is a common outcry against the *butai* system that it checks the development of the country by preventing all agricultural improvement and throttles the industry of the tenants, who will not devote extra labor to tillage, irrigation, and the cultivation of the crop when he is to share the proceeds of this extra labor with the landlord, who has contributed nothing. These allegations are to a certain extent correct, and there are other serious drawbacks to the system besides. For instance it directly tends to promote fraud and cheating of every description. The cultivators endeavour and generally succeed in abstracting considerable quantities of the grain before it comes to division. To check this the landlords are compelled to protect their own interests by employing men to watch the crops from the time they ripen. The tenant cannot cut his crop when it is ready; he must wait till the landlord is ready and able to supervise the operation, through his *shahnas* or watchers, and so with every subsequent process till the actual division. The tenants are thus taught to depend not so much on the exercise of their own industry as on the success of their plans to defraud the landlord, who is compelled very often to exact more than his proper share by way of reprisals. The

butai system gives a tyrannical and grasping *zemindar* such power over his tenants that their condition often becomes one of almost pure serfage. "One of the greatest evils of *butai*," wrote Mr. Boulderson in 1830, "is the necessity induced of watching the crops till the division takes place. This not only compels a heavy expense, but it creates incessant, weary, harassing interference between landlord and tenant, making a constant sore and irritation where a good feeling is particularly requisite. Very considerable portions of the produce of the land are yearly lost under this system. If a landlord wishes to ruin a tenant he has only to hold off from dividing the crop till rain comes down and rots it, or the same effect may follow from his not being able to attend or depute an agent. This often occurs with regard to the *rubbee* crop. In this year very large quantities of grain have been either totally destroyed or greatly damaged by an unexpected heavy rain without the fault of either party. Only, however, the *butai* estate suffered where the division delayed the cultivator in storing or selling his produce." (The same loss happened from the same cause in April and May, 1871.) "If the tenant thinks the landlord too hard upon him, he absents himself from the division of the crop and goes and petitions the Collector, being certain thereby of harassing the landlord, and being for the time at least reckless whether he involves himself also in loss by the destruction of the produce."

43. I fully acknowledge the truth of every word of the above extract. I have myself found rice cut in October, and still undivided, and not even thrashed or winnowed, in February. It lay rotting while the wretched cultivators were almost starving on grain borrowed at ruinous interest. Yet after all, such cases are very exceptional, and an easy remedy for them will shortly be provided by law. Still I maintain that the *butai* system has very great counterbalancing advantages.

(1) It is the existing system the "*dustur*," with which the people are familiar, and according to which rights in the soil have been fixed from time immemorial.

(2) The rate of division being customary over large tracts, the tenant is freed from all danger of competition; "none but a fool or a foe" would agree to cultivate at rates exceeding those which are the custom of the village.

(3) While the cultivator is thus secured in his tenure, the landlord receives a fair profit on any improvements he may make from the increased produce he receives.

(4) Under the system the rents are self-adjusting, the value of the landlord's and tenant's share rises and falls simultaneously with prices, while if the crop partially fails the loss is shared by both parties. If it fails entirely, the tenant loses his seed, but is not crushed by having to pay a rent for the land which has yielded him nothing.

(5) The tenant is never actually turned on the world with a load of debt due to the money-lender.

(6) If his cattle die, the landlord usually assists him to replace them.

(7) Under a *butai* system he usually borrows from his landlord and at a lower rate of interest than he would have to pay to a money-lender, while the latter is far more pressing and exacting in his demands for repayment.

(8) The system creates a tie of self-interest between landlord and tenant. The landlord is more directly concerned in the well-being of his tenants and the good cultivation of his estates. He exerts himself to promote the cultivation of the better crops for the sake of the increased produce of the *nijkari* crops sown subsequently in the manured fields. He exerts himself to provide irrigation at the right time because he knows his share of the produce will be increased at once thereby, and his supervision and

authority direct the tenants, and better results are produced for all than where each petty cultivator of six or seven acres has to look out for his own interests unaided by the influence and capital of the *zemindar*. This is always strongly exemplified in years of drought, when the *butai* villages always get more water than the money villages. In those years the *zemindars* of the *butai* villages fed their cultivators. Those of the money paying villages left them to starve. They knew the places of the dead would soon be filled up by immigrants from other districts, and they actually profited by the deaths, for they demanded and got increased money rents for the vacant fields.

44. From the above it may easily be seen that I am opposed to the provisions of Act XIV., 1863, by which either party can claim a forced commutation of rents from kind to money, and this after what I believe to have been a larger experience of such commutations than any other officer in these provinces. My reasons are the following:—

(1) I think it unjust to the landlords to whom we have given proprietary rights to change the ancient custom on the demand of one party only to the rent contract. It is unfair to them to prescribe the special form in which they shall take their rent, without giving them any voice in the matter.

(2) Their *hukoomut* or authority is destroyed, and with it their interest in the village, and they receive in exchange a mere rent charge. Their income is fixed and is hardly to be increased by any act of their own, and all incentives to energy and self-control are removed.

(3) An entirely new right is created in favor of the tenant at the expense of the landlord.

(4) The tenants have no capital, and the landlord's security for the rent is impaired. The tenant reaps all the benefit of a good year and high prices, and absconds in a bad year, leaving the landlord to bear the entire loss.

(5) As soon as the customary share by *butai* is commuted to a money rate, competition sets in with all its evils and the customary tenant is converted into a cottier, to be rack-rented wherever population is dense enough to create a demand for land to cultivate. In Bareilly nearly all the Act X. litigation is in money rented villages.

(6) Forced commutations create a bitter feeling of animosity between landlord and tenant. The usual process in Bareilly as soon as a suit was filed for commutation was this: the landlord as soon as possible ousted the cultivators, suing from all land which they held as tenants-at-will. They deprived them of all grazing lands, and pounded their cattle whenever they could catch them on the waste land. The village servants were prevented from working for them; suits were laid for immediate settlement of all outstanding advances for seed and *tuccavi*. The *khundsari* was induced to sue for balances due on advances for *rus*, and the division for the current harvest was deferred till the crop was ruined. In Aspoor Richhola, in Nawabgunj, and in more than one village in Jehanabad, the *zemindars* burnt the houses of the *asamis* who sued, and for want of sufficient evidence escaped without punishment in the Criminal Courts. Many of the cultivators who fought on to a commutation were compelled, when prices fell in the next year, to go back to *butai*. Their landlords were too strong for them.

(7) Forced commutations cannot endure for long against the continued opposition of the *zemindar* where the latter is as strong as he usually is in the *butai pergunnahs* of Bareilly, and they are ruinous in the long run to the tenants, who in the first bad year are compelled either to quit the village or to return to *butai*, utterly impoverished by the struggle they have gone through.

(8) On this subject of forced commutations the Board remarked in 1834, in their report on Mr. Boulderson's settlements, as follows :—

" Where *butai* rents prevail the cause is usually to be found in the actual state of wealth and commerce of a district, and the Board believe that any attempt to effect a conversion to money rates, however desirable such a change may be in principle, before the state of things in a district admits of the payment of rent generally through wholesale grain merchants, bankers, or that class of people who have constant money dealings with the cultivators of the soil, must fail."—(Board, North-Western Provinces, to Government, No. 436, dated 14th November, 1834.)

The Board were, to a great extent, correct in their prediction, and I much doubt the permanency of my own commutations in the northern *pergunnahs* for the same reasons.

(9) There is no *need* to force commutations; when the country is ripe for money rents the kind rates are gradually converted by the consent of the parties. In 1830, Mr. Boulderson wrote, that the rents over four-fifths of the district, or 80 per cent. of the cultivated area, were taken in kind. At the revision of settlement by me I found 64·3 per cent. of the land cultivated by tenants paying *money* rents, instead of only 20 per cent., and this does not take into account commutations effected by me. In 1830 Mr. Boulderson wrote thus of his own commutations—he was an ardent opponent of the *butai* system :—" It is too soon yet to state that I have succeeded in changing generally *butai* to money tenures. The change must stand the test of experience of some years before such an assertion can be made. Hitherto with the exception of one or perhaps two of the estates settled, the *ryots* have accepted *pottahs* at money rates, and are very careful in retaining and acting on them. No person who has not like myself experienced the difficulty of persuading them to try what they were ignorantly afraid of, and that of contending against *malgoozars* equally ignorant, who at first strenuously resisted the measure, can partake with me in the satisfaction I have felt in being able to accomplish even to the extent I have what I consider to be a really beneficent measure to both parties."

Yet in 1834 we find the Board writing :— " As the practice of paying rent in kind has, we understand, been very generally adhered to by the *ryots*, the Collector's arrangements in regard to rents have been in a great measure imperative." Thus most of the tenants had reverted to *butai* in four years, and the change shown above has come on gradually since 1834, and by the voluntary action of landlords and tenants, and has therefore remained permanent. Forced changes have no vitality in them.

(10) No European Officer can satisfactorily fix money rents on every field in a village in a *butai* pergunnah, where perhaps there are no money rates within miles to which he can look as example. His average soil rates may be perfectly accurate over arge areas, but they are only *average* rates after all, and will probably be much too high or too low in individual fields.

45. The area cultivated as *seer*, and by tenants with and without rights of occupancy at kind and money rents, according to the measurement papers is given in the following statement :—

TABLE XXIII.

Pergunnahs.	Cultivated seer lands in acres.	Cultivated by occupancy tenants.			Cultivated by Tenants-at-will.			Rent-free service lands in acres.	Total cultivated area in acres.
		Area at kind rents.	Area at money rates.	Rent.	Area at kind rates.	Area at money rates.	Rent.		
				Rs. a. p.			Rs. a. p.		
Fureedpoor,	9,399	48	71,844	2,04,414 0 0	89	28,258	71,024 5 3	3,244	1,12,882
Crore, ...	11,634	28,019	77,629	2,33,568 5 2	7,371	16,035	51,459 13 2	...	1,40,688
Bullia, ...	4,014	528	10,209	37,084 15 6	425	2,377	7,828 2 3	419	17,972
Suneha, ...	4,143	599	25,671	86,232 6 3	729	5,861	20,405 6 9	1,029	38,032
Aonlah, ...	7,638	2,870	34,070	96,377 1 6	1,310	6,922	20,015 9 9	1,356	54,166
South Seroli,	3,003	492	17,190	46,111 6 0	392	6,925	21,660 14 9	534	28,536
Meergunj, ...	4,333	8,610	39,925	1,47,018 13 8	6,360	6,549	24,668 2 10	1,294	67,071
Kabur, ..	1,258	14,614	6,261	20,997 7 3	3,695	847	3,892 15 9	454	27,129
Sirsawan, ...	1,555	5,526	4,261	17,948 13 9	2,938	968	5,941 8 3	295	15,543
Choumahla,	1,315	23,099	846	4,047 4 6	17,184	758	4,247 10 2	681	43,883
Ritcha, ...	3,432	50,013	2,631	15,517 13 0	20,608	732	3,452 1 0	1,164	78,580
Nawabgunj,	3,426	57,920	23,394	91,625 14 0	17,298	3,976	13,773 9 7	2,151	1,08,165
Beesulpoor,	10,464	9,869	93,702	3,59,958 6 6	5,508	26,553	92,385 10 0	5,250	1,51,346
Total, ...	65,614	2,02,207	4,07,633	13,60,903 5 1	83,907	1,07,158	3,40,755 13 6	17,871	8,83,993

46. The same statistics may be thrown into the following form, which is perhaps the more useful for purposes of comparison :—

TABLE XXIV.

Pergunnah.	Percentage of seer to total cultivated area.	Percentage of land held at kind rents to total tenants' cultivation.	Average money rate per acre on land rented at money rates by		
			Occupancy tenants.	Tenants-at-will.	Both classes.
			Rs. a. p.	Rs. a. p.	Rs. a. p.
Furreedpoor, ...	8·3	·12	2 13 4	2 8 2	2 11 11
Crore, ...	8·2	25·62	3 0 1	3 3 4	3 0 8
Bullia, ...	22·3	7·03	3 10 1	3 4 8	3 9 1
Suneha, ...	10·8	4·04	3 5 9	3 7 8	3 6 1
Aonlah, ...	14·1	9·25	2 13 3	2 14 3	2 13 5
South Seroli, ...	10·5	3·53	2 10 11	3 2 0	2 13 0
Meergunj, ...	6·4	24·36	3 10 11	3 12 3	3 11 1
Kabur, ...	4·6	72·03	3 5 8	4 9 6	3 8 0
Sirsawan, ...	10·0	61·81	4 3 4	6 2 2	4 9 1
Choumahla, ...	3·0	96·16	4 12 6	5 9 8	5 2 9
Ritcha, ...	4·3	95·45	5 14 4	4 11 5	5 10 3
Nawabgunj, ...	3·1	73·32	3 14 8	3 7 1	3 13 7
Beesulpoor, ...	6·2	11·33	3 13 5	3 7 8	3 12 2

47. It will be observed that in five pergunnahs out of the 13 the average money rate paid by tenants-at-will is less than that paid by tenants with occupancy rights. The most probable explanation is that as a rule they hold the worst land, that most recently brought under cultivation, and which was considered by the occupancy tenants as hardly worth cultivating. The lower rates of the tenants-at-will in these *pergunnahs* is not due to the greater part of the *pahi* cultivation being included in the tenant-at-will holdings, for in Suneha and Aonlah, in which the percentage of *pahi* cultivation is the largest in the district, the rates of the tenants-at-will are higher than those of occupancy tenants, while they are lower in Nawabgunj, in which the percentage of *pahi* cultivation is exceptionally low. In Choumahla and Ritcha, where the money rents are very high, nearly all the land is held at *butai*, and fixed money rates, independent of the crop grown, are found prevalent in a few villages only, to the south of Ritcha, on the Crore border. In both *pergunnahs* it is a custom in some villages to give two or three *kutcha beegahs* to an *asami* at very high money rates. This land is well manured and irrigated and only the best crops are grown on it. This explains the reason why the money rates are so much higher than in the rest of the district.

48. The general average money rate is Rs. 3-4-10 per acre; excluding the *butai pergunnahs* the general average is, for occupancy tenants, Rs. 3-4-4 per acre, for tenants-at-will Rs. 3-1-6. In the *butai pergnnnahs* the average money rates for the two classes are, occupancy tenants, Rs. 4-0-3; tenants-at-will, Rs. 4-4-9.

49. In these no doubt the increased value of produce owing to high prices has affected the money rents. There the *zemindars* can form a pretty accurate estimate of the true letting value of the land, as there is so much land paying grain rents to compare with. In the southern, eastern, and western *pergunnahs*, where money rents have been longer prevalent, the landlords have no such standard of comparison, and rents have been less affected consequently by the rise in prices.

Rise in rents since last Settlement.

50. Mr. Boulderson in his report, dated 31st October, 1832, gives the average rent per acre in the 412 villages settled by him at Rs. 3-1-5. In his report, dated 7th March, 1832, from considerations of produce and prices, he arrived at Rs. 3-5-3 per acre as the average rent. In the same report he says :—"The usual mode of calculating the value of land for purchase among the natives is that *malgoozaree* land sells for one year's rent, *maafee* lands for 10 years' rent per acre. The average price of land sold by private sale in this district, taken on the registered transfers of 66 estates, gives Rs. 3-1-6 per acre."

51. From other parts of his report I gather that the above were chiefly forced sales to meet either private debts or balances of revenue. In either case the seller would probably get rather less than the full market value. He could not wait to sell advantageously. Further it must be recollected that at Mr. Boulderson's settlements—

(1.)—The two first year's work included as he says himself "an unusually large amount of the poorer soils."

(2.)—That it was applied chiefly to over-assessed and deteriorated villages.

(3.)—That the actual average rate obtained by dividing the *jummabundee* by the number of cultivated acres was Rs. 3-1-5 per acre, but that *seer* was invariably rated in the *jummabundee* below full *ryotti* rates.

52. Hence Rs. 3-1-5 must be rather below the true rate, while Rs. 3-5-3 derived from average produce and prices must have been rather above it, for money rents never keep pace with prices. We may fairly then consider Rs. 3-3-0 per acre, or 8 annas per *kutcha beegah*, as the average rate for the district in 1828-32.

53. The following statement shows the cultivated area at last settlement and at the present of the villages which have come under revision in each *pergunnah*, together with the former rental and the present as recorded and as corrected by me. The cor-

rection consisted in applying full *ryottee* rates to the lands held as *seer*, and on service tenures, and the cultivated lands which had been entered erroneously as fallow in the village papers :—

TABLE XXV.

Pergunnah.	At last Settlement.			At the present Settlement.					
	Cultivated area in acres.	Rental in rupees.	Rate per acre.	Cultivated area.	Recorded rental in rupees.	Corrected rental in rupees.	Rate per acre by A.	Rate per acre by B.	Increase per acre by B. since last settlement.
		Rs.	Rs. a. p.		Rs.	Rs.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Fureedpoor, ...	89,523	2,21,151	2 7 6	1,12,822	2,78,992	3,13,866	2 7 6	2 12 5	0 4 11
Crore, ...	1,01,964	2,49,026	2 7 0	1,40,688	3,83,548	4,62,243	2 11 7	3 4 6	0 13 6
Bullia, ...	14,061	40,262	2 13 9	17,972	53,897	63,748	2 15 11	3 8 9	0 11 0
Suneha, ...	25,944	78,696	3 0 6	38,032	1,14,207	1,28,835	3 0 0	3 6 2	0 5 8
Aonlah, ...	32,289	90,832	2 13 0	54,166	1,23,536	1,66,440	2 4 6	3 1 2	0 4 2
South Seroli,...	19,325	57,006	2 15 2	28,536	75,205	85,250	2 10 1	2 15 9	0 0 7
Meergunj, ...	53,908	1,70,530	3 2 7	67,071	2,31,392	2,48,676	3 7 2	3 11 3	0 8 8
Beesulpoor, ...	1,26,239	4,21,493	3 5 5	1,51,346	5,10,474	5,64,185	3 5 11	3 11 7	0 6 2
Kabur, ...	22,937	67,741	2 15 3	27,129	99,951	1,22,980	3 10 11	4 8 6	1 9 3
Sirsawan, ...	15,265	56,144	3 10 8	15,543	60,951	73,820	3 14 8	4 11 11	1 1 3
Choumahla, ...	33,379	70,107	2 1 7	43,883	1,19,840	1,52,000	2 11 8	3 7 5	1 5 10
Ritcha, ...	63,615	2,15,843	3 6 3	78,580	3,20,146	3,31,400	4 1 2	4 3 5	0 13 2
Nawabgunj, ...	88,234	3,73,537	4 3 7	1,08,165	3,82,690	4,55,300	3 8 7	4 3 4	...
Total, ...	6,86,683	21,12,368	3 1 2	8,83,993	27,54,829	31,68,743	3 1 10	3 9 4	0 8 2

54. On the whole district, then, the increase in rent since last settlement up to the revision was Re. 0-8-2 per acre, or 16·6 per cent. Taking the first eight *pergunnahs* in which rents are chiefly paid by money-rates, the increase was Re. 0-7-5, or 16·2 per cent., and in the last five, or the *butai pergunnahs*, it was Re. 0-8-11, or 18·4 per cent. Tabulating the average rent-rate we have—

In 1832, Rs. 3-3-0 per acre.
1837, „ 3-1-2 „ „
1867, „ 3-9-4 „ „ or 7*s.* 2*d.*, excluding the *butai pergunnahs*, the average money rate is now Rs. 3-3-8 per acre.

55. The wages for agricultural labor may be taken all round at two annas per day; in England they are from two shillings to half-a-crown a day, or nine times more. The rate of interest on agricultural loans with us is from 25 to 37 per cent., in England it is four to six per cent., or one-sixth of what it is here. These facts being taken into consideration, it is not much to be wondered at that rents with us average only 7*s.* 2*d.* per acre, while in England according to the table printed in the Cobden Club Essays on Land Tenure the average rent rate is 35 shillings per acre, or nearly five times as much as our rate. It may be asked why rents have not risen more than they have done since 1837. The following considerations give an adequate explanation :—

(1.) There has been an increase in the cultivated area since last settlement of 1,97,310 acres, or over 28 per cent. 168,788 acres still remain waste, though the greater portion is fairly culturable.

(2.) The demand for cultivators to clear the waste prevented enhancements on the old lands which possessed no marked superiority to the new.

(3.) In the northern *pergunnahs* the competition of the Turai for *asamis*, and the very favorable terms offerred to them, have tended to check enhancements of rents.

(4.) An artificial barrier to enhancement was applied at last settlement by the entry of a condition in the *wajib-ool-urz* to the effect that the rent rates prevailing at settlement were to remain in force till they were

altered by mutual agreement. At the same time the power of ouster was taken from the zemindar, and he had no means of obtaining an enhancement of rent except by a civil suit against each cultivator, and so costly and hazardous a process was practically impossible.

(5.) Till 1859 produce prices differred inappreciably only from those of the previous 55 years; and until the waste lands had been brought into cultivation, and the competition for cultivators changed into one for land to cultivate, there could be no enhancement on the old lands.

(6.) True Act X. was passed in 1859, but it took a long time for even the most intelligent *zemindars* to comprehend the powers it gave them, and then the new settlement operations commenced, and they had no wish to enhance until the new assessments were declared.

(7.) Another process has been going on. In 1832 Mr. Boulderson wrote that four-fifths of the rents in the district were paid in kind by division of the produce. In 1869 only 35 per cent. of the land was held by tenants at *butai* rents.

(8.) Money rents never keep pace with prices, besides which, with the rise in prices, the cost of cultivation also increases. Seed-grain costs more, a serious consideration where, as we have seen, two-thirds of the cultivators are compelled to borrow the seed, and repay it with from 25 to 50 per cent. interest. The cost of plough cattle has increased, and the rates for day labor are beginning to rise, owing to the demand for labor caused by the railroad, the new canals, and the cantonment buildings. Besides, and above all these reasons, there is another which has been perhaps stronger than all. The native idea of rent is totally different from the English notions attaching to the word. The idea of competition rents is unfamiliar to them. They by no means look on a rise in prices, and a consequent increase in the value of produce, as a fair ground for enhancement. They consider the customary and prescriptive rates of the village as the only fair guide in fixing rents. They cannot recognize the fact that a *zemindar* is entitled to make more out of his village than the share of the assets left to him by the Settlement Officer. A balance of rent is called "*sirkar ki baqi*," just as much as a balance of revenue. The *zemindar's* share of produce in *butai* is called "*hissa sirkar.*" The *zemindar* himself is almost invariably called the "*hakim.*" There is no cultivator now who does not think it a "do" on the part of a *zemindar* who tries to enhance his rent during the currency of a settlement. He says at once—"the *sirkar* has not enhanced on the *zemindar*, why should I be called on to pay more;" at the same time he will agree to any fair enhancement fixed by the Settlement Officer. Now it may be said that these ideas have grown up since the VII., 1822, Settlement, and are due to the entries in the *wajib-ool-urz* which barred enhancement; but I think that the popular notion embodies more than this, and implies that the rent rate is identical with the revenue rate; that the rent of the *asami* is to be fixed by Government, who makes over any portion of its own rights to the *zemindar*, without giving him any right to enhance the rent rate. This, thinks the *ryot*, none but Government is properly competent to do. This is no new observation of mine: 40 years ago Mr. H. M. Boulderson wrote as follows:—"The whole allowance of 25 per cent. on the gross rental is not a fraction more than will cover the ordinary village expenses and the chances of season. In point of fact there is no proprietor's rent throughout the country, where an estate is settled up to the Regulation mark, and the rent-roll is well ascertained.

Government is indubitably the proprietor in the English sense of the word, and it is a mere farce to talk, up here at least, of proprietors in any other sense than that of Government officers for the collection of the revenue with a small remuneration for the trouble of collection. The inequality of settlement makes the difference of pay."

56. If this was the case at the VII. 1822 Settlement, when the gross deduction from the *jummabundee* was 25 per cent., how much more must it have been so previously, when Rs. 5 per cent. were deducted from the gross *jummabundee* to cover village expenses, and 10 per cent. as *malikana*, the entire remainder being taken as Government *jumma*?

57. Land has notoriously only yielded good profits since last settlement, which was made at a considerable reduction of revenue; in other words, before last settlement the rent-rate only differred sufficiently from the revenue rate to cover the ordinary costs of collection, with a slight but precarious remuneration for the trouble and time expended in collection. When *malgoozaree* land could only sell at one year's purchase of the rental, what appreciable profits could have been left to the purchaser? This price taken in connection with the price fetched by *mâfee* land, or 10 years' purchase of the rental, show that in 1832 on the average, the *jumma* and costs of collection and management must have been 90 per cent. of the gross rental. What wonder then if the *assamee* looked on rent-rate and revenue rate as nearly synonymous; and if this idea exercised, as I believe, a strong influence against the enhancement of rents, true, irrigation has increased as I will show, and produce prices have risen; but men are not ruled by averages and figures. An *assamee* will not pay increased rent when he finds that he is not much better off than he was before, that he is still in the clutch of the money-lender, and that the cost of cultivation has increased, while he has little or no more grain than he had formerly. Years of good produce and high prices are not always years of profit and plenty to the cultivator, for the *zemindar* and the *bunneah* are wide-awake to seize the golden opportunity, and collect as much of the old outstanding balances of former years as they can, without driving their victim to desperation and flight. It is easy to say that rents *ought* to have risen 50 per cent., but not so easy to prove that they *have* so risen, or will rise; and we are compelled to be guided rather by what *is* than by what *ought to be*. Act X. of 1859 and the High Court are over our heads, and under the existing law the Judge is the ultimate fixer of rents. On him and his rent decisions depend whether or no a settlement will work, in which a possibility of a future enhancement of rents has been taken into consideration in assessment.

58. My assessment at half assumed assets, including future enhancements, has been Rs. 16,62,680 on a *jummabundee* of Rs. 33,25,360, which gives an average rent-rate of Rs. 3·76, or Rs. 3-12-1 per acre all round. The average *money* rate in all the money-paying *pergunnahs* before assessment was Rs. 3-3-8 per acre. I therefore calculated on an enhancement of not quite 8½ annas per acre, or a little over two annas in the rupee, allowing for assessments on waste lands and *sayer* assets, about 1½ to 1¾ annas per rupee would represent the increase in rent on cultivated land after assessment on which I have calculated. I worked out crop rates based on calculations of produce and prices, and the share taken by the *zemindars* in each *pergunnah*. The total rental so obtained averaged Rs. 3-14-3 per acre; but money rates will hardly reach this, while in the *batai pergunnahs* it will be exceeded. My rates have been almost universally accepted by the *assamees*, who appealed in 14 cases only, from the 1st January, 1866, to the 1st January, 1872. In a vast number of cases the *zemindars* and *assamees* made up the *jummabundees* to the full amount without coming into Court. The increase, I assumed, was about 16½ per cent., while the decrease in the value of money since 1859 is 30½ per cent.; for from 1804 to 1858 the average price of wheat was 82 lbs. per rupee: from 1859 to 1872 it has been 57 lbs. It may be said, therefore, that I might have calculated on a higher rise in rents with safety; but considering the increased cost of cultivation, and the new

standard of comfort among the cultivators, I think I have kept on the right side of the estimate. Men are not ruled by averages, and it is not such an easy thing for a *zemindar* now-a-days to get the full enhancement which he is entitled to. Two-thirds of the cultivators are more or less in debt, and the unindebted portion will not pay higher rates than those which their indebted brethren can afford to pay, while the interest paid by the latter to the *mahajuns* for advances for seed and cattle diminish *pro tanto* the amount they can pay as rent. Bearing these and similar facts in mind, I kept my rent estimates moderate.

Tenures of Proprietors.

59. Having finished with the tenants we can pass on to the proprietor. Taking him first as a cultivator of *seer*, we have seen by Table XXIII. that the total *seer* cultivation in the district is 65,614 acres. What *seer* is seems to be a moot point. In this district the meaning of the word is clear enough. It is that land, which the *zemindar* has reserved for his own or his children's cultivation, and which is habitually cultivated by them, *with their own stock*, either by themselves or by hired labor or by labor given as service. Of late years many *zemindars* have caused a large amount of land cultivated by tenants to be entered in the village papers as *seer*, though they had never cultivated it at all; but these very men owned that this land could not be called *seer*, and that their only reason in so entering was—(1) to prevent occupancy rights growing up, and (2) to lower the *jummabundee* by recording *seer* rates instead of those actually received. The *seer* land where there are resident cultivating *zemindars* is usually taken from the best land in the village; but in Beesulpore, especially in the Bumroli *ilaqua*, where land has deteriorated or has been thrown up by tenants, the *zemindars* sometimes take it in hand and cultivate it by hired labor, manuring it well, until the land has recovered its vigour and can be let again advantageously to tenants. Many cultivators here speak of their old holdings which they cultivate with their own stock, and do not sublet as their "*seer*." The test of *seer* is whether or no it is cultivated with the *zemindar's* own stock; if not it is not real *seer*—at least not in this district. The sharers are usually very careful that each shareholder shall hold an amount of *seer* exactly proportionate to his interest in the village. The usual rule is that if one holds more *seer* than the other sharers in proportion to his share in the village, he shall pay full *ryottee* rates according to the village custom for the surplus land held as *seer* above the amount to which he is entitled by his proportionate share in the *zemindaree*. Sometimes, but not usually, he is allowed to pay slightly lower rates than those of ordinary *assamees*. A favourite device of an embarrased *zemindar* is to enter his own *seer*, and as much tenant's land as he can get hold of, in the name of one of his sons, the *seer* rate being recorded as rent. The son's name will appear year after year in the village papers till he acquires occupancy rights. The *zemindar's* object is to have some land to fall back on at low rents, when his proprietary rights are sold by decree of Court. In some villages the *zemindars* are so fettered by the occupancy rights created under Act X., that they cannot get enough land to cultivate to satisfy the wants of their increasing families, and are compelled to cultivate as *palá assamees* in neighbouring villages. This is not an uncommon occurrence, especially in the Furreedpore and Aonlah Tehseels. An ex-proprietor always considers himself very hardly treated if he is not allowed by an auction purchaser to retain his old *seer*. Unfortunately, however, the first object of the new comer is always to turn the ex-proprietor out of the village altogether, lest his influence over the tenants should lead to difficulties in the collection and enhancement of the rents. Our laws have not hitherto sufficiently recognized the difference between the proprietor's rights as proprietor and as cultivator. I do not see why an owner should be placed at a disadvantage as compared with his own tenants by not being allowed to acquire occupancy rights in his own cultivation as against auction purchasers and others. If this were conceded it would remove a fertile source of discontent.

The tenures of proprietors in Bareilly are very simple as compared with those of other districts. The ownership may either be entirely joint over the whole area, or entirely in severalty, or partially in severalty and partially joint. The following state-

ment shows the number of revenue-paying estates under each class in each *pergunnah* :—

TABLE XXVI.

Pergunnah.	Total number of *mehals.*	*Mehals* exempt from revenue.	*Mehals* assessed to revenue.	Number of assessed *mehals* under Class I., or *zemindaree.*	Ditto under Class II., or perfect *putteedaree.*	Ditto under Class III., or imperfect *putteedaree.*	Average area per *mehal* in acres.	Average area in acres per proprietor recorded.
Furreedpore, ...	476	...	476	351	45	80	335·5	32·3
Crore, ...	554	33	521	384	41	96	361·0	52·9
Bullia,...	68	1	67	38	12	17	352·7	19·9
Suneha, ...	180	3	177	142	17	18	296·0	28·5
Aonlah, ...	190	2	188	137	20	31	431·0	43·1
Serowli, ...	82	4	78	58	17	3	464·7	62·5
Meergunj, ...	221	4	217	149	42	26	445·0	44·4
Sirsawan, ...	62	...	62	52	9	1	334·8	61·8
Kabur, ...	84	1	83	73	9	1	417·3	43·5
Chowmahla, ...	183	...	183	181	1	1	324·6	101·2
Ritcha, ...	258	12	246	218	23	5	420·6	98·0
Nawabgunj, ...	433	9	424	376	47	1	334·4	92·1
Beesulpore, ...	535	5	530	452	40	38	443·2	107·0
Total, ...	3,326	74	3,252	2,611	323	318	379·1	54·5

By a statement drawn up in 1849, it appears that there were then only 35 imperfect *putteedaree* and 12 perfect *putteedaree* estates, all the rest being *zemindaree.* The total area was then 1,317,618 acres comprised in 2,424 estates, giving an average of 543·5 acres per estate, as against the present average of 379·1 acres. Sub-division and partition then has been proceeding at a very rapid pace. Now 74·6 per cent. of the area is under *zemindaree,* 10·8 per cent. under perfect, and 14·6 per cent. under imperfect *putteedaree* tenure.

Statement No. VII. in the appendices gives a complete detail of the castes of proprietors in each *pergunnah.* The following table shows the chief proprietary castes in each *pergunnah* :—

TABLE No. XXVII.

Pergunnah	Thakoor Proprietor.	Kayeths.	Brahmins.	Buniahs and mahajuns.	Coormis.	Mahomedans.	Others (Hindoo) &c. 50 castes.	Total number of proprietors.
Furreedpore, ...	3,765	290	326	87	55	184	225	4,932
Crore, ...	740	644	421	116	504	1,060	294	3,779
Bullia, ...	817	201	147	15	...	15	9	1,2[illegible]4
Suneha, ...	492	348	220	168	1	283	355	1,867
Aonlah, ...	811	233	154	83	...	431	185	1,897
Serowli, ...	247	29	23	45	...	116	149	609
Meergunj, ...	808	246	332	54	51	605	116	2,212
Sirsawan, ...	10	8	9	1	51	132	125	336
Kabur, ...	120	48	54	16	17	511	39	805
Chowmahla, ...	24	147	44	49	27	243	53	587
Ritcha, ...	84	90	47	68	121	628	69	1,107
Nawabgunj, ...	87	240	124	68	253	733	67	1,572
Beesulpore, ...	618	249	497	101	278	239	233	2,215
Total, ...	8,623	2,773	2,398	871	1,358	5,180	1,919	23,122

The above table includes owners of resumed revenue-free tenures, and all subordinate proprietors who have free power to alienate their lands by sale or mortgage. Of all our *zemindars,* the *raiens* are almost the only men who really exert themselves in the management of their estates, and their proper cultivation and irrigation. They have

consequently become very wealthy during the term of last settlement, and they are always on the look-out for the purchase of new estates. They are exceedingly hard landlords to their tenants, grinding them down till they are thoroughly subservient. Then the *raiens* treat them tolerably, and supply them with seed-grain, cattle, and all other necessaries for cultivation. Though they rarely leave the *asamis* more grain than is sufficient for the support of themselves and their families, they never allow them to starve; and in the droughts of 1860-61 and 1869-70, the *raiens* expended very large amounts of grain in the support of their cultivators. The *raien* villages are always well populated and well cultivated. All the other classes of *zemindars* do but little to improve their villages. Their notion of "improvement" is chiefly confined to raising the rents. The fact is improvement in our sense of the word is hardly to be hoped for.

Capital in the hands of a *zemindar* (a cultivating *zemindar* may now and then be an exception) is of little or no use as far as the improvement of the soil is concerned. As far as I have seen, the notion of improving or reclaiming the soil is foreign to the natives. They extend the cultivation, they procure more ryots and bring waste land under the plough, but they never think of making a piece of sand valuable by mixing it with clay, or a hard clay serviceable by turning up the sand which is commonly to be met with a short distance under the surface, or any similar improvement, and this will never be done by the *zemindars*. The only improvements can come from the actual cultivator, and they have no capital and no security of enjoying the profit of any increased produce which they might effect by their industry.

In the following statement are given the number of *seer*-holding proprietors and the area cultivated as *seer* in each *pergunnah*:—

TABLE XXVIII.

Pergunnah.	*Seer* area in acres.	Number of recorded *seer*-holders.	Average *seer* cultivation in acres.
Fureedpore,...	9,399	1,869	5·0
Crore, ...	11,634	2,072	5·6
Bullia, ...	4,014	795	5·0
Suncha, ...	4,143	2,447	1·7
Aonlah, ...	7,638	1,072	7·1
Serowli, ...	3,003	391	7·6
Meergunj, ...	4,333	964	4·5
Kabur, ...	1,258	310	4·0
Sirsawan, ...	1,555	169	9·2
Chowmahla,...	1,315	314	4·1
Ritcha, ...	3,432	330	10·4
Nawabgunj, ...	3,426	668	5·1
Beesulpore,...	10,464	1,441	7·2
Total, ...	65,614	10,986	5·9

The proportions of resident and non-resident *zemindars* is shown:—

TABLE XXVIII A.

Pergunnah.	In *zemindaree* estates.		Perfect *putteedaree* estates.		Imperfect *putteedaree* estates.		Total percentage.	
	Percentage to total residents.	Per cent. of non-residents.	Per cent. of residents.	Per cent. of non-residents.	Per cent. of residents.	Per cent. of non-residents.	Residents.	Non-residents.
Fureedpore, ...	6·25	93·75	8·66	91·34	13·59	87·11	9·85	90·15
Crore, ...	18·35	81·65	10·18	89·82	36·28	63·72	25·73	74·27
Bullia, ...	6·18	93·82	53·57	46·43	40·90	59·10	32 90	67·10
Suncha, ...	28·30	71·70	13·50	86·50	43·26	56·74	29·88	70·12
Serowli, ...	22·97	77·03	26·70	73 30	47·02	52·98	29·24	70·76
Aonlah, ...	22·63	77·37	62·33	37·67	52·50	47·50	41·70	48·30
Meergunj, ...	25·09	74·91	27·57	72·43	48·08	51·92	32 30	67·70
Kabur, ...	13·02	86·48	35·59	64·41	...	...	13·50	86·50
Sirsawan, ...	29·34	70·66	35·29	64·71	10·52	89·48	29·49	70 51
Chowmahla, ...	11·72	88·28	22·23	77·77	...	100·00	11·55	88·45
Ritcha, ...	25·00	75·00	50·25	49·75	...	...	25·00	75 00
Nawabgunj, ...	24·40	75·60	14·30	85·70	28·66	71·34	23·80	76·20
Beesulpore, ...	19·97	80·03	35·02	64·98	45·42	54·57	25·70	74 30
Total ...	18·31	81·69	24·77	75·23	33·14	66·86	24·34	75·66

Among the *putteedaree* estates are a few where the tenure is true *bhyachara*, where profits depend on possession and not an ancestral descent.

These are all very simple tenures, except in a few villages lying chiefly in the Ramgunga *khadir*. In these a portion of the area is on the upland, and the rest in the low-lying *khadir* and liable to constant alterations of area, both in extent and quality. Under these circumstances either all these *khadir* lands are *shamlat*, and the proceeds in rents are first appropriated to the payment of the *jumma*, the balance, if any, being made up by a rate on the land held in severalty; or the profits, if any, are divided on the old ancestral *biswa* shares, or else the *khadir* land is divided annually among the sharers according to ancestral shares. There is thus a kind of double tenure *bhyachara* in the severalty, and *zemindaree* in the *shamlat*, giving rise to constant disputes. In these estates all land gained by alluvion is held to be added to the *shamlat*, not to the severalty of any proprietor to whose lands the new accretion may adjoin.

The *lumberdars* usually endeavour to lay their hands on the profits of the *shamlat* if there be any, and to get all new accretions to themselves by cultivating it as soon as possible and refusing to pay any rent on such cultivation. In this they are often successful through the connivance of the *putwaree*.

There are numerous small proprietors who have no shares in the common land or in the *zemindaree* dues, and have no right of preemption, but have otherwise a full proprietary title over the land in their possession, with rights of hereditary succession and transfer by sale, gift, or mortgage, without reference to the *zemindars* of the village in which their land is situated. These patches of land thus owned are usually either resumed revenue-free tenures, or grants made by former *zemindars* to *Brahmins* in *sunkullup*, or to their relatives or dependants, and in which the title of the *zemindar* to resume has been barred by limitation. Hitherto these bits of land have been entered in the village papers in the *jummabundee* and the jumma payable on them, through the *lumberdar*, has been erroneously entered as rent. This wrong method of record has given rise to much injustice, and many of these small holders and their heirs have been deprived of their lands by powerful *zemindars* and fraudulent *putwarees*. It is a common saying in Bareilly, "*Gureeb ka oostad putwaree, putwaree ka oostad canoongo.*" In the new settlement I have entered all these petty proprietors with the area held and the *jumma* payable by them, in the *khewut* paper, and in the *khuteonee* and *jummabundee* have carefully distinguished their lands from those of the tenants. No mistake can now, I hope be made by the courts as to the nature of their tenures.

Nearly all of our *zemindars* are of modern growth. Some few there are whose proprietary rights can be traced back as far as the *Rohilla* rule; but the Rohillas as far as they could, obliterated all proprietary rights in the districts over which they ruled, and such rights could hardly grow up under the *Nawab Wuzeer* of Oudh and his rapacious *amils*. I have found a few cases in which undoubtedly the *zemindaree* right was bought and sold both before and during the *Rohilla* times; the most notable being that of Sunja Misr, *Poojari* to *Rajah* Mukrund Rae, the *soobah* of Bareilly, and ancestor of the Misrs of Rujow, who is said to have invested Rs. 1,27,000 in the purchase of 175 villages, some of which his descendants continued to hold until last settlement. They lost many villages in consequence of the severity of the assessment at the fourth settlement, but they still retain some 10 or 12.

Again in Ahmedabad, in Nawabgunj, the present *coormi zemindars* hold old deeds 1162 *H.*, showing that their ancestors, Bheem Sens and Rikhi, *coormis*, bought four *biswas* of the village, and Toola Ram, *Coormi*, two *biswas* from the *zemindars* the *kayets* of Gela Tanda. The same Toola Ram bought two *biswas* more from Sher Khan, "*zemindar* of Tappa Haveli Sirkar Badaon," in 1094 *F. S.*-1686, for Rs. 81. Those two *biswas* would now fetch at least 25 times as much.

The *Shekhs* of Nawadah, in Crore, too hold a few old deeds running from 1155 H., * * * * showing that *zemindares* rights not only existed, but could be freely transferred by sale or gift. Still large tracts of country were owned by the *kutheria* chiefs, whose rights were ruthlessly swept away by the *Rohillas*. At the first settlement of Bareilly, which then included all Shahjehanpore and part of Budaon, only 461 persons engaged as proprietors of land, at the second 404; at the third (1808-9,-1811-12) only 563. At the fourth settlement in 1812-13 we find 1,463 proprietors engaging, and in 1813-14, 2,733.

To Secretary Government of India, Revenue Department, dated 31st December, 1805.

Mr. Seton in 1805 wrote thus—"when in the year 1802, I proceeded to the *Pergunnahs* of Chowmahla, &c., which comprised the district then known by the general name of Rehur, I found that there were no *zemindars* whatsoever, the late Fyzoollah Khan (of whose territory it formed a part until the year 1794, when it was transferred to the territories of the *Nawab Wuzeer*)" having abolished all *zemindaree* rights, and declared himself *zemindar* of the country. Mr. Seton, consequently, formed his settlement of Chowmahla with those persons who seemed to him to have the *strongest constitutions* "and who by a long residence in the *pergunnah* had become acclimatized to it,". Writing of *Ajaon*, he says, "it may perhaps appear singular that in discussing the subject of the settlement I have not once alluded to *zemindars* or *maliks*. The fact is that in this *pergunnah* there are not at present any persons of that description. In Beesulpore alone, so late as the last settlement and up to 1849, there were no less than 104 villages with no recorded proprietors, and in Ritcha, Jehanabad, Pillibheet, Furreedpore, and, in fact, in almost every *pergunnah*, there were numerous villages without proprietors. All these were granted away by Government, very frequently on the most slender grounds, such as, for instance, to a farmer, who without a shadow of claim to proprietary right, had paid his rent to Government for 12 or 15 years regularly. The possession of groves, or the having sunk a well, was alleged and accepted in itself as proof of proprietary right, though numerous *asamis* own groves and have sunk wells; and the inquirers for rights forgot that in a *khana khali* village, a farmer during the term of his farm invariably takes all the dues which are received in other villages by *zemindars*; he plants groves and acts in every way like a proprietor, but no such act under the circumstances could prove his proprietorship. The policy of the day was to get rid of such Government rights, to create *zemindars* if they could not be found where no better title could be established. The *mocuddums* were usually vested with the character of proprietors, irrespective of any prescriptive rights that might have been enjoyed by the village community.

Truly, there was a curious way in former times of dealing with rights. *Rajah* Subkurun Singh, the head of the *kutheryas*, had been over and over again at each successive settlement declared to be *zemindar* and proprietor of *Pergunnah* Sirsawan. He was deprived of settlement and allowed *malikana*, because he was said to be incompetent *i.e.* he could not work a *jumma* which the *pergunnah* even now could not possibly pay. Farms were concluded at gradually decreasing *jummas* with his own *mocuddums*, and then in 1850, the *zemindaree* was declared to be vacant, and the proprietary rights conferred on the *mocuddums* to the exclusion of the *Rajah*, though those persons to whom he had sold his rights in certain villages were recognized as *zemindars* by virtue of their purchase from the *Rajah*. The result is that his heirs now hold not a single village in the *pergunnah*, of which at seven successive settlements he was recognized as *zemindar*. A similar, though, not so bad a case was that of Ajaon, where the old *chouhan zemindars* were declared to be possessed of no *zemindaree* rights, and were assigned *malikana* as *talookdars* in a few villages only. They, however, recovered a considerable portion oftheir rights by a suit in the civil courts—a process whichthe Sirsawah *khutheryas* could not afford to go through.

The *zemindaree* of many villages was acquired by the *canoongos* at the early settlements (hence the number of *kayeth zemindars* at the present day).

The district was newly acquired, and the system of revenue settlements was in its infancy. The allotments of *jummas* and selection of parties for the farm of villages which had no ostensible *zemindars*, and were ceded to the British Government as the property of the State by the *Puthan* rulers, was based almost entirely on the information obtained from the *canoongos* of the *pergunnah*, who in collusion with the *tehseeldar* parcelled them out in clusters; and after helping themselves in the first instance to the most profitable estates, engaged for them *ism furzi* in the names of their relatives and dependants, and assisted their friends to the others.

Mr. Boulderson's report on the khana khali villages of Beesulpore, dated 16th October, 1848.

Mr Boulderson in his report on the VII., 1822 settlement, alludes to the same frauds. He says—" it seems to have been a custom not uncommon in all parts of the district to change the name of the village on its changing hands, or for other cause, such as an unlucky name, &c. It has prevailed to a considerable extent in estates situated near rivers. The new and the old names were both retained in the papers, but there being in reality only one estate, opposite one or more of its names no *zemindar* was recorded. The *canoongos* on making out the *dehsuni* book, finding a convenient vacancy, inserted their own names or some of their relations. Subsequently on the strength of this record they brought forward their claims, and declared that the zemindars of such an estate (the only one) have possession of the land. The revenue authorities were very alert in recognizing such *nouburamud* villages; and where the *zemindars* of the real estate were not very strong, the interlopers usually succeeded in making out another property for themselves. In several cases the claims were urged in court, and on the strength of the record, an *ameen* was sent out to measure off so much land, and to give possession. I believe extensive injustice has been practised in this way."

Collector to Commissioner dated 28th January 1832.

The tremendous power in the hands of the *canoongos* will be understood from the following description of the *dehsuni kitab* as given by the Board of Commissioners in their report on the fourth settlement. They say that where the right of property was in dispute, the revenue officers derived great assistance from the *dehsuni* book. "The assistance to which we allude is a valuable document which was compiled in the year 1802, under the instructions of Mr. Deane, then Collector of the district, at the first assumption of these Provinces by the British Government, and which ever since formed, under the name of the *dehsuni kitab*—a record of general reference in all points connected with the property, the possession, or the revenue of the lands in this district. With a view of meeting the changes of property attendant on two revolutions, the usurpation of the *Rohilla Pathans*, and the conquest by the *Nawab Wuzeer*, two columns of this register exhibit under the description of the *malik kudeem* and *malik hal*, the ancient proprietor known to the canoongo records, and the more recent occupant where no claimant to the title of the former had been hitherto forthcoming, or where the latter could show a preferable title either by prescriptive possession or by documents, conferring a right of property, the latter has been invariably recognized; but in a large majority of cases, the title of the former is not disputed. With the assistance of this record few cases of doubt or difficulty can have occurred. But in some instances, where the claim of admission has rested on transfers from the recorded *maliks*, the property is disputed on the production by the contesting parties of bills of sale from different vendos, or of double transfers from the same vendors; and on such occasions the parties have been left to adjust their dispute by regular suit in the *adawlat*, if a reference to the *dehsuni kitab* did not furnish sufficient grounds for the selection of either claimant to the exclusion ofthe other."

The record was drawn out by the *canoongos*; they had their opportunity, and used it, as shown by the number of villages still in possession of the *kayeth* families.

The permanent changes in proprietary possession since last settlement by voluntary sales and sales in execution of decree of court are shown in the annexed table:—

TABLE XXIX.

Pergunnah.	Total area in acres.	Area alienated by private sale.	Ditto by sales in execution of decree.	Total area alienated by both methods.	Percentage of column 5 to column 2.
Fureedpore, ...	159,721	41,336	20,308	61,644	38·6
Crore, ...	200,124	55,741	15,956	71,697	35·8
Bullia, ...	23,986	2,717	1,747	4,464	18·6
Suneha, ...	53,283	9,246	7,461	16,707	31·3
Aonlah, ...	81,898	14,566	8,778	23,344	28·5
S. Serowli, ...	38,108	2,310	5,401	7,711	20·2
Meergunj, ...	98,352	15,675	10,506	26,181	26·6
Sirsawan, ...	20,758	No returns were made out for these, *pergunnahs* which were settled by Mr. Porter.			
Kabur, ...	35,056				
Chowmahla, ...	59,407	51,878	9,381	61,259	103·1
Ritcha, ...	108,512	34,548	5,065	39,613	36·5
Nawabgunj, ...	144,829	38,448	13,535	51,983	35·8
Beesulpore, ...	237,115	47,141	15,371	62,512	26·3
Total, excluding Kabur and Sirsawan, ...	1,205,335	313,606	113,509	427,115	35·3

The whole of Chowmahla then, if the *canoongos'* records are to be trusted, have changed hands since last settlement, and part of it more than once; and of the whole district about 35·3 per cent. has been permanently alienated. Considering the modern origin of most of our *zemindars*, I am not very much astonished at this result. Many of them, especially among the Mahomedans, are mere land speculators with not much attachment to their property. Still, I own I cannot satisfactorily explain the enormous alienations in Chowmahla, where the revenue as a rule has been collected with ease. The *canoongos* have, however, included the whole area of the Chachait *ilaqa* in transfer. The large *ilaqa* was exchanged with Government by the *Rajah* of Kashipoor, its former owner for another in the Bijnour district.

From a report of the Collector, dated 14th July, 1843, I find that the average sale price of *malguzari* land in 1823, according to the office records, was Rs. 2-12-11, per acre all round.

Mr. Boulderson in 1832 wrote—"the usual mode of calculating the value of and for purchase among the natives is, that *malguzari* land sells for one year's rent, *lmaafee* land for 10 years' rents per *beegah*." The average price of land sold by private sale in this district, taken on the registered transfers of estates, gives Rs. 3-1-0 per acre. Mr. Clarke gives Rs. 5-5-6, as the average price in 1843.

The average prices in each *pergunnah* realized by private sale since last settlement, as shown by the *canoongos'* records, are:—

Meergunj, ...	10	10	1	per	acre.
Serowli, ...	10	0	8	"	"
Suneha, ...	7	10	9	"	"
Bullia, ...	11	4	2	"	"
Crore, ...	14	10	8	"	"
Ritcha, ...	12	10	6	"	"
Chowmahla, ...	10	6	5	"	"

In the other *pergunnahs* the records of prices had not been kept with sufficient care to warrant any reliance on them. In answering a recent report by the late Judge of Bareilly, I had occasion to draw up from the records in the Collector's office a statement showing the average sums reaized per acre by sale and mortgage in the three *tehseels* first assessed, *viz.*, Furreedpore, Crore, and Meergunj, for the five years, 1862 to 1867, before the declaration of the revised assessments, and the five years, 1867 to 1872, after they were declared.

The results were as follows:—

TABLE XXX.

A. FOR SALES.

Pergunnah.	1st Period, 1862-1867.			2nd Period, 1867-1872.			
	Area sold in acres.	Price realized in rupees.	Average per acre in rupees and decimals.	Area sold in acres.	Price.	Average per acre.	Rate of interest on profits.
		Rs.			Rs.		Rs.
Fureedpore, ...	5,747	52,889	9·2	3,003	40,536	13·4	7·4
Crore, ...	11,618	1,63,969	14·1	5,882	1,24,494	21·1	5·8
Meergunj, ...	3,134	43,296	13·8	1,366	19,304	14·1	7·7
Total, ...	20,499	2,60,154	12·6	10,251	1,84,334	18·0	6·3

B.—MORTGAGES.

Fureedpore, ...	6,294	47,597	7·5	4,437	36,805	8·3	...
Crore, ...	9,874	1,19,126	12·0	6,387	99,916	15·6	...
Meergunj, ...	4,099	33,819	8·2	7,053	81,658	11·5	...
Total, ...	20,267	2,00,542	9·9	17,877	2,18,379	12·2	...

Again Mr. Berkeley offered for sale, in two lots, 15 villages in Crore, and received offers aggregating Rs. 1,60,000. The profits would have given almost exactly 6 per cent. on the purchase-money; but Mr. Berkeley changed his mind, and did not sell. The higher prices obtained in Crore as compared with the rest of the district are due to villages being nearer to the city, where all the capitalists reside, and their consequent greater facility in management and superior advantages for the disposal of their produce. The rate of interest given by landed property has then steadily been falling since 1832, when it was 10 per cent. This rate remained tolerably steady till 1860, when it fell to 9 per cent., then to 8, and finally between 1867 and 1872 to about 6 per cent. It may be thought that the purchasers are trusting to enhancements in rent to recover the former rate of interest on investments; but I do not think this is the true explanation. I attribute the rise in the value of land.

(1) To the large amount of money awaiting investment, especially in the hands of Mahomedan capitalists, who are forbidden by their religion to take interest openly, and prefer investing in land.

(2) To the increased prosperity of the *zemindars* owing to the high prices ruling for produce during the last 10 years, and the consequent comparatively small amount of land in the market.

(3) The settlement operations have exposed the true value of villages, which, especially where rents were taken in kind, was formerly unascertainable with any degree of accuracy by intending purchasers, as the village papers were regarded as pure fiction.

(4) To the confidence felt in the new settlement, and the removal of all doubts and fears as to its amount.

The investors know well that where rents have been enhanced all over a village in the new settlement, and the cultivators have obtained certified extracts from the new *jummabundee*, signed and sealed by the settlement officer, any further enhancement for

the next 10 years will be *almost* out of the question. Hence I think that as the rate of interest yielded by land is now only 6 to 7 per cent., while safe investment can be made in Government notes and guaranteed securities at 4½ to 5 per cent. interest, land has all but reached its limit of value in this district.

Revenue-free and *istimrar* tenures :—

The following table shows the areas held on revenue-free and *istimrar* tenures in each *pergunnah* :—

TABLE XXXI.

Pergunnah.	Area held revenue free.			Area held on an *istimrar jumma* in acres.
	Kumuzdeh beegah in acres.	In perpetuity in acres.	For life in acres.	
Fureedpore, ...	327	499	9	...
Crore, ...	210	1,3,852	345	1,069
Bullia, ...	11	391	...	...
Suneha, ...	147	2,622	74	...
Aonlah, ...	223	826	24	1,397
Serowli, ...	200	1,702	63	...
Meergunj, ...	297	2,085	294	...
Kabur, ...	93	211	...	...
Sirsawan, ...	27	242	...	...
Chowmahla, ...	50	369	...	...
Ritcha, ...	185	9,030	294	2,487
Nawabgunge, ...	61	5,040	81	1,691
Beesulpore, ...	101	2,755	...	...
Total, ...	1,932	39,624	1,184	6,644

The above differs slightly from the areas entered in the district statement. The difference is due to the release or resumption of small patches after the *pergunnah* area statements had been made up. The *jummas* of the *istimrar* tenures are included in the assessments, and their areas in the *malguzari* area.

The following is a list of the *talookdaree* villages in which there are superior and inferior proprietors :—

Pergunnah.		*Village.*
Meergunj,	...	Jouner. Bajpoor. Gynee Shib Nuggur. Meer Nuggur. Thirea Jykishan. Mundunpoor. Labhera. Moghulpoor. Purchai. Pultha. Hafizgunj.
Aonla,	...	Anroodhpoor. Mulsakhera. Rajpoorkulan. Sahjunee.
Sirsawan,	...	Pundree, 2 *mehals.* Sooltanpoor. Bilsa. Surae, 15 *bis.* Do., 5 *bis.* Chungasee.
Seroli,	...	Pipurea Beerpoor. Chukurpoor, 2 *mehals.*
Ritcha,	...	Sookutea.

In assesment these have all been treated in the same way, the old custom being followed as nearly as possible. Engagements have been taken from the *biswadars* for the revenue cesses, and *talookdaree* allowance of 10 per cent. The total sum will be paid in to Government, and the *talookdari* allowance will be paid from the Treasury to the *talookdars* who have no concern whatever with the internal management of the villages, and no responsibility. There is no peculiarity about the *biswadaree* tenures of any of these villages, except Sookootia in Ritcha, where every cultivator is a proprietor of his holding, with hereditary and transferable rights. The *lumberdars* are entitled to collect no more than is entered in the *jummabundee*, and have no right to sue for enhancement. What is paid by the cultivators is their quota of revenue and village expenses, and is not rent.

Financial History of the Distirict and former Settlements.

In the following account of the financial history of the district I intend to confine myself, as far as possible, to those *pergunnahs* only which are dealt with in this report, and which have been re-settled by me. For the history of the past settlements of the *pergunnahs* comprising the Pillibheet sub-division, reference must be made to Mr. E. Colvin's report on his settlement.

At the distribution of the *jageers* among the *Rohilla* chiefs, the following valuation was made of the assets of the following *pergunnahs*.

	Rs.
Crore, Bareilly, ...	6,44,000
Beesulpore and Powain, ...	3,50,000
Ritcha, ...	1,81,000
Fureedpore and Suleympore, ...	1,97,000
Shahi,...	95,000
Serowli and Kot Salbahan, ...	1,03,000
Kabur and Sheregurh, ...	60,000
Ajaon, ...	1,62,000
Suneha, ...	70,000
Aonlah, ...	1,35,000
Sirsawan, ...	62,000
Chowmahla, ...	1,15,000

In Crore were included the present *Pergunnahs* of Nawabgunj and Bullia, and also the Etawah collections. We know that the name of the *pergunnah* was given to it from the fact that its revenue was a crore of *dams*, or Rs. 2,50,000; and that in 1801, the revenue was 216,687, notwithstanding the decrease of cultivation caused by the exactions of the *Nawab Wuzeer's amils*. If then we estimate the Etawah collections received in Bareily at Rs. 3,94,000, and the revenue of Crore, Nawabgunj, and Bullia at Rs. 2,50,000, we shall probably be very near the mark. In Beesulpore the revenue of the 51 Murori villages was granted by Hafiz Rehmut Khan to his *Dewan*, Rao Puhar Singh, but would certainly have been included in the valuation, as it was a private grant from Hafiz himself, with which the chiefs collectively had nothing to do. In 1208 *F.S.* the revenue of Powain is put down at Rs. 1,33,830 and that of Beesulpore at Rs. 2,05,817: Rs. 2,20,000 then, is very close to what must have been the Rohilla valuation. The *jumma* of *Pergunnah* Suleympoor, in 801, is set down at Rs. 65,148. Fureedpore alone, therefore, may be set down at Rs. 1,30,000.

The remaining correction to be applied is for Kot Salbahun, the *jumma* of which in 1208 *F. S.*, was Rs. 59,269. The assets of Serowli maybe set down, therefore, at about Rs 45,000 and the valuation will then stand thus for the Bareilly *Pergunnahs*:—

Fureedpore, ...	Rs. 1,30,000
Crore, Nawabgunj, and Bullia, ...	„ 2,50,000
Aonlah, ...	„ 1,35,000
Suneha, ...	„ 70,000

Serowli (North and South),...		...	...	Rs.	45,000
Ajaon,	..	...	...	...	„ 1,62,000
Shahi,	...	...	...	...	„ 95,000
Kabur,	...	...	...	...	„ 60,000
Sirsawan,	...	...	...	...	„ 62,000
Chowmahla,	...	...	...	..	„ 1,15,000
Ritcha,	...	...	...	...	„ 1,81,000
Beesulpore, and Murori	...	...	...	...	„ 2,20,000
		Total,	...	„	15,25,000

This seems a large sum when compared with the revenue assessed by me 100 years afterwards, more especially when the difference in the value of money is taken into consideration; but it must be borne in mind that the *Rohillas*, as a rule, admitted no *zemindaree* claims to a share in the profits, and their revenue approached as nearly as possible to the actual *jummabundee* of the time. They certainly allowed the *zemindars* to hold their *seer* cultivation at rates slightly more favorable than those of ordinary cultivators, but in the numerous villages which they themselves founded, it was unnecessary to grant even this reduction. The system of management was probably the same that is found at the present day in the old *jageer* of Rampore, where the *Nawab* acknowledges no proprietary rights but his own, and gives out his villages on lease for a term (usually 10 years) to the highest *bonâ fide* bidder who can give satisfactory security, the *ryots* being protected by their rents being fixed for the term of the lease.

I cannot give any statement approaching accuracy of the revenue derived from these *pergunnahs* by the *Nawab Wuzeer;* but from the letter of Mr. H Wellesley to the Governor-General, we know that the revenue of Rohilkhund for 1210 *F. S.*, was six lacs above that of 1209 *F. S.*, and from the *touzees* of the *pergunnahs* resettled by me their revenue in 1210 was as follows:—

Fureedpore,	...	...	...	Rs.	63,584
Crore,	...	...	...	„	1,20,197
Bullia,	...	...	...	„	16,872
Suneha,	...	...	...	„	41,438
Aonlah,	...	...	...	„	44,953
Serowli South,	...	...	...	„	32,985
Seroli North	...	...	...	„	32,809
Ajaon,	...	...	...	„	60,543
Shahi, ...	...	...	...	„	14,001
Sirsawan,	...	...	...	„	9,592
Kabur,	...	...	...	„	9,825
Chowmahla,	...	...	...	„	17,346
Ritcha,	...	...	...	„	42,465
Nawabgunj,	...	...	...	„	96,489
Beesulpore and Murori,		...	...	„	2,36,612
			Total,	„	8,39,711

This is an extraordinary falling-off, but it is hardly surprising when we recollect Mr Tennent's account of the state of the district in A. D. 1799, only three years before. The *Nawab Wuzeer* too had made large revenue-free grants in almost every *pergunnah*, most of which were not resumed until some years afterwards. At the fourth Settlement the whole of *Pergunnah* Shahi was farmed at a very inadequate *jumma* to Rao Putni Mul, and the two whole *pergunnahs* of Chowmahla and Ajaon were held under direct management as *seer sircar*. Owing to the backward state of the district and the large amounts of waste land as compared with that under cultivation, it was found generally necessary at the first settlement to have recourse to *russuddee jummas* rising by annual increments supposed to be proportionate to the increase in cultivation

to be expected. The following table shows the average annual *jumma* (omitting fractions of a rupee) at each settlement. No material alteration took place in the areas of limits of the several *pergunnahs* until after the settlement under Regulation IX., 1833. The *jummas* are taken from a statement drawn up before the mutiny from the then existing annual *towzees*, showing the *jumma* of each year for each *pergunnah* :—

TABLE XXXII.

Pergunnah.	Average annual *jumma*, at 1st Settlement, 1210 to 1212, Fuslee.	Ditto 2nd Settlement, 1213 to 1215.	Ditto 3rd Settlement, 1216 to 1219.	Ditto 4th Settlement, 1220 to 1224.	Ditto 5th Settlement, 1225 to 1229.	Ditto 6th Settlement, Regulation VII., 1822, 1230 to 1243.	Ditto average *jumma*, from 1216 to 1243.	Initial *jumma* of the IX. 1833 Settlement.	Expiring *jumma* of the IX. 1833 Settlement.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Furreedpore, ...	72,672	81,488	88,852	1,39,845	1,38,516	1,42,259	1,36,614	1,48,170	1,45,694
Crore, ...	1,33,348	1,10,173	1,80,579	1,80,392	1,92,608	1,89,239	1,87,024	1,98,308	1,78,968
Bullia, ...	18,289	14,259	15,738	17,712	19,342	21,157	19,444	27,196	24,402
Suneha, ...	42,446	43,117	47,746	54,212	55,098	56,531	54,606	55,056	56,578
Aonlah, ...	48,765	51,480	59,501	71,722	71,264	68,072	68,070	63,469	64,207
Serowli South, ...	36,619	40,854	47,423	53,002	52,828	51,964	51,655	50,848	37,858
Seroli North, Meer-gunj.	36,760	40,165	52,259	56,765	58,816	59,047	57,628	43,020	1,17,065
Ajaon, Meer-gunj.	69,713	80,034	91,861	92,034	1,04,195	1,02,485	1,00,655	1,15,723	
Shahi, Meer-gunj.	15,001	18,001	22,251	67,391	60,890	59,870	56,021	51,672	
Sirsawan, ...	10,173	18,641	51,554	61,925	65,663	64,114	62,205	55,758	38,274
Kabur, ...	9,825	14,124	49,367	56,196	54,092	54,219	53,856	45,161	48,118
Chowmahla, ...	22,548	28,348	52,158	59,784	57,572	55,646	56,230	44,581	59,580
Ritcha, ...	52,228	51,949	1,08,524	1,73,561	1,71,720	1,68,681	1,61,500	1,42,356	1,51,412
Nawabgunj, ...	1,01,535	1,11,544	1,50,357	2,46,300	2,25,674	2,27,007	2,19,264	1,77,992	1,78,381
Beesulpore, ...	2,06,180	1,97,813	2,60,845	2,67,103	2,76,081	2,81,051	2,74,786	2,49,711	2,77,783
Murori, ...	30,795	25,128	29,698	21,514	21,514	21,258	22,555	18,255	
Total, ...	9,06,897	9,27,118	13,08,213	16,26,438	16,25,873	16,22,600	15,82,113	14,87,236	13,78,320

There were no measurements whatever till the VII. 1822 settlement: a specimen of the *puttahs* granted to the farmers at the first settlement is given in the Appendix.

It is valuable as showing—

(1) The distinctness with which the promise of a permanent settlement was made to each person engaging for the payment of revenue.

(2) The customary *butai* rents of the time.

(3) The anxiety displayed to guard the cultivators from exactions on the part of the farmers.

(4) Principles on which the first three settlements were made.

In 1211 *Fuslee* there was great drought, and 4 annas in the rupee of revenue were remitted. The first settlement was made by Mr. Deane, the first Collector of Bareilly, the second by Mr. Routledge. His predecessor, Mr. Cockburn, commenced the settlement by taking written farming offers, without giving the actual *malgoozars* any opportunity to offer to re-engage, although in many cases they had given their cultivators advances for the year 1213 *Fuslee*. These proceedings were all set aside by Mr. Routledge. From his letter dated 18th January, 1806, his procedure seems to have been to assemble all the *malgoozars* of a *pergunnah* on a fixed day, and then to accept the highest offer made for each estate. Where in any case the offer fell below the *jumma* of 1212 *Fuslee*, he says he examined the accounts filed by the farmer for that year. Judging from the experience of the present day, his examination could not have been of much practical utility as the areas were unknown, rents were paid in kind, and there was nothing to show the crops grown, their area, their produce, or their value beyond the *ipse dixit* of the farmer. His assessment gave an average increase of Rs. 21,220 over the average annual *jumma* of the previous three years, and was pronounced to be highly favourable by the Board. The 3rd, or

"quartennial settlement," was chiefly formed by Mr. Trant, but completed by Mr. Batson. The proceedings on this settlement were not submitted to Government till long after the expiration of the period to which it extended, and the arrangements connected with the quinquennial settlement being then nearly complete, the Board contented themselves with a very brief statement of the result in each *pergunnah;* expressing themselves at the same time highly satisfied with the zealous and beneficial services of Mr. Trant, who had raised the average annual *jumma* by Rs. 3,81,095 on the *pergunnah* under report. In their report dated 27th October, 1818, the Board remark "our Junior Commissioner, Mr. *Trant*, who formed, as Collector of Bareilly, the settlement originally intended to be permanent, has, in his subsequent superintendence of it as member of the Board, been frequently reproached with the breach of the promise held out by him to the landholders on that occasion under the provisions of Regulation X., 1807, *and on the strength of which they acceded to the great increase then assessed upon them.*" The Board did not, however, recommend that the settlement should be declared permanent "as we possess no satisfactory information of the resources of the country, and it is capable of great improvement, the landholders are indigent, and the population deficient, and the right of property in the land remains undetermined. The district is unequally assessed, and in the short period which will intervene before it becomes necessary to conclude the settlement, it would be impossible to obtain these materials, which might enable the Local Officers to correct the present inequalities and to form the assessment with justice both to the landholders and to Government."

The settlement did not work well, and in the last two years it was found necessary to remit large sums. The state of affairs is described thus by the Board in their letter dated 20th September, 1814. "On the promulgation of Regulation IV., 1812, we were apprized by Mr. Batson, who was then officiating as Collector of the District of Bareilly, that a general combination had been formed among the landholders in anticipation of the resettlement which was to take place in consequence of the Court of Directors having disapproved of the promised permanency of the *jumma* of the last year of the quartennial settlements, to diminish the cultivation of their estates, and throw up the management of them, with a view of compelling Government to the necessity of forming arrangements with them on reduced terms, and unexampled balance of Rs. 3,02,107-4-0 had, at the same time, accrued on the demand of the year 1219, and the explanations furnished of it by the acting Collector on the information of the *Tehseeldar* ascribed it in almost every instance to the absconding of the *malgoozars* and the desertion of their tenants. We had also reason to believe, from information derived through other sources, that the *tehseeldars* themselves had been guilty of the greatest abuses in league with the principle Native Officers of the *sudder cutchery*, particularly in the article of *tulubana*, on which a sum nearly equal to the entire amount of the balance was averred to have been levied by them for their own benefit." In this unsatisfactory state of the district, Mr. Deane (the Junior Member) proposed to undertake in person the superintendence of the arrangements connected with the resettlement, and he accordingly proceeded at the end of November, 1812, to Bareilly with the separate powers vested by Regulation XIII., 1821, in a member of the Board on deputation. Mr. Christian, Sub-Secretary to the Board, was placed in charge of the Collectorship, and Mr. Chamberlain, Assistant Collector of Bareilly, and Mr. Colvert, one of the Board's assistants, were at the same time placed under Mr. Deane's orders. These three gentlemen in ten months assessed 32 *pergunnahs*, comprising the whole of the present Bareilly and Shahjehanpore Districts, and about half of the Budaon and Turaien Districts. The result was an increase of Rs. 6,12,482 beyond the preceding quartennial settlement, and of no less than Rs. 14,73,188 over the *jumma* of the two triennial settlements. On the *pergunnahs* now under report, there was an average annual increase of Rs. 3,18,225 over the *jumma* of the 3rd settlement, which had broken down so completely in the last two years, and of Rs. 6,99,320 over the average of the 2nd settlement. Not a single misgiving appears to have crossed the minds of the Board as to the wisdom of this enormous and sudden increase; and the fact that the revenue was collect-

ed tolerably regularly for the first two years, completely lulled them into security. The Government at Calcutta had some slight misgivings. They wrote to the Board on the 8th November, 1814—"the great and rapid augmentation made to the resources of Government might, under ordinary circumstances, have excited apprehensions as to their (*sic*) stability, but the uncommon attention which appears to have been given to the foundation of the settlement by Mr. Deane personally, and by the officers acting under his authority, and above all, the success and facility with which the revenue was actually realized during the two last years are calculated to dissipate any apprehensions which might otherwise have been entertained on this point." It may be asked, why if the *jumma* were really so heavy the *malgoozars* consented to give in engagements? The answer is clear; (1), as no *malikana* whatever was given in cases of refusal to engage, they had no option between starvation and ruin, and preferred to take the chance of the latter, with the vague hope that a rise in prices of produce would pull them through; (2), up to the 4th Settlement the district was let out in large farms or *talookas*, estates to the number of 30 or 40 being held by one *malgoozar*. In 1220 *Fuslee*, the settlement was concluded with the persons whose claims to the *zemindaree* rights had been established, and who were glad to get the *malgoozaree* on any terms, and a competition ensued between the farmers and the *zemindars* of the different estates which, in many instances, led to the latter agreeing to higher *jummas* than they could pay on an average of years. Facts soon woke up the Board from their slumbers. There were very heavy balances in 1223 *Fuslee* and between that year and 1225 *Fuslee* estates assessed at Rs. 485,645, had been resigned by the proprietors and thrown back on the hands of the Collector. The *rusuddi* increase on the years 1223 to 1225, was abandoned, and the Junior Member of the Board, Mr. Trant, was deputed to examine into the causes of the heavy balances in Rohilkhund, for the other districts were in as bad a condition as Bareilly. The following is an extract fron his report:—

"My enquiries in the district of Bareilly have led me to conclude that the *jumma* of the present settlement is not generally higher than the rules under which the settlement was made (*sic*), although some estates, I was satisfied from personal inspection, are over-assessed; but that must generally be the case in all districts, and these cases are not numerous. The assessment, indeed, is generally less than it might have been under those rules by which only 5 per cent. for village expenses, and 10 per cent. for *malikana*, are allowed. But when it is considered that the increase of the assessment since the year 1216 *Fuslee* has been great indeed, it cannot be a matter of astonishment that landholders are very unwilling to pay the full amount of this enhanced revenue."

He ascribed the numerous resignations of estates:—

(1) To a combination of the landholders, not because they were over-assessed but, "because they hope to effect a reduction of the assessment by some means or other on a revision of the settlement. Estates bearing a *jumma* of more than Rs. 80,000 (out of 5 *lakhs*) have been taken back by the proprietors under the permission granted by the Board, showing that many resigned their estates who could not complain of over-assessment with truth." Unfortunately for him he refutes this view in another part of his letter, where he says the landholders complained, and with reason, that they had no option between accepting the assessments or starving, as no *malikana* whatever was allowed to those who refused to engage.

(2) The next cause assigned was "a general agreement between the native officers of all descriptions and the landholders to defraud the Government."

(3) "The effects of the severe drought of 1223 *Fuslee*," on a district where there was hardly any irrigation. The revenues of 1221 and 1225, in which there were good harvests, were collected with comparatively small balances.

He finally says that deficiencies of revenue must always be expected in Rohilkhund in bad seasons, as long as the settlements continue to be temporary, "and of such a

nature as to put it out of the power of the *lumberdar* readily to borrow money on the security of his estate." The Board then ordered the Collector to farm the resigned estates if possible at the old *jumma* or at a reduction if farming offers were not obtained. This, however, was not found so easy to do and in 1823 the *jumma* of the resigned estates amounted to over nine *lakhs* of rupees in Bareilly alone and over 27 *lakhs* in the Province of Rohilkhund. This time the Senior Member of the Board, Mr. Elliott, was deputed to examine into the state of affairs. The following extracts from his minute show how they had progressed and the degree of insight he possessed into the real causes of the break down.

Para. I.—At the 4th settlement of Bareilly the assessment was very unequal and in some instances might be considered high, especially when compared with others where the lands had been let on very easy terms. The *malgoozars* of the estates thus heavily assessed were, of course, dissatisfied and envious of their neighbour's good fortune, and before I left Bareilly to visit Calcutta in January, 1822, it was generally known that the *malgoozars*, not only of these over-assessed estates but of many others, had determined to reduce the cultivation of their estates during the last year of their lease, and were willing to submit to the loss which such a measure might entail in the hope of thus compelling the Collector to grant a considerable decrease of *jumma* at the re-settlement. Their object was rendered the more easily attainable by the permission subsequently granted to them to retain such estates as they pleased and to resign the rest.

Para. II.—On the 15th March, 1822, a proclamation was issued by the Board, the last clause of which authorized the Collector to relet to the proprietors, *mocuddums*, or ultimately to farmers, for a term of 12 years, resigned estates or lapsed farms, and declared that such proprietors as did not avail themselves of the offer now made to them would be excluded from their estates for the period above stated. This notification caused a considerable sensation among the *malgoozars* of Bareilly, and many who had resigned or were about to resign, requested permission to renew their engagements rather than submit to exclusion from their estates for so long a term as 12 years. Thus the loss which these persons had intended to fall on their rulers recoiled on themselves. They not only had to make good the deficiency on which they had calculated in the last year of their lease, but found it both difficult and expensive to recall cultivators whom they had permitted to quit their lands ; and I have been informed that *zemindaree* estates to the amount of Rs. 150,000 of *jumma* have been sold or mortgaged in Bareilly in the past year, to make good the loss sustained in 1229 and 1230 *Fuslee*. The amount may be exaggerated, but that sales and mortgages to a great extent have taken place admits of no doubt.

Para. III.—On the 8th August, 1822, a Circular letter was addressed to the Collectors directing them to hold under *kham* management all estates for which the *jumma* of 1229 *Fuslee*, could not be obtained.

Para. V.—The Collectors of Bareilly and Moradabad appear to have sent repeated orders to the *tehseeldars* to take proper measures to prevent embezzlement of the produce of the *kham* estates, to place *shahnas* on the crops, and to adopt all the usual precautions to ensure the realization of the dues of Government, and they awaited instructions from the Board for proceeding to the re-settlement of those estates under the provisions of Clause 3, section 9, Regulation VII., 1822.

Para. VI.—The resigned estates and lapsed farms in Rohilkhund amounted to Rs. 27,79,527, of which about 10 *lakhs* were *kham tehseel*, and although *ameens*, *putwarees*, *canoongos* and *sizawals* were deputed to collect the rents, a very small portion found its way to the Treasury. The cultivators were allowed to carry off the crops while the silence of the persons employed to guard them was secured by a bribe.

Bareilly, ...	...	Rs.	9,04,119
Shahjehanpore,	...	„	4,01,828
Moradabad, South,	...	„	10,42,833
Ditto, North,	...	„	4,30,747
		Rs.	27,79,527

Para. VII.—On the 19th April, 1823, an order was issued for the re-settlement of the *kham* estates in Moradabad and Bareilly on the best terms procurable.

Para. VIII. and *IX.*—The principal loss in re-settlement has occurred in *zillah* Bareilly. We are by no means satisfied with the reasons assigned by the acting Collector Mr. Lowther, for so great a reduction of the *jumma*, and we have therefore recommended the confirmation of the engagements taken by him only for one year.

Para. XI.—It must not be concealed that a great proportion of the loss sustained in the past year is utterly irrecoverable; that no exertions can avail to recover, otherwise than gradually the depreciated estates, and that if for 1233 *Fuslee*, a *jumma* approximating to that of 1229 *Fuslee*, can be obtained, it is as much as we have reason to expect.

It apparently never occurred to the Board that when no *malikana* was allowed to the proprietors of farmed or resigned estates, it was only the direct necessity that would compel them to throw up their engagements and leave themselves utterly without resources. It never struck him that when rents were paid almost entirely in kind, an assessment payable in cash which made no allowance for seasons, and only professed to leave 10 per cent., as profits for the proprietor, and that was framed when prices ruled high, might become intolerable when prices fell. That this was the main cause of the break down is obvious from the following, which shows the prices of wheat in Bareilly from 1216 *Fuslee*, to 1229 *Fuslee*, (1821) in lbs. per rupee.

Year.	Price of wheat in lbs, per rupee and decimals.	
1216 *Fuslee*	74·9	
1217	78·9	
1218	131·2	In these two years heavy balances accrued
1219	112·4	
1220	74·9	Revenue much enhanced in 1220, but collected with no great balances.
1221	113·8	
1222	147·2	Revenue collected with great difficulty ; numerous resignations of estates.
1223	113·8	
1224	87·1	No record as to collection of revenue.
1225	52·2	Revenue collected easily.
1226	46·8	No complaints of balances.
1227	37·4	
1228	88·3	Heavy balances and numerous resignations.
1229	110·4	

We cannot be astonished at the results of a settlement formed on the following system, as described by Mr. H. M. Boulderson in 1830. He says, "from the prevalence of *butai* tenures all was darkness. None of the *competitors* knew the value of the estates they were bidding for. It was not merely open fair competition that was resorted to. Every underhand petty intrigue was put in action every fair account was rejected, and the merits of a Native Officer rose in proportion to the height of the "*doul*" or estimate of the resources that he submitted. A *tehseeldar* or *canoongo* was subjected to the greatest suspicion if not disgrace if the "*doul*" of any other person was higher than his. The European Officers, from an utter want of any information on the subject, naturally supposed that the highest estimates must be the most correct, and the fact is, that it is now possible to trace these estimates, we find that the highest was generally the one acted on. These documents seem to have been accounted private information and numbers therefore are not forthcoming; indeed, few remain to be referred to. Where the assessment was thus raised it was first found necessary to let off all the *rasudi* increase after the year 1222, the third year of the Settlement, when at subsequent settlements estates were resigned and when farmed fell in, the same strenuous attempts were made to maintain the *jumma*, which instead of being received with its radical defects was looked to as a standard whereby to guide the new operations. We have thus been perpetuating errors. Many again of those estates which had been clung to throughout by the *zemindars* from the strong disinclination they have to part from their land, or see it in the possession of a stranger, in spite of all the knowledge they

may have had, but supported by the vague hope of good harvests and favourable prices, have shown themselves utterly unable to support the change in the value of silver which has occurred in the last three or four years, and which has reduced the average run of prices at least 30 per cent."

From 1230 *Fuslee*, till 1235 *Fuslee*, prices were high and the harvests good, and the revenue was got in, but in 1235 prices fell heavily and suddenly, and diffculty was at once felt.

The Commissioner Mr. Campbell in 1239 *Fuslee*, thus describes the state of affairs. "There has been much depression in the market prices of grain and produce of all kinds during the last four years, which still continues. This cause, with the deficiency in the supply of money in circulation compared with the demand, the diminished quantity of exports in consequence of the cheapness and abundance of grain with which the country is overstocked, together with three bad seasons in succession and the absence of all requisitions now-a-days upon the cultivators from the cotton and indigo manufacturers, have simultaneously contributed to depreciate the value of land. There was still another cause of the difficulty of collecting the revenue omitted by Mr. Campbell, but described by Mr. Boulderson who says—" the usual allowance in former settlements throughout these Provinces for village expenses was 5 per cent on the estimated assets. But in Rohilkhund there is a charge which at the time the 4th settlement was made amounted on the average to about 2¾ per cent., *viz.*, exchange on the Bareilly with the Kuldar rupees: rents are paid and all transactions carried on throughout the district in the Bareilly rupee. The rate of exchange rose most considerably after the settlement was made, and it had got to 6 per cent. when three months ago the Government, on the Commissioner's representation, allowed Bareilly rupees to be taken in payment of revenue at 3¼ per cent., and but for this it would, I doubt not by this time, have been 8 or 9 per cent., and Kuldar rupees, probably not procurable. Here was one cause of failure." The times no doubt were very bad, and many of the large *zemindars* were compelled to sell most of their villages for a mere song. At length Mr. Boulderson was ordered to resettle, under Regulation VII., 1822, all the estates which had broken down or been resigned under the assessments of the fourth settlement. His operations in the *pergunnahs* on which I am reporting covered 412 villages. His statistics are given in the following table:—

TABLE XXXIII.

Pergunnah.	Number of villages.	Total area in acres.	*Minhaie.*	*Malguzari* including cultivated and waste.	Highest *jumma* of the 4th Settlement.	*Jumma* of the year preceding the Settlement.	*Jumma* of 1237, *F. S.*	Ditto of 1238.	Ditto of 1239.	Ditto of 1240.	Ditto of 1241.	Ditto of years subsequent to 1241.	Average of new *jumma* on cultivation.	Ditto on *malguzari* area.
				Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs. a. p.	Rs. a. p.
Beesulpore, ...	13	5,128	1,252	3,876	9,891	11,733	11,733	8,743	9,283	9,352	9,352	9,352	3 0 0	2 6 7
Choumahla, ...	21	7,223	1,584	5,639	11,256	10,769	10,769	7,854	7,999	7,999	7,999	7,999	2 4 4	1 6 8
Crore, ...	88	43,183	13,946	29,237	47,551	54,609	51,794	46,185	46,226	48,311	48,311	48,311	2 5 5	1 10 5
Fureedpore, ...	29	11,459	2,558	8,901	14,275	12,848	12,348	13,197	13,536	13,574	13,574	13,574	2 9 6	1 8 4
Nawabgunj, ...	61	27,679	7,444	20,235	58,619	55,394	46,744	41,428	41,808	42,185	42,193	42,193	2 10 10	2 1 4
Aonlah, ...	30	19,753	7,354	12,399	20,491	19,911	15,969	15,924	15,523	15,668	15,668	15,668	2 5 8	1 4 2
Shahi, ...	84	40,319	12,302	28,017	63,186	58,419	55,109	50,995	49,353	50,389	50,389	50,543	2 9 5	1 12 10
Sirsawan, ...	61	29,493	7,130	22,363	60,710	64,708	58,661	55,612	54,535	55,566	55,889	55,589	2 12 8	2 7 9
Suneha, ...	14	6,230	3,380	2,850	8,299	7,455	5,311	5,334	5,362	5,438	5,438	5,438	2 6 0	1 14 6
Tissoa, ...	2	419	144	275	485	485	485	413	413	413	413	413	2 10 10	1 8 0
Ajaon, ...	5	4,920	1,414	3,506	7,970	8,975	8,975	8,052	8,605	8,605	8,605	8,605	2 8 2	1 15 0
Kabur, ...	4	4,018	1,222	2,796	7,550	7,050	6,538	6,650	5,099	5,198	5,198	5,198	2 1 11	1 13 8
Total, ...	412	199,824	59,730	1,40,094	3,10,283	3,12,356	2,84,436	2,60,393	2,55,942	2,60,898	2,60,929	2,61,083	2 9 0	1 13 9

The above is from the statement embodied in the Board's report on Mr. Boulderson's Settlement. Mr. Boulderson himself gave the total statistics thus.—Total area, ... 205,170·72 acres. *Malguzari*, ... 143,050·10 " Cultivated, ... 404,637·06 " } Total rental, Rs. 3,23,945-7, or Rs. 3-1-5 per acre. Population 104,166, or 324·9 per square mile.

The Government *jumma* he says is 78·74 per cent. of the *jummabundee*. The lands settled in 1237 and 1238 *F. S.* embraced a more than ordinary proportion of poor soils.

The rent per cultivated acre of the lands settled in 1237 was Rs. 2 12 4
Ditto ditto ditto 1238 " " 3 2 6
Ditto ditto ditto 1239 " " 3 4 8

The Board remarked that the settlement proceedings already completed are stated by the Collector to include almost every estate in the District of Bareilly that had suffered from over-assessment, or had from any cause ceased to yield the revenue with which it was charged. The reductions that have been on the *jumma* of 1235 *Fuslee*, by all the revised settlements that have been effected either under the rules of Regulation VII., 1822, or by a more summary process of inquiry, amount to Rs. 1,21,340. It appears to the Board that the full amount of the remissions that have been granted cannot be regarded as extravagant. The assessments in many parts of Rohilkhund have been higher than is consistent with a successful and satisfactory administration of revenue affairs, in which expression is meant to be comprehended not merely a collection of the revenue without balance at the end of a year, but a progressive improvement in agriculture, and in the general condition of the people deriving a subsistence from the land. The fund on which the revenue of this Government can fairly form a charge is in the Board's opinion, the rent which land taken in its natural state will yield when subject to efficient but ordinary tillage, and ought not to include the profit that may arise from an expenditure directed to the object of rendering land fertile in the highest degree by extra labor, or less dependent on the seasons by supplying means of artificial irrigation.

In the assessment of the revenue of Rohilkhund in the year 1220 *Fuslee*, the Board believe that the labors of the officers engaged were directed too exclusively to the object of ascertaining how much revenue could be obtained from the proprietors, and securing engagements for that amount; little if any consideration having been given to the fact of the *jumma* demanded in any case being fair with reference to a fixed principle for assessing the Government demand, or to the probable effect which the rate of charge then imposed might have on the comfort of individuals, or the future progress of the revenue.

As the district had certainly not reached the limit of possible improvement in 1220, the fund from which the Government revenue is paid would, it may be presumed, in the ordinary course of affairs have gone on increasing as it had done from 1210 to 1220, if some impediment to its further progress had not existed. The *jumma* of the quinquennial terms subsequent to the fourth settlement is less than that of 1220, and though the demand in 1235 was raised a little in excess of the *jumma* of that year, still the revenue collected in the last term of settlement was considerably less than the amount realized in any previous quinquennial period.

The revised settlements were founded on measurements by native *ameens* carefully supervised and tested by Mr. Boulderson, in about one-third to a half taken at random of all the estates settled; his rates for each estate were based on produce and prices. The average yield per acre of each of the principal crops having been determined by a large number of experiments, the rates being checked by the actual money payments as rent where they existed. Every estate was measured field by field, and each field classed according to the quality of the soil or its position. The growing crop or that last gathered was recorded. Money rents were then affixed to each field by the *ameen* in communication with the *tehseeldar* and *canoongo*, and a gross *jummabundee* calculated therefrom. The *jummabundee* was compared by the Collector with the result given by his crop rates. If it differred materially either one way or the other from the average, then says Mr. Boulderson, "I require some collateral proof that the *jummabundee* is proportionate to the quality of the land. As I have now been near nine years in this district, and have traversed it in all directions, I know with something like certainty the soils of different parts of the country; when, therefore, I am not near an estate of which I have doubts to see it, my first question is where it is situated, and my doubts are not unfrequently resolved by finding near what place, which I do know, it is situated. Failing this, I proceed to analyze the crops in cultivation when the land was measured, and to look backwards to what the proportion of land under each particular crop was in the previous years. It will be very readily found from this practice what is a near approximation to the real rents of the land. If there still remains a doubt, as has often

happened, I put off all decision till I can see the estate, and I take the earliest opportunity of doing so."

The Collector having fixed his rates, and calculated the gross rental accordingly, deducted between 20 and 30 per cent. for proprietary profits and expenses of management, and took the remainder as revenue.

The Commissioner, Mr. Campbell, opposed the decrease granted by the Collector as an unnecessary sacrifice of public interests, and stigmatized Regulation VII., 1822, as an utter failure, because he said all settlements made under it resulted in a decrease of revenue; but he was quietly snubbed by the Board, who said that "they were not inclined to attach much importance to the Commissioner's observations on Mr. Boulderson's proceedings." He especially objected to the classification of soils, in which judging from some cases quoted by him, he was probably right. Mr. Boulderson's proportion of *minhai* to assessable land, too, is extraordinarily large. He must have given a very wide signification to the word "barren." But no settlement is faultless. Mr. Boulderson did vast good to the district by granting a decrease in the revenue in defiance of the opposition of two Commissioners, and at first of the Board itself. To this day the people speak with respect of "Boulderson *sahib*," and the trouble he took to make himself acquainted with the agriculture of the district and the condition of the people. They still think that a rent must be fair and equitable at the present day: because it was originally fixed by him, and they have often wondered at my conceited audacity in presuming to alter his rates. He was aware of the defects of his own settlements, and wrote—"let me not be supposed to assert that the assessments I have made are precisely correct and equitable: no man who has thought on the subject will require such an impossibility; it is quite sufficient if from assessments not merely founded on no good data, but on such as are deservedly reprobated, I have made some steps even towards founding them on better."

Almost immediately after Mr. Boulderson's final report the regular settlement of the whole district, under Regulation IX. 1833, was commenced. It was based for the first time on a regular survey and classification of soils. The assessments were made in *Pergunnahs* Aonlah, Suneha, and Fureedpore, by Mr. Conolly, in South Serowli by Mr. Rowland Money, in Ritcha by Mr. Head, and in the remainder of the district by Mr. J. W. Muir. The greatest moderation was inculcated on all these officers by the Board, and the Government share of the gross *jummabundee* was reduced to 66 per cent. To show the state of the district at the time, I will quote the words used by each officer in the reports:— State of the district.

"Aonlah and Suneha were selected first for settlement, as they were in very bad order. No great increase of *jumma* could be expected; for notwithstanding the extensive reductions which have been of necessity made during late years, the rent-roll of 1240 *Fuslee*, the year before revision, was only Rs. 10,126 less than that of 1222 *Fuslee*, and Rs. 15,172 higher than that of the first year of the fourth settlement. Lately the *jumma* has been realized with considerable difficulty. The balance of 1239 and 1240 *Fuslee*, without counting decrease on re-settlements of these years, amounted to Rs. 23,027, and though this is partly ascribable to bad management, as Rs. 9,365 have been subsequently recovered, yet the primary cause was doubtless, the highness of the assessments in particular cases pressing upon unusually trying seasons. 1. Aonla and Suneha.

In Fureedpore all classes are indifferent agriculturists and bad payers of revenue, and the *pergunnah* has always been considered as the most difficult of management in the Bareilly district. The *jumma* was increased between 1210 and 1223 by the sum of Rs. 73,585, but notwithstanding this large enhancement (with the exception of the years immediately succeeding the fourth settlement, for which special reasons are assignable), and the difficulty in collecting the revenue arising from the unmanageable character of the inhabitants, it has been paid pretty regularly ever since, and the total reductions found necessary in all the trying seasons since 1236 *Fuslee* amount to a 2. Furreedpore.

very small sum when compared with the reductions in other *pergunnahs*. At the same time, too, the condition of the *pergunnah* has been gradually improving, the improvement has in most instances been gradual, but a very considerable increase of cultivation has taken place within the last two years since a temporary rise has arisen in grain prices. The fund from which the revenue is paid having increased so much since it was last brought under assessment, it might be presumed that the condition of the people would have improved in the same ratio ; of this, however, there are few signs in the appearance of the people themselves or their villages. Their habits are improvident, and they squander their profits as fast as they get them.

3. Bullia.

"Bullia is certainly better off than most parts of the Bareilly District."

4. Crore and Nawabgunj.

"The assessment at the fourth settlement though on the whole excessive became in many instances moderate, from the proprietors improving their estates by increasing the cultivation where this was practicable. The total *jumma* must, however, be considered to have been too high, although the assessment was not found to cause any very great pressure for nearly 15 years afterwards, in consequence of the high price of grain during that period, enabling both cultivators and *malgoozars* to realize more than ordinary profits; a change however for the worse took place about 1235 *Fuslee*, when grain fell considerably in price, a great deal of distress ensued, and many a estate broke down, numerous transfers of every kind followed, and a difficulty was experienced in collecting the revenue. Had the *jummas* not in a majority of cases been high, things would afterwards have found their own level.

5. Kabur and Ajaon.

In Ajaon and Kabur the condition in which I found the majority of the people was enough to convince me that they were suffering from over-assessment. The Ajaon *mocuddums* by their industry had been able to struggle against it, but I found the most of them miserably poor, and few in comfortable circumstances. Such also is the condition of the Kabur *malgoozars*, the greater number of whom are indigent.

6. Chowmahla.

In Choumahla the resident *malgoozars* and the cultivators were equally in distress.

7. N. Serowli.

In the Serowli villages the people did not appear so badly off as in the neighbouring *pergunnah* of *Ajaon*.

8. Sirsawan and Shahi.

I found several over-assessed estates in Shahi and Sirsawan, where the people were really suffering from the pressure of the existing *jummas*. I found many estates moderately, nay lightly, assessed, but there was no case in which I considered it safe or fair to impose any prospective increase.

9. Ritcha.

In Ritcha the *asamees* are migratory, and like their brethren in Jehanabad very poor. They have not had time to learn local attachment, for there are few villages in Ritcha which have not at sometime broken down and become more or less depopulated.

Generally the impression derived from the above is of a poor and backward district, unequally assessed with an indigent population, struggling in most places against the burden of a crushing assessment. I think, however, as will be seen hereafter, that with a view to excuse the reductions of *jumma*, the colours were laid on rather thickly, and the existing state of affairs depicted as worse than they really were. The measurement papers and statistics for assessment were furnished by the Survey Department. The system of assessment is described thus by Mr. Conolly and Mr. Muir. The former says—"the revision was conducted on the general principles which I understand to constitute the present system. In the first instance, a general review was taken of the fiscal history of the *pergunnah* traceable in its *jumma*, collections, and balances at each settlement, and the present and past condition of its inhabitants. A knowledge was gained from different sources of the general politics of the *pergunnah*, the supposed capabilities of the principal estates, and the characters of the landlords. Former settlement proceedings were examined with the view of ascertaining the different grades of assessments which have hitherto obtained upon different classes of villages;

Report dated 4th April, 1835.

and in connection with the same point a careful course of inquiry was gone into to ascertain the prevailing rates of rent paid by the cultivators to the *zemindars*.

" The accounts were necessarily grounded entirely on estimates, for, with the exception of one or two cases, the *putwarees'* papers were as usual totally devoid of credit. Money rates, however, have so long prevailed in these *pergunnahs* (Aonla and Suneha), and their general average with regard to particular classes of soil is so well known, that I have every reason to believe the *jummabundees* are generally close approximations to the truth, sufficiently so certainly, for the sole purpose for which they are now required of serving as a basis to calculate the *jumma* upon, without the rates assumed on them being necessarily binding upon the *zemindars* and *assamees*. At the same time the *jumma* was not ultimately fixed on these estimates alone, but on a general consideration of the circumstances of each case as collected from the other satistical details and miscellaneous enquiries. Former profits, the rank and means of the engaging party, his character, the expenses to which he might be subject as a resident or absentee in collecting his rents, and all such matters affecting his general liability and condition, were taken into account, especially in cases where an increase was demanded in which the greatest caution was observed."

Report dated August, 1834.

" Mr. Conolly and Mr. Head classified their villages into tracts of a generally similar character. Mr. Muir and Mr. Money classified them into first, second, or third class *mouzahs*, or good, middling, and bad—not so much with reference to their relative situations as according to their several capabilities, as ascertained from the survey returns from the statements of the *pergunnah* officers, and from personal observations."

Mr. Conolly, Mr. Money, and Mr. Head worked on soil-rates : Mr. Muir utterly disbelieved in rates on soils, and worked on general revenue-rates on the cultivated area. He says,—" I have now only to explain the data on which the details of the present settlement were grounded. From a variety of calculations made from the results of former settlements, and from a comparison of the rates paid by villages fairly assessed previous to the settlement, I was enabled to draw out general revenue-rates for the three classes of estates. In fixing the detailed *jummas* I was guided principally by these general rates, which I regarded as the standard for the different classes of estates. The rules laid down for calculating rent-rates on the different kinds of soil have been observed. So much has been said and written regarding the uncertainty of the returns of soil, that I need hardly add that I do not put great reliance on them."

The rent and revenue-rates on soils are only useful as a check on the general revenue-rates, which, from all the experience I have had, I consider a much more safe and useful standard for the purposes of assessment.

In fixing the detailed assessment of each *mouzah*, the general revenue-rates were taken as a standard, and it was made an object to equalize the rates of assessment as much as possible. The same rates having been assumed for whole *pergunnahs*, it was found necessary to pay particular attention to the general capabilities of the lands and condition of the people in each case.

It is evident that where such general rates have been taken as the basis of assessment, great allowance must be made for differences which still exist, notwithstanding the alterations made after procuring the requisite local information.

My object has been to fix such a *jumma* for each estate as may be realized without distress for 20 years, and at such moderate rates as may allow the people to extend the cultivation, to become comfortable, and to prosper.

Mr. Money and Mr. Head seem to have taken the waste land into account ; Mr. Muir and Mr. Conolly did not take it into consideration at all.

The financial results of the settlement are shown in the following table complied from the different reports and No. IV. Statement :—

TABLE XXXIV.

Pergunnah.	Jumma of the year before resettlement.	Jumma of IX. 1833 Settlement.	Increase.	Decrease.
	Rs.	Rs.	Rs.	Rs.
Furreedpore, ...	1,41,937	1,48,170	6,233	...
Crore, ...	2,13,900	1,98,308	...	15,592
Bellia, ...	27,017	27,196	179	...
Suneha, ...	55,251	55,056	...	195
Aonla, ...	66,015	63,469	...	2,546
S. Seroli, ...	46,503	50,848	4,345	...
N. Seroli, ...	44,595	43,020	...	1,579
Ajaon, } Meergunj, ...	1,23,755	1,15,733	...	8,022
Shahi, } Meergunj, ...	52,715	51,672	...	1,043
Kabur, ...	50,039	45,161	...	4,878
Sirsawan, ...	56,446	55,758	...	688
Choumahla, ...	51,042	44,531	...	6,511
Ritcha, ...	1,53,313	1,42,356	...	10,957
Nawabgunj, ...	1,90,796	1,77,992	...	12,804
Beesulpoor and Murori, ...	2,87,841	2,67,966	...	19,875
Total, ...	15,61,169	14,87,236	10,757	84,690

The net reduction, therefore, was Rs. 73,933, or 4·7 per cent. The reduction from the average annual *jumma* of the 4th settlement was Rs. 1,39,202, or 14·7 per cent. We have seen that Mr. Boulderson's settlements subsequent to 1235 *Fuslee* included all the villages which up to that time had suffered from over-assessment. The price-tables show that from 1237 *Fuslee* to the date of the formation of the IX. 1833 Settlement prices had ranged abnormally high, and the *jummas* of that settlement, which only gave 4·7 per cent. decrease, were, as subsequent experience has shown, generally fair, and in most of Mr. Muir's *pergunnahs* very light. Hence it is I think a fair conclusion that the statements of over-assessment and depression were somewhat exaggerated, a few estates may have been heavily assessed, the majority could not have been, or the decrease would have been heavier. From the papers I have seen, it appears to me that there was little or no enquiry into the real rental assets of the time. The enquiry was chiefly confined to the points whether the former assessment had been realized with or without difficulty and resort to the severe coercive processes, and whether the rate of incidence on the cultivated area was above or below the average rate of incidence, and the *jumma* was slightly lowered or raised accordingly.

Report dated 30th August, 1834, para. 7.

The last proceeding in the settlement was the preparation of the *jummabundee*. On this point Mr. Conolly stated,—" I considered the *asamis* tenants-at-will till they advanced claims to the contrary, and left the distribution of the rents to the *zemindars* and themselves after the Government *jumma* had been fixed. Generally speaking no claims were made, and the parties in attendance declared themselves satisfied with the rents put down to them in the *jummabundee* produced as the last act of the settlement. When disputes arose they were settled at once either by a *punchayet* or through the *tehseeldar*; and in some very special cases, where the charactor of the *zemindar* was bad, and the *assamis* required protection, I adjusted the contracts myself. This was done, however, very sparingly, and, generally speaking, my interference was confined to taking a record from the *zemindar* of his demands from *assamis* to remain in force, as was explained to him and all parties present, till altered by mutual agreement.

" Mr. Muir in a similar way caused *jummabundees* to be filed after the settlement of the assessment, taking care to have them properly attested and agreed to by the ryots assembled for the purpose."

In 1838-39 there was a severe drought, and heavy remissions and reductions of assessment were made. The boundaries of most of the pergunnahs and of the district were altered considerably by transfer of villages from one pergunnah to another. Owing to this it is impossible to trace all the causes of alteration of jumma, a large tract of country from Pergunnahs Seroli, Ajaon, and Sirsawan assessed

at Rs. 1,19,158, was granted in reward to the Nawab of Rampore for his services during the mutiny. The IX. 1833 and expiring *jummas* of each *pergunnah* as constituted is given in the following table :—

TABLE XXXV.

Pergunnah.	Jumma of the IX. 1833 Settlement.	Expiring jumma.	Increase.	Decrease.
Furreedpore, ...	1,47,434	1,45,694	...	1,740
Crore, ...	1,68,393	1,78,968	10,575	...
Bullia, ...	23,339	24,402	1,063	...
Suneha, ...	55,087	56,578	1,491	...
Aonla, ...	60,554	64,207	3,653	...
Seroli, ...	38,004	37,858	...	146
Meergunj, ...	1,13,687	1,17,065	3,378	...
Kabur, ...	45,161	48,118	2,957	...
Sirsawan, ...	37,429	38,274	845	...
Choumahla, ...	44,531	59,580	15,049	...
Ritcha, ...	1,43,895	1,51,412	7,517	...
Nawabgunj, ...	1,82,358	1,78,381	...	3,977
Beesulpore, ...	2,80,995	2,77,783	...	3,212
Total, ...	13,40,867	13,78,320	37,453	...

In Furreedpore and Crore the details of the increase and decrease of *jumma* were not made up when I prepared my rate reports, and now I have neither the papers at hand to refer to, nor time to have the details searched out. In Furreedpore there were heavy reductions after the famine of 1839 for over-assessment, and the subsequent increase by resumption of revenue-free lands were insufficient to counterbalance them. In Crore the increase is due to resumptions of maâfee lands. In the other *pergunnahs* the details of increase and decrease are as follows :—

TABLE XXXVI.

Pergunnah.	Increase of Jumma.			Decrease in Jumma.			
	By resumption of maâfees.	By alluvion.	By rusuddi increments.	By diluvion.	Remissions for over-assessments.	Remissions for lands taken for public purposes.	Remissions on land granted revenue-free in rewards.
Bullia, ...	905	707	...	449	95	5	...
Suneha, ...	3,244	783	...	...	809	27	1,700
Aonla, ...	4,410	1,014	...	23	1,749	...	...
S. Seroli, ...	779	27	604	40	197	...	1,319
Meergunj, ...	5,167	199	...	1,712	...	249	27
Kabur, ...	2,704	253	...	...	...	...	...
Sirsawan, ...	845	...	...	...	...	...	...
Choumahla, ...	15,229	...	...	...	134	9	37
Ritcha, ...	8,818	...	...	...	599	702	...
Nawabgunj, ...	6,844	40	...	197	5,456	404	4,804
Beesulpore, ...	4,495	2,463	...	1,812	6,671	6	1,671

The following statement shows the number of estates farmed or sold for arrears for balances in each *pergunnah* since last settlement :—

TABLE XXXVII.

Pergunnah.	Number of estates.	Number sold for arrears.	Number farmed.	Total sold or farmed.	Percentage sold or farmed.
Furreedpore, ...	476	4	98	102	21·4
Crore, ...	554	...	5	5	0 9
Bullia, ...	68	...	...	...	...
Suneha, ...	180	1	7	8	4·4
Aonla, ...	190	...	10	10	5·2
Seroli, ...	82	1	6	7	8·5
Meergunj, ...	221	...	3	3	1·3
Kabur, ...	84	1	...	1	1·2
Sirsawan, ...	62	...	...	...	...
Choumahla, ...	183	1	6	7	3 8
Ritcha, ...	258	...	4	4	1·5
Nawabgunj, ...	433	6	20	26	6·0
Beesulpoor, ...	535	4	44	48	9·0
Total ...	3,326	18	203	221	6·6

This, notwithstanding the transfer statement, shows that the settlement was not a heavy one, and has worked well on the whole. Nearly all the farms were prior to 1850 and were the result of the great famine of 1838-39. Throughout nearly all the district the profits arising from future extension of cultivation were left to the *zemindars*, and these profits rapidly lightened the pressure of the assessment, and when the rise in prices came after 1859 the *jummas* became, as a rule, very light, and in the *butai pergunnahs* the *zemindars*, and most especially the *raiees*, realized very heavy profits. We can now proceed to describe the methods and financial results of the present or new settlements. I have already given most of the statistics of the district in the previous part of this report, and have already submitted detailed reports on the rent-rates proposed for sanction in each *pergunnah*, most of which have been printed ; and to these I must refer for details, keeping myself to general heads.

THE NEW SETTLEMENT.

Settlement operations commenced in *tehseels* Fureedpore and Crore simultaneously in November, 1865 ; the boundaries were first marked out, and all disputes decided. Many of these were of the most frivolous nature, and were decided on the spot without any difficulty. In a few, and these chiefly in the *khadir*, resort was had to *punchayets* under Reg. IX. of 1833. As a rule, their decisions were not very satisfactory, and the people infinitely preferred referring their disputes to me and abiding by the result. The measurements were then taken in hand. For some months previously in each *tehseels* selected *ameens* had been appointed to instruct the *putwarees* in measurement work, as a knowledge of plane-table surveying had always been insisted on by the Board as a necessary qualification for the office of *putwaree*. I insisted that all the *putwarees* should either survey themselves or provide a man to do their work for them ; in all cases their attendance during the survey was insisted on. At first an *ameen* was appointed to every four chains at work to lay out the work and test the measurements. As the work progressed, and the measurers became more practised, one *ameen* to every six chains was found sufficient ; over four *ameens* a superintending *ameen* was appointed, and their work was finally tested by the Deputy Collector and myself or my assistant. Each chain was expected to survey, on an average, at the rate of 25 *pukka beegahs* per day, including waste land, but afterwards I found that the men, as a rule, could do very much more. At the end of the month the diaries and statements of work of the *ameens* and superintending *ameens* were carefully examined. Where the amount of work done was deficient in quantity without any adequate excuse, I made the *ameens* pay the wages of the *mirdhas* for the excess time required to make up the full amount of work. Where work was rejected for inaccuracy, I fined the culprit. No pains, time, or labour were spared to secure accuracy in the maps,

and all the entries in the field-book, especially in the soils, crops, and irrigated areas. So these, as a rule, may be accepted as absolutely correct. No objection made by either zemindars or cultivators on these points were ever allowed to pass without full and careful enquiry, for I was fully persuaded of the fact that on a good *khusra*, and a correct classification of soil and irrigation, depends the whole settlement.

Measurements were commenced in Furreedpore and Crore *tehseels* in November 1865. Furreedpore was completed in February, 1867, and Crore in September, 1866. In October, 1866, Meergunj and Nawabgunj were commenced. They were finished in April, 1867. In May, 1867, Beesulpore was commenced, and was completed in June, 1868. Aonla *tehseel* was commenced in October, 1867, and finished in June, 1868. No more measurements were taken in hand till September, 1869, when the Buheree *tehseel* was commenced. It was finished in June, 1870. The following statememt shows the total area (including measurements where the work was rejected and had to be redone) measured in each year, the total cost, exclusive of the pay of European officers and Deputy Collectors, the average area measured per month by each chain, and the average cost per 1,000 acres surveyed :—

TABLE XXXVIII.

Year.	Total area measured.	Expenditure on measurements.	Average cost per 1,000 acres.	Average area in acres measured monthly by each chain at work.
				A. r. p.
1865, ...	32,459	1,821 14 6	56 2 0	165 2 29
1866, ...	515,949	14,129 13 4	27 6 2	408 3 13
1867, ...	282,568	8,958 5 10	31 11 3	358 0 21
1868, ...	238,954	6,503 15 4	27 3 6	451 2 33
1869, ...	84,004	2,437 3 9	29 2 0	396 0 20
1870, ...	151,083	4,275 3 2	28 4 8	541 2 2
Total,	1,305,017	38,126 7 11	29 3 5	399 2 12

The area of the district actually is 1,261,149 acres, the real cost consequently was Rs. 30-3-8 per 1,000 acres, or Rs. 20-5-6½ per square mile. If, as under the present system, the putwarees had been paid for measuring, it would have cost 10 rupees per month extra for each man who would have measured 400 acres in the month on an average. This woud have raised the cost to Rs. 55-3-8 per 1,000 acres, or Rs. 35-5-6 per square mile. This would include the complete map and field-book. The time actually employed, excluding the months in which no chains were at work, was 41 months, or 3 years and 5 months, giving an average of 576·72 square miles per year. The next point is the degree of reliance to be placed on the accuracy of the measurements by the Government. The best test is to compare my survey made by Native agency with plane-tables and other survey instruments made up in Barielly with that of the revenue survey party under Mr. Campbell working with the best instruments and on scientific principles. I should premise that my measurements always preceded his by about 2 years, and the only pergunnah in which we have the areas for the same year 1870 is Beesulpore. This is very important to bear in mind, for in the khadir of the Ramgunga and Deoha the village and pergunnah areas vary every year according to which side of their channel the rivers are flowing in. Taking individual villages first, I take fifty villages at random in Beesulpore, and give the areas by my measurement and by the scientific survey, and the difference per 100 acres in the former as compared with the latter.

TABLE XXXIX.

Name of Village.	Area by my survey in acres.	Area by the scientific survey.	*Difference per cent. of former as compared with the latter.*	
			Increase.	Decrease.
Adilabad, ...	586	597	...	1·8
Amkhera, ...	255	253	0·8	...
Amkhirea, ...	117	117	...	...
Azimpoor Burkhera, ...	769	769	...	...
Behareepoor, ...	315	313	·6	...
Behtee, ...	314	315	...	·3
Bhoora, ...	269	265	1·5	...
Bilaspoor, ...	989	990	...	·1
Bilsunda, ...	513	515	...	·4
Bullia Mukrundpoor, ...	222	215	3·2	...
Bitehra, ...	545	548	...	·5
Bumroulee	1,419	1,409	·7	...
Burhepoora, ...	477	476	·2	...
Busoola, ...	163	163	...	...
Chandpoor, ...	204	198	3·0	...
Chentapoor, ...	188	185	1·6	...

Name of Village.	Area in acres by my survey.	Area by scientific survey.	Increase per 100 acres.	Decrease per 100 acres.
Churkhola, ...	526	522	0·7	...
Deoria Khoord, ...	309	307	·6	...
Dhooria, ...	324	320	1·2	...
Dhukurea, ...	556	552	·7	...
Damoopoorah, ...	320	321	...	·3
Esapoor, ...	356	354	·6	...
Ghungoora, ...	679	664	2·2	...
Ghunshampoor, ...	310	317	...	2·2
Guleria, ...	397	390	1·8	...
Ghoongchahea, ...	318	319	·3	...
Gopalpoor, ...	109	109	...	...
Gouhurpoor, ...	267	259	3·0	...
Hempoor, ...	386	383	·8	...
Hurraepoor, ...	194	194	...	...
Hurhurpoor, ...	365	369	...	1·0
Huroo Nagur, ...	326	331	...	1·5
Hurrae, ...	702	702	...	...
Jadounpoor Khoord, ...	250	252	...	0·8
Jadounpoor Nutta, ...	182	182	...	...
Jypalpoor, ...	285	290	...	1·7
Jumpa, ...	157	157	...	...
Jogiabari, ...	247	247	...	...
Jugutpoor, ...	1,099	1,111	...	1·0
Jamoonean, ...	299	301	...	·6
Pugar, ...	1,055	1,052	·2	...
Pundri Murori, ...	339	344	...	1·4
Puseapoor, ...	221	224	...	1·3
Putijea, ...	350	354	...	1·1
Rampoor Amrit, ...	845	843	·2	...
Roorea Ghoorea, ...	455	453	·4	...
Routapoor, ...	199	195	2·0	...
Sanddeo, ...	185	184	·5	...
Seetalpoor, ...	678	679	...	·3
Simrouli, ...	1,333	1,318	1·1	...
Total, (50) ...	21,968	21,927	·1	...

Taking all the *pergunnahs*, though the areas agree similarly and equally closely in almost every village, the only exceptions being two or three of the villages to the north-east, in which there are large areas of dense forest. Here our boundary lines agree, but our forest areas differ. On retesting no error was found in my areas. Taking Mr. Campbell's No. 10, main circuit in Beesulpore, his area is 55,543 acres; mine 55,916, giving a difference of 373 acres, or ·6 per cent. on the whole *pergunnah*. The difference between his area and mine is ·67 per cent. In Nawabgunj, on 120 villages taken at random, according to their position on the Surveyor's list, the area by survey is 51,391 acres; by my measurements 51,929; difference 538 acres, or 1·4 per cent. Of this a considerable proportion is due to alterations in area caused by the river Deoha since my measurement.

Taking the Bangur 1st circle of Suneha, the areas are, by survey 16,861, by my measurements 17,012; difference in acres 152; difference per cent. ·9. Taking the first 60 villages on the Surveyor's (Crore) lists, the areas are by survey 21,892, by my measurement 21,927, difference 35; difference per cent. ·1. Comparing the *pergunnahs* in which there is little or no khadir, and in which consequently the areas are constant, and not subject to annual alteration by fluvial action, we have—

Pergunnah.	Area by my measurement in acres.	Area by survey, 2 to 3 years afterwards.	Difference per cent.
Aonla, ...	81,898	81,449	0·55+
Seroli, ...	38,108	38,204	0·25—
Sirsawan, ...	20,758	20,667	0·44+
Kabur, ...	35,056	34,614	1·27+
Ritcha, ...	1,08,512	1,07,543	0·90+
Choumahla, ...	59,407	58,745	1·12+

The area of the whole district comprised in my settlement is by the professional survey 1,251,757 acres, by my measurement 1,261,149 acres, giving a difference of 0·75 per cent.

Every village in the district was carefully inspected by myself and by Mr. Porter, my assistant. My system was to go over the entire village, attended by the *mocuddum* and most of the cultivators. I inspected every "*har*," corrected the entries of soil and irrigation where necessary, and made notes of the rents paid on the different classes of soil, the crops, and any special circumstances affecting the village, such as the style of cultivation, liability of the crops to damage from floods or wild animals, indebtedness or otherwise of the cultivators, and so on. Any patch of any particular soil differing considerably in value, either above or below the average, was marked off on the field map, on which also the general lie of the soils was marked out. All the villages composing a similar tract were then arranged into one class or circle. Then the statistical *mohurrirs* worked out the average rents on soils, which I was able to compare with the tables of enhancements in Act X. suits, and with the rates in the neighbouring villages. By this method, picking up experience from day to day, as I went over new villages, I was enabled to work out rates in the money-paying *pergunnahs*. Where the rents were taken in kind, I had the actual rates paid for *zabti* and for *nijkari*. I worked out crop rates, based on the average produce, derived from a vast number of experiments: from this I deducted one-sixth to allow for reductions before division; from the remainder I took the average share received in the tract by the *zemindar*, and commuted the grain rent to money at the average price of 20 years, omitting the famine years. I thus obtained average money rates for each crop. I applied these rates to the areas of each crop in each soil, and the total divided by the area gave soil rates in money. These were compared with the results of the rent-rates fixed in the numerous suits for commutation from kind to money rates, and which had been accepted by both parties to the suits; and finally a conclusion was arrived at as to the fair rent-rates for each soil. The rates when reported and sanctioned were applied to the soil rates in each estate, and the result compared with the *jummabundees*—(1) by the actual village rent-rates, (2) by crop rates, (3) by the circle average cultivated rate; and after all the modifying circumstances noted down at the inspection of the village, or deducible from its previous history, had been carefully weighed and taken into account, a final *jummabundee* was arrived at, of which 50 per cent. was taken as *jumma*, and 5 per cent. as cesses. The rates of incidence on *malgoozari* and cultivated area were then noted on a large pergunnah map. When the assessments of all the villages of the *pergunnah* had been completed, and the rates noted on the map, I usually laid aside the papers for a fortnight or so, and then taking the map carefully compared the assessment rates of each village with those of the neighbouring villages, and reconsidered the grounds of assessment, where there were marked differences, to see whether the difference in the rates of assessment were fully justified by actual facts.

I usually regarded the *jummabundee* by crop-rates as a minimum amount, unless I had noted at inspection that the village had been under-cropped in the year of measurement—a fact very easily ascertainable. Supposing, however, I had noted that the village was above or below the average of its circle, the crop *jummabundee*, taken in connection with the results of the soil rates, gave a very good gauge of the *amount* by which the village differed from the average. Where the crop-rate results differed very materially from those by soil rates, I made careful enquiry for the cause of the difference. In fine, though I did not actually assess on the crop-rates, they formed a very useful check and guide to enquiry.

Treatment of waste land in assessment.

Where there was a large proportion of waste land, I treated it according to the population and the circumstances of the neighbourhood. If the land was of fair quality, the village inhabited, and the neighbourhood well populated, then I assessed such an amount of the waste at full rates as would bring the cultivation up to the average of the neighbouring villages. Under similar circumstances, where the waste was poor, I took into account only its actual value as waste for grass and grazing.

This was usually from 10 annas to 1 rupee per acre. Thatching grass I usually rated at Rs. 2-6 per acre. This is much below the actual value in good seasons, but considering its liability to destruction or damage from accidental fires, and the cost of carriage to Bareilly, I took a very moderate estimate. Where the village was uninhabited, and the neighbourhood thinly populated, I merely put a nominal amount on the waste; for to assess it in anticipation of immediate improvement would be to diminish the zemindars' capital, and thereby to lessen the fund from which alone improvement can come. Under such circumstances, it is difficult either to procure or retain *assamis* without considerable risk of loss. *Dhak* jungle, which is of some value for its wood, gum and leaves, I usually rated at 5 to 8 annas per acre, according to the circumstances of the neighbourdood, and the distance to which the wood when cut had to be taken for sale.

Allowance made in assessment.

In assessment I made allowances for the following circumstances :—

(1.) *Caste of Cultivators.*—Where most of the residents belonged to the inferior cultivating classes I rated low. This is the reason why the rent-rates in Furreedpore are light. In similar soils the difference in rent between the good cultivators and bad is quite 3 annas per rupee in the money-paying, and 4 annas in the *butai pergunnahs.*

(2.) *Absence of waste.*—If there is no waste, or not sufficient, the cultivators are compelled to devote a portion of their land to fodder. This is recognised even by most *zemindars*, who frequently allow 10 *kutcha biswas* per plough rent-free for growing *churri*. In such a village, too, there is little probability of future increase in the assets, except by enhancement of rent; and if the rents are already up to the standard, this is more likely to lead to diminution of the area under cultivation, and consequent reduction of the rent-roll.

(3.) Where the cultivation has been very largely increased by expenditure of the *zemindar's* capital and his good management, I conceive it to be the wish of the Government to encourage industry, and to leave a fair profit on capital expended.

(4.) *Liability of damage to crops either from floods or from jungle animals.*—Both these are recognized by the *zemindars* who grant "*nabood*" remissions. Both are undeniably good grounds for consideration.

(5.) *Non-residence of Zemindars.*—This allowance was given in certain special cases only, where the *zemindar* was *compelled* to manage his property through *karindas*, and from age or sex was unable to check their frauds.

(6.) *Former profits.*—Where the old assessment left exorbitant profits, to raise the *jumma* at once to the full proportion, would frequently so reduce the proprietor's income, that in all probability he would be ruined. Most

zimindars live up to their incomes, and we all know how difficult it is suddenly to reduce a habitual rate of expenditure. In such cases I assessed rather under the full amount.

(7.) *Number of proprietors.*—Where the number of sharers was exceedingly large, and the profits of each sharer small, I made allowance for this. The Rajpoot villages on the Ramgunga were those chiefly affected. In some of these there are 2 or 300 sharers in a single village.

(8.) Notoriously unhealthy villages where the population is always varying.

(9.) Great distance from any market for disposal of produce.

It has been made a question whether large *talooqas* or clusters of villages owned by single *zemindars* should not, in consideration of the large aggregate profit, be assessed at a rather higher rate than the usual 55 per cent. of the rental. I made no such difference between large and small proprietors, and I think it would be inequitable to do so, for—

(1) The assessment is made on each estate separately, with reference to its capabilities, and the possibility of its alienation and separation from the *talooqa* should never be lost sight of.

(2) The expenses of management necessarily incurred by large proprietors are proportionately much higher than those of the small *zemindars*. The latter can look after their properties themselves. The former have to employ *karindas* or agents, by whom they are robbed and defrauded in every possible way. On an equal amount of *jumma*, a large *zemindar* receives much less profit than a number of small proprietors get. Why then should the former be assessed higher?

(3) They are compelled to keep up a certain amount of state and expenditure greater in proportion to that of a number of men of inferior rank.

(4) Whatever the rule adopted for assessment, it should be the same for all. I fail to perceive either the justice or the policy of differential rates according to the size of the property. It would be impossible to draw the limits, and it would be regarded as an act of great injustice by the victims, who, *ex hypothesi*, would be the men of the greatest wealth and influence of the district. *They* all consider themselves entitled to lower rates than the petty proprietors, on account of the expenditure necessary to keep up their position, and would quite fail to comprehend the equity of the suggested arrangement.

(5) A land-tax cannot be converted into an income-tax without injustice.

When the assessment had been declared in the presence of the assembled *zemindars* of the *pergunnah* on dates fixed for the purpose, I gave the *zemindars* every opportunity to express any objection to it, and went into such objections with the greatest care. If they were well founded I slightly lowered my demand, if they were merely stereotyped complaints against any increase in the demand, I wrote out my reasons for refusing to alter the *jumma*, proved that it was fair, and sent a copy of my order to the complainant. Except in Crore and Chowmahla (which is chiefly owned by residents of the city), I received very few complaints of over-assessment. In Crore they were the result of a combination among six or seven leading men in the city of Bareilly.

The *khewuts* and *wajiboolurz* were attested by every *zemindar*, either personally or by agent. The greatest care was taken to make the latter a record of local custom, and to omit all speculative fanciful provisions, and everything provided for by law. As a rule the assessments were distributed over the shares by mutual agreement of the parties; where they could not agree, I made the distribution on the same principles which had guided me in the assessment of the entire *mehal*. So much for the *zemindars*, next for the cultivators. At first, in the preparation of the *kheteonees*, I relied on the ordinary verbal attestation of the entries. I soon found that this was not satisfactory or sufficient and I adopted the following system, which in working was com-

pletely successful. After the *khusra* had been thoroughly tested and passed, as far as the entries of measurement, soil, irrigation, and crops were concerned, it was made over to the "testing *mohurrirs*," who checked the arithmetical portions and the resulting areas, and compared minutely the *shujra* and *khusra*. This done, the holdings were excerpted *mehalwar* and *puttiwar* in duplicate. The slips showed the name of *mehal*, *putti*, cultivator, number of field in *khusra*, area, and soil. Columns were left blank for rent and length of occupancy. The slips in duplicate having been prepared for the whole village, and the totalled area having been recompared with the *khusra*, they were made over to a *moonserim*, who, on a day previously notified, went to the village and filled in the blank columns in each slip from the statements of the *zemindar* and cultivator concerned, who also attested the remaining entries. If there was no dispute the *moonserim*, *zemindar*, and *putwari* signed and dated both slips, one of which was retained for the preparation of the corrected *khuteonee* and *jummabundi*; the other was made over on the spot to the cultivator. Where any entry was disputed, the unsigned duplicate slip was made over to the cultivator, with a very short note of the nature of the dispute, and the number of the field to which it referred. Finally, the *moonserim* drew up a list of the disputed numbers, which he forwarded to the *tehseeldar* or other officer in charge of the attestations. He as soon as possible proceeded to the village, and was usually able, by his superior knowledge and influence, to arrange many of the disputes, either by consent of the parties or through *punchayets* appointed by them. In such cases the arrangement arrived at was noted on the backs of the slips, which were signed and sealed by the *tehseeldar*, *zemindar*, and *putwari*; one slip as before being made over to the cultivator. A list was then drawn up of all cases not found susceptible of amicable arrangement, and forwarded to the officer of the Settlement Department in charge of the *pergunnah*, who fixed a day for hearing, summoned all the parties, took petitions from them, and decided the cases judicially, noting the purport of his decision and the date on the slips, one of which he made over to the cultivator, the other to the officer preparing the *khuteonee*; every single entry was thus guarded, either (1) by mutual agreement attested by the signatures of the parties, or (2) by a judicial decision in a regular suit; complete publicity was given to the proceedings, no man could plead ignorance of the nature of the entries affecting him, and conflicting decisions of the Collectory and Settlement courts were rendered almost impossible. There is another great advantage in this procedure in the efficient check to slovenliness of work and corrupt frauds which it imposes on the *khuteonee moonserims*. The slips being given to the cultivators before the *khutonees* are faired out, complete correctness is ensured, and the papers, when faired out, are done once for all: no dispute can remain in abeyance, to come up when the *khewuts* are under preparation, and to delay their completion. The cultivators value their slips as *pottahs* and as they are signed by the *zemindars*, the latter are compelled to be very careful in their statements as to the rents. It seems to me that this mode of attestation alone fairly carries out the provisions of Section 9, Regulation VII. of 1822. Each single entry is really "avowed and ascertained," and for each single entry written proof exists in the hands of the cultivator and in the settlement office that it was so avowed.

From the *khuteonees* so prepared the *jummabundees* were drawn up, and all subsequent alterations in rents were only made up at regular suit of the parties, under Acts XIV. of 1863, and X. of 1859, and *jummabundees* of the land in suit at the new rates were drawn up, and a copy given to the *putwari*, the *zemindar*, and the *mocuddum*, for inclusion in the village *jummabundee* of the year next after that in which the decree was passed. Almost invariably the enhancement and commutation suits were finally settled by agreement between the parties. Up to the 1st January, 1872, in 14 cases only, out of some thousands, did the *assamis* appeal against rent enhancement decisions of the settlement courts, and in all but one the settlement decisions were maintained.

I can now proceed to show for each pergunnah the different rates on which the assessments were based and the results of the assessment. The grounds on which the

rates were based must be sought for in the rate reports which were sent up and sanctioned before assessment. I commence with Furreedpore, the most southern *pergunnah*, and the worst in the district. The *pergunnah* was classified into four large tracts or circles; the several soils in the villages in each circle were generally similar in character. The circles were—

(1) The *khadir* of the Ramgunga to the west.

(2) The "*adhkutcha*" villages, or those whose area was partly on the upland and partly in the *khadir*.

(3) The *bhoor* running along the centre and south-east. Here the *doomut* is sandy, the *muttear* bad, and the *bhoor* execrable.

(4) The "*doomut-muttear*" circle to the north-east. Here both the *doomut* and *muttear* are much superior to those in the *bhoor*, while the *bhoor* is as bad, or worse.

The rent-rates proposed and sanctioned were per acre—

Circle.	*Doomut.*	*Muttear.*	Second Class *Doomut* and best *Bhoor.*	The worst *Bhoor.*	Remarks.
	Khadir I.		*Khadir* II.		
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	
I., ...	4 0 0 *khadir.*	4 0 0 *khadir.*	2 6 0	...	All the *bhoor* is one quality; practically the classification was into loamy and sandy soil.
II., ...	4 0 0	4 0 0	2 6 0	...	
III., ...	3 4 1	2 9 5	2 1 1	1 9 6	
IV., ...	4 9 6	3 6 9	2 3 9	1 8 10	

No crop rates were worked out in this *pergunnah*. The areas and result of the rates were—

	Acres.	Rate.	Rental.	*Jumma* at 55 per cent.
	Rs.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Circle I, ...	9,064	4 0 0	36,256 0 0	...
"	2,352	2 6 0	5,586 0 0	...
Total, ...	11,416	...	41,842 0 0	23,012 0 0
Circle II, ...	2,481	4 0 0	9,924 0 0	...
"	4,530	2 6 0	10,758 0 0	...
Total, ...	7,011	...	20,682 0 0	11,374 0 0
Circle III, ...	22,049	3 4 1	71,774 1 5	...
"	6,758	2 9 5	17,493 5 10	...
"	20,119	2 1 1	41,600 3 7	...
"	20,177	1 9 6	32,157 1 6	...
Total, ...	69,103	...	1,63,024 12 4	89,661 0 0
Circle IV.	10,518	4 9 6	48,317 1 0	...
"	6,076	3 6 9	20,791 5 0	...
"	5,009	2 3 9	11,191 15 9	...
"	3,749	1 8 10	5,818 12 2	...
Total, ...	25,352	...	86,119 1 11	47,366 0 0

The total rental by rates is Rs. 3,11,667-14-3 ; *jumma* at 55 per cent., Rs. 1,71,413.

To compare with this we have--

1. Rental, as recorded in the village papers, ... Rs. 2,78,992
2. Do. as corrected for seer, &c., by me, ... „ 3,13,866

The *jumma* actually assessed by me on the above lands at Rs. 55 per cent. was Rs. 1,77,764. The difference between this and the amount by rates is Rs. 6,351, which is accounted for by assessments on waste land, &c. In addition to the above, Rs. 51 were assessed as cesses on small *maafee* patches of land, making the total demand, Rs. 1,77,815, the details of which are—

Land Revenue on assessable area,	...	...	1,61,604
Local cesses on ditto	...	... 16,160	16,211
„ „ on maafee patches	...	... 51	
			1,77,815

The total of revenue and cesses on the assessable area is Rs. 1,77,764. The rates of incidence on the total *malgoozari* and cultivated areas of the *jumma* of last settlement, the expiring and revised *jummas*, are as follows :—

	Rate of incidence on total area.	Rate on the *malguzari* area.	Rate on cultivated area.
	Rs. a. p.	Rs. a. p.	Rs. a. p.
Jumma of IX. 1833 Settlement, ...	0 14 9	1 1 2	1 9 7
Expiring *jumma*, ...	0 14 7	1 0 4	1 4 7
Revised *jumma*, ...	1 1 9	1 3 11	1 9 2

My assessments were considered fair by the people, and hardly any objections were raised to them. They presume a rental on the assessable area of Rs. 3,23,218, which falls on the cultivated area at Rs. 2-13-9 per acre. In order to facilitate comparision with rent-rates in other *pergunnahs* rating the best *khadir* as *doomut*, the average rental rates for the whole *pergunnah* on the three main soils, *doomut*, *muttear*, and *bhoor* work out thus—

Doomut,	... 3 12 3	per acre or 9½	as per kutcha beegah.	
Muttear,	... 2 15 8	„ „ 7½	„	„
Bhoor,	... 1 14 7	„ „ 4½	„	„

Next I take up Crore, which was the next *pergunnah* assessed.

The *pergunnah* was divided for assessment into seven circles.

I. The land to the east of the Kandoo river, that to the west of the Bygool, between it and the Nukuttea, and that to the south of the city of Bareilly.

II. The villages in the basin of the Bygool.

III. The high watersheds (a) between the Kandoo and Bygool.
„ „ (b) „ Nukuttea and Deorunean.

IV. The villages to the north of Bareilly along the Deorunean.

V. The *muttear* tract between the Deorunean, the Dhunnia, and the Ramgunga Turaien.

VI. The five villages north of the Dhunnia, between it and the borders of Nawabgunj, Ritcha, and Meergunj.

VII. The Ramgunga khadir.

The rental rates proposed and sanctioned; the areas and results of the rates are given below:—

Circle.	Soil.	Area.	Rent-rate.	Rental.	Jumma at 55 per cent.
			Rs. a. p.	Rs. a. p.	
I.	Doomut, ...	17,461	4 12 0	82,939 12 0	
	Muttear, ...	6,643	2 13 0	18,683 7 0	
	Bhoor, I., ...	6,427	2 10 0	16,870 14 0	
	Bhoor, II., ...	13,337	1 12 0	23,339 12 0	
	Total, ...	43,868	...	1,39,833 13 0	
II.	Khadir, I., ...	2,454	5 12 0	14,110 8 0	
	Khadir, II., ...	446	4 8 0	2,007 0 0	
	Doomut, ...	2,311	4 0 0	9,244 0 0	
	Muttear, ...	636	3 0 0	1,908 0 0	
	Bhoor, I., ...	1,253	2 10 0	3,289 2 0	
	Bhoor, II., ...	3,266	1 12 0	5,715 8 0	
	Total, ...	10,366	...	36,274 2 0	
III.	Doomut, ...	2,685	3 8 0	9,397 8 0	
	Muttear, ...	1,157	2 8 0	2,892 8 0	
	Bhoor, I., ...	1,493	2 4 0	3,359 4 0	
	Bhoor, II., ...	5,427	1 8 0	8,140 8 0	
	Total, ...	10,762	...	23,789 12 0	
IV.	Doomut, ...	2,806	4 6 0	12,276 4 0	
	Muttear, ...	663	4 6 0	2,900 10 0	
	Bhoor, ...	5,116	2 0 0	10,232 0 0	
	Total, ...	8,585	...	25,408 14 0	
V.	Doomut, ...	11,515	4 6 0	50,378 2 0	
	Muttear, ...	9,345	3 0 0	28,035 0 0	
	Bhoor, ...	8,275	2 6 0	19,653 2 0	
	Total, ...	29,135	...	98,866 4 0	
VI.	Doomut, ...	8,074	5 12 0	46,425 8 0	
	Muttear, ...	7,886	3 10 0	28,586 12 0	
	Bhoor, I., ...	1,823	3 4 0	5,924 12 0	
	Bhoor, II., ...	2,570	2 6 0	6,103 12 0	
	Total, ...	20,353	...	91,040 12 0	
VII.	Khadir, ...	12,767	4 0 0	51,068 0 0	
	Bhoor, ...	4,852	2 6 0	11,523 8 0	
	Total, ...	17,619	...	62,591 8 0	
	GRAND TOTAL, ...	140,688	...	4,77,005 1 0	262,350

The average rates on *doomut*, *muttear*, and *bhoor* work out—

	Rs.	a.	p.
Doomut, ...	4	9	5
Muttear, ...	3	2	5
Bhoor, ...	2	1	11

Crop-rates were worked out on average produce, deduced from experiments, deducting one-sixth of the gross produce, to cover losses by seasons, difference between money

and kind rates, and deductions before the grain comes to division, &c. The landlord's share was taken at $\frac{5}{12}$ths of the net produce, or 16⅔ seers in the maund, and this was commuted to money rates on the average prices of 12 years, omitting those of the exceptional years of drought (1860-61). The *zabti* rates were taken at the average rates paid under the *butai* system for *zabti* crops.

The average rates finally fixed were as follows:—

	Rs.	a.	p.
Zabti crops per acre, ...	5	12	0
Rice,...	3	7	0
Bajra and *coarse khureef*, ...	1	9	5
Wheat, *ghooean*, *melons*, ...	4	1	3
Barley, *gojhee*, *bajra*, *gram*, ...	2	14	0
Inferior *rubbi*, ...	2	5	10
Dosalie, ...	2	0	0

These rates gave a resultant *jummabundi* of Rs. 4,77,909. The rental, as recorded in village papers, was Rs. 3,83,548. The rental corrected for seer, *zemindari*, rent-free land, &c., Rs. 4,62,243. The *jumma* actually assessed by me on the assessable area was Rs. 2,69,602, besides which Rs. 2,568 were assessed as cesses on revenue-free lands, making a total of Rs. 2,72,170, of which Rs. 2,44,941-8-0 are land revenue proper, and Rs. 27,228-8-0 are cesses. The revenue presumes a rental of Rs. 4,89,883, which falls at Rs. 3-7-8 per cultivated acre. The rates of incidence on the total *malguzari* and cultivated areas of the *jumma* at the IX. 1833 Settlement, the expiring demand, and the new assessment, excluding cesses on revenue-free lands, are as follows:—

	Incidence per acre.								
	On total area.			On *malguzari*.			On cultivation.		
	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.
Jumma of IX. 1833 Settlement, ...	0	15	7¾	1	5	6½	1	13	6¾
Expiring *jumma*, ...	0	14	3¾	1	1	4½	1	4	4½
New assessment, ...	1	5	6½	1	10	1¾	1	14	7¾

The new assessment at 55 per cent., as compared with the expiring, gives an increase of Rs. 90,634 against the *zemindars*, or 56 per cent. As I before remarked, a few of the city "raieeses" got up a howl against the new *jummas*. That they are by no means high, is proved—

(1) By the small difference between the incidence rate on cultivation of the new *jummas*, and those of the IX. 1833 Settlement.

(2) The cultivators generally were satisfied with my rates, and there was no difficulty whatever in making up the new *jummabundis*. Most of the cases were settled by agreement, and never came into court at all

(3) As already shown under "transfers of land," the value of land has risen *since* the declaration of the new *jummas*, 50 per cent. on sales, and 26 per cent. on mortgages.

(4) The *jumma* has been easily and regularly collected for the three full years that it has been in operation, notwithstanding that of those years, two have been on the whole unfavourable, from the excessive rains and consequent floods.

(5) In the cases appealed, the Commissioner, Mr. Sapte, and Senior member of the Board, found no reason whatever to lower my demands, which they considered equitable.

(6.) Assessable cultivated area has increased since last settlement by

acres,	...	...	...	33,251, or 30 per cent.
Irrigated area	ditto	ditto,	...	18,100, or 5 „ „
Population	ditto	ditto,	...	155·1 per square mile, or 21·3 per cent.
Rent-rate per acre,		...	...	13½ as. per acre.

MEERGUNJ.

This *pergunnah* comprises the remains of the old *pergunnahs* of Ajoan, north Seroli, and Shahi. For assessment it was divided into three circles :—

Circle I.—The old Shahi and North Seroli villages to the east and centre.

„ *II.*—The Ajaon villages to the west.

„ *III.*—The Ramgunga khadir villages to the south.

The rent-rates sanctioned, the soil areas, and the rental by rates are shown thus :—

Circle.	Soil.	Area in Acres.	Rent-rate.	Rental.
			Rs. a. p.	Rs. a. p.
I.	*Doomut I.*, ...	18,704	4 12 0	88,844 0 0
	Muttear, ...	16,424	3 3 0	52,351 8 0
	Doomut II., ...	3,524	3 0 0	10,572 0 0
	Bhoor, ...	3,671	2 4 0	8,259 12 0
	Total, ...	42,323	...	160,027 4 0
II.	*Doomut I.*, ...	7,211	5 8 0	39,660 8 0
	Muttear, ...	6,986	4 0 0	27,964 0 0
	Doomut II., ...	1,685	3 10 0	6,108 2 0
	Bhoor, ...	767	2 10 0	2,013 6 0
	Total, ...	16,649	...	75,746 0 0
III.	*Doomut I.*, ...	3,347	4 0 0	13,388 0 0
	Muttear, ...	1,708	3 10 0	6,191 8 0
	Doomut II., ...	1,777	2 13 0	4,997 13 0
	Bhoor, ...	1,267	2 0 0	2,534 0 0
	Total, ...	8,099	...	27,111 5 0
	GRAND TOTAL, ...	67,071	...	2,62,884 9 0

The average rates on *doomut*, *muttear*, and *bhoor* fall per acre—

					Rs. a. p.
Doomut,	...	...	...	...	4 8 2
Muttear,	...	...	...	...	3 7 1
Bhoor,	...	...	...	...	2 4 0

The rental by village papers was	...	...	...	Rs. 2,31,392
The same corrected for seer, &c.,	...	...	...	„ 2,48,676
Rental by rates,	...	...	...	„ 2,62,884

The *jumma* at 55 per cent. actually assessed by me on the assessable area was Rs. 1,48,379, besides which Rs. 875-8-0 were assessed as cesses on revenue-free lands, making a grand total of Rs. 1,49,254-8-0, of which Rs. 1,34,890 are land revenue proper, and Rs. 14,364-8-0 cesses. The land-revenue presumes a rental on the assessable area of Rs. 2,69,780, falling at Rs. 4 per cultivated acre.

The rates of incidence of the IX. 1833 *jumma* on the then area and the expiring and new demands on the present assessable areas are as follows :—

	Incidence per Acre.		
	On total area.	On *malgoozari*.	On cultivated.
	Rs. a. p.	Rs. a. p.	Rs. a. p.
Jumma of IX, 1833, Settlement, ...	1 2 1	1 6 8	2 0 6
Expiring *jumma*, ...	1 3 0½	1 6 8	1 12 1
New Demand, ...	1 8 1	1 12 9	2 3 4

The increased demand on the *zemindars* is Rs. 31,314, or 26·7 per cent. The new assessments were considered moderate by the people, and there were hardly any objections raised to them.

					Acres.
The increase in cultivated area since last settlement has been					11,177, or 20 per cent.
„	irrigated	„	„	„	11,770, or 15·7 per cent.
„	rent-rate		„	„	0-8-8 per acre, or 17 per cent.

BULLIA.

Bullia was divided for assessment into two circles.

Circle I.—All the eastern and northern portion of the *pergunnah.*

„ *II.*—Seven *muttear* villages to the south on the Budaon border.

The rent-rates sanctioned and their results are as follows :—

Circle.	Soil.	Area.	Rent-rate.	Rental.
			Rs. a. p.	Rs. a. p.
I., ...	*Doomut,*	9,610	4 8 0	43,245 0 0
	Muttear, ...	3,324	3 8 0	11,634 0 0
	Bhoor, ...	3,887	3 4 0	12,632 12 0
	Total, ...	16,821	...	67,511 12 0
II., ...	*Doomut,*	298	4 0 0	1,192 0 0
	Muttear, ...	748	2 14 0	2,150 8 0
	Bhoor, ...	105	2 10 0	275 10 0
	Total, ...	1,151	...	2,618 2 0
	GRAND TOTAL, ...	17,972	...	70,129 14 0

The rental by village papers was ... ... Rs. 53,897

Ditto as corrected for seer, &c., ... „ 63,748

The rates give the following average rates for *doomut*, *muttear*, and *bhoor* :—

	Rs. a. p.	
Doomut, ...	4 7 9	per acre.
Muttear, ...	3 6 1	„ „
Bhoor,...	3 3 8	„ „

The *bhoor* is all *khadir bhoor* and of good quality, equal in produce to inferior *doomut.*

The *jumma* at 55 per cent. actually assessed on the *malgoozari* area was Rs. 37,048, besides Rs. 74 cesses on revenue-free lands, making a total of Rs. 37,122, of which Rs. 33,680 are land-revenue, and Rs. 3,442 cesses. The land-revenue presumes a rental of Rs. 67,360, falling at Rs. 3-11-11 per acre. The rates of incidence of the IX. 1833 *jumma* on the then area and the expiring and new demands on the present assessable area are as follows :—

	On total area.	*On malgoozari.*	*Cultivated.*
	Rs. a. p.	Rs. a. p.	Rs. a. p.
Jumma of IX. 1833 Settlement,	0 15 9	1 4 0	1 9 11
Expiring *jumma,*	1 0 3	1 3 0	1 5 8
New demand, ...	1 8 8	1 12 10	2 0 11

The new demand gives against the *zemindars* an increase over the expiring *jumma* of Rs. 12,646, or 51·8 per cent.,—a very heavy enhancement, but it was shown in the rate report,

(1) that the IX 1833 assessment was extraordinarily light.

(2) that the cultivated area had increased 27 per cent.

(3) that prices had risen 44 per cent. in the 12 years before the assessment, omitting the years 1860-61.

(4) the rent rates had risen at least 16 per cent.

(5) the *zemindars* accepted the assessments without any difficulty or protest.

SUNEHA.

Suneha was divided for assessment into three circles.

I.—The *khadir* villages along the Ramgunga to the east of the *pergunnah* adjoining the *Bullia* 1st class villages.

II.—A strip to the west of the *khadir* circle running the whole length of the *pergunnah*. This is all old *khadir* lying higher than the 1st circle—all irrigable from *dhenkli* wells, but not much requiring irrigation except in years of drought.

III.—The tract to the west of No. II. between it and the Aril. Here irrigation is required, and I used wet and dry rates.

The rates sanctioned, the areas and resultant rentals, are shown thus :—

Circle.	Soil.	Area.	Rent-rate.	Rental.
			Rs. a. p.	Rs. a. p.
I.	*Doomut*, ...	5,541	4 8 0	24,934 8 0
	Muttear, ...	2,378	3 8 0	8,323 0 0
	Bhoor, ...	2,030	3 4 0	6,597 8 0
	Total, ...	9,949	...	39,855 0 0
II.	*Doomut*, ...	7,949	4 12 0	37,757 12 0
	Muttear, ...	2,724	3 14 0	10,555 8 0
	Bhoor, ...	1,975	3 6 0	6,665 10 0
	Total, ...	12,648	...	54,978 14 0
III.	*Doomut* Wet, ...	3,212	4 8 0	14,454 0 0
	Ditto Dry, ...	4,276	3 10 0	15,500 8 0
	Muttear Wet, ...	2,423	3 6 0	8,177 10 0
	Ditto Dry, ...	4,038	2 10 0	10,599 12 0
	Bhoor Wet, ...	378	3 4 0	1,228 8 0
	Ditto Dry, ...	1,108	2 6 0	2,631 8 0
	Total, ...	15,435	...	52,591 14 0
	GRAND TOTAL, ...	38,032	...	147,425 12 0

The rental by village papers was ... Rs. 1,14,207 0 0
Ditto corrected for seer, &c., ... „ 1,28,835 0 0

The average rates on *doomut*, *muttear*, and *bhoor* work out—

Doomut, ... Rs. 4 6 7 per acre.
Muttear, ... „ 3 4 1 „
Bhoor, ... „ 3 1 10 „

The *jumma* at 55 per cent. actually assessed on the *malgoozari* area was Rs. 80,553, besides Rs. 582 cesses on revenue-free lands, making a grand total of Rs. 81,135, of which Rs. 73,230 are land-revenue proper, and Rs. 7,905 cesses. The land-revenue presumes a rental of Rs. 1,46,460, which falls at Rs. 3-13-7 per cultivated acre. The rates of incidence per acre of the IX. 1833 *jumma* and the expiring and revised *jummas* are shown below :—

	On total area.	On *malgoozari*.	On cultivated.
	Rs. a. p.	Rs. a. p.	Rs. a. p.
Jumma of IX. 1833 Settlement, ...	0 14 8½	1 4 6¼	2 3 2
Expiring *jumma*, ...	1 0 11¾	1 3 9	1 7 9¾
New ditto, ...	1 8 2¼	1 12 2	2 1 11

The new demand on the assessable area gives an increase over the expiring demand of Rs. 23,975, or 42 per cent.

The increase in cultivation since last settlement is 12,963 acres, or 51 per cent.
Ditto irrigation „ „ „ „ 2,256 „ 27 „
Ditto the rent-rate „ „ „ „ 0-5-8 per acre „ 11¾ per cent.

The *zemindars* offered little or no objection to the assessments, and the rentals, where enhancements had been calculated on were made up to the full amount without difficulty. In fact, in some villages the new rentals where corrections have been made for seer, &c., have been made are more than double the land-revenue already.

Aonlah.

Pergunnah Aonlah adjoins Suneha and lies to the north and west of it. It was divided for assessment into four circles :—

I.—The *khadir* villages to the north of the *Suneha khadir*, but on the whole of rather better quality.

II.—West of No. I., between the *Suneha* border and the Aril river—a tract adjoining and exactly similar to the 3rd circle of *Suneha*.

III.—A tract to the south of Circle II. between the Aril and Nawab Nuddi, thinly populated, very backward in cultivation, with much jungle. Rents consequently are low.

IV.—The remainder of the *pergunnah* between the *Serowli* border, the Badon border, and the Nawab Nuddi. The level here rises considerably, and the tract differs altogether from the other circles in character. The depth to water ranges from 20 to 25 feet, and the wells are mostly worked by *lao* and *chursa*.

The soil rates, sanctioned areas, and resultant rentals are shown thus :—

Circle.	Soil.	Area.	Rent-Rate.	Rental resulting.
			Rs. a. p.	Rs. a. p.
I., ...	*Doomut*, ...	5,320	5 4 0	27,930 0 0
	Muttear, ...	1,705	4 0 0	6,820 0 0
	Bhoor, ...	2,326	3 0 0	6,978 0 0
	Total, ...	9,351	...	41,728 0 0
II., ...	Wet *Doomut*, ...	2,252	4 8 0	10,034 0 0
	Dry *Do.*, ...	1,830	3 10 0	6,633 12 0
	Wet *Muttear*, ...	2,588	3 6 0	8,734 8 0
	Dry *Do.*, ...	2,705	2 10 0	7,100 10 0
	Wet *Bhoor*, ...	303	3 4 0	984 12 0
	Dry *Do.*, ...	475	2 6 0	1,128 2 0
	Total, ...	10,153	...	34,615 12 0
III., ...	Wet *Doomut*, ...	684	3 10 0	2,479 8 0
	Dry *Do.*, ...	1,088	2 10 0	2,856 0 0
	Wet *Muttear*, ...	491	3 3 0	1,565 1 0
	Dry *Do.*, ...	988	2 0 0	1,976 0 0
	Wet *Bhoor*, ...	163	2 6 0	387 2 0
	Dry *Do.*, ...	422	1 9 6	672 9 0
	Total, ...	3,836	...	9,936 4 0
IV., ...	Wet *Doomut*, ...	5,165	4 12 0	24,533 12 0
	Dry *Do.*, ...	12,923	3 10 0	46,846 14 0
	Wet *Muttear*, ...	1,356	4 0 0	5,424 0 0
	Dry *Do.*, ...	1,623	3 0 0	4,869 0 0
	Wet *Bhoor* I., ...	907	3 8 0	3,174 8 0
	Dry *Do.*, ...	5,386	2 8 0	13,465 0 0
	Wet *Bhoor* II., ...	125	3 0 0	375 0 0
	Dry *Do.*, ...	3,344	1 12 0	5,852 0 0
	Total, ...	30,829	...	1,04,540 2 0
	Grand Total, ...	54,166	...	1,90,320 2 0

In this *pergunnah* I worked out crop-rates per acre in each circle as follows :—

Crop.	Circle I.	Circle II.	Circle III.	Circle IV.
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Vegetable and *Kussoom*, ...	8 0 0	6 6 0	5 10 0	8 0 0
Sugar-cane, ...	6 0 0	5 4 0	4 8 0	6 6 0
Cotton, *Sunn*, Indigo, ...	5 4 0	4 12 0	4 0 0	5 0 0
Rice, ...	3 10 0	2 6 0	2 4 0	2 14 0
Mukka, ...	3 3 0	2 14 0	2 4 0	2 14 0
Bajra and coarse *Khureef*, ...	2 12 0	2 4 0	1 12 0	2 4 0
Wheat, ...	4 6 0	4 6 0	3 4 0	4 6 0
Barley, *Gojee*, and *Bijra*, ...	3 12 0	3 12 0	2 12 0	3 12 0
Gram, ...	3 4 0	3 4 0	2 6 0	3 4 0
Mussoor, linseed, &c., ...	2 10 0	2 6 0	2 0 0	2 6 0
Dosahi, ...	half *Pural* rates.	half *Pural* rates.	half *Pural* rates.	half *Pural* rates.

The resulting rentals were :—

Circle I., ...	Rs. 45,119
„ II., ...	„ 33,140
„ III., ...	„ 10,986
„ IV., ...	„ 113,171
Total, ...	Rs. 202,416

The rental by village papers was ...	Rs. 123,536
Ditto corrected for *seer*, &c., ...	„ 166,440

The average soil rates on *doomut*, *muttear*, and *bhoor* work out for the *pergunnah*—

	Rs. a. p.
Doomut, ...	4 2 3 per acre
Muttear, ...	3 2 11 „
Bhoor, ...	2 7 3 „

The new *jumma* actually assessed at 55 per cent. of the assets is Rs. 102,583-8-0, besides Rs. 345-6-0 cesses on revenue-free land, making a total of Rs. 102,928-14-0, of which land-revenue proper is Rs. 93,285 and cesses Rs. 9,463-14-0. The land-revenue supposes a rental from all sources of Rs. 186,570, or Rs. 3-7-1 per cultivated acre.

The rates of incidence of the IX. 1833 *jumma* and the expiring and new demand compare thus :—

	On total area.	*On malgoozari.*	*On cultivated.*
	Rs. a. p.	Rs. a. p.	Rs. a. p.
Jumma of IX. 1833 Settlement,	0 12 2	0 14 6¼	1 14 8
Expiring *jumma*, ...	0 12 6½	0 14 8½	1 2 11
New *jumma*, ...	1 4 0	1 7 6	1 14 3¾

The increased demand on the assessable area over the expiring *jumma* is Rs. 38,376, or 59 per cent. To justify this increase we have an increase in cultivation of 22,579 acres, or 71 per cent. In irrigation of 6,245 acres, and in rent-rate 4 annas 2 pies per acre, or 9 per cent., and in produce prices we have an increase of at least 40 per cent.

The assessments were accepted at once by the *zemindars*, and there have been hardly any complaints. The enhancements in rent justified my estimates, and the new *jumma-bundis* were made up to the full amount calculated on without the least difficulty.

Seroli.

The present *pergunnah* of Seroli adjoins and lies north of Aonla. For assessment it was divided into two circles,—

I. The five *khadir* villages on the Ramgunga to the north-east.

II. The remainder of the *pergunnah*, which is similar in character to the 4th Aonla circle, but has more *bhoor*.

The rates sanctioned, areas and resulting rentals are—

Circle.	Soil.	Area.	Rent rate.	Rental.
			Rs. a. p.	Rs. a. p.
I.	*Doomut*, ...	1,313	5 10 0	7,385 10 0
	Muttear, ...	92	4 0 0	368 0 0
	Bhoor, ...	494	3 4 0	1,605 8 0
	Total,...	1,899	...	9,359 2 0
II.	Wet *Doomut*, ...	2,974	4 12 0	12,639 8 0
	Dry *Ditto*, ...	6,686	3 10 0	24,236 12 0
	Wet *Muttear*, ...	578	4 0 0	2,312 0 0
	Dry *Ditto*, ...	1,159	3 0 0	3,477 0 0
	Wet *Bhoor* I, ...	843	3 8 0	2,950 8 0
	Dry *Ditto*, ...	7,823	2 8 0	19,557 8 0
	Wet *Bhoor* II, ...	218	3 0 0	654 0 0
	Dry *Ditto*, ...	6,356	1 12 0	8,873 0 0
	Total,...	26,637	...	74,700 4 0
	GRAND TOTAL, ...	28,536	...	84,059 6 0

The rental by village papers was ... ... Rs. 75,205
Ditto corrected for *seer*, &c., ... „ 85,250

The average rates on *doomut*, *muttear* and *bhoor* work out :—

	Rs. a. p.	
Doomut, ...	4 0 7	per acre.
Muttear, ...	3 5 10	„
Bhoor, ...	2 2 2	„

The new assessment on the assessable area at 55 per cent. of the assets is Rs. 49,940, besides Rs. 246-12-0 cesses on revenue-free land, making a total of Rs. 50,186-12-0, of which land-revenue is Rs. 45,400, and cesses Rs. 4,786-12-0. The land revenue supposes a rental of Rs. 90,800 from all sources, or Rs. 3-2-10 per acre cultivated. The rates of incidence of the IX. 1833 *Jumma*, the expiring and revised demands are as follows :—

	On total area.	*On malgoozari.*	*On cultivated.*
	Rs. a. p.	Rs. a. p.	Rs. a. p.
Jumma of IX. 1833 Settlement,	1 0 2	1 4 10	1 15 5
Expiring Demand,	1 0 7	1 3 9	1 6 2
New Ditto,	1 4 11½	1 8 11½	1 12 0

The increased demand on the assessable area over the expiring *jumma* is Rs. 10,352 or 26 per cent. The increase is justified by—

(1) An increase in cultivated area of 9,201 acres or 47 per cent.

(2) Ditto ditto irrigated 2,897 „

(3) Ditto ditto produce prices 44 per cent.

(4) The demand was at once agreed to by the *zemindars* and has been collected with ease.

BEESULPOOR.

Beesulpoor is the last of the *pergunnahs* in which money-rents are the rule, and I therefore take it up here. It was divided for assessment into two circles.

I.—The west and centre including most of the *pergunnah*.

II.—The inferior villages to the east along the water-shed of the Kunhout, and along the *jungle* to the north-east, and three other detached clusters of backward or poor villages.

(*a*) Seven villages to the south running from Meerpoor to Chukkurunpoor on the Nigohee border.

(*b*) Seven villages to the south, but west of the Kutna on the Shahjehanpoor border round Lohcha.

(*c*) Seven villages to the extreme west beyond the Deoha on the Nawabgunj and Furreedpoor borders running from Khukooma to Sayer.

The rates sanctioned, the areas, and the resulting rentals are given :—

Circle.	Soil.	Area.	Rate.	Rental.
I.	Wet *Doomut*, ...	46,600	5 10 0	262,125 0 0
	Dry *Ditto*, ...	23,280	3 6 0	78,570 0 0
	Wet *Muttear*, ...	9,850	5 0 0	49,250 0 0
	Dry *Ditto*, ...	18,654	3 3 0	59,459 10 0
	Wet *Bhoor*, ...	2,104	3 8 0	7,364 0 0
	Dry *Ditto*, ...	2,900	2 2 0	6,162 8 0
	Khadir, ...	6,040	3 10 0	21,895 0 0
	Total, ...	109,428	...	484,826 2 0

The *muttear* in this circle is as a whole of better quality than elsewhere in the district; the *muttear* tract east of the Kutna is especially good : hence the rates are somewhat higher. The actual soil rates and the result of the assumed rates are as follows per acre :—

	Actual rate.	*Assumed rate.*
	Rs. a. p.	Rs. a. p.
Doomut, ...	4 7 0	4 14 0
Muttear, ...	3 11 8	3 12 0
Bhoor, ...	2 10 0	2 10 0
Khadir, ...	3 7 8	3 10 0

The difference only just brings up the abnormally low rents to the average standard.

Circle.	Soil.	Area.	Rate.	Rental.
		Rs.	Rs. a. p.	Rs. a. p.
II.	Wet *Doomut*, ...	15,261	4 3 0	63,905 7 0
	Dry *Ditto*, ...	10,966	2 10 0	28,785 12 0
	Wet *Muttear*, ...	1,729	4 0 0	6,916 0 0
	Dry *Ditto*, ...	4,534	2 6 0	10,768 4 0
	Wet *Bhoor*, ...	2,906	2 14 0	8,354 12 0
	Dry *Ditto*, ...	5,121	1 12 0	8,961 12 0
	Khadir, ...	1,401	3 6 0	4,728 6 0
	Total, ...	41,918	...	132,420 5 0

This is a poor circle—more of the Furreedpoor *bhoor* stamp—the actual and assumed rates on the three soils compare thus per acre :—

	Actual rate.	*Assumed rate.*
	Rs. a. p.	Rs. a. p.
Doomut, ...	3 2 3	3 8 4
Muttear, ...	2 10 9	2 13 2
Bhoor, ...	2 4 6	2 2 6

Some of the villages are rented at very old and exceptionally low rents, hence the difference between the actual and assumed rates :—

The total assumed *jummabundi* is	... ...	Rs. 617,246
The rental by village papers is	... ...	„ 510,474
Ditto corrected for *seer*, &c.,	... ...	„ 564,185

The average assumed rates on *doomut*, *muttear*, and *bhoor* work out.—

	Rs. a. p.	
Doomut, ...	4 7 0	per acre.
Muttear, ...	3 10 1	„
Bhoor, ...	2 5 10	„

The new assessment at 55 per cent. on the assessable area is Rs. 3,38,723, besides which there are Rs. 467 cesses on revenue-free land, making in all Rs. 3,39,190, of which Rs. 3,07,930 are land revenue proper, and Rs. 31,260 cesses. The land-revenue presumes a rental of Rs. 6,15,860 or 4-1-1 per cultivated acre. The rates of incidence of the IX. 1833 *jumma*, and the expiring and new demands are shown below :—

	On total area.	*On mal-goozari.*	*On culti-vated area.*
	Rs. a. p.	Rs. a. p.	Rs. a. p.
IX. 1833 *jumma*,	1 3 4	1 7 6¾	2 3 10
Expiring *ditto*,	1 2 9	1 7 8	1 13 4
New *ditto*,	1 6 10	1 13 8	2 3 9

The increased demand on the assessable area is Rs. 57,728 or 20 per cent. My assessments were accepted at once, the only malcontents were the Deoria *zemindars* and the family of the Canoongoes at Beesulpoor, or the two *alaqas* which were the lightest assessed in the whole *tehseel*.

The increase in cultivated area since last settlement has been 57,728 acres or 20 per cent. Increase in irrigated area of 16 per cent. (See *pergunnah* report). Increase in average rent-rate per acre, 0-6-11 or 12 per cent. Increase in population 214 per square mile.

KABUR.

The rents in this *pergunnah* were almost entirely taken by *butai*. No classification of villages was found necessary, and one set of soil-rates were found sufficient for the whole pergunnah.

The rates sanctioned, the areas, and resultant estimated rental are shown thus :—

Soil.	Area.	Rate.	Rental.
		Rs. a. p.	Rs. a. p.
Wet *Doomut*, ...	7,267	5 12 0	41,785 4 0
Dry *Ditto*, ...	10,162	4 6 0	44,458 12 0
Wet *Muttear*, ...	3,458	4 9 0	15,777 2 0
Dry *Ditto*, ...	5,332	3 3 0	16,995 12 0
Wet *Bhoor*, ...	222	3 6 0	749 4 0
Dry *Ditto*, ...	688	2 6 0	1,634 0 0
Total, ...	27,129	...	1,21,400 2 0

The average soil rates work out—

	Rs. a. p.	
Doomut, ...	4 15 2	per acre.
Muttear, ...	3 11 7	,,
Bhoor, ...	2 9 10	,,

Crop rates were worked out. The average produce was ascertained from a large number of carefully conducted experiments. From this one-sixth was deducted to cover deductions from the gross produce before division of the grain. From the net produce was taken the share of the landlord usual in the pergunnah, or one-half, and this was commuted at the average prices of the previous 20 years, excluding the famine years. The *zabti* crops were rated at the average money-rates actually current.

The deduced crop rates were —

Sugar-cane, ...	10 0
Pundrah, ...	6 6
Cotton, ...	6 6
Mukka, ...	3 10
Vegetables, ...	7 3
Rice, ...	4 6
Bajra and coarse *khureef*, ...	3 3
Wheat, ...	5 6
Barley and *Goojee*, ...	4 9

Bijra,	...	...	...	4 0	
Gram,	...	...	...	3 6	
Linseed, *musoor*, &c.,		...	...	2 6	
Dosahi wheat	...	...	...	3 3	other *dosahi* at half *pural* rates.

These rates gave an estimated rental of 1,30,832. In 24 villages out of the 63 comprising the pergunnah, the kind rates were commuted to money-rates giving the following average rates :—

				Rs. a. p.	
Doomut,	...	...	...	5 1 9	per acre.
Muttear,	...	...	...	4 0 0	
Bhoor,	...	...	...	3 3 0	

The assumed wet and dry rates on the same villages give—

				Rs. a. p.	
Doomut	...	...	...	5 1 1	per acre.
Muttear	...	...	...	3 13 11	
Bhoor	...	...	...	2 15 7	

The commutation rates on the whole pergunnah would give a rental of Rs. 1,27,116.

The village papers as in nearly all *butai* villages were pure fiction, and useless for any purpose whatever. The assessment actually made was Rs. 67,001 on the assessable area, besides Rs. 39, cesses on revenue-free lands making in all Rs. 67,040, of which Rs. 60,910 are land-revenue and 6,130 cesses. The land-revenue presumes a rental on the assessable area of Rs. 1,21,820, or 4-7-10 per cultivated area. The rates of incidence of the IX 1833 *jumma* and the expiring and new demand are as follows :—

		On total area.	*On malgoozari.*	*On cultivated.*
		Rs. a. p.	Rs. a. p.	Rs. a. p.
IX. 1833 *jumma,*	...	1 5 1	1 10 6	1 15 6
Expiring demand,	...	1 5 10	1 9 2	1 12 4
New demand,	...	1 14 7	2 3 0	2 7 6

The increase demand on the *malgoozari* area is Rs. 12,792 or 26·5 per cent. To justify this we have.

(1) A rise in prices of at least 30 per cent. and as rents are in kind *zemindars* have derived the full benefit from the increased prices.

(2) An increase in cultivation of 18·2 per cent.

(3) A large increase in population.

(4) An increase in irrigated area of 8,456 acres, or 184 per cent. over the former amount.

(5) At last settlement *zubti* crops only occupied 4 per cent. of the cultivated area. They now occupy 27 per cent.

The *zemindars* generally were contented with the assessments.

SIRSAWAN.

This pergunnah adjoins *Kabur*, and in general character is very similar to it. One set of rates, the same as those used for *Kabur*, were applied to the whole pergunnah. The soils, rates, areas, and rental resulting are as follows :—

Soil.					Area.	Rate.	Rental.
						Rs. a. p.	Rs. a. p.
Wet *Doomut,*	...	...	...	...	5,038	5 12 0	28,968 8 0
Dry *Do.,*	...	...	...	...	3,770	4 6 0	16,493 12 0
Wet *Muttear,*	...	...	...	...	2,988	4 9 0	13,632 12 0
Dry *Do.,*	...	...	...	...	3,863	3 3 0	10,719 9 0
Wet *Bhoor,*	...	...	...	...	111	3 6 0	374 10 0
Dry *Do.,*	...	...	...	...	273	2 6 0	648 6 0
			Total,	...	15,543	...	70,837 9 0

The average rates on soils work out *doomut* Rs. 5-2-6, *muttear* 3-13-4, *bhoor* 2-10-7.

The same crop rates were used as in *Kabur*. They gave an estimated rental of Rs. 69,295.

In 17 villages out of the 41 composing the pergunnah, rents were commuted at suit of the cultivators from kind to money-rates. The *jummabundis* and rates accepted and agreed on between the parties gave the following average rates :—

	Rs.	a.	p.
Doomut, ...	5	7	1
Muttear, ...	4	1	0
Bhoor, ...	3	12	4

The sanctioned wet and dry rates on the same villages gave :—*doomut* Rs. 5-5-9, *muttear*, Rs. 3-14-6, *bhoor*, Rs. 2-8-10 per acre, on the whole pergunnah the commutation rates would give a rental of Rs. 75,188, but the best villages only were commuted.

The actual assessment at 55 per cent. of the assumed rental on the assessable area was Rs. 40,601, to which Rs. 37 were added as cesses on revenue-free lands making a total of Rs. 40,638, of which Rs. 36,910 are land-revenue and 3,728 cesses.

The land-revenue presumes a rental of Rs. 73,820 falling at 4-11-11 per cultivated acre. There is a decrease in land-revenue proper of Rs. 1,364. In every other *pergunnah* in the district the land-revenue has increased. Here some villages were found very highly assessed, and the cases where an increase was fairly demandable did not suffice to cover the reductions required.

The average incidence of the assumed rental is higher than that of any other pergunnah in the district. The incidence of the IX. 1833 *jumma*, the expiring and new demand, is compared thus :—

	On total area.			*On malgoozari.*			*On cultivated.*		
	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.
IX. 1833 *jumma*, ...	1	13	0	2	1	9	2	7	2
Expiring *do.*, ...	1	13	6	1	14	5	2	7	4
New *do.*, ...	1	15	3	2	0	3	2	9	9

The increase against the *zemindars* on the assessable area, including cesses, is Rs. 2,327 or 6 per cent.

1) The cultivated area has only increased 278 acres or 1·8 per cent.

2) The irrigated area has increased by 1,073 acres or 12·5 per cent. on the old amount.

(3) Prices have increased as in the rest of the district, and as rents have been entirely by *butai*, the *zemindars* have derived all the benefit from the increased prices.

(4) The crop statement of last settlement shows 2,622 acres of "*zubti*" or 17·1 per cent. on the then cultivated area.

The new measurements give 4,709 acres or 30·3 per cent. on the present cultivated area.

These improvements have proved not quite sufficient to cover the reductions required by the cases of over-assessment and reduction of the proportion of the rental taken for land revenue from 66 to 50 per cent. The *zemindars* were highly satisfied with the new *jummas*.

CHOUMAHLA.

The pergunnah is the most northern in the district. It was divided for assessment into two circles—

I.—The "*des*" villages to the south.

II.—The "*mar*" villages to the north, where rents are kept down by climate and by competition for cultivators with the Teraie.

The following were the crop rates per acre, adopted. The average share of the land-lord was found to be 36 per cent. in the "*Des*" and 30 per cent. in the "*mar*" villages :—

Crop.	Rate in I. Circle.	Rate in II. Circle.
	Rs. a. p.	Rs. a. p.
Sugar-cane, ...	8 0 0	6 6 0
Cotton, ...	6 0 0	5 0 0
Vegetable, ...	6 8 0	5 12 0
Churri and *Mukka*, ...	3 3 0	2 8 0
Melons, ...	4 0 0	3 0 0
Hemp, ...	4 0 0	3 0 0
Rice, ...	3 2 0	3 8 0
Jowar, ...	2 10 0	2 4 0
Bajra and other coarse *khureef*, ...	2 6 0	2 0 0
Wheat, ...	3 6 0	2 12 0
Barley and oats, ...	2 14 0	2 4 0
Gojee, ...	2 14 0	2 4 0
Gram, ...	2 12 0	2 0 0
Mussoor, ...	1 9 0	1 4 0
Dosahi at half *pural* rates in both Circles.		

These rates give a total rental of Rs. 1,67,231; from these soil-rates were deduced by applying the crop-rates to the crop-areas in each soil. The results were—

Circle.	Soils.	Area.	Rate.	Resultant Rental.
		Rs. a. p.	Rs. a. p.	Rs. a. p.
I., ...	Wet *Doomut*, ...	10,360	4 8 0	46,620 0 0
	Dry Ditto, ...	8,151	3 2 0	25,471 14 0
	Wet *Muttear*, ...	6,958	3 14 0	26,962 4 0
	Dry Ditto, ...	6,760	2 12 0	18,590 0 0
	Wet *Bhoor*, ...	111	3 8 0	388 8 0
	Dry Ditto, ...	55	2 6 0	130 10 0
	Total, ...	32,395	...	1,18,163 4 0
II., ...	Wet *Doomut*, ...	2,015	3 12 0	7,556 4 0
	Dry Ditto, ...	3,715	2 10 0	9,751 14 0
	Wet *Muttear*, ...	2,045	3 4 0	6,646 4 0
	Dry Ditto, ...	3,605	2 4 0	8,111 4 0
	Wet *Bhoor*, ...	1	2 14 0	2 14 0
	Dry Ditto, ...	50	1 12 0	87 8 0
	Total, ...	11,431	...	32,156 0 0
	GRAND TOTAL, ...	43,826	...	1,50,319 4 0

The average rent-rates on *doomut*, *muttear*, and *bhoor* by the crop-rates, and the sanctioned soil-rates are as follows :—

Circle.	Soil.	Rate by crop-rates.	Rate by sanctioned soil rates.
		Rs. a. p.	Rs. a. p.
I.	*Doomut*, ...	3 14 3	3 14 2
	Muttear, ...	3 4 9	3 5 1
	Bhoor, ...	3 0 0	3 2 0
II.	*Doomut*, ...	3 0 10	3 0 3
	Muttear, ...	2 11 7	2 9 9
	Bhoor, ...	2 1 3	1 12 3

The general soil average rate for the *pergunnah* deduced from the rates is—

	Rs.	a.	p.
Doomut, ...	3	11	0
Muttear, ...	3	1	9
Bhoor, ...	2	12	10

The *jumma* actually assessed at 55 per cent. on the assessable area was Rs. 83,182, besides Rs. 32 cesses on revenue-free land, making a total of Rs. 83,214, of which Rs. 75,620 are land-revenue, and Rs. 7,594 cesses. The land-revenue presumes a rental of Rs. 1,51,240, which falls at Rs. 3-7-1 per cultivated acre. The incidence rates of the old and new *jummas* are—

	On total area.			On *malgoozari*.			On cultivated.		
	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.
IX. 1833 *jumma*,...	0	12	3	0	13	8	1	6	0
Expiring „ ...	1	0	0	1	2	4	1	5	8
New „ ...	1	8	1	1	9	7	1	14	4

The increase on the assessable area as against the *zemindars* is Rs. 44,531, or 86 per cent. This seems an enormous increase, but—

(1) Cultivation has increased by 35 per cent. or 11,504 acres.

(2) Irrigated area „ „ 143 „ „ 13,202 „

(3) Rents being in kind the *zemindars* have reaped the full benefit of the increase in prices.

(4) My assessments in many villages in the *pergunnah* only fall at 50 to 55 per cent. on the declared rentals.

(5) The density of the population has increased since 1846 from 321 to 472 per square mile.

(6) The rent-rates assumed for assessment are lower considerably than those of any other of the neighbouring *butai pergunnahs*.

The *zemindars* of the villages to the west of the Kitcha were, as a rule, satisfied with my assessment. Those of some of the villages to the east accepted them, but petitioned to me for a reduction; as a rule their complaint was caused by the increase of the *jumma*. They failed utterly as a rule to show any cause for reduction. In each petition filed I proved to demonstration, without using any *estimated* rates, but from the village papers of their own and the neighbouring villages that the assessments were rather light than otherwise.

RITCHA.

The classification of villages in this *pergunnah* was much the same as that adopted by Mr. Head at last settlement, *viz.*:—

Circle I.—The southern villages which are fairly healthy and exceedingly good in soil and produce.

II.—The central villages not quite so well populated and cultivated, though the soils are similar naturally to those of Circle I. These villages, however, are not so healthy, and suffer considerably from fever after the rains.

III.—The "*mar*" villages to the north. Here the population is inadequate, and it is difficult to keep the cultivators owing to the inducements to emigration held out by the kham tehseel villages. The climate, too, is unhealthy during the whole hot weather and until the beginning of December.

The soil-rates sanctioned, the areas and resultant rentals are as follows :—

Circle.	Soil.	Area.	Rate.	Rental.
			Rs a. p.	Rs. a. p.
I., ...	Wet *Doomut*, ...	18,100	5 8 0	99,550 0 0
	Dry Ditto, ...	9,380	4 0 0	37,520 0 0
	Wet *Muttear*, ...	14,485	4 12 0	68,803 12 0
	Dry Ditto, ...	8,372	3 6 0	28,255 8 0
	Wet *Bhoor*, ...	222	4 0 0	888 0 0
	Dry Ditto, ...	199	2 12 0	547 4 0
	Total, ...	50,758	...	2,35,564 8 0
II., ...	Wet *Doomut*, ...	7,215	5 0 0	36,075 0 0
	Dry Ditto, ...	4,476	3 6 0	15,106 8 0
	Wet *Muttear*, ...	5,268	4 3 0	22,059 12 0
	Dry Ditto, ...	3,342	3 0 0	10,026 0 0
	Wet *Bhoor*, ...	16	3 0 0	48 0 0
	Dry Ditto, ...	22	2 0 0	44 0 0
	Total, ...	20,339	...	83,359 4 0
III., ...	Wet *Doomut*, ...	922	3 8 0	3,227 0 0
	Dry Ditto, ...	2,031	2 8 0	5,077 8 0
	Wet *Muttear*, ...	865	3 4 0	2,616 4 0
	Dry Ditto, ...	3,719	2 4 0	8,367 12 0
	Total, ...	7483	...	19,288 8 0
	GRAND TOTAL, ...	78,580	...	3,38,212 4 0

The average soil-rates work out on the *pergunnah* :—

	Rs. a. p.
Doomut, ...	4 10 7
Muttear, ...	3 12 11
Bhoor, ...	3 5 2

The crop-rates worked out and used in each circle were—

Crop.	Circle I.	Circle II.	Circle III.
	Rs. a. p.	Rs. a. p.	Rs. a. p.
Sugar-cane, ...	9 9 0	8 0 0	6 6 0
Cotton, ...	6 6 0	5 10 0	4 12 0
Mukka, ...	3 3 0	2 10 0	2 3 0
Garden crops, ...	6 6 0	5 10 0	4 12 0
Rice, ...	4 2 0	3 9 0	2 10 0
Bajra and coarse crops, ...	2 14 0	2 8 0	1 14 0
Wheat, ...	4 9 0	4 1 0	3 0 0
Barley and *gojee*, ...	3 13 0	3 6 0	2 8 0
Bijhra, ...	3 10 0	3 3 0	2 6 0
Gram, ...	3 3 0	2 11 0	2 1 0
Mussoor, linseed, &c., ...	2 4 0	2 0 0	1 8 0
Dosahi at half *pural* rates in all circles.			

These rates gave as rentals on the crop statement—

Circle I., ...	Rs.	2,32,761
„ II., ...	„	82,862
„ III., ...	„	23,026
Total, ...	Rs.	3,38,649

The *jumma* actually assessed at Rs. 55 per cent. on the assessable area was Rs. 1,83,131, besides Rs. 1,373 cesses on revenue-free land, making a grand total of Rs. 1,84,504, of which land-revenue is Rs. 1,66,237, and cesses Rs. 18,267. The land-revenue presumes a rental on the assessed area of Rs. 3,32,474 falling at Rs. 4-3-7 per cultivated acre. The incidence rates of the old and new assessments are—

	On total area.	*On malgoozari.*	*On cultivated.*
	Rs. a. p.	Rs. a. p.	Rs. a. p.
IX. 1833 *jumma*, ...	1 5 10	1 13 1	2 4 2
Expiring „ ...	1 6 3	1 12 2	1 14 10
New „ ...	1 11 0	2 2 1	2 5 3

The increase in assessment on the *malgoozari* area is Rs. 31,719 or 20·9 per cent.

(1) The cultivated area has increased by 14,965 acres or, 23·5 per cent.

(2) The irrigated, „ „ 20,537 „ 73·9 „

(3) Population, „ „ 157·1 persons, per square mile since 1846.

(4) Rents being generally by *butai*, the rents have increased by the full increase in prices.

(5) Zabti crops have risen from a proportion of 8 per cent. of the cultivated area at last settlement to 25 per cent. at the present.

(6) The new assessments were accepted at once and were generally considered very moderate by the *zemindars*, though a few relying on their carefully prepared (and utterly false) village papers, petitioned me for a reduction. On receiving copies of my orders, rejecting the petitions with my reasons in detail they dropped their complaints at once and went no further.

Nawabgunj.—The *pergunnah* lies between Ritcha and Beesulpore: rents are paid chiefly by *butai*. The classification of villages for assessment was much the same as that made at last settlement by Mr. J. W. Muir.

The first circle comprised the fine villages to the north-east and east on and along the Deoha and Afsurha. The second class, speaking broadly, contained the villages to the north-west and centre of the *pergunnah*; those along the Afsurea and Deorunean and those adjoining Furreedpore to the south. The third-class villages are in three distinct strips,—(1) the *khaput* villages to the south-east between Assora and Raipore; (2) the *bhoor* villages running from the Crore border along the Pungeilee north to Deorunean and Bhikumpore; and (3) the poor *bhoor* and *muttear* villages running from the Crore border up the Nukutea to Ahrola and Atunga. The soil-rates sanctioned for each circle; the areas and resultant rentals are as follows:—

Circle.	Soil.	Area.	Rate.	Resultant Rental.
			Rs. a. p.	Rs. a. p.
I., ...	*Doomut* I., ...	6,358	6 6 0	40,532 8 0
	Muttear, ...	1,916	5 0 0	9,580 0 0
	Doomut II., ...	344	4 3 0	1,440 8 0
	Bhoor, ...	87	3 3 0	277 5 0
	Khadir I., ...	766	5 0 0	3,830 0 0
	Khadir II., ...	284	3 10 0	1,029 8 0
	Total, ...	9,755	...	56,689 13 0
II., ...	*Doomut* I., Wet, ...	23,313	6 0 0	1,39,878 0 0
	Doomut I., Dry, ...	9,075	4 6 0	39,703 2 0
	Muttear, Wet, ...	17,455	4 3 0	73,092 13 0
	Ditto, Dry, ...	13,461	3 3 0	42,906 15 0
	Doomut II., Wet, ...	3,531	4 3 0	14,786 1 0
	Ditto, Dry, ...	3,935	3 3 0	12,542 10 0
	Bhoor, Wet, ...	1,259	3 3 0	4,013 1 0
	Ditto, Dry, ...	2,929	2 4 0	6,590 4 0
	Total, ...	74,958	...	3,33,512 14 0
III., ...	*Doomut*, I., Wet, ...	4,555	5 0 0	22,775 0 0
	Ditto Dry, ...	2,277	3 10 0	8,254 2 0
	Muttear, Wet, ...	2,930	3 10 0	10,621 4 0
	Ditto, Dry, ...	3,640	2 13 0	10,237 8 0
	Doomut II., Wet, ...	1,893	3 10 0	6,862 2 0
	Ditto, Dry, ...	2,206	2 13 0	6,204 6 0
	Bhoor, Wet, ...	1,027	3 0 0	3,081 0 0
	Ditto, Dry, ...	4,924	1 14 0	9,232 8 0
	Total, ...	23,452	...	77,267 14 0
	GRAND TOTAL, ...	1,08,165	...	4,67,470 9 0

The rates work out—

	Rs.	a.	p.	
Doomut, ...	5	1	4	per acre.
Muttear, ...	3	7	4	„
Bhoor, ...	2	4	3	„

The crop-rates worked out were as follows:—

Crop.	Circle I.		Circle II.		Circle III.	
	Pural.	*Dosahi.*	*Pural.*	*Dosahi.*	*Pural.*	*Dosahi.*
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Sugar-cane, ...	9 0 0	...	6 12 0	...	6 0 0	...
Pandrah, ...	9 0 0	6 0 0	6 12 0	3 6 0	6 0 0	3 0 0
Vegetables per year, ...	9 0 0	...	6 12 0	...	6 6 0	...
Cotton and hemp, ...	6 6 0	...	6 0 0	...	5 10 0	...
Mukka, ...	3 10 0	...	3 6 0	...	3 3 0	...
Rice, ...	4 0 0	...	3 12 0	...	3 0 0	...
Bajra and coarse khureef, ...	3 6 0	...	2 6 0	...	2 0 0	...
Wheat, ...	5 10 0	3 12 0	5 2 0	2 9 0	4 6 0	2 3 0
Barley, *gojee*, *bijra*, ...	4 0 0	2 10 3	4 8 0	2 4 0	3 9 0	1 13 0
Gram, ...	3 8 0	2 5 4	3 8 0	1 12 0	3 6 0	1 11 0
Musseor, peas, linseed, ...	3 0 0	2 0 0	2 4 0	1 2 0	2 4 0	1 2 0

Tha rentals resulting were—

Circle I., ...	Rs.	57,059
„ II., ...	„	3,29,585
„ III., ...	„	84,860
Total, ...	Rs.	4,71,505

The money-rates fixed in commutation of rents in many villages in each circle averaged as follows:—

Circle.	Number of villages commuted.	Wet Doomut.	Dry Doomut.	Wet Muttear.	Dry Muttear.	Wet Doomut, II.	Dry Doomut, II.	Wet Bhoor.	Dry Bhoor.	Khadir, I.	Khadir, II.
		Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
I., ...	12	6 11 3	...	5 4 5	...	4 9 3	...	3 3 0	...	5 7 3	4 2 2
II., ...	88	6 0 0	4 4 5	4 6 0	3 3 0	4 9 8	3 3 0	3 5 3	2 4 7	...	...
III., ...	20	5 4 0	3 12 9	3 14 9	2 14 2	3 11 0	2 13 8	3 1 1	2 0 0	...	...

The commutation rates would give rentals on the three circles:—

Circle I., ...	Rs.	60,330
„ II., ...	„	3,36,284
„ III., ...	„	92,621
Total, ...	Rs.	4,89,235

The *jumma* actually assessed on the assessable area at 55 per cent. of a fair rental was Rs. 2,51,176-8-0, besides Rs. 1,066 cesses on revenue-free lands, making a total of Rs. 2,52,242-8-0, of which Rs. 2,28,032-8-0 are land-revenue, and Rs. 24,210 cesses.

The land-revenue presumes a rental of Rs. 4,56,065 falling at Rs. 4-3-5 per cultivated acre. The incidence rates of the old and new assessments are—

	On total area.	*On malgoozari.*	*On cultivated.*
	Rs. a. p.	Rs. a. p.	Rs. a. p.
Jumma of IX. 1833 Settlement, ...	... 1 4 5	1 10 2	2 1 2
Expiring *jumma*,	... 1 3 8	1 7 0	1 10 4
New „	... 1 11 9	2 0 6	2 5 2

The increase by the new assessment (at 55 per cent.) on the *malgoozari* area is Rs. 72,795 or 40·8 per cent. over the expiring, and 37·7 per cent. over the IX. 1833 settlement *jumma*.

The increase in cultivated area since last settlement is 20,295 acres or 23 per cent.

„ „ irrigated area is, ... 15,103 or 32·8 „

„ „ population is, ... 157·7 per square mile.

Rents having been generally *butai*, the landlords have reaped the whole benefit of the increase in prices, I received hardly any objections to the new assessments for more than a year after they had been declared, and then a few petitions were given to me. The altered conditions of the Bygool caused by the *Sookhi* torrents being diverted into it (see under rivers east Bygool) may hereafter necessitate a reduction of assessment on some of the villages damaged by the Bygool floods.

The following statement shows at one view the rate of incidence of the old, the expiring, and the new assessments in each pergunnah :—

TABLE XL.

Pergunnah.	*Rate on total area of.*			*Rate on malgoozari area.*			*Rate on cultivated area.*		
	IX. 1833 jumma.	Expiring jumma.	New jumma.	IX. 1833 jumma.	Expiring jumma.	New jumma.	IX. 1833 jumma.	Expiring jumma.	New jumma.
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Fureedpore, ...	0 14 9	0 14 7	1 1 9	1 1 2	1 0 4	1 3 11	1 9 7	1 4 7	1 9 2
Crore, ...	0 15 7	0 14 3	1 5 6	1 5 6	1 1 4	1 10 1	1 13 6	1 4 4	1 14 7
Bullia, ...	0 15 9	1 0 3	1 8 8	1 4 8	1 3 0	1 12 10	1 9 11	1 5 8	2 0 11
Suneha, ...	0 14 8	1 0 11	1 8 2	1 4 6	1 3 9	1 12 2	2 3 2	1 7 9	2 1 11
Aonla, ...	0 12 2	0 12 6	1 4 0	0 14 6	0 14 8	1 7 6	1 14 8	1 2 11	1 14 3
Serowli, ...	1 0 2	1 0 7	1 4 11	1 4 10	1 3 9	1 8 11	1 15 5	1 6 2	1 12 0
Meergunj, ...	1 2 1	1 3 0	1 8 1	1 6 8	1 6 8	1 12 9	2 0 6	1 12 1	2 3 4
Beesulpore, ...	1 3 4	1 2 9	1 6 10	1 7 6	1 7 8	1 13 8	2 3 10	1 13 4	2 3 9
Kabur, ...	1 5 1	1 5 10	1 14 7	1 10 6	1 9 2	2 3 0	1 15 6	1 12 4	2 7 6
Sirsawan, ...	1 13 0	1 13 6	1 15 3	2 1 9	1 14 5	2 0 3	2 7 2	2 7 4	2 9 9
Chowmahla, ...	0 12 3	1 0 0	1 8 1	0 13 8	1 2 4	1 9 7	1 6 0	1 5 8	1 14 4
Ritcha, ...	1 5 10	1 6 3	1 11 0	1 13 1	1 12 2	2 2 1	2 4 2	1 14 10	2 5 3
Nawabgunj, ...	1 4 5	1 3 8	1 11 9	1 10 2	1 7 0	2 0 6	2 1 2	1 10 4	2 5 2
Total, ...	1 1 1	1 1 6	1 7 2	1 5 5	1 4 5	1 11 0	1 14 11	1 8 11	2 1 1

TABLE XLI.

The following Statement shows at once the Financial Results of the New Settlement.

Pergunnah.	Expiring jumma.	Cesses.	Total.	New jumma.	New cesses.	Total new demand.	Increase of land revenue.	Increase in cesses.	Total increase.	Increase per cent. of new, over old land-revenue.	Increase per cent. of new total demand over old total.
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.
	Rs.	Rs.	Rs.	Rs. a.	Rs. a.	Rs. a.		Rs. a.	Rs. a.		
Fureedpore, ...	1,45,694	1,821	1,47,515	1,61,604 0	16,211 0	1,77,815 0	15,910	14,390 0	3,300 0	10·9	20·5
Crore, ...	1,78,969	2,238	1,81,207	2,44,941 8	27,228 8	2,72,170 0	65,973	24,990 8	90,977 0	36·8	50·2
Bullia, ...	24,402	305	24,707	33,680 0	3,442 0	37,122 0	9,278	3,137 0	12,415 0	38·0	50·2
Sunehs, ...	56,578	707	57,285	73,230 0	7,905 0	81,135 0	16,652	7,198 0	23,850 0	29·4	41·6
Aonla, ...	64,207	803	65,010	93,285 0	9,643 14	1,02,928 14	29,078	8,840 14	37,918 14	45·2	58·3
Serowli, ...	37,858	495	38,353	45,400 0	4,786 12	50,186 12	7,542	4,291 12	11,833 12	19·9	30 8
Meergunj, ...	1,17,065	1,463	1,18,528	1,34,890 0	14,364 8	1,49,254 8	17,825	12,901 8	30,726 8	15·2	25·9
Kabur, ...	48,118	601	48,719	60,910 0	6,130 0	67,040 0	12,792	5,529 0	18,321 0	26·5	37·6
Sirsawan, ...	38,274	478	38,752	36,910 0	3,728 0	40,638 0	1,364	3,250 0	1,886 0	3·5	4·6
Chowmahla, ...	59,580	745	60,325	75,620 0	7,594 0	83,214 0	16,040	6,849 0	22,889 0	26·9	37·9
Ritcha, ...	1,51,412	1,893	1,53,305	1,66,237 0	18,267 0	1,84,504 0	14,825	16,374 0	31,199 0	9·7	20·3
Nawabgunj, ...	1,78,381	2,230	1,80,611	2,28,032 8	24,210 0	2,52,242 8	49,661	21,980 0	71,631 8	27·8	39·6
Beesulpore, ...	2,77,783	3,472	2,81,255	3,07,930 0	31,260 0	3,39,190 0	30,147	27,788 0	57,935 0	10·8	20·5
Total, ...	13,78,320	17,251	13,95,571	16,62,670 0	1,74,770 10	18,37,440 10	2,84,359	1,57,519 10	4,41,869 10	20·4	31·6

The above shows a considerable increase in demand. I assume that as the rent-rates for each pergunnah were submitted to, and sanctioned by, the Board, there is no necessity to go into the proofs of their fairness again here. If they were not too high, and again I say, I assume that the Board were satisfied on that point before sanctioning them, then my assessments cannot be too high. That I have not materially departed from those rates is proved by the following table. It should be remembered, however, that in the rate reports the estimated *jumma* at 55 per cent. was based on the results, given by the rent-rates on the cultivated area only, without taking into account sayer receipts, and the produce of the waste lands and new fallow :—

TABLE XLII.

Pergunnah.	Old waste in acres excluding groves.	New fallow.	Cultivated area.	Land-revenue at 50 per cent. as estimated in rates reports on column 5 only.	Land revenue at 50 per cent. actually assessed on columns 2, 3, and 4.
1.	2.	3.	4.	5.	6.
					Rs. a.
Fureedpore, ...	18,239	3,907	112,882	1,55,864	1,61,604 0
Crore, ...	4,425	3,543	140,688	2,34,797	2,44,941 8
Bullia, ...	2,152	71	17,972	35,390	33,680 0
Suneha, ...	6,608	217	38,032	73,890	73,230 0
Aonlah, ...	14,090	455	54,166	93,530	93,285 0
Serowli, ...	2,501	223	28,536	43,650	45,400 0
Meergunj, ...	13,532	631	67,071	1,30,460	1,34,890 0
Kabur, ...	2,726	233	27,129	99,000	60,910 } 97,820
Sirsawan, ...	1,407	289	15,543		36,910 }
Chowmahla, ...	6,537	909	43,883	75,400	75,620 0
Ritcha, ...	4,745	1,167	78,580	1,69,400	1,66,237 0
Nawabgunj, ...	11,680	1,636	1,08,165	2,32,960	2,28,042 0
Beesulpore, ...	21,567	1,850	1,51,346	3,05,550	3,07,930 0
Total, ...	1,10,209	15,131	8,83,993	16,49,891	16,62,670 0

Where the revenue is not in even sums, it is due to the *jummas* of the "*istimrar*" tenures which have remained unaltered.

The *average* pergunnah rates on *doomut*, *muttear*, and *bhoor* for all the pergunnahs are as follows :—

TABLE XLIII.

	Pergunnah.	Average rate on *Doomut.*	Average rate on *Muttear.*	Average rate on *Bhoor.*	Remarks.
		Rs. a. p.	Rs. a. p.	Rs. a. p.	
1	Fureedpore, ...	3 12 3	2 15 8	1 14 7	Bhoor bad.
2	Crore, ...	4 9 5	3 2 5	2 1 11	Ditto.
3	Bullia, ...	4 7 9	3 6 1	3 3 8	Bhoor, all khadir bhoor and good.
4	Suneha, ...	4 6 7	3 4 1	3 1 10	Ditto do. do.
5	Aonla, ...	4 2 3	3 2 11	2 7 3	Bhoor mostly bangur and not good.
6	Serowli, ...	4 0 7	3 5 10	2 2 2	Bhoor mostly bangur and bad.
7	Meergunj, ...	4 8 2	3 7 1	2 4 0	Ditto do. do. do.
8	Beesulpore, ...	4 7 0	3 10 1	2 5 10	
9	Kabur, ...	4 15 2	3 11 7	2 9 10	Bhoor moist low lying and above average.
10	Sirsawan, ...	5 2 6	3 13 4	2 10 7	Ditto do. do. do.
11	Chowmahla, ...	3 11 0	3 1 9	2 12 10	Ditto do. do. do.
12	Ritcha, ...	4 10 7	3 12 11	3 5 2	Bhoor of small extent, moist and good.
13	Nawabgunj, ...	5 1 4	3 7 4	2 4 3	
	Average for District, ...	4 7 4	3 7 11	2 2 9	

The average soil-rates of the money-paying and *butai pergunnahs* contrast thus :—

	Doomut.	*Muttear.*	*Bhoor.*
	Rs. a. p.	Rs. a. p.	Rs. a. p.
Money-paying *pergunnahs*, ...	4 4 10	3 5 6	2 2 7
Butai *pergunnahs*, ...	4 12 9	3 10 9	2 5 8
Percentage of increase in the butai *pergunnahs* over the money rented,... ...	11·5	9·8	11·6

The difference of about 11 per cent. is not more than enough to compensate the cultivator for the increased risk to himself of fixed money-payments where he has to bear the whole risk of bad seasons.

It is evident that the soils have in the long run been classed on similar principles throughout the district. The rates are much below the average in Fureedpore, as—

(1) The soils themselves are inferior.

(2) Cultivation is more slovenly, and carried on chiefly by the less industrious castes.

In Nawabgunj the *doomut* rates are above the average, as (1) almost every field is irrigable, and (2) the proportion of cultivation by the more industrious classes is much above the average.

In Chowmahla the climate and proximity to the Tarai district, with the consequent competition for cultivators, is sufficient to explain the low rates.

In Crore the *doomut* rate is above the average, owing to the high rates in many villages caused by the neighbourhood of the city, and the number of the more industrious cultivating castes.

In the following table all the main statistics of each *pergunnah* are collected together for purposes of comparison. To make the comparison more correct, I rate all old waste at 6 annas per acre for grass and grazing, taking good and bad together, deduct the result from the gross rental assumed for assessment and then dividing the remainder by the areas of cultivated and new fallow (all of which latter is probably cultivated by now), the result is the *assumed* rent-rate, as the rates of the *butai pergunnahs* are generally higher than those of the *pergunnahs* in which money-rates are prevalent, I put the latter together first, and the *butai pergunnahs* last, in the list.

TABLE XLIV.

Name of Pergunnahs.	Population per square mile.	Cultivated acres per male adult agriculturist.	Cultivated acres per plough.	Percentage of cultivated, to assessable area.	Percentage of irrigated, to cultivated area.	Percentage of cultivated area under *zabti* crops.	Percentage of under coarse khureef crops.	Percentage of khureef sown with a second crop for the rubbi (*dosahi*).
Fureedpore, ...	464	3·4	8 3	79·3	48·2	12·0	41·2	12·1
Crore, ...	883	3·9	8·7	85·3	37·9	17·0	34·2	11·3
Bullia, ...	675	3·3	7·2	87·5	15·4	11·1	28 8	45·3
Suneha, ...	666	2·8	7·1	83·1	27·6	16·2	27·3	50·0
Aonla, ...	587	3·4	7·7	77·5	27·5	14 3	34·0	29·7
Serowli, ...	556	3·9	8·9	89·1	17·2	10·5	46·0	8·4
Meergunj, ...	637	3·0	8·6	81·3	26 5	23·7	22·7	31·6
Beesulpore, ...	532	2·9	7·0	82·9	51·3	21·0	14·5	28·4
Kabur, ...	644	3·3	8·1	88·6	48·0	27·3	30·6	38·9
Sirsawan, ...	704		8·5	77·2	61·7	30·3	30·1	36·0
Chowmahla.	472	4·3	9·4	84·3	51·1	27·0	28·0	45·4
Ritcha, ...	583	3·2	8·4	91·5	61·4	25·0	19·0	37·6
Nawabgunj, ...	541	3·6	8·0	87·3	56·5	15·3	18·6	15·4
Total, ...	615	3·0	7·9	81·7	44·2	18·6	27·2	25·0

TABLE XLIV.—(*concluded.*)

Name of Pergunnahs.	Percentage of cultivated area held by the inferior cultivating classes.	Percentage of sandy soils to total cultivated area.	Percentage of pahi cultivation to total cultivated area.	Percentage of area cultivated by tenants held by tenants of will.	Average total area per proprietor recorded in acres and decimals.	Average real rent per cultivated acre before assessment.	Assumed rent-rate per cultivated acre after deducting for waste lands counting new fallow as cultivated.	Percentage of enhancement in rent calculated to take place after assessment on cultivated lands.
						Rs. a. p.	Rs. a. p.	
Fureedpore, ...	70·2	49·5	28·8	28·5	32·3	2 12 5	2 11 4	2·4
Crore, ...	50·8	38·6	13·5	18·1	52·9	3 4 6	3 6 1	3·0
Bullia, ...	74·5	22·2	23·3	20·8	19·9	3 8 9	3 11 0	3·9
Suneha, ...	58·2	14·4	30·4	20·0	28·5	3 6 2	3 12 2	11·0
Aonla, ...	58·7	24·9	34·6	18·1	43·1	3 1 2	3 5 1	10·0
Serowli, ...	69·7	55·2	25·2	20·9	62·5	2 15 9	3 1 11	4·5
Meergunj, ...	48·5	18·9	15·2	20·5	44·4	3 11 3	3 14 6	5·4
Beesulpore, ...	47·7	10·0	18·6	23·3	107·0	3 11 7	3 14 11	5·4
Kabur, ...	41·7	3·4	23·7	17·8	43·5	Butai.	4 6 7	...
Sirsawan, ...	33·4	2·5	10·4	28·5	61·8	Do.	4 10 0	...
Chowmahla, ...	49·5	0·5	8·3	42·8	101·2	Do.	3 5 1	...
Ritcha, ...	38·2	0·6	19·4	28·8	98·0	Do.	4 2 4	...
Nawabgunj, ...	37·9	20·2	12·6	20·7	92·1	Do.	4 1 9	...
Total, ...	58·7	...	19·5	23·7	54·5	...	3 10 5	...

The above statement speaks for itself, and does not require much comment. The enhancements assumed in the money *pergunnahs* is hardly more than is required to bring up to the general standard the rates of those villages which are rented at abnormally low rates. The *butai pergunnahs*, it will be observed, in every point which affects rents are better than those which pay money-rates. The nearest approach to them is made by Meergunj and Beesulpore, though even these have more sandy soil, much less irrigation, less *zubti* crops, less *dosahi*, more land cultivated by the less industrious castes, a larger percentage of *pahi* cultivation and smaller one of land held without occupancy rights. The slight difference in the assumed rent-rate is therefore fully justified. The differences between the rates of the several *pergunnahs* from one another can be similarly explained. The average assumed rent-rate on the whole district is not too high as it only differs by about 1 anna per *kutcha beegah* from the rate of last settlement, and the comparative statement given before of the prices fetched at sales and mortgages before, and after the new assessments were given out, prove to demonstrate that my settlement is not too high, as it has increased the value of land. My rates have been generally accepted by *zemindars* and cultivators with only about 1 per cent. of appeals, and in very numerous cases the parties have made up the rent-rolls to the amount on which I calculated without coming into court at all. That my settlement is not too low is, I think, sufficiently proved by the amount of enhancement in the demand against the *zemindars*—31·6 per cent. is no small amount. To go beyond this would check the prosperity of the district. The amount of enhanced revenue due to the canals is shown thus :—

TABLE XLV.

Pergunnah.	Amount of increased revenue due to canals.	Amount of increased revenue due to cesses.	Total.
Nawabgunj, ...	13,500	1,350	14,850
Chowmahla, ...	5,050	505	5,555
Kabur and Sirsawan, ...	3,640	364	4,004
Ritcha, ...	10,400	1,040	11,440
Total, ...	32,590	3,259	35,849

The details of the calculation in each pergunnah have been given at length in the pergunnah rate reports. It is unnecessary to repeat them here. If the canal-rates for water are raised hereafter, it will be necessary, if justice is to be done, to lower the

jummas of the villages now irrigated from canals, as I have taken into account in assessment the full benefit due to irrigation, deducting only from the rental received by the *zemindar* the share of the canal dues payable by him. In Bareilly the custom in *butai* villages is for the *asami* and *zemindar* each to pay the same share of the canal dues that they receive of the produce. Where commutations of rent have taken place, an abatement will have to be made in the rents of the cultivator, as he has been rated at the full value of the land as irrigated, deducting only the full canal dues, or an average of 8 annas per acre, as the custom in money-rented villages is to charge the *asami* with the whole water-rate. These points should always be carefully borne in mind, as if the water-rates are raised either (I) the people will refuse to take the water they now enjoy, in which case the collection of the new assessments based on the fact that the land is and will continue irrigated will become difficult if not impossible; or (II) if they take the water the increase in the water-rate will trench on the landlord's rent and share of profits. After a larger and closer experience of the agricultural condition of the district than any other official has ever had, I am persuaded that the cultivators cannot for any length of time, with average prices and produce, pay higher water-rates in addition to the present full money-rates fixed in commutation of the kind rents, and therefore the increase in the canal water-rates will have to be made good from the fund which now provides the landlord's rent, and if the rent be diminished, the land revenue will have also to be reduced. I regard our present system of including the increment in assets due to canal-irrigation in our estimated *jummabundi* for assessment as a flagrant blunder. The prominent objections to it are the following, premising that differential water-rates are out of the question :—

(1) It prevents any correct statement being drawn up of the true receipts of the canal, so that it is impossible to make out a true profit and loss account on the special canal in question.

(2) Government having created the whole extra profit due to irrigation from the public funds, can only recover at the best a moiety of that profit, the entire remainder being without reason surrendered to the landlord.

(3) Where new irrigation is created during the currency of a settlement, the whole of the profit except a small water-rate is retained by the landlord for the remainder of the term of settlement.

(4) Equality of pressure of the assessments becomes impossible, estates unirrigated at settlement, but which subsequently receive water, pay practically far less to Government than estates irrigated at time of settlement, though the rental assets are brought up to the same level by the water.

(5) To meet this difficulty the clumsy device of a "special landlord rate" or "acreage tax" has been invented, which will be inevitably regarded as an extra tax upon land and a gross violation of the terms of the settlement.

(6) Remissions of revenue are rendered necessary when the canal is closed for repairs, or when water previously supplied is diverted owing to changes in the direction of the main lines.

(7) The canal officers are fettered in the distribution of the water, and cannot dispose of it to the best advantage, while difficulties are opposed to enhancement of the water-rates.

(8) Complicated questions of compensation are created, which would never arise under a more rational system of assessment.

(9) Rent questions are needlessly complicated.

(10) The true value of the water can never be ascertained.

(11) A permanent settlement is rendered impossible, many other objections might be urged, but the above are sufficiently strong. The remedy is so easy and obvious, and the present time is so favourable to its introduction, that I still am sanguine enough to hope for its adoption. It is simply *everything else remaining the same* to assess land

irrigated from canals at dry rates. This removes every one of the above objections, Government has the command of canal-water and can demand any rent it pleases for its use. It is at the option of the landlord and tenant to take the water or not. If the tenant can derive any extra profit from its use over and above the cost of the water-rate and other charges, he will certainly take it. If Government finds the water running to waste, it will have to reduce the water-rate. If the water were withdrawn at once and for ever, it would make no difference in the *jumma*. The water would be economized, as a full rate being charged, it would not supersede wells unless the saving in cattle, time, and liberated labour fully compensated the cultivator for the extra money-payment. Government would recoup itself for the loss at assessment by the increased yield from water-rates and from the extension of irrigation. The greatest bar to permanent settlement would be removed, and all real ground of complaint taken from the people. All land irrigated from wells, tanks, or rivers (not forming a part of the canal system) would be assessed at irrigated rates as at present. The one slight alteration would make the whole difference. There could be no two opinions as to the financial results. The canal officers' hands would be untied. They would be able to manage the water to the best advantage, their judgment and energy could be tested by results, and it would very soon become obvious whether a canal paid or not.

The following statement shows the total amount of cesses and the amount available under each cess :—

TABLE XLVI.

Pergunnah.	School Fund at 1 per cent.			Road Fund at 1 per cent.			Dak Fund at 4 as. per cent.			Chowkidari at Rs. 7-12 per cent			Total.		
	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.
Fureedpore, ...	1,621	1	7	1,621	1	7	405	4	5	12,563	8	5	14,364	8	0
Crore, ...	2,722	13	7	2,722	13	7	680	11	6	21,102	1	4	27,228	8	0
Bullia, ...	344	3	2	344	3	2	86	0	9	2,667	8	11	3,442	0	0
Suneha, ...	790	8	0	790	8	0	197	10	0	6,126	6	0	7,905	0	0
Aonla, ...	964	6	3	964	6	3	241	1	7	7,473	15	11	9,643	14	0
S. Serowli, ...	478	10	9	478	10	9	119	10	9	3,709	11	9	4,786	12	0
Kabur, ...	613	0	0	613	0	0	153	4	0	4,750	12	0	6,130	0	0
Sirsawan, ...	372	12	9	372	12	9	93	3	2	2,889	3	4	3,728	0	0
Chowmahla, ...	759	6	5	759	6	5	189	13	7	5,885	5	7	7,594	0	0
Ritcha, ...	1,826	11	2	1 826	11	2	456	10	9	14,156	14	10	18,267	0	0
Nawabgunj, ...	2,421	0	0	2,421	0	0	605	4	0	18,762	12	0	24,210	0	0
Beesulpore, ...	3,126	0	0	3,126	0	0	781	8	0	24,226	8	0	31,260	0	0
Total, ...	17,477	0	10	17,477	0	10	4,369	4	3	1,35,447	3	0	1,74,770	10	0

In fixing cesses on the small revenue-free patches, I remitted the cess wherever it would have fallen below Re. 1. The same course I believe has been followed in other districts.

Kistbundis.—The instalments of payment have been arranged as far as possible in accordance with the circumstances of each village. It was impossible to lay down a hard and fast rule for the whole district, as in the south the *rubbi* harvest is nearly a fortnight earlier than in the northern *pergunnahs*. The convenience of the *zemindars* and cultivators was consulted as much as possible. In the last two tehseels, Buheree and Beesulpore, I did away with the November *kist* altogether, as the *khureef* is rarely off the ground completely till the 10th or 12th of November, and the grain cannot possibly be prepared for sale till some time after. The cultivators, where rents are paid in money were, under the old arrangement of *kists*, compelled to borrow their November instalments of rent, and were unnecessarily burdened with interest. Where rents are paid in kind, the *zemindars* were put to the same inconvenience. I myself was in favour of having two revenue *kists* only—one for the *khureef* and one for the *rubbi* ; but the *zemindars* did not approve of so sweeping an innovation, and I considered that they must know best what form and time of payment would be most convenient to them.

Durkhwasts.—The engagements were taken on the Board's lithographed forms. In the *pergunnahs* first assessed—namely, all but Kabur, Sirsawan, Ritcha, Chowmahla

and Nawabgunj,—the revenue and cesses were consolidated into one demand in accordance with the existing orders. In the latter *pergunnahs* engagements were taken for the amount of revenue only "exclusive of cesses."

Period of Settlement.—The Board could give me no orders as to the term for which engagements should be taken. I have therefore left the period blank in the *durkhwasts.* It can be filled up whenever final orders on the point are issued by Government. I should recommend a term of 20 years only, or even less. New canals are being constructed in every part of the district, and it is a matter of great doubt at present whether they will be a success either financially or in any other point of view, and it would therefore be advisable to fix a short term of settlement, but yet one sufficiently long to allow the canals to develop their full effects.

Always providing that prices of produce do not fall for any long time below 26 to 27 seers for wheat, and that the canal rates are not exorbitantly raised, there is every reason to believe that the new assessments will stand. In two sets of villages they may require alteration hereafter.

(1.) *In the villages along the Ramgunga.*—This river is so erratic in its course that the villages in its *khadir* are liable to constant alterations both in area and quality of soil, and consequently the *jummas* must be constantly varying The greatest care should be taken to proportion the reductions or enhancements on account of diluvion or alluvion to the *quality* of the land lost or gained, which should always be entered in the summary settlement statements sent to the Board. The alterations in *jumma* should not be made solely by applying the incidence rates of my *jumma* on the cultivated or *malgoozari* area to the area lost or gained, and deducting or adding the result to the old *jumma.* This system is utterly erroneous, and will greatly injure the zemindars in some cases, Government interests in others. The land lost or gained should always be classified into *khadir*, 1st, 2nd or 3rd class, if culturable, and the "10 per cent." loss or gain in area should always be calculated on the area entered as *assessable* at settlement. The area entered as barren in the settlement papers should always be examined, to see if it has become culturable by fluvial deposits since settlement; and if this change has happened, it should be treated exactly as if it had been gained by alluvion. A neglect of this hitherto has lost Government very many thousands of rupees in Bareilly alone.

(2.) The only other part of the district in which the working of the new assessments will require careful watching is the tract traversed by the east Bygool and within the reach of its floods. Since this tract was measured the Sookhee has been turned by the Canal Engineers into the Bygool, and, as Captain Tickell has stated, the bed of the Bygool was not large enough to carry off the increase supply of water, and the river has practically been changed in its character. It now resembles a hill stream, and the floods from it in the rains are very destructive to the *khureef* in the villages along its banks. If these floods continue, and no engineering arrangements can prevent them, it will be necessary to lower the assessments. This should be done by reducing the assumed rent-rate for *muttear* to Rs. 2-6-0 or Rs. 2-10-0 per acre. At present the assumed rate ranges from Rs. 3 to Rs. 3-12-0. The tract, however, should be at once examined by a competent engineer with a view to obviating these floods, and remedying the great mischief caused by the diversion of the Sookhee into the Bygool.

Arrangement of Putwaries' Circles.—After the completion of the assessments, the old *putwaries'* circles were revised. The former arrangements were found to be very faulty. The circles had been roughly arranged by a Deputy Collector a few years after the mutiny, but had never been reported or sanctioned.

The principal faults were :—

(1) Many circles were composed of villages not contiguous to each other.

(2) Some circles were as much too small as others were too large,—for instance, the little village of Tanda Chunga in Chowmahla, with a land revenue of about Rs. 200, formed one circle, and the large village of Goorgaon in Aonla, with a land revenue of Rs. 9,000, also formed one circle. So also in Nawabgunj, the Jubeda Jubedee circle contained 10 villages, with a revenue aggregating nearly Rs. 4,000. Many other similar instances of both kinds could be given.

The arrangements made are shown in the following table :—

TABLE XLVII.

Tehseel.	Total revenue.	Area excluding maafee villages.	Number of Putwaries. 1st Class.	2nd Class.	3rd Class.	Average jumma per circle.	Average area per circle.	Rate on revenue of fees per cent.	Total Fee Fund.	Putwaries Fees.	Balance with Collector.	Number of Putwaries under former arrangements.	Number of Putwaries under present arrangements.
						Rs.		R.a.p.	Rs. a. p.		Rs. a. p.		
Fureedpore,	161,604	159,721	21	42	45	1,496	1,489	6 4 0	11,110 4 0	10,332	778 4 0	110	108
Crore, ...	246,605	186,478	51	50	43	1,712	1,295	5 8 0	14,919 9 3	14.532	387 9 3	154	144
Aonla, ...	248,145	191,481	57	44	33	1,838	1,418	6 4 0	15,509 1 0	13,920	1,589 1 0	108	134
Meergunj,	134,890	95,194	31	22	22	1,798	1,269	5 8 0	8,160 13 6	7,680	480 13 6	75	75
Buheree, ...	342,380	213,176	57	87	22	2,038	1,269	6 4 0	21,398 12 0	20,928	470 12 0	189	166
Nawabgunj,	232,150	138,567	62	38	8	2,149	1,283	6 4 0	14,509 6 0	13,056	1,453 6 0	110	108
Beesulpore,	307,930	234,412	72	45	41	1,949	1,484	6 4 0	19,245 10 0	18,300	945 10 0	152	157
						Average.							
Total, ...	1,673,704	1,219,029	351	328	215	1,854	1,358	...	1,04,853 7 9	98,748	6,105 7 9	898	892

In column 2, "total revenue," the assessed revenue on khalsa villages and the assumed revenue in *istimrar* villages is entered—that is, the revenue on which cesses were calculated has invariably been entered.

Column 9, "rate per cent. of revenue taken as fees."—In Fureedpore, Crore, and Meergunj the cess was taken on the total demand of revenue and cesses together, not revenue only. In Fureedpore this was done as the tehseel was a poor one, and there would hardly otherwise have been a sufficient fund. In Crore and Meergunj the Rs. 5-8-0 per cent. on the total demand equals the Rs. 6-4 per cent. on the revenue only of the other tehseels which is the same that has always been paid, *viz.*, half an anna in the rupee of the rental. In arranging the circles the principles always kept in view were :—

(1) To disturb existing arrangements only when absolutely necessary to secure compactness, and such an amount of work as could fairly be expected to be done thoroughly by one *putwari*.

(2) To consult the convenience of the *zemindars* as much as possible.

(3) To injure as little as possible the rights of the existing *putwaries*.

To secure these ends, the arrangements first proposed were drawn up and notified at the tehseel, and all parties encouraged to bring forward objections, which were almost carefully gone into; and, in accordance with the decisions on the objections, the arrangements were revised and finally completed.

In classifying the *putwaries*, the arrangements were based on their qualifications and character. In hard cases the amount of fees formerly received was taken into consideration. The classification is purely personal, and a *putwari* can be promoted or reduced without being removed from his circle. This will strengthen the hands of the Collector in future. Hereafter no *putwari* should be entered in the first class who cannot survey with a plane-table. Any *putwari* who has not drawn up a correct

jummabundi for the year after going over the whole village should be reduced a grade till the next year. A few strict examples will soon ensure the village papers being kept up with fair correctness. In tehseels Furreedpore, Crore, Meergunj, and Aonla the pay of the three grades has been fixed on the scale laid down by the Board, *viz.*, 10, 8 and 7 per month. In Nawabgunj and Beesulpore, on account of the kind rents and the different forms of money and crop rates prevalent, which entail more work if correctness is aimed at, I raised the pay by Re. 1 per month in each grade.

In *tehseel* Buheree on account of the *butai* rents, combined with the comparative unhealthiness of most of the villages, I fixed the same rates that were sanctioned in the neighbouring and similar pergunnah of Jehanabad, *viz.* Rs. 12, 10, and 8 per month. I wish to have had in each *tehseel* a Superintendent of *putwaris* and in five of the seven *tehseels* I had appointed picked men on Rs. 15 per month, paid from the Fee Fund. Their duties were to keep the monthly accounts of pay, to superintend measurements in the *tehseel*, which are always going on in alluvion and diluvion cases, land taken up for public purposes, &c., and to aid in testing putwaris papers. They would have been most useful men, as I had specially selected them for the work, but the present Collector, Mr. Daniell, has since reported that they are not necessary, and with the Commissioner's sanction they have all been dismissed—a great pity, as they would have been most useful, and there was ample work to employ their time.

Work disposed of.—Besides all the measurement and assessment work there was a vast amount of judicial work and miscellaneous applications to be disposed of. There were two or three opposing claims to almost every grove in the district. In the village papers hitherto all these groves had either been entered as "bagh zemindar" or simply "bagh," with no entry as to whom it belonged. These incorrect entries have always been a fertile source of dispute in Bareilly, which I hope has now been effectually closed. In the grove statement, which is in every misl, full particulars will be found as to the ownership of the land, and the ownership of the *trees.* Wherever the ownership of land and trees is distinct, the land reverts to the owner as soon as it is cleared of trees, and cannot be replanted without his permission.

The cases under Act XIV., 1863, have been very numerous for enhancement and commutation of rents. The following statement shows the number of cases of all descriptions decided in the settlement Courts :—

TABLE XLVIII.

Name of year.	Description of Cases.						
	Cases under Regulation VII. 1822, including all disputes concerning rights and interests, &c.	Cases under Act XIX.	Rent cases under Acts X. and XIV.	Boundary disputes.	Appeals.	Miscellaneous.	Total.
From the commencement of settlement operations to 30th September, 1866, ...	476	...	298	771	34	793	2,372
From 1st October 1866 to 30th September, 1867, ...	1,172	57	113	169	...	1,956	3,467
" 1st " 1867 to 30th " 1868, ...	2,489	221	...	83	14	3,636	6,443
" 1st " 1868 to 30th " 1869, ...	3,196	...	348	95	161	3,215	7,015
" 1st " 1869 to 30th " 1870, ...	2,856	...	305	47	124	5,943	9,275
" 1st " 1870 to 30th " 1871, ...	3,277	...	437	32	158	8,529	12,433
" 1st " 1871 to 30th " 1872, ...	2,784	...	796	3	102	6,010	9,695
Total. ...	16,250	278	2,297	1,200	593	30,082	50,700

The following shows the entire cost of the Bareilly settlement operations, exclusive of Pillibheet, under each head of the budget from the commencement to the 1st instant (October, 1872). A full detail is given in the Appendices :—

TABLE XLIX.

Charges.	Amount.
	Rs. a. p.
1. Pay and travelling allowance of officers, ...	1,74,302 12 2
2. Pay and travelling allowance of fixed establishment, ...	40,709 2 5
3. Cost of measuring establishment, ...	50,659 8 7
4. Khuteonee Establishment, ...	29,307 12 5
5. Khewut and records of rights, ...	17,346 1 10
6. Testing establishment, ...	24,911 3 0
7. Deputation allowances, ...	1,141 14 11
8. Contingencies of fixed and variable establishment, ...	8,113 6 1
9. Job-work, ...	28,682 13 0
10. Stationery, ...	11,717 6 1
11. Office furniture, ...	805 4 8
12. Pay of settlement guard,...	506 4 0
13. Office house-rent, ...	5,224 11 8
Grand Total, ...	3,93,428 4 10

Besides the above, Rs. 24,354-10-2 were expended in Pillibheet, as at first there was only one district budget. This sum has probably been taken into account in the cost of the Pillibheet settlement.

The total increase in the new demand is Rs. 4,41,869. Taking the entire Bareilly expenditure at Rs. 3,95,000, from beginning to end, it is 21·5 per cent. of 1 year's demand, and 89 per cent. of the enhancement in demand for one year; but the entire cost has been paid off ere this as shown by the following statement :—

TABLE L.

Tehseel.	Increase in demand.	From what date new assessments were collected.	Total increased demand to 1st July, 1872.
	Rs. a. p.		Rs. a. p.
Fureedpore, ...	30,300 0 0	1st July, 1869,	90,900 0 0
Crore, ...	90,977 0 0	" " 1869,	2,72,937 0 0
Meergunj, ...	30,726 8 0	" " 1870,	61,453 0 0
Aonlah, ...	86,017 10 0	" " 1871,	86,017 10 0
Nawabgunj, ...	71,631 8 0	" " 1871,	71,631 8 0
Buheree, ...	74,295 0 0	" " 1872,	...
Beesulpoor, ...	57,935 0 0	" " 1872,	...
Total, ...	4,41,882 10 0	...	5,82,939 2 0

I trust that in connection with the amount of work done, the fact may be taken into consideration that in proportion to the size of the district, I have had less assistance than I believe was given to any other settlement officer. Mirza Vicar Ali Beg was appointed to the settlement as Deputy Collector on the 1st March, 1866, and remained till its completion. Pundit Ajoodhia Pershad was appointed Deputy Collector on the 8th June, 1868, and was transferred to Jhansie on the 1st January, 1869, and was retransferred to Ba reilly on the 6th December, 1869, and remained till the 31st March, 1872. He did not give me the assistance I expected, and I was compelled to withdraw whole classes of cases from his cognizance, as he showed an utter incapacity to settle them. Mr. Porter was appointed as Assistant Settlement Officer on the 6th March, 1869. Thus for nearly half the time that the settlement was in progress, I had only one officer under me with powers under Regulation VII., 1822 and IX., 1833, while in other districts smaller than Bareilly there were from three to five officers with those powers besides the settlement officer, and an assistant also in some cases. Had not Vicar Ali been a most exceptionally good and hard working officer, the work must have broken down. I hope that his great services may be soon recognized by the promotion which he most thoroughly deserves. Mr. Porter after he had learnt his work rendered me valuable assistance, and assessed Pergunnahs Bullia, Kabur, Sirsawan, and Ritcha, under my supervision.

Regarding the settlement there is no more to be said, time no doubt will bring some errors to light; for errors there must be in all settlements, by whomsoever conducted;

but no time or labour have been spared to reduce them to a minimum. The settlement of the villages along the Ramgunga in Crore and Suneha will require revision, as I understand that the river has shifted its course some miles to the west during the severe rains of last year and this year. If the revenue in other parts be found difficult to collect after the new canals have been made, and the water-rates have been increased, the difficulty must not be attributed to the assessment. I must protest against this beforehand. I have already stated to Government that the new canals, as a rule, will only substitute one form of irrigation for another. The average produce received by the tenant has been carefully calculated. If his net receipts over and above what is necessary to maintain him and his family be reduced by the new water-rates, he will be able to pay so much less rent to his landlord, while under all circumstances, the profit of the landlord will be diminished by the amount which he has to pay as his share of the canal dues, and these amounts have already been taken into account in assessment. If the water-rates in the *butai pergunnahs* be enhanced, the assessment should in fairness be reduced; and if this is not done, difficulties will be experienced in the collection of the revenue, and I must in no way be held responsible for these difficulties.

In addition to revenue, the following sums are also collected according to a statement supplied to me from the Collector's office:—

Head of Receipt.	1866-67.	1867-68.	1868-69.	1869-70.	1870-71.
	Rs.	Rs.	Rs.	Rs.	Rs.
Abkaree, ...	87,941	75,597	63,010	32,639	52,192
Stamp, ...	106,299	173,854	179,626	201,112	196,186
Ferries, ...	36,016	31,376	28,871	21,048	30,555

Income-tax collected on land profits in 1870-71 amounted to Rs. 49,398, and on trades and professions to Rs. 46,900. The estimate for 1871-72 was on land, Rs. 17,760.

Trades, Rs. 13,694.

To the above must still be added the collections by municipalities, and now I may bring this report to a close, with an apology for the great length to which it has extended.

S. M. MOENS,

Settlement Officer, Bareilly.

APPENDIX.

DEMI-OFFICIAL.

FROM

S. M. MOENS, ESQ.,

Settlement Officer, Bareilly,

To

JOHN INGLIS, ESQ.,

Commissioner, Rohilkhund, Nynee Tal.

DATED 19TH AUGUST, 1867.

SIR,

I HAVE the honor to submit the following report on the classification of mouzahs, the past and present fiscal condition, and the rates of settlement which I propose to adopt in the Pergunnah of Fureedpoor in this District.

I consider it advisable to forward this report demi-officially for sanction. I do not wish until the new jumma is declared, to pass the report through the Collector's office, as the proposed rates would thereby become universally known.

I have, &c.,

(Sd.) S. M. MOENS,

Settlement Officer.

Pergunnah Fureedpoor is situated to the south of the District. It is bounded on the north by Pergunnahs Crore and Nawabgunj, east by Pergunnahs Beesulpoor and Powaen, south by the Shahjehanpoor District, and to the west by the Ramgunga river, which forms the boundary (*dhar dhura*) with the Budaon district. The Imperial road to Futtehgurh runs directly through it for about 15 miles.

The early history of the pergunnah is wrapped in obscurity; what few details I have been able to discover I will reserve for my final report. It is now almost entirely held by Junghara Thakoors, who claim to be a branch of the great Tamur clan. They represent themselves to have been driven from the neighbourhood of Dehli by the persecutions of Shahab-ood-deen. They all trace their descent from Jungpal, a son of Anungpal, the predecessor of Pirtheeraj, but either this is entirely a fabrication, as the last Anungpal left no legitimate male issue, or they are descended from an illegitimate branch, or else, which seems probable from their own genealogies, they are descended from a previous Anungpal, as the name was assumed by each successor of Beesundeo, the restorer of Indraprestha in 792 A. D. They entered Fureedpoor from the south under the leadership of two chiefs, named Hathi Singh and Juppunsah, about 10 generations back, and settled at Pura, (now Fureedpoor) Sisseya, and other spots. The pergunnah was then held by the Ahir Rajahs of Beesulpoor, but the Jungharas wrested it from them, and have held their ground ever since; always with a peculiarity which still distinguishes them; siding with the party in power, and always on the winning side. They thus escaped the ruin which befell the Khutheryas at the hands of the Rohillas and the Oudh Wazeer. Their internal jealousies and dissensions alone prevent them from acquiring power and influence. Combined, they would be a match for all the Mahomedans in the district.

Their present leaders are the Thakoors of Boodhowlee, Raepoor, Nugurea, and Keara in Crore.

The pergunnah generally is the poorest in the district. With the exception of the villages to the west along Ramgunga, and to the north-east on the Bygool and Kylas, the soil of the remainder is, as a rule, sandy and unproductive, unless assisted

by irrigation; where facilities for the latter do not exist, the produce in other than a favorable season, will hardly repay the cultivator for the seed and labor he has expended; when, however, the rains have been abundant and seasonable, the lands of this pergunnah yield a fair return on the *khureef*, more profitable in proportion to the labor expended, than those which are naturally more productive, as remarked by the last settlement officer in 1835 (see para. 8 of his report.)

"A pergunnah like Fureedpoor is precisely the one to exhibit sudden fluctuations in its agricultural condition, from the operation of temporary causes. The soil is generally so light as to require but little outlay to bring it under tillage, and when the new land ceases to yield a remunerative return, it is abandoned without much loss in the contraction of agricultural capital." The remark is as true now as it was then, and explains the rapidity with which the pergunnah recovered from the effects of the drought and famine of 1835. There are but few large proprietors. The villages are generally small, averaging only 330 acres. In some instances, too, the number of people dependent on the produce of the village for actual subsistence is very considerable, and in such cases, though the assessment be ever so moderate, little will remain, after payment of the Government revenue and the immediate expenses of the zemindars, which could be applied to the improvement of the estate. The loose and sandy substratum prevents the construction of *pucka* wells. In the absence of more efficient means, general recourse is had to the expedient of digging small *kutcha* wells, at the time when irrigation is most needed. These demand an expenditure of about two days' labor, and from Re. 1-8 to Rs. 3, according to the depth to water. They are mere holes about two feet in diameter, and worked either by a wheel and two or more *ghurras*, or by a *dhenkli* or lever, the water being in most parts within 12 to 15 feet of the surface. Even in these small wells, the soil is constantly falling in, and the only means by which they are kept efficient, till the *rubbee* harvest, is by lining them with rolls of *bajra* stalks. This device prevents to a certain extent the saturation of the sandy soil, and keeps the wells open as long as they are required for irrigation. They are then abandoned and destroyed by the annual rains. They are capable of irrigating from half to one acre in the harvest. It is only in the extreme south-east corner that the *lao* and *chursa* are used, and that only in 8 or 9 villages.

The percentage of irrigated land on the total cultivated area of the pergunnah is 47·08 per cent.

The population is almost entirely agricultural. There is no considerable depôt or mart, and no trade or manufacture of any consequence is carried on. The produce of the pergunnah, not required for the immediate consumption of the inhabitants, is either bought up for exportation by the Bareilly merchants, or carried off by *beoparees*.

The last census (see Appendix A) returned the population of the pergunnah at 1,15,557, on an area found by the recent survey to be 251·27 square miles, giving a density of 459.9 per square mile. The number of the male agricultural adults was 32,992 to a culturable area of 143·228 acres, giving an average of 4·34 per man. These statistics afford strong grounds for hope that the present high pitch of cultivation will be maintained in the absence of sudden and unforeseen calamity. The rents being universally paid in money, the cultivating classes have reaped the full benefit of the uniformly high prices that have ruled for agricultural produce during the last nine years, and which have been due, not to deficient harvests, as in the early years of the expiring settlement (see Appendix B), but to an increased demand for exportation to the Doab and the west.

2. The revision of assessment of the Pergunnah under Regulation IX., 1833, was carried into effect by Mr. Conolly. It took effect from 1242 F. S. The old jumma stood at Rs. 1,35,826. The revision raised it to 1,44,324, giving an increase of Rs. 9,905, from which, however, must be deducted Rs. 3,403 on account of annexations from other pergunnahs and the Shahjehanpoor District, leaving a net increase of Rs. 6,502. The Pergunnah was at the time of settlement considered to be so highly cultivated as to press closely on the verge of its capability of extension. This, however, appears inconsistent with the results of the professional survey, which shewed that only 86,731

acres were under cultivation, out of a *malguzaree* area, as the pergunnah then stood, of 1,29,915 acres, leaving an available area of 42,984 acres for further improvement. The difficulty, was, however explained by the statement that much land had been included by the surveyor in the culturable waste, of which the soil was of too poor a quality to afford a remunerative return under ordinary circumstances. The settlement officer remarked in para 12 of his report:—"generally I am inclined to think that, "taking into consideration the inferior character of the soil, and the want of means "for natural or artificial irrigation, the pergunnah may be considered in a very fair "state of cultivation, and that even with the advantages of a 20 years' lease, the culti-"vation is more likely to fall off than increase. One thing is allowed on all hands, that "the present year (1241) exhibits more tillage than was ever known before, even when "prices were at their highest, so that, as regards past experience, at least, the cultiva-"tion is now at a maximum, and the chief room for improvement is in the substitution "of the better articles of culture for those of inferior value."

The revenue statistics founded on this extension of cultivation justified a hope that the jumma fixed, though its amount exceeded what had ever been imposed in any previous settlement, would be collected without difficulty in good seasons.

3. The settlement, however, had two serious defects. First and foremost, though the jumma was fair in the aggregate, it was not distributed in detail with sufficient care, so that it fell very unequally on villages of relatively equal capacity. The Commissioner in reporting on the settlement in his letter No. 61, dated 29th March, 1836, para. 32, remarks:—

"The great mistake made by Mr. Conolly, has I think arisen from his having "assessed by estimate on *talookas*, leaving the apportionment on the separate compo-"nent parts to be afterwards adjusted, whereas had he assessed the component villages "and *puttees* of the *talookas* correctly by an average rate on the classes to which they "belong, and merely corrected this detailed statement by the gross demand, such a "course would have shewn against the *talookas*, and his settlement would have been "more generally equal and satisfactory."

The next great error is thus described by the Commissioner in para. 5 of his letter. "The surveyor in the first instance has not measured off the culturable waste of the se-"veral *puttees* (in the *khitbut* villages) as component parts of the mehals with which the "*puttees* have been assessed, and the Collector has accepted the Surveyor's returns in this "state, and completed his settlement on the cultivated area only, and the proportion of "waste belonging to the separately assessed numbers, is consequently left to be divided "off or disputed in future by the several claimants."

This latter omission was fertile in its evil results. It gave rise subsequently to an immense amount of litigation, and was the main cause of the numerous and bloody affrays for which this pergunnah was so noted until 1857.

4. For these and other defects the settlement was condemned in toto by the Commissioner, but it was sanctioned by the Board and Government. Unfortunately, the drought of 1837 almost immediately followed the completion of the settlement, and this part of the country became the scene of unprecedented misery and distress, which was aggravated by the numberless dacoities committed on the grain merchants.

A general dispersion of the people took place, and though numbers returned with the ebb which followed on an improved state of things, still a large proportion had been carried off by famine and sickness, while many cultivators had located themselves on more fertile lands in other parts of the country, sooner than return to the poor and uncertain *bhoor* soils which form the broad ridge running the whole length of the pergunnah, on the watershed of the Bygool and Ramgunga. The result was, that it was very difficult to get the poorer *bhoor* lands brought into cultivation again, a difficulty which was materially enhanced by the competition for agricultural labour, which increased in intensity throughout the whole of the district, as fast as the new jum-

mas in each pergunnah under the revision of settlement were declared. An idea may be formed of the condition of the pergunnah from the statement in the margin, which shows that out of 413 mehals, then composing the pergunnah, 157 changed hands in the seven years from 1835 to 1842 ; and there is little doubt that the transfers would have been still more numerous, had it not been that land at the time was so depreciated in value, that it was only the more profitable villages which could find purchasers at all at any price.

Number of villages sold for arrears of revenue, ...	4
Do. farmed for arrears, ditto, ...	74
Do. sold at auction under decrees of the Civil Court, ...	33
Do. sold by private sale, ...	46
Total, ...	157

5. The annexed statement shows the relief which it was found necessary in 1841-42 to afford to the rapidly deteriorating pergunnah :—

Number of villages to which relief was afforded.	Settlement jumma.	New Jumma.					Amount of Permanent reduction.
		1841-42.	1842-43.	1843-44.	1844-45.	1845 to end of settlement.	
128	47,174	45,847	38,184	40,502	41,449	41,710	5,564

Under this seasonable relief which, though not great in amount, was afforded promptly and with great discrimination, the pergunnah gradually recovered, and by 1852 had almost attained its former prosperity. But the effects of the unequal distribution of the jummas on the separate villages remained still in operation.

6. From Appendix C. to this report, being a statement of proprietary mutations since the settlement, it will be seen that out of a total jumma of Rs. 1,45,814, property re-presenting a jumma of Rs. 1,09,698-3-9 has changed hands; of this amount, land assessed at Rs. 60,969 has passed permanently out of the hands of its original owners. The whole of this great revolution of landed property is not chargeable to the severity of the assessment. It was in part caused by the improvidence, extravagance, and bad management of the Thakoor zemindars who form the greatest part of the proprietors, and in part by errors and omissions in the settlements, the result of which, as foreseen by the Commissioner at the time, (see para 33 of his report) was that proprietors " allowed portions of their separately assessed estates to be brought to the hammer". The jummas as noticed above were assessed on the talookas, and in many cases the proprietors were allowed to distribute the jummas of the component villages as they pleased, and the natural results followed: a third cause was the extreme slovenliness with which the records of rights were drawn up. Rights were left undefined. The *khewuts* of *bhyachara* villages were drawn up as for zemindaree villages, with the minutest fractional subdivision of shares down to " *nunwansees*," and the jumma apportioned accordingly, while the actual tenure was by customary possession. Of course the sharers who held less than the fractional share entered in their names were ruined; and the amount of litigation to which these incorrect records gave rise was but little less ruinous to the litigants, even to those who gained their suits.

Still the pergunnah gradually improved by the extension of cultivation, the *jumma* was increased to Rs. 1,45,834 by the transfer of a number of villages from Tehseel Crore in 1853, and the operations of the Special Commissioner under Regulation II of 1819. The revenue was henceforward realized regularly, though only by the expedient of collecting in many villages directly from the *putteedars*; the *lumberdars* being put on one side.

The comparative area and *jumma* statement, Appendix D. will show that, notwithstanding all drawbacks, cultivation has increased from 89,768 acres to 113,677, being an increase of 23,909 acres, or 26·62 per cent. since the last settlement; although even at that time cultivation was considered to be at a maximum. Of this, however, about

3,000 acres is due to the resumption of invalid *Lakhiraj* tenures by the Special Commissioner under Act II., 1819, and about 1,800 acres to the summary resumption by me of invalid unregistered *maâfees* and *chowkeedaree* lands, which have been included in the *khalsa* ; as under the new settlement the *chowkeedars* will receive fixed monthly wages, instead of as heretofore an allowance of rent-free land. The above review of the past fiscal condition of the pergunnah will prepare the Commissioner and the Board for the conclusion, that no very considerable increase is to be expected by the present revision. I trust that the result will be satisfactory to them.

7. I now proceed to notice the classification of villages which I have adopted, and the rates on the separate circles into which I have divided the pergunnah for assessment purposes. The detail for each circle and the rates proposed for adoption will be found in the Appendix D.

In classifying the several circles, I have endeavoured, as far as possible, to adhere to natural distinctions, avoiding all arbitrary classifications and minute sub-divisions, which I believe to tend only to the multiplication of error. The pergunnah is naturally divided into five great classes, which I will describe separately, beginning with the westernmost side of the pergunnah, or that bordering on the Ramgunga, which I call, as it is called by the people, the Turaeen circle. This is situated in the low lands, or the valley of the Ramgunga. The estates comprised in this circle are generally much superior to the average of the pergunnah, and are unusually fertile, and profitable. Rice, bajra, and wheat, are the chief staples, but sugar-cane is also produced without the necessity of irrigation, which the inherent moisture and humidity of the soil render totally superfluous, and without the intense and protracted labor which the cultivation of that crop under ordinary circumstances demands. The cane is, it is true, inferior both in size and in the quantity of saccharine matter which it yields to that grown in the uplands, but there is a vast difference in the cost of production, and while the upland cane occupies the ground for three seasons, (1 fallow, and 2 on the ground) the Turaeen cane requires no fallow, and occupies the ground for two seasons only. The circle was formerly exposed after very abundant rains, to inundations from the Ramgunga, and consequent ruin to the autumn crops. These severe floods, however, have been unknown for more than 20 years, and though the recent floods (in 1867) have been heavier and more sudden than have been known for years, yet with but few exceptions they have not interfered with the sowings for the autumn crops. No drought on the other hand, will so far deprive the land of its natural humidity as to render it unprofitable. This circle consequently has suffered less from forced transfers of property than any other part of the pergunnah. The estates on the banks of the river are liable to loss of area by diluvion, but care has been taken to mark off the portions thus exposed to injury, and they will be settled as separate *chucks*. Owing to the risk of injury to the crops from floods, deposits of sand, and other causes, the rent-rates are considerably lower in these portions, and a separate set of rates has consequently been investigated for them. Most of the villages in the circle are held by the large community of the Raepoor and Deeppoor Thakoors, and a considerable proportion of the cultivation is carried on by the proprietors themselves. A glance at Appendix D. will show the wonderful progress made in this circle since last settlement, cultivation having increased by nearly 46 per cent. The soil is principally a rich deep loam ; nearer the river there is an admixture of sand, greater or less according to the depth of the alluvial deposit. East of this is what I have called the *adh kutcha* circle, as it is so called by the people themselves. It is composed of villages, whose lands are partly on the uplands, and partly in the low *khadir* ; the line of the division of the two being strongly defined by a sudden drop in the level, marking the original bank of the Ramgunga. The productiveness and value of these villages of course vary according to the greater or less amount of *khadir* which is similar to the first class *khadir* of the Turaeen circle. The uplands generally are sandy, but here and there are patches of good soil. There is but little irrigation, as it is not required in the *khadir*, and as a rule, the sandy substratum in the upland does not admit of the construction of *kutcha dhenkli* wells. In these villages there is usually one fixed rent-rate per beegah for all

The percentage of irrigated land on the cultivated area of this circle is 8·9 per cent.; of the inferior soils, 21·2 per cent.

The percentage of irrigated land on the cultivated area is 30·6 per cent.: of the inferior soils, 48·1 per cent. of the whole.

crops on the uplands (which are locally called the *bhoor*, though they may include *domut* or *muttear*), and another for the *khadir*. I have maintained these local distinctions, and deduced my rent-rates accordingly.

Still more to the east, between this circle and the Bygool, is the "Bhoor Circle, west." It is a high plateau, forming the water shed of the Bygool and Ramgunga. The villages composing it are generally of an inferior description, the *bhoor* soils preponderating, and the *domut* being decidedly inferior to that of any of the other circles. The *muttear* is mostly poor and confined to the borders of tanks and *jheels*. There is only one soil requiring special notice, and it is that entered as *domut* 2nd in the statements. The name was given to it in the *khusrah* before I received charge of the pergunnah. It is a light loamy soil, composed of sand mixed slightly with black earth. The local name for it is "*bhoor milaonee*," a far better name, and less likely to mislead, as it is really nothing but superior *bhoor*, and rents accordingly; but, as to correct the original misnomer would have necessitated the altering of all the *khusrahs*, I allowed the names originally given to stand, explaining to the people that by it was merely meant what they called "*milaonee*."

The percentage of irrigated land on the cultivated area is 41·9 per cent.: of the inferior sandy soils, 67 per cent.

There is a fair proportion of irrigation in this circle, but the produce generally, except in a few isolated villages, is inferior, and there is but little land bearing double crops in the year.

East of this, beyond the Bygool, is the "Bhoor Circle, east." It is of a different character to the western circle. In the southern portion it is composed of undulating ridges, the ridges themselves being *bhoor*, and the soil between them in the low lands fair average *doomut* and *muttear*. The Gouneya Nullah runs through the centre of the circle, affording a little irrigation in the *khureef*; the *doomut* and *muttear* are generally somewhat superior to that of the western circle, and the *bhoor* inferior. The population is much less dense, and there is consequently a greater amount of *pahi* cultivation. This part of the pergunnah suffered most severely from the famine and drought of 1837, and still requires careful handling. There is a fair proportion of irrigation from *kutcha dhenkli* wells, and in the extreme eastern corner the clayey substratum admits of the construction of *kutcha* "*pool* and *chursa*" wells, irrigating from 4 to 6 acres in the year.

The percentage of irrigated land to the whole cultivated area of the circle is 62·6 per cent.; of the inferior sandy soils, 44·6.

North of this circle is the "Doomut Muttear Circle," comprising the villages on and near the Bygool and Kylas rivers. These are on the whole the best villages in the pergunnah. The produce as a rule is superior, especially in the low lands along the Bygool and the northern portion of the Kylas. Here and there along the water shed the soil is inferior and injured by *kunkur*, which crops up through the surface, but as a rule, the circle is productive and thriving. The population is almost entirely composed of *gungpari* and *canoonjea coormees*, with a small intermixture of *ahirs* and *brahmins*. Wells are generally practicable, and there is a fair amount of irrigation from the Bygool and Kylas rivers, by means of *kutcha* dams renewed annually. For the construction and maintenance of these dams a number of villages combine, each being considered bound to supply the labour of one man per plough, the charges of maintenance being debited proportionally, and regularly charged in the village expenses.

The percentage of irrigated land to the whole cultivated area in the circle is 65 per cent. Of the inferior sandy soils 35·5 per cent.

The above classsification appears to agree generally in its main features with that of Mr. Conolly, as described in paras. 6 and 10 of his report. His rates however were summary rates on cultivation, not on soil, and consequently as remarked by the then Commissioner in his report, "Mr. Conolly found reason for varying greatly from "them in the distribution of jumma. In fact they appear to have been almost nominal."

8. I now come to the subject of rates, which will be found in Appendix D.

"The comparative area and jumma statement."

The mode in which I have worked out my average rent-rates on soils and from these the deduced revenue rates shown, is in full accordance with that laid down in para 3 of the Board's circular, No. 1 of 1863. The comparative results directed to be

exhibited by para. 6 of the Board's Circular order, D. D., dated 13th October, 1862, are also shown in my statements. In the Turaeen and *adh kutcha* circles, the average rent-rates have been deduced from the ascertained total rental of every acre of cultivation included in those circles. The cultivating rates on soils in each village were first determined with reference to the rate found to be most prevalent in each village for each description of soil. To obtain these rates I personally visited each village, and accompanied by the cultivators and the zemindars, and having with me an analysis which I had drawn up of every Act X. suit which had been decided in the pergunnah, I had no difficulty in ascertaining with absolute correctness the prevalent *ryothi* rates, and the opinion of the village as to the correctness or otherwise of the Act X. decisions in enhancement cases. This course having been followed with each village of the circle, and notes made as to the relative quality of each description of soil in villages where there was any marked variation from the usual rates, the *mouzahwar* rental on soils were totalled, the result, divided by the number of cultivated acres of each description of soil in the circle, gave the ascertained average rent-rates on that soil, as shown in the annexed table:—

Turaeen circle.		Average rent rates.	Adhkutcha circle.	Average rent-rates.
In Permanent Mehals	*Khadur, I.,* ...	4 0 0		
	Bhoor, ...	2 6 4	*Bangur,*	2 6 0
In alluvial Mehals,	*Khadur, I.,* ...	3 4 0	*Khadur,*	4 0 0
	Bhoor, ...	1 10 0		

In the next, or Bhoor circle west, consisting of mehals of greatly varying powers of productiveness, I went carefully through the papers of a large number of villages selected primarily with reference to the rates of incidence of the old jumma, and secondly with reference to locality. From these and the Act X. suits for balance and enhancement relating to these villages, I obtained rough rent-rates on soils. I then personally visited and narrowly inspected every village in the circle. Whenever I found a continuous tract composed chiefly of any one of the main divisions of soil, the rent-rates on that soil paid in each separate village or subdivision of a village composing the tract, and the size of the village *beegah*, were carefully noted. During the whole of my investigation I was in constant and unreserved communication with all classes of the community, and where the rent on similar soils in adjacent villâges differed, the cause of the variation was at once investigated on the spot. Having obtained a large number of rent-rates on soils deduced by personal investigation from a very extended area, I eliminated the differences due to variations in the size of the village *beegah* by reducing all to acreage rates, and obtained the double set of rates given in margin: 1*st* on soils irrigated and unirrigated, 2*nd* on soils irrespective of irrigation. I then applied the results to 14 villages in the circle, the rents of which were paid by all-round rates, that is, by fixed money rates per *beegah*, irrespective of crops, soils, or irrigation. I found the results of the two methods to approximate very closely, the result by soil rates being slightly in excess of the result by *chukota* "*faisla*" rates as it ought to be, the latter rates having been fixed some years ago. I then totalled the result on the circle by applying my double set of rates to the total of each description of soil in the circle and applied another test. As observed above, the rents on this pergunnah are paid almost entirely by money-rates. I found that the entries of amount of land and rents of *assamess* in the village papers were exceedingly correct, *as far as they went.* The frauds in these papers were chiefly of two classes.

Rate of irrigated and unirrigated soil.

Soil.		Rates.
		Rs. a p.
Muttear,	irrigated, ...	3 4 0
	unirrigated, ...	2 0 0
Doomut. I.,	irrigated, ...	3 12 0
	unirrigated, ...	2 4 0
Doomut II.,	irrigated, ...	2 8 0
	unirrigated, ...	1 12 0
Bhoor,	irrigated, ...	2 0 0
	unirrigated, ...	1 8 0

Rates of soils irrespective of Irrigation.

Soil.	Rates.
	Rs. a. p.
Muttear	2 9 5
Doomut, I., ...	3 4 1
Doomut, II., ...	2 1 1
Bhoor, ...	1 9 6

A. A portion of the cultivated area, and the rents chargeable on it, were excluded from the *jummabundee*, and entered as fallow.

B. A large amount of land held by cultivators at the village rates was entered as seer at nominal rates.

In both cases the proportion of *assameewar* collections, to the extent of *assamees* cultivation as entered in the papers, remains unaltered, and by dividing the one by the other, the general rate of rent in the village is ascertained : the application of this rate to the cultivated area as found by survey will give a close approximation to the real village rental, of course in *bhyachara* and other villages, where a large proportion of the area is cultivated by proprietors, this test is inapplicable, but in other cases the result is remarkably accurate. The resultant rental on the whole circle by this process was Rs. 1,16,294, and by my soil rates, Rs. 1,08,345, which is sufficiently close.

I obtained a still more striking test of the correctness of my rates. Until quite recently I retained in my own hands all the Act X. cases in the pergunnah ; I decided a considerable number of enhancement suits by applying my rates on soils to the amount of each soil in the holding on which enhancement was claimed, and proposed the result to the parties. In all these cases thus decided, both parties accepted the proposed rent as fair and equitable, and in no single instance was an appeal preferred against these decisions, though in some cases the enhancement was over 25 per cent. on the old rent. It would be impossible, I think, to have a better or more convincing test of the accuracy of either the rates or the correctness of the soils, as entered in the *khusrahs*.

In the Bhoor circle east of the Bygool, I adopted the same rates for *doomut* and *muttear* ; and for Doomut II. Rs. 2 per acre ; for Bhoor, Re. 1-8-0 per acre.

Though there is a greater proportion of the better soils in this circle than in the last, yet the population is not so dense, and there is a greater amount of *pahi* cultivation, and the tract generally has not recovered so thoroughly from the effects of the disastrous years at the commencement of the settlement as the rest of the pergunnah, and the rent-rates are consequently lower in proportion to the productiveness and relative goodness of the soil. A precisely similar and equally laborious induction from facts in the Doomut Muttear Circle, gave the following results :—

1st set of rates.			*2nd set of rates.*	
Soils.	Irrigated per acre.	Unirrigated per acre.	Soils.	Rates.
Doomut, ...	5 0 0	3 0 0	Doomut, ...	4 9 6
Muttear, ...	4 0 0	2 6 5	Muttear, ..	3 6 9
Doomut, 2nd, ...	...	...	Doomut 2nd, ...	2 3 9
Bhoor, ...	2 0 0	1 6 2	Bhoor, ...	1 8 10

Finally, these several class rent-rates were applied to the total of each soil in each circle, and the total result on all the circles gave the pergunnah assumed *jummabundee* of 311,728 as shown in Appendix D., giving a *jumma* at 55 per cent. of Rs. 1,71,450, or a net increase on the previous demand of Rs. 26,136, or nearly 18 per cent. The deduced revenue-rates, as shown by Appendix D., give a *jumma* of Rs. 171,319.

In 1841-42 Mr. R. H. P. Clarke, after a careful investigation, found the average pergunnah rents to be 8 per cent. for cane, and 2-6-0 for other crops; applying these rates to the areas given in the produce statement Appendix E., the result is a gross outturn of Rs. 307,085 or Rs. 4,643 less than my assumed *jummabundee*, calculated by totally independent methods. The close, and by me unlooked for, coincidence in the two results, cannot but give confidence in the correctness of the data on which I have based my estimates. It may be a subject of surprise that I should propose an increase of jumma on a pergunnah which has been hitherto considered as the most heavily assessed pergunnah in the district, but I trust I have said enough to show that while the total jumma of last settlement was fair in the aggregate, yet it pressed heavily on a number of vil-

lages, owing to a faulty and unequal distribution in detail. Further, it should be remembered that the present jumma of Rs. 1,45,314 does not include cesses: adding these, at 1½ per cent., the result is Rs. 1,48,021, leaving a net increase by my proposed pergunnah jumma of Rs. 23,298, or about 16 per cent. Considering the density of the population, the increase in the cultivated area, which has been shown to amount to 26·62 per cent., the increase in the amount of sugar and cotton cultivation, as shown by the produce statement, Appendix E., and the facilities for the future disposal of produce by the Rohilkhund Railway which is to be constructed, I do not think that the proposed demand can be considered excessive. It will be seen from Appendix D. that it presses in its incidence on the cultivated area far more lightly in every circle than the IX. 1833 jumma did, although the general condition of the pergunnah has considerably inproved in the interval, as shown in the note to Appendix E.; at the same time I would remark that the proposed demand is a rough pergunnah jumma only, which may be increased or diminished in the distribution by detail on the several villages. The rates are average rates only, though they have been worked out with the utmost care and labour. I do not look on settlement as a mere process of arithmetical calculation. A settlement officer must be trusted to run up and down the scale, provided that he assigns adequate reasons for any marked variations from the result by average rates. Villages, though equal to the average in soil, may not be able to bear average rates, either from the fact that the cultivation is carried on entirely or mainly by non-resident cultivators, or because the profits are minutely subdivided, and the number of mouths to be fed from the village is abnormally large: hence the final jumma may fall short of the proposed demand by a small percentage.

With a view to equitable distribution of the jumma in detail, I have visited every village in the pergunnah, and narrowly examined it in every part. I have made notes of its condition, the nature and relative productiveness of its soil, its irrigation, and the capacities for its extension, population, caste of cultivators, and the degree of facility with which the jumma has been hitherto paid. In fact, every point has been noted which should receive the attention of a settlement officer.

In conclusion, I fear that I have been very tedious in this report, more especially in the exposition of the manner in which I arrived at my rent-rates; but I consider it advisable in a first report to give the Commissioner and the Board full information of all details under this head. I have spared no labour or pains to arrive by induction at correct results based on actual facts.

If my method of procedure be approved of, it will not be necessary in future reports to do more than refer to it.

A pergunnah map accompanies this report, illustrating the proposed classification of villages.

(Sd.) S. M. MOENS,
Settlement Officer.

APPENDIX A.

Census Statement.

HINDOOS.												MAHOMEDANS AND OTHERS.												TOTAL.											
Agricultural.						Non-Agricultural.						Agricultural.						Non-Agricultural.						Agricultural.						Non-Agricultural.					
Males.			*Females.*			*Males.*			*Females.*			*Males.*			*Females.*			*Males.*			*Females.*			*Males.*			*Females.*			*Males.*			*Females.*		
Adult.	Minor.	Total.	Adult.	Minor.	Total.	Adult.	Minor.	Total.	Adult.	Minor.	Total.	Adult.	Minor.	Total.	Adult.	Minor.	Total.	Adult.	Minor.	Total.	Adult.	Minor.	Total.	Adult.	Minor.	Total.	Adult.	Minor.	Total.	Adult.	Minor.	Total.	Adult.	Minor.	Total.
CENSUS OF 1853.																																			
...	...	42,467	...	...	34,937	...	...	5,478	...	...	4,826	...	...	3,529	...	...	3,071	...	...	3,701	...	...	3,233	...	...	45,996	...	...	38,008	...	...	9,109	...	...	8,059
CENSUS OF 1865.																																			
20,207	16,756	46,963	24,593	14,127	38,720	5,342	2,660	8,002	4,215	2,239	6,454	2,785	1,591	4,376	2,533	1,444	3,977	2,513	1,289	3,802	2,064	1,193	3,257	32,992	18,347	51,339	27,126	15,571	42,697	10,855	3,949	11,804	6,279	3,432	9,711

REMARKS.—The total number of mehals is 484, of houses 21,817, with an average of 5·3 persons per house. The total superficial area of the pergunnah is 251·27 square miles, or 160,818 acres. The density, or, as a recent French writer has proposed to term it, the "specific population," is 459·9 per square mile. This is exceedingly high, and much above the density of any part of England, except London and the Lancashire district. I append a table of density of various countries for the sake of comparison.

North-Western Provinces, ...	438
Bengal, ...	311
Bombay Presidency, ...	156
Madras, ...	170
Punjab, ...	156
Great Britain, ...	237
France, ...	176
Belgium, ...	400
Prussia, ...	172

The density of the agricultural population only is 382; and a comparison of the number of male agricultural adults with the culturable area gives an average of 4·34 acres per man on the culturable area. Taking the cultivated area only, the average is 3·44 per male agricultural adult, or 5,504 pucka beegahs, which is an exceedingly low average, and at once explains the reason for there being so little exportation from the pergunnah, as the produce is nearly all required for the actual sustenance of the population.

The present demand on account of land revenue is Rs. 145,814 or Rs.4-6-8 per head on the male agricultural adults: the proposed future demand would raise it to 5-3-1 per head. The Hindoos form a percentage of 86·66 of the whole population. They are chiefly Thakoors and Aheers, with a small proportion of Koormees, Kayeths, and Brahmins. The Mahomedans are 13·34 of the whole population. They are chiefly weavers, but there are a few Moguls and Pathans in the south of the pergunnah between Tissooa and Futtehgunge.

(Sd.) S. M. MOENS,

Settlement Officer.

APPENDIX B.

Statement of Harvest Prices of Agricultural Produce in Furreedpore, from 1818 *to* 1866, *calculated in Pounds Avoirdupois.*

Name of year.	Wheat.	Gram.	Barley.	Bajra.	Rice.
Year 1818	49·98	50·45	...	70·28	99·51
" 1819	46·85	50·45	...	70·50	87·02
" 1820	99·07	116·19	...	81·22	76·36
" 1821	110·24	151·96	...	147·77	155·54
" 1822	65·18	95·28	...	91·64	105·10
" 1823	86·12	89 25	...	110·85	110·67
" 1824	78·09	95·95	...	91·92	104·87
" 1825	50·65	66 27	...	58·38	65·60
" 1826	69·60	91·30	...	72·74	97·93
" 1827	108·89	102 34	...	100·86	102·64
" 1828	108·26	168·69	...	200·83	164·02
" 1829	100·41	129·55	...	137·23	178·18
" 1830	...	...	...	134·	152·
" 1831	...	...	...	90·	...
" 1832	...	...	...	...	...
Average from the year 1833 to 1836.*	69·36	73·44	102·06	87·72	55·08
Year 1837	38·25	42·62	48·45	33·15	43·35
" 1838	42·35	4 ·50	51·00	112·20	140·25
" 1839	68 85	89·25	102·00	76·50	89·25
" 1840	63·75	73·95	89·25	68 85	89·25
" 1841	61 20	76·50	91 80	102·00	114·75
" 1842	86·70	91·80	127·50	114·75	140·25
" 1843	91·80	114 75	140·25	102·00	140·25
" 1844	73·95	91·80	133·87	8 ·60	102·00
" 1845	79·05	96 90	121·12	102·00	114·75
" 1846	84·15	114·75	133·87	158·10	165·75
Average of 10 years.	69·10	82·51	103·91	95·11	113·98
Year 1847	102·00	124·95	145·35	114·75	165·75
" 1848	102·00	102 00	127·50	153·00	178·50
" 1849	102·00	102·00	121·12	153 00	165 75
" 1850	99·45	102·00	117·30	147·90	165·75
" 1851	63·75	81·60	86·70	140·25	165·75
" 1852	61·20	86 70	102·00	81·80	127·50
" 1853	79·05	91·80	102·00	94·35	91·80
" 1854	84·79	89·25	102·00	133·87	102·00
" 1855	114·75	127·50	153·00	130 55	153 00
" 1856	63·75	76·50	86 71	76·50	140·25
Average of 10 years.	87·27	98·43	114·35	122·54	145·60
Year 1857	102·00	124·95	140·25	102·00	140·25
" 1858	76·50	81·60	102·00	76·50	127·50
" 1859	53·55	81·60	89·25	153·00	102·00
" 1860	38 25	48·45	51·00	40 80	63·75
" 1861	38·25	48·45	51·00	102·00	165·75
" 1862	76·50	79·05	89 25	127·50	127·50
" 1863	102·00	102·00	25·50	51·00	89·25
" 1864	63·75	71·40	81·60	51·00	63·75
" 1865	51·00	63·75	76·50	51·00	81·60
" 1866	44·62	51·00	63·75	51·00	63·75
Average of 10 years.	64·64	80·58	77·01	80·58	102·51

* The prices for the several years in detail are not obtainable.

NOTE.—The Bareilly pucka maund is of 40 seers, each weighing Rs. 104. The rupee by the regulation troy grain weighs 180·234 grains. The maund therefore would be 749773·44 grains, or 107·20lbs. nearly, and the seer equals 18744·336 grains, or 2·68lbs. The kutcha or local weight varies in every pergunnah. In Furreedpore the local maund is exactly half the Bareilly maund, and the kutcha seer equals 1·34lbs. To admit of comparison with the prices of other districts, the harvest prices have been reduced to lbs. avoirdupois, but nearly all agricultural transactions are carried on in kutcha maunds, pusserees and seers.

BAREILLY SETTLEMENT OFFICE:
1st August, 1867.

(Sd.) S. M. MOENS,
Settlement Officer.

APPEN

Statement showing Mutation of

Caste of Zemindars at IX., 1833 Settlement.	Number of Mehals.	Jumma.	By Sale. Entire Estates.	Jumma.	Defined shares.	Jumma.	Undefined shares.	Jumma.	Mortgage. Entire Estates.	Jumma.	Defined shares.	Jumma.	Undefined shares.	Jumma.	Sale by order of Civil Entire Estates.	Jumma.	Defined shares.	Jumma.
		Rs.		Rs. a. p.		Rs. a. p.		Rs.		Rs.		Rs. a.		Rs.		Rs.		Rs. a.
Thakoor, ...	221	73,846	17	4,947 0 0	33	5,873 11 0	10	3,009	4	1,300	21	2,114 0	12	1,848	15	2,624	10	2,744 13
Kayaths, ...	104	25,493	22	3,491 0 0	10	776 1 6	4	295	11	2,751	8	610 0	...	...	2	300	2	201 5
Brahmins, ...	53	16,210	9	2,763 0 0	8	1,060 0 0	2	120	2	700	1	70 0	...	...	...	...	1	132 0
Bunniahs, ...	12	5,463	7	4,107 10 5	...	...	...	...	...	...	...	...	...	...	1	250	...	...
Aheers, ...	17	5,120	...	...	3	265 0 0	1	45	...	...	...	...	...	...	...	...	3	309 12
Gooshaeen, ...	7	2,431	1	125 0 0	2	132 9 0	...	...	...	...	...	...	3	926	...	...	...	...
Khuttree, ...	3	879	1	160 0 0	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Europeans, ...	7	2,400	7	2,400 0 0	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Sheikh, ...	37	8,638	9	1,504 4 0	3	123 7 0	5	1,406	...	...	...	4 2	2	250	...	...	1	54 11
Puthans, ...	16	3,974	...	...	6	852 0 0	...	...	...	...	...	...	7	1,132	...	...	2	436 5
Moghul, ...	4	958	...	...	...	...	...	...	...	...	...	141 8	...	...	...	...	...	...
Koormee, ...	3	402	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total, ...	484	1,45,814	73	19,497 14 5	65	9,082 12 6	22	4,875	17	4,751	...	2,939 10	24	4,156	18	3,174	19	3,878 14

Abstract of above Statement, showing Mutations

Pergunnah,	Number of Estates in Pergunnah.	Jumma.	Detail of Transfers.	Entire Estates.	Jumma.	Defined shares.
		Rs. a. p.			Rs. a. p.	
Fureedpore.	484	1,45,814 0 0	By private sale, ...	73	19,497 14 5	65
			By mortgage, ...	17	4,751 0 0	32
			Sold at auction by order of Civil Court, ...	18	3,174 0 0	19
			Transfers under Decree of Court, ...	2	281 8 0	4
			Confiscation for Rebellion, ...	29	6,885 0 0	10
			Farmed for arrears, ...	*98	37,507 0 0	...
			Government sales for arrears, ...	4	715 0 0	...
			Total, ...	241	72,811 6 5	130

* 14 since 1841-42.

BAREILLY SETTLEMENT OFFICE :
21st *July*, 1867.

DIX C.

Estates in Pergunnah Fureedpore.

Court.		By Decree of Court.						Confiscation for Rebellion.						Farmed for Arrears.		Sold at auction for Arrears.		Total.	
Undefined shares.	Jumma.	Entire Estates.	Jumma.	Defined shares.	Jumma.	Undefined shares.	Jumma.	Entire Estates.	Jumma.	Defined shares.	Jumma.	Undefined shares.	Jumma.	Number of Mehals.	Jumma.	Number of Mehals.	Jumma.	Total number of Estates.	Total Jumma.
	Rs. a.		Rs. a.		Rs. a. p.		Rs.		Rs.		Rs. a.		Rs. a.		Rs.		Rs.		Rs. a. p
40	7,363 0	1	140 0	2	86 8 10	...	...	...	...	3	700 8	...	...	69	29,956	4	715	238	63,421 8 10
...	...	...	...	...	...	...	...	24	5,085	1	150 0	...	...	15	2,972	...	...	99	16,331 6 6
1	125 0	...	...	...	...	...	...	...	...	...	...	...	...	2	399	...	...	26	5,369 0 0
...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	250	...	...	9	4,607 10 5
...	...	...	...	...	...	...	...	...	...	...	...	...	...	8	2,753	...	...	15	3,372 2 0
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	..	...	6	1,183 9 0
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	160 0 0
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	7	2,400 0 0
4	803 0	...	...	...	...	...	...	...	...	5	349 7 5		1,120 12	3	1,177	...	...	38	6,792 11 0
20	1,032 0	...	...	2	90 5 0	...	...	5	1,800	1	426 0 1		50 0	...	...	...	...	44	5,819 4 0
1	141 8	1	141 8	...	...	...	...	...	...	...	...	1	141 8	...	...	...	...	4	566 0 0
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
66	9,464 8	2	281 8	4	176 13 10	...	...	29	6,885	10	1,625 15 7		1,312 4	98	37,507	4	715	487	1,10,323 3 9

of Estates in Pergunnah Fureedpore.

Jumma.	Undefined shares.	Jumma.	Total Transfers.	Total Jumma.	Remarks.
Rs. a. p.		Rs. a. p.		Rs. a. p.	
9,082 12 6	22	4,875 0 0	160	33,455 10 11	Of the total amount of property transferred, property assessed at Rs. 60,969-9-9 has passed permanently away from its former owners during the currency of the expiring Settlement. Of the farms for arrears, 84 cases were prior to, and 14 since, 1841-42, and the sale for arrears were before 1841-42. Since 1858 it has not been found requisite to employ coercive measures for the realization of the Revenue in a single instance.
2,939 10 0	24	4,156 0 0	73	11,846 10 0	
3,878 14 0	66	9,464 8 0	103	16,517 6 0	
176 13 10	...	...	6	458 5 10	
1,625 15 0	7	1,312 4 0	46	9,823 3 0	
...	...	...	98	37,507 0 0	
...	...	...	4	715 0 0	
17,704 1 4	119	19,807 12 0	487	1,10,323 3 9	

(Sd.) S. M. MOENS,

Settlement Officer.

Name of Pergunnah.	Names of Circles of Villages.	Number of Mehals in each Circle.	Regulation IX, 1833, Settlement Jumma.	Present Jumma as borne on the District Rent-Roll.	As per Records of all former Measurements as eff							Rate on cultivated area at IX., 1833, Jumma.	Rate on total area at expiring Jumma.	Rate on Malgoozaree area at expiring Jumma.	Rate on cultivated area at expiring Jumma.	Rate of proposed Jumma on total area.	Rate of proposed Jumma on Malgoozaree area.	Rate of proposed Jumma on cultivated area.	Percentage of increase of proposed Jumma on former.	Percentage of increase of cultivation on former.
					Total Area.	Lakhiraj.	Barren.	Culturable not cultivated.	Recently thrown out of cultivation.	Cultivated.	p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.		
	Turaeen,... ...	...	Rs. 15,167	Rs. 16,532	15,379	453	2,241	4,229	270	8,186	1½	1 13 7¾	0 14 8¾	1 1 11½	1 6 2	1 3 9	1 8 0	1 13 8	33·91	45·7
	Adhcutcha, ...	...	9,937	9,695	8,817	311	812	1,727	630	5,337	8	1 13 9½	1 1 5¼	1 3 2¾	1 6 7½	1 3 9	1 5 9	1 9 8	13·47	28·40

APPENDIX E.

Jinswar Statement of Pergunnah Furreedpore, Zillah Bareilly.

Number of Mouzahs.	Total area in acres.	Minhaee.	Culturable waste.	Baghs.	Recently thrown out of cultivation.	Total cultivated area.
389	160,818	17,590	22,854	2,742	3,955	113,677
			Percentages.			100

	KHUREEF CROPS.																							RUBBEE CROPS.																	
	Rice.	Bajra.	Jowar and Churee.	Moath.	Sugar.	Pundruh.	Cotton.	Codon.	Vegetable.	Mash.	Arhur.	Shamakh.	Mukka.	Mundwa.	Sunn.	Kungnee.	Moong.	Lobea.	Til.	Tobacco.	Total.	Wheat.	Wheat, Barley and Gram.	Gram.	Barley.	Linseed.	Wheat and Barley.	Melour.	Last Balum.	Oats.	Kussa.	Musoor.	Peas.	Chyna.	Tobacco.	Ghooeean.	Sirsoon.	Sehoon.	Lahee.	Total.
	11,795	39,657	4,145	602	6,595	3,253	2,677	411	720	1,173	618	175	230	4	105	7	57	17	49	2	72,293	33,032	541	4,808	1,484	201	432	120	165	50	89	164	166	9	5	85	10	18	5	41,384
	10·37	34·88	3·65	·54	5·81	2·87	2·35	·35	·62	1·03	·54	·15	·20	·0035	·09	·006	·05	·015	·044	·0017	63·55	29·05	·47	4·23	1·30	·17	·38	·10	·14	·04	·07	·15	·14	·008	·004	·07	·008	.016	.004	36·45

Dofusli, 8,812 acres, or 7·75 per cent.

Rice	and	Wheat	1,160	acres.	Bajra	and	Gram	346	acres.	Churee Jowar	and	Kussa	20	acres.	Mukka	and	Barley	15	acres.	Codon	and	Linseed	7	acres.	Sunn	and	Wheat	12	acres.
,,	,,	Barley	270	,,	,,	,,	Pundruh	119	,,			...			,,	,,	Pundruh	12	,,	Mash	,,	Ghooeean	3	,,	,,	,,	Mussoor	3	,,
,,	,,	Gram	2,418	,,	,,	,,	Wheat	166	,,	,,	,,	Sirsoon	2	,,	Cotton	,,	Ghooeean	6	,,	,,	,,	Gram	14	,,	,,	,,	Barley	3	,,
,,	,,	Gojee	80	,,	,,	,,	Mussoor	437	,,	,,	,,	Gojee	3	,,	,,	,,	Pundruh	9	,,	,,	,,	Mussoor	2	,,	,,	,,	Gram	1	,,
,,	,,	Linseed	917	,,	,,	,,	Balum	57	,,	,,	,,	Sehoon	7	,,	,,	,,	Melons	3	,,	,,	,,	Wheat	9	,,	,,	,,	Pundruh	4	,,
,,	,,	Kussa	44	,,	,,	,,	Melour	378	,,	,,	,,	Ghooeean	7	,,	Shamakh	,,	Gram	89	,,	,,	,,	Mukka	3	,,	,,	,,	Vegetables	7	,,
,,	,,	Bijhara	207	,,	,,	,,	Bijhara	51	,,	,,	,,	Gram	281	,,	,,	,,	Pundruh	12	,,	,,	,,	Pundruh	18	,,	,,	,,	Wheat	19	,,
,,	,,	Pundruh	138	,,	,,	,,	Ghooeean	23	,,	,,	,,	Sugar	67	,,	,,	,,	Gojee	5	,,	,,	,,	Linseed	1	,,	,,	,,	Ghooeean	1	,,
,,	,,	Mussoor	51	,,	,,	,,	Linseed	26	,,	,,	,,	Wheat	92	,,	,,	,,	Barley	1	,,	Moath	,,	Barley	1	,,	Mundooa	,,	Gram	1	,,
,,	,,	Peas	14	,,	,,	,,	Barley	48	,,	,,	,,	Mussoor	36	,,	,,	,,	Wheat	15	,,	,,	,,	Wheat	4	,,	Cotton	,,	Vegetables	2	,,
,,	,,	Balum	3	,,	,,	,,	Kussa	3	,,	,,	,,	Linseed	14	,,	,,	,,	Linseed	4	,,	,,	,,	Gram	4	,,	Linseed	,,	Ghooeean	1	,,
,,	,,	Sehoon	11	,,	,,	,,	Sehoon	5	,,	,,	,,	Barley	54	,,	Sunn	,,	Vegetable	1	,,	,,	,,	Ghooeean	1	,,					
,,	,,	Ghooeean	1	,,	,,	,,	Vegetable	30	,,	,,	,,	Peas	6	,,	Codon	,,	Pundruh	1	,,	Kungun	,,	Wheat	3	,,					
,,	,,	Melons	1	,,	,,	,,	Gojee	3	,,	,,	,,	Bijhara	27	,,	,,	,,	Gram	10	,,	,,	,,	Gram	6	,,					
,,	,,	Koondree	14	,,	Churee Jowar	,,	Mussoor	24	,,	Mukka	and	Wheat	84	,,	,,	,,	Wheat	2	,,	,,	,,	Vegetables	688	,,					
,,	,,	Vegetables	1	,,	,,	,,	Melour	20	,,	,,	,,	Gram	40	,,	,,	,,	Musoor	2	,,	,,	,,	Ghooeean	1	,,					

Note I.— Mr. Conolly in his Settlement Report of 1837 remarks (para. 6),—"No indigo or cotton is grown in any part of the pergunnah, and but little sugar." From existing records it appears that in 1835 the amount of land under sugar-cane was 2,254 acres ; in 1841 it was 1,966. By the present measurements the amount was 6 596 acres, while there were 2,677 acres under cotton. It will be at once seen therefore how the pergunnah is advancing. It should be remembered also that in the year of measurements there is always a tendency to sow the coarse crops in a greater proportion than usual. In 1841-42 Mr. Clarke, the then Collector, found the average rents to be for sugar, Rs. 8 per acre, for other crops Rs. 2-6-0. Applying these rent-rates to the above statement, the result would be a gross outturn of Rs. 3,07,085. The assumed jummabundee on which I have calculated my proposed jumma, by independent methods, is Rs. 3,01,254, or Rs. 5,831 less than the above, which is sufficiently close.

Note II.— 2,742 acres, or 1·9 of the malgoozarce area, are bagh or grove-land, almost entirely planted with country mangoes. Except in the immediate vicinity of Kusbeh Furreedpore, the fruit is not sold, nor does the proprietor derive any profit, except from the fallen wood and the grass under the trees. As a rule, there is no rent levied on grove-land by the zemindars, as 99 out of 100 groves were either planted by former zemindars or by mocuddums, to whom the land was granted rent-free for the purpose, as a reward for their exertions in inducing cultivators to settle in the village.

BAREILLY SETTLEMENT OFFICE :
The 15th August, 1867.

(Sd.) S. M. MOENS,
Settlement Officer.

Extract from Index to the Proceedings of the Board of Revenue, North-Western Provinces, in the Revenue Department, for the month of September 1867.

Proceedings Date.	Proceedings Number.	From or to whom, with Number and Date. (P. No.)	Zillah or Division.	Subject.	Substance of Letter.	Reference Number.
23rd September, 1867,...	755-761	From Commissioner, Rohilkhund, ... P. No. 9083.	Bareilly, ...	Rates proposed for the revised assessment of Pergunnah Furreedpore.	Forwards letter, dated 19th September, 1867, with its enclosures, from the Assistant Settlement Officer, for Board's orders, and recommends the rates proposed by Mr. Moens for sanction.	
"	762	To Commissioner, Rohilkhund, ... No. 377.	Ditto, ...	Ditto, ...	Conveys Board's sanction to the proposal.	

BAREILLY SETTLEMENT OFFICE:
The 15th August, 1867.

(Sd.) S. M. MOENS,
Settlement Officer.

Proposed Rates of Assessment for Pergunnah Nawabgunge.

By S. M. Moens, Esq., *Settlement Officer, Bareilly.—Dated Octr.* 30, 1870.

Until 1222 *Fuslee* Nawabgunge formed a part of *Tuhseel* Crore. In that year the tract to the east and north was selected to form a new *tuhseel*, and a large separate *pergunnah* was thus created, the head-quarters of which were established at Nawabgunge—a town about 15 miles from Bareilly on the Phillibheet road. The *pergunnah* has been very much altered by revision of boundaries since last settlement. As now constituted, it is 226 square miles in extent, bounded to the north by Ritcha and Jehanabad, to the east by Beesulpore, to the south by Furreedpore, and to the west by Crore.

The areas of the *pergunnah* (as it now stands) at last settlement and by present measurement are thus contrasted in acres :—

Areas.	At last settlement.	By new measurement.	Increase per cent.	Decrease per cent.
Total area, ...	142,507	144,544	1·4	...
Barren, ...	18,278	13,550	...	25·9
Maafee, ...	12,275	7,356	...	40·0
Old waste, ...	18,184	14,042	...	22·7
New fallow, ...	5,536	1,635	...	70·4
Cultivated, ...	88,234	107,961	22·4	...
Malgoozaree, ...	111,954	123,638	10·4	...

2. The last settlement was formed by Mr. J. Muir. He thus describes the previous fiscal history of the *pergunnah* :—

"The *jummas* were considerably raised from the first to the fourth settlements. "The increase at the fourth settlement may be partly attributed to the mode in which "former settlements were concluded on no fixed principle or known data, but on uncer-"tain estimates, backed by the bids of informers and speculators; 2*ndly*, the *huzoor* "*tuhseel*, of which Nawabgunge formed nearly half, was up to the fourth settlement "let out in large farms and *talookas*—estates to the number of 30 or 40 being held "by one *malgoozar*. In 1220 *Fuslee*, the settlement of most of the estates was con-"cluded with the persons who established their claims to the *zemindaree* rights, and "who were glad to get the *malgoozaree* on any terms. A competition ensued between "the old farmers and the *zemindars* of the different estates, which in many instances "led to the latter agreeing to higher *jummas* than would now be considered moderate "or equitable. The assessment thus fixed, though on the whole excessive, became in "many instances moderate from the proprietors improving their estates by increasing "the cultivation where this was practicable, and the assessment was not found to cause "any very great pressure for nearly 15 years afterwards, in consequence of the high "prices of grain during that period, enabling both cultivators and *malgoozars* to realize "more than ordinary profits. A change, however, for the worse took place about "1235 *Fuslee*, when grain fell considerably in price, a great deal of distress ensued, "many estates broke down, numerous transfers of every kind followed, and a difficulty "was experienced in collecting the revenue. In Crore and Nawabgunge, where *buttaee* "rents were prevalent, the pressure was felt principally by the *malgoozars*.

"The settlements made under the provisions of Regulation VII. of 1822, and "summarily, were mostly at a decrease; and as the broken-down estates were in the "greatest number of instances selected for these revisions, many *muhals* were thereby "saved from ruin."

Still Mr. Muir considered that the total *jumma* of the *pergunnah* was too high, and he allowed a reduction of nearly Rs. 14,000 in the revenue as absolutely required "to bring about a result by which the *malgoozars* should enjoy a fair profit, and the "Government revenue be realized with ease and punctuality."

The *jumma* then fixed was Rs. 1,82,358, and there was every reason to expect that it would be collected with regularity, more especially as there was then a reserve of waste, amounting to more than 22 per cent. of the culturable area. Unfortunately, in 1244 *Fuslee*, the rains were unfavourable, and the rice crop was a partial failure. In 1245 *Fuslee*, the drought was general, and the *khureef* totally failed. In 1246 the rice crop was an average one, but the *rubbee* was very scanty. In 1247 the rains were abundant, but owing to their coming late, the rice sowings were very partial. In 1248 the rains were good, and both harvests up to the average; but in 1249 the rains were again late, and the sowings only partial. By such a succession of bad seasons* the resources of the *pergunnah* were severely tried. Rent-rates were reduced after the famine to induce new cultivators to settle, and the old ones who had dispersed to return to their fields. Six villages were sold for balances, and 20 farmed between 1837 and 1841.

To lighten the pressure, a permanent remission of *jummas*, to the amount of Rs. 5,456, besides temporary suspensions, was proposed and sanctioned. Since that time the demand has been collected with unvarying "ease and punctuality," and, by the rise in prices, has become exceedingly light. It now stands at Rs. 1,78,379-12-0. The details of the decrease are as follows :—

	Rs.	a.	p.			
Decrease by remissions of *jummas* in 1842, ...	5,456	0	0			
Revenue-free grants, as rewards for loyalty in 1857, ...	4,804	8	0			
Diluvion, ...	197	0	0			
Compensation for land taken up for canals, ...	404	0	0			
				10,861	8	0
Increase by resumption of invalid maafee tenures, ...	6,843	4	0			
Summary settlement for alluvion, ...	40	0	0			
				6,883	4	0
Total, net decrease, ...				3,978	4	0

3. The *pergunnah* is well populated. The density on the total area, as compared with other *pergunnahs*, is thus shown :—

Pergunnahs.	Density per square mile.	Cultivated area per male adult agriculturist.
Nawabgunge, ...	541	3·6
Crore, ...	416	3·9
Furreedpore, ...	460	3·4
Aonla, ...	583	3·4
Suneha, ...	666	2·8
Seraolee, ...	564	3·9
Bullea, ...	647	3·3
Meergunge, ...	634	3·0

Mahomedans form 20·1 per cent. of the total, and 12·4 per cent. of the agricultural population. Of the cultivated area, 47 per cent. is held by Koormees, 8·6 per cent. by Brahmins, 6·6 by Chamars, and the remainder by other castes in small proportions. The detail is given in Appendix II.

* NOTE.—At the time there were no canals in the *pergunnah*; now 72 per cent. is irrigable from all isources, and the risks from bad seasons are much lessened. At such times, too, as rents are chiefly paid in kind, the *zemindars* are compensated for their losses on the dry lands by the increased profits from the wet resulting from high prices.

In the whole *tuhseel* there is but one Government school at Nawabgunge, itself educating from 60 to 80 boys. The new school cess will enable us to start *hulkabundee* schools in every part of the *pergunnah* not before they are wanted. I received a good illustration of the intelligence of the people when I was in the Aheer village of Dhubea. The residents told me, with some pride, that it was utterly impossible for a Koormee to live in Dhubea, or an Aheer in the adjoining village of Busenya, as in each place a "*Bhoot*" promptly disposed of intruders of the obnoxious castes—"he rushes at them and kills them at once." On my gravely asking the Aheers how they managed to propitiate their exceedingly unpleasant and summary demon, they replied, "Oh, we are all right; we keep another private devil of our own, who is stronger still (*"hum to apne nij ke shaitan pal rukhte hain"*).

4. The tenures of this *pergunnah* are simple Of the 375 *khalsa muhals*, 327 are *zemindaree*, 47 *putteedaree*, and 1 *bhyachara*. The average number of sharers, including holders of resumed revenue-free plots, is only 4 per *muhal*. Of these rather more than three quarters are non-resident. Mahomedans, Kayeths, Koormees, and Brahmins are the largest landholders.

5. The appended table shows the average harvest prices of the chief articles of agricultural produce during three periods in Bareilly maunds and seers:—

(1.) From 1227 to 1237 *Fuslee*, during which, as stated by Mr. Muir, the old *jumma* was not found to cause any very great pressure.

(2.) The 28 years subsequent to the great famine, from 1839 to 1867 inclusive.

(3.) The 10 years, 1857—1867, after the mutiny, and before the drought of 1868-69.

Staples.	Prices during first period.	Prices during second period.	Increase per cent. over first period.	Prices during third period.	Increase per cent. over first period.
	M. S.	M. S.		M. S.	
Rices, ...	1 13	0 33	37·7	0 27	49·0
Bajra, ...	1 22	0 30	51·6	0 23	62·9
Wheat, ...	1 0	0 27	32·5	0 20	50·0
Barley, ...	1 18	1 3	25·8	0 34	41·4
Gram, ...	1 25	0 28	56·9	0 24	63·1

Over the 28 years the average increase over prices of the first period has been 42 per cent., and the average prices of the third period has been 54 per cent. over the first period, and 20·5 over the second.

This, in a *pergunnah* where rents are taken chiefly in kind, should produce a considerable effect on the *jumma*. In working out crop-rates I have applied the average prices of the second period of 28 years.

The average price since 1858 has been much affected by the exceptionally high rates, caused by the drought of 1860-61, and ten years is too short a term to give a reliable average. This is shown at once by the fact that in six of those years prices were considerably lower than the average of the ten years; and if an assessment had been made on that average, it would have pressed heavily in those six years.

6. The *pergunnah* as a whole is a good and productive one. In soil it is not naturally equal to Phillibheet or Jehanabad, but the cultivation is more close and laborious; more manure is used, the climate is more healthy, and the cultivators have stronger local attachments.

The acreage under each crop will be found in the Crop Statement, Appendix IV. It will be observed that rice is the great *khureef* staple, with a fair proportion of sugar and cotton. Wheat and barley or *gojaie* occupy most of the *rubbee* sowings, and

10 per cent. of the total cultivated area is *dosahi*. The average produce of the chief staples in Bareilly *pucka* maunds and seers per acre is—

	lbs.	M.	S.
Rice, ...	1,063	9	37
Bajra, ...	530	4	38
Wheat, ...	1,028	9	24
Barley, ...	1,438	13	17
Gram, ...	874	6	32

For assessment purposes, however, I have estimated rice at 921lbs., and gram at 728,—as the rains must be very favourable to admit of the whole rice-growing area being sown, and bearing a full average crop. The rices chiefly grown are what are commonly considered third and fourth class rices, *viz.*, *anjunan*, *banki*, *deoli*, *seorhi*, and *sathi*, though here and there *jilma* and the fine rices are found. My experience is that one season in three is a poor one for rice, and I have reduced my estimate of produce accordingly for assessment purposes. In my first circle the produce is a little better, and the proportion of fine rices rather larger than in my second circle. In the third circle villages, the rice produce is poor, and almost entirely confined to *sathi*, *seorhi*, and *deoli*,—the most inferior kinds.

In the first and second circles the rubbee is almost all irrigated. My average for gram is low, but the crop is a very uncertain one, liable to injury from hoar frost and *makoon*—a kind of blight caused by fog and damp. The ordinary amount of seed sown per acre is as follows in lbs. weight:—

Rice,	...	85	Produce, ...	12½	fold.
Bajra,	...	20	...	26½	,,
Wheat,	...	107 to 128	...	8 to 9½	,,
Barley,	...	128	...	11	,,
Gram,	...	106	...	8	,,

The average yield of *rus* in sugar-cane in the *bangur* is 72 *kuchha* maunds per *kuchha beegah*, or 461 *kuchha* maunds per acre, value at average prices Rs. 92, though in the last two years prices have reached as high as 30 per 100 *kuchha* maunds, which would make the value per acre Rs. 123. From this may be seen how low the prevailing rent is for sugar in this district. The highest rate I have yet met with is Rs. 22-8-0 per acre on the cultivation, or Rs. 11-4-0 per annum, and that in two villages only. It must be recollected, however, that the cultivation is expensive and laborious, made chiefly on advances from the *bunniah* or the *khundsali*, for which heavy interest is demanded. The crop is a risky one, and the ground is occupied for from three to four harvests. In villages, however, where rents are taken in money, the Koormee cultivator usually looks to his sugar to pay the rent of his entire holding, and the manure put down for the sugar-cane makes the subsequent wheat crop very heavy.

7. *Irrigation.*—For purposes of irrigation, the *pergunnah* has peculiar facilities. It is traversed from north to south by the Deoha, the Gola, the Afsurha, the Afsurea, the Pungailee, the Bygool, the Nukutea, and the Deorunean. In the country between the Nukutea and the Afsurea, there is a considerable amount of irrigation by canals constructed since last settlement, and a plan has been proposed to Government for a new system of high-level canals, by which the whole area would be irrigable. The general depth to water is from 10 to 15 feet, and *kuchha dhenkli* wells are usually dug for the irrigation of the cane and garden cultivation. The soil, as a rule, is moist. Only one watering is required for *rubbee*, and in parts even cane is grown without any artificial irrigation at all. The wet and dry areas of the present assessable villages at the last settlement and the present time are contrasted thus in acres:—

	Wet.	*Dry.*	*Total.*
By present measurement, ...	61,139	46,822	107,961
At last settlement, ...	44,657	42,198	86,855
Increase at present measurement, ...	16,482	4,624	21,106

Thus, of the total increase in cultivation, 78 per cent. has been in wet land, 57 per cent. of the total cultivation were found actually irrigated at the new measurement, while at last settlement 51·4 per cent. only were irrigated. Large, however, as the proportion of irrigation now is, yet the statement above does not adequately represent the capabilities of the *pergunnah*. Of the 46,822 acres entered as dry, 1,334 acres are *khadir* land, which never requires irrigation, and of the remainder, 16,148 acres are already easily irrigable from existing sources, though in the year of measurement they were not irrigated, as they were under crops which do not ordinarily receive water: thus of the whole cultivated area, excluding the *khadir*, 72·5 per cent. are already irrigable or irrigated, and only 27·5 can really be considered dry. Of the actually irrigated area, 23,155 acres were watered from canals. It must not, however, be supposed that the whole of this area would have remained dry if the canals had never been constructed. In many instances they have only taken the place of well or dam irrigation.

The benefits they have conferred on the *pergunnah*, and the money profits to Government, have been largely exaggerated by the canal officers, as will be shown hereafter.

8. At last settlement Mr. Muir described the soil of Nawabgunge thus:—

"In soil the *pergunnah* is very much superior to Crore. There is much less *bhoor* "with reference to the total area, and the general condition is more assimilated to that "of Beesulpore. There are several embankments over rivers from which a number of "villages are irrigated, and to the north and north-east good sugar-cane is grown. The "soil, however, is adapted principally for growing rice, which may be considered the "staple crop of Nawabgunge. There are many estates also, chiefly those bordering on "Crore, and likewise detached villages in different parts of the *pergunnah*, with a sandy "soil fit only for the production of the inferior crops—such as *bajra*, &c.—which are "the staple productions of the majority of the Crore *mouzahs*." At present there are very few villages in the *pergunnah* without a fair proportion of sugar, though rice is still the chief staple.

The soils at re-measurement were thus distributed:—

Soils.	Wet.	Dry.	Total.	Percentage of soil total cultivated.
Domut, first class, ...	31,760	13,570	45,330	41·9
Mutyar, ...	21,929	17,946	39,875	36·9
Domut, second class, ...	5,161	6,140	11,301	10·6
Bhoor, ...	2,289	7,832	10,121	9·4
Khadir, first class, ...	...	...	896	1·2
Do., second class, ...	...	...	438	

The very greatest care and labour have been expended in obtaining a correct classification; and, as the soils stand, they have been accepted by the people themselves as a reliable basis for fixing money-rents in the very numerous suits that have been brought forward for commutation of rents from kind to money-payments. The *khadir* is all low-lying land in the bed of the Deoha. For the determination of the quality of *khadir* land two points have to be looked to,—*first*, the depth of the *kamp* or alluvial deposit; and *second*, the level. Where the alluvial deposit is over twelve inches in thickness, the land will grow anything, and usually a double crop in the year. This is first class *khadir*, provided that the land is not on so low a level as to be always subject to considerable flooding in the rains.

In this latter case, whatever the depth of the *kamp*, the land is second class only, as *rubbee* only can be grown, and owing to the over-saturation of the soil the crop is a light one. Where there is only a thin deposit of *kamp* on a sandy sub-soil, the land is second class *khadir*, even though the level be such as to prevent risk of loss by heavy annual floods, for the land will only grow a single *khureef* crop, though a good one and equal in value to the single *rubbee* crop on the low level. The average produce of *bajra*

in the *khadir* is 282 *pucka* seers per acre, or more than 42 per cent. higher than in the uplands. The first class *khadir*, *i. e.*, land on the higher levels, with a thick surface stratum of *kamp*, will grow always two crops in the year. I have known it grow even cane two and three years running in the same land, without irrigation and without manure. The juice, however, is watery, and inferior in quality to that of sugar grown on the high lands. The land entered as *domut* includes both *siwaiee* and the loamy soil always known as *domut*. The *mutyar* includes all the stiff tenacious clayey lands. The *domut* second is *domut* with a defect, such as a *kunkureli* substratum, or more than usually sandy or *oosur*,—in a word, *domut*, but of an inferior quality.

At last settlement Mr. Muir reduced all his soils to two,—first, *khadir*, which included all *domut* and all *mutyar*; and second, *bhoor*.

Here I think there was an error. The word *khadir* connotes peculiar conditions of situation and soil well known to and understood by the agricultural classes, and to apply this word to up-land *domut* and *mutyar* is a complete misnomer leading only to confusion. Nextly, *domut* and *mutyar* are totally distinct soils, of very different value as a rule in this *pergunnah*. They may, under special circumstances, be of equal value, but it is an exceptional case. *Mutyar* is usually a rigid, tenacious clay difficult to work, and, as a rule, growing rice with occasionally a second crop, where water is obtainable, or the rains are favourable at the end of September. Occasionally it grows cane and wheat, but this is exceptional. The *domut* is an easily-worked soil growing all crops, including at least nine-tenths of the sugar, cotton, and wheat; easily irrigated, and not requiring so much water as the *mutyar*.

Hence it is not wonderful that the cultivators consider their *domut* as much more valuable than their *mutyar*. To include the two soils under one name, and one set of rates, could only lead to great inequality of assessment. From this, however, Mr. Muir was preserved, as he threw over his soils altogether, and worked almost entirely by *surasuri* rates on the cultivated acre.

9. He divides the *pergunnah* into three classes for assessment. He thus described his classification :—

" The first class embraces those estates situated chiefly on the north-east and " northern boundaries of the *pergunnah*, of which the soil is remarkably fertile. Such " estates are the most of those composing the well known *Talooka* of Adhcutta, the " capabilities of which are second to none in the whole district of Bareilly. The standard " is about the same as that of the Beesulpore *râh* villages, but I must observe that the " number of estates belonging to this class is very small. The second class includes " those *mouzahs* of which the soil is, generally speaking, good, but inferior in fertility " to the standard of the first class. It comprises chiefly the central estates of the *per-* " *gunnah*, which are generally well-inhabited, and growing mostly rice and some sugar- " cane.

" The third class includes those villages of which the soil is bad, and the products " of an inferior quality. These villages are principally those bordering on Crore ; but " several *mouzahs*, also detached in different parts of the *pergunnah*, of which it was " found that the capabilities were of a low grade, have been assigned to this class."

His assumed revenue-rates on cultivation were as follows :—

	Rs. a. p.
1st class, ...	3 0 0 per acre.
2nd class, ...	2 0 0 "
3rd class, ...	1 8 0 "

10. My classification is, I fancy, almost precisely similar. My first class comprises the very fine villages to the north-east and east on and along the Deoha and Afsurha. The second class comprises, broadly speaking, the villages to the north-west and centre

of the *pergunnah*, those along the Afsurea and Deorunean, and those adjoining Furreedpore.

The third class villages are in three distinct strips—(1) the *khaput* villages to the south-east between Asooa and Raepore; (2) the *bhoor* villages running from the Crore border north to Deorunean and Bheekumpore along the Pungailee; and (3) the poor *bhoor* and *mutyar* villages running from the Crore border up the Nukutea to Ahrola and Atunga.

The average incidence rate of the *jumma* of last settlement on the villages composing these three circles was very close indeed to Mr. Muir's assumed revenue-rates, *viz.* :—

	Rs. a. p.	
1st Circle, ...	2 12 8	per cultivated acre.
2nd do., ...	2 1 10	"
3rd do., ...	1 8 1	"

11. I can now proceed to show the areas and the rates on soils which I propose for adoption in each circle :—

Circle I.—This circle comprises 38 villages, of which three, formerly *khalsa*, are now revenue-free. They form part of the grant made in reward for loyalty to Rajah Misr Byjenath. The expiring demand is Rs. 22,060, which has been regularly collected without balances or coercive processes.

Areas.	At last settlement.	By present measurement.	Increase per cent.	Decrease per cent.
Total, ...	15,154	15,096	...	0·3
Barren, ...	3,076	1,595	...	48·1
Lakhiraj, ...	546	1,923	252·3	...
Old waste, ...	1,954	1,747	...	10·6
New fallow, ...	327	78	...	76·1
Cultivated, ...	9,251	9,753	5·4	...
Malgoozaree, ...	11,532	11,578	0·4	...

The comparison of irrigation, excluding those villages, *khalsa* at last settlement, but which have since been given in revenue-free tenure, stands thus :—

	Wet.	Dry.	Total.	Percentage of wet cultivated.
At last settlement, ...	4,022	3,850	7,872	51·1
By new measurement, ...	5,003	4,750	9,753	51·2

But of the land entered as unirrigated, 1,334 acres are *khadir*, which requires no irrigation, and 702 are irrigable with ease from existing sources, leaving only 2,714 acres, or 27 per cent., really unirrigated; but even in this *dhenkli* wells are practicable. The soils are—

Soils.	Wet.	Dry.	Total.	Percentage.
Domut, first, ...	4,026	2,156	6,182	63·3
Mutyar, ...	847	1,057	1,904	19·5
Domut, second, ...	126	147	273	2·8
Bhoor, ...	4	56	60	6·
Khadir, first class, ...	...	896	896	9·1
Do., second do., ...	...	438	438	4·7

Of the cultivated area 23·2 per cent. was held at kind rates, and this chiefly in the best villages. The average rent paid by occupancy-tenants in the remainder is Rs. 4-15-0 per acre. Out of the 35 *khalsa* villages in 12 rents have been commuted from kind to money-payments at suit of the cultivators. The rates fixed were in all cases accepted by both *zemindars* and cultivators without appeal, and in most of the cases the money rents were fixed amicably by the parties themselves by mutual consent.

The general average on soils in these villages, deduced from the commutation suits, was—

	Rs.	a.	p.	
Domut, first, ...	6	11	3	per acre.
Mutyar, ...	5	4	5	„
Domut, second, ...	4	9	3	„
Bhoor, ...	3	3	0	„
Khadir, first, ...	5	7	3	„
Khadir, second, ...	4	2	2	„

and on the cultivated area Rs. 6-1-4 per acre. I have adopted the following as fair average rent-rates for the circle soil-rates :—

	Rs.	a.	p.	
Domut, first, ...	6	6	0	per acre.
Mutyar, ...	5	0	0	„
Domut, second, ...	4	3	0	„
Bhoor, ...	3	3	0	„
Khadir, first, ...	5	0	0	„
Khadir, second, ...	3	10	0	„

I have not worked out separate wet and dry rates, as the whole circle is practicably irrigable, and is so considered by the cultivators. My rates, therefore, may be all considered wet-rates. These rates fall on an average one anna per *kuchha beegah* below the commutation rates. They give an outturn of Rs 56,332, or an average of Rs. 5-12-4 per acre. The average money-rate paid by occupancy-tenants before the commutation was Rs. 4-15-0 per acre.

My crop-rates, worked out on an average proportion of 5-12ths produce after deduction of one-tenth produce for cutting, carrying, and other incidental charges before the grain is divided, are as follows ;—

	Purhel. Per annum per acre. Rs.	a.	p.	*Doosahi.* Rs.	a.	p.
Sugar-cane and *pundrah*, ...	9	0	0	6	0	0
Vegetables, ...	9	0	0	...		
Cotton and hemp, ...	6	6	0	...		
Rice, ...	4	0	0	...		
Mukka, ...	3	10	0	...		
Bajra and coarse *khureef*, ...	3	6	0	...		
Wheat, ...	5	10	0	3	12	0
Barley, *goojaie*, *bijhra*, ...	4	0	0	2	10	8
Gram, ...	3	8	0	2	5	4
Mussoor, peas, linseed, ...	3	0	0	2	0	0

These rates applied to the produce statement give an outturn of Rs. 57,059. The several results of the different sets of rates are thus compared :—

	Per acre. Rs.	a.	p.	Result (Rs.)
Former *mouroosee* money average,...	4	15	0	47,156
Commutation average, ...	6	1	4	60,330
Proposed soil-rates, ...	5	12	4	56,332
Crop-rates, ...	5	13	8	57,059

The old *jummas* and those resulting from my proposed soil-rates are as follows :—

Jummas.	Amount.	Incidence on *malgoozaree* area.	Incidence on cultivated area.
	Rs.	Rs. a. p.	Rs. a. p.
IX., 1833, Settlement, ...	25,863	2 3 10	2 12 8
Expiring, ...	22,060	1 14 5	2 4 2
By soil-rates, @ 50 per cent., ...	28,160	2 6 11	2 14 2
„ @ 55 per cent., ...	30,976	2 10 10	3 2 9

The result is an increase of Rs. 6,100 in land revenue, or 27 per cent. over the expiring demand, besides cesses.

12. My second circle is a very large one, comprising 186 *mouzahs*, of which three are revenue-free in perpetuity, and two are held on a perpetual *nuzzurana* tenure by payment of Rs. 601 per annum.

The expiring demand on the circle is Rs. 1,27,880-12-0. Four villages were sold for balances, and 14 farmed between 1838 and 1842. Since the latter year the revenue has been regularly collected. The areas are as follows :—

Areas.	At last settlement.	By new measurement.	Increase per cent.	Decrease per cent.
Total, ...	94,338	95,609	1·3	...
Barren, ...	11,775	9,313	...	26·4
Meafee, ...	8,693	4,304	...	101·9
Old waste, ...	10,070	7,895	...	27·5
New fallow, ...	3,187	726	...	77·2
Cultivated, ...	60,613	73,371	21·0	...
Malgoozaree, ...	73,870	81,992	10·9	...

Irrigation.

	Wet.	Dry.	Total.	Percentage of wet.
By re-measurement, ...	45,210	28,161	73,371	61·6
At last settlement, ...	32,745	27,868	60,613	54·0

Of the 28,161 acres unirrigated at measurement, 10,488 were irrigable from existing sources, and 17,673 were unirrigable. The irrigable area is therefore 76 per cent. of the total cultivation. Of the 45,210 wet acres, 21,730 were irrigated from the canals.

The soils of the cultivated area are thus distributed :—

Soils.	Wet.	Dry.	Total.	Percentage.
Domut, I., ...	22,976	9,099	32,075	43·7
Mutyar, ...	18,042	12,696	30,738	41·8
Domut, II., ...	2,979	3,594	6,573	8·9
Bhoor, ...	1,213	2,772	3,985	5·6

Of the cultivated area at measurement 80 per cent. was held at kind rates ; the average *mouroosee* rate on the land held at money-rents was Rs. 3-15-0 per acre : commutation suits were brought by the cultivators in 88 villages. The money-rates fixed averaged on the whole as follows ;—

Soils.	Wet.	Dry.	*Surasuri.*
	Rs. a. p.	Rs. a. p.	Rs. a. p.
Domut, I., ...	6 0 0	4 4 5	5 8 11
Mutyar, ...	4 6 0	3 3 0	3 15 1
Domut, II., ...	4 9 8	3 3 0	3 14 8
Bhoor, ...	3 5 3	2 4 7	2 8 2

The general average rate was Rs. 4-9-4 per acre.

For the whole circle I propose the following rent-rates on soils as a basis for assessment :—

	Wet.	Dry.	*Surasuri.*
	Rs. a. p.	Rs. a. p.	Rs. a. p.
Domut, I., ...	6 0 0	4 6 0	5 8 7
Mutyar, ...	4 3 0	3 3 0	3 12 5
Domut, II., ...	4 3 0	3 3 0	3 10 3
Bhoor, ...	3 3 0	2 4 0	2 8 6

My rates on crops are as follows. They are based on average produce, taking 5-12ths as rent :—

	Purhel.	*Dosahi.*
Sugar-cane, ...	6·12 per annum per acre,	3·6
Pandrah, ...		
Vegetables, ...		
Cotton and other *zubtee*,..	6·0	...
Rice, ...	3·12	...
Mukka, ...	3·6	...
Bajra, ...	2·6	...
Wheat, ...	5·2	2·9
Barley, ...	4·8	2·4
Gojaie, ...		
Bijhra, ...		
Gram, ...	3·8	1·12
Mussoor, ...	2·4	1·2
Linseed, ...		
Peas, ...		

The results by the several sets of rates are thus shown together :—

Mouroosee money average rent at measurement. } Average rate per acre Rs. 3-15-0, the resultant outturn Rs. 2,88,898, but the proportion of land held at money-rates was very small.

	Rs. a. p.	Rs.
Commutation average, ...	4 9 4	3,36,284
Proposed soil-rates, ...	4 7 6	3,27,897
Crop-rates, ...	4 7 10	3,29,585

The old *jummas* and those resulting from my soil-rates are as follows :—

Jummas.	Amount.	Incidence on *malgoozaree* area.	Incidence cultivated area.
	Rs.	Rs. a. p.	Rs. a. p.
IX., 1833, Settlement, ...	1,28,412	1 11 9	2 1 10
Expiring, ...	1,27,880-12	1 8 11	1 11 10
By estimated at 50 per cent., ...	1,63,950	1 15 11	2 3 9
By ditto at 55 per cent., ...	1,80,345	2 3 2	2 7 4

Considering however the high proportion of cultivation, it is probable that my final *jumma* after distribution will fall rather below the estimate, which gives an increase of Rs. 36,070, or 28·2 per cent. over the old land revenue, exclusive of cesses.

13. The third circle comprises 104 *khalsa* and two revenue-free villages.

The expiring demand on the circle is Rs. 28,439. Two villages were sold for balances, and six farmed during the term of settlement. The areas are as follows in acres :—

Areas.	At last settlement.	At new measurement.	Increase per cent.	Decrease per cent.
Total area, ...	33,015	33,839	2·4	...
Barren, ...	3,427	2,642	...	22·9
Maafee, ...	3,036	1,129	...	62·8
Old waste, ...	6,160	4,400	...	28·6
New fallow, ...	2,022	831	...	58·9
Cultivated, ...	18,370	24,837	35·2	...
Malgoozaree, ...	26,552	30,068	13·2	...

Irrigation.

	Wet.	Dry.	Total.	Percentage of wet.
By re-measurement, ...	10,926	13,911	24,837	43·6
At last settlement, ...	7,890	10,480	18,370	43·9

Of the 13,911 acres now entered as dry, 4,958 acres are irrigable from existing sources, leaving 8,953 acres, or 36 per cent. of the total cultivation, unirrigable. Of the wet area 1,416 acres are irrigated from canals. The soils of the cultivated area are thus distributed :—

Soils.	Wet.	Dry.	Total.	Percentage on cultivation.
Domut, I., ...	4,758	2,315	7,073	28·5
Mutyar, ...	3,040	4,193	7,233	29·1
Domut, II., ...	2,056	2,399	4,455	17·9
Bhoor, ...	1,072	5,004	6,076	24·5

Seventy-four per cent. of the whole cultivated area at measurement was held at *buttaee* rates. In 20 villages rents have been commuted to money rates. The resulting rates on soils averaged—

Soils.	Wet.	Dry.	*Surasuri.*
	Rs. a. p.	Rs. a. p.	Rs. a. p.
Domut, I., ...	5 4 0	3 12 9	4 13 6
Mutyar, ...	3 14 9	2 14 2	3 7 7
Domut, II., ...	3 11 0	2 13 8	3 4 8
Bhoor, ...	3 1 1	2 0 0	2 3 6

The average rent-rate on total cultivation being Rs. 3-11-8 per acre for the whole circle, I propose the following soil-rates :—

Soils.	Wet.	Dry.	*Surasuri.*
	Rs. a. p.	Rs. a. p.	Rs. a. p.
Domut, I., ...	5 0 0	3 10 0	4 8 9
Mutyar, ...	3 10 0	2 13 0	3 2 6
Domut, II., ...	3 10 0	2 13 0	3 3 0
Bhoor, ...	3 0 0	1 14 0	2 1 2

They give a result on the circle of Rs. 81,796, falling at Rs. 3-4-8 per acre. My crop-rates work out as follows per acre :—

	Purhel.	*Doosahi.*
	Rs. a. p.	Rs. a. p.
Sugar-cane, ... *Pundrah*, ...	6 0 0	3 0 0
Vegetables, ...	6 6 0	...
Cotton, ...	5 10 0	...
Rice, ...	3 0 0	...
Mukka, ...	3 3 0	...
Bajra and coarse crops, ...	2 0 0	...
Wheat, ...	4 6 0	2 3 0
Barley, ... *Gojaie*, ... *Bijra*, ...	3 8 0	1 13 0

	Rs. a. p.	Rs. a. p.
Gram, ...	3 6 0	1 11 0
Mussoor, ...	2 4 0	1 3 0

The results by the several sets of rates on the cultivated area of the circle are thus shown together :—

Rates.	Average per acre.	Resultant outturn.
	Rs. a. p.	Rs.
Commutation rates, ...	3 11 8	92,621
Proposed soil-rates, ...	3 4 8	81,796
Crop-rates, ...	3 6 8	84,860

The commutation rates bring out a high result, as in only the best villages of the circle were rents commuted.

The old *jummas* and those resulting from my proposed soil-rates are as follows :—

Jummas.	Amount.	Incidence on *malgoozaree* area.	Incidence on cultivated area.
	Rs.	Rs. a. p.	Rs. a. p.
IX., 1833, Settlement, ...	28,083	1 0 8	1 8 1
Expiring, ...	28,439	0 15 1	1 2 4
By soil-rates, excluding cesses, ...	40,900	1 5 9	1 10 4
Do., including cesses, ...	44,990	1 7 11	1 12 11

The increase on land revenue proper by the estimate is Rs. 12,461, or 43·8 per cent.

14. On the whole *tuhseel* the comparative results are as follows :—

Jummas.	Amount.	Incidence on *malgoozaree* area.	Incidence on cultivated area.
	Rs.	Rs. a. p.	Rs. a. p.
IX., 1833, Settlement, ...	1,82,858	1 10 0	2 1 0
Expiring, ...	1,78,379-12	1 7 1	1 10 5
Revised estimate at 50 per cent., excluding cesses,	2,32,960	1 14 2	2 2 6
Do., including cesses, at 55 per cent., ...	2,56,256	2 1 2	2 5 11

There is thus an estimated increase of Rs. 54,580-4-0 in actual land revenue, or 30·6 per cent. above the expiring demand. Including the cesses at 5 per cent. on the assets of the revenue-free villages, and the *nusrana jummas* on the two villages held on this tenure, the total estimated demand on the *tuhseel* would be Rs. 2,58,152—

Composed of land revenue, ...	Rs.	2,33,561
Ditto cesses, ...	,,	24,591

15. It remains to show the effect on the revenue produced by the canals,—all of which have been constructed since last settlement.

In Circle I. only 9 acres were measured as *khalsa* irrigated from canals.

In Circle II. there were 21,730 acres, *viz.*:—

Soils.	Area in acres.	Percentage of soil to total canal irrigated area.
Domut, I., ...	9,061	41·7
Mutyar, ...	11,203	51·5
Domut, II., ...	964	4·4
Bhoor, ...	502	2·4

In the canal-irrigated villages the areas at last settlement and present measurement are as follows :—

	Total area.	*Minhaee.*	Culturable waste.	*Cultivated.*			*Malgoozaree.*
				Wet.	Dry.	Total.	
By present measurement, ...	50,426	5,682	3,714	29,194	11,836	41,030	44,744
At last settlement, ...	49,519	9,515	6,531	18,567	14,906	33,473	40,004

The old percentage of wet to total cultivation was 55·4. The present percentage is 71·1: of the total 29,194 acres now irrigated, 21,730 are from canals, and 7,464 from wells and other sources. The total cultivated area has increased 22·5 per cent.; wet cultivation has increased 10,627 acres, or 57·2 per cent. over the former amount, and dry cultivation has decreased by 3,070 acres, or 20·5 per cent. on the old amount.

Now taking the villages in the same circle, the same tracts of country which are unaffected by canals, we get the following results:—

	Total area.	*Minhaee.*	Culturable waste.	*Cultivated.*			*Malgoozaree.*
				Wet.	Dry.	Total.	
By present measurement, ...	41,460	4,212	4,907	16,016	16,325	32,341	37,248
At last settlement,	41,352	7,063	6,737	14,805	12,747	27,552	34,289

Here the old percentage of wet to total cultivation was 53·0, the present is 49·5. The wet area has increased 8 per cent., and the dry 28 per cent., over the similar areas at last settlement. The average wet-rate in the whole circle is Rs. 5-1-4 per acre, the average dry rate, Rs. 3-7-9 per acre.

Now the canal system is a low level one drawing its water-supply from the same streams which were formerly utilized for irrigation by *kuchha* dams. The tract unaffected by the canals is most distant from the rivers which form the sources of supply. In all other points, leaving out the canals, in caste of cultivators, crops, soils, and irrigability from wells, it is precisely similar to the canal-irrigated tract. We should then conclude that if the canals had not been constructed, the former tract would have made rather less progress in irrigation than the latter, inasmuch as the latter is nearest the water-supply.

If then we apply the ascertained facts of the former tract to the latter one, we shall be rather understating the natural progress which the latter tract would have made in the absence of the canals. In other words, we shall be stating the case most favourably for the canals. In the non-canal villages, the wet area has increased by 8 per cent., the dry by 28 per cent., since last settlement: applying these proportions to the canal villages, we get the following as the approximate areas and rents at the present time, supposing the canals had not been constructed:—

	Acres.		Acres.			
Old wet area, ...	18,567	+ 8 per cent.	=20,070 × 5 1 4	=	1,02,022	8 0
Dry, ...	14,906	+28 per cent.	=18,079 × 3 7 9	=	62,994	1 0
Totals, ...	...	...	38,149	rental	1,65,016	9 0

The actuals are—

Wet, ...	...	29,194 × 5 1 4	= Rs.	1,48,402	13 0
Dry, ...	...	11,836 × 3 7 9	= Rs.	41,241	1 0
Total, ...	...	41,030	Rs.	1,89,643	14 0

Difference in rental is Rs. 24,627-5-0, which is the maximum net increase in rental purely due to the canals. The *jumma* on this at 50 per cent. would be Rs. 12,313.

The *jumma* remitted on the cultivated land thrown out of cultivation, and taken up for the canals in this circle, was Rs. 384, to which must be added 28 per cent. for general increase at this settlement, making Rs. 453: deducting this from the Rs. 12,313, leaves Rs. 11,860 per annum net increase in *jumma* due to the canals in this circle.

In the third circle the areas in canal and non-canal villages are as follows. The average wet-rate being Rs. 4-2-9, and average dry rate Rs. 2-9-9 per acre.

1. *Canal Villages.*

	Total.	*Minhaee.*	Waste.	Cultivation.			*Malgoozaree.*
				Wet.	Dry.	Total.	
By re-measurement, ...	7,714	713	808	3,491	2,702	6,193	7,001
At last settlement, ...	7,484	1,011	1,533	2,184	2,756	4,940	6,473

Of the present wet area 2,185 acres is irrigated from canal, and 1,306 from other sources.

2. *Non-canal Villages.*

	Total.	*Minhaee.*	Waste.	Cultivation.			*Malgoozaree.*
				Wet.	Dry.	Total.	
By re-measurement, ...	25,335	2,269	4,423	7,435	11,209	18,644	23,067
At last settlement, ...	24,658	3,759	6,744	6,310	7,845	14,155	...

In the latter 80·8 per cent. of the *malgoozaree* area is cultivated, and of the cultivated area 39·8 per cent. is irrigated,—applying these proportions to the canal-irrigated villages, we get *malgoozaree* 7,001,

Cultivated 5,656	Wet	2,241×4	2	9=9,349	11	0
	Dry	3,415×2	9	9=8,911	0	0
		5,656		18,260	11	0

The actuals are—

Cultivated 6,193	Wet	3,491×4	2	9=14,564	0	0
	Dry	2,702×2	9	9= 7,050	8	0
				21,614	8	0

The difference is, 3,354 land revenue, at 50 per cent., 1,677.

The *jumma* remitted for land taken up for canals was Rs. 20, adding to which 43·8 per cent., the estimated increase on land revenue of the circle at the re-settlement, makes Rs. 28, which amount, deducted from Rs. 1,677, leaves Rs. 1,649, the net increase in *jumma* due to canals. On the two circles the total maximum increase due to the canals is Rs. 13,509, or roundly Rs. 13,500. The canal officers have usually taken credit for Rs. 2 per acre irrigated, or (21,730+2,185 acres)+2=47,830, forgetting that all the canal-irrigation is not *new* irrigation. To a great extent it has only supplanted previously existing modes of irrigation. In the canal-irrigated villages of both circles the total increase in the wet area is only 11,934 acres, so that 11,981 acres, now irrigated from canals, must have been irrigated from wells and other sources prior to the construction of the canals: and further, it would not be correct to attribute the whole of the increased irrigation even to the canals; for even in the non-canal villages we find that the wet area has increased with the increased population, and consequent close and more laborious cultivation; and there is no reason whatever why *cæteris paribus* a similar increase should not have taken place in the tract now irrigated from canals, if those canals had never been constructed. With these data, and the Executive Engineer's canal accounts, a fair estimate might now be made as to whether, with the present water-rates, the canals pay any, and what amount of interest on the capital expended in their construction.

It cannot be said that my estimate of the increased revenue due to them is not a liberal one: for if in the canal villages we attribute the entire increase in irrigated area solely to the canals, and on that increase charge the difference between wet and dry rates for each circle, the resultant increased rental only comes to Rs. 19,034, on which the land revenue would be Rs. 9,517, or deducting the present annual value of the land revenue remitted on the land taken up for them, Rs. 9,036, whereas the former estimate was Rs. 13,000.

This however is the more scientifically correct as it takes into account the increase in the *cultivated area* due to the canals, as well as the increased *irrigated* area.

16. On the whole wet and dry areas of the *pergunnah*, excluding the *khadir*, the average wet rate is Rs. 5-0-8. The average dry rate Rs. 3-3-1, the difference is Rs. 1-13-7 per acre, on which 55 per cent. would be Re. 1-0-3 per acre. One rupee per acre, therefore, would give a fair "landlord rate," in case of the extension of irrigation by the construction of new canals after settlement, to be applied to the area rated at dry rates, but brought under irrigation by the canals, as proposed by Colonel Strachey. Considering, however, that 87 per cent. of the *malgoozaree* area is already cultivated, and that of the cultivated area 72½ per cent. are irrigable from sources already existing, and that there will always be a certain amount of land under coarse crops which receive no irrigation, I do not think it will be a profitable investment of money to lay it out in the construction of new canals in this *pergunnah*, or the revision of the present system. Owing to the local peculiarities of soil, substratum, and seasons which have been described in a separate report, the canal returns are exceedingly precarious and variable, and to expend more money in constructing new canals in Nawabgunge would be by no means a "reproductive expenditure." It would be far better for the country, and far more profitable to Government, to devote the money to creating a system of canals through the high lands of Crore, and the *bhoor pergunnah* of Furreedpore, where water is really urgently required, and where the effects of drought are felt at the earliest time and with the greatest severity.

In Nawabgunge new canals would only replace one mode of irrigation by another. In Furreedpore they would create irrigation, largely increase the value of landed property, save the *pergunnah* from drought, and create a large increase in the revenue at the next settlement.

A map* to illustrate the classification of villages for assessment and the usual statistical appendices accompany this report.

* Not printed.

APPENDIX I.

Census Statement of Pergunnah Nawabgunge, Zillah Bareilly.

Number of *mouzahs*.	Area in square miles (British Statute) of 640 acres each.		POPULATION.																Totals.								
			Hindoos.								Mahomedans.																
			Agricultural.				Non-agricultural.				Agricultural.				Non-agricultural.												
			Males.		Females.		Males.		Females.		Males.		Females.		Males.		Females.										
	Total.	Cultivated.	Adult.	Children.	Adult.	Children.	Adult.	Children.	Adult.	Children.	Adult.	Children.	Adult.	Children.	Adult.	Children.	Adult.	Children.	Adults.	Adult males.	Adult females.	Children.	Boys.	Girls.	Males.	Females.	Totals.
324	225·8	168·71	26,138	17,078	21,007	13,478	7,314	3,015	5,962	3,593	3,254	1,687	2,922	1,791	4,453	2,877	4,632	3,063	75,682	41,159	34,523	46,582	24,657	21,925	65,816	56,448	122,264

APPEN

Statement showing the Distribution of the cultivated areas

Number.	Castes.	Khadir.								
		Residents.			*Non-residents.*			*Total.*		
		Holding.	Assamees.	Land in acres.	Holding.	Assamees.	Land in acres.	Holding.	Assamees.	Land in acres.
1	Koormees, ...	6,703	8,119	44,668	2,230	2,499	5,775	8,933	10,618	50,443
2	Carpenters, ...	426	474	1,724	175	187	309	601	661	2,033
3	Chumars, ...	1,415	1,522	6,595	314	363	578	1,729	1,885	7,173
4	Hindoo Fuqeers, ...	31	34	77	20	18	28	51	52	105
5	Talees or Oilmen, ...	303	320	891	115	125	220	418	445	1,111
6	Moraos, ...	1,056	1,104	4,357	205	206	390	1,261	1,310	4,747
7	Goshaiens, ...	27	37	317	20	19	49	47	56	366
8	Aheer, ...	782	777	4,700	304	387	931	1,086	1,164	5,631
9	Afghan, ...	370	356	1,304	103	109	268	473	465	1,572
10	Kayeths, ...	94	140	465	96	104	444	190	244	909
11	Brahmins, ...	1,139	1,245	8,045	471	566	1,181	1,610	1,811	9,226
12	Blacksmiths, ...	128	146	877	83	93	112	211	239	989
13	Goldsmiths, ...	30	30	55	5	7	10	35	37	65
14	Barbers, ...	326	352	995	110	113	173	436	465	1,168
15	Bhoorjees, ...	86	94	160	21	21	46	107	115	206
16	Kahars, ...	429	473	1,219	144	153	232	573	626	1,451
17	Dhobees, ...	389	367	1,123	100	105	161	489	472	1,284
18	Khateeks, ...	203	216	438	40	41	62	243	257	500
19	Kulwar, ...	4	5	34	3	3	6	7	8	40
20	Potters, ...	159	156	457	29	39	44	188	195	501
21	Weavers, ...	243	233	531	36	33	44	279	266	575
22	Sheikhs, ...	299	286	1,347	138	122	323	437	408	1,670
23	Mahomedan Fuqeers, ...	302	307	1,085	77	80	132	379	387	1,217
24	Sweepers, ...	187	173	217	19	19	26	206	192	243
25	Goojurs, ...	59	75	443	14	16	16	73	91	459
26	Baneahs, ...	15	14	32	11	12	13	26	26	45
27	Turks, ...	13	11	55	4	7	10	17	18	65
28	Raeens, ...	7	4	74	2	2	2	9	6	76
29	Syuds, ...	241	234	987	144	171	775	385	405	1,762
30	Bhuttearahs, ...	11	9	24	2	3	5	13	12	29
31	Mahajuns, ...	3	3	16	3	3	9	6	6	25
32	Bunjarahs, ...	30	22	74	16	17	18	46	39	92
33	Beldars, ...	377	380	1,820	64	65	109	441	445	1,929
34	Munehars, ...	17	18	75	7	7	5	24	25	80
35	Thakoors, ...	296	399	2,344	89	113	287	385	512	2,631
36	Koonjrahs, ...	17	21	61	3	7	10	20	28	71
37	Tailors, ...	66	75	184	13	16	23	79	91	207
38	Guddureas, ...	91	105	383	26	29	50	117	134	433
39	Kisans, ...	458	655	3,200	169	198	372	627	853	3,572
40	Bards, ...	43	57	79	8	9	9	51	66	88
41	Mewatees, ...	234	278	1,108	59	68	83	293	346	1,191
42	Dhoonahs, ...	95	99	207	7	10	16	102	109	223
43	Butchers, ...	8	9	68	7	8	15	15	17	83
44	Lodhas, ...	19	19	225	4	6	5	23	25	230
45	Jats, ...	43	65	486	18	20	75	61	85	561
46	Flower-sellers, ...	17	20	40	6	6	12	23	26	52
47	Dyers, ...	7	8	24	1	1	3	8	9	27
48	Khuttree, ...	3	6	3	4	8	48	7	14	51
49	Sadh, ...	69	77	392	39	47	112	108	124	504
50	Tamolee or Beetle-sellers,	2	3	5	4	3	3	6	6	8
51	Passeah, ...	8	8	12	2	3	5	10	11	17
52	Meerasees, ...	27	21	54	1	1	4	28	22	58
53	Nutts, ...	7	5	34	3	4	10	10	9	44
54	Chhenpees, ...	2	2	7	1	1	2	3	3	9
55	Moguls, ...	43	38	171	11	12	9	54	50	180
56	Eunuchs, ...	3	3	6	1	1	1	4	4	7
57	Masons, ...	2	2	4	3	4	6	5	6	10
58	Radhas, ...	2	5	1	1	3	1	3	8	2
59	Joshees, ...	2	1	1	...	...	...	2	1	1
60	Korees, ...	1	1	4	...	...	...	1	1	4
61	Bhistees, ...	2	2	4	...	...	...	2	2	4
62	Barees, ...	1	1	4	...	...	...	1	1	4
63	Putwas, ...	2	2	2	...	...	...	2	2	2
	Total, ...	17,474	19,723	94,294	5,605	6,293	13,667	23,079	26,016	1,07,961

DIX II.

among the several Castes of Pergunnah Nawabgunge.

Maafees.									Total of Maafee and Khalsa.		
Residents.			*Non-residents.*			*Total.*					
Holding.	Assamees.	Land in acres.	Holding.	Assamees.	Land in acres.	Holding.	Assamees.	Land in acres.	Holding.	Assamees.	Land in acres.
472	793	2,872	7	10	31	479	803	2,903	9,412	11,421	53,346
7	8	27	2	4	9	9	12	36	610	673	2,069
149	158	294	1	1	1	150	159	295	1,879	2,044	7,468
...	...	...	4	4	11	4	4	11	55	56	116
11	16	43	4	5	9	15	21	52	433	466	1,163
133	143	271	1	1	9	134	144	280	1,395	1,454	5,027
8	10	23	...	...	...	8	10	23	55	66	389
36	48	113	3	6	15	39	54	128	1,125	1,218	5,759
...	...	...	6	6	11	6	6	11	479	471	1,583
16	31	68	1	1	5	17	32	73	207	276	982
151	177	410	22	30	78	173	207	488	1,788	2,018	9,714
13	15	33	4	6	9	17	21	42	228	260	1,031
...	...	...	...	...	...	...	...	...	35	37	65
20	35	69	2	4	3	22	39	72	458	504	1,240
4	6	8	...	...	...	4	6	8	111	121	214
68	79	116	26	25	53	94	104	169	667	730	1,620
12	14	35	3	3	5	15	17	40	504	489	1,324
9	10	18	...	...	...	9	10	18	252	267	518
...	...	...	...	...	...	...	...	...	7	8	40
5	5	19	1	1	4	6	6	23	194	201	524
7	13	40	...	...	...	7	13	40	286	279	615
1	1	1	6	6	16	7	7	17	444	415	1,687
5	5	10	3	3	5	8	8	15	387	395	1,232
8	9	19	...	...	...	8	9	19	214	201	262
...	...	...	...	...	...	...	...	...	73	91	459
1	1	1	...	...	...	1	1	1	27	27	46
...	...	...	...	...	...	...	...	...	17	18	65
...	...	...	...	...	...	...	...	...	9	6	76
3	6	15	...	...	...	3	6	15	388	411	1,777
...	...	...	...	...	...	...	...	...	13	12	29
...	...	...	2	2	3	2	2	3	8	8	28
...	...	...	3	3	3	3	3	3	49	42	95
2	3	16	10	17	30	12	20	46	453	465	1,975
...	...	...	...	...	...	...	...	...	24	25	80
11	23	79	...	...	...	11	23	79	396	535	2,710
...	...	...	...	...	...	...	...	...	20	28	71
1	3	10	...	...	...	1	3	10	80	94	217
1	4	6	...	...	...	1	4	6	118	138	439
128	145	195	...	...	...	128	145	195	755	998	3,767
...	...	...	...	...	...	...	...	...	51	66	88
3	3	25	1	1	3	4	4	28	297	350	1,219
7	7	31	...	...	...	7	7	31	109	116	254
...	...	...	...	...	...	...	...	...	15	17	88
...	...	...	...	...	...	...	...	...	23	25	230
...	...	...	...	...	...	...	...	...	61	85	561
2	3	1	...	...	...	2	3	1	25	29	53
...	...	...	...	...	...	...	...	...	8	9	27
...	...	...	...	...	...	...	...	...	7	14	51
...	...	...	...	...	...	...	...	...	108	124	504
...	...	...	...	...	...	...	...	...	6	6	8
...	...	...	...	...	...	...	...	...	10	11	17
...	...	...	...	...	...	...	...	...	28	22	58
...	...	...	...	...	...	...	...	...	10	9	44
...	...	...	...	...	...	...	...	...	3	3	9
...	...	...	...	...	...	...	...	...	54	50	180
...	...	...	...	...	...	...	...	...	4	4	7
1	1	3	1	1	1	2	2	4	7	8	14
...	...	...	...	...	...	...	...	...	3	8	2
...	...	...	...	...	...	...	...	...	2	1	1
...	...	...	...	...	...	...	...	...	1	1	4
...	...	...	...	...	...	...	...	...	2	2	4
...	...	...	...	...	...	...	...	...	1	1	4
...	...	...	...	...	...	...	...	...	2	2	2
1,295	1,795	4,871	113	140	314	1,408	1,915	5,185	24,487	27,931	113,146

APPENDIX III.

Statement showing the Harvest Prices Current in Pergunnah Nawabgunge, Zillah Bareilly.

Year.	Wheat.	Barley.	Gram, 1st quality.	Gram, 2nd quality.	Mussoor.	Moong.	Mothe.	Bajra.	Cotton.	Goor or Treacle.	Til.	Urhur.	Mash.	Rice, 1st quality.	Rice, 2nd quality.	Linseed.	Lahee.	Sirson.
	M. S. C.	M. S. C.	M. S. C.	M. S. C.	M. S. C.	M. S. C.	M. S. C.	M. S. C.	M. S. C.	M. S. C.	M. S. C.	M. S. C.	M. S. C	M. S. C.	M. S. C.	M. S. C.	M. S. C.	M. S. C.
1840 A. D.,	0 22 0	1 22 0	0 22 0	...	...	0 23 0	0 23 0	0 27 0	...	0 13 8	0 21 0	0 16 8	0 19 0	0 32 0	...	0 29 0	0 27 0	...
1841 „ „	0 27 5	1 14 0	0 30 10	...	1 0 0	0 26 8	0 18 0	0 30 1	...	0 16 4	0 21 8	0 29 8	0 18 12	0 34 0	0 35 0	0 23 8	0 24 0	...
1842 „ „	0 33 4	1 21 8	0 33 6	0 35 15	1 1 15	0 23 4	0 23 12	...	...	0 17 4	0 23 8	1 2 0	0 18 12	0 32 12	0 34 12	0 25 0	0 25 0	...
1843 „ „	0 27 3	0 33 3	0 34 9	...	1 0 8	0 21 5	0 25 8	...	...	0 15 12	0 19 8	1 0 12	0 22 5	0 34 0	0 35 0	0 22 7	0 22 10	...
1844 „ „	0 35 2	1 7 12	0 32 6	...	0 32 0	0 24 12	0 33 12	0 37 8	...	0 19 0	0 18 14	0 33 7	0 23 14	0 38 3	0 39 2	0 23 7	0 22 7	...
1845 „ „	0 29 14	1 4 13	0 32 11	...	0 35 14	0 24 7	0 32 9	0 30 0	...	0 13 10	0 16 10	0 27 10	0 24 8	0 36 4	0 37 4	0 22 6	0 18 14	...
1846 „ „	0 28 14	1 1 0	0 31 14	...	0 34 15	0 23 14	0 33 2	0 31 12	...	0 14 0	0 15 14	0 28 4	0 25 2	0 35 0	0 37 8	0 23 4	0 19 2	...
1847 „ „	0 27 8	0 34 12	0 25 0	...	0 24 12	0 26 12	0 30 8	0 35 0	0 4 4	1 13 6	0 19 8	1 4 12	0 35 8	1 7 0	1 13 4	0 28 12	0 27 2	0 25 0
1848 „ „	0 38 12	1 19 8	1 6 0	1 15 0	1 12 4	0 37 4	1 2 0	1 2 0	0 4 1	0 13 6	0 16 8	0 24 0	0 24 12	0 35 0	1 8 0	0 17 8	0 17 14	0 17 14
1849 „ „	0 24 15	1 11 2	0 37 5	1 1 4	0 39 4	0 28 4	0 32 4	1 5 12	0 3 0	0 18 1	0 24 3	0 35 6	0 24 4	0 36 14	0 38 6	0 32 8	0 35 3	0 33 1
1850 „ „	0 36 14	1 21 0	1 10 2	1 16 6	1 6 6	0 36 14	1 0 8	1 9 12	0 3 7	0 20 10	0 30 0	1 21 8	0 28 8	0 35 12	0 37 2	1 7 8	1 6 0	1 1 0
1851 „ „	0 34 15	1 12 2	0 37 5	1 1 4	0 39 4	0 28 4	0 32 12	1 5 12	0 3 0	0 18 1	0 24 3	0 38 6	0 24 4	0 36 14	0 38 6	0 32 8	0 35 3	0 33 0
1852 „ „	0 29 4	1 9 0	0 32 0	...	0 38 8	0 24 6	0 31 4	0 31 0	0 3 8	0 13 0	0 16 4	0 28 5	0 23 7	0 33 14	0 36 5	0 21 5	0 18 7	0 18 6
1853 „ „	0 29 2	0 39 4	0 34 0	0 34 0	0 31 12	0 26 12	0 17 0	0 21 4	0 4 4	0 17 8	0 16 8	0 24 0	0 24 14	0 35 2	1 0 8	0 17 8	0 17 14	0 17 14
1854 „ „	0 28 14	0 34 15	0 26 2	0 27 6	0 25 11	0 27 2	0 28 15	0 36 13	0 4 0	0 13 12	0 16 12	0 29 4	0 20 7	0 33 2	0 36 4	0 19 12	0 18 4	0 16 14
1855 „ „	0 38 0	1 9 12	1 0 0	1 13 8	1 15 0	1 8 0	1 5 0	1 8 0	0 4 4	0 15 12	0 16 0	1 2 12	1 2 0	1 2 4	1 5 12	0 19 12	0 18 8	0 18 4
1856 „ „	0 36 0	1 0 0	0 36 4	0 38 4	1 0 0	1 1 12	1 4 4	1 5 4	0 4 2	0 15 0	0 17 0	1 1 4	1 0 0	1 2 0	1 2 12	1 2 0	0 18 12	0 17 4
1857 „ „	0 37 0	1 4 0	0 36 8	0 38 6	1 2 0	1 3 2	1 5 0	1 6 4	0 4 4	0 18 0	0 16 0	1 10 0	0 35 0	1 5 12	1 7 10	1 1 0	0 20 2	0 18 12
1858 „ „	0 27 5	1 7 3	0 36 12	1 2 0	1 3 4	0 28 2	0 30 0	0 28 2	0 1 12	0 17 8	0 18 1½	0 34 0	0 30 0	0 38 4	1 0 2½	0 27 9	0 26 0	0 25 8
1859 „ „	0 22 12	0 34 12	0 28 8	0 29 0	0 28 0	0 18 8	0 12 0	0 13 12	0 2 12	0 12 4	0 13 12	0 28 2	0 17 12	0 25 2	0 27 0	0 17 10	0 18 12	0 16 1
1860 „ „	0 12 1	0 17 7	0 12 13	0 14 6	0 13 4	0 11 0	0 13 6	0 13 6	0 3 8	0 11 5	0 11 2	0 13 8	0 9 10	0 16 6	0 18 6	0 10 9	0 13 11	0 10 4
1861 „ „	0 13 12	0 18 6	0 13 12	0 15 0	0 15 8	0 12 4	0 14 12	0 14 12	0 2 12	0 12 4	0 12 11	0 14 8	0 12 4	0 16 12	0 12 12	0 12 5½	0 16 7	0 13 5½
1862 „ „	0 26 7	1 25 5	0 39 7	1 7 0	0 39 4	0 35 7	0 21 13	0 39 2	0 2 3	0 11 14½	0 11 7	1 2 12	0 28 6	1 0 7	1 2 12	0 12 15	0 16 7	0 13 5½
1863 „ „	0 22 15	1 1 12	0 27 12	0 34 8	0 39 2	0 19 8	0 20 4	0 23 12	0 1 1	0 13 4	0 9 8	0 26 8	0 19 8	0 30 8	0 32 8	0 13 1	0 14 12	0 9 1½
1864 „ „	0 20 12	0 38 4	0 26 8	0 28 8	0 30 4	0 21 12	0 18 6	0 25 13	0 1 5	0 12 14	0 12 0	0 30 0	0 19 0	0 30 4	0 32 4	0 13 14	0 12 8	0 13 0
1865 „ „	0 18 12	0 31 0	0 24 12	0 26 14	0 28 0	0 23 12	0 25 0	0 32 0	0 1 10	0 6 4	0 14 6	0 27 4	0 20 0	0 22 0	0 23 0	0 23 8	0 20 0	0 19 8
1866 „ „	0 14 14	0 20 14	0 18 0	0 18 5	0 19 12	0 17 0	0 17 0	0 15 8	0 2 4	0 7 8	0 14 7	0 18 0	0 16 0	0 16 4	0 17 4	0 16 2	0 16 2	0 17 5
1867 „ „	0 23 6	0 34 8	0 18 0	0 22 0	0 18 0	0 30 0	0 25 0	0 29 8	0 2 2	0 10 0	0 12 0	0 32 0	0 25 0	0 32 0	0 34 0	0 11 10	0 12 0	0 11 6

APPENDIX IV.

Jinswar or Produce Statement of Pergunnah Nawabgunge, Tuhseel Nawabgunge, Zillah Bareilly.

Names of Circles.	Total area in acres.	Minhai Area.			Malgoozaree Area.				Khureef Crops.																			
		Barren.	Lakhiraj.	Total.	Old Waste. Banjur.	Old Waste. Bagh.	New fallow.	Cultivated.	Sugar-cane.	Pandrah.	Mukka.	Cotton.	Vegetables.	Sunn.	Rice.	Churree and Jowar.	Bajra.	Mothe.	Moong.	Mash.	Kodon.	Shamukh.	Urhur.	Mundwa.	Kungni.	Urvee.	Lobia.	Til.	Total Khureef Crops.
Circle I., ...	13,180	1,595	7	1,602	1,484	263	78	9,753	1,027	537	102	488	46	10	3,437	193	688	24	14	16	368	41	48	9	3	...	...	...	7,051
3 Maafee Villages,	1,916	...	1,916	1,916	In	parts	of	100	10·53	5·50	1·05	5·01	0·47	0·10	35·24	2·00	7·06	0·24	0·14	0·16	3·77	0·42	0·49	0·09	0·02	...	...	...	72·29
Circle II., ...	92,102	9,313	797	10,110	6,353	1,542	726	73,371	5,163	3,205	719	1,911	436	28	31,681	820	4,638	199	21	807	1,777	1,491	694	63	3	9	8	16	53,689
5 Maafee Villages,	3,507	...	3,507	3,507	In	parts	of	100	7·04	4·38	0·98	2·60	0·59	0·04	43·18	1·11	6·32	0·27	0·03	1·10	2·43	2·03	0·94	0·09	...	0·01	0·01	0·02	73·17
Circle III., ...	33,050	2,642	340	2,982	3,898	502	831	24,837	1,312	809	91	512	137	10	7,217	295	5,623	136	18	427	852	561	189	13	...	7	6	4	18,219
2 Maafee Villages,	789	...	789	789	In	parts	of	100	5·28	3·25	0·36	2·06	0·55	0·05	29·05	1·19	22·63	0·54	0·07	1·72	3·44	2·26	0·76	0·06	...	0·03	0·03	0·02	73·35
Total, ...	1,38,332	13,550	1,144	14,694	11,735	2,307	1,635	1,07,961	7,502	4,551	912	2,911	619	48	42,335	1,308	10,949	359	53	1,250	2,997	2,093	931	85	6	16	14	20	78,959
Total Maafees,...	6,212	...	6,212	6,212	In	parts	of	100	6·95	4·22	0·85	2·68	0·58	0·05	39·22	1·22	10·15	0·34	0·06	1·14	2·78	1·94	0·84	0·09	...	0·01	0·01	0·02	73·15
Total Khalsa and Maafee, ...	1,44,544	13,550	735	20,906																									

Names of Circles.	Total area in acres.	Rubbee Crops.												Total Rubbee Crops.
		Wheat.	Melons.	Barley.	Gojaie.	Bijhra.	Gram.	Mussoor.	Linseed.	Peas.	Bahun.	Jaee.	Senhon.	
Circle I., ...	13,180	2,084	2	128	115	87	199	55	7	...	24	1	...	2,702
3 Maafee Villages,	1,916	21·36	0·02	1·31	1·18	0·89	2·05	0·56	0·08	...	0·25	0·01	...	27·71
Circle II., ...	92,102	13,580	1	1,430	1,869	590	1,644	172	88	20	279	7	2	19,682
5 Maafee Villages,	3,507	18·65	...	1·95	2·55	0·81	2·24	0·24	0·12	0·03	0·23	0·01	...	26·83
Circle III., ...	33,050	4,184	4	607	909	71	460	21	7	1	354	...	...	6,618
2 Maafee Villages,	789	16·85	0·02	2·45	3·66	0·29	1·85	0·08	0·03	...	1·42	...	...	26·65
Total, ...	1,38,332	19,848	7	2,165	2,893	748	2,303	248	102	21	657	8	2	29,002
Total Maafees,	6,212	18·39	...	2·00	2·68	0·69	2·13	0·23	0·09	0·02	0·61	0·01	...	26·85
Total Khalsa and Maafee, ...	1,44,544													

Detail of Dofusli Crops.

Crops.	Circles. Circle I.	Circle II.	Circle III.	Total.
Wheat, ...	168	408	64	640
Gram, ...	782	4,018	657	5,457
Barley, ...	107	232	79	418
Peas, ...	12	19	2	33
Bijhra, ...	103	478	128	709
Gojaie, ...	55	136	38	229
Mussoor, ...	133	495	47	675
Linseed, ...	11	292	84	387
Pundrah, ...	482	2,043	512	3,037
Vegetables, ...	41	324	137	502
Bahun, ...	19	...	...	19
Urhur, ...	...	16	...	16
Jaee, ...	8	5	5	18
Lahee, ...	...	5	...	5
Total, ...	1,921	8,471	1,753	12,145

APPENDIX. V.

Statement showing Distribution of the Cultivated area in each Circle of Pergunnah Nawabgunge, Zillah Bareilly.

Number of Circle.	Seer and Khood Kasht of proprietors and zylees in acres.	Cultivated by Tenants with occupancy rights in acres.			Cultivated by Tenants at will.			Zemindars' rent-free lands.	Total cultivated area in acres.
		Land paying rents in kind.	Land paying money rents.	Rents.	Land paying rents in kind.	Land paying money rents.	Rents.		
				Rs. A. P.			Rs. A P.		
1st Circle Khalsa, ...	114	1,795	6,065	29,955 0 3	601	801	3,517 7 3	216	9,753
Ditto, Maqruqa, ...	24	72	65	322 11 6	...	...	...	...	...
2nd Circle Khalsa, ...	2,591	41,585	12,045	47,384 4 3	11,277	2,178	7,916 15 0	1,367	73,371
Ditto, Maqruqa, ...	505	1,771	52	235 8 0	...	...	...	...	...
3rd Circle Khalsa, ...	664	12,022	5,141	13,599 13 3	5,326	996	2,339 3 4	543	24,837
Ditto, Maqruqa, ...	17	103	25	56 8 9	...	...	...	...	...
Total, Khalsa, ...	3,369	55,402	23,251	90,939 1 9	17,204	3,975	13,773 9 7	2,126	1,07,961
Ditto, Maqruqa, ...	546	1,946	142	614 12 3	...	...	...	...	...
Grand Total of Khalsah and Maqruqa, ...	3,915	57,348	23,393	91,553 14 0	17,204	3,975	13,773 9 7	2,126	1,07,961

Proposed Rates of Assessment for Pergunnah Crore.

(No. 501).—Dated Bareilly, the 3rd October, 1868.

From—*The* HON'BLE R. DRUMMOND, *Commissioner, Rohilkhund Division,*

To—F. HENVEY, ESQ., *Officiating Secretary, Board of Revenue, N.-W. P.*

SIR,—I have the honor to submit, for the consideration and orders of the Board, the enclosed report, with appendices, by the Settlement Officer of Bareilly, on the rent rates proposed by him as a standard of assessment for *Pergunnah* Crore.

(No. 10).—Dated the 22nd September, 1868.

From—S. M. MOENS, ESQ., *Settlement Officer, Bareilly,*

To—*The* HON'BLE R. DRUMMOND, *Commissioner, Rohilkhund Division.*

SIR,—I have the honor to report on the average rates which I propose to use for the assessment of *Pergunnah* Crore.

The *pergunnah* is situated in the centre of the district. At last settlement the area and *jumma* were as follows:—

Total area in acres.	*Lakhiraj.*	Barren.	Culturable waste.	New fallow.	Cultivated.	*Jumma.*
						Rs.
228,652	32,335	31,835	32,577	10,309	121,596	2,00,465

In 1852-53, the boundaries of the *pergunnah* were revised, and the following alterations took place:—

Transferred from Crore to other *pergunnahs*,—84 villages; area, 37,270 acres; *jumma*, Rs. 39,039.

Transferred from other *pergunnahs* to Crore,—21 villages; area, 9,067 acres; *jumma*, Rs. 6,017.

The area of the *pergunnah* then stood at 200,449 acres; *jumma*, Rs. 1,68,393.

By the operations of the Special Commissioner under II., 1819, the revenue-free tenure in 16 entire villages and a large number of small patches was resumed and assessed. Thus, in 1858, the *jumma* stood at Rs. 1,86,426; 2,868 acres, assessed at Rs. 3,460, were included in the new cantonments in 1860-61; and 16 villages, assessed at Rs. 7,186, were granted in revenue-free tenure to Raja Misr Byjnath, in part of his reward for services in 1857. All other remissions and alterations in the *jumma* since 1858 will be found detailed in the "Demands, Collections, and Balance Statement" which forms Appendix A. to this Report.

At the remeasurement in 1865-66, the area of the *pergunnah* as then constituted, excluding the areas of the city, cantonments, and civil lines, was found to be as follows:—

	Total area in acres.	*Lakhi-raj.*	Barren.	Old waste.	New fallow.	Cultivated.	Culturable.	*Jumma.*
								Rs.
Revenue-paying area,	188,845	32,110	20,300	20,752	3,886	140,597	165,235	1,78,216
Entire *maafee* villages, ...	13,342	...	1,402	1,301	95	10,544	11,940	...

2. The present as compared with the past survey of the *pergunnah* shows the following results:—

	Total area in acres.	*Lakhi-raj.*	Barren.	Old waste.	New fallow.	Cultivated.	Total *mal-goozaree.*	*Jumma.*
								Rs.
By present measurements, ...	202,187	15,250	21,702	20,752	3,886	140,597	165,235	1,78,216
At last settlement,	199,362	30,248	27,862	30,328	8,960	101,964	141,252	1,66,017

The number of *muhals* is—*khalsa*, 488; *maafee*, 32; or in all 520, with an average area of 408 acres, and a *jumma* of Rs. 366.

There is an increase by present measurement of 2,825 acres, or 1·4 per cent. in the total area,—of which 2,359 acres are attributable to land gained by alluvion in the villages along the Ramgunga, leaving a real difference of 466 acres, or ·2 per cent. The old waste has decreased by 9,576 acres, new fallow by 5,074 acres. The cultivated assessable area has increased by 38,633 acres, or 37·8 per cent.; and the *malgoozaree* area by 23.983 acres, or 16·9 per cent. The increase in *jumma* is due to the resumption and assessment of invalid *maafee*.

The assessment at last settlement was made at 66 per cent. of the assets; so that, in order that the expiring *jumma* may not be diminished by an assessment at 55 per cent., the cultivated area, if the rent rates be supposed unaltered, ought to have increased by 30 per cent. The surplus, 7·8 per cent. of cultivation, points to an increase, independently of what may be caused by a general rise in rents and produce prices, improved cultivation, and extended irrigation.

3. A very reliable index to the severity or lightness of the *jumma* of a *pergunnah* is the number of private tranfers of proprietary right, and of the severer coercive processes for the realization of the revenue. Now, in Crore, during the whole term of the expiring settlement, there have been no sales for arrears of revenue, and only five farms for short periods, all prior to 1847. Of these latter, four were caused by disputes among the sharers, not by any severity of the assessments.

Appendix A., the Statement of Demands, Collections and Balances, shows that since 1857-58 there have been no real balances, though the famine of 1860-61 fell within this period. These facts alone prove that the expiring *jumma* must have been very light.

The following statement shows the transfers since last settlement:—

Transfers.	Entire villages.	Area in acres.	*Jumma.*	Rights in portions.	Area in acres.	*Jumma.*	Total.	
							Area.	*Jumma.*
			Rs.			Rs.		Rs.
Private sales and unredeemed mortgages, ...	92	16,733	13,586	1,156	39,068	35,668	55,741	49,254
Auctions in execution of Civil Court decrees, ...	1	252	75	286	8,653	8,436	8,905	8,511
Other transfers by decree of Civil Courts, ...	5	2,561	2,474	29	4,490	4,339	7,051	6,813
Confiscations for rebellion,...	29	12,031	13,729	41	5,104	4,809	17,135	18,538
Farms for arrears, ...	5	2,013	1,963	...	...	...	2,013	1,963
Total, ...	132	33,590	31,827	1,462	57,255	53,252	90,845	85,079

Owing to the entire destruction of the records, the real sale prices could be ascertained for 20,852 acres only, which fetched Rs. 3,05,745, or an average of Rs. 14-10-8 per acre. Now, the usual value of a village is calculated among the natives of the district at ten years' purchase of the net profits. Applying this rule, the result is—

Total area of the assessable portion of *pergunnah* = 188,845 acres × 14-10-8 = Rs. 27,69,726-10-8,—

		Rs.	a.	p.
Of which, net profits = 1-10th, ...	=	2,76,972	10	8
Add for expenses of collections and management, @ 5 per cent.,	=	13,848	5	4
Jumma, ...	=	1,78,216	0	0
Total, *Nikasee*, ...	Rs.	4,69,037	0	0

A comparison with the final *nikasee* obtained by independent methods, as shown in para. 17, will prove how close an estimate this is. Even after the severe famine of 1839-40, the only relief required by the *pergunnah* was in 5 villages, the *jumma* of

which was reduced by Rs. 253 per annum. In the rest of the *pergunnah*, as far as I can discover, there were no remissions or even suspensions of revenue. These facts speak for themselves.

4. The next point for our consideration is, how far rents have risen generally. Under Mr. Muir's settlement, the cultivated portion of the present revenue-paying area was 101,964 acres; *jumma* at two-thirds of the assets, Rs. 1,66,017. The assets, therefore, were Rs. 2,59,025, which gives a rent rate of Rs. 2-8-5 per acre. The new *khuteounees* give the following results :—

Land held at money rates,	96,319	acres; rental Rs. 3,12,339; average, Rs. 3-3-10 per acre.
" " at *buttaee*,	44,278	"
	1,40,597	"

The *buttaee* lands are chiefly to the north and west of the *pergunnah*, and are rather above the general average; but if they are for the present rated at the average of the money-paying villages, the total rental will be Rs. 4,55,476, at a general average rent rate of Rs. 3-3-10 per acre. The rent rate, therefore, has increased by at least 11 annas and 5 pies per acre, or 28·3 per cent.

Owing to the total destruction of records in the mutiny, I am unable to compare the rent rates given by the present *khuteounees* with those given by the *khuteounees* of last settlement; but from a comparison of the rates in a few villages where they have remained unaltered since last settlement, with the rates now paid for similar soils in neighbouring villages, I am inclined to estimate the real increase in rents at not less than 50 per cent. Cultivation has very largely extended, and the natural tendency of this is to lower the general average rent rates; for the lands taken last into cultivation are usually those of inferior quality, and consequently paying a lower rent rate. The 28·3 per cent. increase in the average does not show the true increase in the rents. It is really 28·3 per cent. in addition to the sum by which an increase of cultivation of 38 per cent. of inferior land has lowered the general average. Further, there are some villages in which enhancements have not taken place since the rents were commuted 25 years ago. I think, therefore, I am not much above the mark when I say that in similar soils rents are 50 per cent. higher now than they were at settlement. This heavy rise may be attributed to the competition for land, especially in the eleven years that have elapsed since the mutiny; to the great increase in produce prices (which, as I shall presently show, have risen 54·9 per cent. since the formation of last settlement); to extended irrigation; and to better cultivation by the increased use of manure, and the increased cultivation of the more valuable crops. That I am correct in stating that the *buttaee* villages are, as a rule, slightly above the average, and that consequently the general average rent rate is rather above Rs. 3-3-10 per acre, may be shown by the following fact:—From the commencement of settlement operations till the present time, the rents of 20,660 acres of land held previously at *buttai* have been commuted, under Act XIV., 1863, to money rates,—the aggregate rental being fixed at Rs. 73,337-7-3, or Rs. 3-8-9 per acre. There have only been two appeals in all; in every other case the rates fixed have been accepted by both *zemindars* and *assamees* as fair and equitable. If we rate the *buttaee* at Rs. 3-8-9 all round per acre, the resultant *nikasi* on the whole *pergunnah* will be Rs. 4,69,387.

5. The increase in irrigation is shown by the following statement:—

Areas.	1837.		1867.	
	Acres.	Percentage.	Acres.	Percentage.
Irrigated, ...	35,330	34·6	53,430	38·
Unirrigated, ...	66,634	65·4	87,167	62·

Thus, though owing to the great increase in cultivation the percentage of irrigated to unirrigated land has only increased by 3·4 per cent., yet the increase of irrigated land is 18,100 acres, or 51·2 per cent. above the amount recorded at last settlement;

and this increase in irrigation points to an extended cultivation of the more valuable staples. Of the 53,430 irrigated acres, 22,198 are from wells, 15,116 from rivers, and 16,116 from tanks and *jheels*.

6. *Increase in produce prices.*—Till last settlement, rents in Crore were taken chiefly in kind. They were commuted in numbers of villages by the Settlement Officer, who based his general conclusions on the average prices of the previous ten years applied to tables of average produce.

The annexed table shows the average prices of the chief articles of produce for the ten years previous to last settlement, as compared with the prices for 1856 to 1867, omitting the years 1860-61, which were years of drought and scarcity, when prices ruled extraordinarily high :—

Crops.	Average price per Rupee from 1227 to 1237 *Fuslee*.		Average prices from 1856 to 1867 A. D.		Increase per cent.
	M.	S.	M.	S.	
Mukka, ...	2	...	1	6	74·0
Rice, ...	1	13	...	37	43·7
Sathee, ...	1	34	1	6	61·0
Bajra, ...	1	22	...	34	82·3
Wheat, ...	1	...	...	26	53·6
Gram, ...	1	18	1	4	31·7
Barley, ...	1	25	1	7	38·0

The average increase is 54·9 per cent. My average for the years 1227-1237 is taken from some *misls* of last settlement which I was fortunate enough to find. This increase is startlingly heavy, and points to a heavy increase in the *jumma*. The prices for each kind of produce for the last thirty years will be found in Appendix B.

7. *Increase in Population.*—If we compare the Census Returns of 1852-53 and 1865, we shall find a slight increase in the adult male agricultural population. The Census Statement, Appendix C., shows that in 1852-53 the total number of agricultural males was 70,733; in 1865 it was 72,980. But it must be remembered that the census was actually taken in 1852 before the alteration of the *pergunnah* boundaries, noticed in paragraph 1. The total area, including *maafees*, but excluding the city and cantonments, was then 219,651 acres; average per agricultural male, 3·1 acres. The present total area, making the same exclusions, is 202,187 acres, on which, supposing the rate unaltered, the population would be 65,221; but the actual number is 70,733, giving an increase of 5,512, or 8·4 per cent.

The present number of agricultural male *adults* in the *pergunnah* is 37,327; average cultivated acres per head, 3·2. The new *jumma* of Furreedpore *Pergunnah* which was received with great satisfaction and contentment by all classes, fell at the rate of Rs. 5-2-5 per male agricultural adult. This rate would give in Crore a *jumma* of Rs. 2,26,260; but Furreedpore is much inferior in soil and productiveness to Crore, and grows a smaller proportion of the superior staples, and while the cultivating classes in the former *pergunnah* are chiefly Junghara, Thakoors, and Aheers, both lazy and slovenly cultivators, in the latter, Koormees and Kisans preponderate. Crore, then, should be able to pay a higher average rate. The number of ploughs recorded is 17,229, which gives an average of 8·8 acres per plough, and a little over two men per plough, which is about correct.

8. To sum up the information derived from the preceding, we find that cultivation has increased in the assessable area (excluding *maafee* villages) by 38,633 acres, or 37·8 per cent. Irrigation has increased by 18,100 acres, or 51·2 per cent. Produce prices have increased 54·9 per cent. Rents have increased all round by 28 per cent., but on similar soils, nearly 50 per cent. The agricultural male population has increased by 18·4 per cent. There have been no sales for arrears of revenue, and only five farms—none since 1847. There are no real balances. The proportion of private sales has been few as compared with Fureedpore, affecting only about 26 per cent. of

the acreage of the *pergunnah*, while the prices realized were from 14 to 16 years' purchase of the *jumma*. The *zemindars* are chiefly residents of the city; most of them have acquired wealth under the expiring light settlement. There are only 20 or 30 villages in which the sharers are sufficiently numerous to necessitate special allowances in assessment.

The above conclusions all point to a heavy increase in the *jumma*; of the amount of increase we are now in a position to form a rough estimate. The assumed rental of last settlement was Rs. 2,49,026. If this sum be increased by 37·8 per cent. for increase of cultivation, and 11¼ annas per acre for rise in rents, the result is Rs. 4,42,014. The declared *nikasee* is Rs. 4,55,476, or, rating the *buttaee* lands at Rs. 3-8-9 per acre, instead of Rs. 3-3-10, the result is Rs. 4,69,387; and there are many villages in which rents have remained unchanged for the last twenty years, and the *zemindars* of which are only waiting till the new *jummas* are declared, to bring their suits for enhancement. The *nikasee*, then, may be fairly estimated at from Rs. 4,60,000 to Rs. 4,70,000 and the new *jumma* from Rs. 2,53,000 to Rs. 2,58,500, which would give an increase of from 41·9 to 45 per cent.

9. The objection might be raised that, although undoubtedly the above statistics show that the *pergunnah* has made great progress since 1837, yet that the tendency of the increase of the population is to lessen the size of the cultivators' holdings, and thereby almost to necessitate over-cropping the land. It is very common indeed for the native *zemindars* to appear in the character of the *Laudator temporis acte*, and to maintain energetically that the present produce per *beegah* does not nearly approach the amount in the time of "Boulderson Sahib." Fortunately I have been able to obtain from the Board's Office a copy of the report in which Mr. Boulderson details the results of his experiments in produce, and to compare them with my own, as shown in the annexed table:—

Results of my Experiments in 1867-68.			Results of Mr. Boulderson's Experiments in 1828-29-30.		Results from Act X Suits.
Crops.	Number of trials.	Average per acre in lbs. avoirdupois.	Number of trials.	Average per acre in lbs. avoirdupois.	Average per acre in lbs. avoirdupois.
Rices of sorts, ...	2,506	981	144	1,008	823
Bajra, ...	658	423	12	355	548
Wheat, ...	353	822	88	850	706
Gram, ...	55	804	42	1,050	1,112
Barley, ...	52	1,045	66	1,255	...
Gojee, ...	136	999	...	...	...

The only noticeable difference between the results of Mr. Boulderson's experiments and mine is in gram and barley. This is probably explained by the fact that, in my trials of those crops, many fields were taken where the gram and barley had been sown as a second crop, while Mr. Boulderson took only selected *purhel* fields,—*i. e.*, where the gram or barley were the only crop of the year. My trials were made with the utmost care.

The villages for experiment were selected by me after local inspection, so that they might not be much above or below the average. They were taken from every part of the *pergunnah*. Each trial was made by cutting in a field one *pucka biswa*, the produce of which fairly represented the average of the field. The grain was then separated, dried, and weighed. The process was conducted before the *assamees* and *mokuddums*, and all objections raised by them on any point received proper attention.

In the above statement, only the averages so gained have been entered. All estimates made by the eye, however good approximations they may have been, have been carefully excluded. The results show that the charge of over-cropping and diminution of produce falls to the ground, especially when due advertence is had to the very great excess

of the number of trials in 1867-68, as compared with those made by Mr. Boulderson. It may be curious to show the results given by the above produce estimate when applied to the Jinswar statement, the money value of the grain being estimated at the average price of the last twelve years, excluding the exceptional years of famine, 1860-61. I must premise that the average deductions from the produce for *lahi*, *haqs* of village servants, *kurha*, *thapa*, &c., before the division takes place, amount to one-sixth. The average share of the landlord in *nijkaree* produce over the whole *pergunnah* is 1¼ maund in 3 maunds, or five-twelfths of what remains after the above deductions. We then get—

Crop.	Gross produce in lbs.	Deduction.	Net produce in lbs.	Share of Landlord. In lbs.	Share of Landlord. In seers pucka.	Sale price in seers.	Resultant money rate per acre. Rs. a. p.
Rices, ...	981	1-6th	818	341	127	37	3 7 0
Bajra, ...	423	1-6th	353	147	54·8	34	1 9 5
Wheat, ...	822	...	685	285	106	26	4 1 3
Barley, ...	1,045	...	871	363	135	47	2 14 0
Gram, ...	804	...	670	279	104	44	2 5 10

The inferior *khurreef* grains, such as *urhur*, *mote*, *lobia*, *moong*, *mash*, *&c.*, may be taken at the same rates as *bajra*, *gojee*, *and bijhra* at the rates of barly; other inferior *rubbee* at the rates of *gram*. The *zubtee* average rate on the whole *pergunnah* is Rs. 5-12-0 per acre. We then have—

					Rs.	a.	p.
1st class *khurreef*, or *zubtee* crop, ...	...	23,984 acres	×	5-12-0=	1,37,908	0	0
2nd class, or rices, ...	...	19,533 „	×	3-7-0=	67,144	11	0
3rd class, or *bajra*, &c., ...	...	48,043 „	×	1-9-5=	76,068	1	4
1st class, *rubbee*, wheat, urvee, and melons,	...	32,976 „	×	4-1-3=	1,34,480	4	0
2nd class, *rubbee*, Barley, ... / *Gojee*, ... / *Bijra*, ...	...	6,940 „	×	2-14-0=	19,952	8	0
3rd class, *rubbee*, Gram, ... / Linseed, ... / *Mussoor*, ... / Peas, ... / *Kussa*, ... / *Sirson*, &c.,	...	9,121 „	×	2-5-10=	21,567	5	10
Dosahi, ...	...	10,394 „	×	2-0-0=	20,788	0	0
	Total, ...		...	Rs.	4,77,908	14	2

My actual estimate by soil rates on the same area is Rs, 4,69,593, or Rs. 8,305 less = 1·7 per cent.,—a coincidence closer than I had expected.

10. I can now proceed to describe the physical geography of the *pergunnah*, the classification of villages which I have adopted, the rates on the several soils in each circle, and the grounds on which I have formed them. The *pergunnah* is intersected by six rivers,—the Bygool, the Nukuttea, the Deorunean, the Sanka, the Dojara, and the Ramgunga. Of these, the five first run from NNE. to SSW.; the last and the largest, into which all the others fall, from NNW. to SSE. There are besides two lesser streams or nullahs,—the Kandoo to the east of the Bygool, and joining it below Chahir Nugla; and the Dhunnea, to the west of the Deorunean, between it and the Sanka, which it joins. A glance at the map will show what splendid facilities the *pergunnah* offers for a system of high-level irrigation by means of canals along the watershed, as proposed by Captain Thomason. Beginning from the east, between the border and the Kandoo, the soil is mostly average *domut* and *mutyar*, with some poor *bhoor* to the extreme east and on the Kandoo. The water-shed between the Kandoo and the Bygool is almost entirely the poorest high-lying *bhoor*, sloping on either side. This is the worst land in the whole *pergunnah*. The depth to water averages from 18 to 22 feet, but the loose sandy substratum is unfavourable to the construction of *kuchha*

wells, which give but little water, and soon fall in. There is but little *rubbee*, and in the *khureef* only the coarser crops are grown, such as *bajra*, *mote*, *or lobia*. The rents consequently are very low, ranging from Re. 1 per acre to Rs. 2-8.

Proceeding westward, we come to the basin of the Bygool. The soil in the valley is all of very fine quality, chiefly *domut*, but all alike is irrigable from the river by dam or lift. There are *kuchha* dams at Sanwur Kheruh, Koonwurpoor Bunjurea, Meondi, Bhugwanpore, Singhan, Oogunpore, Bhugotipore, Lilowree, and Gaeghetta, or at intervals of about every two miles down the stream. Whether the irrigation is flush or by lift makes no difference in the money rents. These dams are all constructed by the villages irrigating from them.

Each village usually contributes a *mudud* of one man per plough, or his pay, @ 2½ annas per diem, for as many days as may be required to construct the dam. Until this year the Canal Department charged for the water, but this proceeding has now been stopped, under orders from Government. On either side of the basin is *bhoor*, but that to the west is better than that at the east side. It is more level, and *kuchha* wells are generally practicable at a depth to water of from 14 to 16 feet. Between this *bhoor* and the Nukuttea, and to the south of the city of Bareilly, is a level tract of all soils—*domut*, *mutyar*, and *bhoor*. The quality of the several soils is pretty much the same throughout the tract, and the soil rates vary but slightly, according to special local circumstances. Wells are generally practicable at an average depth of 10 to 12 feet, and along the Nukuttea there are dams at short intervals at the following villages:—Rathora, Moondea, Ahmudnuggur, Dhonreruh, Huroo Nugla, Chunehta, Lukhouruh, Manpoor, Choktea, and Boodhoutah. West of the Nukuttea, and north of the city of Bareilly, the level rises considerably. All along the water-shed of the Nukuttea and Deorunean the soil is second-rate *bhoor*, very similar to that between the Kandoo and Bygool, and almost equally poor. There is a little *domut* to the north-west of the tract, but it is of inferior quality. Wells are practicable, but the staples are coarse *khureef*, which require no irrigation. On both these water-sheds, the wells require a *beer*, or lining made of a long twisted rope of *urhur* and *bajra* stalks, to prevent the sand falling in and choking the wells. The population is chiefly Mehwattee. West of this tract is the basin of the Deorunean. This is much narrower than that of the Bygool, and the soil is inferior to that of the latter. Immediately along both banks of the river is a narrow strip of low-lying land, rising on each side into *bhoor*. Down the course of the Deorunean, *kuchha zemindaree* dams are erected, at Manda, Itowa, Aspoor, Ata, and Boodholea. Still to the west, beyond the Deorunean, south of the Dhunnea, and nearly up to the Dojara, is a pretty level tract; all soils are found in it, but *mutyar* preponderates. There are several large *jheels* scattered over the surface, which afford a good supply of water for both rice and *rubbee* irrigation. Wells are also generally practicable, and a large extent of land is watered from the Sanka, chiefly by lift: the water, however, is close to the level of the banks, and it is rare that more than two lifts (*nudhas*) of 3¼ feet each are required.

The soil generally is second-rate, and in the west and north-west portion the *mutyar* is very inferior, and what is locally known as *khaput*. There is a good deal of *oosur* (waste), and it is chiefly to the *mutyar* of this tract, and some between the Bygool and Nukuttea, that the Settlement Officer referred in paragraph 11 of his report of 1st June, 1837, when he says:—"The tracts of land composing *pergunnah* Crore merge "in many places into a hard, clayey soil, fit for growing an inferior kind of rice (*sathi*), "which, however, is not a much more valuable crop than the common products of the "*bhoor* land." The villages to the south, however, within five miles of the city, on the Moradabad Road, are mostly good and productive. To the north of this tract, between the Dhunnea, the Deorunean, and the Ritcha and Meergunge borders,—*i. e.*, all along the north of the *pergunnah*,—the level falls considerably, and the villages here include some of the best in the *pergunnah*. The soil is naturally moist, as water is rarely more than nine feet below the surface, and, especially in the western and northern villages, irrigation is but little required: even sugar-cane will grow in an ordinary

season in many places without irrigation. The *mutyar* here is true *mutyar*, though still it is not reckoned by the residents equally as valuable as *domut*. There is very little *oosur*, and the *bhoor* is more level and of a better quality than that to the south of the Dhunnea. The population is principally Koormee and Kisan.

The last natural division is the Terai of the Ramgunga. This, for the most part, requires no irrigation; and the drier the season, the better the produce. There is a general similarity in the rent-rates, which vary according to the greater or less exposure of the land to floods and erosion.

11. We thus have the *pergunnah* divided off naturally into seven circles:—

I.—The land to the east of the Kandoo, and that to the west of the Bygool, between it and the Nukuttea, and to the south of the city of Bareilly.

II.—The villages in the basin of the Bygool.

III.—The water-sheds (*a*) between the Kandoo and Bygool.

Ditto ditto (*b*) ditto Nukuttea and Deorunean.

IV.—The villages along the Deorunean to the north of Bareilly.

V.—The *mutyar* tract between the Deorunean, the Dhunnea, and the Ramgunga Teraien.

VI.—The fine land to the north of the Dhunnea, up to the borders of Nawabgunge, Ritcha and Meergunge.

VII.—The Ramgunga Terai.

And this is the classification which I propose: it agrees strictly with the natural divisions of the *pergunnah*.

12. *Soils.*—What may be termed the natural soils are *domut*, *mutyar*, and *bhoor*,—or the loamy, clayey, and sandy soils. Where they adjoin, however, as they usually do, it is exceedingly difficult to draw the line of demarcation between *domut* and *bhoor*, as they merge almost imperceptibly into each other by fine degrees. To meet this difficulty, in the 1st, 2nd, 3rd, and 6th circles, I have recognized a fourth class of soil which may be called at pleasure either the first-class *bhoor*, or the second-class *domut* of the circle. The distinction is recognized by the people, who call this doubtful land either *milaonee bhoor* or *bhoorea* (*i. e.*, mixed *bhoor*, or sandyish land), and the rents paid for it are invariably rather higher than for the true or *nire bhoor*. When manured and irrigated, the produce in land near the village site becomes nearly equal to that of *domut*. At the last settlement, Mr. Muir classified all the soils into *khadir* and *bhoor*,—the former including all *domut* and *mutyar*, whether *banjar* or true *khadir*, and the latter all *bhoor*. But this was simplifying over-much, and led to great inequalities in the assessments; for the *mutyar* differs very considerably in popular estimation and real value from *domut*, except in the 4th and 7th Circles, where both are Teraien, and of about equal value. I have thought it better in every point of view to adhere to locally recognized distinctions of soil, than to run risk of error by over-simplification, to avoid a multiplicity of rates. The local divisions of a village known in the Doab as the *barha*, *munjha* and *har*, or *gowhan*, *munjha*, and *burhet*, are unknown here. The *assamees* reserve their manure for their best land, irrespective of its proximity to or distance from the village site. Frequently an outlying *har* will be found better cultivated and manured than the land immediately adjoining the village site, because the soil has naturally greater advantages, and is better suited to the more valuable kinds of produce.

13. Owing to the peculiar circumstances of the *pergunnah*, I have not thought it necessary to work out separate irrigated and dry rates. With the exception of the high *bhoor* on the water-sheds in Circle III. and parts of No. II., there is no really "dry" land in the *pergunnah*; all is irrigable in the *rubbee* from rivers, tanks, or wells, for the depth to water only ranges from 8 to 14 feet below the surface, and a *kucha* well costs only from Re. 1 to Rs. 2. Most of the *khureef*, or at least that

which is worth irrigating, is also irrigable from rivers, *jheels*, and ponds. Irrigation therefore depends almost entirely on the energy of the cultivator. He can irrigate in 99 villages out of 100, at all events in the *rubbee*, if he choose to devote the necessary time and labour to it, certain of being repaid by the increased produce; but whether he does or not, the *zemindar* will take the same amount of rent from him.

Flush irrigation from rivers by a *kuchha dam* is less laborious than well-irrigation; and hence, when it comes to competition, land so irrigated can pay a slightly higher rate; but if the new Draft Bill "to regulate the construction and maintenance of public works for irrigation, &c.," be passed, and Captain Thomason's scheme for high-level canals be sanctioned, this difference will be removed, as all the streams will come under the Canal Department, and a uniform water-rate be levied over the *pergunnah*, which will probably be fixed slightly below the present cost of well-irrigation. Though the irrigated and unirrigated lands have been most carefully distinguished in the *khusrahs*, yet that land only has been entered as irrigated which was actually found to be so in the year of measurement. In an ordinary Crore village, the best land will be put under a rotation of sugar-cane, wheat, gram (or perhaps rice), *pandrah* sugar. This land will all be irrigable, but the cane and wheat only will be irrigated. The *mutyar* will usually be reserved for rice; if of good quality, there will be cotton and a little wheat or cane, if easily irrigable. The rices sown in Crore, with the exception of five villages, are only *unjunan*, *bunki*, *scorbi*, *deoli*, and *sathi*; they are reaped early, and in ordinary seasons receive sufficient water from the rain-fall. In the third-class land, coarse *khureef* is sown one year, and *rubbee* the next. Only the *rubbee* is irrigated, even though a well may be practicable in every field, and the depth to water may be only 10 feet. In the fourth-class land only, coarse *khureef* will be sown year after year, and this neither requires nor receives irrigation. Again, as water is generally so near the surface, far less irrigation is required than in the Doab, where the depth to water is from 30 to 70 feet, and the difference in the amount of produce between irrigated and unirrigated land is less also. Last *rubbee*, on an average of 103 trials in *domut* irrigated from wells, the produce being cut and carefully weighed, the result per acre of wheat was 8 maunds 18 seers; 123 trials in unirrigated *domut* gave an average of 6 maunds 22 seers of wheat per acre. Here the difference due to irrigation was only 1 maund 36 seers per acre, or a little over 28 per cent. One of the great dangers to the wheat crops is *rutta*, or mildew caused by excessive damp; hence it is rare to find more than one watering given to the *rubbee*, even where the greatest facilities for irrigation exist. Thus irrigation being almost universally possible at comparatively small cost, irrigated and unirrigated lands pay the same rates. I have preferred to follow the local custom, holding that the payers and receivers of rent are more likely to know the peculiarities of their lands than I am; and that, where practice does not correspond with theory, it is safer to follow practice, where it is explainable on simple principles.

14. I arrived at my rates much in the same way that I described in my Fureedpore report, *viz.*, by a process of induction, based on the ascertainments, by personal local inquiry, of the general rates of rent paid on large tracts of similar soils. In inspecting a village, I noted carefully the rents paid in the several *hars* of each class of soil, and especially the period at which the existing rates had been fixed. After inspecting 18 or 20 villages, I obtained rough soil-rates, which were good approximations to the real average rates. These were tested and modified by my daily experience, and finally checked by the circle totals. I had with me a book which I had prepared containing short abstracts of every Act X. suit which had been brought forward in the *pergunnah* since the passing of the Act; and, with this in my hand, I was able to test in the very fields the decisions passed in Cutchyrr in enhancement suits, and to obtain the opinion of the village as to their correctness or otherwise. My respect for the way in which the Act had been worked in this *pergunnah* was not increased by my experience thus gained. The soil *hars* were marked off on the *shujrehs*, and the *khutcounees* gave me the existing rates in those *hars*, which I could easily compare with the

rates of the neighbouring villages for similar soils. The great difficulty was to get the soil areas correctly. The *khusrahs* first prepared under the superintendence of the Native Deputy Collector, though exceedingly correct in the measurements, were simply infamous as regarded the classification of soils,—nearly all the *bhoor* in the *pergunnah* and most of the *mutyar* being classified as irrigated *domut*. To correct these errors cost me infinite time and labour. My plan was to lay out on the *shujreh* the soil *hars*, and then to correct the *khusrahs* accordingly. I trained the superintending *ameens* in this system, and then had the soil entries for the whole *pergunnah* prepared afresh, and tested them most carefully. I have inspected every village in Crore, without exception, attended in each by the residents, and generally by the *mocuddums* of the neighbouring villages. The result is that the classification of soil is now exceedingly correct and reliable, and does not depend on the honesty or dishonesty of the *putwarees* and *ameens*.

The soil-rates have thus become an absolute check or guide with which I cannot arbitrarily tamper. Even if they bring out in any village results which at first sight seem to me much too high, in such a case I have to discover a genuine and valid reason for the discrepancy between that result and the actual *nikasee*. Of course local circumstances will and do largely affect the rent-rates. The soil may be correctly classed as *domut*, but there may be a thick bed of kunkur underlying the surface, which lessens the productiveness, and practically prevents irrigation, by the difficulty and expense to be incurred in digging through it to water ; or the *har* may be subject to flooding from a *jheel* in the rains ; or the crops may be liable to injury by wild pigs from a neighbouring *koonduli ;* or the village may be *werand*, and consequently the inferior crops only grown, as the zemindars generally object to an assamee carrying manure out of his own village. There are numerous other causes of variation from average soil rates, which can only be discovered by a careful local inspection.

15. I have not worked out crop or produce rates. They involve too many arbitrary assumptions for me to place any reliance on them. There is one assumption as to the average rate of produce, which varies considerably every year in every village, and in almost every *har* of a village ; another as to the amount of deductions to be made before the division of produce takes place ; another as to the average share of the landlord ; another as to the average price to be assumed. An error in any one of these assumptions will largely affect the accuracy of the result. I made a *kunkoot* on a large scale, with a view to obtaining average crop rates ; but I abandoned the plan, as I considered it unscientific to attempt to check soil rates based on actual facts, by crop rates dependent on at least four arbitrary assumptions.

16. Having explained my method, I can now show what the soil rates are which I propose to adopt in each circle, and the results which they yield. From the following soil areas those of the entire *maafee* villages are excluded :—

CIRCLE I.

Expiring *jumma*, Rs. 50,854.

Culturable area, 48,206 acres.

								Rs.	as.
Cultivated acres, 42,042.	*Domut*, ...	Irrigated, 10,401							
		Dry, ... 5,714	Total 16,115	Rent rate,	4-12-0	Rental,	...	76,546	4
	Mutyar, ...	Irrigated, 3,740							
		Dry, ... 2,828	„ 6,568	„	2-13-0	„	...	18,472	8
	Bhoor, 1st, ...	Irrigated, 2,750							
		Dry, ... 3,283	„ 6,033	„	2-10-0	„	...	15,836	10
	Bhoor, 2nd, ...	Irrigated, 3,103							
		Dry, ...10,223	„ 13,326	„	1-12-0	„	...	23,320	8
			42,042				Rs.	1,34,175	14

The *khuteounees* show—

Land held at money rates,	...	34,197 Acres.	Rental,	... Rs.	1,06,434 0 0
Land held at *buttai* rates,	...	7,845	Average per acre,		3 1 9
Total,	...	42,042			

Calculating the *buttaee* land at the average of the *nuqshi*, the total assets are Rs. 1,30,827; but there are some few villages where rents have remained unaltered since last settlement—hence my assumed total is slightly above that given by the *khuteounees*. The result of the commutation suits in this circle was as follows; the rents of 17 villages were commuted:—

					Rs. a. p.		Rs. a. p.
Dowut,	...	2,469	Acres,	Rent fixed,	11,870 9 3	Average,	4 12 11
Mutyar,	...	474	„	„	1,393 10 9	„	2 15 0
Bhoor, 1st,	...	873	„	„	2,431 0 0	„	2 12 6
Bhoor, 2nd	...	1,931	„	„	3,555 8 9	„	1 14 3
Total,	...	5,747	„	„	19,250 12 9	„	3 5 7

In every case the rates fixed were accepted by both parties without appeal. The resultant soil rates are slightly higher than the average I have assumed for the circle. This is due to the fact that 5 out of the 17 villages affected by the suits were very superior to the average. The *jumma* resulting from the rates will be, at 55 per cent. of the total assets, Rs. 73,797, giving an increase of Rs. 22,943, or 45 per cent. over the present demand.

CIRCLE II.

Expiring *jumma*, Rs. 13,642.

Cultivated, 10,025 acres.

Culturable area, 11,289 acres.

Khadir, 1st, ...	Irrigated, ... 1,789 Dry, ... 234	Total,	2,023	Rent rate,	Rs. a. p. 5 12 0	Rental,	Rs. a p. 11,632 4 0
Khadir, 2nd, ...	Irrigated, ... 486 Dry, ... 328	„	814	„	4 8 0	„	3,663 0 0
Bangur, Domut, ...	Irrigated, ... 1,135 Dry, ... 850	„	1,985	„	4 0 0	„	7,940 0 0
Bangur, Mutyar, ...	Irrigated, ... 228 Dry, ... 389	„	617	„	3 0 0	„	1,851 0 0
Bangur, Bhoor, 1st,	Irrigated, ... 474 Dry, ... 742	„	1,216	„	2 10 0	„	3,192 0 0
Bangur, Bhoor, 2nd,	Irrigated, ... 459 Dry, ... 2,911	„	3,370	„	1 12 0	„	5,897 8 0
	Total, ...		10,025 Acres.				Rs. 34,175 12 0

The resulting *jumma* at Rs. 55 per cent. will be Rs. 18,797. This gives an increase of Rs. 5,155, or 37·7 per cent. over the expiring *jumma*.

The *khuteounees* show the following result:—

Land held at money rates,—8,458 acres; rental, Rs. 31,145; average, Rs. 3-10-10 per acre.

Land held at *buttaee* rates,—1,567 acres.

Calculating the *buttaee* land at the average money rate, the resultant rental of the circle would be Rs. 36,907; but the *buttaee* villages remaining in this circle are not equal to the general average in soil, and consequently the *nikasee* by soil rates is slightly below the above result.

The results of the Act XIV. suits in this circle are as follows:—

					Rs.		Rs. a. p.	
Khndir, 1st Class,	...	...	456 Acres,	Rent	2,420	Average	5 5 0	per Acre.
„ 2nd „	...	...	130 „	„	448	„	3 7 0	„
Baugur Domut,	...	...	820 „	„	3,677	„	4 7 8	„
„ *Mutyar*,	...	...	324 „	„	1,040	„	3 3 4	„
„ *Bhoor*, 1st,	...	...	226 „	„	723	„	3 3 2	„
„ *Bhoor*, 2nd,	...	...	808 „	„	1,543	„	1 14 6	„

These rates differ considerably from my average soil rates, being lower on the *khadir* and higher on the bangur; but most of the decisions in this circle were by *punchayet*, and were not on the whole very satisfactory. My rates have been carefully tested, village by village, and I have perfect confidence in their correctness.

CIRCLE III.

	Total area.	Barren.	Lakhiraj.	Old waste.	New fallow.	Cultivated.	Total malgoozaree.	Jumma.
								Rs.
At last Settlement, ...	15,597	1,864	641	4,131	1,267	7,694	13,092	8,608
„ Remeasurement, ...	15,887	1,091	390	1,804	641	11,961	14,406	8,658

Increase in cultivated area is 4,267 acres, or 55·4 per cent.; percentage of cultivated to *malgoozaree by* present measurement, 83 per cent.; number of ploughs, 1,028; average cultivated acres per plough, 11·6.

Class of soil.	Irrigated.	Unirrigated.	Total.	Rate.	Rental.
				Rs. a. p.	Rs. a. p.
Domut, ...	1,418	1,696	3,114	3 8 0	10,899 0 0
Mutyar, ...	314	991	1,305	2 8 0	3,262 8 0
Bhoor, 1st, ...	500	1,161	1,661	2 4 0	3,787 4 0
Bhoor, 2nd, ...	646	5,235	5,881	1 8 0	8,821 8 0
Total, ...	2,878	9,083	11,961	...	26,720 4 0

The resultant *jumma* at 55 per cent. is Rs. 14,696, or an increase of Rs. 6,038, equal to 69 per cent. over the expiring *jumma*.

The *khuteounees* give the following results:—

Land held at money rates,—7,723 acres; rental, Rs. 17,048; average per acre, Rs. 2-3-5.

Land held at *buttaee* rates,—4,238 acres.

If the *buttaee* lands be estimated at the general money average rate, the result is a rental on the circle of Rs. 26,431, or almost the same as that given by the soil rate. The results of the Act XIV. of 1863 suits in this circle are—

Domut,	354	Acres,	Rental Rs.	1,299	Average Rs.	3	10	8	per Acre.
Mutyar,	153	„	„ „	429	„ „	2	12	10	„
Bhoor, 1st,	194	„	„ „	420	„ „	2	2	7	„
Bhoor, 2nd,	608	„	„ „	938	„ „	1	8	8	„
	1,309	„	„ „	3,086	„ „	2	5	8	„

CIRCLE IV.

	Total area.	Barren.	Lakhiraj.	Old waste.	New fallow.	Cultivated.	Total malgoozaree.	Jumma.
								Rs.
At last settlement, ...	9,786	1,376	811	1,519	561	5,519	7,599	8,149
„ Re-measurement, ...	10,048	1,092	94	721	56	8,085	8,862	8,149

The increase in cultivated area is 2,566 acres, or 48·3 per cent.; the percentage of cultivated to *malgoozaree* by present measurement is 91·2; number of ploughs, 842; average cultivated acres per plough, 9·6.

Class of soil.	Irrigated.	Unirrigated.	Total.	Rate.	Rental.
				Rs. a. p.	Rs. a. p.
Khadir, ...	1,495	1,624	3,119	4 6 0	13,645 10 0
Bhoor, ...	789	4,177	4,966	2 0 0	9,932 0 0
Total, ...	2,284	5,801	8,085	...	23,577 10 0

The resultant *jumma* is Rs. 12,968, giving an increase of Rs. 4,819, or 59 per cent. over the expiring *jumma*. The *khuteounees* give the following results:—

Land held at money rates,—7,576 acres; rental Rs. 22,187; average per acre, Rs. 2-14-8.

Land held at *buttaee* rates, 509 acres.

Applying the average money rate per acre to the land held at *buttaee*, the resulting rental of the whole circle is Rs. 23,671, or nearly identical with the *nikasee* by soil rates.

The rents have been commuted under Act XIV., 1863, in one village only of this circle, and the rate fixed were the same as the circle soil rates.

CIRCLE V.

	Total area.	Barren.	Lakhiraj.	Old waste.	New fallow.	Cultivated.	Total malgoozaree.	Jumma.
								Rs. a.
At last settlement, ...	38,523	4,014	4,666	6,858	1,467	21,518	29,843	33,598 0
„ Re-measurement, ...	39,131	3,793	690	4,871	822	28,985	34,648	38,331 15

The increase in cultivated area is 7,467 acres, or 34·7 per cent.; the percentage of cultivated to *malgoozaree* by present measurements is 83·6; number of ploughs, 3,290; average cultivated acres per plough, 8·8 acres.

Class of soil.	Irrigated.	Unirrigated.	Total.	Rate.	Rental.
				Rs. a. p.	Rs. a. p.
Domut, ...	5,254	4,904	10,158	4 6 0	44,441 4 0
Mutyar, ...	4,262	6,004	10,266	3 0 0	30,798 0 0
Bhoor, ...	2,484	6,077	8,561	2 6 0	20,332 6 0
Total, ...	12,000	16,985	28,985	...	95,571 10 0

The resultant *jumma*, at Rs. 55 per cent., is Rs. 52,564, giving an increase over the expiring *jumma* of Rs. 14,233. The *khuteounees* give the following results:—

Land held at money rates,—15,121 acres; rental, Rs. 50,036; average, Rs. 3-4-11 per acre.

Land held at *buttaee* rates, 13,864 acres.

Applying the money average rate to the cultivated area of the circle by measurement, the result is Rs. 95,862, or nearly identical with the *nikasee* by soil rates.

The result of the commutation suits under Act XIV., 1863, is as follows:—

Domut, ...	1,634	Acres.	Rental, Rs.	7,321	4	0	Average, Rs.	4	7	8	per acre.
Mutyar, ...	1,815	„	„ „	5,630	7	6	„ „	3	1	7	„
Bhoor, ...	1,731	„	„ „	4,284	5	9	„ „	2	7	7	„
Total, ...	5,180			Rs. 17,236	1	3					

or about one anna and a half per acre in excess of my soil rates. The difference is unimportant.

CIRCLE VI.

	Total area.	Barren.	Lakhiraj.	Old waste.	New fallow.	Cultivated.	Total malgoozaree.	Jumma.
								Rs. a.
At last Settlement, ...	26,256	3,180	3,813	2,344	644	16,275	19,263	30,978 0
„ Remeasurement, ...	26,808	2,372	185	3,455	322	20,474	24,251	34,522 8

The increase in cultivated area is Rs. 4,199 acres, or 25·8 per cent., by present measurement; cultivated is 84·4 per cent. of the culturable area; the number of ploughs is 2,394; average cultivation per plough, 8·1 acres.

Class of soil.	Irrigated.	Unirrigated.	Total.	Rate.			Rental.		
				Rs.	a.	p.	Rs.	a.	p.
Domut, ...	4,443	3,752	8,195	5	12	0	47,121	4	0
Mutyar, ...	2,802	4,980	7,782	3	10	0	28,209	12	0
Bhoor, 1st, ...	699	1,080	1,779	3	4	0	5,781	12	0
Bhoor, 2nd, ...	769	1,949	2,718	2	6	0	6,455	4	0
Total, ...	8,713	11,761	20,474	...			87,568	0	0

The resultant *jumma* is Rs. 48,154, or an increase of Rs. 13,636 over the expiring *jumma*.

The *khuteownees* give the following results :—

Land held at money rates,—7,623 acres; rental, Rs. 30,209; average per acre, Rs. 3-15-6.

Land held at *buttaee* rates,—12,851 acres.

If the average money rates be applied to the cultivated area by measurement, the result is Rs. 81,264; but the best villages are held at *buttaee* rates, and in most of the *nuqshi* villages the rents have remained unaltered since the commutation to money rates, 25 years ago. I have therefore calculated on enhancements taking place after the *jummas* are declared.

The following is the result of the commutation suits under Act XIV. of 1863 in this circle :—

				Rs. a. p.		Rs. a. p.	
Domut, ...	1,778	Acres.	Rental,	9,844 0 6	Average,	5 8 7	per Acre.
Mutyar, ...	1,554	„	„	6,118 6 0	„	3 15 0	„
Bhoor, 1st, ...	429	„	„	1,406 12 6	„	3 4 0	„
Bhoor, 2nd, ...	417	„	„	1,100 13 0	„	2 10 0	„
	4,178			18,069 15 6			

but the average is lowered by the low rates fixed by *punchayet* on the one large village of Soorha. Without this village, the average soil rates given by the suits are :—

Domut, ...	Rs.	5	14	10	per Acre.
Mutyar, ...	„	4	0	0	
Bhoor, 1st, ...	„	3	6	8	
Bhoor, 2nd, ...	„	2	10	10	

These show that my assumed rates are very moderate, though the resulting increase in *jumma* is heavy.

CIRCLE VII.

	Total area.	Barren.	Lakhiraj.	Old waste.	New fallow.	Cultivated.	Total malgoozaree.	Jumma.
								Rs.
At last Settlement, ...	27,553	5,976	2,560	6,208	637	12,172	19,017	22,119
„ Remeasurement, ...	29,912	5,606	733	4,067	481	19,025	23,573	24,059

The difference in total area is caused by alluvion.

The increase in cultivated area is 6,853 acres, or 56·3 per cent.; the percentage of cultivated to culturable area by present measurement is 80·7; number of ploughs, 2,553; average cultivation per plough, 7·4 acres.

Class of soil.	Irrigated.	Unirrigated	Total.	Rate.	Rental.
				Rs. a. p.	Rs. a. p.
Khadir, ...	2,719	11,201	13,920	4 0 0	55,680 0 0
Bhoor, ...	271	4,834	5,105	2 6 0	12,124 6 0
Total, ...	2,990	16,035	19,025	...	67,804 6 0

The resultant *jumma* is Rs. 37,292, giving an increase over the expiring *jumma* of Rs. 13,233.

The *khuteounee* gives—

Land held at money rates,—15,621 acres; rental, Rs. 55,280; average, Rs. 3-8-7 per acre.

Land held at *buttaee* rates,—3,404 acres.

If the money average rent rate be applied to the cultivated area by measurements, the resultant *nikasee* of the circle is Rs. 67,281. There have been no suits under Act XIV., 1863, from which any information on soil rates could be extracted.

17. I have now gone through the circles singly. The result of the whole is an estimated *nikasee* of Rs. 4,69,593-8-0, which agrees curiously with the rough estimates in paragraphs, 3, 4 and 8; and an estimated *jumma*, including cesses, of Rs. 2,58,272, giving an increase of Rs. 80,056, or 44·9 per cent. It must be remembered, however, that this is a rough pergunnah *jumma*, and it is probable that some villages will be unable to bear all at once the enhancement that would result from the application of the average rates. This will, it is true, be partially counterbalanced by the cases of those villages whose real *nikasees* exceed those given by rates, but it is probable that the detailed *jumma* will fall below the above estimate by Rs. 3,000 or 4,000. There remain the *maafee* villages. These also I have classified in the circles to which they belong. The details will be found in Appendix E.

The areas, &c., are as follows:—

	Total area.	Barren.	Lakhiraj.	Old waste.	New fallow.	Cultivated.	Culturable.
At last Settlement, ...	13,758	1,284	639	1,794	715	9,326	11,835
„ Remeasurement, ...	13,342	1,402	64	1,301	95	10,480	11,876

Number of ploughs, 1,133; average cultivated area per plough, 9·2 acres; percentage of cultivated to culturable, 88·2. The estimated *nikasee* is Rs. 40,937, which gives cesses, at 5 per cent., Rs. 2,047, making the total demand from the entire

pergunnah, Rs. 2,60,319. A reference to Appendix E. will show at one view the past and present areas, the *jummas* past and proposed for each circle, and their rates of incidence on the total cultivated and *malgoozaree* areas.

The accompanying map* shows clearly the extent and boundaries of each circle.

18. I conclude by requesting that the Board will be good enough, in passing orders on this report, to give me instructions as to whether the settlement should or should not be made temporary only, with reference to Captain Thomason's scheme of irrigation, which will materially alter the condition of the pergunnah, and considerably increase its productiveness.

As I have never had any opportunity of becoming acquainted with the details of the plans or the Government orders on the subject, it will be totally impossible for me to form even a conjectural estimate in any village of the extent to which its resources will be beneficially or otherwise affected by the proposed canals. It is more than probable that the irrigated area of the *pergunnah* will not be very materially increased by the introduction of canals. They will, however, to a large extent supersede irrigation from wells and natural streams, and the quantity of land now under the more valuable crops will be increased. There will always, however, with so much poor land as there is in Crore, be a large proportion of coarse *khureef* which would hardly ever require or receive irrigation. With no precedents which could enable us to judge of the results of the carrying out of Captain Thomason's plans, it will hardly be judicious to make a permanent settlement of Crore based on facts which may be most materially altered by the introduction of canals within the next ten years; and great discontent among the zemindars would be the result if they are allowed to hope that the settlement now formed will be declared permanent, and are hereafter disappointed by its being made temporary only. In the face of the great uncertainty as to the extent by which the *pergunnah* will be hereafter affected by the introduction of canals, my own opinion is that it would be far more judicious at once to declare the settlement temporary only. This course would be fully in accordance with the instructions of the Board contained in Circular No. 54 of 1867, dated 27th November, 1867. If the settlement is to be temporary only, I should be glad to know whether the term to be declared to the zemindars is to be fixed at 30 years, or a lesser period.

If it be possible for the Board to give me definite instructions on the subject now, it will save the future labour and expense of alteration of the engagements and other settlement papers.

APPENDIX A.

Statement showing the Total Jumma of Pergunnah Crore, yearly Collections and Balances and consequent Remission of the Jumma, from 1858-59 *to* 1867-68.

1.	2.	3.	4.	5.	6.	7.	8.
		Sums Realized.					
Year, A. D.	Total *Jumma* of the *Pergunnah*.	During the year.	Subsequently realized.	Total.	Balances.	Remission.	Net Balance.
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
1858-59,	1,86,426 8 0	1,77,322 8 4	2,481 7 10	1,79,804 0 2	6,622 7 10	6,622 7 10	...
1859-60,	1,86,557 8 0	1,76,642 2 8	251 9 4	1,76,893 12 0	9,663 12 0	9,663 12 0	...
1860-61,	1,86,557 8 0	1,73,221 3 0	80 15 7	1,73,302 2 7	13,255 5 5	13,255 5 5	...
1861-62,	1,75,681 12 0	1,69,111 0 9	4,167 7 10	1,73,278 8 7	2,403 3 5	2,403 3 5	...
1862-63,	1,74,889 12 0	1,74,337 10 6	...	1,74,337 10 6	552 1 6	552 1 6	...
1863-64,	1,77,600 3 6	1,76,417 0 2	6 2 4	1,76,423 2 6	1,177 1 0	1,177 1 0	...
1864-65,	1,80,338 7 6	1,79,039 8 11	1 0 0	1,79,040 8 11	1,297 14 7	1,297 14 7	...
1865-66,	1,80,170 6 6	1,78,991 11 3	18 8 8	1,79,009 3 11	1,161 2 7	1,161 2 7	...
1866-67,	1,79,017 6 6	1,78,889 11 11	13 15 5	1,78,903 11 8	113 10 10	81 0 0	32 10 10
1867-68,	1,78,934 6 6	1,78,903 10 0	...	1,78,903 10 0	30 12 6	30 12 6	...

* Not printed.

APPENDIX A.

Statement showing the Total Jumma of Pergunnah Crore, yearly Collections and Balances, and consequent Remission of the Jumma, from 1858-59 *to* 1867-68.—(.Contd.)

Year, A. D.	*Details of Remissions under Column 7.*	Rs. a. p.	Rs. a. p
1858-59,	Remission of quarter *jumma* to Rajah Byjnath, G. O. No. 2944, dated 27th August, 1859, ...	1,643 5 1	
	Remission of half *jumma* to Cheda Singh, G. O. No. 1442, dated 16th October, 1860, ...	2,576 14 0	
	Remission for diluvian, G. O No. 1442, dated 16th October, 1860, No. 1442, dated 16th August, 1865, and No. 665, dated 7th August, 1860,	646 13 3	
	Remission for land taken into Cantonment, No. 642, dated 22nd June, 1861, ...	1,250 1 2	
	Compensation for damage of crops, No. 1531, dated 17th May, 1862,	125 0 0	
	Losses by *kham* management of confiscated villages, No. 329, dated 27th November, 1863, and No. 914, dated 7th November, 1865, ...	380 6 4	
	Total, ...	...	6,622 7 10
1859-60,	Remission for *jagheer* of Rajah Byjnath, No. 2924, dated 27th August, 1858, ...	4,718 12 0	
	Remission of half *jumma* to Cheda Singh, No. 1159, dated 26th August, 1859, ...	2,456 8 0	
	Remission of land included in Cantonments, No. 642, dated 22nd June, 1861, ...	1,784 4 9	
	Remission for damage of crops, No. 531, dated 17th May, 1862, ...	100 0 0	
	Losses by *kham* management of confiscated villages, No. 1329, dated 27th November, 1863, ...	57 4 0	
	Diluvian by No. 1442, dated 16th October, 1860, and No. 669, dated 7th August, 1860, ...	546 15 3	
	Total, ...	...	9,663 12 0
1860-61,	Remission for *jagheer* of Rajah Byjnath, No. 2924, dated 27th August, 1858, ...	7,393 0 0	
	Remission of half *jumma* to Cheda Singh, No. 1159, dated 26th August, 1859, ...	2,012 1 9	
	Remission for land included in Cantonments, No. 642, dated 22nd June, 1861, ...	3,077 3 3	
	Losses by *kham* management of confiscated villages, ...	150 15 5	
	Remission for *lands* taken for public purposes, No. 661, dated 26th November, 1861, ...	47 14 6	
	Losses by *kham* management of confiscated villages, No. 1319, dated 27th November, 1863, ...	16 8 3	
	Remission of quarter *jumma*, No. 111, dated 24th January, 1859, ...	16 14 9	
	Diluvian, No. 669, dated 7th August, 1860, No. 1442, dated 16th October, 1860, and No. 1587, dated 29th November, 1860, ...	605 2 3	
	Total, ...	...	13,255 5 5
1861-62,	Remission of half *jumma* to Cheda Singh, No. 1159, dated 26th August, 1859, ...	1,881 12 8	
	Remission of diluvian, No. 337, dated 4th August, 1863, ...	457 0 0	
	Total, ...	...	2,403 5 5
1862-63,	Remission for lands taken up for Lunatic Asylum, No. 661, dated 26th November, 1861, ...	76 0 0	
	Remission for lands taken up for public purposes, No. 362, dated 9th June, 1863, ...	1 0 0	
	Remission for lands taken up for public purposes, No. 442, dated 1st May, 1862, ...	18 1 6	
	Remission for diluvian, No. 337, dated 4th August, 1863, ...	457 0 0	
	Total, ...	...	552 1 6
1863-64,	Remission for lands taken for Grand Trunk Road, No. 60, dated 26th January, 1864, ...	127 1 0	
	Remission for Canals, No. 362, dated 9th June, 1863, ...	34 0 0	
	Remission for land taken for Lunatic Asylum, No. 661, dated 26th November, 1861, ...	76 0 0	
	Remission for diluvian, No. 337, dated 4th August, 1863, ...	457 0 0	
	Remission under No. 362, dated 15th April, 1864, ...	34 0 0	
	Remission under No. 156, dated 27th February, 1866, ...	449 0 0	
	Total, ...	...	1,177 1 9
1864-65,	Remission for land taken for Grand Trunk Road, No. 60, dated 26th January, 1864, ...	139 14 7	
	Remission for land for Canals, No. 362, dated 9th June, 1863,	44 0 0	
	Remission for land for Lunatic Asylum, No. 961, dated 26th November, 1861, ...	76 0 0	
	Remission for diluvian, No. 337, dated 4th August, 1863, ...	457 0 0	
	Remission under Government order, No. 765, dated 8th August, 1864,	75 0 0	
	Remission under G. O., No. 454, dated 21st August, 1866, ...	57 0 0	
	Remission under G. O., No. 156, dated 27th February, 1866, ...	449 0 0	
	Total, ...	...	1,297 14 7

APPENDIX A.

Statement showing the Total Jumma of Pergunnah Crore, yearly Collections and Balances, and consequent Remission of the Jumma, from 1858-59 *to* 1867-68.—(Concld.)

Year, A. D.	Details of Remissions under Column 7.		
1865-66,	Remission for land taken up for Lunatic Assylum, No. 661, dated 26th November, 1861, ...	76 0 0	
	Remission for land for Canals, No. 362, dated 9th June, 1863, ...	10 0 0	
	Remission for diluvian, No. 969, dated 7th August, 1860, ...	457 0 0	
	Remission for diluvian, No. 769, dated 8th September, 1864, ...	100 0 0	
	Remission for diluvian, No, 1199, dated 27th December, 1865, ...	50 4 0	
	Remission under G. O., No. 156, dated 27th February, 1866, ...	449 0 0	
	Total, ...	...	1,142 4 0
1866-67,	Remission for land taken up for Imperial Road to Moradabad, ...	81 0 0	
	Total, ...	...	81 0 0
1867-68,	Remission for land taken up for Imperial Road to Moradabad, ...	30 12 6	
	Total, ...		30 12 6

APPENDIX B.

Prices Current in Tuhseelee Crore, Zillah Bareilly.

Year, A. D.	Rubbee Crops.					Khureef Crops.							
	Wheat.	Grain, 2nd.	Barley.	Linseed.	Musoor.	Makka.	Rice.	Sathee.	Jowar.	Bajra.	Mothe.	Mash.	Moong.
	M. S.	M. S.	M. S.	M. S.	M. S.	M. S.	M. S.	M. S.	M. S.	M. S.	M. S.	M. S.	M. S.
1838,	0 16½	0 16	0 22	0 17	1 3	1 5	0 24	1 3	0 38	0 33	0 19	0 19	0 18
1839,	0 22	0 37½	0 36	0 29	1 2	0 34	0 31	0 38	1 13	0 32	0 22	0 27	0 27
1840,	0 22	0 27	0 34	0 30	0 32	0 32	0 29	0 35	0 34	0 28	0 30	0 20	0 20
1841,	0 44	0 30	0 36	0 26	1 6	1 8	0 27	1 16	0 32	0 38	0 20	0 20	0 23
1842,	0 31	0 35	1 5	0 24	1 7	1 8	0 30	1 8	1 8	0 38	0 24	0 25	0 20
1843,	0 34½	0 38	1 10	0 22	1 12	1 15	0 33	1 10	1 8	1 0	0 24	0 18	0 14
1844,	0 32½	0 32	1 17	0 28	1 8	1 24	0 36	1 3	1 24	0 39	0 26	0 23	0 26
1845,	0 26½	0 33	1 2	0 22	0 32	0 37	0 38	1 0	1 8	0 32	0 35	0 26	0 27
1846,	0 27¾	0 28	0 34	0 16	1 10	1 0	0 34	1 20	0 38	0 38	0 31	0 27	0 28
1847,	0 33½	1 20	1 10	0 27	1 24	2 0	1 0	1 32	1 0	0 38	1 0	0 34	0 38
Average of 10 years,	0 27	0 33½	1 0½	0 24	1 5½	1 8¼	0 32¼	1 8½	1 4¼	0 35½	0 27	0 24	0 24
1848,	0 32	1 8	1 13	0 30	1 24	1 8	0 38	1 0	1 32	0 36	1 2	1 0	0 33
1849,	0 36½	1 0	1 11	0 31	1 20	1 34	1 8	1 16	1 8	1 20	0 35	0 25	0 29
1850,	0 36	1 13	1 17	1 3	2 8	1 25	0 38	1 16	1 30	1 10	0 37	0 29	0 38
1851,	0 39¼	1 32	2 0	1 15	0 28	1 16	0 32	1 11	1 32	1 10	1 0	1 2	0 14
1852,	0 23	0 28	0 37	1 0	0 35	1 16	0 25	0 35	1 8	1 0	0 32	0 21	0 25
1853,	0 31	0 32	1 5	0 20	1 2	0 36	0 32	1 0	1 8	0 38	0 32	0 23	0 26
1854,	0 26	1 1	1 2	0 26	0 35	2 0	0 36	1 2	0 30	0 32	0 33	0 28	0 30
1855,	0 35	1 12	1 20	0 28	2 0	1 20	1 10	1 20	1 24	1 26	1 8	1 8	1 20
1856,	0 28	1 0	0 35	0 13	1 24	1 0	0 33	1 2	1 24	0 27	1 0	0 30	0 36
1857,	0 35	1 15	1 20	0 17	1 14	1 24	1 25	2 0	1 8	1 20	1 8	1 10	1 15
Average of 10 years,	0 32¼	1 6	1 12	0 30¼	1 15	1 18	0 39¾	1 10¼	1 16½	1 6	0 38¾	0 33½	0 38½
1858,	0 37	1 22	1 20	0 22	1 8	1 20	0 30	1 0	1 28	0 35	0 30	0 30	0 35
1859,	0 29	0 38	1 5	0 18	0 28	1 0	0 30	1 0	1 0	0 28	0 32	0 20	0 28
1860,	0 20	0 28	0 30	0 20	0 26	0 13	0 15	0 16	0 24	0 11	0 16	0 11	0 11
1861,	0 14	0 15	0 11	0 15	0 26	1 4	1 2	0 18	0 14	0 12	0 18	0 12	0 14
1862,	0 30	1 10	1 20	0 23	0 34	1 16	1 0	1 15	1 11	1 10	0 26	0 36	0 37
1863,	0 33	1 5	1 15	0 29	1 2	0 28	0 26	0 35	1 0	0 28	0 26	0 16	0 17
1864,	0 21	0 28	0 30	0 18	0 28	0 19	0 20	0 30	0 28	0 22	0 20	0 14	0 16
1865,	0 19¾	0 26	0 28	0 22	0 27	0 38	0 25	0 35	0 19	0 23	0 30	0 21	0 23
1866,	0 19½	0 28	0 30	0 24	0 28	0 21	0 19	0 25	0 24	0 26	0 24	0 16	0 17
1867,	0 17¼	0 23	0 24	0 18	0 23	0 34	0 30	1 0	0 19	0 25	0 20	0 25	0 29
Average of 10 years,	0 24	0 34¼	0 37¼	0 21	0 31	0 35¼	0 27¾	0 33½	0 32¾	0 26	0 24¼	0 20	0 22¼

NOTE.—The above weights are given in the Bareilly *pucka* maund and seer. The *pucka* maund is of 40 seers, each weighing Rs. 104, of 180·234 Troy grains to the rupee. The maund therefore is 749,773·44 grains, or 107·11 lbs.; and the seer equals 18,744·336 grains, or 2·68 lbs. All agricultural transactions, however, are made by the *kuchha* maund and seer, which equal respectively two-fifths of the weights above given. The *kuchha* maund therefore equals 42·84 lbs., and the *kuchha* seer 1·07 lbs. The *kuchha beegah* of the *pergunnah* is exactly one-fourth of the *pucka beegah*, or 756·25 square yards. The length of the side is 27·5 yards. In some villages a custom prevails of measuring sugar-cane, cotton, *mukka*, *churri*, *sunn*, and vegetables with a *beegah* equal to 18 *biswas* only of the ordinary *kuchha beegah*,—*i. e.*, with a side of only 26·08 yards. In such cases *nabood* is given. This *nabood* is either estimated by a village *punchayet* or else a fixed deduction of one-tenth is made.

APPENDIX C.

Census Statement of Pergunnah Crore.

HINDOOS.												MAHOMEDANS AND OTHERS.					
AGRICULTURAL.						NON-AGRICULTURAL.						AGRICULTURAL.					
Males.			*Females.*			*Males.*			*Females.*			*Males.*			*Females.*		
Adults.	Minors.	Total.	Adults.	Minors.	Total.	Adults.	Minors.	Total.	Adults.	Minors.	Total.	Adults.	Minors.	Total.	Adults.	Minors.	Total.
CENSUS OF 1853.																	
...	...	57,551	...	...	49,239	...	...	34,997	...	...	31,344	...	...	13,182	...	...	11,873
CENSUS OF 1865.																	
39,332	20,567	59,899	32,386	18,007	50,393	28,799	14,422	43,221	25,624	12,398	38,022	7,995	5,086	13,081	6,738	3,770	10,508

MAHOMEDANS AND OTHERS.						TOTAL.											
NON-AGRICULTURAL.						AGRICULTURAL.						NON-AGRICULTURAL.					
Males.			*Females.*			*Males.*			*Females.*			*Males.*			*Females.*		
Adults.	Minors.	Total.	Adults.	Minors.	Total.	Adults.	Minors.	Total.	Adults.	Minors.	Total.	Adults.	Minors.	Total.	Adults.	Minors.	Total.
CENSUS OF 1853.																	
...	...	31,630	...	...	3,000	...	...	70,733	...	...	61,112	...	...	66,627	...	...	63,344
CENSUS OF 1865.																	
19,430	11,473	30,903	19,386	10,406	29,792	47,327	25,653	72,980	39,124	21,777	60,901	48,229	25,895	74,124	45,010	22,804	67,814

APPENDIX D.

Produce Statement of Pergunnah Crore, Zillah Bareilly.

Number of Circles.	Total area in acres.	*Minhaee* area.	Culturable Waste.		New fallow.	Cultivated area.	Khureef Crops.								
			Bunjur.	Baghs.			Sugar-cane.	*Pandruh.*	Vegetables and Tobacco.	*Mukka.*	Cotton.	*Sunn.*	Rice.	*Bajra.*	Churri and Jowar.
Khalsa, I., ...	54,392	6,186	3,192	1,632	1,340	42,042	4,159	1,510	615	128	739	35	4,373	11,495	1,873
II., ...	12,667	1,378	762	278	224	10,025	1,271	487	74	1	174	8	586	3,467	207
III., ...	15,887	1,481	1,164	640	641	11,961	731	263	58	39	161	7	1,310	5,758	469
IV., ...	10,048	1,186	381	340	56	8,085	474	212	138	32	116	15	456	2,775	610
V., ...	39,131	4,483	4,188	653	822	28,985	2,160	1,181	316	504	817	10	6,287	5,011	1,270
VI., ...	26,808	2,557	3,042	413	322	20,474	2,136	1,148	180	741	498	18	5,626	2,162	400
VII., ...	29,912	6,555	3,633	218	481	19,025	631	47	387	1,217	475	71	838	4,209	2,409
Total, ...	188,845	23,826	16,362	4,174	3,886	1,40,597	11,562	4,848	1,768	2,662	2,980	164	19,476	34,877	7,238
							8·22	3·45	1·25	1·89	2·12	·12	13·86	24·80	5·15
Maafee, ...	13,342	1,466	1,076	225	95	10,480	981	368	86	247	264	43	2,764	2,169	533
							9·36	3·51	·82	2·35	2·52	·40	26·38	20·70	5·09
Grand Total, ...	202,187	25,292	17,438	4,399	3,981	151,077	12,543	5,216	1,854	2,909	3,244	205	22,240	37,046	7,771

APPENDIX D.

Produce Statement of Pergunnah Crore, Zillah Bareilly.—(continued.)

Number of Circles.	Khureef Crops.—(concluded.)													Rubbee Crops.		
	Urhur.	*Shamakh.*	*Kodon.*	*Mash.*	*Moong.*	*Mothe.*	*Lobia.*	*Mundwa.*	*Til.*	*Kungni.*	Melons.	Indigo.	Total.	Wheat.	*Arvee.*	Melons.
Khalsa, I., ...	415	222	164	508	57	313	9	...	4	3	19	18	26,659	1 ,789	...	...
II., ...	90	102	40	90	4	59	...	1	...	...	...	...	6,661	1,873	1	2
III., ...	109	82	46	145	21	142	...	...	...	...	...	...	9,341	1,560	1	1
IV., ...	374	10	12	83	4	123	...	1	1	...	...	...	5,436	1,955	...	91
V., ...	376	134	141	348	34	110	...	8	8	4	...	...	18,719	7,317	16	34
VI., ...	151	144	164	376	16	90	...	1	1	...	...	...	13,852	4,622	...	3
VII., ...	145	63	55	201	4	102	...	13	...	5	20	...	10,892	4,587	...	183
Total, ...	1,660	757	622	1,751	140	939	9	24	14	12	39	18	91,560	32,603	18	314
	1.19	.54	.44	1.24	.10	.67	.01	.01	.01	.01	.02	.01	65.12	23·20	·01	·23
Maafee, ...	.19	132	75	136	6	28	...	7	...	3	...	...	78,59	1,861	...	4
	.18	1.29	.71	1.21	.05	.26	...	.07	...	.03	...	...	74.99	17.77	...	·04
Grand Total, ...	1679	889	697	1,897	146	967	9	31	14	15	39	18	99,419	34,464	18	318

APPENDIX D.

Produce Statement of Pergunnah Crore, Zillah Bareilly.—(continued.)

Number of Circles.	Rubbee Crops.—(*concluded.*)												*Dofuslee.*
	Gram.	Barley.	*Goojaee.*	*Sirson* and *Doan.*	*Mussoor.*	*Bijhra.*	Peas.	*Kussa.*	Linseed.	*Bahun.*	Vegetables.	Total.	
Khalsa, I., ...	2,238	1,034	610	2	108	282	63	36	211	60	...	15,383	2,182
II., ...	672	363	244	1	34	96	17	15	21	25	...	3,364	155
III., ...	364	307	269	5	8	55	3	5	19	23	...	2,620	264
IV., ...	377	83	53	...	14	48	9	4	7	2	6	2,649	436
V., ...	1,204	472	372	7	118	318	59	...	176	173	...	10,266	2,686
VI., ...	954	363	115	12	98	275	39	...	120	20	1	6,622	2,095
VII., ...	1,147	380	228	1	213	1,073	132	195	7	3	34	8,133	2,576
Total, ...	6,956	3,002	1,891	28	593	2,147	322	255	561	306	41	49,037	10,394
	4·95	2·22	1·27	·02	·42	1·52	·22	·18	·40	·21	·03	34·88	7·39
Maafee, ...	352	130	89	...	22	86	12	6	26	32	1	2,621	647
	3·36	1·24	·85	...	·21	·82	·11	·05	·25	·30	·01	25·01	6·17
Grand Total, ...	7,308	3,132	1,980	28	615	2,233	334	261	587	338	42	51,658	11,041

APPENDIX D.

Produce Statement of Pergunnah Crore, Zillah Bareilly.—(concluded.)

DETAILS OF DOFUSLEE CROPS.

Crops.	Number of Circles. I.	II.	III.	IV.	V.	VI.	VII.	Total.
Cutcheana, ...	615	69	57	130	333	161	327	1,692
Pandruh, ...	44	3	7	16	61	134	25	290
Wheat, ...	258	14	44	59	495	292	807	1,969
Gram, ...	773	34	68	109	1,029	789	608	3,410
Barley, ...	83	1	32	23	146	123	87	495
Bijhra, ...	261	1	1	9	91	85	44	492
Mussoor, ...	42	...	...	15	151	80	255	543
Linseed, ...	106	17	29	18	328	354	14	866
Kussa, ...	...	15	4	3	...	2	13	37
Goojaee, ...	...	1	19	2	11	22	7	62
Peas, ...	...	...	2	2	...	26	15	45
Melons, ...	...	...	1	47	41	1	372	462
Sirson, ...	...	...	...	3	...	26	...	29
Chyna, ...	...	...	...	...	...	...	2	2
Total, ...	2,182	155	264	436	2,686	2,095	2,576	10,394

	Acres.
Maafee, ...	87
Cutcheana, ...	87
Pandrah, ...	12
Wheat, ...	127
Gram, ...	235
Barley, ...	19
Bijhra, ...	34
Mussoor, ...	41

	Acres.
Linseed, ...	50
Kussa, ...	3
Goojaee, ...	16
Peas, ...	4
Melons, ...	19
Total, ...	647

APPENDIX E.

Assessment Statement of Pergunnah Crore, Zillah Bareilly.

Pergunnah.	Number of Circles.	Number of Muhals.	Former Settlement under Act IX of 1833.								Jumma of Regulation IX. of 1833 Settlement.	Present Measurements.							
			Total area in acres.	Minhaee area.			Malgoozaree area.					Total area in acres.	Minhaee area.			Malgoozaree area.			
				Barren.	Maafee.	Total.	Culturable waste.	New fallow.	Cultivated.	Total.			Barren.	Maafee.	Total.	Culturable waste.	New fallow.	Cultivated area.	Total.
											Rs.								
Khalsa, ...	I.	144	55,356	9,013	3,810	12,823	7,531	3,602	31,400	42,533	49,661	54,392	5,442	744	6,186	4,824	1,340	42,042	48,206
	II.	37	12,533	1,155	1,473	2,628	1,737	782	7,386	9,905	12,904	12,667	904	474	1,378	1,040	224	10,025	11,289
	III.	51	15,597	1,864	641	2,505	4,131	1,267	7,694	13,092	8,604	15,887	1,091	390	1,481	1,804	641	11,961	14,406
	IV.	29	9,786	1,376	811	2,187	1,519	561	5,519	7,599	8,149	10,048	1,092	94	1,186	721	56	8,085	8,862
	V.	98	38,523	4,014	4,666	8,680	6,858	1,467	21,518	29,843	33,598	39,131	3,793	690	4,483	4,841	822	28,985	34,648
	VI.	63	26,256	3,180	3,813	6,993	2,344	644	16,275	19,263	30,978	26,808	2,372	185	2,557	3,455	322	20,474	24,251
	VII.	66	27,553	5,976	2,560	8,536	6,208	637	12,172	19,017	22,119	29,912	5,606	733	6,339	4,067	481	19,025	23,573
Total, *Khalsa*,...	...	488	185,604	26,578	17,774	44,352	30,328	8,960	101,964	141,252	1,66,017	188,845	20,300	3,310	23,610	20,752	3,886	140,597	165,235

APPENDIX E.

Assessment Statement of Pergunnah Crore, Zillah Bareilly.—(Continued.)

Pergunnah.	Number of Circles.	Expiring *jumma.*	Percentage of cultivated to *malgoozares* area.	Percentage of irrigation.	Number of ploughs.	Average acres per plough.	Description of Soils. Irrigated.	Description of Soils. Unirrigated.	Assumed average rental rates per acre on each well-known class of soil.	Resultant assets.	*Jumma* at 55 per cent.
		Rs. a. p.							Rs. a. p.	Rs. a.	Rs.
Khalsa, ...	I.	50,853 14 6	87·3	47·5	4,983	8·4	*Domut,* ... 10,401 *Mutyar,* ... 3,740 *Bhoor,* 1st, ... 2,750 *Bhoor,* 2nd, .. 3,103 } 19,994	*Domut,* ... 5,714 *Mutyar,* ... 2,828 *Bhoor,* 1st, ... 3,283 *Bhoor,* 2nd, ... 10,223 } 22,048	*Domut,* ... 4 12 0 *Mutyar,* ... 2 13 0 *Bhoor,* 1st, ... 2 10 0 *Bhoor,* 2nd, ... 1 12 0 } 1,34,175-14	76,546 4 18,472 8 15,836 10 23,320 8	73,797
	II.	13,642 0 0	88·8	45·6	1,006	9·9	*Khadir,* 1st, ... 1,789 *Khadir,* 2nd, ... 486 *Bangur.* *Domut,* ... 1,135 *Mutyar,* ... 228 *Bhoor,* 1st, .. 474 *Bhoor,* 2nd, 459 } 4,571	*Khadir,* 1st, .. 234 *Khadir,* 2nd, ... 328 Bangur. *Domut,* ... 850 *Mutyar,* ... 389 *Bhoor,* 1st, ... 742 *Bhoor,* 2nd, 2,911 } 5,454	*Khadir,* 1st, ... 5 12 0 *Khadir,* 2nd, ... 4 8 0 Bangur. *Domat,* ... 4 0 0 *Mutyar,* ... 3 0 0 *Bhoor,* 1st, ... 2 10 0 *Bhoor,* 2nd, 1 12 0 } 34,175-12	11,632 4 3,663 0 7,940 0 1,851 0 3,192 0 5,897 8	18,797
	III.	8,658 0 0	83·0	24·0	1,028	11·6	*Domut,* ... 1,418 *Mutyar,* ... 314 *Bhoor,* 1st, ... 500 *Bhoor,* 2nd, ... 646 } 2,878	*Domut,* ... 1,696 *Mutyar,* ... 991 *Bhoor,* 1st, ... 1,161 *Bhoor,* 2nd, ... 5,235 } 9,083	*Domut,* ... 3 8 0 *Mutyar,* ... 2 8 0 *Bhoor,* 1st, 2 4 0 *Bhoor,* 2nd, ... 1 8 0 } 26,720-4	10,899 0 3,262 8 3,737 4 8,821 8	14,696
	IV.	8,149 0 0	91·2	28·2	842	9·6	*Khadir,* ... 1,495 *Bhoor,* ... 789 } 2,284	*Khadir,* ... 1,624 *Bhoor,* ... 4,177 } 5,801	*Khadir,* ... 4 6 0 *Bhoor,* ... 2 0 0 } 23,577-10	13,645 10 9,932 0	12,968
	V.	38,331 15 0	83·6	41·4	3,290	8·8	*Domut,* ... 5,254 *Mutyar,* ... 4,262 *Bhoor,* ... 2,484 } 12,000	*Domut,* ... 4,904 *Mutyar,* ... 6,004 *Bhoor,* ... 6,077 } 16,985	*Domut,* ... 4 6 0 *Mutyar,* ... 3 0 0 *Bhoor,* ... 2 6 0 } 95,571-10	44,441 4 30,798 0 20,332 6	52,564
	VI.	34,522 8 0	84·4	42·5	2,394	8·1	*Domut,* ... 4,443 *Mutyar,* ... 2,802 *Bhoor,* 1st, ... 699 *Bhoor,* 2nd, ... 769 } 8,713	*Domut,* ... 3,752 *Mutyar,* ... 4,980 *Bhoor,* 1st, ... 1,080 *Bhoor,* 2nd, ... 1,949 } 11,761	*Domut,* ... 5 12 0 *Mutyar,* ... 3 10 0 *Bhoor,* 1st, ... 3 4 0 *Bhoor,* 2nd, ... 2 6 0 } 87,568-0	47,121 4 28,209 12 5,781 12 6,455 4	48,158
	VII.	24,059 0 0	80·7	15·7	2,553	7·4	*Khadir,* ... 2,719 *Bhoor,* ... 271 } 2,990	*Khadir,* ... 11,201 *Bhoor,* .. 4,834 } 16,035	*Khadir,* ... 4 0 0 *Bhoor,* ... 2 6 0 } 67,804-6	55,680 0 12,124 6	37,292
Total, *Khalsa,*	...	1,78,216 5 6	85·1	38·0	16,096	8·7	53,430	87,167	...	4,69,593 8	2,58,272

APPENDIX E.

Assessment Statement of Pergunnah Crore, Zillah Bareilly—(continued.)

Pergunnah.	Number of Circles.	Area rates of the *Jumma* under Act IX., 1833, Settlement.				Area rates of incidence of expiring *Jumma*.				Area rates of incidence of proposed *Jumma*.			
		Area.	Rs.	as.	p.	Area.	Rs.	as.	p.	Area.	Rs.	as.	p.
Khalsa, ...	I.	Total,	... 0	14	4¼	Total,	... 0	14	11½	Total,	... 1	5	8½
		Malgoozaree,	.. 1	2	9	*Malgoozaree*,	... 1	0	10½	*Malgoozaree*,	... 1	8	6
		Cultivated,	... 1	9	4	Cultivated,	... 1	3	4	Cultivated,	... 1	12	1
	II.	Total,	... 1	0	5	Total,	... 1	1	2	Total,	... 1	7	8¾
		Malgoozaree,	... 1	4	3	*Malgoozaree*,	... 1	3	4	Malgoozaree,	... 1	10	7
		Cultivated,	... 1	11	11	Cultivated,	... 1	5	9	Cultivated,	... 1	14	0
	III.	Total,	... 0	8	10	Total,	... 0	8	8½	Total,	... 0	14	10
		Malgoozaree,	... 0	10	6	*Malgoozaree*,	... 0	9	7	*Malgoozaree*,	... 1	0	3¾
		Cultivated,	... 1	1	10	Cultivated,	... 0	11	7	Cultivated,	... 1	3	7¾
	IV.	Total,	... 0	13	4	Total,	... 0	12	11½	Total,	... 1	4	7¾
		Malgoozaree,	... 1	1	1	*Malgoozaree*,	... 0	14	8½	*Malgoozaree*,	... 1	7	4¾
		Cultivated,	... 1	7	7	Cultivated,	... 1	0	2	Cultivated,	... 1	9	7¾
	V.	Total,	... 0	13	11	Total,	... 0	15	8	Total,	... 1	5	6
		Malgoozaree,	... 1	2	0	Malgoozaree,	... 1	1	8¼	*Malgnozaree*,	... 1	8	3
		Cultivated,	... 1	8	11¾	Cultivated,	... 1	4	10¼	Cultivated,	... 1	13	0
	VI.	Total,	... 1	2	10	Total,	... 1	4	7	Total,	... 1	12	8
		Malgoozaree,	... 1	9	8	*Malgoozaree*,	... 1	6	9¼	*Malgoosaree*,	... 1	15	9
		Cultivated,	... 1	14	5	Cultivated,	... 1	10	11¾	Cultivated,	... 2	5	7
	VII.	Total,	... 0	12	10	Total,	... 0	12	10½	Total,	... 1	3	11
		Malgoozaree,	... 1	2	7	*Malgoozaree*,	... 1	0	3¾	*Malgoozaree*,	... 1	9	3
		Cultivated,	... 1	13	1	Cultivated,	... 1	4	2¾	Cultivated,	... 1	15	4
Total *Khalsa*,...		Total,	... 0	14	3¾	Total,	... 0	15	1	Total,	... 1	5	10¾
		Malgoozaree,	... 1	2	9¾	*Malgoozaree*,	... 1	1	3	*Malgoozaree*,	... 1	9	0
		Cultivated,	... 1	10	0½	Cultivated,	... 1	4	3¼	Cultivated,	... 1	13	5

Pergunnah.	Number of Circles.	Number of *Muhals*.	Former Settlement under Act IX. of 1833. Total area in acres.	*Minhaee area.* Barren.	*Maafee.*	Total.
Maafee, ...	I.	6	2,401	243	94	337
	II.	1	724	...	...	...
	III.	4	1,209	63	6	69
	IV.	2	400	70	75	145
	V.	5	2,720	194	2	196
	VI.	9	4,611	383	305	688
	VII.	5	1,693	331	157	488
Total *Maafee*...	...	32	13,758	1,284	639	1,923
Grand Total,...	...	520	199,362	27,862	18,413	46,275

APPENDIX E.

Assessment Statement of Pergunnah Crore, Zillah Bareilly—(continued.)

Pergunnah.	Number of Circles.	Former Settlement under Act IX. of 1833. — Malgoozaree Area — Culturable waste.	New fallow.	Cultivated.	Total.	Jumma of Regulation IX. of 1833 Settlement.	Present Measurements. — Total area in acres.	Minhaee Area. — Barren.	Maafee.	Total.	Malgoozaree Area. — Culturable waste.	New fallow.	Cultivated area.	Total,
						Rs.								
Maafee, ...	I.	241	244	1,579	2,064	...	2,449	185	...	185	37	5	2,172	2,264
	II.	65	79	580	724	...	420	36	...	36	28	1	355	384
	III.	309	136	695	1,140	...	1,162	66	...	66	72	24	1,000	1,096
	IV.	31	6	218	255	...	402	43	64	107	55	...	240	295
	V.	771	121	1,632	2,524	...	2,875	383	...	383	559	55	1,878	2,492
	VI.	173	67	3,683	3,923	...	4,356	438	...	438	314	9	3,595	3,918
	VII.	204	62	939	1,205	...	1,678	251	...	251	186	1	1,240	1,447
Total, *Maafee*, ...	...	1,794	715	9,326	11,835	...	13,342	1,402	64	1,466	1,301	95	10,480	11,876
Grand Total, ...	...	32,122	9,675	111,290	153,087	1,66,017	202,187	21,702	3,374	25,076	22,053	3,981	151,077	177,111

APPENDIX E.

Assessment Statement of Pergunnah Crore, Zillah Bareilly.—(concluded.)

Pergunnah.	Number of Circles.	Expiring *Jumma*.	Percentage of cultivated to *Malgoozaree* area.	Percentage of Irrigation.	Number of ploughs.	Average acres per plough.	Description of Soils. Irrigated.		Description of Soils. Unirrigated.		Assumed average rental rates per acre on each well known class of soil.		Resultant assets.		*Jumma* at 55 per cent.
		Rs.										Rs. as. p.	Rs. As.		Rs. Cesses at 5 per cent.
Maafee, ...	I.	...	95·9	27·5	207	10·5	*Domut*, ... 495 *Mutyar*, ... 57 *Bhoor*, 1st, ... 21 *Bhoor*, 2nd, ... 23	597	*Domut*, ... 1,030 *Mutyar*, ... 114 *Bhoor*, 1st, ... 160 *Bhoor*, 2nd, ... 271	1,575	*Domut*, ... *Mutyar*, ... *Bhoor*, 1st, ... *Bhoor*, 2nd, ...	4 8 0 2 13 0 2 10 0 1 12 0	6,867 0 480 15 475 2 514 8	8,337-9	
	II.	...	92·4	55·8	40	8·8	*Khadir*, 1st, ... 6 *Khadir*, 2nd, ... 45 Bangur. *Domut*, ... 111 *Mutyar*, ... 29 *Bhoor*, 1st, ... 6 *Bhoor*, 2nd, ... 10	198	*Khadir*, 1st, ... 0 *Khadir*, 2nd, ... 15 Banjur. *Domut*, ... 59 *Mutyar*, ... 69 *Bhoor*, 1st, ... 6 *Bhoor*, 2nd ... 8	157	*Khadir*, 1st, ... *Khadir*, 2nd, ... Banjur. *Domut*, ... *Mutyar*, ... *Bhoor*, 1st, ... *Bhoor*, 2nd, ...	5 12 0 4 8 0 4 0 0 2 13 0 2 10 0 1 12 0	34 8 270 0 680 0 250 5 33 12 31 8	1,300-1	
	III.	...	91·2	44·5	76	13·1	*Domut*, ... 233 *Mutyar*, ... 158 *Bhoor*, 1st, ... 24 *Bhoor*, 2nd, ... 30	445	*Domut*, ... 78 *Mutyar*, ... 136 *Bhoor*, 1st, ... 46 *Bhoor*, 2nd, ... 295	555	*Domut*, ... *Mutyar*, ... *Bhoor* 1st, ... *Bhoor*, 2nd, ...	3 8 0 2 8 0 2 4 0 1 8 0	1,088 8 735 0 157 8 487 8	2,468-8	
	IV.	...	80·0	14·1	28	8·5	*Khadir*, ... 18 *Bhoor*, ... 16	34	*Khadir*, ... 26 *Bhoor*, ... 180	206	*Khadir*, ... *Bhoor*, ...	4 6 0 2 0 0	192 8 392 0	584-8	
	V.	...	75·3	44·1	222	8·4	*Domut*, 356 *Mutyar*, ... 384 *Bhoor*, ... 88	828	*Domut*, ... 423 *Mutyar*, ... 375 *Bhoor*, ... 252	1,050	*Domut*, ... *Mutyar*, ... *Bhoor*, ...	4 6 0 3 0 0 2 6 0	3,408 2 2,277 0 807 8	6,492-10	
	VI.	...	91·7	35·6	405	8·8	*Domut*, .. 875 *Mutyar*, ... 271 *Bhoor*, 1st, ... 76 *Bhoor*, 2nd, ... 59	1,281	*Domut*, ... 1,189 *Mutyar*, ... 836 *Bhoor*, 1st, ... 157 *Bhoor*, 2nd, ... 132	2,314	*Domut*, ... *Mutyar*, ... *Bhoor*, 1st, ... *Bhoor*, 2nd, ...	5 12 0 3 10 0 3 4 0 2 6 0	11,868 0 4,012 14 757 4 453 10	17,091-12	
	VII.	...	85·7	36·3	155	8·0	*Khadir*, ... 437 *Bhoor*, ... 13	450	*Khadir*, ... 620 *Bhoor*, ... 170	790	*Khadir*, ... *Bhoor*, ...	4 0 0 2 6 0	4,228 0 434 10	4,662-10	
Total, *Maafee*,...	...	...	88·2	36·5	1,133	9·2	3,833		Total, *Maafee*, ... 6,647		...		40,937 10		2,047
Grand Total,...	...	1,78,216-5-6	85·3	37·9	17,229	8·7	57,263		Grand Total, ... 93,814		...		510,531 2		2,60,319

Bareilly Settlement Office : *September*, 1868.

S M. MOENS, *Settlement Officer.*

Proposed Rates of Assessment for Pergunnah Meergunge.

By S. M. Moens, Esq., B.A., *Settlement Officer, Bareilly.—Dated* 31*st August*, 1869.

1. The Pergunnah Meergunj, as now constituted, is bounded to the north by Pergunnahs Kabur and Sirsanwan, to the west by the Rampore territory, to the south-west and south by the Ramgunga and *pergunnah* Crore, to the east by Crore and Ritcha. It is formed out of portions of the old *pergunnahs* of Shahi, Serowli, and Ajaon, and now contains 172 *mouzahs* and 213 *muhals*, of which four are revenue free. The average size of each *muhal* is by the new measurements 462 acres, or rather larger than in Crore, where the average size was 408 acres. It is intersected by seven rivers, the Dhora, Bygool, Bhukra, Dhukra, Nahil, Siddha, and Ramgunga, into which latter all the six former flow. There are also, especially in the southern portion, numerous nullahs and drainage lines. The country generally is a series of gentle undulations formed by the water-sheds of the rivers and their valleys. The greater portion lies low and retains the rainfall and drainage; the land is thus kept naturally moist, and only the better crops in the higher levels require artificial irrigation: along the Ramgunga is all low-lying *khadir* of varying quality. There are two main lines of road,—one the imperial metalled road to Moradabad and Bareilly, and the second the Shahi and Buheree kuchha road, which branches off from the first at the Sunka bridge in Crore. This is in fair order, though here and there permanent masonry bridges and culverts are required. Well attended local markets are held in numerous villages all over the *pergunnahs*. The population, as shown by Appendix A., is very dense—the general average being 6·34 to the square mile. The number of the agricultural adult males is 21,705, which gives an average of three cultivated acres per man, or a fraction less than in Crore, where the cultivated average was 3·2 acres. The cultivated area is sub-divided into 13,727 holdings, with an average of 4·9 acres per holding. Nearly 86 per cent. is cultivated by men resident in their own villages, and a little over 14 per cent. by *pahees*. The chief cultivating castes are Kissan, Koormi, Brahmin, Thakoor, Mrao, Chumar, and a few Jats and others (see Appendix B). The staple crops are *mukka*, rice, cotton, and *bajra* in the *khureef*, and wheat in the *rubbee*; 15,709 acres or 23½ per cent. of the whole area were *dosahi* at measurement. Very little sugar is grown, as the *khureef*, followed by a second crop, is found to pay better, with less risk. Of the rice, the 2nd and 3rd class rices only are grown.

2. The settlement under Regulation IX. of 1833 was formed by Mr. James Muir at a *jumma* of Rs. 1,13,687—the Government share being estimated at 66 per cent. of the assets. The following are his remarks as to the condition of the *pergunnahs* and the classification of villages adopted at that time.

"The Ajaon villages to the west are the most fertile; the Shahi and Serowli vil-
"lages (to the east and centre) are of middling capabilities. Several of the Ajaon villages
"lie along the banks of the Ramgunga, and 8 or 10 are situated on the opposite side of
"it. The capabilities of these Ramgunga villages are generally inferior to the inland
"ones; but there are also one or two exceptions. The soil of Ajaon is generally speak-
"ing fertile, and the staple products are rice and *mukka*, which in these *pergunnahs* are
"found to be valuable crops. Many of the villages are populous, and the majority of the
"population are Koormees, who are the best practical agriculturists in this part of the
"country; several estates are irrigated from embankments by gools, but their number is
"not great. The rent-rates are generally *buttaee*—the only money payments (except
"where the entire money rates of the VII. 1822 settlement still remain in force) being
"by *hulbundi nuqshi*. To each plough 10 or 12 *beegahs kuchha* are assigned for the
"cultivation of *mukka* and cotton, and charged at Re. 1 per *beegah*. For all the other
"land attached to the same plough, payments are made in kind. This is exclusive of

"sugarcane, for which money rates are also paid ; but the latter is by no means a staple "crop in the western pergunnahs of the Bareilly District. The *hulbundi* system is uni-"versal in Ajaon, and is to be met with in the Serowli and Shahi villages also. These "latter are inferior to those to the west. They are not unhealthy, but the soil is not "so fertile, and many places on the contrary are unproductive. The products are less "valuable in proportion, and the rent-rates lower. There are no estates irrigated from "embankments, and the people are not such good agriculturists. The villages are not "so populous, nor are there so many Koormee cultivators. This remark, however, does "not apply to some of the Serowli villages bordering on Ajaon, which are well inha-"bited, and of which the ryots are substantial. The *pergunnahs* were over-assessed "from the excessive enhancement of *jumma* that took place between the 1st and 4th "settlements. From all I can learn they were well-cultivated at the cession. The "Ajaon *mokuddum* farmers by their industry had been able to struggle against the "over-assessment; but the most of them are miserably poor, and few in comfortable "circumstances. The people in the Serowli villages did not appear so badly off as "in Ajaon. The assessments of Shahi, which had been entirely settled under Regulation "VII. of 1822, were generally speaking equitable, and many estates were moderately, "nay lightly assessed."

3. Mr. Muir then, on the villages embraced in this report, fixed a *jumma* of Rs. 1,13,687. I cannot but think that he unconsciously somewhat exaggerated the former over-assessment and consequent depression of the people; for the decrease in the former *jummas* allowed by him was only—

In	Shahi,	...	...	1·9	per cent.
"	Serowli,	...	...	3·5	" "
"	Ajaon,	...	...	6·5	" "

And, considering that the average *jumma* per *mouzah* was Rs. 680, the practical relief afforded by the reduction to a "miserably-poor" population could scarcely have been very appreciable. In fact, the *jummas* of the 4th settlement, which were characterized as so high, were maintained in almost every instance, except where they had been altered at the VII. 1822 settlement by Mr. Boulderson. The settlement has worked successfully. It had none of the faults of the Furreedpore settlement, and was not so immoderately light as in most parts of Crore. The *jumma* has been regularly, and on the whole, easily collected. There have been no sales for arrears, and only three farms during the currency of the settlement. The modifications in the *jumma* which have since occurred and the causes which led to them are as follows :—

	Rs.	a.	p.	Rs.	a.	p.
Increase by resumption of invalid revenue-free holdings, ...	5,167	8	0			
Summary settlement for *alluvion*, ...	199	0	0	5,366	8	0
Decrease land taken up for public purposes, ...	249	0	0			
Remission of *jumma* in reward for loyalty, ...	27	8	0			
Summary settlement for *diluvion*, ...	1,700	0	0	1,976	8	0
Net Increase, ...				3,390	0	0

The expiring demand therefore, exclusive of cesses, stands at Rs. 1,17,077.

4. The permanent transfers of proprietary rights since settlement are shown below :—

Description of Transfer.	Rights transferred.	Area in acres.	Government Jumma.	Price realized.	Average per acre.
					Rs. a. p.
By private sale,	Entire villages 26— Bs. Bs. C. Portions, 370 19 8	15,675	19,497 0 9	1,66,678	10 10 1
By auction in execution of decree.	Entire villages 20— Bs. Bs. C. Portions, 127 13 0	10,506	10,680 6 8	61,165	5 14 8
Confiscated for rebellion.	Rights in portions 67 1¼ Bs. Bs.	2,019	2,341 2 4	21,719	10 12 1

From this it appears that the average value of land under the expiring *jummas* was about Rs. 10½ to 11 per acre. In Crore, though the soil is as a rule inferior to Meergunge, it was nearly Rs. 15 an acre. Comparing the acreage alienated with the acreage of the *pergunnah*, we find that 28½ per cent. has permanently passed away from the old owners—a large proportion, which shows that the *jumma* could not have been exorbitantly light. In fact, I believe that Mr. Muir did here take the full 66 per cent. or very nearly so of the assets, in all villages which were fairly well-cultivated, and in which the proportion of waste land was small.

5. Having touched on the past, we can now proceed to show what progress the *pergunnah* has made, and its present condition. The following shows the results by the new measurement as compared with last survey :—

	Total area in acres.	Lakhiraj.	Barren.	Culturable waste.	Cultivated.	Total assessable area.
By present measurement, ...	98,340	5,794	10,040	15,393	67,059	82,452
At last settlement, ...	97,885	10,599	9,446	23,932	53,908	77,840

There is thus an increase of 528 acres, or ·54 per cent. in the total area showing that there can be no great error in the measurements. The assessable area has increased by 4,612 acres, or 5·9 per cent ; while cultivation has extended by 14,151 acres, or 26·2 per cent. But the Government share having been decreased from 66 to 55 per cent., an increase of 30 per cent. in the assets is required to prevent the Government demand from falling. The increase in the assets depends either on increase of cultivation, or improved cultivation, or an increase in the value of produce, or on all these causes jointly. Cultivation, we have seen, has extended by 26·2 per cent. Produce prices have certainly risen largely as shown in my reports on Crore and Furreedpore. The rise is certainly not less than 40 per cent,—even allowing for the difference between village and city prices.

6. Have rents risen generally? Under Mr. Muir's settlement, the *jummabundee* on which he based his *jumma* gives an average rent-rate of Rs. 3-2-8. The new *khuteounees* show the average money-rate paid by tenants to be Rs. 3-11-4 per acre all-round, giving an actual increase of 8 as. 8 pie per acre. Again, the rents on 8,821 acres have been commuted at suit of the cultivators from kind to money-rates at an average rate of Rs. 4-3-3 per acre; while the average rate of occupancy tenants in 1867, before the recent commutations, was found to be Rs. 3-8-8 per acre; the average rate of the tenant-at-will was Rs. 3-12-3. I applied a further test. I took the old and new papers of 50 villages in different parts of the *pergunnah* and compared them ; by the old papers there were 9,478 *beegahs*, 4 *biswas pucka*, paying a money-rent of Rs. 21,780-2-6, or an average of Rs. 3-10-9 per acre. By the papers of 1867 in the same villages, there were 19,865 *pucka beegahs* renting at Rs. 49,660 or Rs. 3-14-11 per acre, giving an increase of 5 annas 2 pies per acre. This increase is larger than it looks; for in the old papers, only the best land was held at money-rates. In the new, though the money-paying area had more than doubled, though inferior land had been taken into cultivation, though a considerable proportion of land was held by the old tenants or their representatives at the old rates unaltered, yet still not only has the general average rate not fallen, but it has increased by nearly 9 per cent. The rise in rents has been checked by custom, and by the approach of the new settlement; but still rents have risen, and it may be fairly presumed from the results in the commutation suits, that they will rise still higher.

7. Kind rates are, as a rule, preferred by the cultivators where the produce is uncertain and variable. The results in the preceding para., taken together with the numerous claims for commutation, would tend to prove not only that rents had risen, but the style of cultivation had improved. This latter conclusion is borne out by a comparison of the irrigated area at last settlement and at the present time.

	Cultivated area in acres.	Irrigated.	Dry.	Percentage of irrigation on cultivation.
At last Settlement, ...	53,908	6,028	47,880	11·2
By present measurement, ...	67,059	17,798	49,261	26·5

Thus, while the irrigated area has extended by 11,770 acres, the dry has extended by only 1,381 acres. The general increase in the percentage of irrigated lands on total cultivation being 15 per cent. By a comparison of old and new village papers, I find that at last settlement the average cultivated area per plough was 9·06 acres, while it is now 7·56 acres, and naturally the plough acreage having diminished in extent, the style of cultivation must have improved to enable this smaller area to support the same or a greater number; and it is incontestable that the condition of the people has improved. The cultivators are, as a rule, well off, though the pergunnah is densely populated. Rents being for the most part now paid in money they have reaped the full benefit of the increased prices of late years. I have no means of comparing the density of the present and former population, but it must have increased, for Shahi has now passed Ajaon;—in the one the density is 694, in the other 687 the square mile.

8. To sum up the conclusions from the preceding, we find that cultivation has increased 26 per cent., the proportion of irrigation 15 per cent., the irrigated area being nearly threefold the former wet area. Rents have actually increased 8¾ annas per acre; while an increase of about 5 annas more is to be calculated on: population has increased; the plough area has diminished, and cultivation has improved; while prices have risen quite 40 per cent. We are justified, then, in expecting a moderate increase in the *jumma*.

9. I can now proceed to the classification of villages, and the soil-rates which I propose for adoption. We have seen that Mr. Muir divided the tract of country into two circles.

I. The Shahi and Serowli villages to the east and centre.

II. The Ajaon villages to the west and south-west.

He correctly noted, however, that the Ajaon villages along the Ramgunga were inferior in capabilities to the rest. My classification very closely corresponds with his. I have divided the villages into three circles for assessment.

I. The Shahi and Serowli villages.

II. The Ajaon villages to the west.

III. The Ramgunga villages or *khadir* circle to the south. The description quoted above from Mr. Muirs's report still pretty accurately represents the characteristics of each circle, except that Shahi is now densely populous, and that in Ajaon the people are thriving and prosperous.

The following statement shows the distribution of the soils in the cultivated area in each circle:—

Name of Circle.	*Domut.*	*Mutyar.*	*Bhoor, 1st.*	*Bhoor, 2nd.*
Circle I., ...	16,928	15,593	3,385	3,878
„ II., ...	7,359	7,982	1,652	1,113
„ III., ...	3,799	1,885	1,991	1,494

At last Settlement the soils were divided into two classes, *khadir* comprehending both *domut* and *mutyar*, whether true *khadir* or *bangur*; and *bhoor*, including all sandy soil. This division, as in Crore, was faulty, for *domut* and *mutyar* are of by no means the same value; *domut* generally, throughout the *pergunnah*, now, as

formerly, rents at higher rates than *mutyar;* and in some parts the *domut* rents are more than double those of the *mutyar*. In the former soil all the better crops are grown, and much of the *dosahi*. In the latter, as a rule, rice and gram, linseed, &c., only. It is generally a stiff tenacious clay: where water is easily obtainable for artificial irrigation, or the level is so low as to receive and retain the drainage, the produce is good; but under other circumstances it is uncertain and variable. This latter condition is chiefly to be found in the tract between the Bygool and Bhukra rivers, and is capable of an easy remedy. A masonry dam over the Kuli and Buschee, and a rajbuha about 12 miles long taken down on the water-shed of the two rivers, with an escape into the Bhukra at the south of the *pergunnah*, would irrigate from end to end the only uncertain villages in the *pergunnah*. The cost could not be heavy, and the work would be a very remunerative one. There is a slight natural slope, and there would be no engineering difficulties whatever. The water-supply in the Kuli is permanent and abundant. There used formerly to be a *kuchha* dam at the spot indicated; but of late years, owing to dispute as to the proportion in which the expense was to be shared, the dam has not been constructed.

10. Having noticed my classification, I pass on to the rates which I propose for adoption. In working out these, I have followed the same method which I used in Crore and Furreedpore. As my procedure in those *pergunnahs* has met with the Board's sanction, it is unnecessary for me to enter into details again. My labours in arriving at soil-rates have been simplified by the fact that where money-rates prevail, they have been commuted from kind rates within the memory of living men, and the principles on which the commutation was based are still known and remembered. They were, for the most part, fixed on soils and crops at the VII. 1822 Settlement by Mr. H. Boulderson. His procedure was admirably successful. Where enhancements have taken place, they have been, as a rule, field by field, by increase of rates, and not in lump sums, fixed, as Mr. Elliot calls it, by rule of thumb. There is almost always a valid reason for variations of rent where they occur in the same *har* or soil of a village. These are caused usually either by some ascertainable local peculiarity, or by the distance of time back at which the commutation took place, and the produce prices of the time, or by the former *buttase* rate of the holder and his predecessors being a little higher or lower than the average, or by the fact that the cultivator is a relative or connection of the former or present *zemindars*.

11. The next point is the correctness of the data on which I have based my conclusions in the money-paying villages. I am satisfied that on the whole the rents entered in the *khuteounees* are the rents actually paid. The number of fields, areas, and rents in every holding have been attested and re-attested by cultivators and *zemindars*, and every cultivator has received a copy of the entries affecting him. Collusion may have occurred in rare instances; but I am convinced that such cases are so rare as not to affect the results drawn from large areas; *zemindars* and cultivators are not on such good terms, they have not such confidence in each other as to embolden the former to get rents attested lower than the real rates. A *zemindar* would not dare to attempt it with cultivators so well off and litigious as they are here. He would know well that he would never be able to collect a fraction of a pie more than was entered in the cultivator's "*parcha*," without a suit for enhancement; next, the number of the tenants-at-will is too small comparatively to render any system of terrorism feasible to any great extent. Besides which the landlords have not yet sufficiently as a body realized their powers over tenants-at-will under Act X., for them to conceive the idea of working such a system. Practically the rents of the tenants-at-will are higher than those of the occupancy tenants. Thirdly, supposing a *zemindars* made successful arrangements with his own cultivators, yet he could not tutor those of neighbouring villages; and whereas here similar rates prevail in similar soils over large areas, a marked decrease in the rates of single villages could not escape scrutiny, and a fraud, if it existed, would be at once detected. Here as in Crore and Furreedpore, I believe the village papers to be fairly correct as far as they go in money-paying villages.

12. The kinds of soil entered in the *khusrahs* are those known to the people, and on which their rents were fixed before. In the *buttaee* villages I have had the numerous commutation suits affecting 37 scattered villages and 8,812 acres of land to assist me. From these cases, from existing money-rents, from decisions in Act X., suits for enhancement, from free local enquiry, and constant communication with all classes during a careful inspection which I made of every single village, I have deduced the following assumed rent-rates per cultivated acre :—

	Domut.	Mutyar.	Bhoor, 1st.	Bhoor, 2nd.
	A. R. P.	A. R. P.	A. R. P.	A. R. P.
Circle I., ...	4 12 0	3 3 0	3 0 0	2 4 0
" II., ...	5 8 0	4 0 0	3 10 0	2 10 0
" III., ...	4 0 0	3 10 0	2 13 0	2 0 0

The results by the application of these rates are shown in the table below :—

	Total area.	Minhaie.	Waste.	Cultivated area.	Malgoozaree area.	Present jumma.	Jummabundee by rates.	Jumma by rates at 55 per cent.
Circle I., ...	56,352	9,108	7,460	39,784	47,244	69,918	1,48,991	81,945
" II., ...	24,394	3,000	3,288	18,106	21,394	37,262	81,312	44,722
" III., ...	17,594	3,780	4,645	9,169	13,814	10,797	30,617	16,839
Total, ...	98,340	15,888	15,393	67,059	82,452	1,17,077	2,60,920	1,43,506

The actual *jummabundee* obtained by applying the average *ryotri* money rent-rate to the cultivated area by measurements is Rs. 2,48,676 ; but in some villages the old money rates of the VII., 1822 Settlement are still in force.

In many others the representatives and heirs of the men who cultivated at last settlement still hold their old settlement puttas at from six to nine annas a *beegah kuchha*, while fields of precisely similar quality that have since fallen vacant are renting at 10 to 14 annas. Enhancement was barred against the former men till the expiration of the settlement by the terms of their *pottas* and the provisions of the *wajiboolurz*. The enhancement, therefore, on which I have calculated is by no means excessive. The soil rates adopted at last settlement by Mr. J. Muir were as follows :—

	General Revenue rate on cultivation.	*Soil rent.*	*Rates.*
		Khadir.	Bhoor.
Shahi and Serowli villages: My Circle I., ...	2 0 0	3 8 0	2 12 0
Ajaon villages: My Circles II. and III., ...	2 6 0	3 12 0	3 0 0

He remarked—"These distinctions of soils have been retained to make the state-"ments correspond with those of Crore and Nawabgunge. In the tract of country under "review, there is, however, not much *bhoor* or sandy soil. The soils are chiefly *domut* "and *mutyar*, which have been both classed as *khadir*. The rent-rates on soils are only "useful as a check on the revenue rate, which, from all the experience I have had, I "consider a much more safe and useful standard for assessment."

Adopting Mr. Muir's classification of villages and soils for purpose of comparison, my rates fall thus :—

	General Revenue rates.	Khadir.	Bhoor.
Shahi and Serowli, ...	2 1 0	4 0 0	2 9 7
Ajaon Villages, ...	2 4 1	4 7 10	2 12 2

My rates, therefore, as compared with the old ones, give an increase of from 8 to 12 annas per acre on the better soils, and from 2½ to 3½ as decrease on the worse. This decrease on the *bhoor* puzzled me for some time. I naturally argued that the same causes that had tended to increase the rents of the better soils should have had an effect on those of the worse, especially when the great increase in produce prices was taken into consideration. The old *khusrahs* solved the problem ; I found that most of the 2nd class *bhoor*, especially in the eastern villages, was waste at last settlement; and further, that much genuine *domut* had at that time by fraud on the part of the Ameens been entered as *bhoor* without the error being detected.

This land being *classed* as bhoor while rented as *domut*, of course the soil rate came out higher than it should have done, while the poor *bhoor* that has since been brought under cultivation at low rates has decreased the general *bhoor* average rate. I am strongly inclined to think that very little real *bhoor* beyond what has now been classed as first class was under cultivation at all at last settlement; and on this the proposed rates show an increase over the old rates quite in proportion to the rise in rents on the other soils.

The incidence of the IX. 1833 Settlement *jumma*, and the *jumma* by my rates, is shown thus :—

	On assessable area.			On cultivated area.		
	Rs.	a.	p.	R.	a.	p.
By IX. 1833 Settlement, ...	1	7	4½	2	1	9
By my rates, ...	1	11	10	2	2	3

But my estimated *jummabundee* does not include miscellaneous receipts, assets of the waste, &c., which will probably add another Rs 2,500, or 3,000. The estimate on the cultivated area only gives an increase in actual land revenue of Rs. 13,383, or 11·4 per cent., while the gross demand including cesses is an increase over the old gross demand of Rs. 24,672, or 21·7 per cent.

14. The only point left for notice is the distribution of the proprietary rights. Of the 209 revenue-paying *muhals* 142 are *semindaree*, with an average of six sharers to each *muhal*. The remaining 67 are putteedaree, perfect and imperfect. There are only 20 *muhals* with more than 20 sharers to the *muhal*. There are no large cultivating communities to cause any difficulty in assessment, or any very great deviation from the standard rates. The *zemindars* are most of them residents in the *pergunnah*, and are generally in comfortable circumstances. The chief land-owning castes are Thakoors, Brahmins, Kayeths, Sheikhs, and Pathans (see Appendix). In the 12 villages noted in the margin there are superior and inferior proprietary rights. The *talookdars*, the representatives of Koour Kehri Singh, claimed to engage; but I propose to take engagements directly from the *biswadars*, assigning as *malikana* to the *talookadars* 10 per cent. on the land revenue, payable from the Government Treasury. The grounds on which I rejected the claim of the latter were :—

Purchai, Mundunpore, Meernugger, Hafizgunge, Mogulpore, Labhera, Jouner, Thiria, Puttha, Bullia, and Kyni Shibnugger.

1. Because to oust the *biswadars* from the management would be opposed to the whole course of previous practice and to the views of the Government as laid down in letter of Government of the North-Western Provinces to Government of India, No. 8, dated 31st January 1844, paragraph 35 ; (see Thomason Despatches, Vol. II., page 21).

2. Because the *talookdars* have had no concern whatever with the management of these villages since the second settlement, when heavy arrears accrued. Since then the *biswadars* have always been engaged.

3. Because the villages have thriven and become prosperous under the management of the *biswadars*, who are entitled to reap the benefit of their skill and industry.

4. The avowed object of the *talooadars* was, if engagements were taken from them, and sub-settlement made with the *biswadars*, to oust and ruin the latter by any means in their power. The prosperity of the villages would then be destroyed by constant intrigues and feuds.

On appeal the Board approved of my views.

15. There are no canals in the *pergunnah* nor, as far as I am aware, is there any proposal for their construction before Government. Of the assessable area more than 80 per cent. is cultivated. I presume, therefore, that the settlement now formed will be declared permanent. The *pergunnah* is in every way ripe for the measure. With the exception of the small tract between the Bhukra and the Bygool, noted in para 9, I do not think it would be advisable to construct canals anywhere in the *pergunnah*; water is already near the surface, and nearly all the land which requires irrigation is already irrigated from wells and streams. The remaining land is so naturally moist, that if canals were constructed there would be a great risk of over-saturation from filtration, and the rise in the water level which almost invariably follows canals. The results would be a deterioration in productiveness, and great risk of malarious diseases.

16. I fear this report has spun itself out to a wearisome length; but here, as heretofore, I have wished to lay the grounds of my proposals so fully before the Board as to enable them to judge now of the correctness of my conclusions, and to avoid the risk, labour, and expense of having my settlement revised hereafter as being too low or too high. If my rates are sanctioned, the Board may rely on the *jummas* being distributed on the villages in detail, with the greatest care and regard for the special circumstances of each village.

A map* coloured to show the circles and appendices accompany the report.

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* Not printed.

APPENDIX A.

Census Statment of Pergunnah Meergunge, Zillah Bareilly.

Tuhseelee.	Pergunnah.	Number of Mouzah.	Area in Square British Statute Miles of 640 acres each.		POPULATION.											
					HINDOOS.											
					Agricultural.				*Non-agricultural.*				*Agricultural.*			
					Males.		Females.		Males.		Females.		Males.		Females.	
			Total Area.	Cultivated Area.	Adult.	Children.	Adult.	Children.	Adult.	Children.	Adult.	Children.	Adult.	Children.	Adult.	Children.
2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.	17.	18.
Meergunge, ...	Shahi, ...	81	60·64	43·22	8,287	5,054	7,207	4,375	3,124	1,779	2,739	1,522	1,059	614	906	582
	Serowli, N., ...	71	68·20	42·48	8,492	4,998	7,409	3,975	3,581	1,827	3,033	1,892	795	596	725	482
	Ajson, ...	20	20·57	14·51	2,722	1,515	2,637	1,326	997	543	1,074	545	350	220	323	184
	Total, ...	172	149·41	100·21	19,501	11,567	17,253	9,667	7,702	4,149	6,846	3,959	2,204	1,430	1,954	1,248

APPENDIX A.

Census Statement of Pergunnah Meergunge, Zillah Bareilly.—(Concluded.)

POPULATION.																
MAHOMEDANS AND OTHERS, NOT HINDOOS.							TOTAL.									
		Non-agricultural.														
		Males.		Females.												
Tuhseelee.	Pergunnah.	Adult.	Children.	Adult.	Children.	Adult.	Adult Male.	Adult Female.	Children.	Boys.	Girls.	Males.	Females.	Total.	Number of persons per square mile.
2.	3.	19.	20.	21.	22.	23.	24.	25.	26.	27.	28.	29.	30.	31.	32.
Meergunge, ...	Shahi, ...	1,622	823	1,494	882	26,438	14,092	12,346	15,631	8,270	7,361	22,362	19,707	42,069	694
	Serowli, N., ...	1,226	652	1,052	543	26,313	14,094	12,219	14,965	8,073	6,892	22,167	19,111	41,278	605
	Ajaon, ...	537	338	532	289	9,172	4,606	4,566	4,960	2,616	2,344	7,222	6,910	14,132	687
	Total, ...	3,385	1,813	3,078	1,714	61,923	32,792	29,131	35,556	18,959	16,597	51,751	45,728	97,479	652

APPENDIX B.

Statement showing the Distribution of the Cultivated Area among the several Castes.

Number.	Caste.	Chhupperbund Assamees cultivating in their own villages.				Cultivating as pahees in other villages.		Total.			
		Number of Assamees.	Holdings.	Land in pucka beegahs.				Assamees.	Holdings.	Land in pucka beegahs.	
1	Brahmins, ...	1,417	1,347	9,950	10	2,273	2	1,417	1,347	12,223	12
2	Kahars, ...	807	797	2,959	10	470	18	807	797	3,430	8
3	Carpenters, ...	212	202	1,205	16	103	19	212	202	1,309	15
4	Lohars, ...	172	165	575	18	96	3	172	165	672	1
5	Gudureeas, ...	237	232	1,074	17	134	10	237	232	1,209	7
6	Goojurs, ...	139	128	900	3	77	8	139	128	977	11
7	Kisan, ...	2,258	2,258	17,450	11	2,562	10	2,258	2,258	20,013	1
8	Chumars ...	1,198	1,150	6,079	8	766	15	1,198	1,150	6,846	3
9	Dhobi, ...	314	299	1,329	7	285	6	314	299	1,614	13
10	Dhoona, ...	113	110	328	5	47	17	113	110	376	2
11	Buneeah, ...	61	57	262	13	35	12	61	57	298	5
12	Barbers, ...	199	189	889	4	113	13	199	189	1,002	17
13	Khuteeks, ...	17	17	55	16	2	13	17	17	58	9
14	Sweepers, ...	296	286	604	5	62	1	296	286	666	6
15	Joolaha or weavers,	175	170	420	8	52	11	175	170	472	19
16	Talee or Oilman,	247	217	1,141	3	155	2	247	217	1,296	5
17	Koormees, ...	1,521	1,444	13,681	16	2,022	13	1,521	1,444	15,704	9
18	Mooraos, ...	1,399	1,360	6,815	12	1,017	16	1,399	1,360	7,833	8
19	Koomhar, or potter,	77	75	165	18	55	11	77	75	221	9
20	Jats, ...	364	242	4,868	6	716	15	364	242	5,585	1
21	Sheikh, ...	319	311	2,067	13	705	10	319	311	2,773	3
22	Faqeer Moossulman, ...	230	220	658	15	370	10	230	220	1,029	5
23	Bhuteeara. ...	20	20	59	11	8	1	20	20	67	12
24	Bards, ...	18	18	32	2	79	13	18	18	111	15
25	Kayeths, ...	215	119	1,647	1	642	11	215	119	2,289	12
26	Mewatees, ...	212	209	1,500	8	304	10	212	209	1,804	18
27	Lodhas, ...	14	14	107	3	7	6	14	14	114	9
28	Thakoors, ...	822	818	7,572	9	1,530	2	822	818	9,102	11
29	Kumboh, ...	2	2	33	18	10	7	2	2	44	5
30	Bhoorjees, ...	38	36	127	8	32	8	38	36	159	16
31	Ahirs, ...	291	280	2,445	1	121	10	291	280	2,566	11
32	Tailors, ...	47	47	124	18	22	3	47	47	147	1
33	Fuqeers, Hindoo,	22	22	70	15	55	1	22	22	125	16
34	Raeen, ...	25	25	360	19	66	13	25	25	427	12
35	Goshaeen, ...	135	131	718	19	0	0	135	131	718	19
36	Puthans, ...	475	450	3,391	1	817	1	475	450	4,208	2
37	Syud, ...	34	30	307	16	153	16	34	30	461	12
38	Soonar, ...	12	12	28	18	1	8	12	12	30	6
39	Dulhera, ...	55	55	263	2	189	9	55	55	452	11
40	Chheepees, ...	12	12	37	13	16	14	12	12	54	7
41	Moguls, ...	25	25	160	11	10	1	25	25	170	12
42	Malees, ...	51	51	107	15	46	14	51	51	154	9
43	Bunjarah, ...	22	12	46	11	0	0	22	12	46	11
44	Bhishtees, ...	8	7	11	3	11	6	8	7	22	9
45	Dyers, ...	5	5	6	7	2	17	5	5	9	4
46	Guddees, ...	13	13	83	7	3	1	13	13	86	8
47	Rawut, ...	1	1	3	7	4	16	1	1	8	3
48	Korees, ...	7	7	18	12	0	0	7	7	18	12
49	Butchers, ...	8	5	21	5	0	6	8	5	21	11
50	Meerasees, ...	1	1	0	19	4	10	1	1	5	9
51	Munihars, ...	16	16	35	14	42	13	16	16	78	7
52	Khagees, ...	3	3	21	3	0	0	3	3	21	3
53	Puseeas, ...	3	3	28	3	0	0	3	3	28	3
54	Radhas, ...	2	2	12	3	3	12	2	2	15	15
55	Mirdhas, ...	0	0	0	0	12	6	0	0	12	6
	Grand Total, ...	14,386	13,727	92,871	16	16,329	10	14,386	13,727	1,09,201	6

APPENDIX C.

Statement showing Distribution of the Cultivated Area in each Circle of Pergunnah Meergunge.

Circles.	Seer and khood-kasht of proprietors in pucka beegahs.	*Cultivated by Assamees with occupancy rights in pucka beegahs.*			*Cultivated by Tenants-at-Will in pucka beegahs.*			*Total in pucka beegahs.*	
		Land paying rents in kind.	Land paying money-rents.	Rents.	Land paying rents in kind.	Land paying money-rents.	Rents.	Zemindaree rent-free lands.	Cultivated area in pucka beegahs.
				Rs. a. p.			Rs. a. p.		
Total Khalisa of the I. Circle, ...	5,584 19	9,778 5	34,784 9	74,828 10 0	5,184 6	5,612 14	13,434 7 3	1,253 16	62,198 9
„ Muqruqa of the ditto, ...	173 18	247 15	1,541 3	3,343 6 3	70 17	223 12	517 1 3	...	2,257 5
„ Khalisa of II. Circle, ...	1,391 9	3,782 2	17,663 12	48,194 0 8	2,836 16	1,649 14	4,798 4 3	520 19	27,844 12
„ Muqruqa of ditto, ...	235 10	147 10	463 1	853 11 9	77 16	186 11	382 15 9	...	1,112 8
„ Khalisa of III. Circle, ...	1,079 17	1,938 9	6,157 1	12,312 13 9	1,964 9	2,476 13	4,735 2 1	252 4	13,868 13
„ Muqruqa of ditto, ...	...	6 8	22 12	38 0 0	...	19 15	77 2 6	...	48 15
„ Khalisa of the whole Pergunnah,	3,056 5	15,498 16	58,605 2	1,25,335 8 5	9,985 13	9,739 1	22,967 13 7	2,026 19	1,03,911 14
„ Muqruqa of the ditto, ...	409 8	401 13	2,026 16	4,230 1 0	150 13	429 18	977 3 6	...	48 15
Four Maafee Villages, ...	68 13	57 7	3,248 3	7,453 4 3	39 14	308 19	723 1 9	44 3	3,789 19
GRAND TOTAL, ...	8,534 6	15,957 16	63,880 1	1,47,018 13 8	10,176 0	10,477 18	24,668 2 10	2,071 2	1,11,120 1

APPENDIX D.

Jinswar Statement of Pergunnah Meergunge, Zillah Bareilly.

Number of Circles.	Total area in acres.	Minhaie area.	Culturable Waste.		New fallow.	Cultivated area in acres.	Khureef Crops.												
			Bunjur.	Baghs.			Sugar-cane.	Pandruh	Mukka.	Cotton.	Vegetables.	Sunn.	Rice.	Churria Jowar.	Bajra.	Mote.	Moong.	Mash.	Kodon.
I., ...	56,315	9,071	6,365	711	384	39,784	985	297	4,135	2,889	327	168	11,657	2,344	4,450	177	71	513	175
In parts of 100, ...	...	...	...	...	...	...	2·49	0·74	10·48	7·19	0·83	0·41	29·22	5·97	11·26	0.40	0·17	1·35	0·44
II., ...	24,394	3,000	2,753	445	90	18,106	140	6	3,217	1,094	342	87	5,276	1,416	1,914	48	5	251	58
In parts of 100, ...	...	...	...	...	...	...	0·74	0·03	17·86	6·04	1·88	0·47	29·23	7·73	10 57	0·26	0·02	1·38	0·32
III., ...	17,666	3,252	4,278	62	305	9,169	537	78	927	583	103	...	1,459	889	1,262	134	12	556	14
In parts of 100, ...	...	...	...	...	...	...	5·93	0·99	9·78	6·44	1·13	...	15·39	10 09	13·76	1·49	0·13	5·97	0·15
Total, ...	98,375	15,923	13,396	1,218	779	67,059	1,662	381	8,279	4,566	772	255	18,392	4,659	7,635	359	88	1,320	247
In parts of 100, ...	...	...	...	...	...	...	2·48	0·58	12·35	6·81	1·14	0·39	27·39	6·96	11·39	0·54	0.12	1·97	0·38

Number of Circles.	Khureef Crops.					Rubbee Crops.												
	Shamak.	Urhur.	Lahee.	Singhara.	Total Khureef crops.	Wheat.	Melons.	Barley.	Gojye.	Bijhra.	Gram.	Oats.	Mussoor.	Linseed.	Surson.	Ajwayan.	Total of Rubbee crops.	Dofuslee.
I., ...	249	328	32	2	28,808	8,842	26	379	106	422	960	39	176	10	6	10	10,976	8,619
In parts of 100, ...	0·62	0·80	0·08	...	72·45	22·22	0·06	0·94	0·26	1·06	2·43	0·09	0·44	0·02	0·01	0·02	27·55	...
II., ...	62	129	57	...	14,102	3,186	...	118	39	88	470	1	100	...	2	...	4,004	5,146
In parts of 100, ...	0·33	0·71	0·32	...	77·89	17·59	...	0·68	0·22	0·47	2·59	...	0·56	...	...	...	22·11	...
III., ...	17	32	32	...	6,645	1,501	27	206	66	86	376	19	160	12	10	61	2,524	1,943
In parts of 100, ...	0·17	0·37	0·34	...	72·13	16·06	0·30	2·40	0·75	0·97	4·37	0·22	1·82	0·13	0·10	0·75	27·87	...
Total, ...	331	486	121	2	49,555	13,529	53	703	211	596	1,806	59	436	22	18	71	17,504	15,708
In partsof 100, ...	0·48	0·73	0·18	...	73·89	20·17	0·07	1·05	0·31	0·90	2·72	0·08	0·65	0·03	0·03	0·10	26·11	...

Detail of Dofuslee Crops.

Crops.	Circles.			
	I.	II.	III.	Total.
Cutcheana, ...	247	113	101	461
Sugarcane, ...	19	14	5	38
Pandrah, ...	146	32	65	243
Wheat, ...	2,057	1,276	643	3,976
Gram, ...	3,329	1,557	349	5,235
Barley, ...	284	52	117	453
Gojye, ...	36	77	46	159
Bijhra, ...	1,030	1,041	128	2,199
Oats, ...	117	40	15	172
Mussoor, ...	1,048	858	219	2,125
Linseed, ...	58	30	20	108
Kussa, ...	64	25	4	93
Peas, ...	34	11	17	62
Melons, ...	135	14	116	265
Sirson, ...	5	5	...	10
Mash, ...	7	...	2	9
Lahee, ...	1	1	96	98
Total, ...	8,617	5,146	1,943	14,706

(Sd.) S. M. MOENS,

Settlement Officer.

Proposed Rates of Assessment for Pergunnah Bullia.

By F. W. PORTER, ESQ., *Asst. Settlement Officer, Bareilly, dated* 12*th January*, 1870.

1. PERGUNNAH Bullia is situate to the south-east of *tuhseel* Aonla. It is triangular in shape, and is bounded to the north-east by the river Ramgunga, separating it from *pergunnahs* Crore and Furreedpore of this district, south-west by *pergunnah* Suneha, *tuhseel* Aonla, and to the south by *pergunnah* Suleympore, *zillah* Budaon. The *pergunnah* contains 50 *mouzahs* and 61 *muhals*. Each *mouzah* averages 482 acres in size. I regret to say that nothing regarding the former history or state of the *pergunnah* is obtainable from any previous report. As will be seen from the annexed list, almost two-thirds of the *zemindars* are Thakoors, the remainder nearly all Brahmins and Kaeths. The Thakoors and Brahmins form also a large portion of the cultivating classes. Among the Thakoors the chief tribes are the Jangharas, Pomars, Rathors, and Chouhans. Of these the Jangharas were the first to make their appearance in this district.

Thakoors,	...	817
Kaeths,	...	201
Brahmins,	...	147
Bunneahs,	...	10
Goshaeens,	...	6
Sheikhs,	...	9
Khuttrees,	...	5
Puthans,	...	3
Fuqeers,	...	2
Butchers,	...	1
Bards,	...	1
Kazies,	...	1
Christians,	...	1
		1,204

Their settlements were, however, all to the east of the river Ramgunga. What property they now hold on this side the river was gained by them long after the arrival of the Pomars, who at one time were the leading men in the *pergunnah*.

From conversation with the leading members of the Pomar family, and a perusal of the few old *sunnuds* in their possession, I have been able to gather some particulars concerning the early history of the *pergunnah*. Their account is as follows:—

In the reign of Akbar, the Goblas (or Aheers), the Kuthereyas, and Jungharas, inhabited this district and the neighbouring *pergunnah* of Budaon. A *jagheer* of 12 villages, seven of which were in this *pergunnah*, was given by Akbar to their ancestor Maheeput. In one of these villages, Kureaon, now Sirdarnuggur, was a fort, where Maheeput established his headquarters and residence. During the lifetime of Pertab Singh, the son of Maheeput, the Goblas, Kutheryas, and Jungharas made a joint attack on the Pomars, and assaulted the fort. They were twice repulsed, and at the third attempt succeeded in taking the fort, and putting most of the inhabitants to the sword.

The news of this disaster was carried to Pertab Singh at Delhi, and he is said to have marched against the Goblas with a large force. After a fierce engagement he utterly defeated them, and drove the remnant which remained into the forests at the foot of the Himalayas, after which he built a fort at Budri, and reinstated his family in their former possessions, which they continued to hold till they were ousted by the Nawab Wuzeer's government.

The Pomars now hold only two villages, Budri and Kulleea, now Rufeeabad. The other *zemindars* have all obtained possession, since the cession, from the descendants of the original settlers, none of whom now remain.

2. At last settlement this *pergunnah* contained 64 *mouzahs*. The area and *jumma* assessed were as follows:—

Total area.	*Minhaee.*	*Waste.*	*Cultivated.*	*Jumma.*
28,541	7,606	4,973	15,962	26,741

After settlement 19 *mouzahs* were transferred to the neighbouring *pergunnah* Suneha, after which the area stood thus:—

Total area.	*Minhaee.*	*Waste.*	*Cultivated.*	*Jumma.*
19,975	5,611	2,769	11,595	19,089

Four villages were afterwards joined to this *pergunnah* from Suleympore, and one village was divided into two making the number of villages at present in the *pergunnah* 50, and the area as annexed :—

Total area.	*Minhaee.*	*Waste.*	*Cultivated.*	*Jumma.*
23,268	5,775	3,432	14,061	23,339

The nominal rate of assessment was at that time two-thirds of the assets, so that had the full amount been taken, the assets of the *pergunnah*, as now constituted, should then have been Rs. 35,008-8-0. The settlement officer's estimate of assets was, however, considerably in excess of this. I have been able to recover the last settlement soil-areas and estimated rates on 45 out of the 50 villages now in the *pergunnah*; they are as follows :—

Domut, 6,302 at 9 as. per Cult. *Beegah*, or Rs. 3-10 per acre =	23,026	0	0
Mutyar, 3,084 at 7 as. per Cult. *Beegah*, or Rs. 2-1-8 per acre =	8,673	12	0
Bhoor, 1,897 at 5 as. per Cult. *Beegah*, or Rs. 2 per acre =	3,794	6	0
11,333	35,493	12	0

This gives an average rate of Rs. 3-2-1 per acre, which, applied to the total cultivation at last settlement, gives an estimated *nikasee* of Rs. 44,013-13-9, and, at two-thirds, a *jumma* of Rs. 29,342-9-2. That this assumed outturn was low rather than high is proved by the fact that in the villages where rents have remained unchanged since settlement the average rent-rate is almost invariably higher than that given by the above rates, except in the very worst villages of the pergunnah. Besides this the large amount of waste in reserve was totally left out. No account was taken of the *Sewaee* items, and no allowance made for a rise in rents. To crown all, the *jumma* on this low estimate of the out-turn of the cultivated area was only assessed at 53 per cent. instead of 66. If any more proof is wanting of the exceeding lightness of the expiring *jumma*, we have the fact that, after the great famine of 1841, remissions were required in only three villages, and then only to the amount of Rs. 95. These three villages, too, were the most backward, and almost the most lightly assessed in the whole *pergunnah*. There are also the details of transfers as shown in Appendices I. and II. From these it appears that during the whole of the expiring settlement there has not been a single sale or farm for balances. The sales effected by decrees of Court have been chiefly among the Kaeths and Brahmins, whose litigious character and bad management are notorious in the *pergunnah*. The private transfers take in only 11½ per cent. of the total area of the *pergunnah*. The average price realized by private sales has been from 11 to 12 Rs., by mortgages 10 to 11 Rs. The real price in private transfers is, however, seldom ascertainable with any degree of accuracy, and these figures, never very reliable, are rendered more worthless by the fact that most of the transfers have been between members of the Thakoor clans, and many of the prices are merely nominal.

3. We can now pass on to a comparison of the past and present measurements. The following is the result :—

	Total Area.	*Minhaee.*	*Waste.*	*Cultd.*	*Malg.*	*Jumma.*
Present measurement, ...	24,107	3,522	2,629	17,956	20,585	24,402-2-3
Last Settlement.	23,268	5,775	3,432	14,061	17,493	23,339-0-0

The total area has increased by 839 acres, or about 3½ per cent. This is mostly attributable to the increase in area from alluvion in the villages along the Ramgunga. The cultivated area has increased by 3,895 acres, or 27½ per cent., and is now 87 per cent. of the *malgoozaree*. The increase in *jumma* is due to the resumption of invalid *maafees*

and the assessment of alluvial lands. The following shows the variations in the *jumma* :—

Last Settlement jumma,	...	23,339	0	0	Alluvion 905	Diluvion,	449	0	0
Balance added, ...	...	1,063	2	3	Resumed maafee, 707	After famine of 1841,	95	0	0
						For Imperial road to Budaon,	4	13	9
Presen jumma, ...	...	24,402	2	3	Total, 1,612		548	13	9

4. The next point is to compare the past and present condition of the *pergunnah*, to ascertain whether an increase or decrease in the revenue is to be looked for. The points indicating an expected increase are—

1. Increase of cultivation.
2. Rise in rents.

Both these points are affected by—

1*st*,—Increase of population.

2*nd*,—Improved cultivation and introduction of new staples.

3*rd*,—Rise in produce prices.

Let us review these points in order.

1st,—Has population increased? The following is a comparative statement of the population according to the Census of 1847 and that of 1865 :—

			1847.	1865.
Hindoos, agricultural,	...	...	13,306	16,235
„ non-agricultural,	...	...	4,353	5,738
			17,659	21,973
Mahomedans, agricultural,	...	...	673	595
„ non-agricultural,	...	...	1,204	1,746
				2,341

During the last 20 years, therefore, the total population has increased by 4,778, or slightly over 24 per cent. The agricultural population has, however, increased by only 2,851, or rather over 20 per cent. The present number of agricultural male adults is 5,396, giving an average of 3·3 acres of cultivated land per head. The recorded number of ploughs is 2,486, giving an average of 7·5 cultivated acres, and rather over two men per plough. In the neighbouring *pergunnah* (Crore) the average was 3·2 cultivated acres per man, and 8·8 cultivated acres per plough. This population while quite sufficient for the requirements of the area, is not so dense as to cause any fear of too minute a subdivision of holdings over-cropping. A detailed Census Statement forms Appendix III.

As regards the 2nd point, I cannot find that the style of cultivation has improved in the slightest during settlement, or that any new staples have been introduced. There being no crop returns of last settlement obtainable, there is no means of ascertaining whether the cultivation of the better staples has been on the increase or decrease during the last 30 years. An inspection of the crop statement, Appendix IV., will, however, show that out of 17,956 acres of cultivated land, 8,140 acres, or nearly half, is under first class crops, and 3,938 acres, or more than one-fifth, produces two crops yearly. This shows that the *pergunnah* is, as a whole, a good one, and that cultivation is not below the average. Looking at the neighbouring *pergunnah* Crore, we find only two-fifths under first-class crops, and only one-thirteenth under *dosahi*.

We now come to the 3rd point,—the increase in produce prices. I have been able to recover from some old settlement records the average prices ruling in *Tuhseel* Aonla

from 1232—1236 *Fuslee*. That is for the five years before settlement. I have also obtained the average given during the last 30 years. Taking this period in decade the following is the result :—

	1232—1236.		1246—1255.		1256—1265.		1266—1275.	
	Mds.	*Seers.*	*Mds.*	*Seers.*	*Mds.*	*Seers.*	*Mds.*	*Seers.*
Bajra, ...	1	3	0	33	0	37	0	27
Rice, ...	1	21	1	0	1	3½	0	32
Wheat, ...	0	37½	0	26½	0	28	0	24
Grain, ...	1	10	0	29	0	33	0	27

A comparison of the 1st and 2nd of these periods shows a rise of 57 per cent. This heavy rise is clearly due to the great famine of 1840-41. Going on to the second decade, which was an uninterrupted prosperity, we find a fall in prices of ten per cent. In the third decade two more famine years are included, and the rise in prices amounts to 28 per cent. Allowing that a continuance of the present high price cannot be counted on, I propose to take for my comparison the five years before last settlement and the ten good years forming the second decade of the expiring settlement. This shows a rise of slightly over 35 per cent. in prices which can, I think, be counted on for a permanency. We have now seen that population has increased 20 per cent., and is quite sufficient for the requirements of the area ; that cultivation is decidedly up to the average; and that produce prices have permanently increased 35 per cent. The next question is, how have these causes affected the cultivation and rents?

It has already been shown that cultivation has increased 27½ per cent. since last settlement. It may be as well, however, to see here in what soil the increase has been. The following is a comparative statement of the soil-areas of 45 villages, by the last settlement and the present settlement measurements.

	By last settlement measurement.	*By present measurement.*	*Increase.*
Domut, ...	6,352	7,755	1,403
Mutyar, ...	3,084	3,523	439
Bhoor, ...	1,897	3,852	1,955
	11,333	15,130	3,797

It seems curiously opposed to all experience that the increase in the best soil should be nearly as large as that in the worst. In this case it is, however, simply explainable.

Much of the land in the Koondulis along the Ramgunga was, at last settlement, under *Jhao* and *Tát* grass. This land, having been since fertilized by alluvial deposits, has come under cultivation, and, being exceedingly fertile and productive, has been entered among the better soils. Hence this increase.

Have rents actually risen? We have already seen that the estimated *nikasee* at last settlement gave an average rate of Rs. 3-2-1 per acre. From Appendix V. it will be seen that, of the total cultivated area of this *pergunnah*, 20,137-8 *pucka beegahs* are held by *asamees* at a rent of Rs. 44,913-1-9. This gives an average *ryotti* rate of Rs. 2-3-8 per *pucka beegah*, or as near as possible Rs. 3-10-0 per acre. This increase is therefore 7 annas 11 pie per acre, or nearly 16 per cent. all round. The Thakoors and Brahmins (who constitute the bulk of the *zemindars*) have, however, many relatives and hangers on who cultivate at privileged rates. Were we to eliminate these, and take into consideration only the land on which a fair village rate is paid, the apparent rise in rents would be considerably increased. To sum up, we find an increase in cultivation of 27½ per cent., and a real increase in rents of 16 per cent., plus the decrease in the general average, by the increased area of the worst lands taken into cultivation. Further, it has been shown that the expiring *jumma* fell at only 53 per cent. of the then assets, so that all the increase, both in cultivation and rents, may be looked on as pure gain to the revenue. A heavy increase may therefore be expected.

5. We can now proceed to the physical geography. Nearly half the *pergunnah* lies in the Ramgunga *khadir*, adjoining the Ramgunga *Taraeen* circles of Crore and Furreedpore. The villages on this side are, however, considerably superior to those on the other, as shown by the preponderance of better soils. To the south, as shown in the accompanying map, is a small *chuk* of almost pure *mutyar* villages; the soil, though good in itself, is difficult to work, most of the villages are uninhabited, and the rates are consequently low. The soil in the remaining villages is nearly all old *khadir*, and with some few exceptions is exceedingly good and productive. Sinking all minor distinctions for the present, I find that, with the exception of the *mutyar* villages to the south on the Budaon border, the whole *pergunnah* can come under one set of average rates, any variations from which can be easily accounted for in assessing. I therefore propose to divide the *pergunnah* into two circles; the first comprising all but the seven *mutyar* villages to the south, and these seven forming the 2nd circle. I found it perfectly impossible to include these *mutyar* villages in the 1st class, the difference in rents being so great, and the soil itself being of a totally different character to the rest of the *pergunnah*.

The statement of irrigated and unirrigated lands in the *pergunnah* is as follows:—

1st Class.		*Irrigated.*	*Unirrigated.*	*Total.*
Domut,	...	1,854	7,548	9,402
Mutyar,	...	590	2,574	3,164
Bhoor,	...	158	4,081	4,239
		2,602	14,203	16,805
2nd Class.				
Domut,	...	44	256	300
Mutyar,	...	111	635	746
Bhoor,	...	9	96	105
		164	987	1,151

The Ramgunga *khadir* lands require, as a rule, no irrigation; suffering rather from over-saturation than from a want of water. The remaining villages of the 1st class can be irrigated almost throughout from *kuchha* wells, the depth to water averaging from 9 to 12 feet. Irrigation is, however, required only in exceptionally dry seasons, owing to the natural moisture of the soil.

In the 2nd class villages existing means of irrigation are the exception and not the rule. In an average season most of the land in this circle, lying low, requires no irrigation. In a season of drought, irrigation is not much used as most of the cultivators are *Pahees*, and seek first to preserve the crops in their own villages. That this little use of irrigation does not affect the cultivation of the better staples is shown by the fact that in the year of measurement there were recorded no less than 8,140 acres of 1st class crops, and 3,938 acres of *dosahi*, much of which was not included among the 1st class crops. The irrigated area, as shown above, is 2,756 acres. It must, however, be remembered that the season of inspection was one of great drought, and that the amount of irrigation entered at measurement was greatly increased at inspection. The crops statement remaining the same, I am not, therefore, far out in saying that the land growing the better staples is, in an average year, nearly four times the amount of the irrigated area. Besides this the *zemindars* themselves make no distinction in their rents cn irrigated and unirrigated lands, as nearly all the area is irrigable from wells, when necessity arises. I have therefore determined to dispense with irrigated and dry rates, employing simply average rates on soils. The method used in this district for working out rates has already been described by Mr. Moens, in two reports. It would therefore be superfluous to say more here than that the rates proposed in this report were worked out jointly by Mr. Moens and myself in the same manner as those for *pergunnah* Crore, after we had both of us separately inspected the whole *pergunnah*.

6. I can now proceed to show the results by soil-rates on circles.

CIRCLE I.

Expiring *jumma*, ... Rs. 23,373-2-3

		Total.	*Min.*	*Cult.*	*Malg.*
Present measurement,	...	22,680	3,398	16,805	19,282
Last settlement, ...	...	21,827	5,330	13,323	16,497

The culturable area has increased by 2,785 acres, or nearly 17 per cent. Cultivation has increased 3,482 acres, or 26 per cent., and is now 87 per cent. of the *malgoozaree* area. The estimate on soils is—

Domut,	... 9,402	Rent-rate		Rs.4-8 = 42,309
Mutyar,	... 3,164	,,	,,	,, 3-8 = 11,074
Bhoor,	... 4,239	,,	,,	,, 3-4 = 13,776-12
	16,805			67,159-12

The *khuteounees* (Appendix V.) show, cultivated by tenants at money rents, 18,916-1-0 *pucka beegahs*, at a rent of Rs. 42,964-10-6. This gives an average of Rs. 2-4-4 per *pucka beegah*, which, applied to the total cultivation, 26,778-2-0 *pucka beegahs*, gives a *nikasee* of Rs. 60,808. Of the 18,916-1 *pucka beegahs* abovementioned 15,566-5-0 *pucka beegahs*, at a rent of 35,829-7-6, are held by tenants having right of occupancy. The average rate on this is Rs. 2-4-9 per *pucka beegah*, giving a *nikasee* in the total cultivation of 61,505-11-6. The difference between the outturn, as shown by the *khuteounees* and the estimate on soils, is accounted for by the fact that in several villages rents have remained unchanged since settlement.

The *jumma* on soil-rates at 55 per cent. will be 36-936-12-0, giving an increase of Rs. 13,563-9-9, or 58 per cent. on the expiring *jumma*.

7 CIRCLE II.

Expiring *Jumma*, ... 1,029.

		Total Area.	*Minhaee.*	*Cultivated.*	*Malgoozaree.*
Present measurement,	...	1,427	124	1,151	1,303
Last settlement,	...	1,408	412	738	996

The culturable area has increased by 307 acres, or 30 per cent. Cultivation has increased by 413 acres, or 56 per cent., and is now 88 per cent. of the culturable area.

The soil estimate is as follows :—

Domut,	... 300	rent-rate	Rs.	4	0 = 1,200
Mutyar,	... 746	,,	,,	2	14 = 2,144-12
Bhoor,	... 105	,,	,,	2	10 = 275-10
	1,151				3,620-6-0

The *khuteounees* show land held by tenants at money rate Rs. 1,221-7-0 *pucka beegahs*, renting at Rs. 1,948-7-3, giving an average rate of Rs. 1-9-6 per *pucka beegah*, which, applied to the total cultivation, 1,839-12, gives a *nikasee* of Rs. 2,940-1-6. Here, as in Circle I., the average rent paid by tenants with rights of occupancy is higher than the average *ryottee* rent of the circle. It is Rs. 1-10-2 per *pucka beegah*, giving a total *nikasee* of Rs. 3,007-8-6. The difference between the outturn by the average *ryottee* rate of the circle and by the assumed soil-rates is 640. This is a large amount in so small a circle, and as such requires explanation. The reasons for the difference are, firstly, that enhancements have been in this circle very few and far between ; secondly, that a large amount of land is held by relatives of *zemindars* at low rates. In one village alone I found no less than 60 acres out of 260, or nearly one-fourth of the entire cultivation of the village, held by zemindars' relatives, at under four annas a *kuchha beegah*, or about one-half the average rate paid by other cultivators.

The *jumma* on soil-rates would be, at 55 per cent., Rs. 1,991, giving an increase of 962, or 93 per cent. on the expiring *jumma*. The estimated yield of the whole *pergunnah*, as shown by the above remarks, amounts to 70,780, giving a *jumma* including cesses of 38,929, and an increase of Rs. 14,526-13-9, or nearly 60 per cent. on the former demands. This increase may seem heavy, but it must be remembered that we are comparing with a demand that fell 33 years ago at only 53 per cent. on the then existing assets. The *jumma* assessed may not reach the above estimate by Rs. 2 or 3,000, as the rise is great, and in some cases allowances will be required by the special circumstances of individual villages: even if, however, the full *jumma* by soil-rates were to be taken, the enhancement in rents allowed for would be only 1 anna per *kuchha beegah*, or, on present cultivation about 1½ as. per rupee on the outturn by average *ryottee* rates. This is not, I think, too much to count on, considering the small amount by which rents have risen since last settlement, when compared with prices.

There remains only one *maafee* village of 356 acres in extent, the estimated *nikasee* on which is 1,400, giving cesses at 5 per cent. 70, making the total estimated demand on the *pergunnah* Rs. 39,054. A comparison of incidence of the last settlement demand with the present gives the following results. The incidence of the last settlement:—

Jumma on present measurements.

	Rs.	a.	p.
On total area, ...	1	0	0
,, *malgoozaree*, ...	1	5	4
,, cultivation, ...	1	10	6

The present estimated demand falls on the present measurements at:—

Total area, ...	1	9	10
Malgoozaree, ...	1	14	5
Cultivated, ...	2	2	8

The revenue rate on cultivation is therefore 30 per cent. higher than at last settlement. It has been shown that the assessment at last settlement fell at two per cent. less than the present, and that rents have risen 16 per cent. This makes up 18 of the 30 per cent. increase: the remaining 12 per cent. represents the Government share of the enhancement in rents allowed for, and of the rent of the increase area under cultivation.

In conclusion I would remark that 87 per cent. of the culturable area of the pergunnah is now under cultivation. Existing means of irrigation, though plentiful, are but slightly used by the cultivators.

Hence it would appear clear that new irrigation works are not required, and if constructed would have little or no effect on rents. Under the existing rules, therefore, the pergunnah, with the exception of the villages subject to fluvial action, would be fit for permanent settlement.

Note by S. M. Moens, Esq., *Settlement Officer, Bareilly.*

As stated by Mr. Porter in his report, the pergunnah was inspected by me subsequently to his inspection. The rent-rates were worked out by us jointly, and the report was prepared by him under my supervision. I am therefore fully responsible for the correctness of the results. The circumstances of the pergunnah have been described by Mr. Porter. The rates proposed in the best circle are—

Domut, ...	4	8	0
Mutyar, ...	3	8	0
Bhoor, ...	3	4	0

They are identical with the rates proposed by me for the adjoining similar *khadir* circle of Suneha. In the best circle of Suneha, which also adjoins the Bulliah Circle under discussion, the rates assumed and sanctioned were—

Domut, ...	4	12	0
Mutyar, ...	3	14	0
Bhoor, ...	3	4	6

The difference is small, and due to the fact that, while in the Suneha Circle cultivation is chiefly by *kisans*, in Bulliah, *Thakoors*, *Brahmins*, and *Kaeths* hold a considerable amount of land.

In the 2nd Bulliah Circle the proposed rates are—

Domut,	...	...	...	...	4	0	0
Mutyar,	...	...	...	...	2	14	0
Bhoor,	...	...	...	...	2	10	0

These rates are identical with those proposed and sanctioned for the similar second rate circle in Suneha: on the whole pergunnah the rates give a resultant outturn of Rs. 70,780. The average rates paid by occupancy tenants, deduced from the attested *khuteounees*, give a result of Rs. 64,513. Hence the assumed is only nine per cent. higher than the deduced actual outturn. This is not more than enough to cover the difference between privileged and ordinary cultivating rates, without allowing for any future general enhancement. If then existing rates are fair the proposed rates are very moderate. But it has been shown in the rate report that prices have increased at least 35 per cent. even by comparison with the cheapest decade of the 30 years of settlement, while rents have only risen 16 per cent. Hence it is clear that existing rents are rather light, and so, consequently, the proposed rates.

2nd,—These rates give an increase in jumma of 59 per cent., a heavier increase than has been found practicable in any pergunnah which has as yet come under revision, but we have shewn that the rates are moderate. This increase is due, firstly, to the increase in the cultivated area since last settlement, which amounts to 27½ per cent.; secondly, to the fact that the assessment at last settlement was a very light one, the Government share being assumed at 53 instead of 66 per cent. of the assets of the cultivated area, the waste being left entirely out of account; thirdly, to the increase in rents which, though it has not kept pace with the rise in prices, still amounts to 16 per cent. Rents will continue to rise, I know, but in the face of the very heavy increase in revenue already demandable, existing rents not being excessively light, I considered it wiser to leave prospective general enhancements out of account than to run the risk of breaking down the present proprietors by too rapid an enhancement of the land revenue, or, in other words, by too suddenly contracting their present incomes. We all know how difficult it is all at once to reduce expenditure.

There was yet another reason for my decision to surrender all profits rising from a future rise in rents. There are 65 *muhals* in the *pergunnah*, with altogether 1,204 sharers, giving an average of only 15 cultivated acres per sharer. So minute a sub-division of profits deserves serious consideration. It is for the Board to judge whether I have made sufficient allowances for this. Taking the last 12 years, omitting the famine year, prices have risen 44 per cent., while rents have risen only 16, and I have calculated practically on no prospective enhancement. Hence there is room for a future enhancement of 28. per cent., or, as rents never quite keep pace with prices of produce, of about 20 per cent. This is the allowance I have made, bearing in mind that the proprietors in their seer cultivation already reap the full benefit of the whole increase in the value of produce. To go further than this would, I think, be carrying liberality to excess.

Statement showing Transfers of Estates in Pergunnah Bullia, Tuhseel Aonla.

Pergunnah.	Number of Villages.	Total area in Acres.	Government Demand.	Description of Transfers.	Rights transferred.	Area in Acres.	Government Demand.	Value.	Average of *Jumma* per Acre.	Average value per Acre.
			Rs. a. p.		Bis. Bis. C. A.	A. R. P.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Bullia, *Tuhseel* Aonla,	50	24,107	24,402 2 3	Private Sale, ...	123 6 0 2½	2,717 0 0	2,831 11 2	30,598 9 6	1 0 8	11 4 2
				Mortgage, ...	33 7 13 2½	843 0 0	1,092 5 11	8,540 8 0	1 4 7	10 2 0
				Auction sale by Civil Court decree, ...	98 0 17 16½	1,747 0 0	2,027 3 3	15,564 3 11½	1 2 7½	8 15 2
				Three kinds of transfers by C. C. order, ...	20 16 13 7½	329 0 0	313 9 4½	2,031 0 0	0 15 2	9 3 0
				For Balances of Government *Jumma*, ...	*Nil.*	*Nil.*	*Nil.*	*Nil.*	*Nil.*	*Nil.*
				For Rebellion, ...	*Nil.*	*Nil.*	*Nil.*	*Nil.*	*Nil.*	*Nil.*
Total, ...	50	24,107	24,402 2 3	...	275 11 4 9	5,636 0 0	6,264 13 8½	57,734 5 5½	1 1 9	10 3 10

Statement showing mutations and name of Caste concerned in Pergunnah Bullia, Tehseel Aonla.

Number of Estates.	Castes.	Number of villages in bis., bis.	Transfers by private sale.		By mortgage.		By C. C., orders.		Auction.		For Balances of Government Demand.		For Farms.		For Rebellion.		Villages still in the possession of former Proprietors.	
			Entire villages.	Rights in portions.	Entire villages.	Rights in portions.	Entire villages.	Rights in portions.	Entire villages.	Rights in portions.	Entire villages.	Rights in portions.	Entire villages.	Rights in portions.	Entire villages.	Rights in portions.	Entire villages.	Rights in portions.
		Bis. Bis. C. A.		Bis. Bis. C. A.		Bis. Bis. C. A.		Bis. Bis. C. A.		Bis. Bis. C. A.		Bis. Bis. C. A.		B. B. C. A.		B. B. C. A.		Bis. Bis. C. A.
	Thakoors, ...	366 14 0 0	...	36 0 4 5	...	20 17 13 2½	...	7 16 13 7½	...	29 6 14 16½	...	...	...	...	..	...	60 Bis.	212 12 14 8½
	Bards, ...	6 3 6 5	...	2 6 13 5	...	...	...	1 0 0 0	...	2 16 13 0	...	...	...	...	...	...	...	...
	Butchers, ...	2 3 7 10	...	2 3 7 10	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Kaeths, ...	435 0 6 10	...	39 6 13 10	...	3 0 0 0	...	...	20	17 15 0 0	...	...	...	...	...	...	220	134 18 13 0
	Mahajuns, ...	21 5 0 0	...	7 0 0 0	...	...	...	...	...	7 10 0 0	...	...	..	...	...	...	...	6 15 0 0
	Brahmins, ...	194 10 13 10	...	3 3 3 17½	...	6 10 0 0	...	2 0 0 0	20	...	...	...	...	...	...	...	100	62 17 9 12½
	Bunneahs, ...	21 14 1 15	...	8 6 13 5	...	...	...	...	...	0 12 10 0	...	...	...	...	...	...	...	12 14 18 10
	Khuttrees, ...	20 1 1 15	...	0 1 1 15	...	3 0 0 0	...	10 0 0 0	...	...	...	...	...	...	...	...	...	7 0 0 0
	Aheers, ...	10 0 0 0	...	10 0 0 0	...	...	...	...	...	..	...	...	...	...	...	...	...	...
	Sheikhs, ...	34 18 2 15	...	14 18 2 15	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Total, ...	1,112 10 0 0	...	123 6 0 2½	...	33 7 13 2½	...	20 16 13 7½	40	58 0 17 16½	...	...	...	...	...	...	400	436 18 15 11

Census Statement of Pergunnah Bullia, Tuhseel Aonla.

HINDOOS.												MAHOMEDANS AND OTHERS.												TOTAL.								
AGRICULTURAL.						NON-AGRICULTURAL.						AGRICULTURAL.						NON-AGRICULTURAL.														
Males.			*Females.*			*Males.*			*Females.*			*Males.*			*Females.*			*Males.*			*Females.*											
Adult.	Minor.	Total.	Adult.	Minor.	Total.	Adult.	Minor.	Total.	Adult.	Minor.	Total.	Adult.	Minor.	Total.	Adult.	Minor.	Total.	Adult.	Minor.	Total.	Adult.	Minor.	Total.	Adult.	Adult males.	Adult females.	Children.	Boys.	Girls.	Males.	Females.	Total.
5,216	3,477	8,693	4,605	2,937	7,542	1,834	1,133	2,967	1,765	1,006	2,771	180	134	314	167	114	281	578	345	923	526	297	823	14,871	7,808	7,063	9,443	5,089	4,354	12,897	11,417	24,314

Census of 1846-47.

Hindoos—Agricultural, 13,306
" Non-agricultural, 4,353
17,659

Mahomedans—Agricultural 673
" Non-agricultural, 1,204
1,877

Total Census, 19,536.

Jinswar or Produce Statement of Pergunnah Bullia, Tuhseel Aonla, Zillah Bareilly.

Circles.	Total area in acres.	Minhace area.	Culturable waste.			Cultivated area.	Khureef Crops.																	Rubbee Crops.										
			Bunjur.	Baghs.	New fallow.		Sugar-cane.	Pandrah.	Mukka.	Cotton.	Vegetables.	Sunn.	Rice.	Churee and Jowar.	Bajrah.	Mote.	Moong.	Mash.	Kodrum.	Shamakh.	Urhur.	Lahee.	Kungni.	Total Khureef.	Wheat.	Melons.	Barley and Jye.	Goiye.	Bijhra.	Gram.	Peas.	Musoor.	Sebon.	Koorder.	Total Rubbee Crops.
I., ...	22,680	3,398	2,029	378	70	16,805	15	6	732	721	295	209	1,192	1,145	3,518	47	19	166	1	16	23	6	7	8,118	5,743	21	325	48	962	1,399	90	84	14	1	8,687
In parts of 100,	...	...	...	...	...	100	0·09	0·03	4·36	4·29	1·76	1·24	7·09	6·81	20·95	0·28	0·12	0·99	...	0·09	0·14	0·03	0·03	48·30	34·12	0·13	1·94	0·29	5·72	8·33	0·57	0·50	0·09	0·01	51·70
II., ...	1,427	124	142	9	1	1,151	...	...	5	23	2	1	305	105	124	1	...	5	...	...	...	...	...	571	367	...	30	2	15	162	...	3	1	...	580
In parts of 100,	...	...	...	...	...	100	...	...	0·44	2·00	0·17	0·09	26·49	9·11	10·77	0·09	...	0·44	...	...	...	...	...	49·60	31·91	...	2·61	0·17	1·30	14·09	...	0·26	0·06	...	50·40
Total Acres,	24,107	3,522	2,171	387	71	17,956	15	6	737	744	297	210	1,497	1,250	3,642	48	19	171	1	16	23	6	7	8,689	6,110	21	355	50	977	1·561	90	87	15	1	9,267

DETAIL OF DOFUSLEE CROPS.

Crops.	Circles. I.	Circles. II.	Circles. Total.
Kutcheana, ...	295	2	297
Wheat, ...	504	16	520
Gram, ...	1,456	286	1,742
Barley, ...	170	11	181
Gojye, ...	21	1	22
Bijhra, ...	294	8	302
Musoor ...	793	6	799
Linseed, ...	4	...	4
Kussa, ...	4	...	4
Peas, ...	36	...	36
Melons, ...	20	...	20
Sebon, ...	2	...	2
Chenan, ...	5	...	5
Lohee, ...	1	...	1
Urhur, ...	3	...	3
Total, ...	3,608	330	3,938

Statement showing Distribution of the cultivated area in each Circle of Pergunnah Bullia, Tuhseel Aonla.

Circles.	*Seer* and *khoodkasht* of proprietors in acres and *pucka beegahs.*	*Cultivated by Assamees with occupancy rights in acres and pucka beegahs.*			*Cultivated by Tenants-at-will in acres and pucka beegahs.*			*Total.*	
		Land paying rents in kind.	Land paying money rents.	Rents.	Land paying rents in kinds.	Land paying money rents.	Rents.	*Zemindaree* rent-free land in acres.	Cultivated area in acres and *pucka beegahs.*
				Rs. a. p.			Rs. a. p.		
Total I. Circle, Acres, ...	3,764 0	343 0	9,729 0	35,829 7 6	416 0	2,094 0	7,135 3 0	391 0	16,737 0
Pucka Beegahs, ...	6,022 0	549 8	15,566 5	...	665 9	3,349 16	...	624 14	26,778 2
Do. II Circles, Acres, ...	250 0	98 0	480 0	1,255 8 0	9 0	284 0	692 15 3	29 0	1,150 0
Pucka Beegahs, ...	400 0	157 3	767 11	...	15 2	453 16	...	46 0	1,839 12
Total Acres, ...	4,014 0	441 0	10,209 0	37,084 15 6	425 0	2,378 0	7,828 2 3	420 0	17,887 0
Pucka Beegahs, ...	6,422 0	706 11	16,333 16	...	680 11	3,803 12	...	670 14	29,617 14

Proposed Rates of Assessment for Pergunnah Aonla.

By S. M. MOENS, ESQ., *Settlement Officer, dated 1st October*, 1870.

1. *Pergunnah* Aonla is the most westerly of the four *pergunnahs* comprising *Tuhseel* Aonla. It contains 128·3 square miles, and 125 villages, averaging 657 acres per *mouzah*, or a little over one square mile. Its principal town was a place of considerable note in the history of Rohilkhund, as being the chief place of residence of Ali Mahomed Khan, the Rohilla Chief. It now contains his tomb, a very handsome building, picturesquely situated on the edge of a large *pucka* tank. Numerous ruined mosques and tombs and old wells attest the former opulence of the place. It is now, however, only a small country town of no importance, without trade to enrich it, and with no residents of any capital. The *pergunnah* is long and straggling in shape, stretching from the Ramgunga on the north-east to the Budaon border on the south-west. It is bounded to the north by *Pergunnah* Seraolee, to the east by the Ramgunga, and *Pergunnah* Suneha to the west, and south by *Pergunnahs* Bissowlee, Sutasee, and Budaon of the Budaon District.

2. It is traversed by the old *kuchha* road from Bareilly to Budaon, and by the new Oudh and Rohilkhund Railway. But, as a whole, the *pergunnah* requires opening out. West of the Nawab Nuddee there are the usual village tracks, but all to the east between the Nawab Nuddee and the Suneha border is a most difficult country, only half reclaimed from its primitive jungle, and intersected by a net-work of streams and *nullahs* which render internal traffic at all seasons of the year difficult, and in the rains almost impassable.

3. The *pergunnah* has been so completely altered in its constitution since the last settlement by the revision of its boundaries and the inclusion of villages from other *pergunnahs*, that it is impossible to arrive at the assessments under the first settlements. Taking it as it now stands, the *jumma* of the settlement under Regulation IX., 1833, was fixed at Rs. 60,554-7-5. From Mr. Conolly's report, we find that the *pergunnah* was then in bad order, caused by "the high assessments in particular cases pressing upon unusually trying seasons." He only aimed at "equalizing the *jumma* as much as possible; and in effecting this, the demandable increase proved little more than sufficient to cover the necessary reductions." His assessment was at 66 per cent. on the assets, but at that time the cultivated area was only 48 per cent. of the *malgoozaree* area, and he only rated the waste at an average of four annas per acre. The extension of cultivation has rendered his *jumma* exceedingly light. On the whole, his settlement has worked well; 10 villages were farmed for balances, and Rs. 1,749-8-0 were remitted in 1842 in 12 villages, on the alleged ground of over-assessment. But in four only of these 12 was resort had to farm before remission. In none of them is the *haftgana nikasees* less than double the original *jumma*, notwithstanding the large areas entered at *seer* rates, and the fact that rents have remained without enhancement. In six of the farmed villages, the *haftgana nikasees*, notwithstanding frauds and the above mentioned drawbacks, are more than quadruple the old *jummas*. The necessity of the remissions is, therefore, at least open to doubt. The expiring *jumma* is Rs. 63,908-7-5. The alterations are explained thus:—

	Rs.	a.	p.
Increase by resumption of revenue-free lands,	4,111	8	0
Ditto ditto summary settlements for alluvion,	1,014	0	0
	5,125	8	0
Remissions for over-assessment, ...	1,749	8	0
Ditto ditto diluvion, ...	22	0	0
	1,771	8	0
Making a net increase of, ...	3,354	0	0

There were the same errors in the preparation of the record-of-rights, and the same want of definition of ownership of waste lands that were noticed in the Furreedpore Settlement formed by the same officer, and they have been followed by the same bad results.

4. The Transfer Statement shows the following results :—

	Area in acres.	Reported price.			Average per acre.		
		R.	a.	p.	Rs.	a.	p.
Private sales, ...	14,566	65,044	5	6	4	7	5
Mortgages, ...	7,440	27,044	0	0	3	11	9
Auctions by decree of Court, ...	8,778	64,927	5	6	7	6	4

The total area of the *pergunnah* is 82,107 acres, of which 28 per cent. appear from the statement to have *permanently* passed out of the possession of the former owners. The average prices appear to be lower than in any other *pergunnah* yet reported, though profits were large. I do not attach much credit to the absolute figures as reported, yet I believe in the fact that lower prices were obtained, and I attribute this to the following causes :—

(1.) To the number and strength of the Thakoor sharers.

(2.) The lax and incorrect way in which the record-of-rights was prepared.

(3.) To a stipulation in the record-of-rights, entered by the Settlement Officer, that rents fixed at settlement should only be altered by the mutual and joint consent of the zemindar and cultivators. The latter, of course, would agree to no alteration to their own prejudice, and rents remained stereotyped till after the passing of Act X. of 1859.

No capitalist would risk money in a share in a village with the knowledge that he would have half a dozen suits to fight through the Civil Courts to get even nominal possession of his purchase, and the subsequent certainty of an annual suit for even the small share of profits assigned to him in the village papers. As an instance of these difficulties, we may note that the well-known Hakeem, Saadut Ali Khan, an unusually strong, wealthy, and intelligent landholder, bought numerous shares in this *pergunnah*, of which neither he nor his successors were ever able to obtain possession.

5. The *pergunnah* is well populated ; its specific population, as contrasted with that of other *pergunnahs* previously reported, is shown in the following table :—

Pergunnah.	Density per square mile.	Cultivated area per male adult agriculturist in acres.
Aonla, ...	583	3·4
Suneha, ...	666	2·8
Bullia, ...	647	3·3
Crore,*	416	3·9
Furreedpore, ...	460	3 4
Meergunge, ...	634	3·0
Seraolee, ...	564	3·9

Mahomedans form 15·3 per cent. of the total, and 6·7 of the agricultural population. The chief cultivating castes, and the proportions of land they hold, are shown below :—

Caste.	Acres.	Percentage of cultivated area.
Thakoors, ...	12,942	23·3
Kisans, ...	10,615	19·1
Chamars, ...	7,829	14·1
Mooraos, ...	3,256	5·8
Aheers, ...	2,821	5 08
Brahmins, ...	2,807	5·07

* Excluding the city and cantonments.

The complete detail will be found in Appendix. The whole cultivated area is divided into 8,562 holdings, with an average of 6·4 acres per holding, and 5·7 acres per recorded cultivator.

6. The comparative statistics of the areas by the measurements of the IX., 1833, Settlement and the present are as follows in acres :—

Areas.	IX., 1833, Settlement.	Present Measurements.	Increase, per cent.	Decrease, per cent.
Total, ...	79,174	82,107	3·7	...
Barren, ...	5,091	9,767	91·8	...
Maâfee, ...	6,730	762	...	88·7
Old waste, ...	34,296	15,560	...	54·6
New fallow, ...	768	461	...	40·0
Cultivated, ...	32,289	55,557	72·0	...
Malgoozaree, ...	67,353	71,578	6·2	...

The great increase in the " barren " area by present measurement is very noticeable. It is entirely due to a difference in the system of classification. We learn from Mr. Conolly's report that at last settlement " the surveyor's account of land capable of cultivation included groves, *roads*, and all land which he could not affirm to be absolutely incapable of tillage. In this way much was included which was not properly culturable."

Thus the great *oosar plain*, south of Islamabad and Sendha, on which not a blade of grass grows, was all entered as culturable. I have entered it as barren, as, even at famine prices, it would not repay cultivation. Similarly, I fail to understand on what principle *roads* should have been considered as culturable waste. I have entered all land as barren which is so poor as not to be likely, under any circumstances, to be brought under cultivation, its poverty being gauged by the simplest test,—the growth of the grass. The cultivated area, it will have been observed, has increased by 72 per cent., while the *malgoozaree* area has increased by 6·2 per cent. only. This latter increase is chiefly in the *khadir* caused by alluvial increments from the Ramgunga. This improvement is very great, but even now 23 per cent. of the culturable area is waste. I have little doubt that before the railway has been at work for ten years, the greater proportion of this will have been brought under the plough, but it would not be safe to presume on this as a certainty in assessment. It is far better to allow the *pergunnah* to develop itself gradually than to retard its progress for years by an avaricious assessment.

7. I have been unable to ascertain the proportion of irrigation at last settlement, as every single record has been destroyed except an old vernacular No. IV. Statement, which does not include details of wet and dry areas. At present, of the 55,557 acres of cultivation, 14,898 acres, or 26·8 per cent., were actually irrigated in the year of measurement.

This, however, hardly gives a fair view of the facts. Deducting the *khadir* cultivation, which, from the natural moisture of the soil, only requires or receives irrigation in years of most severe and exceptional drought, of the remainder, 31·7 per cent. were actually irrigated, and 47·5 per cent. were irrigable from existing sources.

8. The chief staples of the *pergunnah* are, in the *khurreef*, *bajra* and rice, with a little cotton and indigo; and in the *rubbee*, wheat, barley, and gram. Sugar is grown in a few villages, but to a small extent only. Indigo cultivation is extending, and several small factories have been started by natives since the mutiny. Only the coarser rices, such as *sati*, *bunki*, and *deoli*, are grown, and the produce is second-rate; about 25 per cent. of the area is *dosahi*. The average produce of the *pergunnah* has been found by numerous experiments to be as follows per acre :—

	Maunds.	Seers.	lbs.
Rice, ...	9	10	990
Bajra, ...	6	16	685
Wheat, ...	10	3	1,079
Barley, ...	10	17	1,116
Gram, ...	8	0	856

The maund and seer of the above are Bareilly weight. In Crore an extensive series of experiments gave the following results in lbs.:—

Rice,	...	...	...	981	lbs.	per acre,
Bajra,	...	...	...	423	,,	,,
Wheat,	...	...	...	822	,,	,,
Barley,	...	...	...	1,045	,,	,,
Gram,	...	...	...	804	,,	,,

There the rice-growing soils and the kinds of rice grown are exactly similar to those of Aonla, but there is a much larger proportion of *bhoor*, and of a worse quality than is usually found in Aonla. This defect lowers the general average of produce in the other crops. It may be interesting to compare the results of my experiments in wheat with those which have been carried on for many years past in Europe. The highest produce per acre obtained by me in any one *field* was 2,249 lbs. The highest average over any village was 1,686lbs., the lowest 881lbs., and the general average on the two *pergunnahs* is 950lbs., though in Aonla alone the general average was 1,079lbs. In 1780, according to Arthur Young, the general wheat average in England was 1,334 lbs. per acre, and in Ireland 1,044 lbs. per acre. In 1850, according to Parliamentary returns, the average in England was 1,532 lbs., and, according to Mr. Lawes, the general average from 1852 to 1868 was 1,670 lbs. In Ireland, in 1868, the Parliamentary returns give 1,392 lbs. per acre. Mr. Caird, a great authority, gives the following averages for 1868:—

					lbs.
England,	...	...	...	...	1,620
Ireland,	...	...	...	...	1,392
France,	...	...	...	...	894
Prussia,	...	...	...	...	993

Mr. Lawes, from a long series of experiments in all kinds of soil, and under almost every condition, carried on from 1852 to 1869, found the following results for England:—

In unmanured land,	...	...	843	lbs.	per acre.
Farmyard manured,	...	...	2,066	,,	,,
Artificially manured,	...	...	2,130	,,	,,
Mean of all,	...	...	1,680	,,	,,

Now, comparing the above, we see that Aonla in its wheat average beats the French and Prussian averages, and also the English average for unmanured land. It also gives slightly better results than Ireland in 1780. Its highest result over any whole village beats the general English average, while the lowest village average beats the English average for unmanured land. My experiments show that there is no reason why we should not grow as good wheat here as in England at a lower cost, and also how large is the margin for possible improvement in produce by scientific agriculture. I doubt, however, whether this improvement will ever take place. Our landlords are useless honey-eating drones, while the cultivators, from whom alone any real improvement must come, can gain nothing but a bare subsistence, all their profits being swallowed up by the interest on the *bunniahs*' advances for seed, food, and marriage expenses.

Turning from the curious to the useful, there is one more point in these experiments deserving notice, and that is the very small difference in the amount of produce between the irrigated and dry lands. In Aonla, the average produce of wheat in the irrigated land was 10 maunds 9 seers; in the dry, 9 maunds 30 seers per acre,—the difference being only 19 seers. The fact is that last *rubbee* the cold-weather rains were so plentiful that those fields which had been artificially irrigated were injured by getting too much water, and suffered in consequence from mildew. The produce of the artificially-irrigated lands was below, and of dry lands above, the average. In Crore, in an average season, on a large number of experiments, irrigated lands gave 8 maunds 18 seers per acre, and

NOTE.—For the above European averages I am indebted to the *Indian Economist* for 15th August, 1870.

dry 6 maunds 22 seers, the difference being 1 maund 28 seers per acre, or 28 per cent. These facts show how very precarious and variable must be the income of canals in this district as long as the system is maintained of charging differential rates according to the crop on the area actually irrigated. The incontrovertible fact should be at once recognized, that the conditions of agriculture here are totally different from what they are in the Doab. There, artificial irrigation is almost essential to *ensure* the production of a *rubbee* crop; here, canals only *ensure* the crop against a bad season: *there*, three waterings are required; *here*, one; *there*, water ranges from 20 to 50 feet below the surface; *here*, it is found in parts from 6 to 9 feet below, from 10 to 15 feet is the rule, and in certain small and exceptional tracts only does the depth to water reach from 20 to 30 feet. Here, the true system would undoubtedly be to charge a low fixed annual rate on the area irrigable as a canal cess or insurance rate on the crops, whether the water is taken or not. At present the landlords and cultivators derive all the benefit of a canal in a bad season, while in a good one the water is not required at all, and the cost of establishment and the maintenance of the works falls on Government in opposition to the axiom that those who benefit by canals should pay for them. The reports for the Rohilkhund Canals for the years 1867-69 are the best confirmation that could be offered in support of my position. I have urged my views, however, some months ago in a separate correspondence.

9. As in the other *pergunnahs* of this *tuhseel*, produce prices have risen since 1838 on an average 44 per cent. all round. In *bajra* and wheat, the chief staples, the increase has been 62 per cent. in the former, and 36 per cent. in the latter.

This great increase has as yet exercised but little effect on rents. Mr. Conolly, at last settlement, wrote that the average rate of rent on cultivated land varied from Rs. 2-8 to Rs. 3 per acre, excluding the *khadir* circle, which was transferred from *pergunnah* Ajaon to Aonla subsequently to the last settlement. Mr. Conolly's *jumma* on the remainder was Rs. 49,861 at 66 per cent. of the assets. This would give a *jummabundee* of Rs. 74,791; deducting for 29,432 acres of waste at four annas per acre, Rs. 7,358, leaves Rs. 67,433 for cultivated land, or Rs. 2-10-4 per acre, while the present average *ryottee* rate for land held by cultivators at money rates is Rs. 2-11-6. This agrees with my inquiries during inspection. I then found that rent-rates, as a rule, had remained unaltered since the Regulation VII., 1822, Settlement. Enhancements had taken place to a very small extent, as old holdings became vacant and were given to new cultivators. In almost every village the old tenants still hold at the old rates. The reasons for the fact are clear:—

(1.) The very large area of culturable waste, and the consequent demand for cultivators, tended to check enhancement of rent.

(2.) Thakoors form a considerable proportion both of *zemindars* and cultivators. Though very oppressive landlords to men of other castes, they are usually very unwilling to enhance the rents of their fellow-tribesmen. Tribal opinion is against it, and a respect for tribal feeling is still very strong among our Kutherias.

At last settlement Mr. Conolly noticed "that in Rajpoot estates, the brethren of the caste, whether concerned with the management or not, held their fields at lower rents than other *assamees*, and retained their tenures on the same terms as long as they chose, or at least as long the village remained in the hands of their community."

(3.) There was, as has been already noticed, a condition entered in the *wajibool-urz* that the rent-rates of last settlement were to remain in force until altered by mutual agreement.

(4.) After the passing of Act X., 1859, the near approach of the new settlement operated as a temporary check to enhancement, though in a few cases the *zemindars* availed themselves of the facilities afforded by the Act.

On the whole question, we may affirm, with a close degree of accuracy, that rents have been affected by the rise in the value of produce less than in any *pergunnah* yet reported.

10. In the 158 *muhals* composing the *pergunnah*, the tenures are as follows:—

Tenure.	No. of Muhals.	No. of Sharers.
Zemindaree, ...	101	751
Perfect *putteedaree*, ...	25	395
Imperfect *putteedaree* and *bhyachara*, ...	32	855
	158	2,001

Among the sharers are included owners of resumed revenue-free patches. The detail of castes of owners is as follows:—

Caste.	Number.	Caste.	Number.
		Brought forward, ...	1,876
Christian, ...	1	Mahajun, ...	81
Sheikh, ...	246	Kumboh, ...	12
Pathan, ...	50	Khuttree, ...	1
Moghul, ...	13	Weavers, ...	2
Syud, ...	84	Kisan, ...	5
Noumooslim, ...	26	Byragee, ...	12
Kayuth, ...	233	Bhat, ...	1
Thakoor, ...	827	Punjabee, ...	1
Brahmin, ...	154	Goojur, ...	5
Aheer, ...	102	Morao, ...	3
Gooshaeen, ...	40	Barber, ...	2
	1,876		2,001

There are 2 *muhals* with over 100 sharers.
" 7 " " 50 "
" 26 " " 25 "
" 123 " less than 25 "

The average number of sharers per *muhal* is 12, the average number of cultivated acres per sharer is 28, and the average culturable acres, 35. I can now proceed to the classification of villages, and the rent-rates on which I propose to base my assessment.

11. To the north-east of the *pergunnah*, between the Seraolee border and the Ramgunga, are 14 villages, which were transferred after last settlement from *Pergunnah* Ajaon. Of these, two (Sheopooree and Lodhipore) are held on a *nuzzurana* tenure at a nominal *jumma*. They are all in the *khadir* between the Ramgunga and the Pairea, in a long strip between the *khadir* villages of Seraolee and those of Suneha. The land is naturally moist and exceedingly productive. Water is found usually within eight to nine feet from the surface; and except in seasons of extraordinary drought, irrigation is not required. The better crops are largely grown, and 45 per cent. of the entire cultivated area is usually *dosahi*. The *khureef* is occasionally damaged by floods, but usually the produce is exceedingly fine. The areas, excluding the *nuzzurana* villages, are as follows in acres:—

Areas.	At last Settlement.	By present measurement.	Increase per cent.	Decrease per cent.
Total, ...	11,741	13,639	16·2	...
Barren, ...	1,587	1,683	3·5	...
Lakhiraj, ...	599	..	...	100·
Old waste, ...	4,403	1,879	...	57·4
New fallow, ...	255	94	...	63·1
Cultivated, ...	4,897	9,983	103·8	...
Malgoozaree, ...	9,555	11,956	25·1	...

The increase in total area is caused by alluviation. The soil areas are:—

	Acres.	Percentage on cultivated area.
Domut, ...	5,681	56·9
Mutyar, ...	1,838	18·4
Bhoor, ...	2,464	24·7

The settlement *jumma* was Rs. 10,693, and the expiring demand is Rs. 12,307. There have been no balances or coercive processes, and the revenue has always been realized with ease. Besides the increase in produce prices, the cultivated area has more than doubled. The rent-rates assumed at last settlement by Mr. J. Muir were—

	Rs.	a.	p.
Domut and *mutyar*, ...	3	12	0
Bhoor, ...	3	0	0

These rates, on present cultivation, give an outturn of Rs. 35,588.

The average rates paid by occupancy-tenants on land held at money rents at measurement was Rs. 3-10-1 per acre, which gives Rs. 36,708. Both these estimates are low. In six of the 12 *khalsa* villages rents were chiefly taken in kind. The cultivators sued to commute, and the money rents fixed give the following results:—

	Rs.	a.	p.		*Average.*	*General average.*
Domut,	5	5	4	per acre,	Rs. 5-0-0	Rs. 4-8-8 per acre.
Mutyar,	3	15	4	ditto,		
Bhoor,	3	2	7	ditto,		

In no case was an appeal preferred. In all, the cultivators were contented, while the zemindars, though they accepted the rates, urged that they were too light; we may be certain therefore that they were moderate. I propose to adopt the following soil-rates for the circle:—

	Rs.	a.	p.
Domut, ...	5	4	0
Mutyar, ...	4	0	0
Bhoor, ...	3	0	0

They give an outturn of Rs. 44,569, and an average of Rs. 4-7-11 per acre, or 9 pie per acre less than the commutation average. The resultant *jummabundee* is Rs. 9,300, or 26 per cent. in excess of the resultant by the soil-rate used at last settlement, while prices have increased over 44 per cent. Where rents are taken in kind, the usual rates are five-twelfths and half of the produce. Rating *zubtee* crops at the average money rates and *nijkaree* at four-twelfths of average produce, after deduction of one-tenth for cutting and carrying, and taking the average prices of 30 years, ending with 1867-68, we get the following crop-rates:—

		Rs.	a.	p.
Vegetables,	per acre, ...	8	0	0
Sugar-cane,	,, ...	6	0	0
Cotton and *Sunn*,	,, ...	5	4	0
Rice,	,, ...	3	10	0
Mukka,	,, ...	3	3	0
Bajra,	,, ...	2	12	0
Wheat,	,, ...	4	6	0
Barley, *Gojie*, and *Bijhra*,	,, ...	3	12	0
Gram,	,, ...	3	4	0
Musoor, linseed, and *sirson*,	,, ...	2	10	0
Dosahi at half *purhel* rates.				

These give an outturn of Rs. 45,119, or rather above the result by soil-rates; at five-twelfths, the result would be about Rs. 54,000. These results, and the rates accepted in commutation, both show that the proposed rates are moderate, but we have another good test. The circle under treatment lies between the *khadir* circles of Seraolee and Suneha. In both of these the revised *jummas* have been declared and accepted. In neither have I as yet received any objections to the new *jummas* as too high. The rent and *jumma* rates of three circles are thus contrasted:—

Rent-rates.	*Seraolee.*			*Aonla.*			*Suneha.*		
	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.
Domut,	5	10	0	5	4	0	4	8	0
Mutyar,	4	0	0	4	0	0	3	8	0
Bhoor,	3	4	0	3	0	0	3	4	0
Resultant *jumma* rates per acre,	2	7	10	2	7	2	2	2	3

If my rates are correct, Aonla *khadir* should be in quality as in position, midway between the other two.

The crop statements completely bear out this conclusion :—

	Percentages.		
	Seraolee.	*Aonla.*	*Suneha.*
1st class crops, ...	59·51	48·78	48·09
2nd " " ...	24·10	21·37	18·01
3rd " " ...	16·29	29·85	33·90
Dosahi, ...	10·0	44·60	32·40

This, I think, with the results by commutation and crop-rates, is as good proof as could be given for the correctness of my estimates. The *jumma* at 50 per cent., resulting from my proposed rates, would be Rs. 22,250. Its incidence rates are thus contrasted with those of the last settlement and the expiring *jummas* :—

	Amount in rupees.	Incidence on *malgoozaree* area.	Incidence on cultivated area.
	Rs.	Rs. a. p.	Rs. a. p.
Jumma of IX., 1833, Settlement, ...	10,693	1 1 10	2 2 11
Expiring *jumma*, ...	12,307	1 0 5	1 3 9
Estimated revised *jumma*, at 50 per cent., ...	22,250	1 13 9	2 3 8
Ditto ditto, at 55 per cent., ...	24,475	2 0 9	2 7 2

12. West of this circle, between the Aril and the Suneha border, is a tract of 24 villages adjoining and exactly similar to the second-class *bungur* tract in Suneha. It is similar not only in soil and irrigability, but also in population. The *zemindars* are chiefly Kutherias ; the cultivators, Thakoors, Aheers, and some Kisans, Chumars, and Moraos. The two former are lazy and turbulent, the three latter as usual thoroughly good cultivators. The Aheers are here, as elsewhere in Bareilly, notorious as a caste for being *facile princeps* in lying, fraud, and ingratitude. There are numerous proverbs on these points. They all have a mental twist, and I have long given up all hope of getting the whole truth out of an Aheer, even when it is his interest to tell it.

The area statistics of this circle are—

	At last Settlement.	By present measurements.	Increase per cent.	Decrease per cent.
Total, ...	15,957	16,426	2·9	...
Barren, ...	453	2,273	401·7	...
Lakhiraj, ...	750	119	...	84·1
Old waste, ...	9,752	5,012	...	48·6
New fallow, ...	117	90	...	23·0
Cultivated, ...	4,885	8,932	82·8	...
Malgoozaree, ...	14,754	14,034	...	4·8

The cultivated area is divided thus in its soils : —

	Wet.	Dry.	Total.	Percentage of cultivation.
Domut, ...	2,104	1,621	3,725	41·7
Mutyar, ...	2,216	2,317	4,533	50·7
Bhoor, ...	285	389	674	7·6

Of the cultivated area 51·5 per cent. were actually irrigated in the year of measurements, and 73·9 were irrigable from existing sources. Irrigation is chiefly carried on from the Aril, the Pairea, the Kutterra, the Nawab Nuddee, and the small *nullahs* which run into them, by a system of *kuchha* dams managed by the *zemindars*. The cost is

usually defrayed by a voluntary cess of 2 per cent. on the *jummas* of the villages which take water. The cess is paid to the dam managers. Water is generally found at a depth of from 10 to 12 feet below the surface, but wells are not much used, except by the Moraos and Kisans. Only the *dhenkli* and small *churkhi* wells are in use. Generally speaking, this is a backward tract; only 63·6 per cent. of culturable land is cultivated; the waste is either *dhâk-jungle* or open spaces covered with grass and *gandur*, the latter is sold annually to the *talwallas* of Aonla and Bareilly for considerable prices. The *dhâk* is cut every seven years for firewood; the leaves and gum are sold annually. The Oudh and Rohilkhund Railway passes through the centre of the circle, and in a few years will probably clear off all the jungle. The *domut* of this tract is all naturally very good and productive, and grows very fine wheat. The *mutyar* is very thirsty stiff clay; *oosur* potted here and there, and growing as a rule only *sathi* and *bunki*, the poorest of the rices. It is considered but little superior in value to *bhoor*. The assessment at last settlement was by no means light, but by the very great increase in cultivation it has become very moderate. The *zemindars* are numerous and not well off. The cultivators, however, as a rule are prosperous owing to the low rents when compared with the produce.

I propose to carry on into this circle the same rates that I used in the corresponding and adjoining circle in Suneha, *viz.*:—

	Wet.			*Dry.*		
	Rs.	a.	p.	Rs.	a.	p.
Domut, ...	4	8	0	3	10	0
Mutyar, ...	3	6	0	2	10	0
Bhoor, ...	3	4	0	2	6	0

These rates give an outturn on cultivation of Rs. 30,755, and an average rate of Rs. 3-7-1 per acre. My crop-rates, at *tihara*, or one-third of the average produce, commuted at the average rates of the 30 years from 1837-38 to 1867-68, are as follows:—

	Rs.	a.	p.	
Vegetables, ...	6	6	0	per acre.
Sugar, ...	5	4	0	„
Cotton, *Sunn*, Indigo, ...	4	12	0	„
Mukka, ...	2	14	0	„
Rice, ...	2	6	0	„
Bajra and other coarse crops, ...	2	4	0	„
Wheat, ...	4	6	0	„
Barley, ...	3	12	0	„
Gram, ...	3	4	0	„
Mussoor, ...	2	6	0	„
Dosahi at *purthel* rates.				

These rates give a *nikasee* of Rs. 33,140, or 7·7 per cent. above the result by soil-rates. If prices were taken on an average from 1858 only, the difference would be much greater. The present money-rates, according to the village papers, average Rs. 2-14-6 per acre for *mouroosee assamees*, and Rs. 2-12-1 for tenants-at-will. The latter hold chiefly in the land recently reclaimed from jungle in the inferior *mutyar* soil, while the former hold in the very fine *domut* along the rivers in the land, which was under cultivation at last settlement. Their rents have remained as a rule unaffected by the general rise in prices or by Act X., and are extraordinarily low. I can imagine no reason why, under identically similar circumstances, these villages should not pay the same rates which have been accepted contentedly by *zemindars* and cultivators of the same castes in the adjoining tract of Suneha. I have had considerable reason to distrust the *nikasees* in this *pergunnah*. Besides ordinary fraud, they have been considerably lowered by the large amount of land held by Thakoor connections of the *zemindars* at abnormally low rates. For my part, I can see no reason why cultivators of this class should receive larger deductions from the rates paid by ordinary cultivators than are allowed by law to actual *zemindars* refusing settlement, or temporarily ousted from the management, by farm of the estate for arrears of revenue.

The incidence rates of former and proposed *jummas* are as follows :—

		On Malgoozaree.			On Cultivation.		
		Rs.	Rs. a.	p.	Rs. a.	p.
Jumma of IX., 1833, Settlement,	...	11,437	0 12	4	2 5	5
Expiring *jumma* ...	...	11,376	0 12	11	1 4	4
Proposed *jumma*, excluding cesses,	...	15,350	1 1	5	1 11	6
Ditto, including cesses, ...	...	16,885	1 3	3	1 14	3

13. To the south of this circle, between the Aril and Nawab Nuddee, is a circle of 22 villages, which, from the amount of waste and their general condition, I have called the jungle circle. The area statistics are—

	Act IX., 1833, Settlement.	By present measurement.	Increase per cent.	Decrease per cent.
Total area, ...	9,509	9,588	0·08	...
Barren, ...	279	1,466	425·44	...
Lakhiraj, ...	1,545	64	...	95·8
Old waste, ...	6,322	3,909	...	38·16
New fallow, ...	21	119	470·0	...
Cultivated, ...	1,342	4,030	200·29	...
Malgoozaree, ...	7,685	8,058	4·8	...

The reason for the increase of "barren" has already been explained. Cultivated area is treble the amount at last settlement, but is still only 50 per cent. of the culturable area. The circle has a good water-supply; 64·8 per cent. of cultivation is easily irrigable from the Aril, Pairea, and Nawab Nuddee, but only 34·1 per cent. were actually irrigated.

Rents are very low, as we should expect from the amount of waste. The average *ryottee* rate for land held at money rents is only Rs. 2-5-7 for occupancy ryots, and Rs. 2-7-0 for tenants-at-will. The kind rates are one-third and one-fourth of the produce. The population is scanty, and cultivators are chiefly Thakoor, Aheer, and Mahomedan—all slovenly and indolent in the extreme, with no local attachments, and ready to remove at very small provocation. The waste is of the same character as in the last circle. The cultivated area is thus distributed in soils :—

	Wet.	*Dry.*	*Total.*	*Percentage.*
Domut, ...	676	1,150	1,826	45·3
Mutyar, ...	518	1,034	1,552	38·5
Bhoor, ...	182	470	652	16·2

The respective soils are precisely similar to those of the last circle, but worked badly. The *mutyar* is very poor indeed, except here and there in the low lands along the rivers. The soil rents I propose for adoption are—

	Wet.			*Dry.*		
	Rs.	a.	p.	Rs.	a.	p.
Domut, ...	3	10	0	2	10	0
Mutyar, ...	3	3	0	2	0	0
Bhoor, ...	2	6	0	1	9	6

The resultant *nikasee* is Rs. 10,370, or Rs. 2-9-2 per acre. The present average *ryottee* rate is Rs. 2-6-0. Crop-rates, at one-fourth of average produce, commuted at average prices of 30 years, give Rs. 10,986. The crop-rates worked out are as follows :—

	Rs.	a.	p.	
Bari, ...	5	10	0	per acre.
Sugar, ...	4	8	0	,,
Cotton, ...	4	0	0	,,
Rice, *mukka*, ...	2	4	0	,,
Bajra and coarse crops, ...	1	12	0	,,
Wheat, ...	3	4	0	,,
Barley, *gojie*, and *bijhra*, ...	2	12	0	,,
Gram, ...	2	6	0	,,
Musoor, &c., ...	2	0	0	,,

Dosahi at half *purthel* rates.

It will be observed that I have calculated on no appreciable enhancements in rents. In so thinly populated a tract, still but half reclaimed from jungle, rents will not rise for a considerable period. Enormous progress has been made since Settlement, and a high *jumma* would only retard development. Where land obviously capable of tillage has never been cultivated, it is generally to be presumed that either want of labour or want of capital is the cause. Here both causes are found at once, and will continue to operate for some time to come ; and the assessment of a heavy *jumma* in anticipation of rapid improvement would only thwart the means from which it is to arise. I would assess here simply on existing assets of the cultivated and waste lands. The former have been estimated at Rs. 10,370, the latter may be roughly assessed at Rs. 1,500,—making in all Rs. 11,869, giving an estimated *jumma* of Rs.6,523 at 55 per cent. This gives a very heavy increase, but not by any means an oppressive one. The incidence rates of former and proposed *jummas* are as follows :—

				Incidence on malgoozaree area.			*Incidence on cultivated area.*		
	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.
IX., 1833, settlement *jumma*,	2,671	4	2	0	5	6	1	15	10
Expring *jumma* proposed	2,966	4	2	0	5	10	0	11	9
at 50 per cent.	5,930	0	0	0	11	9	1	7	6
Proposed *jumma* at 55 per cent.,	6,523	0	0	0	12	10	1	9	10

14. The remainder of the *pergunnah*, between the Seraolee border, the Budaon border, and the Nawab Nuddee forms my last and largest circle. The level here rises considerably, and the tract differs altogether from the other circles in character. The depth to water ranges from 20 to 30 feet, and irrigation is almost entirely by *lao* and *churrus*. The only *pucka* wells are in Aonla itself and its immediate vicinity. They are all old but in good order ; *kuchha* wells last usually from 3 to 6 years, but in some places I found them from 20 to 30 years old. Of the cultivated area, 38·7 per cent. were irrigable, and 25·7 per cent. actually irrigated in the year of measurement. *Bajra*, rice, and wheat are the staple crops, with a little cotton, sugar, and indigo. The produce generally is good, except in the Thakoor villages, where it is inferior owing to bad cultivation. The chief cultivators are Thakoors, Kisans, and Moraos. Some of the villages in this circle are exceedingly fine, but to the south especially there is a good deal of *bhoor*. The several soils are identical with those of Seraolee in quality, though somewhat differently distributed. Here, as in Seraolee, I have been compelled to divide the *bhoor* into two classes,—the first, level, growing usually *khureef* aud *rubbee* in rotation ; the second, irregular in surface, rising here and there into sand-hills, and usually growing only coarse *khureef*, with occasionally a little barley or gram. The areas of the circle are as follows :—

	Act IX., 1833 *Settlement.*	*By new measurement.*	*Increase per cent.*	*Decrease per cent.*
Total,	40,322	40,745	1·0	...
Barren,	2,653	4,056	52·8	...
Lakiraj,	3,836	579	...	84·9
Old waste,	13,376	4,574	...	65·8
New fallow,	361	156	...	56·8
Cultivated,	20,096	31,380	56·1	...
Malgoozaree,	33,833	36,110	6·7	...

The cultivated area is composed of—

	Wet.	*Dry.*	*Total.*	*Percentages.*
Doomut, ...	5,281	12,741	18,022	57·4
Mutyar, ...	1,726	1,869	3,595	11·4
Bhoor, I., ...	958	5,318	6,276	20·0
Bhoor, II., ...	114	3,373	3,487	11·2
Total, ...	8,079	23,301	31,380	100·0

The *jumma* of last settlement was Rs. 35,753; the expiring *jumma*, Rs. 37,259. It has been collected regularly, and since 1846 with ease. The average rent-rate for land held at money rates, according to the village papers, is for occupancy-tenants Rs. 2-10-8 per acre; for tenants-at-will, Rs. 3-1-2 per acre.

These rates are extraordinarily light, but there have been very few enhancements since the VII., 1822, Settlement. In no part of the district have I found such low averages for similar soils and produce. There is no doubt, as owned by the *zemindars* themselves, that rents will rise very largely after the revised *jummas* are declared. As an instance of what has been done in his way, I note the village of Noorpore. Five years ago the *zemindar* sued to enhance. The old rates were—

Upland *har*, 4 annas per *kuchha beegah*.
Turaeen ,, 8 ditto ditto ditto.

A *punchayet* fixed 8½ annas on the first, and 13 annas on the second. In the latter, *har* fields, as they now fall vacant, are at once taken up at one rupee per *beegah kuchha*, and the cultivators are contented. To assess on the old rates would be merely to present the *zemindars* with about 50 per cent. more profit than they are entitled to; while the cultivators would derive no benefit, for rents would be enhanced just the same.

Now the individual soils are identical with those of Seraolee, the prevailing castes of cultivators the same, and irrigation is carried on in the same manner; in fact, this circle is a continuation of the same tract. I know that the Seraolee rates were moderate, and the *zemindars* are contented with the assessments based upon them. I propose, circumstances being exactly similar, to use the same rates here, *viz.*:—

	Wet.			*Dry.*		
	Rs.	a.	p.	Rs.	a.	p.
Domut, ...	4	12	0	3	10	0
Mutyar, ...	4	0	0	3	0	0
Bhoor, I., ...	3	8	0	2	8	0
Bhoor, II., ...	3	0	0	1	12	0

These rates give a gross outturn of Rs. 1,06,674, or Rs. 3-6-4 per acre. The *jumma* at 50 per cent. would be Rs. 53,330; but, looking to the number of sharers in some of the villages, and the inferiority of the *mutyar* in some few others, which border on circle No. 2, I estimate that my assessed *jumma* will not reach above Rs. 50,000 at 50 per cent., or Rs. 55,000 at 55 per cent., giving an increase in land revenue of Rs. 12,741, or 34 per cent. over the expiring *jumma*. The increase is heavy, and I have now to demonstrate that my soil-rates are not oppressive.

In 24 villages of the circle my proposed rates have already been paid for the last seven years or more. The gross outturn by my rate is Rs. 1,06,674. Where rents are taken in kind, the usual rates are four-twelfths, five-twelfths of the produce. Taking four-twelfths or the lowest usual rate, and commuting at the average of 30 years' prices, we get the following crop-rates:—

	Rs.	a.	p.	
Bari and *kussoom*, ...	8	0	0	per acre.
Sugar, ...	6	6	0	,,
Cotton, *sunn*, and indigo, ...	5	0	0	,,
Rice and *mukka*, ...	2	14	0	,,
Coarse crops, ...	2	4	0	,,
Wheat, ...	4	6	0	,,
Barley, ...	3	12	0	,,
Gram, ...	3	4	0	,,
Mussoor, &c., ...	2	6	0	,,

Dosahi, half *purthel* rates.

These rates give a result of Rs. 1,13,171, or 6 per cent. above my soil-rates. At five-twelfths of produce, and taking the average of prices from 1855, when the rise in prices, due to the extension of the export trade, and the influx of silver commenced, the outturn would be very largely enhanced.

It must be remembered, however, that money-rents do not keep pace with the increase in the value of produce caused by increased prices. They are largely affected by the rise, but at a considerable interval. It must be recollected that propositions based on principles of political economy are true only in so far as the conditions and laws which regulate them are allowed free and unrestricted action, and it is most necessary to bear this in mind in questions connected with rents in India, where there is no free competition for land, but rather a customary system of tenures. Competition is only just commencing to come into play. The *jumma* estimated to result from the soil-rates, after deductions for drawbacks of all kinds, was Rs. 55,000, which falls at Re. 1-12-0 per cultivated acre. In Seraolee, the declared *jumma* fell at Re. 1-10-10 per cultivated acre, and the *zemindars* were contented. If my *jumma* is correct, this circle should be rather better than Seraolee in soils and produce. Comparing percentages, we have the following results :—

	Percentage on cultivated area.		Irrigated percentage of soils.	
Soils.	*Aonla Circle.*	*Seraolee.*	*Aonla.*	*Seraolee.*
Domut,	57·4	36·8	29·3	30·2
Muttyar,	11·4	6·6	48·0	32·2
Bhoor, I.,	20·0	32·7	15·2	9·4
Bhoor, II.,	11·2	23·9	3·2	3·2
			25·7	16·8

	Of total cultivation. Crops. Percentages. Aonla.	Seraolee.
Bari, sugar, cotton, &c., ...	10·68	9·57
Rice, *mukka,*	6·90	5·75
Coarse crops, ...	40·31	47·67
Wheat, ...	30·37	29·24
Other *rubbee,*	11·74	7·77
	100·0	100·0
Dosahi, ...	7·8	4·9

Both statements show a considerable superiority in favour of the Aonla circle in soil, irrigability, and produce, while the difference in *jumma* is only 1½ annas per acre. The IX., 1833, Settlement, expiring, and estimated revised *jummas*, are thus compared :—

		Incidence on malgoozaree.			Incidence on cultivated.		
	Rs.	Rs.	a.	p.	Rs.	a.	p.
Jumma of IX., 1833, Settlement, ...	35,753	1	0	10	1	12	5
Expiring *Jumma,* ...	37,259	1	0	6	1	3	0
Ditto Estimate, @ 50 per cent., ...	50,000	1	6	2	1	9	6
Estimated @ 55 per cent., *i.e.*, including cesses, ...	55,000	1	8	4	1	12	0

15. To sum up. The result on the whole *pergunnah* is as follows, excluding the two *nuzzurana* villages :—

		On *malgoozaaree.*			On cultivated.		
	Rs.	Rs.	a.	p.	Rs.	a.	p.
Jumma of IX., 1833, Settlement, ...	60,554	0	14	5	1	14	0
Expiring *Jumma,*	63,908	0	14	6	1	2	9
Estimated @ 50 per cent., ...	93,530	1	5	4	1	11	6
Total estimated demand @ 55 per cent., ...	1,02,883	1	7	5	1	14	3

The increase in land revenue only, without cesses, is Rs. 29,622, or 46·4 per cent. over the expiring *jumma*. The estimated revised demand at 55 per cent. is Rs. 38,017, or 58·6 in excess of the expiring *jumma* and cesses. It is in consequence of this very heavy increase that I have been thus particular in proving that my rates in each circle are framed with the most careful moderation consistently with a regard for what is due to Government.

16. Aonla is by far the most difficult *pergunnah* in the whole of Bareilly to assess fairly to both parties. It has cost me more trouble and labour and anxiety than any other three *pergunnahs* put together. The *zemindars* now will cry out against my assessments as heavy, and ten, or even five years hence in all probability the revenue officers of the district will report that my *jummas* are too low. But I trust that the Board, in judging of my work here, will take into consideration the extreme difficulty of a fair assessment caused by the combined action of—

(1.) An immense increase in cultivation.

(2.) A large remaining reserve of waste.

(3.) Money rents as a rule stationary since, at all events, 1835, if not an earlier date.

(4.) An increase in produce prices of 44 per cent.

(5.) A numerous body of proprietors, mostly *Thakoor*, with numerous *Thakoor* connections among the cultivators, who hold at privileged rates.

(6.) The construction of a new line of railway through the *pergunnah*, which will develop trade, and stimulate a competition to break up the waste lands and increase rents.

I have attempted to do justice to all three parties—the State, the *zemindar*, and the cultivator. If hereafter I be proved to have failed, it will not at any rate have been for want of labour or cautious consideration. Under the peculiar circumstances of the *pergunnah*, all thought or idea of permanent settlement should be abandoned. My estimate, though giving a heavy increase on the old demand, is in my opinion still an exceptionally low one. If we are blessed with continued peace, and the *pergunnah* progresses in prosperity, as it ought to progress, my *jumma* ought to be capable of an increase of at least 40 per cent. more, 25 or 30 years hence.

APPENDIX A.

Census Statement of Pergunnah Aonla, Tuhseel Aonla.

Total number of *Mouzahs* in the *Pergunnah*.	HINDOOS.												MAHOMEDANS AND OTHERS.												TOTALS.									Number of persons to each square British statute mile of 640 acres each.
	AGRICULTURAL.						NON-AGRICULTURAL.						AGRICULTURAL.						NON-AGRICULTURAL.															
	Males.			*Females.*			*Males.*			*Females.*			*Males.*			*Females.*			*Males.*			*Females.*											
	Adult.	Minor.	Total.	Adult.	Minor.	Total.	Adult.	Minor.	Total.	Adult.	Minor.	Total.	Adult.	Minor.	Total.	Adult.	Minor.	Total.	Adult.	Minor.	Total.	Adult.	Minor.	Total.	Adults.	Adult Males.	Adult Females.	Children.	Boys.	Girls.	Total Males.	Total Females.	GRAND TOTAL.	
125	15,210	9,302	24,512	13,400	8,134	21,534	6,079	3,378	9,457	5,360	2,726	8,086	1,086	675	1,761	944	648	1,592	2,634	1,596	4,230	2,573	1,374	3,947	47,286	25,009	22,277	27,833	14,951	12,882	39,960	35,159	75,119	583

Number and Name of Circles.	Total area in acres.	*Minhaee* area Barren and *Lakhiraj*.	*Culturable.* Old waste.	New fallow.	Total cultivated area.	Sugar-cane.	Total *Rubbee* Crops.
Bangur Circle I., ...	40,745	4,635	4,574	156	31,360	421	13,419
In parts of 100, ...	...	...	...	...	...	1·23	42·77
Bangur Circle II., ...	16,426	2,392	5,012	90	8,932	62	3,630
In parts of 100, ...	...	...	...	...	...	0·69	40·64
Bangur Circle III., ... or *Jungle* Circle, ...	9,588	1,530	3,909	119	4,030	1	1,581
	...	...	In	parts of	100	0·02	39·24
Khadir Circle, ...	13,639	1,683	1,879	94	9,983	423	2,310
In parts of 100, ...	...	...	...	...	...	4·24	23·14
Total, ...	80,398	10,240	15,374	459	54,325	907	20,940
Sheopooree and Lodhipore *nuzrana* villages.	1,709	289	186	2	1,232	1·67	38·55

Details of Defuslee Crops.

Crops.	Circles. Bangur I.	Bangur II.	Bangur III. or Jungle.	*Khadir* Circle.	Total.
Culcheana, ...	211	39	20	167	437
Wheat, ...	718	659	60	2,850	4,287
Melons, ...	72	13	1	132	218
Barley and Oats, ...	322	162	68	163	715
Gojie, ...	56	92	40	63	251
Bijhra, ...	401	375	174	127	1,077
Gram, ...	373	416	242	841	1,872
Mussoor, ...	5	87	3	334	429
Linseed and *Til*, ...	4	28	6	1	39
Sugar-cane, ...	56	...	...	185	211
Luhee, ...	2	36	1	5	44
Sirson, ...	...	5	5	18	28
Kussa, ...	26	...	...	...	26
Indigo, ...	124	...	...	...	124
Pandruh, ...	24	49	...	...	73
Peas, ...	52	...	...	9	61
Koonder, ...	4	...	...	...	4
Total, ...	2,450	1,961	620	4,895	9,926

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	AGRICULTURAL.						NON-AGRICULTURAL.						AGRICULTURAL.						NON-AGRICULTURAL.															
	Males.			*Females.*			*Males.*			*Females.*			*Males.*			*Females.*			*Males.*			*Females.*											
	Adult.	Minor.	Total.	Adult.	Minor.	Total.	Adult.	Minor.	Total.	Adult.	Minor.	Total.	Adult.	Minor.	Total.	Adult.	Minor.	Total.	Adult.	Minor.	Total.	Adult.	Minor.	Total.	Adults.	Adult Males.	Adult Females.	Children.	Boys.	Girls.	Total Males.	Total Females.	GRAND TOTAL.	
125	15,210	9,302	24,512	13,400	8,134	21,534	6,079	3,378	9,457	5,360	2,726	8,086	1,086	675	1,761	944	648	1,592	2,634	1,596	4,230	2,573	1,374	3,947	47,286	25,009	22,277	27,833	14,951	12,882	39,960	35,159	75,119	583

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	...	...	In parts of 100			0·02	39·24
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In parts of 100, ...	...	...	...	...	...	4·24	23·14
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Lahee, ...	2	36	1	5	44
Sirson, ...	...	5	5	18	28
Kussa, ...	26	...	...	...	26
Indigo, ...	124	...	...	...	124
Pandruh, ...	24	49	...	...	73
Peas, ...	52	...	...	9	61
Koonder, ...	4	...	...	...	4
Total, ...	2,450	1,961	620	4,895	9,926

Statement showing the Distribution of the cultivated Areas among the several Castes of Pergunnah and Tuhseel Aonla, Zillah Bareilly.

Number.	Castes.	Chhuppurbund Assamees cultivating in their own villages.			Cultivating as Pahees in other villages.			Total.		
		Assamees.	Holding.	Land in acres.	Assamees.	Holding.	Land in acres.	Assamees.	Holding.	Land in acres.
1	Thakoors, ...	955	803	7,827	775	714	5,128	1,730	1,517	12,955
2	Kisans, ...	1,015	1,005	7,545	983	955	3,070	1,998	1,960	10,615
3	Chumars, ...	785	715	5,634	175	115	2,195	960	830	7,829
4	Moraos, ...	813	714	2,534	576	514	722	1,389	1,228	3,256
5	Sweepers, ...	313	275	1,635	113	95	471	426	370	2,106
6	Aheers, ...	115	95	1,623	96	65	1,198	211	160	2,821
7	Brahmins, ...	445	403	1,609	393	302	1,198	838	705	2,807
8	Shepherds, ...	202	193	1,187	85	75	620	287	268	1,807
9	Koormees, ...	38	35	990	28	26	353	66	61	1,343
10	Khateeks, ...	55	45	752	39	32	124	94	77	876
11	Mewatis, ...	69	65	695	48	36	135	117	101	830
12	Syuds, ...	19	15	558	11	8	152	30	23	710
13	Sheikhs, ...	19	13	552	9	8	147	28	21	699
14	Dhobees, ...	102	83	508	85	79	354	187	162	862
15	Kayuths, ...	29	28	384	26	25	261	55	53	645
16	Weavers, ...	45	39	375	38	35	248	83	74	623
17	Bunniahs, ...	35	22	336	29	25	124	64	47	460
18	Byragees, ...	98	89	296	62	52	434	160	141	730
19	Bhoorjees, ...	22	21	328	15	14	333	37	35	661
20	Carpenters, ...	125	104	292	75	65	187	200	169	479
21	Barbers, ...	25	23	240	16	15	173	41	38	413
22	Lohars, ...	16	15	185	25	23	561	41	38	746
23	Kahars, ...	115	105	135	119	95	109	234	200	244
24	Mahajuns, ...	26	16	130	16	15	47	42	31	177
25	Korees, ...	30	25	41	20	16	46	50	41	87
26	Oilmen, ...	16	12	34	8	5	9	24	17	43
27	Pathans, ...	19	16	33	7	6	25	26	22	58
28	Potters, ...	9	8	28	9	9	40	18	17	68
29	Sonars, ...	6	5	27	5	4	33	11	9	60
30	Bhats, ...	11	8	21	5	4	16	16	12	37
31	Kulals, ...	16	12	22	...	...	...	16	12	22
32	Juts, ...	5	4	21	2	1	15	7	5	36
33	Bhistees, ...	11	9	20	2	2	9	13	11	29
34	Dalahras, ...	5	4	16	3	2	3	8	6	19
35	Guddees, ...	8	7	16	8	6	24	16	13	40
36	Dhoonahs, ...	5	5	12	9	8	23	14	13	35
37	Mirasees, ...	8	7	10	8	6	8	16	13	18
38	Ahbasis, ...	3	2	9	...	...	...	3	2	9
39	Tailors, ...	2	2	8	1	1	14	3	3	22
40	Ghosees, ...	4	3	8	2	2	5	6	5	13
41	Goojurs, ...	2	2	4	1	1	5	3	3	9
42	Dhanuks, ...	1	1	1	2	2	10	3	3	11
43	Mowhars, ...	1	1	2	...	...	...	1	1	2
44	Moguls, ...	...	...	...	2	2	3	2	2	3
45	Faqeers, ...	38	25	133	25	18	109	63	43	242
	Grand Total,	5,681	5,079	36,815	3,956	3,483	18,741	9,637	8,562	55,557

Statement showing Distribution of the cultivated Area in each Circle of Pergunnah Aonla, Tuhseel Aonla, Zillah Bareilly.

Number and Name of Circles.	*Seer* and *khudkasht* of proprietors in acres.	*Cultivated by Tenants with occupancy rights in acres.*			*Cultivated by Tenants-at-will in acres.*			Granted by *zemindar* rent-free.	Total cultivated area in acres.
		Land paying rent in kind.	Land paying money rents.	Rents.	Land paying rent in kind.	Land paying money rents.	Rents.		
				Rs. a. p.			Rs. a. p.		
Khadir Circle, 12 villages,... ...	601	2,055	5,465	19,751 12 9	553	1,097	3,078 9 9	212	* 9,983
Bangur Circle I., 65 ditto, ...	5,535	239	20,868	55,614 6 9	262	3,771	11,599 3 0	704	31,380
Ditto ditto II., 24 ditto, ...	1,273	619	5,235	15,136 0 3	392	1,101	3,019 7 0	312	8,932
Ditto ditto III., or Jungle, 22 ditto, ...	228	116	2,502	5,874 13 9	103	953	2,318 4 9	128	4,030
Total, ...	7,636	3,029	34,070	96,377 1 6	1,310	6,922	20,015 8 6	1,356	54,325

* 9,983 total cultivated area of the *khadir* circle, exclusive of 1,232 acres of Lodhipore and Sheopoori *nuzrana* villages.

Proposed Rates of Assessment for Pergunnah Suneha.

By S. M. Moens, Esq., *Settlement Officer, Bareilly, dated 25th February*, 1870.

Suneha is the most easterly of the *pergunnahs* which form *tuhseel* Aonla. It is bounded on the east by the Ramgunga, south-east by *pergunnah* Bullia, north and west by Aonla. It has been considerably altered since last settlement by the revision of boundaries. It now comprises 126 *mouzahs*, with an average area of 423 acres and 161 *muhals*, of which three are revenue free.

The *pucka* road from Bareilly to Budaon, the main road from Bareilly to Aonla, and the Rohilkhund Railway traverse it. As regards communications therefore it is more fortunately situated than almost any part of the district.

At last settlement the *jumma* of the *pergunnah* as now constituted, was fixed at Rs. 55,087, the Government share being taken at 70 per cent. of the assets. From Mr. Conolly's report it appears that the *pergunnah* was previously in a bad state, the revenue was realized with difficulty, and the balances were annually increasing. The expiring *jumma* is Rs. 56,484-7-9. The difference is explained thus :—

Increase.				
Resumed *maafees*, ...	Rs.	3,150	2	0
Alluvion, ...	„	783	6	0
Total Rs.		3,933	8	0
Decrease.				
By land taken for public purposes, ...	Rs.	27	0	3
Reduction of *jumma* for over-assessment, ...	„	809	0	0
Granted revenue free in reward, ...	„	1,700	0	0
Total Rs.		2,536	0	3

The net increase is then Rs. 1,397-7-9. The settlement on the whole was a light one and worked well. One village was sold at auction, and seven were farmed for arrears during the term of settlement. The transfer statement shews the following results :—

Description of Transfers.	Rights Transferred.					Area.			Government demand.			Transfer price.			Average per Acre.		
	Bis.	*Bis.*	*Cutch.*	*Tin.*								Rs.	a.	p.			
By private sale,...	453	18	7½	12½	6 Entire villages, 120 Bis. Rights in portion *Bgs. Bs. Chs. Ths.* 33 18 7½ 12½	9,246	0	20	9,628	15	5	70,944	13	0	7	10	9
Mortgage, ...	250	11	19½	½	2 Entire villages, 40 *Bis.* Rights in portion, 210 11 19½ ½	6,161	0	20	6,317	2	1	48,948	0	0	7	15	1
Auction by decrees of Court,	295	15	3	8½	5 Entire villages, 100 *Bis.* Rights in portion 95 15 3 8½	7,461	0	0	7,992	11	2	55,689	0	0	7	7	5

The average prices realized are lower than in the *pergunnahs* hitherto reported, as the greater number of sales took place in the early year of the settlement, before the great rise in the value of land had set in.

I do not however attach as much importance as I used to do to these transfer statistics. In the lowest assessed *pergunnah* in the districts, *viz.*, Crore, the proportion alienated was the highest; and in Serowlee, originally the most heavily assessed, the prices obtained were higher than those in Meergunge, though the land of the latter was better, and the assessment moderate. Where rents are in money, and the natural rise in rents is checked by custom or special stipulation in the *wajiboolurz* the prices fetched for land tell us nothing. Land worth Re. 1 per *b. c.* may be renting at 4 annas. This would at once affect the sale price. When the bar to enhancement is removed, the land at once rises in value, and the average price is altered.

The comparative statistics of the present and last survey are as follows, in acres:—

	At last Settlement.	By measurement.	Increase per cent.	Decrease per cent.
Total area, ...	52,851	53,337	·09	...
Lakhiraj, ...	4,519	2,888	...	36·
Barren, ...	4,022	4,606	14·5	...
Old waste, ...	17,332	7,558	...	56·3
New fallow, ...	1,034	190	...	81·6
Cultivated, ...	25,944	38,095	46·8	...
Total *malgoozaree*, ...	44,310	45,843	3·4	...

Cultivation is now 83 per cent. of the *malgoozaree*. The increase in cultivation is very heavy, and it is still going on. At last settlement, along the Aril and to the south of the, *pergunnah*, there were miles of *dhak jungle* which have since been cleared, and the remainder will to a certainty fall before the railway has been at work for two years. In the *khadir* of the Ramgunga also many villages; which at last settlement were almost waste, the greater part of the area being occupied by *tat* grass, are now richly cultivated, and rents are rapidly rising. The increase in cultivation in this circle is 89 per cent. on the area at last settlement.

The irrigation statistics are as follow, in acres:—

	Wet.	Dry.	Total.	Percentage of wet to total.
By new measurement,...	10,510	27,585	38,095	27·6
At last settlement, ...	8,254	17,690	25,944	31·8

The actual increase is 2,256 acres, or 27·3 per cent., though, relatively to the total cultivated area, there has been a decrease of 4·2 per cent. This is due to the great increase of cultivation in the *khadir* where irrigation is not required. I have no data for comparing the present with the old population; at present the density is 666 per *total* square mile. There are 2·8 cultivated acres per male adult agriculturist. This is the highest average yet obtained. In the other *pergunnahs* the results are:—

Pergunnah.	Density per square mile.	Cultivated acres per male adult agriculturist.
Crore, ...	316	3·2
Furreedpore, ...	460	3·4
Meergunge, ...	634	3·0
Seraolee, ...	564	3·9
Suneha, ...	666	2·8

Mahomedans are 17·2 per cent. of the whole population, or about one-sixth. Non-agriculturists are returned as 25·6 of the whole population. As usual these are chiefly Mahomedans.

The cultivated area is sub-divided into 10,166 holdings, with an average of 3·6, acres per holding. The chief cultivating castes are *Kisan*, *Thakoor*, *Morao*, *Brahmins* and *Chumar*. The staple crops are *mukka*, cotton, rice and *bajra* in the *khureef*, and

wheat in the *rubbee*. There is very little sugar except in the *khadir* lands, but the proportion of *dosahi* is unusually large. Out of a cultivated area of 38,095 acres, 10,806, or 28·3 per cent. were *dosahi* in the year of measurement. This explains at once the reason for the small proportion of cane. With the present high produce prices and money rents the three harvests of *nijkari* pay the *assamee* better, with less risk than the one crop of sugar-cane. The same thing was noticed in Meergunge, where also the soil is rich.

At last settlement the *jumma* was fixed at Rs. 55,087. The assessment was fixed at 70 per cent. of the assets, which gives a *jummabundee* of Rs. 78,696, including the assets of the waste. This gives an average of Rs. 3-0-6 per cultivated acre.

Mr. Conolly, in his report, mentions that in Suneha rents were generally from Rs. 2-12-0 to Rs. 3-8-0 per acre. The average *ryottee* rate by the *khuteounees* of 1275 Fuslee was Rs. 3-6-1 per acre. Notwithstanding that cultivation has increased in the *khalsa* villages nearly 47 per cent., and that many of the *khadir* villages are very much under-rented, taking the circles separately, the rates now run thus:—

	Rs.	a.	p.
1st Class *Bangur*, ...	3	15	3
2nd Class *do.*, ...	3	0	4
Khadir, ...	3	3	0

Applying these average rates to the cultivated *khalsa* area of each circle to eliminate seer, the result is a *jummabundee* of Rs. 1,26,868 giving without *siwai* and *banjur* receipts, an increase of Rs. 48,172, or 61·2 per cent. over Mr. Conolly's total *jummabundee*, including the extra items. But the increase in cultivation being 46·8 per cent., it is clear that rents have risen independently of the increase in the *jummabundee* due to extended cultivation. In many villages large enhancements have taken place since the *khuteounees* were attested, and the process will go on still more generally after the new *jummas* have been declared.

For assessment purposes I have divided the *pergunnah* into three circles. The first comprises the eastern villages along the Ramgunga. These are very fertile, but occasionally exposed to damage from floods, which, however, leave rich alluvial deposits behind them, ensuring an abundant *rubbee*. Irrigation is not required even for sugar-cane, and manure is but little used except for garden produce. Some of the land in this circle produces three crops a year, rice or *bajra* in the *khureef*, and wheat, succeeded by melons, in the *rubbee*. Rents are low at present, but have commenced to rise. In four villages of this circle they have gone as high as Re. 1 per *beegah kuchha surasuree*, or Rs. 6-10-0 per acre.

My average rates which I propose for sanction are:—

	Rs.	a.	p.	
Domut, ...	4	8	0	per acre.
Mutyar, ...	3	8	0	„ „
Bhoor, ...	3	4	0	„ „

These give an all-round rate of not quite Rs. 4 per acre. The present average rate by the *khuteounees* is only Rs. 3-3-0. Some villages, however, already pay higher than my average rates, which are the same as those I used for the exactly similar lands of Meergunge, on the other side of the Ramgunga. The same rates are also current in the *khadir* villages of the adjoining *pergunnah* of Bullia to the south, while higher rents have been readily accepted by the cultivators in commutation suits in the *khadir* of Aonla, to the north of this circle. I am therefore fully justified in concluding that my estimate is not an inordinately high one. On produce it is light.

My next circle is a strip running the whole length of the *pergunnah*, west of the 1st or *khadir* circle, and comprising 45 villages. These are all old *khadir*. At some remote period the Ramgunga has wandered over the whole of this tract, fertilizing it wherever it has passed: the level is low, water is near the surface, irrigation is not absolutely requisite, and is only practised to any extent in years of drought. This circle

is exceedingly fertile, most of the cultivators are *Kisans*, and the land is thoroughly well worked.

My proposed rent-rates are :—

Doomut,	...	...	...	Rs.	4	12	0	per acre.
Mutyar,	...	...	...	„	3	14	0	„ „
Bhoor,	...	...	...	„	3	6	0	„ „

They give an all-round rate of Rs. 4-5-3 per acre.

The *surasuree* rate by the *khuteounees* is Rs. 3-15-3 per acre, or six annas less than my estimate. Enhancements are going on; my rates are actuals, while the *khuteounee* average rates are pulled down by land held at low rents by relatives of the *zemindars* and other privileged cultivators.

My third and last circle comprises 59 villages to the west of the 2nd circle, between it and the Aril. This is the most backward tract in the *pergunnah*. To the south and south-west there are several villages with a very large proportion of their areas still unreclaimed from *dhak junglee*. Of the total waste land in the *pergunnah* more than two-thirds is in this circle. Naturally the abundance of waste has affected the rents. They were lower originally, and have increased less than in the last circle. The cultivators are chiefly *Thakoors*, lazy and quarrelsome to a degree. In this circle irrigation is required and practised. I therefore propose to use wet and dry rates as follows :—

	Wet.			Dry.		
	Rs.	a.	p.	Rs.	a.	a.
Domut, ...	4	8	0	3	10	0
Mutyar, ...	3	6	0	2	10	0
Bhoor, ...	3	4	0	2	6	0

For comparison with the other circles I give the soil-rates without reference to irrigation, resulting from the above.

Domut, ...	Rs.	4	0	0
Mutyar, ...	„	2	14	0
Bhoor, ...	„	2	10	0

The *surasuree* rate is Rs. 3-6-7 per acre. The *khuteounees* give Rs. 3-0-4. The result of my rates on the *pergunnah* is shown below :—

Circle.	*Jummabundee* by proposed rates.			Resultant *jumma* at 55 per cent.			Expiring *jumma*.		
	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.
I., ...	39,839	8	0	21,912	0	0	11,139	15	3
II., ...	56,327	2	0	30,976	0	0	23,966	0	6
III., ...	51,616	14	0	28,391	0	0	21,378	8	0
Total, ...	1,47,783	8	0	81,279	0	0	56,484	7	9

The resultant increase by revision is Rs. 24,795, or 43·8 per cent. The incidence on the main areas of the demand of last settlement and expiring demand, and the result by proposed rates, is shown thus :—

	On total area per acre.			On *malgoozaree* per acre.			On cultivated area per acre.		
	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.
IX., 1833, Settlement *jumma*, ...	1	0	8	1	3	10	2	1	11
Expiring *jumma*,...	1	0	11	1	3	8	1	7	8
Jumma by rates, ...	1	8	4	1	12	4	2	1	8

The resultant increase, notwithstanding the reduction of the Government share from 70 to 55 per cent. of the assests, is large, but by no means too heavy. In fact the assessment is a light one with reference to produce. It falls at much about the same rates as the revised assessment of Meergunge, which is considered an equitable one. A general map for all the *pergunnahs* of *tuhseel* Aonla will accompany the report on that *pergunnah*.

Jinswar, or produce Statement of Pergunnah Suneha, Tuhseel Aonla.

Name of Circles.	Total area in acres.	*Minhaee* area.	Culturable waste. *Bangur.*	*Baghi.*	New Fallow.	Cultivated area in acres.	Khureef Crops. Sugar-cane.	*Pundruh.*	*Mukka.*	Cotton.	Vegetables.	*Sunn.*	Rices.	*Churee* and *Jowar.*	*Bajra.*	*Moth.*	*Moong.*	*Mash.*	*Kodon.*	*Shawakh.*	*Urhur.*	*Lahee.*	*Singhara.*	Total *Khureef* Crops.
Khadir,	12,875	1,308	1,510	...	91	9,966	453	124	1,085	409	132	23	506	687	2,411	18	20	95	4	4	4	11	...	5,986
In parts of,	...	...	...	...	...	100	4·54	1·24	10·88	4·10	1·32	0·23	5·07	6·89	24·19	0·18	0·20	0·95	0·04	0·04	0·04	0·11	...	60·06
Bangur, I.,	17,012	2,737	1,239	...	27	13,009	102	51	1,179	782	335	174	1,733	911	2,628	30	...	32	4	15	4	6	...	7,986
In parts of,	...	...	...	...	...	100	0·79	0·39	9·06	6·01	2·58	1·33	13·32	7·01	20·20	0·23	...	0·25	0·03	0·11	0·03	0·05	...	61·39
Bangur, II.,	23,450	3,449	4,809	...	72	15,120	22	5	255	827	185	24	4,155	1,394	1,992	5	...	62	2	15	8	4	38	8,993
In parts of,	...	...	...	...	...	100	0·14	0·05	1·68	5·47	1·22	0·16	27·48	9·22	13·18	0·04	...	0·41	0·01	0·09	0·05	0·03	0·25	59·48
Total, ...	53,337	7,494	7,558	...	190	38,095	577	180	2,519	2,018	652	221	6,394	29·92	7,031	53	20	189	10	34	16	21	38	22,965
In parts of,	...	...	...	...	...	100	1·52	0·47	6·61	5·29	1·71	0·58	16·79	7·85	18·46	0·14	0·05	0·49	0·03	0·09	0·04	0·06	0·10	60·28

Name of Circles.	Rubbee Crops. Wheat.	Melons.	Barley.	*Gojye.*	*Bijrah.*	Gram.	*Musoor.*	Linseed.	*Sarson Doan.*	*Kandher.*	Total *Rubbee* Crops.
Khadir,	2,568	1	264	53	348	624	110	3	9	...	3,980
In parts of,	25·77	0·01	2·65	0·53	3·49	6·27	1 10	0·03	0·09	...	39·94
Bangur, I.,	4,211	...	233	16	151	361	21	...	5	25	5,023
In parts of,	32·37	...	1·79	0·12	1·16	2·78	0·16	...	0·04	0·19	38·61
Bangur, II.,	5,252	...	342	69	104	350	9	...	1	...	6,127
In parts of,	34·73	...	2·26	0·45	0·69	2·32	0·06	...	0·01	...	40·52
Total, ...	12,031	1	839	138	603	1,335	140	3	15	25	15,130
In parts of,	31·59	...	2·20	0·36	1·58	3·51	0·37	...	0·04	0·07	39·72

Detail of Dofuslee Crops. Crops.	Circles. 1. *Khadir,* I.	2. *Bangur,* I.	3. *Bangur,* II.	Total.
Cutcheana,	148	384	196	728
Wheat, ...	914	1,082	691	2,687
Melons, ...	168	21	5	194
Barley, ...	153	107	189	449
Gojye, ...	17	18	132	167
Bijrah, ...	186	679	641	1,506
Gram, ...	714	1,592	1,624	3,930
Musoor, ...	763	573	114	1,450
Linseed, ...	5	20	79	104
Sugar-cane,	147	53	12	212
Lahee, ...	10	3	2	15
Doan, ...	6	3	6	15
Total. ...	3,231	4,535	3,691	11,457

Census Statement of Pergunnah Suneha, Tuhseel Aonla.

Total number of *mouzahs* in the *pergunnah*.	HINDOOS.												MAHOMEDANS AND OTHERS.												TOTALS.									Number of persons to each square British statute mile of 640 acres each.
	AGRICULTURAL.						NON-AGRICULTURAL.						AGRICULTURAL.						NON-AGRICULTURAL.															
	Males.			*Females.*			*Males.*			*Females.*			*Males.*			*Females.*			*Males.*			*Females.*											
	Adult.	Minor.	Total.	Adult.	Minor.	Total.	Adult.	Minor.	Total.	Adult.	Minor.	Total.	Adult.	Minor.	Total.	Adult.	Minor.	Total.	Adult.	Minor.	Total.	Adult.	Minor.	Total.	Adults.	Adult Males.	Adult Females.	Children.	Boys.	Girls.	Total Males.	Total Females.	GRAND TOTAL.	
127	11,759	7,350	19,109	10,115	6,743	16,858	3,237	1,945	5,182	2,850	1,719	4,569	1,417	1,137	2,654	1,503	998	2,501	1,360	908	2,268	1,349	783	2,132	33,690	17,873	15,817	21,583	11,340	10,243	29,213	26,060	55,273	666

Statement showing the Distribution of the cultivated area among the several Castes in Pergunnah Suneha, Tuhseel Aonla.

Number.	Castes.	Chupperbund Assamees cultivating in their own villages.				Cultivating as Pahis in other villages.				Total.			
		Assamees.	Holdings.	Land in pucka beegahs.		Assamees.	Holdings.	Land in pucka beegahs.		Assamees.	Holdings.	Land in pucka beegahs.	
1	Kisans, ...	1,301	1,445	10,087	1	710	647	4,784	19	...	2,092	14,872	0
2	Moraos, ...	1,221	1,148	5,002	0	225	208	1,176	19	...	1,356	6,178	19
3	Chamars, ...	830	757	4,565	0	231	212	787	2	...	969	5,352	2
4	Thakoors, ...	776	686	6,826	4	456	323	4,124	8	...	1,009	10,950	12
5	Brahmins, ...	550	500	3,894	10	306	277	2,059	15	...	777	5,954	5
6	Kahars, ...	496	469	1,991	19	172	156	516	3	...	625	2,508	2
7	Pathans, ...	262	235	2,096	2	181	165	828	17	...	400	2,924	19
8	Aheers, ...	260	225	2,028	4	136	124	803	5	...	349	2,831	9
9	Barbers, ...	171	155	483	6	59	52	132	9	...	207	615	15
10	Sweepers, ...	128	134	465	12	28	26	66	18	...	160	532	10
11	Carpenters, ...	174	145	833	7	68	59	184	9	...	204	1,017	16
12	Shepherds, ...	125	127	532	6	26	21	79	8	...	148	611	14
13	Oilmen, ...	117	112	429	15	35	30	163	9	...	142	593	4
14	Sheikhs, ...	115	100	641	3	59	53	211	15	...	153	852	18
15	Kayeths, ...	113	87	428	16	115	104	524	13	...	191	953	9
16	Dhobees, ...	100	98	334	18	44	40	110	17	...	138	445	15
17	Khanzadahs, ...	90	83	390	19	14	7	50	11	...	90	441	10
18	Fakeer Mussulmans, ...	83	81	222	1	33	31	74	6	...	112	296	7
19	Blacksmiths, ...	88	85	295	12	24	21	83	0	...	106	378	12
20	Bilochs, ...	89	56	348	13	36	28	128	12	...	84	477	5
21	Weavers, ...	73	66	214	13	23	21	170	13	...	87	385	6
22	Mewatees, ...	68	52	515	1	52	42	339	10	...	94	854	11
23	Goshaeens, ...	35	51	308	2	30	28	155	15	...	79	463	17
24	Buneeahs, ...	35	37	327	1	23	25	225	0	...	62	552	1
25	Lodhas, ...	42	37	231	13	8	7	21	6	...	44	252	19
26	Tailors, ...	44	33	140	19	14	12	52	12	...	45	193	11
27	Mahajuns, ...	31	29	127	2	39	27	261	16	...	56	388	18
28	Dhooneeahs, ...	30	28	78	1	8	8	20	3	...	36	98	4
29	Kalals, ...	30	30	226	3	8	7	19	2	...	37	245	5
30	Curriers, ...	27	27	110	15	5	5	29	15	...	32	140	10
31	Khuttrees, ...	25	20	119	11	6	6	43	13	...	26	163	4
32	Gaddees, ...	18	17	164	6	2	2	4	3	...	19	168	9
33	Syuds, ...	13	11	52	18	7	7	31	3	...	18	84	1
34	Hunters, ...	12	8	55	14	...	...	...	...	...	8	55	14
35	Monihars, ...	12	8	42	16	...	...	...	...	...	8	42	16
36	Gardeners, ...	12	11	34	12	6	6	24	4	...	17	58	16
37	Abkars, ...	16	13	45	13	4	4	4	6	...	17	49	19
38	Bhoorjees, ...	19	22	50	2	12	12	45	2	...	34	95	4
39	Korees, ...	8	8	42	8	5	5	22	3	...	13	64	11
40	Bhistees, ...	6	6	15	2	1	1	10	5	...	7	25	7
41	Dhanuks, ...	5	6	32	15	5	5	10	17	...	11	43	12
42	Jats, ...	7	7	19	12	...	...	...	...	...	7	19	12
43	Koormees, ...	5	5	13	10	...	...	...	...	...	5	13	10
44	Goldsmiths, ...	4	4	27	16	7	6	19	3	...	10	46	19
45	Butchers, ...	4	4	11	10	4	4	14	17	...	8	26	7
46	Moghuls, ...	3	1	12	18	...	...	...	...	...	1	12	18
47	Dulehras, ...	2	3	15	9	3	3	4	9	...	6	19	18
48	Byragees, ...	3	3	13	18	1	1	2	9	...	4	16	7
49	Jugahs, ...	2	2	4	14	..	...	...	...	...	2	4	14
50	Dyers, ...	2	2	4	7	...	...	...	...	...	2	4	7
51	Ghosees, ...	2	2	4	0	...	...	...	...	...	2	4	0
52	Innkeepers, ...	1	1	...	13	9	9	35	11	...	10	36	4
53	Meerasees, ...	1	1	3	10	1	1	1	17	.	2	5	7
54	Dancing Girls, ...	...	...	...	...	2	2	2	7	...	2	2	7
53	Kumbohs, ...	...	...	...	...	4	5	22	13	...	5	22	13
56	Putwahs, ...	...	...	...	...	2	2	12	3	...	2	12	3
57	Surgeons, ...	...	...	...	...	1	1	1	9	...	1	1	9
58	Bhudrees, ...	...	...	...	...	1	1	0	15	...	1	0	15
59	Goojurs, ...	11	12	55	6	7	6	25	12	...	18	80	18
60	Bards, ...	12	11	18	3	7	5	13	9	...	16	31	12
	Grand Total, ...	7,709	7,306	45,038	1	3,265	2,860	18,539	17	...	10,166	63,577	18

Inclusive of muafee villages.

Statement showing Distribution of the cultivated Area in each Circle of Pergunnah Suneha, Tuhseel Aonla.

Number and Name of Circles.	*Seer* and *khudkasht* of proprietors in acres.	*Cultivated by Tenants with occupancy rights in acres.*			*Cultivated by Tenants-at-will in acres.*			*Total in Acres.*	
		Land paying rent in kind.	Land paying money rents.	Rents.	Land paying rent in kind.	Land paying money rents.	Rents.	*Zemindaree* rent-free lands.	Cultivated area in acres.
	Rs.			Rs. a. p.			Rs. a. p.		
Khadir Circle, ...	1,054	164	6,660	21,200 12 6	321	1,504	4,822 11 3	267	9,970
Bangur Circle, ...	1,755	40	9,079	35,350 8 0	170	1,620	6,935 4 6	338	13,002
Ditto 2nd ditto, ...	1,388	395	9,932	29,681 1 9	238	2,737	8,647 7 0	424	15,114
Total, ...	4,197	599	25,671	86,232 6 3	729	5,861	20,405 6 9	1,029	38,086

Proposed Rates of Assessment for Pergunnah and Tuhseel Beesulpore.

By S. M. Moens, Esq., B.A., *Settlement Officer, Bareilly.—Dated 14th September*, 1871.

1. The Tuhseel of Beesulpore is about the largest in the district. It lies to the extreme east: bounded to the north by Poorunpore and Phillibheet; to the west by Phillibheet, Nawabgunge, Furreedpore, and Jelalpore (in Shahjehanpore); to the south by Jelalpore, Negohee, and Powayn, all pergunnahs of Shahjehanpore; and to the east by Powayn and Poorunpore. It extends over an area of 366 square miles, and contains 456 mouzahs, or 535 muhals. The average area of each village is 513 acres. The average size in other pergunnahs is shown thus:—

	Acres.		*Acres.*
Nawabgunge, ...	444	Bullia, ...	482
Crore, ...	408	Seraolee, ...	680
Meergunge, ...	571	Kabur, ...	535
Aonla, ...	657	Ritcha, ...	570
Suneha, ...	423	Furreedpore, ...	383

2. It is traversed by the following rivers and streams:—

(1.) The Kunhout, which runs all along the border in a deep bed, with a narrow khadir on either side.

(2.) West of this, to the south of the pergunnah, are two small streams—the Khundue and the Kymoon,—neither of any importance, though they afford a little irrigation by lift to the villages through which they pass.

(3.) The Mala, a small stream taking its rise in the Bilheree forest in Phillibheet.

(4.) The Amerhi, which after receiving two small affluents—the Nurhura and Bhugeya—joins the Mala at Dhutea Runjeet. These two after their junction form:—

(5.) The Kutna, a stream of some size, and with a considerable body of water, which eventually joins the Deoha in the Shahjehanpore District.

(6.) West of the Kutna, and between it and the Deoha, is the Raputooa, at first a mere nullah, but after receiving the Chukreri Nullah it becomes a deep stream, joining the Deoha in the Shahjehanpore District.

(7.) West of this is the Deoha, a large river fed by hill streams, flowing with a strong and rapid stream into the Ramgunga. It has a wide bed, and causes considerable annual alterations in the area and soils of the villages on its banks by its erratic proceedings. There is a broadish khadir on either side, which will be noticed hereafter. During the rains it is navigable for boats of 400 maunds; as its bed is considerably below the level of the surrounding country, it is useless for irrigation purposes, and the lowness and sandy nature of its banks must ever prevent the construction of a dam.

(8.) West of the Deoha there are but few villages in Beesulpore. These, however, are traversed by the Looncha, a small affluent of the Deoha. Besides these rivers there are numerous large ponds and jheels dotted over the area, all of which are utilized to the utmost for irrigation purposes.

3. To the north-east, between the Mala and Kunhout, is a considerable tract of forest, a continuation of the Bilheree forest. It is mostly composed of stunted sâl, sheeshum, and occasionally huldoo trees. The forest is at present quite worthless for timber, and is only useful for the firewood. Even if cleared, it would not be worth much for cultivation, as the soil is bad and sandy, and there are no means of irrigation. It swarms

with neelgae and spotted deer, but the jungle is too dense to admit of much sport. The only way to get a shot is by stalking along the edge of the forest just before day-break, when the animals are returning from their depredations on the fields of the neighbouring villages. To the south of the pergunnah round Lohcha is a good deal of old jungle, all stunted dhak and thorny scrub, useless even for firewood, but in parts so dense as to be almost impenetrable.

4. The eastern part of the district along the Kunhout lies much higher than the remainder of the tuhseel, and in soil is of quite different character. The domut is high and sandy, like that of most parts of Furreedpore and Aonla. The mutyar is a stiff poor clay of low productive powers, and confined to the drainage lines between the ridges of domut or bhoor. All along the dhaia or high bank of the Kunhout is a line of irregular and exceedingly bad bhoor, growing only scanty harvests of the poorest khureef crops, such as bajra, oorud, or mote; most of the bhoor in the pergunnah is included in this tract. Soils of a similar character and equally poor are found in three other patches in the pergunnah :—

(1.) To the south, in seven villages on the Negohee border, running from Meerpore to Chuck Kurunpore.

(2.) To the south, but west of the Kutna, in seven villages round Lohcha, also on the Shahjehanpore border. The prevailing soil in these is a bad mutyar, locally known as khaput. These villages are still imperfectly reclaimed. In Lohcha it is difficult to find the cultivation,—it is so concealed within the jungle.

(3.) To the extreme west beyond the Deoha, on the Furreedpore and Nawabgunge border, in seven villages running from Khakooma to Sayer.

Besides the inferiority in soil, there is yet another disadvantage. The substratum is so loose and sandy as quite to prevent the construction of lao wells, and the small wells worked by churkhi give but little water, and soon fall in.

To the north of this Kunhout tract, from Seetulpore to Shergunge, are 21 villages in or in the vicinity of the forest. In these the soil is fairly good, except just on the high bank of the river; but rents are pulled down by the sparseness of the population, as compared with the amount of culturable land, by the damage to the crops caused by the jungle animals, and the consequent extra labor and expense in watching the fields. Besides these special drawbacks there is one other common to all the villages of this circle. The tract adjoins the thinly-populated jungle pergunnahs of Powayn and Poorunpore, where waste land is abundant, rents low, and the competition for cultivators great. This state of affairs keeps down rents, and checks enhancements in the conterminous Beesulpore tract.

5. To the west of this tract, with a marked drop in the level, runs a strip, four or five villages wide, of good land. The domut and the best mutyar here are of much the same value, and both alike grow fine sugar, wheat, and rice. The domut, or as it is here called dorus, is a good stiff loam; and in the rotation of crops, rice or shamakh, with a rubee crop of grain, take the usual place of bajra; only the mutyar in the lowest levels in the drainage lines, where the rice is exposed to damage from floods, is inferior; all the rest is good land; there is little or no real bhoor. Water is found at a depth of from four to ten feet; dhenkli wells are generally practicable, and, as a rule, in certain places in every village lao wells can be constructed. Here, as in the rest of Beesulpore, they are worked by men. It is a very rare circumstance indeed to see them worked by bullocks, as in the "Doab" or western Aonla. The superiority of this tract is due to its lying low between the Kunhout water-shed to the east, and that of the Kutna to the west, and receiving the drainage from both.

6. West of this, on both banks of the Kutna, is fine *sini acre* domut, as a rule splendidly worked; both the wheat and sugar are good; the mutyar is rather below the domut, and only exceptionally grows cane. West of this, up to the dhaia of the

Deoha, is an undulating tract, domut on the higher lands rising into bhoor in places, and mutyar in the lower. The domut is not quite as good as that on the Kutna and Deoha, and the mutyar is second-rate, and mostly unirrigated; it, as a rule, grows the coarse rices only. Beyond this tract, to the west, is the Deoha dhaia, all good land, as in the corresponding circle in Nawabgunge, but renting much lower, as in the Nawabgunge villages rents were only recently commuted from kind rates, while in Beesulpore the money rates are of old standing; below this is the Deoha khadir. This is of very variable character, according to the depth to which "kamp" or alluvial soil has been deposited by the floods. The best land of one year may be converted into the worst of the next, or *vice versâ*, by the annual inundations. There is great risk of damage to the autumn crops; and if the floods are late, the rubbee sowings are deferred, and the crops are proportionately thin; with light rains, however, the crops in both harvests are superb. It is clear from the above that money rents on soils or fields would not answer for a series of years; hence rents are usually by an average rate all round the village. As a whole, the Deoha khadir is hardly equal to that of the Ramgunga, though of somewhat similar character, and rather superior to that of the Kutna and Kunhout.

The chief irrigation dams are between Dhukwaruh and Puhargunge on the Kutna, and at Moondea Sereenuggur on the Mala. The former and largest is under the joint management of the zemindars of the two villages in whose area it is situated. They are responsible for its construction, which costs on an average Rs. 300 a year, and in case of loss by negligence are liable for damages to the zemindars of the villages which irrigate from the dam, and they share equally all profits after payment of expenses; some 60 villages take water by gools. The amount of their several contributions towards expenses and maintenance of the dam was fixed for each village by Mr. Boulderson in 1828, and have since then remained unaltered. It was provided that if the dam had to be made twice in one season, an extra cess should be paid by each village to the managers of three annas per rupee of the usual contribution. It was also provided that the then managers, the lumberdars of the contributing villages, the tuhseeldar, canoongoes, and Doobe Ramgholam, Raiees of Beesulpore, should constitute a dam committee, with power to revise from time to time the amount of contributions from each village, and decide disputes. The money profits to the managers amount to Rs. 300 or Rs. 400 per annum. The Moondea Sereenuggur dam on the Mala is a much smaller work; it is under the management of the Deorea zemindars, who take the water first for their own villages, and then sell the surplus water to other zemindars, taking great care to avoid giving cause for the growth of a *claim* to water by prescription. The management on the whole is bad; a great deal of the water is run to waste, and the remainder is not utilized to the utmost. In the villages irrigating from both dams the cultivators are charged either one anna for nijkaree, and two annas for cane irrigation per kuchha beegah, or a uniform cess of one and a half to two annas per kuchha beegah on the land irrigated.

7. Bareilly, Phillibheet, and Khoodagunge in Shahjehanpore are the chief markets for the surplus produce. There is only one town in the pergunnah, Kusbeh Beesulpore, which is built on land from six villages—Kusbeh Putti, Chousur Pundea, Gulurea, Khumerea Naundea, Doogipoor and Ghyaspoor. There are of course small village markets dotted over the pergunnah, but there is no large market capable of absorbing the surplus produce. The only roads are kuchha, and with the exception of those from Beesulpore to Bareilly and Phillibheet, are unbridged. The numerous streams, especially the Deoha and Kutna, offer the greatest obstacles to traffic, and after the rains have set in it is almost impossible for the loaded carts to get across the pergunnah. All these circumstances, but especially the want of good communications and a local market, tend to keep down rents.

8. The total area of the tuhseel in the year of measurement was 366 square miles, with a population, according to the census of 1865, of 196,839 souls, giving a

density of 537 per square mile. The density in other pergunnahs already reported on was as follows:—

Kabur, ... Sirsawan, ...	669		Seraolee, ...	564
			Nawabgunge, ...	541
Suneha, ...	666		Furreedpore, ...	460
Bullia, ...	647		Crore, excluding the city and cantonments.	416
Meergunge, ...	634			
Aonla, ...	583			

We have no accurate details of the former population on the present area; but Mr. Henby Clarke, writing in 1841, states that in 1836 a pergunnah census was taken, from which it appeared that the total population on the then area of 323 square miles was 107,706, giving a density of 333. The villages subsequently added were by no means densely populated, and were, as a rule, surrounded by old Beesulpore villages, so that we may accept the results on 323 square miles out of the present 366 as giving a rough average for the time. Even allowing for the imperfections and inaccuracies of the former census, and the natural increase during the 30 years between 1836 and 1865, it is clear that there must have been a considerable increase by immigration; indeed, if we exclude the eastern portion of the tuhseel, the remainder is now as densely populated as any part of the district.

Mahomedans form 9·5 per cent. of the total population. The number of the agricultural male adults is 51,804, the number of ploughs is 21,727, and the total cultivated area, including the revenue-free villages, is 153,172 acres. This gives 2·4 men per plough, and 7 acres as the plough area.

Appendix II. gives the distribution of the cultivated area of the pergunnah among the several castes of cultivators. This shows that Koormees, Brahmins, Kisans, Thakoors, Chumars, and Moraos are the largest cultivators; they hold among them 112,675 acres, while the remaining 40,497 acres are divided among 74 other creeds, castes, and occupations. Of the whole cultivated area, 124,882 acres are cultivated by chhuppurbund, and 28,290, or not quite 12 per cent., by pahi assamees.

9. The following shows the state of the tenures:—

Tenure.	Number of mahals.	Malgoozaree area.	Cultivated area.	Number of sharers.	Average number per mahal.	Average malgoozaree area per sharer.	Average cultivated area per sharer.
Zemindaree, ...	455	171,863	120,806	1,478	3·2	116·25	81·74
Perfect putteedaree, ...	42	17,922	14,620	284	6·8	63·10	51·47
Imperfect putteedaree, ...	38	18,869	15,567	382	10·05	49·39	40·75

In one village only are there as many as 27 sharers.

In 38 villages	Zemindaree, ...	16	There are more than 10 and less than 25 sharers.
	Perfect putteedaree, ...	6	
	Imperfect putteedaree,	16	
„ 496 „	Zemindaree, ...	439	There are less than 10 sharers.
	Perfect putteedaree, ...	36	
	Imperfect putteedaree,	21	

It is clear from the above that the tenures are extraordinarily simple. Besides the above 2,144 village zemindars, there are 71 holders of resumed revenue-free tenures, making the total number of proprietors 2,215. Of these, as shown by Appendix III., Thakoors, Brahmins, Koormees, and Kayeths form by far the greater proportion; of the Aheers, the former lords of the whole tuhseel, only 8 now hold land in it,—so completel were they swept out by the Junghara invaders.

Passing from proprietary to cultivating tenures, we have—

Cultivated by proprietors, ...	9,799	acres.
Baghs cultivated by their planters without rent, ...	678	„
Land granted rent-free by the zemindars in lieu of service.	5,251	„
Cultivated by tenants with rights of occupancy, ...	77,108	„
Ditto by tenants-at-will, ...	32,196	„

In almost all cases occupancy tenants also hold land as tenants-at-will. The cases are exceptional in which a tenant is a tenant-at-will for his whole holding.

10. The standard kuchha or local beegah is almost universally ¼th of the pucka beegah of 3,025 square yards, or 756¼ square yards. Originally, at the cession, the mode of measurement practised was with a rope containing 20 guttas or lengths of 33 inches each; in other words, of the same lengths as the chain now in use. A square of such measure forms the pucka beegah of record, containing 3,025 English square yards; but the custom had long obtained in this district of allowing only 18 of these lengths to the side of a beegah, when the land measured was cultivated with "nuqshi" or zubti crops, *i. e.*, with sugarcane, cotton, maize, safflower, tobacco, hemp, and vegetables; while 19 guttas constituted the side of a beegah under all other crops. The full 20 guttas were never given, but the maafeedars always claimed an exemption, though without apparent reason or proof.

The pucka beegah of the 18 gutta side contained 2,450¼ English square yards, and the beegah of the 19 gutta side 2,730 square yards.

These measurements prevailed till the year 1828, when the Collector (Mr. Shadwell Boulderson), seeing the confusion that was introduced into the accounts, and that a field with certain defined boundaries would be in some years nominally larger and in some less, according to the crop with which it was cultivated, directed that in future all lands should be measured with 19 guttas to the chain, and the beegah so gained was the one used in subsequent settlements till now. But in practice the pucka beegah was a mere name. All rents were calculated on the kuchha beegah, which in all past settlements was calculated in this pergunnah at 3·5 of the pucka beegah of 2,730 yards. This, however, involved a slight error, which was probably known at the time, though the ratio of 3·5 was adopted to facilitate calculations. The kuchha beegah as known to the cultivator is a square of 20 "qadams" each way, each qadam being 1½ guz elahi, or yards of 33 English inches to the yard. This makes a square of 756¼ English square yards, or exactly one-fourth of the pucka beegah of 3,025 yards. I have had the side of a beegah kuchha stepped by numerous mokuddums, and on measuring up found their measurement to agree almost to an inch with this. A careful examination and comparison of the village papers with present measurements brought out the same results. Traces of the old customs are still found in the practice of most of the zemindars, either to claim "dobeswee" or one-tenth extra rent on sugarcane, or to measure it up with 18 qadams, instead of 20 to the side of the beegah. It is needless to say that the extra rent so gained is never shown in the putwarees' papers; as far as the zemindars are concerned, this cannot be characterized as a fraud or extortion. It is only an attempt to maintain old customs against modern innovation, where measurements are made with a rope. However, numerous frauds are knowingly practised; for instance, measuring in the heat of the sun, when the rope shrinks, while the seer is measured when the dew is on the ground, and the rope has stretched; lengths are omitted, the measurer holds the rope over his shoulder with his hand at his waist, and so on, the result being always against the cultivators. The latter have now discovered their rights and their losses under the old system, and energetically claim to pay rent on the Government measurement.

11. The weights prevailing are uncertain, that is to say, perfect accuracy is not obtainable, because they and the scales used are so coarse; but the Beesulpore kuchha

maund is one-half the Bareilly pucka maund, or 53·55 lbs. avoirdupois, while the seer equals 1·3 lbs. The kuchha maund, like the kuchha beegah, is used in all agricultural transactions, and all purchases from or by zemindars and cultivators.

12. We can now proceed to the financial history of the pergunnah.

At last settlement the pergunnah comprised 407 villages, of which 7 were revenue-free; the areas were then in acres:—

Total.	Lakhiraj.	Barren.	Old waste.	Lately abandoned.	Cultivated.	Malgoozaree.
206,848	7,178	27,474	24,541	6,596	111,059	172,196

Of this area the highest jumma of the first settlement was Rs. 2,04,090; of the fourth settlement Rs. 2,61,517; and of the seventh, 1822, settlement Rs. 2,66,583. This sum Mr. J. Muir at last settlement first proposed to increase to Rs. 2,81,583, but on proceeding to detailed assessments he reduced his first estimate to Rs. 2,69,583. In the next year, with the sanction of the Board, he reduced his assessments to Rs. 2,49,711, or Rs. 16,872 less than the expiring demand. Most unfortunately the reasons for this great change of opinion are no longer ascertainable, as the printed settlement report for Beesulpore contains no information whatever either as to the state of the pergunnah, or the ground of assessment, or even the rates on which it was based. Subsequent events, however, amply justified the propriety of the more moderate views at last entertained by the Settlement Officer. His assessment appeared to be at first by no means illiberal. It gave a heavy reduction on the expiring demand, and an increase of only 22 per cent. on the jumma at the cession; still it was considered high by the people, and at first many of the zemindars refused to engage even at the lowered demand, though they subsequently withdrew their opposition. The settlement broke down almost immediately. The causes are given clearly in Mr. Henby Clarke's report of 1841, which I quote *in extenso*, as it gives a good, though perhaps slightly overdrawn, picture of the results of the famine of 1839 on the pergunnah. He says,—"The revision of the settlement of Beesulpore was effected in 1244 Fuslee, and a reduction of Rs. 16,872 allowed on a jumma of Rs. 2,66,583. There was no ground at the time to apprehend that the relief granted was insufficient, but from a series of misfortunes which have since occurred, the resources of the pergunnah have been so much reduced as to give rise to much solicitude in regard to the future. The revised jumma stands at Rs. 2,49,711, of which Rs. 1,50,000 are collected without difficulty, and the remainder with more or less trouble. In 1243 Fuslee, the year before settlement, there were 111,059 acres of cultivation, of which 10,000 acres were under sugarcane. The present estimate gives an increase of 1,000 acres in cane, but a falling off of 25,000 acres of rice and other products. The rubbee cultivation last season was estimated at 56,000 acres, rice 8,000 acres, and other khureef 10,674, making a total of 85,674 acres. The causes which have led to the deterioration of the pergunnah may be generalized under the following headings:—

"(1.) *Drought.*—In 1244 Fuslee the rains were unfavorable, and the rice crop was a partial failure. In 1254 Fuslee the drought was general and its effects too well-known to require comment. In 1246 Fuslee the rice crop was an average one, but the rubbee very scanty. In 1247 the rains were abundant, but, owing to their coming late, the rice sowings were very partial. In 1248 the rains were good, and the people obtained average crops. In the present year the rains have again fallen too late for extensive sowings. Thus out of six seasons there was one complete failure and two partial failures of the rice crop. I lay great stress on the rice, because it is one of the chief staples of the pergunnah; many villages are almost entirely dependent on it, and the cold stiff mutyar in which it is sown becomes so hard when dry as to render it unfit for growing any other kind of crop.

" (2.) *Famine and mortality of men and cattle.*—The drought naturally caused famine; to present its results in a tangible form, I beg to submit a pergunnah census taken in 1836, and one made last year (1840). In 1836 there were 107,706 souls, and in 1840 only 91,373, showing a positive falling off in round numbers of 16,000, in addition to the loss of the natural increase. The loss in cattle was ruinous; they were swept off by thousands; it being notorious that no less than 2,000 died in one large talooka only.

" (3.) *Decrease of stock from loss of capital.*—Many of the village barahs, malgoozars, and cultivators, who were in good circumstances, are said to be reduced to an impoverished state; heavy losses were incurred by all in fruitless attempts at irrigation, and in the seed grain which was purchased during the drought at very high prices.

" (4.) *Dacoities.*—There were 59 dacoities perpetrated in the single thannah of Beesulpore in the year 1837, and 452 prisoners seized and sent in for trial. The evils of dacoity were scarcely exceeded by those caused through the oppression and villany of the Thannahdar, who now holds two villages in the pergunnah under fictitious names.

" (5.) *Emigration.*—The above calamities, which were not felt with equal severity in Shahjehanpore, naturally tended to give a stimulus to the otherwise great temptation to emigrate to the adjoining Pergunnahs of Poorunpore, Subna, &c., of that district, where the assessment being lower, the rents are also much lighter than those of Beesulpore."

These facts, while they afford a satisfactory solution of the distress that prevails, point to the necessity of granting relief on a liberal scale.

The relief actually granted was of two kinds, temporary and permanent. The following statement exhibits the detail:—

Year.	Temporary.	Relief.	Permanent.	Decrease.
	No. of villages.	Amount.	No. of villages.	Amount.
		Rs.		Rs.
1248, ...	28	3,477	...	...
1249, ...	38	5,094	98	6,671
1250, ...		5,359		
1251, ...		929		
1252 to 1273, ...		27,079		

It must be noted that the amount of decrease in cultivation alluded to by Mr. Clarke was an estimate only by the tuhseeldar, and not based on actual measurements. The measures adopted give immediate relief to the villages affected by them, though it is a question whether the same results would not have followed a temporary remission of jumma for five years instead of a permanent reduction. In Beesulpore, as in Furreedpore and Aonla, I find that, as a rule, reductions were granted only to those villages whose zemindars were wealthy, influential men; while the villages which even at the present day seem over-assessed, received no reductions or relief where the zemindars were men of no substance. Since 1841 the jumma has been collected with regularity. The area of the pergunnah was greatly altered by revision of boundaries in 1852-53; villages with a jumma of Rs. 325 were transferred to the Shahjehanpore District, four with a jumma of Rs. 1,150 to Tuhseel Nawabgunge, two then assessed at Rs. 1,550 were transferred from Furreedpore, and 55 assessed at Rs. 32,754 from Tuhseel Jelalpore in Shahjehanpore to Beesulpore. The net area added according to the measurements of last settlement was as follows:—

Total.	Lakhiraj.	Barren.	Old waste.	New fallow.	Cultivated	Malgoozaree.
25,311	421	5,159	3,906	645	15,180	19,731

On the pergunnah, as it now stands, the jumma of last settlement was Rs. 2,80,995; the expiring jumma is Rs. 2,77,782-11-0. The difference is thus explained:—

Decrease.	Rs.	a.	p.	*Increase.*	Rs.	a.	p.
By reduction of jumma for over-assessment, ...	6,671	0	0	By resumption of maafee lands, ...	4,484	11	0
„ do. for diluvion, ...	1,812	0	0	Summary settlement for alluvion, ...	2,463	0	0
„ do. land taken up for roads, ...	6	0	0		6,947	11	0
„ rewards for mutiny services, ...	1,671	0	0	Net decrease, ...	3,212	5	0
	10,160	0	0		10,160	0	0

13. The following, according to the canoongoes' returns, shows the transfers of land during the settlement:—

	Entire villages.	Rights in portions.	Area in acres.	Jumma.
				Rs.
By private sale, ...	64	128	47,141	67,947
Sales in execution of decrees, ...	33	134	15,371	57,212
Mortgages still in force, ...	...	...	17,540	20,140

Thus it appears that about 27 per cent. of the area, bearing 44 per cent. of the jumma of the tuhseel, has permanently passed away from its former owners, besides which 4 villages have been sold, and 44 farmed for balances. This seems to show that the last settlement got along rather limpingly. I do not give the prices for which the land was sold or mortgaged, as the canoongoes' returns are imperfect and untrustworthy on this head, and to quote them would only lead to false inferences.

14. Next as to increase of cultivation and irrigation. The area of the last survey and by present measurement of the tuhseel as it now stands, including alterations by alluvion and diluvion up to 1870, are given in the table below. I should premise, however, that at last settlement baghs were entered as barren, and forest jungle as culturable waste. At the present measurement baghs have been entered under a separate heading, but as culturable, and forest under a separate heading, in "minhai," and the area stands thus:—

Total.	Barren.	Lakhiraj.	Jungle.	Old waste.	Bagh.	New fallow.	Cultivated.	Malgoozaree.
235,176	23,676	2,846	26,744	21,423	7,664	1,830	150,993	181,910

To admit of comparison, arranging the areas as at last settlement, we have the following results:—

	At last settlement.	By present measurement.	Increase per cent.	Decrease per cent.
Total area, ...	232,159	235,176	1·29	...
Barren, ...	32,633	31,340	...	3·9
Lakhiraj, ...	7,599	2,846	...	62·54
Old waste, ...	58,447	48,167	...	17·59
New fallow, ...	7,241	1,830	...	74·72
Cultivated, ...	126,239	150,993	19·60	...

The total area by the recent scientific Revenue Survey under Mr. Campbell is 233,657 acres, from which plane-table khusrah survey (completed before the Revenue Survey commenced) differs by 1,519 acres, or 65 per cent.

The increase of 19·60 per cent. in cultivation is considerable, but not enough by itself to cover the decrease caused by the reduction of the Government share of the rental from 66 to 50 per cent.

15. The following shows the irrigation at last settlement and at the present time :—

	Total cultivated area.	Wet area.	Dry area.	Percentage of wet to total cultivated.
Last settlement, ...	126,239	78,852	47,387	62·4
By re-measurement, ...	150,993	77,541	73,452	51·3

From this it would seem that irrigation has fallen off. I on the contrary believe that it has largely increased. I believe the solution of the problem is to be found in the fact that at last settlement all irrigable land was entered as irrigated, for in the old No. IV. Statement I find numerous villages entered with the whole cultivated area recorded as irrigated, which it never could have been in any single year. Hence the above table compares actual with possible irrigation. If we compare irrigable with irrigable we get the following results, which are much nearer the mark :—

	Total cultivation.	Irrigable.	Dry.	Percentage of irrigable to total.
By re-measurement, ...	150,993	118,374	32,619	78·
At last settlement, ...	126,239	78,852	47,387	62·

showing an increase of 16 per cent. in the percentage, instead of a decrease of 11. The fact is that, except in the worst *bhoor*, which bears a very small proportion to the total cultivated area, all land in Beesulpore is irrigable from wells, jheels, talaos, and streams, and in seasons of heavy rains there is much more water than is required: drainage cuts are more wanted than canals. The average depth to water all over the pergunnah is only 12 feet, and in most places below 10. The increase in population, as compared with the increased area brought under cultivation in the 35 years since 1836, has been so heavy that holdings must have largely decreased in size, necessitating closer cultivation, and consequently more irrigation, the means for which were everywhere at hand.

16. This conclusion is confirmed by an examination of the crop statement, Appendix IV. We find—

	Area.	Percentage to total cultivation.
	Acres.	
Under sugarcane, ...	12,475	8·2
„ land prepared for sugar, ...	13,129	8·7
„ cotton, sunn, and indigo, ...	6,388	4·2
„ vegetables, ...	1,128	0·7

Thus of zubtee crops only we have 21·9 per cent. of the total cultivation, while a further area of 25,744 acres, or 17 per cent., is under other dosahi cultivation, excluding vegetables and pundruh. All this implies careful cultivation. Excluding the eastern

circle, the rest of the pergunnah is as well cultivated, and produce is as good as in any part of the district. The eastern circle resembles most the greater part of Furreedpore, and the remainder of the pergunnah is very similar to Nawabgunge, or the southern part of Jehanabad. The crop statements give the following results :—

Zubtee, ...	33,120	acres,	or	21·9	per	cent.
Rice, ...	41,595	„	„	27·6	„	„
Other coarse khureef, ...	20,831	„	„	13·9	„	„
Wheat, ...	42,439	„	„	28·1	„	„
Barley, gojye, ...	6,352	„	„	4·2	„	„
Gram and bijra, ...	5,926	„	„	3·9	„	„
Other inferior rubbee, ...	730	„	„	0·4	„	„
Dosahi, besides baree and pundruh,	25,744	„	„	17·0	„	„

Sugarcane, rice, and wheat are then the great staples of Beesulpore. The proportion of sugarcane is larger than in any other pergunnah in the district, and the Beesulpore villages have always been noted for the excellence of their "rab." Of rice, some twenty different kinds are grown, but unjunan, bunkee, deolee, seorhee, and sathee are the most common : 686 trials in 1870 gave an average of 8 maunds 15 seers, Bareilly weight of paddy per pucka beegah, or 1435·28 lbs. per acre. The lowest produce was 3 maunds 18 seers per pucka beegah, the highest 17 maunds. The year, however, was an exceptionally good one for rice. Mr. Boulderson's experiments in 1828 and 1831 gave an average of 1,545 lbs. per acre in the former year, and 1,243 lbs. on 54 trials in the latter, the average on the two years being 1,394 lbs.—or very nearly the same as my own average. Of bajra, the next great khureef crop, both kinds of bajra and bajri are grown. My experiments in 1870 gave on 119 trials an average of 462·7 lbs. per acre, but the bajra generally was below the average in that season. Mr. Boulderson's experiments gave in 1828 502 lbs., and in 1831 356 lbs. per acre, and on the two years an average of 429 lbs. per acre are again very close to my results. This year I intend to continue experiments in bajra.

Press of other work in Chowmehla and Ritcha, and the absolute necessity of making experiments as to the rubbee produce in those pergunnahs where rents are taken entirely in kind, prevented me from making any experiments as to the rubbee produce in Beesulpore. I hope to supply the deficiency this year, and to give the result in my annual report.

17. We now come to the subject of increase of rent during the settlement, and to arrive at this it will be better to take the two assessment circles separately. Money rates have long prevailed in the pergunnah, though Mr. Boulderson commuted rents from kind to money in a considerable number of villages. The custom largely prevails of having separate rates for nijkaree and for sugarcane and vegetables. There is no separate rate for cotton, which is cultivated at ordinary nijkaree rates. There is an unusually large area held at privileged rates. This is mostly land in the cultivation of members of the family, or illegitimate branches of the family of former zemindars, or service land, or land held by pundits or purohits. The theory of Brahmins and other high caste men holding at privileged rates, because of their high caste, breaks down utterly here as in the other pergunnahs. It is their personal connection with the present or former zemindars, either by relationship or service, that has caused the low rates where they exist, not their caste. It is purely a personal, not a caste privilege. Practically, however, the zemindar under the system of crop-rent does get less rent in the long run from the higher castes, as being less industrious cultivators than the lower castes ; they have far less cane, and consequently when rents are converted from rates varying with the crop to all-round rates for any crop, their rates work out lower than those of the lower castes, as on the series of years on which the new "chukota" rates are calculated they have paid a lower total rent, in consequence of having had a smaller proportion of their land under cane. I have very rarely had the claim to hold at low rents in consequence of castes urged before me, though it is

frequently pleaded by mookhtears in enhancement cases in the Collectors' Courts. To discover the increase of rent, taking up the eastern circle first, we have the following :—

Cultivated area.

			Rs.
By former measurement, ...	32,571.	Jumma under IX., 1833, Settlement,	53,856.
By present do. ...	41,903.	Expiring jumma, ...	53,100.

The former jumma supposed a rental of Rs. 80,784, or Rs. 2-7-0 per acre, but the jumma covers also the assets of the waste which was entered at last settlement as 40,822 acres, of which the greater proportion was forest. Allowing for this, and observing the great prevalence of a rate of 6 annas per kuchha beegah, or Rs. 2-6-0 per acre, in the villages where it is allowed that rents have never been enhanced since settlement, I think we may assume that Rs. 2-6-0 per acre was the average rent-rate of last settlement on cultivation. The present average ryotee rate deduced from the attested khuteounees is Rs. 2-13-0 per acre, giving a difference of 7 annas per acre, or 18 per cent., though the cultivated area has increased 28 per cent. In the remaining circle we have,—

Cultivated area.

			Rs.
By former measurement, ...	93,668.	Jumma of IX., 1833, Settlement, ...	2,27,139.
By present do. ...	109,090.	Do. expiring, ...	2,24,682.

The settlement jumma presupposed an outturn of Rs. 3,40,708, or Rs. 3-10-2 per acre, and was considered moderate at the time. The present average ryotee rate is Rs. 4-1-1 on money and kind rates together. The increase is Rs. 6-11-0 per acre, or about 12 per cent. In both cases the actual increase on the parties affected has been very much more, as the land held at privileged rates, besides large areas of land held by ordinary assamees, has remained untouched by the enhancement.

18. To sum up, we have pointing to an increase in jumma—

A. (1.) A vastly increased population.

(2.) An increase of 19·60 in cultivation.

(3.) An increase in irrigation, and therefore in the better staples, of 16 per cent.

(4.) An increase in the area of sugarcane.

(5.) An increase in the average rent-rate of from 12 to 18 per cent.

(6.) The general increase of prices of agricultural produce.

B. On the other hand we have—

(1.) Evidence to show that in the first half of the fifth settlement the jumma pressed heavily, owing to a concurrence of unfortunate circumstances.

(2.) A reduction in the Government share of the rental from 66 to 50 per cent.

(3.) A want of good communications and local markets easy of access.

(4.) Great competition for cultivators, coupled with abundance of waste land and very low rents in the conterminous Pergunnahs of Powayn and Poorunpore.

Nos. 2 and 5 in A. slightly more than counterbalance No. 2 B., and the whole facts taken together point to a slight increase in the Government demand.

19. In my description of the physical geography of the tuhseel, I noticed that the eastern portion was markedly inferior to the remainder of the pergunnah. For assessment purposes, I have taken the natural divisions of the tract to form my circles ; circle I. being composed of the western, circle II. of the eastern villages, and the three detached chucks of the inferior land ; the two are demarcated by a red line on the accompanying map. The general difference between the villages in circle I. are covered by the soil rates and wet and dry rates, and the special difference in style of

cultivation, amount of population, caste, industry, &c., will be specially noticed and allowed for in the detailed assessment of each village. The pergunnah might have been broken up into four circles :—

(1.) The eastern villages, similar and detailed chucks.

(2.) The tract of good mutyar land to the west of these.

(3.) The good villages on the dhaia of the Deoha and Kutna.

(4.) The remainder of the pergunnah.

But increased experience has taught me that the multiplication of circles and rates is a great mistake, leading not only to extra work, but to error in assessment. The two circles I propose give sufficiently accurate classification for practical purposes, when combined with the knowledge of special circumstances of each village, derived from a careful local inspection.

20. Taking up the inferior circle first, the areas are :—

			Irrigated.	Irrigable.	Dry.	Total.
Total, ...	84,393 acres.	Domut, ...	15,706	8,161	2,734	26,601
Barren, ...	5,515 "	Mutyar, ...	1,413	2,458	2,026	5,897
Lakhiraj, ...	189 "	Bhoor, ...	2,880	3,009	2,102	7,991
Jungle, ...	26,744 "	Khadir, ...	857	256	301	1,414
Old waste, ...	7,103 "					
Baghs, ...	2,035 "					
New fallow, ...	904 "					
Cultivated, ...	41,903 "	Total, ...	20,856	13,884	7,163	41,903
Malgoozaree, ...	51,945 "					
Jumma at last settlement, ...	53,856 "					
Expiring jumma, ...	53,100 "					

The cultivated area is thus distributed,—

Seer,	...	...	... 2,803 acres.
Rent-free service land,	...	...	1,878 "
Cultivated baghs paying no rent,		...	160 "

Land held by tenants paying rent.	Land held at buttaee rents.	Land held at money rents.		
		Area.	Rent.	Average.
			Rs. a. p.	Rs. a. p.
Occupancy tenants, ...	2,592	23,761	67,932 3 0	2 13 9
Tenants-at-will, ...	2,160	8,549	22,958 12 0	2 11 0
Total, ...	4,752	32,310	90,890 15 0	2 13 0

The village papers give a rental on this area of Rs. 1,05,197, but this is much below the true present rental, as—

(1.) Much fictitious seer is entered, and all seer is entered at nominal rates;

(2.) There is a large amount of land rent-free in lieu of service rendered to the zemindar.

(3.) All resumed maafee lands are entered at their Government jumma, the jummabundee of these lands being omitted.

(4.) The produce of the buttaee land is grossly understated in almost all cases.

(5.) In some cases, though not as a rule, the money rents have been fraudulently understated.

Rating seer and service lands in each village at full rates paid by tenants-at-will for similar lands in the village, the resultant corrected rent-roll is Rs. 1,19,598, but some

lands are much under-rented: this error is corrected by my local estimate at inspection, village by village, the resultant total of which on the circle is Rs. 1,31,827.

I also had sorted out for each village and each soil all lands held by tenants at soil or "khetwar" rates. The result was—

		Acres.	Rent.	Average.	
Domut,	...	16,062	50,450	3 2 3	These rates give a rental of Rs. 1,21,771-4-6, and this may be accepted as a close approximation to the actual present rental.
Mutyar,	...	3,256	8,695	2 10 9	
Bhoor,	...	4,170	9,524	2 4 6	
Khadir,	...	1,100	3,295	3 0 0	

But some villages are absurdly under-rented. My soil estimates for each village, when totalled up, give the following results :—

Surasuree on soils,	...	Domut,	... 3 8 0	per acre.
		Mutyar,	... 2 13 0	
		Bhoor,	... 2 4 0	
		Khadir,	... 3 6 0	

and taking the produce of actually irrigated land to that of dry as 5 to 3, which is valuation rate taken by the people themselves, the above rates work out,—

	Irrigated.	Dry.
	Rs. a. p.	Rs. a. p.
Domut, ...	4 3 0	2 10 0
Mutyar, ...	4 0 0	2 6 0
Bhoor, ...	2 14 0	1 12 0
Khadir, ...	3 6 0	3 6 0

and these are the rates I propose to adopt for use. I have no difference in the rates of the "dry khadir," as practically it is all land lying closest to the river, where the soil is naturally so moist as not to require irrigation. My local estimates and the resultant rates are no mere shots, they are exactly the results, supposing each village were to be made the subject of a general suit under Act XIV. of 1863 for enhancement. All I have done is to bring up the lands which were palpably under-rented, with no valid reason discoverable for their being so treated, to the full rates prevailing in the neighbourhood for similar land under similar circumstances.

The surasuree rates give a resultant of ... Rs. 1,32,441
Wet and dry soil rates do. ... „ 1,33,131

The difference between these rates, or say Rs. 1,32,500 and Rs. 1,21,771, the result by the present actual soil rates, shows the extent of actual enhancement in rents which I contemplated: it amounts to Rs. 10,729, or 8·8 per cent., or about one anna four pie in the rupee on the rents now paid by actual cultivators. This may seem a very small amount, but looking to the low rates and competition for cultivators across the Khunout in Powayn and Poorunpore, it would be dangerous to reckon on a greater enhancement. The resultant jumma at 50 per cent., supposing no deductions, or that they are covered by the assets of the waste lands, would be Rs. 66,250, as against the expiring jumma of Rs. 53,100,—an increase of Rs. 13,150, or not quite 25 per cent, while the increase in cultivation has been 29 per cent., and in rents 18 per cent.

Classifying the areas as at last settlement, to admit of comparison, the incidence rates of the jumma of the last settlement on the then area, and the expiring and proposed jummas on the present areas, we have,—

	Amount.	Incidence on malgoozaree area.	Incidence on cultivated area.
	Rs.	Rs. a. p.	Rs. a. p.
Jumma of last settlement, ...	53,856	0 11 8	1 10 4
Expiring jumma, ...	53,100	0 11 4	1 4 3
Proposed do. at 50 per cent., ...	66,250	0 13 9	1 9 3
Do. do. with cesses at 55 per cent., ...	72,875	0 14 8	1 11 10

21. In the western or larger circle the areas are,—

		Soils.	Irrigated.	Other irrigable.	Dry.	Total.	Percentage to total cultivated.
Total, ...	150,783 acres.	Domut, ...	45,465	14,527	10,124	70,116	64·3
Barren, ...	18,161 „	Mutyar, ...	8,566	9,858	9,826	28,250	25·9
Lakhiraj, ...	2,657 „	Bhoor, ...	1,712	1,653	1,594	4,959	4·5
Old waste, ...	14,320 „	Khadir, ...	940	909	3,916	5,765	5·3
Baghs, ...	5,629 „						
New fallow, ...	926 „	...	56,683	26,947	25,460	109,090	...

			Rs. a. p.
Cultivated, ...	109,090	Jumma at the last settlement,	2,27,139 0 0
Malgoozaree, ...	129,965	Expiring jumma, ...	2,24,682 11 0

The cultivated area is thus distributed :—

Seer, ...	6,996
Rent-free service lands, ...	3,372
Cultivated baghs paying no rent, ...	483

Land held by rent-paying tenants :—

	At Buttaee rents.	At money rates.		
		Area.	Rental.	Average rate.
			Rs.	Rs. a. P.
Tenants with rights of occupancy, ...	7,167	69,941	2,92,026	4 2 9
Tenants-at-will, ...	3,127	18,004	69,427	3 13 7
	10,294	87,945	3,61,453	4 1 9

The village papers for 1276 Fuslee show a rental of Rs. 4,04,371. A comparison of the khusrah and attested khuteounee gives the following results on lands held by non-privileged cultivators at soil-rates or rates on single fields; all lands held at all-round rates or "chukota" being omitted :—

Soil.	Acres.	Rent.	Average rate.	Percentage to total.
		Rs. a. p.	Rs. a. p.	
Domut, ...	42,328	1,88,230 1 3	4 7 0	65·8
Mutyar, ...	15,238	56,820 1 0	3 11 8	23·7
Bhoor, ...	3,085	8,098 0 0	2 10 0	4·8
Khadir, ...	3,644	12,670 5 0	3 7 8	5·7
	64,295	2,65,818 0 0	4 2 1	

The rates applied to the areas of each soil in the circle give a rental of Rs. 4,49,563.

The average money-rate, Rs. 4-1-9, on all land held by assamees at money-rates, applied to the total cultivated area of the circle, gives Rs. 4,48,292. Rating seer in each village at the rate paid by tenants-at-will for similar land, and rating service and buttaee lands at the average rates paid in money by cultivators for similar lands in the vicinity, gave a total of Rs. 4,44,587; about 4,45,000 therefore may be fairly assumed as the present actual rental on the tract.

My local estimate, made after inspection, for each village, totalled up for the tract, amounts to Rs. 4,83,000. The excess over Rs. 4,45,000 represents the actual enhancement in rent in under-rented villages fairly claimable, and which might be decreed under the provisions of Acts X. of 1859 and XIV. of 1863, and the sum which would be obtained by enhancing privilege to full rates. My local estimates similarly give the following soil rates:—

Domut,	4	14	0	per acre
Mutyar,	3	12	0	,,
Bhoor,	2	10	0	,,
Khadir,	3	10	0	,,

which work out on irrigated and unirrigated areas as follows:—

	Wet.	Dry.
	Rs. a. p.	Rs. a. p.
Domut, ...	5 10 0	3 6 0
Mutyar, ...	5 0 0	3 3 0
Bhoor, ...	3 8 0	2 2 0
Khadir, ...	3 10 0	3 10 0

The latter are the rates on which I place most reliance for assessment, and on which the estimated rental in the English No. 3 Statement will be calculated. They give a gross rental of Rs. 4,78,600. The gross prospective enhancement in rent then which I contemplated is the difference between this sum and Rs. 4,45,000, which amounts to Rs. 33,600, or 7·5 per cent., or one anna two pie in the rupee all round.

I have purposely taken a very light estimate of prospective enhancement of rent in this tuhseel, as all the country to the east and north is in want of thews and sinews to stub the waste, while the Turaeen Pergunnahs under Government management, with their almost nominal rents, and exceedingly tender treatment of the cultivators, offer great and unprecedented inducement to the Beesulpore tenants to emigrate. Anything approaching rack-renting would drive them off the land by hundreds. The resultant land revenue in this circle from my estimate at 50 per cent. would be Rs. 2,39,300, giving an increase on the expiring demand of Rs. 14,618, or 6·5 per cent. The increase in cultivation since last settlement has been 15,422 acres, or 16·4 per cent., and the increase in rents 12 per cent. The average increase by the revision of settlement in the Government demand over the rest of the district has been 25 per cent. But Beesulpore was the first pergunnah settled by Mr. J. Muir. It was heavily assessed by him in the first instance, and the experience gained by him of the results of high assessments turning him in the other direction, led to his very light settlements in the rest of the district. The Senior Member of the Board, who was, I believe, an assistant in the district at the time, will probably remember how heavily the assessment pressed on the tuhseel, and how difficult it was to get in the revenue.

Classifying the areas as at last settlement for the sake of comparison, the incidence rates of the jumma of last settlement on the then area, and of the expiring and proposed jummas on the present area, contrast as follows:—

	Amount.	Incidence on malgoozaree area.	On cultivated.
	Rs.	Rs. a. p.	Rs. a. p.
Jumma of IX., 1833, settlement, ...	2,27,139	1 14 7	2 6 9
Expiring jumma, ...	2,24,682	1 12 10	2 0 11
Proposed jumma at 50 per cent., ...	2,39,300	1 14 8	2 3 1
Do. with cesses, or at 55 per cent., ...	2,63,230	2 1 10	2 6 6

22. The result of the proposed assessment on the whole tuhseel, as compared with the jummas of last settlement and the expiring jumma, is as follows :—

	Rs.	Rs. a. p.	Rs. a. p.
Jumma of last settlement, ...	2,80,995	1 7 4	2 3 7
Expiring jumma, ...	2,77,782	1 6 0	1 13 5
Proposed do. at 50 per cent., ...	3,05,550	1 7 6	2 0 3
Do. at 55 per cent., including cesses,	3,36,105	1 10 8	2 3 7

Arranging the areas in the proper method, *i. e.*, entering baghs as culturable and forest as minhai, in order to compare with other pergunnahs, the incidence rates are,—

	Rs. a. p.	Rs. a. p.
Of the estimated new jumma at 50 per cent.,	1 10 10	2 0 3
Jumma at 55 per cent., ...	1 13 5	2 3 7

The incidence by the sanctioned rates for the adjoining pergunnahs of Nawabgunge to the west and Poorunpore to the east are :—

	On malgoozaree.	On cultivated.
	Rs. a. p.	Rs. a. p.
Nawabgunge, ...	1 14 2	2 2 6
Poorunpore, ...	0 5 9	0 15 9

Beesulpore closely resembles, or is rather superior to, Nawabgunge, but the rates are pulled down by the east circle adjoining Poorunpore; excluding this, and comparing the remainder of the tuhseel, in which the incidence rates are Re. 1-14-8 on malgoozaree, and 2-3-1 on cultivation, the rates closely agree with those of Nawabgunge. With Poorunpore no comparison is possible, as the latter is a purely jungle tract.

BAREILLY SETTLEMENT OFFICE,
The 14*th September* 1871.

S. M. MOENS,
Settlement Officer.

(COPY.)

Census Statement of Pergunnah Beesulpore, Zillah Bareilly.

Number of Mouzahs.	Area in square British statute miles of 640 acres each.		POPULATION.																TOTAL.									
			HINDOOS.								MAHOMEDANS AND OTHERS.																	
			Agricultural.				*Non-agricultural.*				*Agricultural.*				*Non-agricultural.*													
			Males.		Females.		Males.		Females.		Males.		Females.		Males.		Females.											
	Total.	Cultivated.	Adult.	Children.	Adult.	Children.	Adult.	Children.	Adult.	Children.	Adult.	Children.	Adult.	Children.	Adult.	Children.	Adult.	Children.	Adult.	Adult Males.	Adult Females.	Children.	Boys.	Girls.	Males.	Females.	Total.	Number of persons to each square British statute mile of 640 acres each.
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	25.	26.	27.	28.	29.
456	366·50	224·16	48,914	28,896	40,354	25,959	11,910	6,467	9,936	5,551	2,890	1,862	2,476	1,523	3,624	19,30	2,804	1,743	122,908	67,338	55,570	73,931	39,155	34,776	106,493	90,346	196,839	537

BAREILLY SETTLEMENT OFFICE,
The 7th August 1871.

S. M. MOENS,
Settlement Officer.

Statement showing the distribution of the cultivated area among the several Castes of Tuhseel Beesulpore, Zillah Bareilly.

Numbers.	Castes.	Chhuppurbund Assamees cultivating in their own villages.			Cultivating as pahee from other villages.			Total.		
		Assamees.	Holdings.	Land in acres.	Assamees.	Holdings.	Land in acres.	Assamees.	Holdings.	Land in acres.
1	Koormees, ...	7,104	6,337	30,021	2,916	2,721	7,064	10,020	9,058	37,085
2	Kisans, ...	5,057	5,072	18,014	1,919	1,634	4,921	6,976	6,706	22,935
3	Brahmins, ...	5,173	4,985	20,949	2,038	1,968	4,774	7,211	6,953	25,723
4	Thakoors, ...	2,277	2,117	9,251	875	817	2,193	3,152	2,934	11,444
5	Chumars, ...	2,634	2,528	6,557	1,080	1,043	1,515	3,714	3,571	8,072
6	Moraos, ...	2,021	2,036	6,609	411	411	807	2,432	2,447	7,416
7	Lodhas, ...	1,123	1,104	4,226	371	352	633	1,494	1,456	4,859
8	Aheers, ...	789	749	3,308	288	298	476	1,077	1,043	3,784
9	Barbers, ...	981	973	2,074	195	193	345	1,176	1,166	2,419
10	Kahars, ...	906	906	1,855	301	295	475	1,207	1,201	2,330
11	Puthans, ...	347	346	1,770	175	122	472	522	468	2,242
12	Carpenters, ...	513	571	1,826	212	214	383	725	785	2,209
13	Oilmen, ...	599	592	1,621	196	199	311	795	791	1,932
14	Kayeths, ...	333	296	1,260	212	209	626	545	505	1,886
15	Lohars, ...	426	423	1,713	133	138	144	559	561	1,857
16	Puseeahs, ...	576	562	1,584	167	167	181	743	729	1,765
17	Dhobees, ...	672	658	1.517	228	221	244	900	879	1,761
18	Dhanuks, ...	431	461	1,045	58	51	98	489	512	1,143
19	Potters, ...	315	302	878	115	94	182	430	396	1,060
20	Kulals or Kulwars, ...	156	168	588	50	48	338	206	216	926
21	Mewatees, ...	141	126	861	21	21	42	162	147	903
22	Sheikhs, ...	166	171	543	70	71	165	236	242	708
23	Shepherds, ...	393	423	698	110	120	202	503	543	900
24	Behileeahs, ...	185	159	680	17	17	28	202	176	708
25	Fuqeers, Mahomedan, ...	322	322	559	117	116	135	439	438	694
26	Goojurs, ...	154	159	301	67	61	282	221	220	583
27	Gooshaeens, ...	114	114	446	56	54	113	170	168	559
28	Bhoorjees, ...	162	169	433	56	56	75	218	225	508
29	Beldars, ...	89	89	354	49	47	79	138	136	433
30	Weavers, ...	146	141	362	44	46	62	190	187	424
31	Bunniahs, ...	107	111	228	43	44	126	150	155	354
32	Sweepers, ...	152	152	279	21	21	40	173	173	319
33	Byragees, ...	74	74	176	39	38	55	113	112	231
34	Khuteeks, ...	81	82	204	7	7	15	88	89	219
35	Bhats, ...	95	98	179	47	46	40	142	144	219
36	Tailors, ...	105	109	189	26	26	28	131	135	217
37	Pandeys, ...	20	17	147	8	7	8	28	24	155
38	Mahajuns, ...	45	38	109	8	8	24	53	46	133
39	Raeens, ...	12	12	123	4	3	7	16	15	130
40	Sonars, ...	25	42	111	17	15	16	42	57	127
41	Syuds, ...	12	11	21	25	30	105	37	41	126
42	Dhoonahs, ...	217	211	449	59	62	86	276	273	535
43	Munhars, ...	35	37	90	15	14	21	50	51	111
44	Malees, ...	54	54	109	23	22	32	77	76	141
45	Moguls, ...	31	30	59	9	13	35	40	43	94
46	Christians, ...	...	...	...	8	8	84	8	8	84
47	Achareys, ...	34	24	56	23	23	21	57	47	77

Statement showing the distribution of the cultivated area among the several Castes of Tuhseel Beesulpore, Zillah Bareilly.—(concluded.)

Numbers.	Castes.	Chhuppurbund Assamees cultivating in their own villages.			Cultivating as pahee from other villages.			Total.		
		Assamees.	Holdings.	Land in acres.	Assamees.	Holdings.	Land in acres.	Assamees.	Holdings.	Land in acres.
48	Nutts, ...	21	20	43	15	13	25	36	33	68
49	Piracs, ...	9	8	60	2	2	2	11	10	62
50	Fuqeers, Hindoo, ...	13	12	20	8	8	24	21	20	44
51	Butchers, ...	30	30	37	5	5	7	35	35	44
52	Dyers, ...	19	18	29	6	6	10	25	24	39
53	Josees, ...	17	17	25	16	16	13	33	33	38
54	Khuttrees, ...	4	4	23	5	5	12	9	9	35
55	Tumbolees, ...	7	14	16	4	5	18	11	19	33
56	Korees, ...	17	17	28	5	5	6	22	22	34
57	Sadhs, ...	9	9	11	6	8	18	15	17	29
58	Barees, ...	7	8	24	4	4	4	11	12	28
59	Murasees, ...	10	11	27	...	...	...	10	11	27
60	Bhuteearahs, ...	6	5	16	7	7	6	13	12	22
61	Bunsphors, ...	4	3	14	1	1	2	5	4	16
62	Dancing girls, ...	4	7	12	2	2	2	6	9	14
63	Hulwaees, ...	5	6	11	1	2	2	6	8	13
64	Khatees, ...	4	4	11	...	...	...	4	4	11
65	Putwahs, ...	6	6	9	1	1	1	7	7	10
66	Radhas, ...	5	5	7	4	2	2	9	7	9
67	Chhenpees, ...	4	4	7	1	1	1	5	5	8
68	Jats, ...	...	...	...	5	5	6	5	5	6
69	Mochees, ...	1	1	4	4	4	2	5	5	6
70	Moojawurs, ...	7	7	7	...	...	...	7	7	7
71	Eunuchs, ...	2	4	3	2	2	3	4	6	6
72	Kulawunts, ...	3	3	1	6	6	4	9	9	5
73	Ghosees, ...	...	...	...	1	1	5	1	1	5
74	Jogees, ...	2	2	3	1	1	1	3	3	4
75	Khoomrahs, ...	...	...	...	1	1	2	1	1	2
76	Konjrahs, ...	2	2	1	2	2	1	4	4	2
77	Bishnous, ...	...	...	...	1	1	2	1	1	2
78	Sadhoos, ...	1	1	1	...	...	...	1	1	1
79	Masons, ...	...	...	...	3	3	1	3	3	1
80	Bhistees, ...	1	1	1	...	...	...	1	1	1
	Total, ...	35,624	34,390	124,882	13,048	12,306	28,290	48,672	46,696	153,172

Bareilly Settlement Office,
The 13th September 1871.

S. M. MOENS,
Settlement Officer.

Statement showing the Caste of Proprietors in Tuhseel Beesulpore, Zillah Bareilly.

Number of Khalisa Sharers.	Number of Muqruqadars.	Thakoors.	Brahmins.	Koormees.	Kayeths.	Bunniahs.	Puthans.	Kisans.	Sheikhs.	Kulwars.	Syuds.	Goojurs.	Christians.	Raeens.	Khuttrees.	Kumboos.	Telees.	Fuqeers.	Goosharens.	Moguls.	Mewatees.	Aheers.	Lodhas.	Kulals.	Carpenters.	Gudureahs.	Byragees.	Bunjarahs.	Moorsos.	Total.
2,144	71	618	498	277	249	81	80	68	47	46	40	34	24	22	20	18	15	12	11	11	10	8	8	5	4	4	2	2	1	2,215

BAREILLY SETTLEMENT OFFICE,
The 24th August 1871.

S. M. MOENS,
Settlement Officer.

Transfer Statement showing the Castes of Transferers in Tuhseel Beesulpore, Zillah Bareilly.

Number of Mouzahs.	Caste.	By Private Sales.		By Civil Court Decrees.		For Balance of Government Revenue.		For Rebellion.		Village still held by former Proprietors.		Remarks.
		Entire Villages.	Rights in portion.	Entire Villages.	Rights in portion.	Entire Villages.	Rights in portion.	Entire Villages.	Rights in portion.	Entire Villages.	Rights in portion.	
1	Thakoors, ...	12	46	10	49	...	...	...	1	48	43	
2	Brahmins, ...	10	27	2	24	...	...	...	...	30	24	
3	Kayuths, ...	12	15	6	17	1	...	1	5	45	15	
4	Koormees, ...	11	10	5	14	...	...	...	...	19	16	
5	Kisans, ...	...	9	3	10	...	...	...	...	3	11	
6	Bunnias, ...	4	3	3	3	...	...	...	...	...	1	
7	Christians, ...	4	...	2	2	...	...	...	...	2	...	
8	Sheikhs, ...	2	2	...	2	...	...	...	...	8	3	
9	Puthans, ...	2	2	1	4	...	...	1	1	3	3	
10	Aheers, ...	...	6	...	3	...	...	...	...	...	4	
11	Lodhas, ...	...	3	...	1	...	...	...	1	...	1	
12	Syuds, ...	2	...	...	1	...	...	1	2	4	...	
13	Gooshaeens, ...	1	1	...	1	...	...	...	...	2	1	
14	Moguls, ...	...	1	...	1	...	...	...	1	...	...	
15	Mewatees, ...	2	...	...	...	...	...	...	...	3	...	
16	Kumboos, ...	...	...	...	...	...	...	3	...	1	...	
17	Khuttrees, ...	...	...	...	...	...	...	1	1	...	...	
18	Goojurs, ...	...	...	...	...	...	...	...	...	4	1	
19	Talees, ...	1	...	...	...	...	...	...	...	3	...	
20	Kulwars, ...	...	1	...	1	...	...	...	...	3	1	
21	Kahars, ...	...	1	...	1	...	...	...	...	...	...	
22	Mooraos, ...	...	1	...	...	...	...	...	...	...	1	
23	Carpenters, ...	...	...	1	...	...	...	...	...	...	...	
24	Byragees, ...	...	...	...	...	...	...	...	...	1	...	
	Total, ...	64	143	33	134	1	...	7	12	179	125	

Bareilly Settlement Office,
The 24th August 1871.

S. M. MOENS,
Settlement Officer.

Jinswar or Crop Statement of the Villages in Circles I. and II., Pergunnah and Tuhseel Beesulpore, Zillah Bareilly.

	Circles.	I.		II.		Total.
	Total area in acres.	150,783		84,393		235,176
Minhai.	Barren.	18,161		5,515		23,676
	Lakhiraj.	2,257		189		2,846
	Total.	20,818		5,704		26,522
Malgoozaree.	Old waste jungle.	14,320	In part of 100	7,103 26,744	In part of 100	48,167
	Baghs.	5,629		2,035		7,664
	New fallow.	926		904		1,830
	Cultivated.	109,090		41,903		150,993
Khureef Crops.	Sugarcane.	10,044	9·21	2,431	5·80	12,475
	Pundruh.	9,413	8·63	2,395	5·72	11,808
	Rices.	32,767	30·04	8,828	21·07	41,595
	Cotton.	4,736	4·34	1,325	3·16	6,061
	Bajrah.	7,011	6·43	6,235	14·89	13,246
	Mottee.	425	0·37	292	0·70	717
	Charri and jowar.	1,798	1·65	495	1·18	2,293
	Mash.	628	0·58	780	1 86	1,408
	Codrom.	2,564	2·35	1,560	3·72	4,124
	Vegetables.	850	0·78	278	0·66	1,128
	Chyna.	11	0·01	34	0·08	45
	Indigo.	47	0·04	60	0·14	107
	Mukka.	78	0·07	15	0·04	93
	Sunn.	136	0·12	84	0·20	220
	Moong.	39	0·04	12	0·03	51
	Mundwa.	54	0·05	12	0·03	66
	Shamakh.	54	0·05	10	0·02	64
	Til.	27	0·02	18	0·04	45
	Total Khureef.	70,682	64·79	24,864	59 34	95,546
Rubbee Crops.	Wheat.	30,154	27·64	12,285	29·33	42,439
	Gram.	2,796	2 56	1,703	4·06	4,499
	Barley and Oats.	1,686	1·55	861	2·05	2,547
	Gojye.	1,987	1·82	1,818	4·34	3,805
	Linseed.	216	0·20	146	0·35	362
	Bijra.	1,257	1·15	170	0 40	1,427
	Peas.	74	0·07	18	0·04	92
	Musoor.	235	0·22	30	0 07	265
	Melons.	3	...	8	0·02	11
	Total Rubbee.	38,408	35·21	17,039	40 66	55,447
Dofuslee Crops.	Wheat.	517		208		725
	Gram.	12,910		3,524		16,434
	Barley.	564		235		799
	Gojye.	337		118		455
	Pundruh.	980		346		1,326
	Linseed.	2,861		959		3,820
	Bijra.	995		250		1,245
	Vegetables.	850		277		1,127
	Peas.	110		24		134
	Musoor.	936		105		1,041
	Chyna.	86		5		91
	Total.	21,146		6,051		27,197

BAREILLY SETTLEMENT OFFICE,
The 12th September 1871.

S. M. MOENS,
Settlement Officer.

(COPY.)

Statement showing Prices Current in Tuhseel Beesulpore in lbs. Avoirdupois per Rupee.

Year.	Average of Rices.	Bajra.	Wheat.	Gram.	Barley.	Remarks.
1244 F. S., ...	...	...	73·7	73·7	93·8	
1245 „ ...	68·3	53·6	53·6	67·0	67·0	
1246 „ ...	132·7	120·6	93·8	107·2	134·0	
1247 „ ...	111·5	87·1	80·4	93·8	127·3	
1248 „ ...	123·3	83·7	73·7	90·4	107·2	
1249 „ ...	134·0	120·6	107·2	134·0	147·4	
1250 „ ...	134·0	100·5	113·9	120·6	174·2	
1251 „ ...	159·4	127·3	113·9	127·3	147·4	
1252 „ ...	148·7	113·9	103·8	117·2	160·8	
1253 „ ...	147·4	107·2	93·8	100·5	140·7	
1254 „ ...	171·5	120·6	107·2	147·4	187·6	
1255 „ ...	195·6	160·8	120·6	187·6	227·8	
1256 „ ...	178·2	120·6	120·6	134·0	...	
1257 „ ...	247·8	...	107·2	147·4	...	
1258 „ ...	160·8	...	67·0	77·0	120·6	
1259 „ ...	174·2	...	67·0	67·0	120 6	
1260 „ ...	135·3	100·5	93·8	107·2	120·6	
1261 „ ...	127·5	93·8	100·5	107·2	147·4	
1262 „ ...	166·5	160·8	120·6	140·7	174·2	
1263 „ ...	154·1	127·3	107·2	113·9	147·4	
1264 „ ...	154·1	67·0	87·1	107·2	160·8	
1265 „ ...	154·1	93·8	113·9	120·6	160·8	
1266 „ ...	147·4	100·5	93·8	93·8	127·3	
1267 „ ...	80·4	67·0	60·3	60·3	80·4	
1268 „ ...	60·3	40·2	48·6	40·2	60·3	
1269 „ ...	131·5	100·5	93·8	120·6	107·2	
1270 „ ...	147·4	147·4	120·6	134·0	160·8	
1271 „ ...	71·5	53·6	63·6	83·7	93·8	
1272 „ ...	73·7	46·9	73·7	60·3	93·8	
1273 „ ...	80·4	73·7	60·3	67·0	80·4	
1274 „ ...	60·9	46·9	60·3	67·0	80·4	
1275 „ ...	111·2	80·4	73·7	87·1	100·5	
1276 „ ...	53·6	33·5	64·9	40·2	53·6	

Bareilly Settlement Office,
The 12th September 1871.

S. M. MOENS,
Settlement Officer.

Proposed Rates of Assessment for Pergunnah Chowmehla, Tuhseel Buheree.

By S. M. Moens, Esq., *Settlement Officer, Bareilly.*

Chowmehla is the most northerly of all the Bareilly *pergunnahs.* It is bounded to the north by Rooderpore and the Rampore territory; to the west by Rampore; to the south by Sirsawan, Kabur, and Ritcha; and to the east by Ritcha. It comprises 134 villages, and covers 93 square miles, giving an average of 443 acres per village. The average size in the other *pergunnahs* already reported was—

Nawabgunge,	...	...	...	444 acres.
Crore,	...	...	...	408 „
Meergunge,	...	...	...	571 „
Aonla,	...	...	...	657 „
Suneha,	...	...	...	423 „
Bullea,	...	...	...	482 „
Seraolee,	...	...	...	680 „
Furreedpore,	...	...	...	383 „
Sirsawan and Kabur,		...	...	535 „
Ritcha,	...	...	...	570 „

The name of the *pergunnah* is of very modern origin, having been bestowed by the Rohilla Nawab Fyzoollah Khan, who first made the *pergunnah* a separate one, composed of villages from four "muhals," *viz.*, Rooderpore, Ritcha, Sirsawan, and Kabur. It has always been notorious for its unhealthy climate, and in the northern portion for the badness of the water. In the southern and western tracts the inhabitants only suffer severely from malarious fever at the end of the rains, the rest of the year being tolerably healthy. All along the north of the *pergunnah* the climate is very bad all the year round, as sufficiently attested by the yellow countenances and the swollen stomachs of the inhabitants, and their comparatively small families. As a natural consequence the population is scanty, and rents low. The malaria appears to be caused by excessive damp. The rains are usually more abundant than in other parts of the district owing to the neighbourhood of the forest, which skirts the foot of the Himalayas. The spring levels are high, and the water is near the surface all the year round.

2. The population according to the last census (see Appendix I.) was 43,452 souls, giving a density of 468 per square mile. The south and west villages are exceedingly well populated, but to the north the average is lower than in any part of the district. The specific population in other *pergunnahs* already reported on is shown in the following table:—

Kabur and Sirsawan,	...	669	Seraolee,	...	... 564
Suneha,	...	... 666	Nawabgunge,	...	... 541
Bullia,	...	... 647	Furreedpore,	...	... 460
Meergunge,	...	... 634	Beesulpore,	...	... 537
Aonla,	...	... 583	Crore, excluding the city and Cantonment,	...	... 416

Of the population at last settlement there is no account on record. Mahomedans, who are chiefly Bunjarahs, form 28·6 per cent. of the total population. The number of the agricultural male adults is 10,164, the number of holdings 8,608, and of ploughs 4,669. The total cultivated area is 43,884 acres, giving an average of 4·3 acres per man, five acres per holding, and 9·4 acres as the average plough area.

Appendix II. gives the distribution of the cultivated area among the several castes of cultivators. *Koormis, Chumars, Jats, Ahirs, Moraos, and Dhobees* are the chief cultivating castes. They hold between them 26·148 acres or 59 per cent. of the entire cultivated area, while the remaining 17·736 acres are divided among no less than fifty other castes. 40·229 acres are cultivated by *chhuppurbund assamees*, residing in the villages in which they cultivate, and 3,655 acres by *pahis*.

3. The following shows the state of the proprietary tenures :—

		Number of Muhals.	*Number of Shares.*
Zemindaree,	...	181	482
Perfect Putteedaree,	...	1	4
Imperfect Putteedaree,	...	1	13

Puthans, Kayeths, and *Brahmins* are the chief landowners (see Appendix III.).

This is a remarkable contrast to the state of affairs in 1802, when Mr. Seton, Agent to the Governor-General at Bareilly, writes thus :—" When, in the year 1802, I proceeded to the *pergunnah* of Chowmehla for the purpose of concluding the settlement, I found that there were no *zemindars* whatever,—the late Nawab, Fyzoolla Khan, of whose territory it formed a part until the year 1794, when it was transferred to the dominions of the Nawab Wazeer, having abolished all *zemindaree* rights whatever, and declared himself *zemindar* of the country," and again in a letter dated 9th November, 1802, he says :—" It may perhaps appear singular that in discussing the subject of the settlement, I have not once alluded to *zemindari* or *maliks*. The fact is that in his *pergunnah* there are not at present any persons of that description." In his letter dated 15th December, 1802, he says :—" As the climate and the water of Chowmehla are so extremely unwholesome, that during part of the year none but the old residents in the *pergunnah* whom time has familiarized with the climate, preserve their health there, it occurred to me that that particular and minute local superintendency, which the success of a *kham* management absolutely demands, would be attended with insurmountable difficulties, I have thought it best to divide the greater part of it into small farms, and to rent them to respectable persons whose constitutions by a long residence in the *pergunnah* are acclimatized to it."

It seems rather a comical notion to modern Settlement Officers, that strength of constitution should confer a claim to admission to settlement, and Mr. Seton, who so solemnly states the facts which determined his choice of candidates, unfortunately has not left on record a description of the method by which he ascertained the relative goodness of constitution of competitor of life, nor whether length, breadth or thickness of body carried the day. From these extracts it appears that all the modern proprietors in Chowmehla are men of our own creation.

The cultivating tenures are as follows :—

	At kind rates in acres.	At money rates.		
		Area.	Rent.	Average.
				Rs. a. p.
Cultivated by tenants with rights of occupancy, ...	23,098	845	4,058	4 12 7
Ditto by tenants-at-will, ...	17,185	758	4,247	5 9 7
Service, &c., lands granted rent-free by the *Zemindars*.	681 acres.			

In the whole *pergunnah* there are only two villages, Tanda and Fyzabad, where money rents are customarily paid on the whole holding, whether under *nujkaree* or *zubtee* crops. The remainder of the land held at money rates is either *zubtee* or land cultivated by *Moraos* with vegetables and garden crops, and is therefore no guide whatever to the average value of *buttaee* lands under ordinary crops.

4. The local *kuchha beegah* is universally one-fourth of the *pucka beegah* of 3,025 square yards, and the local maund and seer are respectively two-fifths of the Bareilly *pucka* maund and seer; in other words the local

Maund,=42·844 lb, avoirdupois.
Do. seer,=1·071 „ „

5. For irrigation the *pergunnah* is very favorably situated. It is intersected by the Deorunean, the Dhora, the Kitcha, the Khulwa, the Beror, the Burae, the Mudmi and the Bygool rivers; of these the Dhora, Kitcha and Bygool are the chief; the Khulwa falls into the Kitcha, while the Berar, Burae and Mudmi all join the Bygool. There are besides numerous small nullas which carry water in the rains; a glance at the map which accompanies this report shows that the whole country east of the Kitcha between it and the Deorunean will be completely irrigated by canal in course of construction. The tract between the Kitcha and Berar west of the Kitcha is irrigable from canals already existing. There remains only the tract west of the Berar, between it and the Bygool. This is very well irrigated by a system of dams on the Burae, the Berar and the Bygool at Chachail Terha and Khumuria; of these the Chachail dam is the largest and irrigates ten villages from two large gools, the western running through Bhynseah, Lesoee, Bunjurea, between Khumurea and Boojhia, falling into the Bygool south of Khumurea; and the eastern which runs through Gulerea, Etowa, Seeathere Laloo Nugla and Khizurpore, falling into a nulla which communicates with the Bygool. The water supply in these rivers is fully adequate, but they all issue from the Rampore territory, and the supply is liable to be intercepted by the Nawabi people. Hitherto there have not been many disputes, and those which have arisen have been easily settled; but I think some definite arrangement should be concluded with the Nawab which may afford a simple rule for the distribution of water hereafter.

All over the *pergunnah* the soil is naturally moist, and water is near the surface; hence water is far less valuable than in the Doab on the drier portions of these Provinces. In ordinary seasons the monsoon and Christmas rains give sufficient water to the crops, and even cane is grown in many places without artificial irrigation. *Bhyoa* sowings of rice of course must be irrigated, but the *putiha* or ordinary sowings require as a rule no irrigation unless the rains are unfavorable. The *rubbee* usually receives a sufficient supply from the Christmas rains. Hence artificial irrigation is required only to insure the crops against risk from drought and not to ensure its production. In most villages too *kuchha* wells are easily practicable, as the spring level is high, but at present they are only used by the *Moraos* for their garden cultivation, as the unhealthiness of the climate and the grain rents indispose the cultivators to undergo the trouble of irrigation from wells, when the *zemindars* will receive the greater part of the benefit. In ordinary years with average rains as far as my experience has gone, the produce in the unirrigated land is as good as in those which have been artificially irrigated. With rains above the average the crops are light, owing to floods and excessive saturation of the soil. It is only in seasons of drought that there can be a general demand for canal water. The best proof I can offer for the statement, which will most certainly not find favor in the eyes of the Canal Department, is the following.—Taking all the villages in which the irrigation, whether from canals or rivers, is under the management of the Canal Department, the area fairly irrigable from those sources and which will be rated as irrigable in assessment, is 17,456 acres.

Taking the three years 1273-1275 Fuslee, including two years of drought, the area actually irrigated according to the Canal *Jummabundees* only averaged 6,173 acres, while in the favorable year of 1277, the irrigated area was only 3,746 on the four years, two good and two bad: the average is 5,590 acres or 32 per cent. of the irrigable area. This shews how unreliable are estimates of canal profits based on the irrigable area or the amount of water available, so long as the returns are taken by crop acreage rates on the area actually irrigated. I rate the whole irrigable area at increased

rates for revenue purposes, as the whole area is insured against drought, and can afford to pay higher rates than land not so protected. I of course except those lands which have always received water, and which, as the natives say, have become "*akarhai*," so used to water that without it they will hardly give a crop, or at least only one much inferior to the average of lands, which have always been unirrigated.

6. The soils in the *pergunnah* are chiefly *domut* and *mutyar*. There is very little *bhoor* and what there is, moist sandy land in the beds of some of the rivers, and very different in character to the high dry *bhoor* of the southern *pergunnahs*. The *domut* is chiefly along or on the *dhaias* or high banks of the rivers, the *mutyar* is in the intervening village. There is not very much difference in value between the two as sugarcane is not much grown in the *pergunnah*, and the rice which is the staple crop in the *mutyar* is of good quality, and nearly equal in value to the wheat of the *domut*; the difference being counterbalanced by the *bajra*, *oorud* and other inferior *khureef* grains occasionally grown in rotation in the latter.

7. The Crop Statement, Appendix IV., shows that *mukka*, rice, and *jowar* in the *khureef*, and wheat in the *rubbee*, are the staple crops of the *pergunnah*. Sugar-cane and cotton are also grown to a small extent. The sugarcane is nearly all what is known as *kharik*, that is to say grown without a preliminary *khureef* fallow, the ground being for that season occupied by rice and *jowar*, or *shamakh*. It is not a very paying crop in this *pergunnah*, as owing to the great moisture, the juice becomes thin and watery, and consequently fetches low prices.

Sugarcane, cotton, *mukka*, vegetables, and melons are cultivated at money rates; all other crops, except in two villages, at *buttaee*, or occasionally *kunkoot*. Hence a careful inquiry into the average produce of the chief staples became necessary, the results of which will be given when I come to the subject of rates.

8. The centre of the *pergunnah* is traversed by the high road from Bareilly to Nynee Tal, and a wide *kuchha* road runs from Buheree to Chachait. This latter, however, is in a neglected condition, unbridged in most places, and so cut up as to be almost impassable for carts. In the eastern portion of the *pergunnah* there are no roads, and the country is so cut up by a network of old water-courses, *nullahs* and streams, that it is impossible to traverse it after the rains have set in except on an elephant. There is no large local market capable of absorbing the surplus produce: of course there are small "pents" here and there in the large villages, but these do little more than supply the demand for small articles brought by pedlars from Bareilly for sale. The grain trade is all in the hands of *bunjarahs*, who convey their purchase on ponies to Ritcha, Huldwanee and Bareilly for re-sale.

9. We can now proceed to examine the financial history of the *pergunnah* since the cession.

As we have seen above at the first settlement, Mr. Seton found that there were no *zemindars*, all proprietary rights having been destroyed by Nawab Fyz-oollah Khan. He divided off the country into farms of two or three villages each, and took engagements for these either from the *mokuddums*, or where they declined to engage, from respectable residents with strong constitutions. For some villages he could obtain no offers whatever; these he held *kham*. Of the 134 villages composing the *pergunnah*, 113 were *khalsa*, 21 were revenue free. Mr. Seton formed his settlement on a progressively increasing *jumma* for the three years ending with 1805, when the Government demand amounted to Rs. 27,030.

In the *pattahs* given to those who engaged it was stated that "at the commencement of 1213 Fuslee, when the new settlement is to be made, whatever profits shall be found to have taken place, two-thirds thereof shall be added to the present *jumma* to form the new annual demand; for the years next ensuing at the expiration of the second triennial period. Whatever further increase may appear to have taken place in the

annual produce of the land, three-fourths thereof shall be added to the *jumma* of the preceding period, in order to form that of the four years next ensuing; at the expiration of this last period, which will complete the tenth year, a permanent settlement of the land at such *jumma* as may appear equitable will be concluded." At the second settlement the demand was raised to Rs. 29,160, at the third to Rs. 60,001.

In 1820, or at the fourth settlement, the *jumma* was increased to Rs. 63,066; but heavy balances accrued, and at the settlement under Regulation VII., 1822, the demand was reduced to 51,042, at which sum the *pergunnah jumma* stood when the Regulation IX., 1833, settlement was commenced. Mr. Muir, the Settlement Officer, found that the out standing balances of revenue were Rs. 1,22,655, of this sum he could recover only Rs. 1,447, the rest was wiped off as irrecoverable. This was exclusive of Rs. 14,868 of *tuccavee* balances, most of which money had in all probability, according to the practice of those days, gone to pay revenue. He found the resident *malgoozars* and cultivators in distress, and the condition of the *pergunnah* "anything but improving." He reduced the *jumma* to Rs. 44,531, being a decrease of Rs. 5,511 on the expiring demand, and Rs. 18,535 or nearly 30 per cent. on the demand of the fourth settlement. He based his assessment on an assumed general revenue-rate on cultivation of Re. 1-8-0 per acre. His soil rental rates were Rs. 2-12-0 per acre on *domut* and *mutyar*; Rs. 2 on *bhoor*; as in the other *pergunnahs*, however, assessed by him he paid little attention to soil rates. He says—"The rent and revenue rates on soils are only useful as a check on the general revenue-rate, which from all the experience I have had I consider a much more safe and useful standard for the purposes of assessment." I fail to perceive how an avowedly unreliable set of rates could be usefully employed as a check on "safer and more useful," rates. Practically he used his all-round revenue rates only as a standard, and made rough allowances in assessment where the old *jumma* had been collected with difficulty. The revenue rate of the *jumma* actually assessed by him fell at 1-11-4 per acre. His assessments were a little unequal; but, considering things, were wonderfully good and worked well. They were neither so heavy as in Beesulpore, nor so exceedingly and unnecessarily light as in Crore and Nawabgunge. The areas, as they then stood, as compared with those by the persent measurement, are given in the following table in acres:—

	At last settlement.	By new measurement.	Increase per cent.	Decrease per cent.
Total area, ...	58,011	59,408	2·4	...
Lakhiraj, ...	11,867	429	...	96·6
Barren, ...	4,245	6,949	49·9	...
Old waste, ...	13,125	7,237	...	44·8
New fallow, ...	2,850	909	...	68·1
Cultivated, ...	25,924	43,884	69·2	...
Malgoozaree, ...	41,899	52,030	24·1	...

The increase in cultivated and *malgoozaree* areas is very large. It is due to the resumption of the 21 villages revenue free at settlement and of many detached patches of revenue-free land. The actual increase by extension of cultivation has been in the old *khalsa* villages, 9,664 acres or 37·2 per cent. in revenue free village, 844 acres or 11·3 per cent. At the IX. 1833 settlement, 21 villages were revenue free, of these 16 known at the Chachait *ilaqa* belonged to Rajah Sheoraj Singh of Kasheepore, to whose ancestor Rajah Lall Singh, they had been granted revenue free in 1793 A. D. In 1861-62, the *ilaqa* came into possession of Government by exchange for village in the Bijnour District and was summarily settled at a *jumma* of Rs. 13,118. The remaining five villages were resumed on the death of their holders, and assessed at Rs. 1,192

and detached revenue-free patches were assessed at Rs. 918. The *jumma* of the *pergunnah* now stand at Rs. 59,579 being Rs. 15,048 or 33 per cent. in excess of the amount at last settlement. The following statement explains the increase in the *jumma* :—

Increase by resumed *maafees*, Rs. 15,228,

Decrease remission for over assessment, ...	134	0	0	
Ditto in reward, ...	37	0	0	180
Ditto for land taken up for a road, ...	9	0	0	
Net increase, ...				15,048

one village has been sold and six farmed for balances during the currency of the settlement.

The following shows transfers of proprietary rights by private sale or auctions in execution of decrees since last settlement, including cases where the same lands have been sold more than once :—

	Total area in acres.	Jumma.	Sale price.	No. of years purchase.	Average price per acre.
	Rs.	Rs.	Rs.		
By Private Sale, ...	51,878	49,314	5,39,589	10·9	13·6
Under Civil Court Decrees,	9,381	9,247	94,345	10·2	10·05
Total, ...	61,259	58,561	6,33,934	10·8	10·3

The above is the statement as made out by the canoongoes from their records; but I cannot say that I attach the least value to it.

To ascertain the increase in irrigation, we have only to the areas at last settlement for the 113 villages then subject to assessment. In the revenue free village, the old No. IV. Statement gives no detail of the cultivated area. Comparing the former and present areas of these 113 villages we have in acres :—

	Irrigated area.	Dry area.	Total cultivated.	Percentage of wet to total.
At last settlement, ...	9,515	16,409	25,924	36·7
By remeasurement,... ...	16,929	18,359	35,288	47·9
Increase in acres, ...	7,414	1,950	9,364	·0
Per cent., ...	77·9	11·9	36·1	·0

The increase in the remaining 21 villages could not have been so great, as 16 of them, forming the Chachait *ilaqa* have precisely the same means of irrigation now as then, and are entirely untouched by the new system of canals, and the cultivated area has only increased by 5·8 per cent. In the remaining five villages formerly revenue-free cultivated area has increased by 30 per cent., but even now only 20·3 per cent. are irrigated; we may assume, therefore, in these also, that as yet irrigation has not varied materially since settlement.

Taking the same 113 villages, of the 16,929, acres now irrigable 15,429 are so irrigable from canals, deducting the 9,515 acres before irrigated, there remain 7,414 acres of new irrigation due to the canals, to which may be added 343 acres more for Retwara and Oonaee Maqruqa, making in all 7,757 acres of new irrigation in the *pergunnah* due solely to the canals. The total area irrigated in the whole 134 villages in the *pergunnah* is now 22,429 acres, of which 277 acres from wells.

15,772 from canals;
6,380 from river and jheels.

22,429.

10. For assessment I have divided the *pergunnah* into two circles. The first comprises the southern and western portions. The second, the north or more unhealthy and thinly populated villages. In both, sugarcane, cotton, hemp, *mukka*, *churri*, melons, and vegetables are grown, the average rate in money paid being per cent.

	Sugarcane.	Cotton.	Melons and hemp.	*Churri* and *mukka*.	Vegetable.
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Circle I, ...	8 0 0	6 0 0	4 0 0	3 3 0	6 8 0
Circle II, ...	6 6 0	5 0 0	3 0 0	2 8 0	5 12 0

All other crops are paid for by *buttaee*, usually by *kunkoot* or appraisement of the standing crop. A series of experiments carried on during three years in the *pergunnah* gave the following averages of produce of the chief *nikaree* crops per acre in Bareilly maunds and decimals, and in lbs avoirdupois :—

Crops.	Chowmehla produce per acre in Bareilly maunds in seers.	lb avoir. per acre.
Rice, ...	11·200	1,199
Jowar,...	9·000	964
Bajra,...	6·600	707
Wheat, ...	8·650	926
Barley, ...	9·400	1,006
Oats, ...	7·425	795
Gojye,...	8·400	899
Gram,...	...	...
Gram *Purhul*, ...	7·470	800
„ *Dosahee*	5·775	618
Musoor	6·000	642

The average *buttaee* rates are in Circle I., 36 per cent., in Circle II. 30 per cent. of the grain that comes to division. The average prices for the last 25 years, omitting the famine years, are rice 44 seers, *jowar* 40 seers, *bajra* 39 seers, wheat 29 seers, barley 34 seers, *gojye* 34 seers, gram 34 seers, *musoor* 40 seers.

Deducting from the gross produce one-sixth for cutting and carrying and other expenses, and before the grain is ready for division, and to the average share of the landlord at division, applying the average prices given above, we get the following money rent-rates for each crop in two circles.

	Circle I., or des.			Rate assumed.			Circle II., or *mar*.			Rates assumed for assessment.		
	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.
Rice, ...	3	1	3	3	2	0	2	9	0	2	8	0
Jowar, ...	2	10	0	2	10	0	2	3	0	2	4	0
Bajra, ...	2	6	5	2	6	0	2	0	0	2	0	0
Wheat, ...	3	7	6	3	6	0	2	14	0	2	12	0
Barley, ...	3	4	11	2	14	0	2	12	0	2	4	0
Oats, ...	2	10	0				2	3	0			
Gojee, ...	2	15	4	2	14	0	2	7	5	2	4	0
Gram, ...	2	10	2	1	12	0	2	3	1	2	0	0
Musoor, ...	1	9	2	1	9	0	1	14	11	1	4	0

Rating other coarse *khureef* at *bajra* rates, and *dosahi* at half *purhel* rates, and applying the *zubtee* rates to the *zubtee*, and the "assumed" *nijkaree* rates to the *nijkaree* in each soil in the crop statement (Appendix IV.), we get Circle I., or Des :—

	Rs.	a.	p.		Rs.	a.	p.
Domut surasuri, ...	3	14	0	Wheat, ...	4	8	0
				Dry, ...	3	2	0
Mutyar, ditto, ...	3	4	0	Wheat, ...	3	14	0
				Dry, ...	2	12	0
Bhoor, ditto, ...	3	0	0	Wheat, ...	3	8	0
				Dry, ...	2	6	0

The cultivated areas in this circle are thus distributed in acres :—

	Irrigable.	Dry.	Total.
Domut, ...	10,346	7,727	18,073
Mutyar, ...	7,067	6,346	13,413
Bhoor, ...	75	52	127
Total, ...	17,488	14,125	31,613

The wet and dry rates applied to the several soils in the circle give an outturn of Rs. 1,15,957, on which *jumma* at 50 per cent. would be Rs. 57,978·8, or say Rs. 57,900, or adding cesses, Rs. 63,690; the expiring *jumma* without cesses is Rs. 44,982-4-0, the estimated increase in the land revenue proper would be Rs. 12,918, or 28·7 per cent.

The soils in the *mar* or second circle are :—

	Wet.	Dry.	Total.
Domut, ...	2,463	3,715	6,178
Mutyar, ...	2,477	3,565	6,042
Bhoor, ...	1	20	51

The *zubtee* and *nijkaree* crop rates applied to the areas under each crop in each soil, as given in the crop statement, give the following soil rates :—

	Surasuri.			Irrigable.			Dry.		
	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.
Domut, ...	3	0	10	3	12	0	2	10	0
Mutyar, ...	2	11	7	3	5	3	2	5	3
Bhoor, ...	2	1	3	2	15	1	2	10	11

The rates I propose to work with are :—

	Surasuri,			Wet.			Dry.		
	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.
Domut, ...	3	0	0	3	12	0	2	10	0
Mutyar, ...	2	10	0	3	4	0	2	4	0
Bhoor, ...	2	0	0	2	14	0	1	12	0

These latter give a gross rental on the cultivated area of the circle of Rs. 35,150. *Jumma* at 50 per cent., 17,500, being Rs. 2,903, or 19·9 per cent., in excess of the expiring *jumma* of Rs. 14,597.

The total estimated new *jumma* on the *pergunnah* is Rs. 75,400, giving an increase of Rs. 15,821, or 26·5 per cent. in land revenue over the expiring *jumma*, and Rs. 30,869 or 69 per cent. over the *jumma* of the IX., 1833, settlement. This may not seem a heavy increase when compared with the increase of 69 per cent. in the assessable cultivated area, 77 per cent. in irrigation, and about 30 per cent. in price of produce; but it must be remembered,—1st, that the Government share has been reduced from 66 to 50 per cent. of the assets; 2nd, that irrigation is not so valuable here in the Terai as in the drier parts of the districts; 3rd, that the rents are necessarily kept down by the competition with the *kham tuhseel pergunnahs*, where the rents are taken in money, and range from 12 annas to two rupees per acre, with, as far as the cultivator is concerned, free irrigation; while in all probability the Canal Department will insist on charging the Chowmehla cultivator full irrigation rates where there are no cesses, nor *zemindaree* dues to pay, and the measurements are fairly made,—where, to sum up, barring the climate, the cultivator find his Utopia realized, and himself treated like a spoilt child, who has only to cry loud enough to get all he wants. It is *possible* that in the *mar* I may not even be able to assess quite up to my rates, as the climate is similar to that of the neighbouring *kham tuhseel* villages, and the least over-pressure on the cultivators will drive them over the border to the injury of both Government and the *zemindar*.

11. On the whole *pergunnah* the average irrigated rate is Rs. 4-1-3 per acre, and the average dry rate Rs. 2-12-5, the difference is Re. 1-4-10, half of which is Rs. 0-10-5; applying this rate to the 775·7 acres of new irrigation created by the canal, the increase in revenue due to the canals is Rs. 5,050-3-0, and the whole of this increase may fairly be credited to them.

12. The incidence of the *jumma* of the IX., 1833, settlement on the then areas, and the expiring and estimated new *jummas* on the present areas, are given in the following table :—

Jumma.	Amount.	*Incidence.*	
		On *malgoozaree.*	On cultivated
		Rs. a. p.	Rs. a. p.
IX., 1833, settlement, ...	44,531	1 1 0	1 11 4
Expiring, ...	59,579	1 2 3	1 5 8
Estimated new at 50 per cent., ...	75,400	1 7 2	1 11 6
Ditto, including cesses at 55 per cent., ...	82,940	1 9 6	1 4

13. The *des.* and *mar* circles of Chowmehla correspond roughly with the second and third circles of Ritcha, with the following differences. The second circle of Ritcha runs further south, is more distant from the *kham tuhseel ilaqua*, has rather more *zubtee* cultivation, and is generally rather better cultivated. The *butai* rates run about 4 per cent. higher on the average, and it has a slightly better climate than the des. of Chowmehla. The third or *mar* circle of Ritcha is similarly situated to that of Chowmehla, but adjoins the east or inferior portion of it, and has a thinner population and a large proportion of waste. The following table gives a comparative view of the rates assumed, and their results in the circles under comparison :—

	Chowmehla circles, *des.*	Ritcha circle, II.	Chowmehla circle, *mar.*	Ritcha circle, III.
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Domut, wet, ...	4 8 0	5 0 0	3 12 0	3 8 0
Ditto, dry, ...	3 2 0	3 6 0	2 10 0	2 8 0
Mutyar, wet, ...	3 14 0	4 3 0	3 4 0	3 4 0
Ditto, dry, ...	2 12 0	3 0 0	2 4 0	2 4 0
Bhoor, wet, ...	3 8 0	3 0 0	2 14 0	none.
Ditto dry, ...	2 6 0	2 0 0	1 12 0	
Average on total cultivated area,	3 10 8	4 1 7	2 13 9	2 10 3

In Ritcha, Circle II., the average rate by *buttaee* worked out to 40 per cent. of produce; in Chowmehla to 36 per cent., reducing the *ritcha* rate of Rs. 4-1-7 to 36 per cent., we have Rs. 10 : 9 :: 4-1-7 : 3-11-0, which very nearly correspond with the results in Chowmehla.

14. It may perhaps be a subject of surprise to the Board that I have apparently taken no notice of the rentals by village papers, and made no use of them whatever for purposes of comparison.

The rents being almost universally taken in kind by division of the grain, the rentals given in the village paper have been found absolutely useless, as even approximate guides to the real assets of the *pergunnah*. The *zemindars* and *putwarees*, as a rule, have put down anything that came into their heads without the slightest reference to actual produce or receipts. In most cases it was perfectly impossible for the *putwarees*, even had they wished it, to have filled up their papers correctly for each ucltivator and each field, as the areas under a *nujkaree* crop are never measured, the cultivator, watched by the *zemindaree Shahnaos*, cuts each crop as it is ready, collects all grain of one kind from perhaps eight or ten different fields into one heap, prepares it, and when ready, the grain is divided either by weight or in baskets, or in *ghurras* of undefined capacity. All the *zemindars*' shares of each kind of grain is collected into a mass, and weighed in the lump by the *zemindars* own men at his granary in the absence of the *putwaree*, whose papers under these circumstances are a pure farce, deserving of no credit whatever in any single point. The *putwaree's* sole object is to file a set of papers with the columns filled up any how, as a mere form.

These are received, solemnly deposited in the Collector's office, and in case of disputes as to mesne profits, accounts of mortgages, &c., are made the basis of decision by the Civil Courts, and argued on in judgments which may be measured by the yard. Can anything be more ludicrous or more unsatisfactory.

S. M. MOENS,

Settlement Officer, Bareilly.

COPY.

Census Statement of Pergunnah Chowmehla, Tuhseel Buheree, Zillah Bareilly.

Tuhseel.	Pergunnah.	HINDOOS.								MAHOMEDANS AND OTHERS.								Total.								
		AGRICULTURAL.				NON-AGRICULTURAL.				AGRICULTURAL.				NON-AGRICULTURAL.												
		Males.		*Females.*		*Males.*		*Females.*		*Males.*		*Females.*		*Males.*		*Females.*										
		Adult.	Children.	Adult.	Children.	Adult.	Children.	Adult.	Children.	Adult.	Children.	Adult.	Children.	Adult.	Children.	Adult.	Children.	Adult.	Adult Males.	Adult Females.	Children.	Boys.	Girls.	Males.	Females.	Total.
Buheree...	Chowmehla,	8,190	4,660	6,567	4,140	2,449	1,407	2,109	1,277	1,974	1,217	1,786	1,079	2,087	1,214	1,979	1,119	27,339	14,700	12,639	16,113	8,498	7,615	23,198	20,254	43,452

(Signed) S. MOENS,
Settlement Officer.

Statement showing the distribution of the cultivated area among the several Castes of Pergunnah Chowmehla, Tuhseel Buheree.

Number.	Castes.	Chhupperbund Assamees cultivating in their own villages.			Cultivating as pahis from other villages.			TOTAL.		
		Assamees.	Holdings.	Land in acres.	Assamees.	Holdings.	Land in acres.	Assamees.	Holdings.	Land in acres.
1	Koormees, ...	1,914	1,884	12,874	444	437	1,165	2,358	2,321	14,039
2	Chumars, ...	805	762	2,620	98	95	172	903	857	2,792
3	Jats, ...	525	487	2,379	67	60	289	592	547	2,668
4	Aheers, ...	265	255	2,151	31	30	161	296	285	2,312
5	Dhobees, ...	561	518	2,084	21	16	76	582	534	2,160
6	Maraoos, ...	503	466	2,076	54	49	101	557	515	2,177
7	Carpenters, ...	337	332	1,643	21	28	80	358	360	1,723
8	Thakoors, ...	318	245	1,654	45	39	73	363	284	1,727
9	Beldars, ...	293	282	1,597	43	41	63	336	323	1,660
10	Brahmins, ...	139	139	1,458	66	61	157	205	200	1,615
11	Bunjarahs, ...	160	153	1,367	113	92	158	273	245	1,525
12	Puthans, ...	129	134	1,234	74	73	288	203	207	1,522
13	Goojurs	184	175	1,040	3	3	8	187	178	1,048
14	Mewatees, ...	164	159	772	33	32	80	197	191	852
15	Weavers, ...	138	154	604	30	29	34	168	183	638
16	Fuqeers, ...	122	122	542	21	21	35	143	143	577
17	Turks, ...	48	42	506	12	12	28	60	54	534
18	Kayeths, ...	80	70	467	29	28	198	109	98	665
19	Kisans, ...	82	57	443	8	6	9	90	63	452
20	Kahars, ...	192	188	360	29	28	73	221	216	433
21	Sheikhs, ...	72	64	354	17	16	74	89	80	428
22	Lohars, ...	87	79	302	17	17	46	104	96	348
23	Shepherds, ...	80	72	251	27	22	52	107	94	303
24	Barbers, ...	71	57	250	19	19	47	90	76	297
25	Oilmen, ...	61	58	222	15	10	30	76	68	252
26	Gooshaeens, ...	21	26	145	...	...	...	21	26	145
27	Raeens, ...	16	15	131	5	5	17	21	20	148
28	Sweepers, ...	84	83	122	5	5	4	89	88	126
29	Dhoonahs, ...	51	50	73	22	22	49	73	72	122
30	Tailors, ...	16	17	80	3	3	2	19	20	82
31	Bunniahs, ...	11	10	75	1	1	1	12	11	76
32	Ghosees, ...	11	12	75	1	1	1	12	13	76
33	Malees, ...	13	13	53	2	2	3	15	15	56
34	Kulals, ...	10	10	30	3	3	8	13	13	38
35	Mahajuns, ...	8	8	41	6	5	7	14	13	48
36	Bhoorjees, ...	12	12	30	3	3	9	15	15	39
37	Butchers, ...	12	12	30	1	1	3	13	13	33
38	Sonars, ...	11	8	26	...	...	...	11	8	26
39	Sikhs, ...	2	1	8	5	5	18	7	6	26
40	Bhats, ...	5	5	15	1	1	1	6	6	16
41	Dyers, ...	3	4	5	7	7	11	10	11	16
42	Syuds, ...	4	4	9	2	2	3	6	6	12
43	Monhars, ...	7	6	3	2	2	6	9	8	9
44	Punwarees, ...	3	3	13	...	...	...	3	3	13
45	Chheupees, ...	2	2	6	...	...	...	2	2	6
46	Lodhas, ...	1	1	4	...	...	...	1	1	4
47	Radhas, ...	4	4	3	...	...	...	4	4	3
48	Moguls, ...	2	2	1	1	1	2	3	3	3
49	Bishtees, ...	...	...	...	2	2	3	2	2	3
50	Khoomrahs, ...	...	...	...	2	2	3	2	2	3
51	Khuttrees, ...	...	...	...	1	1	2	1	1	2
52	Meerasees, ...	2	2	1	2	2	1	4	4	2
53	Bhuteearahs, ...	...	...	...	1	1	1	1	1	1
54	Duluheas, ...	...	...	...	1	1	1	1	1	1
55	Hulwaees, ...	...	...	...	1	1	1	1	1	1
56	Acharujs, ...	...	...	...	1	1	1	1	1	1
	Total, ...	7,641	7,264	40,229	1,418	1,344	3,655	9,059	8,608	43,884

S. M. MEONS,

Settlement Officer.

BAREILLY SETTLEMENT OFFICE,
The 4th September, 1871.

Statement showing the Castes of Proprietors and Tenure of Villages in Pergunnah Chowmehla, Tuhseel Buheree.

Villages.	Castes.																				Zemindaree.		Perfect Putteedaree.		Imperfect Putteedaree.		Remarks.
	Puthans.	Kayeths.	Brahmins.	Kumbo.	Sheikhs.	Jats.	Thakoors.	Khuttrees.	Raeens.	Dome.	Muhajuns.	Syuds.	Bunneahs.	Bunjarahs.	Koormees.	Gooshaeens.	Byragees.	Faqeers.	Bramhcharees.	Total.	Number of muhals.	Number of sharers.	Muhals.	Sharers.	Muhals.	Sharers.	
Khalsa, ...	113	133	34	22	21	27	23	6	14	8	23	14	20	14	27	...	...	...	...	499	181	482	1	4	1	13	
Maqruga, ...	18	14	10	...	6	8	1	...	...	...	...	7	...	...	...	2	1	20	1	88							
Total., ...	131	147	44	22	27	35	24	6	14	8	23	21	20	14	27	2	1	20	1	587							

BAREILLY SETTLEMENT OFFICE:
The 6th September, 1871.

(Sd.) S. M. MOENS,
Settlement Officer.

Jinswar Kismwar Statement of Pergunnah Chowmehla, Tuhseel Buheree, Zillah Bareilly.

Circles.	Soils.	Khureef Crops.																	Rubbee Crops.										Dofusles Crops.											Total Khureef and Rubbee Crops.
		Sugar-cane.	Pundrah.	Cotton.	Mukka.	Cutcheana.	Rice.	Bajra.	Churri and Jowar.	Mash Moong.	Shamakh.	Mothe.	Codram.	Urhur.	Mundwa.	Sunn.	Kusoom.	Total Khureef Crops.	Wheat and Parbul.	Barley and Oats.	Gojye.	Bijhra.	Gram and Kusa.	Mussoor.	Linseed.	Labee.	Melons.	Total of Rubbee Crops.	Wheat and Parbul.	Barley and Oats.	Gojye.	Gram and Kusa.	Cutcheana.	Mussoor.	Linseed.	Pundrah.	Labee.	Bijhra.	Total Dofusles Crops.	
1st or Dea Circle.	Doomut, ...	1,470	190	1,167	4,655	271	657	2,056	2,349	293	601	86	403	24	41	23	3	14,289	2,265	353	207	18	408	274	166	34	7	3,727	2,404	651	271	999	241	922	321	951	61	23	7,144	18,016
	Mutyar, ...	455	76	129	215	7	5,365	214	2,573	75	245	10	242	3	7	11	...	9,627	1,931	512	224	8	490	107	300	14	...	3,786	255	481	204	502	16	270	1,186	382	...	...	32,96	13,413
	Bhoor.	...	...	4	48	...	6	49	6	2	...	6	...	...	2	...	...	123	20	6	7	1	10	12	5	...	...	61	17	9	7	1	...	14	4	1	...	2	55	184
	Total, ...	1,925	266	1,300	4,918	278	6,028	2,319	4,928	370	846	102	645	27	50	34	3	24,039	4,216	871	438	27	908	393	671	48	7	7,574	2,676	1,141	482	1,502	257	1,206	1,811	1,334	61	25	10,495	31,613
	Percentage, ...	6·09	0·85	4·12	15·56	0·88	19·07	7·33	15·59	1·17	2·68	0·38	2·05	0·09	0·16	0·10	0·01	76·04	13·34	2·76	1·39	0·09	2·86	1·24	2·12	0·15	0·02	23·96	...	...	...	...	...	...	...	...	...	...	...	...
2nd or Mar Circle.	Doomut, ...	251	26	308	1,868	63	171	555	360	175	267	20	241	5	56	1	...	4,365	655	231	82	19	511	195	86	34	...	1,813	772	317	144	297	55	421	265	162	87	15	2,555	6,171
	Mutyar, ...	115	75	76	329	4	1,925	153	658	122	111	20	227	1	10	15	...	3,846	818	241	94	35	748	89	167	4	...	2,196	249	299	67	218	4	170	518	101	...	...	1,626	6,024
	Bhoor, ...	...	...	...	...	...	...	3	3	...	...	7	4	...	...	...	...	17	1	13	...	...	...	15	2	...	3	34	...	..	...	1	...	...	...	...	...	...	1	51
	Total, ...	366	101	382	2,197	67	2,096	716	1,021	297	378	47	472	6	66	16	...	8,228	1,474	485	176	54	1,259	299	253	38	3	4,043	1,021	616	211	516	59	591	803	263	87	15	4,183	12,271
	Percentage, ...	2·98	0·82	3·11	17·90	0·55	17·09	5·84	8·33	2·42	3·08	0·38	3·84	0·05	0·53	0·13	...	67·05	12·01	3·96	1·43	0·44	10·25	2·43	2·06	0·23	0·02	32·95	...	...	...	...	...	...	...	...	...	...	...	...
Total.	Grand Total, ...	2,291	367	1,682	7,115	345	8,124	3,035	5,949	667	1,224	149	1,117	33	116	50	3	32,267	5,690	1,356	614	81	2,162	692	926	86	10	11,617	3,697	1,757	693	2,018	316	1,797	2,614	1,597	148	40	14,677	43,884
	Percentage, ...	...	...	...	...	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

BAREILLY SETTLEMENT OFFICE :
The 6th September, 1871.

(Sd.) S. M. MOENS,
Settlement Officer.

APPENDIX No. IV.

Account of an inscription found by Mr. H. S. Boulderson in the neighbourhood of Bareilly: by James Prinsep, Secretary, &c., taken from the Records of the Asiatic Society.

To their Associate, Colonel Stacy, the Society is more immediately indebted for bringing to their notice the subject of the present article, an inscription hitherto undescribed, though it appears to have been known for several years to Mr. H. S. Boulderson of the Civil Service. Having applied to that gentleman for any notes he might possess on its discovery, he has favoured me with the following particulars:—

"The inscription which Colonel Stacy has sent you was taken in 1829 or 1830 from a stone dug up near a village called Illahabas, about 15 miles north-east from Beesulpore (Visalapur), in the Bareilly District. It was found with some images in the year 1826 or 1827, in land forming a ridge about from 15 to 30 feet (elevation) above the level of the plain. The ridge commences from the hills north and east of Phillibheet, runs down the eastern border of the Bareilly District, and is continued, I believe, to near the banks of the Sardah or Gogra river, in the Shahjehanpore District. The ridge is covered with forest and brushwood, and extends eastward perhaps to near the Sardah. The tract is, I believe, nearly, if not quite, uninhabited: want of water is, I think, the cause. All about the part where the stone was found there are remnants of large bricks of the kind found by Captain Cautley at Behat on the canal, in the Seharunpore District. I do not recollect any ruins, either of an old or more modern description at all near the place. Illahabas and the other villages for miles are mostly 'nawabad,' or new settled villages; they are all in the low lands beneath the ridge. Beesulpore itself is a town of modern date, still mostly chopper and mud. The images were set up by some Brahmins in a temple built for the purpose at Illahabas, and being novelties, for some time attracted considerable offerings,—about Rs. 2,000 were the produce of one year. This occasioned a claim in the shape of a boundary dispute touching the land on which the temple was built. I had to settle it, and then had the copy of the inscription taken: no one there could read it. The stone from which it was taken was either built in over the doorway of the temple, or was standing by the door. I do not recollect which of the images. I either took no notice, or do not now remember anything. The copy of the inscription was laid by and forgotten, till Colonel Stacy, talking about inscriptions, I looked out for it and gave it to him. The people about the place said that there had been in former times a large city or town there. The bricks, &c., might have created the tradition: the forest now covers the place. There are no remains of ruins, new or old, from which the stone could have been taken throughout the pergunnah for miles round. The soil of the ridge, and that of the land below it, are remarkably distinct."

Colonel Stacy's pundit has furnished a modern version of the inscription, but on comparing it so many deviations were found, that I preferred going through the whole with Kamala Kanth, pundit, and I may safely say that the transcript now given is hardly doubtful in a single letter. It is no small compliment to Mr. Boulderson's transcriber that in but one place is a letter omitted, and in one only a letter in excess added. Kamala Kanth asserts that the language and poetry of this inscription are superior to anything he has yet seen of the sort. This is partially visible in the translation, where, although to our taste hyperbole superabounds, the elegance and applicability of the eulogistic metaphors are very perceptible. This translation is again the work of my youthful assistant, Saroda Prasad Chukravarti, merely idiomatized a little by myself. It is nearly literal throughout. The facts made known to us by the text are altogether new. We have heard neither of the Chunder race nor of Rajah Lalla. He was, it seems, the son of Mulhana, the younger brother (Charge d'Affaires), and probably a usurper, of Mans Chanda Pratapa, written मानसचंडप्रताप, a name which the Pundit insists upon converting to Martenda Pratapa (powerful as the sun), as more consonant with Hindoo nomenclature. Mans Chanda's father was Viravarma, who is simply stated to be of the race of Chyavan, a Maharishi of mythologic fame, who captivated

and married the daughter of one Rajah Sarjati; but as she disapproved of his venerable age, he interceded with Aswinikumar, dipped himself in a pond, and was rejuvenilized in the shape of that god. On the celebration of his nuptials, the gods being present, Indra, astonished at his new disguise, levelled his thunder at Muni, who then petrified the god with his frown, as is stated in the text.

The temples thus appear to have been built by a petty Rajah and his wife, in the Samvat year 1049, at a village called Mynta, in the district of Bhusana. Enjoying the advantage of proximity to Kanouj, they procured poets and artists to sing and record their praises.

This is the first time I have remarked the name of the alphabetical character mentioned. It is called the Kutila, by which denomination we must in future describe all documents written in the same hand, midway between the modern Deva Nagari and the Gaouri type. I have given a specimen and alphabet in Plate XLI. It is a peculiarity that the vowels or diphthongs *ai* and *ao* are always written like *e* and *o*, with a single mark above the line. The long *i*, *u*, and *ai* initial do not occur.

Translation by Saroda Prasad Chukravarti.

1. May he to whom the astounded inhabitants of the three worlds offered solemn hymns and prayers, when the jewelled hood of the chief of serpents (Ananta) bent under the weight of the far falling mountains, impinging on the lap of the yielding earth on his easy effort to check the outrages of the wicked (giants), and who humbled the ten-headed (Ravana), vain of his strength and valour, save you from a multitude of sins!

2. May Girija (the mountain-born goddess), beauteously adorned with a string of pearls fallen from the heads of the Danava-like elephants, seeming to spread a moonlike halo round her lotus face, sanctify the universe.

3. May the royal race of Chhindu, of Erst, the scene of Lukshmi's pastime and dalliance, the field of war and exercises of well-disciplined soldiery, the sea of delight of famous princes, the lake wherein Lukshmin disported as a swan, the moon of repose of those who had completed the career of heroes, and a consuming fire to their enemies, be honourable.

4. A Maharishee, named Chyvan, he whose frown restrained the pride of the chief of gods (Indra) when he had committed the well-known crime, who by his fame was celebrated in all quarters of the world, was the founder of this race.

5. Of this family, famed for many good actions, was born Viravarma, who was the ornament of the world and the crown jewel of kings, in whose house Lukshmin took up her abode, foreseeing in it the birthplace of many future eminent persons who would be her protectors.

6. He, Viravarma, in noble qualities well resembled the kings of the Solar line; he was powerful, pious, beautiful, famous, pure, serious, venerable, veracious, moral, surrounded by the educated, attended by the virtuous men; his court was the seat of heroism, integrity, patience, and other virtues.

7. From him descended Mans Chanda Pratapa, a man of warm spirit, who annihilated his foes as mud dried up by his rays; who was the ornament of all people, nay, of the whole world; before whose armies the multitude of heroic enemies depressing the earth with their heavy tread, retreated gasping into the abode of serpents (Patala), and bore it down with their weight.

8. The juice exuding from the temples of his odorous elephants in moonlike crystals, so spread over the forest tanks, that neither the wild elephants nor those of his enemies dare quench their thirst therein.

9. His footstool was worn by the crowns of the numerous princes crowding to do him homage. He was the lord of the earth whom the three great oceans encircle as a waistband (rashona). He dried up the ocean by the continual intercourse of foreign princes, as Rama of old. He occupied the ocean like the mountain on the sea shore.

10. His kingdom, rivalling the habitation of the chief of gods by its magnificent buildings, shining bright and beauteous as the moonbeam with its white tenements, and charming with its Naodana-like gardens abounding in pleasant trees of dark emerald hue, is become white with the high temples of the anointed gods.

11. His younger brother, the stout-armed Malhana, a devoted worshipper of Siva, willingly received charge of the world: his kingdom filled with a multitude of princes proportionate to his kindness from his elder brother.

12. Though gaining such a vast prize as Lukshmin, he always retained his devotion to the gods, his spiritual parents, and the brahmins. He was born for the joy of his friends, intimates, kinsmen, and spread delight among his subjects by destroying the wicked.

13. His wife Chuluki, adorned with shining qualities, was the nonpareil of her day, and was like the new moon to the lotus faces of his other wives. She was descended from the royal line of Iswara.

14. From her was born a moonlike heroic prince, Lalla, who soon mastered the world. On all sides shone the purity of his virtues, as the white kumuda flower, the moon, or ivory. He was the Sumeru among the circle of the mountains of his military officers. On his arm Lukshmin cast a fond glance as he quitted the house of his enemies. He was the root of the Chindoo line.

15. Strange was it that at his birth flowers were strewed from heaven on the palace of Malhana, and bees swarmed to sip their honey, seeming by their hum to announce his future greatness.

16. His words were full of pleasantness, exceeding far the full-blown lily or the company of wise men, or the shrubs bowing with the load of full-blown flowers, or the fields of bending corn, the inspiration of the poet, or the moonbeam in the autumn, or even the sacred words flowing from the mouths of the Vedantis.

17. By what respected hero lord of the world was earth defended in his time? The goddess (Lukshmin), whom none other can restrain or enjoy, is to him as a wife. No princely jewel of the crown of kings ever lived, lives, or will live to equal him in beauty and enjoyment.

18. He lives in a halo of glory like the sun in his summer brightness, and fills the world with his power. His beauty is reddened by the vermilion of the heads of his enemies' war elephants. His fame, like the moon's, has been the theme of praise. He distroys his enemies as the rays of the sun dispel the darkness.

19. His spreading fame encircles the world as a necklace of pearls, or as Ganga around the highest peak of the Himalaya, as the moonbeam on the sky, as the wreath on the elephant's head, the white pennant on the temple of the gods, and the wild geese on the banks of the rivers.

20. On his advent, although the earth now groans under the Kalijuga, the golden age (Satyuga) again visited this town, adorned with wells, lakes, tanks, and neighbouring parks stocked with various animals, whose inhabitants are always rejoicing, and which is borne on the crest of the earth.

21. He presented these sacred villages, inhabited by the wealthy and the civilized, shaded by pleasant trees and watered by pellucid streams, in a chartered gift to the brahmins.

22. He caused to be dug a beautiful and holy canal near his own palace, —himself a director of the right course to his subjects, as Bhagiratha was to Ganga.

23. His wife, named Lukshmin, was as affectionate as her namesake to Madhusudana. She was regarded as a second goddess descended from the sea, of a sinless family, and was like a snow-shower to the lily faces of other women in the inner apartments.

24. By her love and gentleness she stole the heart of her husband; by her accomplishments she retained his affections. Their mutual love was equal to that of Siva and Parbuttee.

25. Whose many virtuous deeds already done, or to be still performed, are visible in groves, gardens, lakes, and many other extensive works.

26. All the luxuries enjoyed daily by multitudes of brahmins are bestowed by her whose heart compassionates the poor, the helpless, and afflicted.

27. In this way the minds of the husband and wife being sensible of the instability of earthly possessions, and the stain of the Kalijuga having been removed by their growing virtues, the one (or Rajah) has caused this temple to be established in honour of the god who wears a crescent on his brow, while the other (or Queen) did as much in honour of Parbuttee.

28. Whose heart is not filled with astonishment as these two divine temples, which may be compared with the beauty of the two lofty peaks of Kylasa, which are beautified by their handsome stairs, and whose banners, agitated by the winds, have dispersed the gathering clouds.

29. As long as the Kanstubha jewel shall rest on the breast of the Destroyer of Madhu (Vishnu), and the head of Sambhu shall be ornamented with the crescent, as long as Indra and all the gods shall tarry with the wives of the moons, so long shall the fame of this act endure.

30. May prosperity always attend him, and his equally endowed lady Lukshmin—him, the chief hero of the Chhindoo line, who with sword, besmeared with the mud formed by the exudation of his enemies' elephants' temples, has carved out his praise on all sides.

31. May Devee, who dwelleth among mankind to promote their prosperity and avert evil, destroy the sins of Lalla, of his family, children, and intimates.

32. The villages of Mayuta in Bhushana, with its adjacent lands, were consecrated to the above-mentioned god and goddess under the denomination of Devapalli.

33. The famous Lalla granted by charter one-fourth of his revenues to the same duties for their worship and other ceremonies.

34. This inscription was composed by the poet Nihal, son of Siva Rudra, of the race of Vatsyamuni, an attendant at the court of the Rajah, whose character was worthy of his name.

35. May Nihal's wreath of mellifluous verses shine on the bosom of the learned like a string of pearls, the source of general delight, ornamented with flowery metaphor, and tied with the string of Lalla's virtues.

36. This composition was copied by the son of Vishnu Hari, an inhabitant of Gour, a proficient in the Kutila character.

37. It was engraven by Somanath, the son of Kamadeva, who came over from Kania Kubja, well skilled in the use of the instruments of engraving. In the Sumvut year 1049, on the seventh of the dark half of the month of Marga (Agrahana), Thursday (corresponding with Thursday, 5th November, A. D. 992, see useful tables).

The translation of the stone inscription found at Debul, as furnished to me by the pundits of Rajah Madho Rao Venaik, runs as follows:—

1st Verse.—In praise of Siva.

May that god who is the husband of Parbuttee, and the humbler of the pride and bravery of Rawun, protect you all. The strength of Rawun was such, that once in sport he pressed a mountain so hard with his thumb, that the earth begun to sink, and the head of the king of serpents on which the world rests was bowed, and the globe began to turn topsy-turvy: then, through fear, the inhabitants of heaven, earth, and those below the earth begun to pray to that deity, embodied only in prayers, and that calamity was averted.

2nd Verse.—In praise of Parbuttee.

May the goddess Parbuttee, whose neck is adorned with that garland of pearls which was taken from the head of Gujasoor (the elephant demon), when he was killed with a trident, and the garland on whose neck resembles the moon's hollow, and even eclipses the moon in beauty, protect you.

3rd Verse.—In praise of a Rajah.

That Rajah is blessed with wealth. His house is the abode of heroes, and the birth-place of mighty princes: as Lake Mansurvura is the home of the wild swans, as holy places are the dwellings of hermits, so is that Rajah's palace the abode of heroes. As the moon enlivens the lily, so also does he the broken hearts of the poor and helpless: as the jungle fires burn up all the trees and grass, so does he the families of all his enemies. May such a Chunderbunsee Rajah enjoy wealth and prosperity above all others.

4th Verse.—Gives Rajah's descent.

At one time Indra (god of heaven) defrauded Chimun Rikh, and of this became so proud that, in order to subdue his pride, Chimun created the family of this Rajah, to the end that he conquered Indra and all other Rajahs, and his reputation spread to the four quarters of the world.

5th Verse.—Gives reasons for Rajah's wealth.

To this house belonged Rajah Viravaramma, who was the Rajah of Rajahs, and who made the surface of the earth level; who removed all thieves, dacoits and liars from his country; and treated his subjects like his own offspring. Hence wealth made the Rajah's house her own.

6th Verse.—Gives an account of the Rajah's qualifications.

This Rajah was religious and pious, knowing his intellectual powers to be his wealth. He was truthful, good-natured, of good repute, a lover of the good, without hypocrisy, wise, of a good understanding, of great dignity, liberal in his views both economical and political, and possessing all military qualifications. His liberality was such that he would have given away mountains of gold. In short, he possessed all good qualities, and the greatest princes were always ready to serve him.

7th Verse.—Gives an account of Bhookun, son of the Rajah.

This Rajah had a son named Bhookun, a man of such lustre that the world gloried in his existence. When this mighty son of Rajah advanced with his army, his enemies were withered up, as the sun dries up the mud and the lilies. The hills and valleys of the earth became even, and, worried by the weight of the world, upholding serpent-shot forth such fiery blasts that the water beneath the earth was turned to salt.

8th—Verse.—In praise of Bhookun's elephants.

To ponds and rivers in the jungles, wherever the war elephants of Bhookun went, either to wash or drink, the wild elephants were afraid to go, because their smell seemed to them a bar, and they were frightened.

9th Verse.—Relation of the dignity and eminence of Bhookun.

Great and mighty Rajahs used to rub their noses at his feet (the rubbing of noses at another's feet is a sign of great humiliation in India), so much so, that the stool on

which Bhookun used to rest his feet was worn away by the friction of the Rajahs' crowns. His empire extended round the earth like a waist-belt, as the water encircles the globe; and, like the Koolachul mountain, by its weight it kept the world from being over-balanced. The mountain, from the fragments of which Ramchundra built the bridge over the sea, also belonged to his empire.

10th Verse.—City of Bhookun.

The city of Bhookun was complete as the full moon. As on that day the face of the moon is complete in all its parts, so in that city all the inhabitants were filled with knowledge. It was surrounded with green groves; its gardens were as attractive as the garden of Indra called Nundun; and its white buildings were so high, that they dwarfed those of the city of Indra.

11th Verse.—An account of Mulhun, younger brother of Bhookun.

Sree Mulhun, younger brother of Bhookun, was a great worshipper of Shiva, and for the protection of his subjects his arms were as a fortification. He easily brought into subjection all the Rajahs whom his elder brother had conquered with great difficulty. The burden of maintaining a good reputation rested solely with him; and he maintained it with his old age.

12th Verse.—On Sree Mulhun's wealth, and fostering cares for his subjects.

Mulhun amassed more wealth than his elder brother. He was devoted to his spiritual teacher and gods, and did a great deal of good to his friends and relatives. He turned out all other gamblers and persons of evil repute, and gave his subjects peace.

13th Verse.—An account of Mulhun's wife.

His Ranee, by name Anehla, belonged to the family of Choolkiswur Rajah: she was possessed of all good qualities. Her beauty put the moon to shame, and her teeth outvied the *kund* flower (*jusaminum grandiflorum*).

14th Verse.—Birth of Sree Lulla, son of Mulhun and Anehla, and an account of his bravery.

By this Ranee, Sree Lulla, the dreaded of great Rajahs, was born. The glistening of his teeth and the glory of his countenance illumined the world, and the brightness of his knowledge dispelled the darkness of ignorance. The officers of his army remained as firm as rocks in the field of battle. They were adorned with golden ornaments like hills of gold. This Rajah reduced the power of all his enemies;—as heavily as a lofty mountain falls, so fell he on whom his frowning looks were turned.

15th Verse.—Relation of an omen which came to pass on the birth-day of Sree Lulla.

A great rejoicing was made in the house of Sree Mulhun at the birth of this son. An extraordinary occurrence—a sign of great prosperity—took place on his birth-day; for the *bhounra*, from the abode of the sun, showered flowers upon the palace.

Bhounra (a large black bee enamoured of lotus and other flowers).

16th Verse.—Rejoicing at the birth of Sree Lulla.

The people were so pleased at the birth of Sree Lulla, that not the sight of lotus nor of flowers, not the sayings of preachers nor the companionship of good men, not the green trees nor the fruitful fields, not the words of poets nor the moons of *Katik* could have pleased them so much.

17th Verse.—Alms given at the birth of Sree Lulla.

There never has been, and never will be, so much distributed in alms, or so many people benefited as on the birth-day of Sree Lulla. The earth requires no protector except this Rajah. As a woman leaves a bad husband, so wealth and territory depart from a worthless king.

18th Verse.—Sree Lulla's powers in battle.

He stood like Indra in the midst of war elephants whose heads were coloured with *sendoor* (red lead); and with the lustre of his great power he dispelled the darkness of his enemies' armies, and extended his sway in all directions like the brightness of the sun. On this account his name is known up to this day.

19th Verse.—Rajah's fame.

His fame extended into all lands; it became as pearls in the ocean, as the clouds and moon on the summit of the Himalayas, as in the sky the Mundagri or heavenly Ganges, as the necklaces on the necks of the four elephants supporting the corners of the world, as the flags on the temples of the gods, and as the wild swans on the river banks, so it travelled through all the lands.

20th Verse.—Works of public utility done by the Rajah.

Although in (*kuljuga*) the present era the hearts of the people are not inclined towards the doing of good things, yet this Rajah, for the public utility, constructed many wells, *baolees* (large wells with steps to go downwards), and tanks, gardens close to the towns, buildings for the poor, alms-houses, temples for the gods, and school-houses for the students, and furnished them with all materials. To the good he gave every comfort; the ways of the bad he amended and gave to them employment. This *dhurmatma outar* (incarnate of piety) converted the *kuljuga* into *sutjuga*.

21st Verse.—Grants of jagheers by the Rajah to Brahmins.

He gave deeds of gift to the brahmins of many wealthy and rich populated and productive villages, in which water and waste land abounded.

22nd Verse.—The river made by the Rajah to flow under his city.

As Bhageerath brought the Ganges to purify the whole country, so he made the river called Kuthena to flow under his city.

23rd Verse.—An account of Rajah's wife.

The wife of this Rajah belonged to a very high family, and was as much beloved by him as Luchmin by Vishnu, hence she also was called Luchmin. She used to treat the other Ranees with such kindness, that their hearts were refreshed as the frost-bitten tree is refreshed by water.

24th Verse.—Love between husband and wife.

This woman, by her affection, obedience, and intelligence, won the heart of her husband, and he was to her as a magnet; in short, their love was equal to that of Shiva and Parbuttee.

25th Verse.—Ranee's good actions.

The Ranee made baghs, tanks, wells, and other works, and thus her name would be long remembered.

26th Verse.—Ranee's fostering care for the poor.

She fed and clothed the helpless and indigent.

27th Verse.—The Rajah and the Ranee built two temples.

The Rajah and the Ranee being both devoted to religious exercises, and to the good of their subjects, the effects of the *kuljuga* were removed from this kingdom. For the benefit of religion and the world the Rajah built a temple to Shiva, and the Ranee to Shiba (Parbuttee).

28th Verse.—The good architecture and the loftiness of the temples.

These two temples were as white and seemed twice as high as the hill Kylas. The waving of their flags dispersed the rain-clouds, and the people saw and wondered.

29th Verse.—Author's benediction of the Rajah.

As long as the breast of Vishnu is adorned with *koustubh-mun* (diamond), the forehead of Shiva with the moon, and the sea remains in the universe, so long may the Rajah enjoy wealth and prosperity.

30th Verse.—Mentions by what means his fame reached all over the world.

Superior in knowledge and wealth to all Rajahs, the blood of his enemies, elephants slain by him in battle, with which the holes of the earth were filled, was his ink, the sword was his pen, and with these the news of his victories were circulated through all lands.

31st Verse.—Accumulation of wealth.

For the good of the people and for the hindrance of crimes the house of Sree Lulla was blessed with many descendants, adherents, and with much wealth.

32nd Verse.—Grants for the maintenance of the temples.

The city of Bhokun was called Devulla, and was given for the maintenance of these temples.

33rd Verse.—Appointments of priests.

Priests were appointed in each temple.

34th Verse.—Name of the poet.

These verses were composed by the poet *Alill*, son of Butkool Shib Roodra Bhutta.

35th Verse.—Praise of the poem.

These sweet verses, in easy style, are like a garland of pearls to beautify the hearts of the wise men; and as they are in praise of Sree Lulla, every one likes them.

36th Verse.—Name of the man who wrote these verses on stone.

Tukea Dutt, son of Bishudher, well versed in reading letters reversed, wrote these on stone.

37th Verse.—Name of the engraver.

Somnath, son of Kamdeo, Kunojiah family, clever in the art of engraving, engraved this on stone.

Thursday, Aghun Budi, Satyu Sumbut 1049.

S. M. MOENS,
Settlement Officer.

Census Statement of the Pergunnahs in the District of Bareilly for the year 1865.

Number.	Pergunnahs.	HINDOOS.								MAHOMEDANS AND OTHERS.								TOTALS.								
		AGRICULTURAL.				NON-AGRICULTURAL				AGRICULTURAL.				NON-AGRICULTURAL.												
		Males.		*Females.*		*Males.*		*Females.*		*Males.*		*Females.*		*Males.*		*Females.*										
		Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Adult Males.	Adult Females.	Children.	Boys.	Girls.	Males.	Females.	Grand Total.
1	Furreedpore,...	30,207	16,756	24,593	14,127	5,342	2,660	4,215	2,239	2,785	1,591	2,533	1,444	2,513	1,289	2,064	1,193	74,252	40,847	33,405	41,299	22,296	19,003	63,143	52,408	115,551
2	Crore, ...	39,332	20,567	32,386	18,007	28,799	14,422	25,624	12,398	7,995	5,086	6,738	3,770	19,430	11,473	19,386	10,406	179,690	95,556	84,134	96,129	51,548	44,581	147,104	128,715	275,819
3	Bullea, ...	5,216	3,477	4,605	2,937	1,834	1,133	1,765	1,006	180	134	167	114	578	345	526	297	14,871	7,808	7,063	9,443	5,089	4,354	12,897	11,417	24,314
4	Suneha, ...	11,759	7,350	10,115	6,743	3,237	1,945	2,850	1,719	1,517	1,137	1,503	998	1,360	908	1,349	783	33,690	17,873	15,817	21,583	11,340	10,243	29,213	26,060	55,273
5	Aonla, ...	15,210	9,302	13,400	8,134	6,079	3,378	5,360	2,726	1,086	675	944	648	2,634	1,596	2,573	1,374	47,286	25,009	22,277	27,833	14,951	12,882	39,960	35,159	75,119
6	Seraolee, ...	6,177	3,460	5,415	3,185	2,460	1,356	2,267	1,270	1,084	557	985	603	1,133	661	1,091	550	20,612	10,854	9,758	11,642	6,034	5,608	16,888	15,366	32,254
7	Meergunge, ...	19,501	11,567	17,253	9,676	7,702	4,149	6,846	3,959	2,204	1,430	1,954	1,248	3,385	1,813	3,078	1,714	61,923	32,792	29,131	35,556	18,959	16,597	51,751	45,728	97,479
8	Kabur, ...	6,271	3,956	5,588	3,389	1,903	1,206	1,770	1,070	1,231	864	1,203	775	1,703	1,152	1,696	1,058	21,365	11,108	10,257	13,470	7,178	6,292	18,286	16,549	34,835
9	Sirsawan, ...	4,064	2,640	3,509	2,403	912	618	821	520	1,069	720	931	672	1,183	758	1,039	679	13,528	7,228	6,300	9,010	4,736	4,274	11,964	10,574	22,538
10	Chowmehla, ...	8,190	4,660	6,765	4,140	2,449	1,407	2,109	1,277	1,974	1,217	1,786	1,079	2,087	1,214	1,979	1,119	27,339	14,700	12,639	16,113	8,498	7,615	23,198	20,254	43,452
11	Ritcha, ...	19,684	11,094	16,343	10,505	4,487	2,319	3,609	2,920	4,423	2,572	3,894	2,429	4,755	2,843	4,338	2,510	61,533	33,349	28,184	36,492	18,828	17,664	52,177	45,848	98,025
12	Nawabgunge,...	26,138	17,078	21,007	13,478	7,314	3,015	5,962	3,593	3,254	1,687	2,922	1,791	4,453	2,877	4,632	3,063	75,682	41,159	34,523	46,582	24,657	21,925	65,816	56,448	122,264
13	Beesulpore, ...	48,914	28,896	40,354	25,959	11,910	6,467	9,936	5,551	2,890	1,862	2,476	1,523	3,624	1,930	2,804	1,743	122,908	67,338	55,570	73,931	39,155	34,776	106,493	90,346	196,839
	TOTAL, ...	240,663	140,803	201,333	122,683	84,428	44,075	73,134	39,548	31,692	19,532	28,036	17,094	48,838	28,859	46,555	26,489	754,679	405,621	349,058	439083	233,269	205,814	638,890	554,872	1,193,762

BAREILLY SETTLEMENT OFFICE :
The 9th October, 1872.

S. M. MOENS,
Settlement Officer.

Statistical Return of Population of the District of Bareilly for the year 1847-48.

District.	Pergunnahs.	Number of Mouzahs or Townships.	Area in square geographical miles of 640 acres each.	Area in acres.	*Malgoozaree or assessed land.*		*Minhaee or unassessed land.*		Population.					Number of persons to each square mile.
									Hindoo.		*Mahomedan and others not Hindoo.*			
					Cultivated.	Culturable.	Lakhiraj.	Barren.	Agricultural.	Non-agricultural.	Agricultural.	Non-agricultural.	Total.	
Bareilly.	Fureedpore, ...	450	250	160,004	87,478	50,082	3,731	18,713	64,397	10,094	5,561	5,873	85,925	344
	Crore, ...	488	259	191,078	112,192	34,390	14,855	29,641	79,114	59,601	24,575	53,634	216,924	838
	Bullea, ...	63	36	23,051	13,235	4,188	995	4,633	13,306	4,353	673	1,204	19,536	543
	Suneha, ...	150	82	52,334	31,613	6,743	3,646	10,332	28,040	6,403	4,486	2,885	41,814	510
	Aonla, ...	147	125	80,030	36,034	25,621	5,275	13,100	32,740	11,535	2,449	6,205	52,929	423
	Seraolee, South, ...	85	81	51,723	36,932	2,085	1,487	11,219	21,640	5,989	3,817	2,798	34,244	423
	Seraolee, North, ...	86	80	51,190	26,131	5,975	3,907	15,177	23,644	6,442	2,774	2,405	35,265	441
	Shahee, ...	109	65	41,799	26,209	3,828	3,824	7,938	22,868	5,967	3,229	3,158	35,222	542
	Kabur, ...	74	53	34,175	25,814	1,910	1,765	4,686	15,683	4,850	3,465	4,549	28,547	539
	Sirsawan, ...	71	42	30.139	22,216	1,484	992	5,447	15,822	2,625	4,590	2,970	26,007	619
	Ajaon, ...	98	91	58,289	41,255	3,310	2,310	11,414	32,626	7,956	4,896	4,502	49,980	549
	Chowmehla, ...	134	91	58,015	23,511	8,913	10,925	14,666	18,312	2,477	6,924	1,503	29,216	321
	Ritcha, ...	208	166	106,275	71,490	13,252	13,712	7,821	40,455	9,322	9,444	11,562	70,783	426
	Nawabgunge, ...	380	230	147,271	89,918	36,359	6,425	14,569	65,999	11,749	7,446	9,867	95,061	413
	Beesulpore, ...	437	338	216,532	106,781	70,148	6,069	33,534	90,196	27,532	4,455	6,814	128,997	382
	Muroree, ...	33	25	15,713	8,727	2,830	237	3,919	7,726	1,644	295	428	10,093	404
	Total, ...	3,013	2,014	1,317,618	759,536	271,118	80,155	206,809	572,568	178,539	89,079	120,357	960,543	477

BAREILLY SETTLEMENT OFFICE:
The 10*th October*, 1872.

S. M. MOENS,
Settlement Officer.

Statistical Return of Land Revenue, area, and population in the district of Bareilly, for the year 1853.

Number.	Pergunnahs.	Number of mouzahs or townships.	Area in square British statute miles of 640 acres each.	Area in acres.	*Malgoozaree or assessed land.* Cultivated acres.	*Malgoozaree or assessed land.* Culturable.	*Minhaee or unassessed land.* Lakhiraj.	*Minhaee or unassessed land.* Barren.	Demand on account of land revenue for 1851-52 in rupees.	Rate per acre on total area.	Rate per acre on malgoozaree.	Rate per acre on total cultivation.	POPULATION. Hindoos. Agricultural. Male.	Hindoos. Agricultural. Female.	Hindoos. Nonagricultural. Male.	Hindoos. Nonagricultural. Female.	Mahomedan and others not Hindoo. Agricultural. Male.	Mahomedan and others not Hindoo. Agricultural. Female.	Mahomedan and others not Hindoo. Non-agricultural. Male.	Mahomedan and others not Hindoo. Non-agricultural. Female.	Total.	No. of persons to each square British statute mile of 640 acres each.
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.
1	Crore, ...	433	299·6	191,734	126,234	24,490	14,225	26,785	166,341	0 13 11	1 1 8	1 5 1	57,551	49,239	34,997	31,344	13,182	11,873	31,630	32,000	261,816	874
2	Aonla, ...	128	126·9	81,245	44,857	20,021	3,828	12,539	62,517	1 12 4	0 15 5	1 6 4	26,367	22,592	4,188	4,020	2,072	1,936	3,400	3,385	67,960	555
3	Suneha, ...	129	83·8	53,593	35,403	6,891	2,455	8,844	56,467	1 0 10	1 5 4	1 9 6	18,629	16,251	2,002	1,774	2,620	2,443	1,565	1,331	46,615	556
4	Bullia, ...	50	36·2	23,153	14,774	2,774	941	4,664	23,447	1 0 2	1 5 5	1 9 5	9,004	7,696	961	883	545	523	558	468	20,638	570
5	Seraolee, south,	78	80·7	51,655	39,471	2,584	1,153	8,447	53,489	1 0 7	1 4 4	1 5 8	15,034	13,156	2,244	2,033	2,704	2,389	1,029	1,049	39,638	492
6	Furreedpore, ...	424	251·0	160,665	98,002	41,342	3,341	17,980	145,445	0 14 6	1 0 8	1 7 9	42,467	34,937	5,478	4,826	3,529	3,071	3,701	3,233	101,242	403
7	Beesulpore, ...	423	338·6	216,711	121,660	60,550	6,060	28,441	258,324	1 3 1	1 6 8	2 2 0	65,463	55,174	12,559	10,953	3,716	3,179	4,553	3,948	159,545	471
8	Murori, ...	31	24·6	15,713	9,387	2,475	195	3,656	18,155	1 2 6	1 8 6	1 14 11	5,065	4,235	1,259	1,024	154	156	261	246	12,400	504
9	Nawabgunge,...	334	229 9	147,162	103,415	26,444	5,311	11,992	189,367	1 4 7	1 7 4	1 13 4	43,347	37,383	5,251	4,776	5,701	5,088	5,363	4,737	111,646	486
10	Shahee, ...	87	65·3	41,799	28,196	3,505	3,676	6,422	53,160	1 4 4	1 10 10	1 14 2	14,165	12,518	2,346	2,144	1,966	1,860	1,759	1,544	38,302	586
11	Ajaon, ...	98	91·1	58,289	43,370	1,128	1,617	12,174	94,515	1 9 0	2 2 0	2 2 10	20,328	17,780	3,104	2,994	3,178	2,995	2,144	2,065	54,588	599
12	Seraolee, north,	80	77 8	49,761	28,729	5,252	3,712	12,068	54,838	1 1 8	1 9 10	1 14 6	16,583	14,628	3,496	3,167	1,839	1,743	1,436	1,356	44,308	569
13	Chowmehla, ...	134	91·4	58,504	32,048	3,848	10,801	11,807	45,824	0 12 6	1 4 5	1 6 10	13,075	11,291	1,088	1,038	4,423	4,039	1,728	1,674	38,356	420
14	Kabur, ...	62	53·8	34,432	26,684	1,476	1,025	5,247	46,627	1 5 8	1 10 6	1 12 0	9,942	9,284	1,526	1,432	2,392	2,302	2,164	2,184	31,226	580
15	Sirsawan, ...	62	46·9	30,027	22,652	1,185	932	5,258	56,479	1 14 1	2 5 11	2 7 11	9,540	8,390	1,163	1,107	2,668	2,440	1,619	1,572	28,499	608
16	Ritcha, ...	198	167·3	107,067	76,644	9,689	13,179	7,555	145,227	1 5 8	1 10 11	1 14 4	29,092	25,243	4,653	4,198	7,810	7,036	6,304	5,888	90,224	539
	Total, ...	2,751	2,064·9	1,321,510	851,526	213,654	72,451	183,879	1,470,222				395,652	339,797	86,315	77,713	58,559	53,073	69,214	66,680	1,147,003	555·4

S. M. MOENS,

Settlement Officer.

APPENDIX No. VI.

Jinswar or Produce Statement of the Pergunnahs in the Bareilly District.

Number	Areas in Acres.	Furreedpore.	Crore.	Bullia.	Suneha.	Aonla.	Serauolee, S.	Meergunge.	Kabur.	Sirsawan.	Chowmehla.	Bitcha,	Nawabgunge	Beesulpore.	Total.	
	Total area, ...	159,721	200,124	23,986	53,283	81,899	38,108	98,352	35,056	20,758	59,407	108,512	144,829	237,115	1,261,149	
	Minhai, ...	17,386	35,262	3,460	7,518	12,081	5,108	15,884	4,457	630	7,378	22,560	20,956	26,504	180,184	
	Culturable waste, ...	18,239	4,425	2,152	6,608	14,090	2,501	13,532	2,726	1,407	6,537	4,745	11,680	49,751	138,393	
	Baghs, ...	7,307	16,206	331	908	1,106	740	1,234	511	2,889	700	1,460	2,392	7 664	43,448	
	New fallow, ...	3,907	3,543	71	217	455	223	631	233	289	909	1,167	1,636	1,850	15,131	
	Cultivated area, ...	112,882	140,688	17,972	38,032	54,166	28,536	67,071	27,129	15,543	43,883	78,580	108,165	151,346	883,993	
	Khureef Crops.															
1	Vegetables, ...	720	1,768	297	652	694	172	772	169	83	345	808	635	1,128	8,243	·932
2	Tobacco, ...	3	...	...	...	...	...	...	...	...	...	...	...	...	3	·000
3	Sugar cane, ...	6,595	11,562	15	577	907	638	1,662	755	434	2,291	4,665	7,502	12,475	50,078	5 664
4	Pundruh, ...	3,253	4,848	6	180	400	461	381	78	10	367	2,013	4,551	11,808	28,356	3·207
5	Cotton, ...	2,677	2,980	744	2,018	2,882	1,631	4,566	1,763	975	1,682	3,091	2,911	6,061	33,981	3 844
6	Mukka, ...	230	2,662	737	2,519	2,705	122	8,279	4,655	3,206	7,115	9,057	912	93	42,292	4·784
7	Sunn, ...	105	164	210	221	187	20	255	5	5	50	78	48	220	1,568	·177
8	Indigo, ...	...	18	...	...	233	17	...	...	...	...	...	...	152	420	·047
9	Rices, ...	11,795	19,476	1,497	6,394	6,891	1,616	18,404	5,566	2,971	8,123	27,077	42,335	41,695	193,480	21·929
10	Jowar and Churri, ...	4,145	7,238	1,250	2,992	4,868	1,809	4,659	3,651	1,950	5,949	5,815	1,303	2,293	47,927	5·421
11	Bajra, ...	38,862	34,968	3,658	6,968	13,027	9,978	7,635	2,865	1,656	3,035	3,962	10,949	13,246	150,809	17·059
12	Moth, ...	602	939	48	53	90	306	359	156	92	149	212	359	717	4,082	·461
13	Kodon, ...	411	622	1	19	4	1	247	408	258	1,117	2,107	2,997	4,124	12,307	1·392
14	Mash, ...	1,173	1,751	171	189	371	859	1,320	483	257	667	631	1,250	1,408	10,530	1·190
15	Urhur, ...	618	1,660	23	16	37	4	486	63	9	33	83	931	...	3,963	·448
16	Shamakh, ...	175	757	16	34	46	17	331	646	450	1,224	1,865	2,093	64	7,718	·873
17	Mundwah, ...	4	24	...	...	...	...	...	20	20	116	267	85	66	602	·068
18	Kungnee, ...	7	12	7	...	9	...	...	...	...	...	...	6	...	41	·004
19	Moong, ...	57	140	19	20	28	115	88	...	...	...	...	53	51	571	·064
20	Lobhia, ...	17	9	...	...	4	...	...	...	...	...	...	14	...	44	·004
21	Lahee, ...	...	...	6	21	...	12	121	...	...	...	...	...	...	160	·018
22	Til, ...	49	14	...	...	2	...	...	9	...	...	...	20	45	139	·016
23	Singhara, ...	...	...	...	38	...	...	2	...	...	...	...	...	...	40	·004
	Total, ...	71,498	91,612	8,705	22,902	33,385	17,778	49,567	21,292	12,376	32,263	61,731	78,959	95,646	597,714	...

Rubbee Crops.															
Tobacco, ...	5	...	...	...	...	...	...	...	...	...	...	...	...	5	·000
Ghooeean, ...	85	18	...	...	...	...	...	...	...	...	...	...	...	103	·013
Vegetables, ...	...	41	...	...	...	...	...	...	...	...	...	...	...	41	·004
Kussoom, ...	...	...	...	...	2	5	...	...	...	3	2	...	...	12	·001
Wheat, ...	33,197	32,909	6,110	12,031	15,097	8,469	13,529	3,937	2,250	5,690	10,255	20,709	42,692	2,06,875	23·401
Wheat, Barley and Gram, ...	541	2,147	977	603	614	121	596	284	25	81	298	748	1,427	8,462	·957
Wheat and Barley, ...	432	1,891	50	138	831	227	211	134	61	614	800	2,893	3,805	12,087	1·367
Melons, ...	120	353	21	1	80	37	53	13	8	10	5	7	11	714	·080
Barley, ...	1,484	3,002	355	839	1,934	719	703	144	97	1,356	1,072	2,165	2,547	16,417	1·857
Gram and Kussa, ...	4,897	7,211	1,561	1,335	2,090	1,158	1,806	860	504	2,162	2,600	2,303	4,499	32,986	3·731
Linseed, ...	201	561	...	3	6	7	22	124	75	926	1,107	102	362	3,496	·395
Oats, ...	50	...	...	...	...	...	59	21	...	...	...	8	...	138	·015
Kussa included in gram, ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Musoor, ...	164	593	87	140	61	11	436	274	141	692	672	248	265	3,784	·428
Peas, ...	166	322	90	...	8	...	...	33	...	...	8	21	92	740	·084
Chyna	9	...	...	...	...	...	...	...	...	...	...	...	...	9	·001
Sirson, ...	10	28	...	15	8	4	18	1	...	...	30	...	...	114	·029
Sehoon, ...	18	...	15	...	13	...	...	...	...	...	...	2	...	48	·005
Lahee, ...	5	...	1	...	37	...	...	12	11	86	...	...	...	152	·017
Ajwayun, ...	...	...	...	...	...	...	71	...	...	...	...	...	...	71	·008
Kandhar, ...	...	...	...	25	...	...	...	...	...	...	...	...	...	25	·002
Total, ...	41,384	49,076	9,267	15,130	20,781	10,758	17,504	5,887	3,167	11,620	16,849	29,206	55,700	2,86,279	32·395
Dofusli Crops.															
Cutcheana, ...	729	1,692	297	728	437	172	461	114	79	316	851	502	1,127	7,505	
Sugarcane, ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Pandrah, ...	428	290	...	212	314	...	281	275	244	1,597	3,238	3,056	1,326	11,261	
Wheat, ...	1,563	1,969	520	2,687	4,287	411	3,976	2,199	1,823	3,697	4,406	640	725	28,903	
Gram and Kussa, ...	3,257	3,447	1,746	3,930	1,898	502	5,328	1,348	1,081	2,018	5,141	5,457	16,434	52,087	
Barley, ...	392	495	181	449	715	237	453	194	158	1,757	1,754	418	799	8,002	
Gojye, ...	91	62	22	167	251	38	159	241	100	693	642	229	455	3,150	
Bijra, ...	291	492	302	1,506	1,077	52	2,199	369	138	40	556	709	1,245	8,976	
Oats, ...	...	...	...	...	...	...	172	...	...	...	...	18	...	190	
Musoor, ...	555	543	799	1,450	429	4	2,125	1,033	731	1,797	2,931	675	1,041	14,113	
Linseed, ...	969	866	4	104	39	68	108	254	89	2,614	3,568	387	3,820	12,890	
Peas, ...	20	45	36	...	61	...	62	15	6	...	...	33	134	412	
Melons, ...	402	462	20	194	218	4	265	29	...	...	18	...	...	1,612	
Sirson, ...	2	29	...	15	28	2	10	...	...	...	...	...	...	86	
Lahee, ...	...	...	1	15	44	...	98	9	10	148	107	5	...	437	
Sehoan, ...	23	...	2	...	...	...	...	...	...	...	...	...	...	25	
Ghooeean, ...	43	...	...	...	...	...	...	...	...	...	...	...	...	43	
Koondher, ...	14	...	...	...	4	...	...	...	...	...	...	...	...	18	
Chyna, ...	...	2	5	...	...	...	...	...	...	...	...	...	91	98	
Total, ...	8,779	10,394	3,935	11,457	9,802	1,490	15,697	6,580	4,459	14,677	23,212	12,129	27,197	1,49,808	

Barreilly Settlement Office:
The 7th October, 1874.

S. M. MOENS,
Settlement Officer.

APPENDIX

Statement showing the caste of the Proprietors

Number.	Castes.	Pergun Fureedpore.	Crore.	Meergunge.	Suneha.	Bullia.	Aonla.	Serasolee.
1	Bunneahs, ...	30	65	37	152	10	30	27
2	Coormis, ...	55	504	51	1	...	...	...
3	Kayusts, ...	290	644	246	348	201	233	29
4	Puthans, ...	54	351	196	166	3	50	63
5	Kumbohs, ...	38	35	8	12	...	12	1
6	Goshaiens, ...	35	44	43	25	6	40	2
7	Brahmins, ...	326	421	332	220	147	154	23
8	Tawayufs or dancing girls, ...	...	...	1	...	...	...	...
9	Thakoors, ...	3,765	740	808	492	817	811	247
10	Sheikhs, ...	51	231	204	193	10	246	52
11	Pandays, ...	...	...	17	...	...	...	38
12	Jats, ...	...	37	16	...	...	...	...
13	Khuttrees, ...	22	46	6	16	5	2	4
14	Nanukshahi Faqeers, ...	...	...	6	...	...	...	...
15	Bhats, ...	...	2	7	7	1	1	...
16	Quwals or singers, ...	...	...	9	6	...	...	...
17	Moghuls, ...	6	29	41	...	...	13	...
18	Syuds, ...	26	173	104	40	...	84	...
19	Mahajuns, ...	35	5	11	...	...	51	14
20	Bhistees, ...	...	...	3	...	...	...	...
21	Kahars, ...	...	...	9	...	...	...	...
22	Musulman Faqeers, ...	2	38	10	21	2	...	...
23	Christians, ...	10	17	1	...	1	1	...
24	Barbers, ...	...	...	1	...	...	2	...
25	Bramhcharees, ...	...	...	1	...	...	...	...
26	Goldsmiths, ...	2	1	1	1	...	...	...
27	Maraos, ...	2	16	1	44	...	3	...
28	Mirdhas, ...	...	...	1	...	...	...	...
29	Byragees, ...	1	9	7	8	...	12	...
30	Mewattees, ...	7	158	10	...	...	...	...
31	Kisans, ...	...	...	9	21	...	5	6
32	Raiens, ...	...	45	15	...	...	...	...
33	Aheers, ...	164	144	...	20	...	102	42
34	Blacksmiths, ...	3	...	...	...	...	...	...
35	Carpenters, ...	1	5	...	16	...	...	...
36	Achariys, ...	6	...	...	...	...	...	...
37	Goojurs, ...	1	...	...	...	...	5	...
38	Weavers, ...	...	1	...	...	...	2	...
39	Bunjarahs, ...	...	4	...	...	...	...	...
40	Tumbolis, ...	...	9	...	...	...	12	...
41	Kulals, ...	...	1	...	...	...	...	...
42	Telees, ...	...	4	...	4	...	...	...
43	Jhojas, ...	...	...	...	...	...	...	...
44	Sikhs, ...	...	...	...	...	...	...	...
45	Butchers, ...	...	...	...	...	1	...	...
46	Ahbasis, ...	...	...	...	...	...	...	61
47	Malees, ...	...	...	...	...	...	...	...
48	Domes, ...	...	...	...	...	...	...	...
49	Noumuslims, ...	...	...	...	...	...	26	...
50	Billoch, ...	...	...	...	44	...	...	...
51	Kulwars, ...	...	...	...	...	...	...	...
52	Shepherds, ...	...	...	...	...	...	...	...
53	Lodhas, ...	...	...	...	...	...	...	...
54	Dhoonas, ...	...	...	...	...	...	...	...
	Total, ...	4,932	3,779	2,212	1,867	1,204	1,897	609

BAREILLY SETTLEMENT OFFICE,
The 10th October, 1872.

No. VII.

in each Pergunnah of Zillah Bareilly.

NAHS.							
Sirsawan.	Kabur.	Chowmehla.	Ritcha.	Nawabgunge.	Beesulpore.	Total of the District.	REMARKS.
...	14	20	40	40	81	546	
51	17	27	121	253	278	1,358	
8	48	147	90	240	249	2,773	
43	108	131	223	111	79	1,578	
11	5	22	60	4	18	226	
...	2	2	7	1	11	218	
9	54	44	47	124	497	2,398	
...	...	...	...	...	...	1	
10	120	24	84	87	618	8,623	
58	352	27	83	122	47	1,676	
...	...	...	...	...	...	55	
61	35	35	17	8	...	229	
1	2	6	28	28	20	186	
...	...	...	...	...	...	6	
...	...	...	...	...	...	18	
15	...	...	...	...	...	30	
...	10	...	...	4	11	114	
...	20	21	92	487	39	1,086	
...	...	23	...	...	...	139	
...	...	...	...	...	...	3	
...	...	...	...	...	...	9	
4	16	20	42	...	12	167	
1	...	...	...	5	24	60	
...	...	...	...	...	...	3	
...	...	1	1	...	...	3	
...	1	...	...	...	...	6	
...	...	...	...	...	1	67	
...	...	...	...	...	...	1	
...	1	1	32	...	2	73	
9	...	...	...	...	18	202	
26	...	...	...	...	68	185	
7	...	14	128	4	15	228	
...	...	...	...	3	8	483	
...	...	...	...	...	...	3	
...	...	...	...	...	4	26	
...	...	...	...	...	...	6	
...	...	...	...	...	34	40	
...	...	...	...	...	...	3	
2	...	14	5	...	2	27	
...	...	...	...	...	...	21	
...	...	...	...	...	5	6	
...	...	...	...	49	16	73	
...	...	...	...	1	...	1	
...	...	...	...	1	...	1	
...	...	...	...	...	...	1	
...	...	...	...	...	...	61	
...	...	...	3	...	...	3	
...	...	8	...	...	...	8	
...	...	...	...	...	...	26	
...	...	...	...	...	...	44	
...	...	...	...	...	46	46	
...	...	...	...	...	4	4	
...	...	...	...	...	8	8	
...	...	...	4	...	...	4	
336	605	587	1,107	1,572	2,215	23,122	

S. M. MOENS,

Settlement Officer.

APPENDIX No. VIII.

Memo. showing the Details of Expenditure in the Bareilly Settlement Department from the commencement of operations up to 30th September, 1872.

Number.	Charges according to Budget Heads.	From May 1865 to 30th April 1866.	From 1st May 1866 to 31st March 1867.	From 1st April 1867 to 31st March 1868.	From 1st April 1868 to 31st March 1869.	From 1st April 1869 to 31st March 1870.	From 1st April 1870 to 31st March 1871.	From 1st April 1871 to 31st March 1872.	From 1st April to 30th September 1872.	Total.	Grand Total.
		Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
1	S. M. Moens, Esq., Settlement Officer, ...	600 0 0	10,370 15 6	14,750 0 0	15,000 0 0	15,000 0 0	17,750 0 0	18,000 0 0	9,000 0 0	100,470 15 6	125,119 6 9
2	F. W. Porter, Esq., A. S. O., ...	...	...	...	...	5,383 14 11	7,200 0 0	7,864 8 4	4,200 0 0	24,648 7 3	
3	Mirza Vicar Ali Beg, I., D. C., ...	500 0 0	3,650 0 0	4,800 0 0	4,800 0 0	4,800 0 0	4,800 0 0	4,800 0 0	2,400 0 0	30,550 0 0	39,201 5 5
4	Pundit Ajoodhia Pershad, II., D. C., ...	...	...	...	1,691 10 7	709 10 10	3,000 0 0	3,000 0 0	250 0 0	8,651 5 5	
5	Fixed Establishment, Clerks, ...	461 0 10	3,058 5 10	4,028 11 1	4,879 0 2	4,788 11 10	5,993 0 0	6,608 0 0	2,718 10 8	32,535 8 5	35,532 9 1
	Fixed Establishment, Duftry and Chuprasees, ...	36 14 11	293 15 1	446 8 0	360 0 0	372 0 0	488 0 0	672 0 0	327 10 8	2,997 0 8	
6	Variable Measurement Establishment, Meonserims, ... Crore, ...	451 0 0	938 5 4	573 13 11	395 13 9	...	...	...	...	2,359 1 0	11,133 13 3
	Meonserims, ... Furreedpore, ...	360 0 0	712 1 5	...	...	265 0 0	...	...	...	1,337 1 5	
	Meonserims, ... Nawabgunge, ...	...	490 0 0	293 0 0	...	223 8 2	35 0 0	...	...	1,041 8 9	
	Meonserims, ... Meergunge, ...	...	354 3 11	270 8 3	...	...	...	...	...	624 12 2	
	Meonserims, ... Aonlah T., ...	...	...	593 0 0	1,418 6 9	320 0 0	100 0 0	60 0 0	...	2,491 6 9	
	Meonserims, ... Beesulpore, ...	...	...	607 4 3	400 0 0	...	30 0 0	200 0 0	...	1,237 4 3	
	Meonserims, ... Buheree T., ...	...	...	...	...	414 14 3	877 12 8	350 0 0	...	2,042 10 11	
7	Field Ameens, Crore, ...	616 14 3	1,290 9 10	169 3 4	42 11 10	...	...	...	...	2,119 7 3	10,890 7 11
	Field Ameens, Furreedpore, ...	572 14 3	1,100 3 5	...	...	20 2 6	...	...	...	1,693 4 2	
	Field Ameens, Nawabgunge, ...	...	854 13 5	210 12 0	...	...	...	...	...	1,065 10 3	
	Field Ameens, Meergunge, ...	...	613 8 8	244 14 0	...	15 0 0	45 0 0	...	...	918 6 8	
	Field Ameens, Aonlah T., ...	...	...	873 14 9	744 0 5	139 9 9	7 8 0	...	...	1,765 0 11	
	Field Ameens, Beesulpore, ...	...	...	1,233 5 9	432 8 8	...	15 0 0	...	...	1,680 14 5	
	Field Ameens, Buheree T., ...	...	...	...	15 0 0	852 3 1	780 9 2	...	...	1,647 12 3	
8	Mirdhas, ... Crore, ...	794 9 9	3,160 13 6	127 13 0	125 14 6	...	...	...	...	4,290 3 7	24,799 2 4
	Mirdhas, ... Furreedpore, ...	776 4 6	2,322 12 3	...	...	60 4 9	...	...	...	3,159 5 6	
	Mirdhas, ... Nawabgunge, ...	...	2,302 14 4	316 10 1	...	40 10 3	4 0 0	...	...	2,664 2 8	
	Mirdhas, ... Meergunge, ...	...	1,580 0 11	223 3 11	...	...	...	...	...	1,803 4 10	
	Mirdhas, ... Aonlah T., ...	...	...	2,280 10 0	1,446 12 11	99 5 11	13 14 0	20 0 0	...	3,860 10 10	
	Mirdhas, ... Beesulpore, ...	...	39 3 4	3,208 13 9	964 9 8	...	8 0 0	28 10 2	...	4,249 4 11	
	Mirdhas, ... Buheree, T., ...	...	...	...	163 15 2	3,055 9 3	1,589 11 9	43 13 10	...	4,853 2 0	
9	Pay of Settlement Guard, ...	...	...	...	...	39 0 0	107 4 0	240 0 0	120 0 0	506 4 0	506 4 0
10	Khuteounee Establishment, ... Crore, ...	...	632 3 6	2,464 8 8	1,688 0 10	600 0 0	...	...	...	5,384 13 0	29,307 12 5
	Khuteounee Establishment, ... Furreedpore, ...	...	887 11 0	1,484 9 5	594 10 2	...	...	...	...	2,966 14 7	
	Khuteounee Establishment, ... Nawabgunge, ...	...	...	1,176 14 7	1,642 5 2	580 0 0	...	...	...	3,399 4 9	
	Khuteounee Establishment, ... Meergunge, ...	...	...	1,921 14 8	713 12 4	...	...	...	...	2,635 11 0	
	Khuteounee Establishment, ... Aonlah T., ...	...	...	...	2,273 2 4	3,856 0 9	635 0 0	...	...	6,764 3 11	
	Khuteounee Establishment, ... Beesulpore, ...	...	...	...	...	1,130 9 2	2,382 8 2	...	...	3,513 1 4	
	Khuteounee Establishment, ... Buheree T., ...	...	...	...	...	...	2,119 8 5	2,524 0 0	...	4,643 11 10	

11	Khewut establishment,	Crore,	...	...	...	...	2,012 0 0	1,156 0 0	...	...	3,168 0 0	17,346 1 10
		Fureedpore,	...	...	...	991 10 3	1,395 6 4	...	...	...	2,387 0 7	
		Nawabgunge,	...	...	...	...	...	...	1,581 12 5	...	1,581 12 5	
		Meergunge,	...	...	...	...	446 0 0	667 0 0	...	...	1,113 0 0	
		Aonla T.,	...	...	...	...	152 0 0	2,223 9 10	1,037 0 0	...	3,412 9 10	
		Beesulpore,	...	...	...	...	...	...	512 0 0	3,034 0 0	3,546 0 0	
		Buheree T.,	...	...	...	...	...	...	2,137 11 0	...	2,137 11 0	
12	Temporary special clerks and testing establishment,		...	2,273 2 5	2,559 7 10	5,119 12 11	3,944 6 11	4,211 14 9	3,347 13 7	3,454 1 7	24,911 3 0	24,911 3 0
13	Deputation allowances,		...	...	1,141 14 11	...	...	...	...	...	1,141 14 11	1,141 14 11
14	Tentage allowance to officers,	S. M. Moens, Esq., S. O.,	...	833 0 0	778 0 0	695 0 0	565 0 0	640 0 0	789 0 0	310 0 3	4,610 0 0	9,982 0 0
		F. W. Porter, Esq., A. S. O.,	...	...	...	...	415 0 0	639 6 0	440 0 0	31 0 0	1,525 0 0	
		Mirza Vicar Ali Beg, D. C.,	45 8 0	576 0 0	552 0 0	414 0 0	171 0 0	426 0 0	529 8 0	276 0 0	2,990 0 0	
		P. Ajoodhia Pershad, D. C.,	...	...	...	222 0 0	...	456 0 0	179 0 0	...	857 0 0	
15	Travelling allowance to establishment,		85 7 8	1,307 6 5	1,208 15 6	880 6 5	538 9 4	655 8 10	430 14 9	69 4 5	5,176 9 4	5,176 9 4
16	Contingencies of fixed and variable establishment.	Pay of khulasees, sweepers, chowkeedars and punkha coolies.	...	106 6 1	155 2 8	297 12 3	364 7 10	569 11 11	498 8 2	281 5 2	2,273 6 1	...
		Purchase of tents and carpets,	...	1,670 5 5	74 5 1	218 15 6	478 2 11	41 5 9	146 8 0	4 0 0	2,633 10 8	8,113 6 1
		Carriage of records and tents,	20 3 3	137 10 0	100 4 6	296 9 3	301 1 11	685 1 0	569 5 0	191 10 10	2,301 13 9	
		Cloth for bustahs and dak bags,	27 14 0	84 14 3	88 4 0	145 6 9	54 14 6	68 8 6	42 3 5	5 6 9	517 8 0	
		Oil for lights,	...	2 7 6	17 2 0	19 14 3	12 10 0	24 2 9	25 0 0	9 2 6	110 14 0	
		Post office charges,	...	...	...	...	...	53 14 6	87 6 0	134 13 1	276 1 7	
17	Office or ground rent,		...	...	1,222 11 8	226 0 0	258 0 0	1,209 0 0	1,544 0 0	756 0 0	5,224 11 8	5,224 11 8
18	Cost of measuring instruments,	244 iron chains,	441 0 0	677 0 0	211 4 0	3 4 0	...	...	...	...	1,332 8 0	3,836 1 1
		254 plane tables,	334 0 0	776 12 0	18 0 0	...	...	...	...	...	1,128 12 0	
		272 sights,	60 5 0	83 8 0	0 9 0	...	...	...	...	...	144 6 0	
		260 pairs of compasses,	76 0 0	73 8 0	0 8 0	15 0 0	...	...	...	...	165 0 0	
		360 brass scales,	37 14 0	87 2 0	7 12 6	...	9 8 0	...	...	...	142 4 6	
		1603 flags,	112 0 8	72 15 11	51 9 0	0 15 6	15 7 2	...	...	...	253 3 3	
		848 soojahs,	2 8 0	98 6 0	...	...	7 0 0	...	...	...	107 14 0	
		298 suhawuls,	4 14 0	9 11 0	...	...	2 0 0	...	...	...	16 9 0	
		184 wooden yards,	10 2 0	16 0 9	...	...	...	...	...	...	26 2 9	
		19¾ seers of iron nails,	9 14 0	...	...	...	...	...	...	...	9 14 0	
		25 dividers,	50 0 0	...	...	...	...	...	...	...	50 0 0	
		171 kutubnumas,	12 8 0	65 8 0	...	...	...	...	...	...	78 0 0	
		1220 pins,	0 10 0	0 15 0	...	...	...	...	...	...	1 9 0	
		Weights,	1 3 6	...	...	...	...	...	...	...	1 3 6	
		Cost of repairs of instruments,	43 4 0	128 6 1	83 1 2	20 6 0	38 9 0	...	...	...	313 2 0	
		Cost of carriage of ditto,	33 5 10	9 14 3	22 8 0	...	...	...	...	...	65 12 1	
19	Job Work,	Copy wages of khusrahs,	...	856 12 6	1,450 3 3	3,534 11 0	4,520 10 8	4,399 12 11	2,685 11 7	1,817 12 6	19,195 10 5	28,682 13 9
		Ditto of village maps,	...	356 3 4	2,305 6 8	925 0 11	1,030 14 11	942 13 1	146 0 9	96 0 0	5,803 7 8	
		Mounting cloth on the back of shujrahs,	...	142 13 3	375 2 0	639 11 2	107 6 0	189 9 3	40 14 9	...	1,495 8 5	
		Binding wages of sett. misls,	...	...	...	...	118 9 0	556 12 9	316 14 0	502 11 0	1,494 14 9	
		Cost of printing forms,	...	...	420 15 0	...	...	...	272 4 9	...	693 3 9	
20	Country Stationery,	Country paper, 4221 guddi, 5 qrs.,	164 5 3	739 10 0	2,328 12 5	1,452 11 8	1,486 14 6	1,638 9 2	997 12 6	768 10 3	9,577 5 9	
		Bans or hill paper, 5,532 sheets,	16 7 1	49 14 9	45 14 5	40 12 3	31 13 6	46 0 9	8 15 0	4 6 0	244 3 9	
		Foolscap paper, 9 reams, 6 qrs.,	...	18 10 0	41 2 8	...	...	4 12 0	9 14 8	27 0 0	101 7 4	

Memo. showing the Details of Expenditure in the Bareilly Settlement Department from the commencement of operations up to 31st September, 1872.—(Continued.)

Numbers.	Charges according to Budget head.		From May 1865 to 30th April 1866.	From 1st May 1866 to 31st March, 1867.	From 1st April 1867 to 31st March 1868.	From 1st April 1868 to 31st March 1869.	From 1st April 1869 to 31st March 1870.	From 1st April 1870 to 31st March 1871.	From 1st April 1871 to 31st March 1872.	From 1st April to 30th September 1872.	Totals.	Grand Totals.
			Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	
20	Country stationery, ...	Blotting paper, 3 quires, ...	...	...	...	...	...	...	0 10 0	0 10 0	1 4 0	
		Seerampore, „ 5 „ ...	...	...	...	...	...	0 12 0	0 6 0	...	1 2 0	
		Zurufshan, „ „ „ ...	...	...	...	...	...	1 12 0	3 5 0	1 5 6	6 6 6	
		Registers for office, 423 quires,...	32 15 8	72 0 9	44 3 8	101 13 7	45 3 3	33 5 9	56 0 9	11 10 3	397 5 3	
		Country ink, 4 mds. 30 srs. 3 ch.,	10 15 0	98 13 9	96 13 6	100 13 0	88 8 0	66 3 0	67 1 9	42 3 0	571 7 0	
		Seal ink, 46 bottles, ...	4 0 6	8 8 0	2 0 0	21 8 6	1 8 0	1 8 0	5 4 0	6 12 0	51 1 0	
		English ink, 31 bottles, ...	...	...	...	3 7 0	2 0 0	5 1 0	10 7 0	15 4 0	36 3 0	
		Steel pen nibs and M. B., 400 dozen.	2 8 0	4 13 10	3 8 8	0 10 6	1 4 0	9 14 0	2 3 6	2 8 0	27 6 6	
		Quill pens, 6 bundles, ...	0 12 2	0 8 6	...	...	...	0 2 6	1 0 0	...	2 7 2	
		Ink pots, 45 ditto, ...	...	...	0 1 0	2 12 0	1 1 0	0 6 0	...	0 3 0	4 7 0	
		Wooden rulers, 12, ...	0 4 6	0 3 0	...	0 4 0	...	0 4 0	0 7 0	0 8 0	1 14 6	
		Holders ditto, 373, ...	0 12 0	2 4 0	1 13 0	0 11 0	1 8 0	...	0 2 6	0 11 0	7 13 6	
		Lead pencils, 377 dozen, ...	12 7 3	43 4 8	33 3 3	6 0 9	11 12 8	2 15 6	1 0 6	0 1 6	107 14 1	
		Red and blue pencils, 171 dozen,	0 4 0	1 2 0	8 12 4	1 12 6	2 14 6	1 6 6	0 9 9	0 1 6	16 15 1	
		India rubber, 12 seers, 6 ch., ...	14 7 0	39 2 0	33 10 0	7 0 0	11 8 6	0 10 3	...	0 10 0	106 15 9	
		Penknives, scissors, and erazers.	1 1 0	...	...	1 4 0	...	1 2 0	...	4 10 0	8 1 0	
		Colour boxes, 21, ...	4 6 0	11 6 0	5 0 0	2 8 0	...	8 12 0	2 0 0	2 0 0	36 0 0	
		Vermilion, 16 seers, 6 ch., ...	6 12 6	32 5 9	30 9 11	13 8 0	12 7 0	5 8 0	4 9 6	1 9 0	107 5 8	
		Red ink,	...	...	0 5 0	...	...	0 3 0	...	...	0 8 0	
		Zingar, 2 seers, 4 ch., ...	1 3 6	0 6 0	0 14 0	0 6 0	2 6 0	...	1 4 0	...	6 7 6	
		Indigo, 5 seers, ...	...	2 6 0	8 3 0	0 12 9	1 10 3	...	...	...	13 0 0	
		Yellow colour, 2 seers 4 ch., ...	...	1 0 0	3 3 0	0 15 0	2 4 0	...	...	...	7 6 0	
		Vinegar for ink, ...	...	...	1 4 0	1 8 0	1 8 0	...	...	...	4 4 0	
		Tape for bundles, 14,071 yards,	0 9 3	10 14 3	8 10 9	17 11 0	7 4 0	11 10 0	12 4 3	2 8 0	71 7 6	
		Pens, 984 dozen, ...	1 0 6	4 7 0	7 10 0	0 11 9	2 1 0	0 0 6	...	...	15 14 9	
		Needles and thread, ...	0 3 0	2 8 1	1 9 5	3 2 6	3 1 0	3 6 9	2 13 2	0 14 1	17 10 0	
		Gum and paste, ...	0 10 0	8 1 9	5 1 1	7 11 5	7 8 1	5 12 10	3 13 10	2 4 0	40 15 0	
		Carriage of stationery boxes,	...	26 5 3	26 15 0	17 14 3	23 3 6	18 14 0	11 7 6	...	124 11 6	
21	Office furniture, ...		24 3 10	99 13 1	123 15 0	221 1 1	96 11 2	119 11 4	76 13 11	42 15 3	805 4 8	805 4 8
												3,93,428 4 10

BAREILLY SETTLEMENT OFFICE,
The 15th October, 1872.

S. M. MOENS,
Settlement Officer.

APPENDIX No. X.

On the thieving Clan known as the "Dulera."

The *duleras* are a thieving caste, known by that name in this district only. They are called elsewhere *mullahs*, though they differ from the ordinary boatman *mullah* in many respects. They are only found east of Goorgaon and Delhi, and the Sarduh is their easternmost limit. Five families emigrated from Goorgaon in the Aonla to Lucknow, and settled there for some years; but they were detected in numerous thefts, and finally branded on the cheeks by the order of the Nawab. They then returned to Goorgaon. In Moradabad they are known as *khagis*. The origin of this word I am unacquainted with, but there may be some connection with the thuggee word *khaga*—a village. In Bareilly the *dulera* head-quarters are at Goorgaon and Hajeepore in Aonlah; Soodunpore, Muheshpore, and Futtehpore in Crore; Toorkoonean, Tatarpore, Simurea, and Sikha in Meergunge. They are also found in the Turaeen, and at Debi Nawadah had five houses; Jessainuggur ten houses; Bansbojh four; and in Drummondgunge in Phillibheet. Some of the Debi Nawadah men have gone recently to Sitooea at Khoop, and Garhpooreh in Rampore; Akha, Mehta, Kherah, and Bhoobura in Moradabad. In Boolundshuhur, Girdhurpore is owned half by *gour mullahs*, and the other half by *gour thakoors*. There is an old connection between the *mullahs* of Girdhurpore and the *duleras* of Goorgaon, as Cheyt Ram of Girdhurpore is the *purohit* of the *gour duleras* of Goorgaon.

The *purohit* of the Jessainuggur *dulera* is Kooer Seyn of Rookunpore on the Jumna, 20 *coss* this side of Delhi. One Gotr Sikurwals, hold Thunthuri on the Jumna in the Goorgaon district, and are notorious thieves. The *duleras*, though not connected by blood, are by friendship and similarity in habits connected with the *bhutteas*, or *Brun Bhats* of Ramnuggur. Both follow the profession of *oothaigiree*, but the superiority of the *bhutteas* is regretfully acknowledged by the *duleras*. The latter emigrated from the Delhi district to Bareilly in the *chaleesa* famine. They first settled at Akha Dhukha on the Ramgunga, and ostensibly followed the trade of basket-making, whence their name of *duleras*, which was adopted by subsequent immigrants from Delhi, Muttra, and Boolundshuhur. A large body of *gour mullahs* settled at Behta Boozoorg, but were expelled by Bisharut Khan, the *Amil*, and moved to Goorgaon, where there is now a large number of them congregated in a separate *mohullah*, known as Pussoopoorah. Any native charged with *oothaigiree*, and describing himself as a *thakoor mullah* or *dheemur*, residing at Pussoopoorah, may be put down with certainty as a professional *dulera* thief.

Like all the predatory clans they are of mixed origin; all their *Gotrs* are descended from Dheemurin on the female side, and *Thakoors* or *Goojurs* on the male. The subdivisions are usually called after the tribe of the male ancestor; thus there are *Gour*, *Tomur*, *Sikkurwal*, *Moraitea*, *Sirsea*, *Thoka* or *Thokea*, all claiming descent from *Thakoor* ancestors, and *Kussanis* from *Goojurs*. All the *Gotrs* smoke, eat, and drink with each other, but the *Thakoor Gotrs* don't intermarry with the *Kussani*. They neither smoke, drink, or intermarry with the boatmen, *mullahs*, nor with the *kahar Dhimur*, to whom they consider themselves much superior. They will never perform menial offices, or carry *palkis*; widows remarry, and *karao* is practised. In the west they do not eat fish, and even here the practice is a very recent one. This point at once distinguishes them from the ordinary *mullah*. They eat partridges and goats flesh; wild hogs are forbidden food, oddly enough, considering that the *thakoors* are exceedingly fond of the flesh. They are exceedingly intemperate; intoxicate themselves with *bhang*, and drink inordinately; but at marriages, or a *punchayet*, drink is strictly forbidden. The ordinary *dhol* is used at marriage feasts, but the *mirdung*, or double-handed drum is strictly forbidden.

Besides all the usual objects of Hindoo worship, they especially worship Bhowanee Dabee and the Amroha Syud; besides the especial Bhoomia of the village in which they reside.

Their *Bhats* are either Mussulman, Hindoo, or *Dom;* each sub-division has its own *Bhat*. The *Bhat* of the Goorgaon *Tomur duleras* is a *Dom*, *Madaree* of Moonjkhera

in Boolundshuhur. The Jessainuggur *Bhat* is at Mollanpoor on the Ganges opposite Moonjkhera; they usually start on their excursions towards the end of September; they arrange parties of five or six usually, consisting of three men and two or three boys; the parties move out of the village and camp in a neighbouring *bagh;* sacrifice a goat to Bhowanee, and observe the omens. The call of a partridge, single fox, or jackal on the left hand is propitious, if from the right, very unfavorable. A dog easing itself on the left hand of the observer betokens great success. If the omens are unfavorable the party return to their village, and pass a night in their homes before again attempting to take the auguries. If the signs are good, they start at once on their way. While the party is absent their women and children are fed by their *bunneah*, who usually receives interest on his advances, at the rate of one anna in the rupee per mensem, besides a present out of the spoils brought back by the party. If the *sohbat* or gang meet with good success at the outset they return at once, otherwise they travel onwards, usually returning to their village in May; but it is a point of honor never to return empty handed. They steal by day only; however favorable the opportunity a *dulera* will never take anything at night. They go unarmed and never use violence. A breach of either of these rules would entail an immediate *punchayet*, and the offender's expulsion from caste, restoration to which can only be purchased by a pilgrimage, or the gift of a cow to a *brahmin*, and a caste dinner. Their mode of stealing closely resembles that of the Oudh *barwars*, with whom, however, they are in noways connected. The *barwars* are mostly of impure *brahmin* descent, with *brahmin* names for their sub-divisions. There are, however, *barwars* of impure *thakoor* descent in eastern Oudh, but the *duleras* disclaim all connection with them. Like the *barwars*, the stealing is carried on chiefly through the boys, though the men of course never neglect a favourable opportunity: unlike them, they rarely assume a disguise. They attend most large fairs and bodies of troops on the march, but never rob the dead on a field of battle. They deny indignantly that they are thieves. They say they only "annex property which the owner has neglected or forgotten;" when arrested they rarely give their real names or caste. They usually describe themselves as *Thakoors*, *Goojurs*, or *Dheemurs*; hence the small number of cases to be found against them in the criminal records of the district. For the same reason the jail registers afford few indications of their existence as a predatory tribe. They never by any chance, on any temptation, carry on their operations in the neighbourhood of a *dulera* village for fear of implicating their brethren; a breach of this rule would entail immediate exclusion from caste intercourse.

Their sphere of operation is very extended. They say they work over all the North-Western Provinces and as far as Lahore, in the western districts of Oudh, in the Central Provinces, and to the south-west as far as Poonah. Some gangs go down through Mirzapore and Benares to Calcutta. They never travel by rail for fear of losing a good chance of *souda*, and they never return empty handed, even if they have to remain absent for years. They soon dissipate their gains, and after all retain but little for themselves; for the *zemindar*, the *chowkeedars*, *putwaree* and *mokuddums* of their own villages have all to be propitiated, beside the police of the neighbouring stations. The *bunneahs* advances, too, have to be repaid, and what little remains is soon spent in drink and debauchery. The trade of *oothaigiree*, is said to be far more unprofitable than formerly. An old *dulera* remarked to me with a mournful shake of the head that the world was day by day becoming more wide awake, and that the *duleras* were gradually becoming more impoverished, and at the same time forgetful of old traditional observances. I believe this statement of the decline of "trade" to be well founded. Nuttha, the *dulera bunneah* of Goorgaon was formerly a wealthy man and built himself a good *pucka* house, but his son is in debt and gradually becoming ruined. The *duleras* strongly disapprove of native states, while on the other hand they are quite enthusiastic on the subject of our Jail management. Most of them have been in Jail at one time or another, and all unite in saying that if spirits and tobacco were procurable as of old, Jail life would leave nothing to be desired.

S. M. MOENS,
Settlement Officer.

APPENDIX No. XI.

Alphabetical and Chukwar List of Pergunnah Crore.

No.	Names of Villages.
	CIRCLE I.
1	Abdoollapore deh maafee.
2	Abhepore.
3	Adhoopoora maafee.
4	Ahladpore Puttee Furzind Ali.
5	Ditto Peetum Rae.
6	Amloneepore Puttee, 15 biswas.
7	Ditto 5 biswas.
8	Alumpore.
9	Aspore.
10	Balepore, Ahmedpore, maafee 2½ biswas.
11	Ditto ditto 17½ biswas.
12	Baree Nugla.
13	Behareepore Khas.
14	Behar Man Nugla.
15	Beneepore Chowdhree.
16	Ditto Saadut.
17	Budhouleea.
18	Bhugnapore.
19	Bhurtoul.
20	Bhururia.
21	Birahimpore.
22	Bithree Chynpore, maafee Lakhee.
23	Ditto ditto Zurd.
24	Ditto ditto Thungurfee.
25	Ditto ditto Muqruqa.
26	Ditto ditto Muqruqa.
27	Bokhara.
28	Budhepoora.
29	Burkapore.
30	Chanwurputtee Chutturput Rae.
31	Ditto Luchun Rae.
32	Ditto Oomrao Begum.
33	Chuk Mahmood.
34	Chuneyta.
35	Chandpore Richpooree Puttee, Hikmut Ali.
36	Ditto ditto Hussun Ali.
37	Chunehtee.
38	Chyna Morarpore.
39	Dohrea.
40	Dharoopore Puttee Akber.
41	Ditto Jeewun Sahae.
42	Ditto Thakooran.
43	Dhounreruh maafee.
44	Doobaree.
45	Etawa Muhal Lakhee.
46	Ditto Sufed.
47	Ditto Sookhdeopore.
48	Furreedpore, Mr. Berkeley.
49	Ditto Puttee, Mt. Koonwer.
50	Ditto Inayet Ali Khan.
51	Ditto Mt. Ajoobun.
52	Goonga.
53	Gopalpore Muhal 17, 15, 11.
54	Gopalpore Muhal 2, 4, 9.
55	Gujroula Muhal, Jeewun Sahae.
56	Ditto ditto ½.
57	Hurhurpore.
58	Huroo Nugla Muhal 17½ biswas.
59	Ditto ditto 2½ ,,
60	Ismaelpore.
61	Jugutpore.
62	Kundhurpore.
63	Khaie Khera.
64	Khoojooreea Brahmins.
65	Ditto Wali Shah.
66	Ditto Zoolficar.
67	Kooan Dauda.
68	Koomhra.
69	Kullapore Muhal Chowdhree.
70	Ditto Puttee Bishen Sahae.
71	Ditto Deena Nath.
72	Kularee.
73	Kunthree.
74	Kurelee.
75	Kurgyna.
76	Kuchoulee.
77	Kuroundah,
78	Ladpore Puttee Chunee Lal.
79	Ditto Dhakun Lal.
80	Ditto resumed maafee.
81	Luchmunpore.
82	Lukhourah.
83	Luheea.
84	Madhobaree.
85	Manpore Chookutpore.
86	Manpore Yahaiapore.
87	Meondee Kulan.
88	Ditto Khoord.
89	Mirzai Bagh.
90	Mohrunean.
91	Mohunpore.
92	Moondea Ahmednuggur.
93	Mollanpore.
94	Moheshpore Thakooran.
95	Mulhpore.
96	Mulhpore Danda.
97	Mulpooria Dulel.
98	Nareawul.
99	Neikpore.
100	Nowgawan.
101	Ditto Jagheer.
102	Nubbeenuggur.
103	Nugurea Anoop.
104	Nuthoo Rampoora.
105	Nuvudea Hurkishen.
106	Nuvudea Alaqa Singhai.
107	Ditto Puttee Chowdhree.
108	Ditto Thakooree.
109	Ditto Muzrah Ruthaurah.
110	Nawada Deena Nath.
111	Ditto Sheikhan.
112	Oodypore 2 puttees.
113	Oomursea Puttee Radha.
114	Ditto Abadee Begum.
115	Oomursea.
116	Oondla Jagheer.
117	Pudaruthpore.
118	Pygahpore.
119	Palpore Kumalpore.
120	Peebahour Muhal Shimalee.
121	Ditto Janoobee.
122	Pepurea.
123	Pahargunge.
124	Purha Tass.
125	Purewa Kooean.
126	Purgawan Puttee, Mussumat Amanee.
127	Ditto Imam-ood-deen.
128	Pursounah.
129	Putapore Puttee Jeewun Sahae.
130	Ditto Kadir Shah Khan.
131	Kusbeh Hafizgunge.
132	Rajpore Nawada.
133	Rajpoora deh maafee.
134	Roopapore.
135	Rusoola.
136	Ruthora.
137	Seinra Bouripore.
138	Seinra.
139	Senghaie Hurdial.
140	Sesaia Puttee Mool Chund.
141	Ditto Tara Chund.
142	Ditto Purmanund.
143	Sethoura.
144	Soondurpore.
145	Suneha
146	Surkura Soorkh.
147	Ditto Muhal Goolabee.
148	Ditto Mooltanee.
149	Sydpore Khujooria.
150	Sydpore Coormian.
151	Sydpore Lushkureegunj.
152	Tab Tajpore.
153	Thirea Nijabat Khan.
154	Taiwurea.
155	Toolsheepore.
	CIRCLE II.
156	Adhkutta Puttee Naeemoolnissa.
157	Ditto Bunyadi Begum.
158	Beerpore Konwerjee.
159	Bhudsar Muhal, 15 biswas.
160	Ditto 5 biswas.
161	Bhugoutepore.
162	Bhugwanpore Dhoonia.
163	Byspore.
164	Chahur Nugla.
165	Chousunda.
166	Dundeea.

Alphabetical and Chukwar List of Pergunnah Crore.

No.	Names of Villages.
167	Gae Ghutta.
168	Goolurea Bizkoonissa.
169	Jagunnathpore.
170	Keerutpore.
171	Koni Muhal 10 biswas, Nujmooddeen.
172	Ditto 10 biswas.
173	Konwurpore Bunjureea.
174	Kumooan Kulan.
175	Lodhepore.
176	Lularee.
177	Lahburee.
178	Meondi Mewa Konwer.
179	Muheshpore Shah Imamooddeen.
180	Nowgawan 3 puttees.
181	Oodeypore Jusrutpore.
182	Oodeypore Dhurumpore.
183	Oogunpore.
184	Poornapore.
185	Sanwur Khera Muhal Sufed.
186	Ditto Soorkh.
187	Ditto maafee Subz.
188	Ditto Mooltanee.
189	Sarepore.
190	Senghai Morawan,
191	Sukutpore.
192	Saiyudpore.
193	Tindwa Muhal Kutwara.
194	Ditto Puttee Crore.
195	Tindawah Muhal maafee.
196	Tighra.
197	Toorkooeean.
	Circle III.
198	Abbipore Keshopore.
199	Adhlukeea.
200	Ahrolah.
201	Bheckumpore deh maafee.
202	Bhoora.
203	Bhugwuntpore Muhal, 12½ biswas.
204	Ditto 7½ biswas.
205	Bhurutpore.
206	Bhyrpore Khujureea deh maafee.
207	Bybuha.
208	Bykoontapore.
209	Dasspore.
210	Deedar Puttee.
211	Deohureea maafee.
212	Ditto Puttee Goolabee.
213	Dohnan.
314	Dohra.
215	Douloo Jugmunpore.
216	Goplapore.
317	Hajipore Brij Lall.
218	Ditto, Khoda Yar Khan.
219	Jullapore.
220	Kesurpore M. Zurd, 10 biswas.
221	Ditto do., Soorkh.
222	Ditto do., Abee.
223	Ditto do., Subz.
224	Ditto do., Zungaree.
225	Kummooan Khoord.
226	Kunja Dasspore.
227	Lalpore.
328	Mohunpore-oorf-Ramnuggur.
229	Mumrezpore Nuvudea.
230	Munpooreea M. Janki Pershad.
231	Ditto do., Muthree.
232	Munhera.
233	Mustafabad.
234	Nawada Jogean M. Moonshee Mool Chund.
235	Ditto do., Mt., Bunnoo Jan.
236	Ditto do., Deep Chund.
237	Ditto do., Mt. Jankee.
238	Ditto do., Gerindhun Lall.
239	Ditto do., Raja Ram.
240	Nagupore.
241	Nugurea Kulan.
242	Ditto Pureechut.
243	Nurotum Nuglah.
244	Nuwudea Jhada.
245	Pahrapore Busawunpore Nugureea.
246	Puchdeorah Kulan.
247	Pulpuragunge.
248	Rumpoorah Jagheer.
249	Rypoorah, Girdharee Lall.
250	Sherepore.
251	Sheogoonean.
252	Sisseya Hosseinpore.
253	Suhowa.
254	Sydpore, M. Wujub-ood-deen.
255	Ditto do., Jhoonnee Lall.
256	Toolapore.
	Circle IV.
357	Aspoor Peetum Rae.
258	Atta Muhal, one-third.
259	Atta Muhal, two-thirds.
260	Baqurnuggur Sundrasee maafee.
261	Bibeeapore Chowdhree.
262	Bilwa.
263	Boodholeea.
264	Furreedpore Chowdhree.
265	Ghangora Pepurea.
266	Girdhareepore.
267	Ghoonsa.
268	Gomdapore.
269	Khutola.
270	Kurumpore Chowdhree.
271	Ditto Thakooran.
272	Lutooree.
273	Maidapore.
274	Mahlon.
275	Muth Konwulnyupore.
276	Do. Luchmeepore.
277	Purtapore.
278	Qassimnuggur.
279	Qasimpore.
280	Rypoorah Chowdhree.
281	Shikarpore muhal, 5 biswas.
282	Ditto 15 biswas.
283	Soorkha Khas.
284	Do. Muhal Chaonee P. Sufed.
285	Ditto Chaonee Muhal Zurd.
286	Sunaeea.
287	Sunawa.
288	Sydpore Hakins.
289	Sutarpore Muhal Soorkh.
290	Ditto Abi, 10 biswas.
	Circle V.
291	Abhirajpore.
292	Badshah Nuggur.
293	Beerpore Nowgawan.
294	Do. Muqruqa.
295	Beharipore Puttee.
296	Bhitoura Nowgawan oorf Futtehgunge.
297	Bhojoopoorah deh maafee.
298	Bhoor Mundoulee.
299	Bohit Muhal Kheoraj, 10 biswas.
300	Ditto Khooshah, 10 biswas.
301	Boojhia Puttee Junoobee.
302	Ditto Shimalee.
303	Bullea.
304	Bulakolah.
305	Bundeeah.
306	Chitoulee.
307	Choupara Muhal Shimalee.
308	Ditto Junoobee.
309	Chundpore Qazee.
310	Ditto Jogeean.
311	Dhaeea.
312	Dhunteea.
313	Doogeepore.
314	Dubhourah Khunjunpore Muhal Shimalee.
315	Ditto ditto Junoobee.
316	Etawah Muhal Kedar Nath ⅓.
317	Ditto Keerutnath ⅓.
318	Fureedpore Muhal Ramcharun.
319	Ditto Konwerjee.
320	Futtehpore.
321	Ghungoorah Ghungooree.
322	Goolurea Hoolas Konwer.
323	Gopalpore Azeezpore Muhal Junoobee.
324	Ditto Shimalee.
325	Gungapore.
326	Gurgaeea.
327	Humeerpore.
328	Hurbunspore oorf Luchmunpore Muhal Shimalee.

Alphabetical and Chukwar List of Pergunnah Crore.

No.	Names of Villages.
329	Hurbuns Muhal Baqurbee.
330	Hyderabad.
331	Ikhtearpore.
332	Imamgunge Nungrah Mudholi.
333	Jataoo Puttee.
334	Jogethur.
335	Jouhurpore.
336	Gugulpore.
337	Keseopore, 2 puttees.
338	Khiljapore.
339	Kherka.
340	Khuleelpore Muhal, 5 biswas.
341	Ditto Toola Ram.
342	Ditto Cheda Singh.
343	Ditto Peransookh.
344	Khurugpore.
345	Kahtola.
346	Koorumpore Muhal, 10 biswas.
347	Ditto Thakoor Dass, 6 biswas.
448	Ditto Teeka Ram, 2 biswas.
349	Ditto Cheda Lall, 2 biswas.
350	Kurreemnuggur Allaqa Meeranpore.
351	Lukhunpore.
352	Madhopore maafee.
353	Meeranpore khas.
354	Mehman Puttee.
355	Mahomedpore Thakooran.
356	Moondea Chet Ram.
357	Mudholee.
358	Moheshpore Ootursea Puchtour.
359	Mujhola Nougawan.
360	Mukrundpore Thakooran.
361	Mukrundpore Thakooran.
362	Ditto Peetum Rae.
363	Mutthrapore Muhal, 12½ biswas.
364	Ditto 7½ biswas.
365	Mawaee Muhal Kedarnath.
366	Ditto Keerulnath.
367	Ditto Nitanund.
368	Nowgawan Ghatumpore.
369	Nowa Nugla Muhal Junoobee.
370	Ditto Shimalee.
371	Nudhosee.
372	Oodeypore Bunnoojan.
373	Aonasee Muhal (one-third).
374	Ditto (two-thirds).
375	Pahladpore,
376	Pipursana.
377	Puchdeorah Deohurea.
378	Pundhoulee.
379	Pursakherah.
380	Purshadpore.
381	Puttee.
382	Putwareea.
383	Raepore.
384	Rufeeabad.
385	Rumeepore.
386	Rusoola Chowdhree.
387	Rookumpore.
388	Rypoorah.
389	Ditto deh jagheer.
390	Saeedpore Muhal Pransookh.
391	Ditto Mussumat Subsookbaee.
392	Sagulpore.
393	Sitooeea Muhal Ali Hossein.
394	Ditto Punchum Singh.
395	Ditto Tara Singh.
396	Ditto Jussondee Singh.
397	Soorlah.
398	Sufree.
399	Surneean.
400	Sydpore Pearee Lall.
401	Teeleeapore Muhal Shimalee.
402	Ditto Junoobee.
403	Ther Khera.
404	Theria Khetul.
405	Ditto Thakooran.
406	Tiholeea.

CIRCLE VI.

No.	Names of Villages.
407	Adhkutta Brahmins.
408	Agrass.
409	Amour.
410	Atta Puttee Junoobee.
411	Ditto Shimalee.
412	Bibiapore Muhal Subr.
413	Ditto Soorkh.
414	Ditto Zurd.
415	Bunjurea deh Jagheer
416	Chitea Muhal Jugunnath.
417	Ditto Mussumat Mahajunee.
418	Chukduha Muhal Shurqee
419	Ditto Sewa Ram.
420	Ditto Madho Ram.
421	Chuk Gopalpore.
422	Chumrowa Puttee Chutturput Rae.
423	Ditto Junoobee, 10 biswas.
424	Dhounra.
425	Dhounra Setooeea.
426	Doleli.
427	Dulputpore.
428	Eesapore.
429	Furreedpore jagheer.
430	Ghoorshumspore Muhal, 7½ biswas.
431	Ditto Muqsood Ali.
432	Ditto Alumoolnissa.
433	Ditto Fuzeetuloolnissa.
434	Ditto Sohun Lall.
435	Jadounpore.
436	Jalub Nugla.
437	Jafirpore,
438	Jitewa Puttee, one-third.
439	Ditto two-thirds.
440	Jumoonian deh maafee.
441	Junuk jagheer.
442	Kera.
443	Khanpore.
444	Khoorumpore.
445	Khojoha deh maafee.
446	Khatousa.
447	Kooandandah jagheer.
448	Kooaadandah Arazee.
449	Koortura Puttee Tara Chund.
450	Ditto 16 biswas.
551	Kulara.
452	Kummooan Muqruqa.
453	Kythola Benee Ram.
454	Lohar Nugla.
455	Mandah.
456	Meanpore.
457	Meinour.
458	Milik Imamnuggur Muhal Goorsahae.
459	Ditto ditto Berkut Ali.
460	Ditto ditto Muqsood Ali.
461	Ditto Kularah.
462	Mohummudpore Jutan.
463	Moondeea Hafiz.
464	Morarpore.
465	Muheshpore.
466	Museet,
467	Nara Fureedapore.
468	Neodhuna.
469	Pipursana.
470	Puchtour.
471	Pundree Hulwa maafee.
472	Pundree.
773	Punthra Puttee, Zurd.
474	Ditto Lakhee.
475	Punthureea.
476	Purewa.
477	Pursoonugla Muhal Chutbey.
478	Ditto Zeenoolabdeen.
479	Sendha.
480	Soorha.
481	Subzeepore.
482	Sydpore Muhal Gunga Pershad.
483	Ditto Ameer Chund.
484	Tujooa.
485	Titoulee.

CIRCLE VII.

No.	Names of Villages.
486	Aienah.
487	Anithpore.
488	Angooree.
489	Azimpore.
490	Bahjooea.
491	Bechra Balkishenpore.
492	Behareepore Soorujpore.
493	Behtee jagheer.
494	Bhat.

Alphabetical and Chukwar List of Pergunnah Crore.

No.	Names of Villages.	No.	Names of Villages.
495	Bhola Soonkapore.	526	Jullapore Muhal, Berkeley.
496	Bhugwanpore.	527	Kherah.
497	Bhugwuntpore.	528	Khujohaiee.
498	Birea Narainpore.	529	Koondra.
499	Boodhouta.	530	Madhopore.
500	Bulrow.	531	Mahgowan.
501	Choubaree.	532	Mobarikpore.
502	Dhunetee.	533	Moorshadabad maafee.
503	Doulee Augud Rae.	534	Muroopoorah.
504	Echouria.	535	Mujhola Peetum Rae.
505	Fureedapore Thakooran.	536	Munkaree.
506	Futtehpore.	537	Nibowa.
507	Goorha.	538	Nuwadea.
508	Gookulpore Muhal, 10 biswas.	539	Pithoopoorah.
509	Ditto Zungari.	540	Punwarea.
510	Ditto Zurd.	541	Raghopore.
511	Gountarah.	542	Rampoorah Enayetpore M. Jy Lall Singh.
512	Goojurhai.	543	Ditto Bhoop Singh.
513	Goorow.	544	Rohudee Muhal Zurd, 12¾ biswas.
514	Gotha.	545	Ditto 7¼ biswas.
515	Hundorea.	546	Rooppore.
516	Hurdoea.	547	Routah.
517	Hybutpore.	548	Routapore.
518	Jesolee.	549	Sahibnuggur.
519	Jinghree.	550	Salahnuggur.
520	Jitour Muhal Radhakishen.	551	Sengtora.
521	Ditto Kashee Ram.	552	Sirsa Khalsa.
522	Ditto Bije Ram.	553	Ditto maafee.
523	Ditto Jy Lall.	554	Soodanpore.
524	Ditto Chote Lall, Girdharee Lall.	655	Surai.
525	Ditto Chote Lall.		

S. M. MOENS,
Settlement Officer.

Proposed Rates of Assessment for Pergunnahs Kabur and Sirsawan.

No. 192.—Dated 19th July, 1871.

From—S. M. MOENS, ESQ., *Settlement Officer, Bareilly,*

To—The Commissioner of the Rohilkhund Division.

SIR,

I HAVE the honour to forward, for sanction, a report on the rent-rates of *pergunnahs* Kabur and Sirsawan, proposed by Mr. F. W. Porter as a basis for the revision of assessment. I have myself also carefully inspected a large portion of both *pergunnahs*, so that I can speak with confidence of the adequacy of Mr. Porter's rates.

2. The two *pergunnahs* comprise 134 *muhals*, with a total area of 55,462 acres, of which 42,657 acres are cultivated; of the latter area, 22,649 acres, or 53 per cent., are irrigated already, and much of the remainder will be irrigable from the new canal in course of construction through Kabur. The population is very dense, being 669 per square mile. The staple crops are rice, *mukka*, cotton, *bajra*, and sugarcane in the *khureef*, and wheat and gram in the *rubbee* harvest: 11,039 acres, or about 32 per cent. of the *khureef* area bears a second crop in the *rubbee*; and of the whole area, 41·8 per cent. is under the superior crops. The rices grown are chiefly second class rices, but the soil is well suited to them; and though the crop is an uncertain one, it is usually good.

3. The tenures are simple: there are eight *talookdaree* villages, 114 *muhals* are *zemindaree*, and 20 only are *putteedaree*. Excluding *muqreequdars*, there are in all 884 sharers, with an average of 54 *malgoozaree* or 48 cultivated acres per sharer.

4. The rates proposed by Mr. Porter were originally based on crop rates, and were tested and checked by the results of commutations of rent from kind to money payments in 41 villages. The crop-rates were derived from the results of over 1,100 actual trials. The landlord's share was taken at 16½ seers net in the maund of gross produce, and the grain-rents were commuted at the average of 20 years' harvest prices, omitting famine years. The rates on soils worked out per acre:—

Soil.		*Wet.*			*Dry.*			*Total average.*		
		Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.
Domut,	...	5	12	0	4	1	6	5	3	0
Mutyar,	...	4	9	0	3	3	0	3	14	0
Bhoor,	...	3	6	0	2	6	0	2	14	0

5. The results of the rates in the two *pergunnahs* correspond very closely with the rates assumed by me in the corresponding and adjoining tracts of Ajaon and Shahee. The expiring land revenue is Rs. 86,322; the proposed rates give about Rs.99,000 without cesses, being an increase of Rs. 12,678, or about 15 per cent. The estimated revised demand falls at Rs. 2-5-1 per cultivated acre, as compared with the rate of last settlement, Rs. 2-2-7. With the addition of cesses the new demand falls at Rs. 2-8-10 per cultivated acre. In actual assessment I think the new *jumma* will come up to one *lakh*.

6. It may excite some surprise that in so good a tract as the one under report it has not been found possible to obtain a larger revenue even under the half-assets rule of assessment. The reasons are not far to seek. The tract was fully cultivated at last settlement, the actual increase in cultivation having been only 466 acres; *2ndly*, the revenue was pitched abnormally high at former settlements, the result being that the old *kutherya* proprietors were sold up, and the *jummas* collected from the *mokuddums*, who were at first contented with no profits beyond clearing the rents of their own holdings. These *mokuddums*, and even mere farmers, were subsequently, with doubtful justice, declared proprietors, to the utter and irremediable ruin of the old *kutherya* rajahs.

It is only since 1855 that these villages have begun to yield any considerable profit to their holders.

7. As regards the amount of increase in revenue due to the canals, Mr. Porter shows that they are entitled to claim credit for Rs. 3,640 per annum. In consequence of the uncertainty as to the amount of canal rates in future, and the effect of the new canals in course of construction, a permanent settlement is not recommended.

8. In conclusion, I trust that sanction may be given to the proposed rates. They have been carefully worked out, and I have thoroughly satisfied myself as to their adequacy.

I have, &c.,

S. M. MOENS,

Settlement Officer.

Report by F. W. PORTER, ESQ., *Assistant Settlement Officer.*

Pergunnahs Kabur and Sirsawan form the south-westerly portion of *tuhseel* Buheree. They are bounded to the north and east by *pergunnahs* Chowmehla and Ritcha of the same *tuhseel*; to the south by *tuhseel* Meergunge; and to the west by the territories of the Nawab of Rampore.

They comprise 104 *mouzahs* (Sirsawan 41, Kabur 63) and 134 *muhals*, with a total area of 55,642 acres, giving an average of 535 acres per *mouzah* as compared with—

Furreedpore, ...	333	Acres.
Crore, ...	408	,,
Meergunge, ...	571	,,
Nawabgunge, ...	444	,,
Aonla, ...	657	,,
Suneha, ...	423	,,
Seraolee, ...	680	,,
Bullia, ...	482	,,

I have thought it advisable to report on these two *pergunnahs* together, as they fall under one set of average rates. This may be considered strange, as at the settlement under IX., 1833, the Sirsawan *pergunnah* was classed with Ajaon as superior to Shahee, Kabur, and Seraolee.

The reasons given for the inferiority of Kabur were, to quote the Settlement Officer's words from para. 10 of his report, where, in speaking of Kabur, he says:—

1. The soil is not so fertile, and in many places on the contrary it is unproductive. The products are less valuable in proportion and the rent-rates lower.
2. We have only one or two estates in this *pergunnah* irrigated from embankments.
3. The people are not such good agriculturists, and we have no *mokuddummee* management. The villages are not so populous, nor are there too many Koormee cultivators.

This classification was at last settlement perfectly correct, and is even now applicable, though to a far less extent.

The first cause of inferiority, as above stated, seems however to have been only the result of the second and third causes; that is, at the IX., 1833 settlement Sirsawan was a well cultivated, well irrigated, and well populated *pergunnah*, while Kabur was without irrigation, less densely populated, and not so well cultivated. It would be only natural then if, under such a state of things, land in Kabur was less productive, the products less valuable, and rents consequently lower than in Sirsawan. This inequality, so noticeable at last settlement, has however to a certain extent been removed during the last

30 years. Sirsawan having been fully advanced in all natural causes of prosperity, has almost stood still during the period of settlement, while Kabur has steadily advanced.

The annexed comparative statements show this :—

			Sirsawan.	*Kabur.*
Increase in cultivation,	...	...	1·9	18·6
Ditto in irrigation,	...	...	12·5	184·2

The percentages is soils are—

				Kabur.	*Sirsawan.*
Domut, ...	...	...	...	64·6	58·2
Mutyar, ...	...	...	...	32·6	39·6
Bhoor, ...	...	...	...	2·8	2·2

the results showing favourably for Kabur. There is, however, still some difference remaining between the two *pergunnahs*, as shown by the comparative density of population—in Sirsawan 704, in Kabur 665—and by the crop statement, which gives :—

				Sirsawan.	*Kabur.*
1st class *khureef*,	...	...	...	37·9	34·9
2nd " "	...	...	...	24·0	26·0
3rd " "	...	...	...	38·1	39·1
1st class *rubbee*,	...	...	...	71·1	67·6
2nd " "	...	...	...	5·7	9·6
3rd " "	..	...	...	23·2	22·8
Dosahi,	...	...	...	28·6	24·2

This difference in crops is occasioned by the larger amount of irrigation in Sirsawan, where it is 61·7 per cent. of the total cultivated area, as against 48·1 per cent in Kabur. This difference is, however, rectified by the use of wet and dry rates. Assessing, as Mr. Muir did, on one average deduced revenue-rate, it would be even now necessary to have separate rates for the two *pergunnahs*.

Pergunnah Sirsawan was originally owned by kutherya thakoors, who are said to have settled there first in the time of Timour, 1400 A.D., under Rajah Kesri Singh, who made his head-quarters at Lucknore, now Shahabad, in Rampore. These head-quarters were afterwards removed to Sirsawan, now Munsoorpore, one of the villages lately transferred to the *Nawabi*, and the descendants of Kesri Singh took the title of Rajahs of Sirsawan. It was not until the sixth generation from Rajah Kesri Singh, in the time of Akbar, that the head-quarters of the family were removed to Sheeshgurh, the present capital of Rajah Khan Jehan. From that time they were called the Rajahs of Sheeshgurh. This old family has now entirely fallen into decay. Their ancestral possessions have been sold for arrears of Government revenue consequent on the large demands made from them, and they and their assignees now hold *talookdare* rights in only eight villages, for which they receive a *malikana* allowance of some Rs. 1,300, and a pension of some Rs. 230, lapsing to Government at the death of the present holders.

The arrears spoken of above accrued during the 4th and 5th settlements, and that the Government demand was then too heavy appears clear from the repeated reductions found necessary by successive Settlement Officers, *viz.*, from Rs. 42,153 in the 5th settlement, to Rs. 35,539 in the 7th settlement.

The *zemindaree* of this *pergunnah* is now held chiefly by the descendants of the former *mokuddums*. In Kabur the most influential *zemindars* are the Kazees Munzee, who hold eleven whole villages and portions of some nine or ten others. There are no representatives of very ancient families.

Appendix A. shows the castes and number of the *zemindars* in each *pergunnah*. The total number of *khalsa zemindars* is 884, giving an average of nearly nine men per village. In only nine villages are there over 20 *zemindars*. The landholding classes

are—in Sirsawan, jats, sheikhs, koormees and puthans chiefly; in Kabur, sheikhs, thakoors, puthans, brahmins, and kayeths. Of the 134 *muhals* contained in the two *pergunnahs*, 114 are in tenure *zemindaree*, 18 perfect *putteedaree*, 2 imperfect *putteedaree*.

1. Bilsa.
2. Pudree.
3. Chungasi.
4. Mulsa Khera.
5. Sooltanpore.
6. Jafirpore.
7. Manpore.
8. Sarae.

In the eight villages marginally noted there are superior and inferior proprietors, the former being the heirs or assignees of the Rajahs of Sirsawan. With regard to their *malikana* and charitable allowance a separate report has been forwarded.

The tract under notice is traversed north and south by five rivers, the Khuli, the Bygool, the Khulwa, the Kitcha, and the Dhora; of these, the most westerly is the Khuli. The Bygool, Khulwa, and Kitcha join one another in the centre of the tract, and continue south into Meergunge under the name of Bygool. The Dhora forms the eastern boundary, dividing *pergunnah* Kabur from *pergunnah* Kitcha.

The country is composed of the high land on the water-sheds of these rivers, varying in breadth usually with the size of the rivers and the intervening valleys which form the drainage lines. The whole country west of the Bygool is irrigated by *zemindaree gools* from the Chunpoorah dam on the river Bhukra in the *Nawabi*, and from the Khimeerea dam on the Bygool. East of the Bygool the country is watered by the Rohilkhund canals. The present canals extend to about half these villages.

If, however, the proposed scheme for the extension of the canals southward is sanctioned, there will not remain a single unirrigated village in the whole tract. The dotted lines in the accompanying map show the proposed course for the new canals. There are two lines of communication by *kuchha* roads. Both these roads start from Meergunge and run westwards, the one through Sirsawan to Chachait and Ruderpore, the other through Kabur to Buheree. The principal outlets for grain are therefore through Meergunge to Bareilly and Moradabad, and through Buheree to Bareilly. Both these outlets are circuitous and difficult to traverse, especially in the rains, on account of the large number of rivers and small streams. The means of communication, both internal and external, are not at all good.

The population, as shown by Appendix B., is very dense, being 669 per square mile, as compared with *pergunnah* Furreedpore, ... 460

„	Crore, ...	...	...	416
„	Nawabgunge,	...	...	541
„	Meergunge,	...	...	634
„	Aonla, ...	...	...	583
„	Suneha, ...	...	...	666
„	Seraolee, ...	...	...	564
„	Bullia, ...	...	...	647

The number of agricultural male adults is 12,635, giving an average of 3·3 cultivated acres per man, as against 3·0 in Meergunge.

„	3·9	„ Crore.
„	3·6	„ Nawabgunge.
„	3·4	„ Furreedpore.
„	2·8	„ Suneha.
„	3·9	„ Seraolee.
„	3·4	„ Aonla.
„	3·3	„ Bullia.

The cultivated area is sub-divided into 11,389 holdings, averaging in size 3·7 acres (see Appendix C.). Of the total cultivated area of 42,657 acres, only 3,751 acres are held by *paheekasht assamees*. The chief cultivating classes are koormees, chumars, kisans, and moraos. In Kabur, brahmins, thakoors, and puthans also cultivate largely.

The staples as shown by the crop statement, Appendix D., are *mukka*, cotton, *bajra*, and *jowar* in the *khureef*, and wheat in the *rubbee*. Nearly all the sugar is grown without leaving the land fallow in the year previous; in fact, in the year of measurement there were only 88 acres altogether of land left fallow for sugar, as against 1,189 acres under sugar. Of the whole cultivated area, 11,039 acres, or 25·8 per cent., had two crops in it in the year of measurement. At the settlement under Regulation IX., 1833, *pergunnah* Sirsawan consisted of 62 villages, which were measured as follows:—

Total.	*Revenue free.*	*Barren.*	*Culturable waste.*	*Cultivated.*	*Malgoozaree.*
30,139	1,654	2,471	3,503	22,511	26,014

After the mutiny 21 villages were given away in reward to the Nawab of Rampore, leaving in the *pergunnah* 41 villages, the areas of which by past and present measurement are given below:—

	Total.	*Revenue free.*	*Barren.*	*Waste.*	*Cultivated.*	*Malgoozaree.*
IX., 1833 settlement,	20,608	1,189	1,687	2,467	15,265	17,732
Present settlement,	20,798	269	2,865	2,120	15,544	17,664

The difference in total area is only 190 acres, or 0·9 per cent. The revenue-free land has decreased by 920 acres, and barren has increased by 1,178 acres: this increase in barren is chiefly due to the large amount of land cut into water-channels from the dams on the Dhori *gool*, and on the Bygool and Kitcha. Culturable waste has decreased by 347 acres, and cultivation has increased by 279 acres, or 1·9 per cent., and is now 88 per cent. of the culturable area.

Pergunnah Kabur has remained exactly the same since last settlement, with this exception, that one village (Kamalpore) has been divided into two. Increasing the number of *mouzahs* from 62 to 63, the measurements show:—

	Total.	*Revenue free.*	*Barren.*	*Waste.*	*Cultivated.*	*Malgoozaree.*
IX., 1833 settlement,	34,175	3,390	3,125	4,743	22,937	27,680
Present do.,	34,844	301	3,960	3,470	27,113	30,583

The difference in the total area is 669 acres, or 1·9 per cent.: the revenue-free area has decreased by 3,069; the barren increased by 835 acres, owing to the increase in the area of the village sites and to the land taken up for canals and *gools*; the culturable waste has decreased by 1,373 acres; cultivation has increased by 4,176 acres, or 18·6 per cent., and is now 88 per cent. of the culturable area. Annexed is a comparison of the areas by past and present measurements of the whole tract under report:—

	Total.	*Revenue free.*	*Barren.*	*Waste.*	*Cultivated.*	*Malgoozaree.*
IX., 1833 settlement,	54,783	4,559	4,812	7,210	38,202	45,412
Present do.,	55,642	570	6,825	5,590	42,657	48,247

The above shows a difference in the total measurements of 1,859 acres, or 1·5 per cent.; a decrease of 3,989 acres in the revenue-free area caused by resumption of invalid *maafees*; an increase in the barren of 2,013 acres; and a decrease in the culturable waste of 1,620 acres. The assessable area has increased 2,835 acres, or 6·6 per cent. The cultivated area has increased 4,455 acres, or 11·6 per cent., and is now 88 per cent. of the *malgoozaree*. I should observe here that the 11·6 increase in cultivation shows the total increase from the last settlement areas, including the invalid *maafees* already resumed and assessed—that is, taking the IX., 1833 settlement *jummas* and cultivated area as a stand-point, an increase of 4,455 acres, or 11·6 per cent., should be credited; but taking the expiring demand and the area on which it was assessed as a stand-point, we can only credit an increase of 4,455 *minus* 3,989, or 466 acres of cultivation.

At last settlement the Government demand in *pergunnah* Sirsawan, as then constituted, was fixed at Rs. 55,758. This was reduced, by the transfer of 21 villages to the *Nawabi*, to Rs. 37,429, which amount was increased, by the resumption of invalid *maafee*, to Rs. 38,203, at which it at present stands.

In *pergunnah* Kabur the *jumma* has increased during the term of settlement from Rs. 45,161 to Rs. 48,119. The causes for the variations in *jumma* are--

	Resumed maafees.	*Alluvion.*
Sirsawan, ...	774	...
Kabur, ...	2,705	253
	3,479	253
		3,732
Total increase on the tract, ...		

The incidence of the settlement *jummas* on the then areas, and of the present and expiring *jummas* on the present areas, is shown below:—

SIRSAWAN.

Rs.		*Total.*	*Malgoozaree.*	*Cultivated.*
37,429,	Last settlement *jumma* on the then areas, falling per acre, ...	1 13 0	2 1 9	2 7 2
38,203,	Expiring *jumma* on present areas, falling per acre, ...	1 13 4	2 3 4	2 7 4

KABUR.

45,161,	Last settlement *jumma* on the then areas, falling per acre,	1 5 1	1 10 1	1 15 6
48,119,	Expiring *jumma* on present areas, ...	1 6 1	1 9 7	1 12 9

ON THE WHOLE TRACT.

82,590,	Last settlement *jumma* on the then area,	1 8 1	1 13 1	2 2 7
86,322,	Expiring *jumma* on present area, ...	1 8 9	1 13 1	2 0 4

The general revenue-rates on which Mr. Muir chiefly worked at last settlement were, as stated in his report for Sirsawan, Rs. 2-6-0 and for Kabur Rs. 2. These rates then gave on Sirsawan a *jumma* of Rs. 36,254-6-0; Kabur on Rs. 45,874.

These, taken as two-third the assets, give estimates amounting respectively to Rs. 54,381-9-0 and Rs. 68,811, and on the whole tract Rs. 1,23,192-9-0. This, then, was the estimated outturn of the whole tract 34 years ago. That this estimated outturn was not too high may be gathered from the fact that during the period of settlement I can only find instances of four villages having been transferred for arrears of Government revenue, and these only for short periods. The rents in this tract are chiefly taken in kind, except for the *zubtee* crops—*mukka*, cotton, sugar and vegetables.

In most villages the custom prevails of having a fixed money rate, usually Re. 1 to Re. 1-2-0 per *beegah kuchha*; on some, five to seven *beegahs kuchha* per plough. The fields paying this rate are in some villages fixed, and the cultivator then usually grows his *zubtee* crops in these fields only. In other cases the cultivator pays the money rents on a fixed number of *beegahs*, without reference to fields. In some five or six villages only are money rents generally paid, and in these the rates have remained unaltered since the IX., 1833 settlement. An abstract of the attested *khuteounees* shows:—

	Buttaee.	*Nuqshi.*	*Rent on Nuqshi land.*
Seer, ...	1,530	1,284	1,780 5 6
Mouroosee assamees, ...	20,120	10,522	38,946 5 0
Ghair Mouroosee do., ...	6,638	1,814	9,834 8 0
Rent-free, ...	749	...	...
Total, ...	29,037	13,620	50,561 2 6

The *ryotee* average then is Rs. 3-15-3 per acre. The average *ghair mouroosee* rate is Rs. 5-6-8 per acre. The former rate is as much too low as the latter is too high, as the one is pulled down by the large amount of land held at rates unenhanced for the last 34 years, and the latter is swelled by the *hulbundee* land, which is held at rates which cultivators could not possibly pay over their whole holdings.

It is therefore impossible to calculate accurately the rise of rents during settlement. In the *buttaee* lands of course the increase is in proportion to the rise in produce prices, which have already in several reports been shown to have risen in this district some 40 per cent., and the permanent rise in which has been estimated at about 33⅓ per cent. The rent of the land held at *pucka nuqshi* on *puttas* granted by the Settlement Officer has varied but slightly, if at all, during settlement. With regard to the *hulbundee* and *zubtee* land, though the actual rent-rate has increased but slightly, yet the large increase in the cultivation of the *zubtee* crops must have had a sensible effect on the assets of the tract. The crop statement of last settlement shows in *pergunnah* Sirsawan 2,622 acres, or 17·1 per cent. of the then cultivated area, as under *zubtee* crops. The present crop statement shows *zubtee* 4,689 acres, or 30·1 per cent. In 49 villages of *pergunnah* Kabur, the last settlement *khusrahs* of which are still extant, the amount of *zubtee* is 750 acres, or 4·1 per cent. of the then cultivated area. In the same villages the amount of *zubtee* as now shown is 6,337 acres, or 31·5 per cent. of the present cultivated area. The soil areas as entered in the present measurement papers are—

	Irrigable.	*Dry.*	*Total.*
Domut, ...	14,580	12,002	26,582
Mutyar, ...	7,729	7,272	15,001
Bhoor, ...	340	734	1,074
	22,649	20,008	42,657

The cultivated area of the *pergunnah* at last settlement was 38,202 acres; of this, 13,120 acres were irrigable, and 25,082 unirrigable. Irrigation has therefore increased by 9,529 acres, or 71·6 per cent. on the irrigated area, and 22·3 per cent. on the total cultivated area. To sum up, we find that the cultivated area has increased 11·6 per cent.; irrigation has increased 9,529 acres, or 71·6 per cent.; there is a far larger proportion of the better staples; rents in kind have risen with produce prices; and population is denser than in any of the neighbouring *pergunnahs*. Some increase in the Government demand may therefore reasonably be expected, in spite of the decrease in the proportion taken by Government; for example, to start with the last settlement estimated *nikasee* as a basis, and work from it, we get, estimated *nikasee*, Rs. 1,23,192 9 0

Add for 279 acres increased cultivation in Sirsawan, at Rs. 3-9-0, the estimated all-round rent-rates of last settlement, ...	993	15	0
Add for 4,176 acres increased of cultivation in Kabur, at Rs. 3, ...	12,528	0	0
Total, ...	1,36,714	8	0

This would give the *nikasee* at the last settlement estimated rates on the present cultivation. To this we have to add one-third as increase of produce prices,—this gives Rs. 1,82,286; add for increase of irrigation, 9,529 acres, at Re. 1-6-0, the difference between the assumed irrigated and dry rates, we get Rs. 1,95,388-6-0, giving Rs. 4-9-3 per cultivated acre. The first class or *zubtee* crops have increased in Sirsawan by 2,067 acres, and in Kabur by 7,587 acres on the whole pergunnah; the increase is therefore on the tract, 9,654 acres. The *zubtee* rents were at last settlement Re. 1 per *beegah kuchha* (para. 9 last settlement report), or Rs. 6-6-0 per acre. Deducting from the Rs. 4-9-3 the average per cultivated area, we get Re. 1-12-9, the amount which every acre under *zubtee* adds to the general outturn. Then Rs. 9,654 × 1-12-9 = 17,348-0-6, which, added to the former *nikasee*, gives Rs. 2,12,736-6-6. This gives a *jumma*, at 50 per cent., of Rs. 1,06,300.

It must be remembered that this estimate can merely be used as a rough high-water mark, as the assumptions on which it is based could never be entirely fulfilled.

1*stly*.—It could hardly be that in a tract with so large a percentage of cultivation the new land should be as good as the old.

2ndly.—Money rents have not, and never will keep pace with the rise in price as they are assumed to have done.

3rdly,—The increased irrigation has as yet had little or no effect on the rents paid in money, while it has been assumed to have had full effect.

If the increase in irrigation in the *nuqshi* lands was struck out and the rise in rents taken at 20 to 25 per cent., instead of 33⅓ per cent., the estimate would be nearer the real state of things.

I can now pass on to my proposed rates. The first rates worked out in this *pergunnah* were crop rates. These were based on a series of 1,100 trials, ranging over the last three years. From the average produce obtained, a deduction has been made of one-sixth for expenses of cutting, loss in cutting, carrying and threshing, and village dues, as in *pergunnah* Crore; and of the remainder, half has been considered as the *zemindar's* rent,—this being the rate prevalent in the tract. This half has been commuted at the average harvest price of the last 20 years, excluding the famine years. The results give on crops in Bareilly maunds :—

Crops.	Average produce per acre.		Price per rupee.	Half-rental after deducting one-sixth.			Assumed rent.		
	M	S.	Seers.	Rs.	a.	p.	Rs.	a.	p.
Rice, ...	13	25	44	5	2	6	4	6	0
Bajra, ...	8	0	39	3	6	9	3	3	0
Wheat, ...	9	4	28	5	6	8	5	6	0
Barley, *Gojee,*	8	32	32	4	9	8	4	9	0
Bijhra, ...	9	0	36	4	2	10	4	0	0
Gram, ...	8	0	38	3	10	4	3	6	0
Udus, &c., ...	6	0	40	2	8	0	2	6	0

NOTE.—A larger allowance has been made in rice than in any other crops, as the largest number of trials were made in that crop during last year, when the rice was above the average. Besides which, some allowance must be made for the large amount of rice land left unsown in bad seasons.

The *zubtee* crops have been raised at the average rates now paid in money, *viz.* :—

	Rs.	a.	p.
Cotton per acre, ...	6	6	0
Mukka, ...	3	10	0
Cutcheana, ...	7	3	0
Sugar, ...	10	0	0
Pundrah, ...	6	6	0

NOTE.—The sugar has been rated separate from the *pundrah* on account of the small amount of the latter, there being only 88 acres in the tract, as against 1,189 acres of sugar. The usual rate for sugar grown without a fallow is Rs. 9-12-0 to Rs. 10-6-0 per acre, for sugar with a fallow, 12-12-0. The fallow (*purdrah*) has been taken at one-half, or Rs. 6-6-0 ; the *dosahee* crops at half *purbeeh* rates for all crops except wheat, for which Rs. 3-3-0 per acre, or 8 annas per *beegah kuchha,* has been assumed. These rates give a result on the crop statement of the year of measurement,—

	Rs.	a.	p.
Sirsawan, ...	74,859	4	0
Kabur, ...	1,27,472	13	0
Total, ...	2,02,332	1	0

Each village has been carefully *purtalled,* and estimates made on the spot. These were again tested by the results of commutation cases, on which chiefly the soil-rates are based.

The proposed rent-rates are—

	Irrigated.			Dry.			Average.		
	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.
Domut, ...	5	12	0	4	6	0	5	3	0
Mutyar, ...	4	9	0	3	3	0	3	14	0
Bhoor, ...	3	6	0	2	6	0	2	14	0

In *pergunnah* Sirsawan 17 villages, and in *pergunnah* Kabur 24 villages have been commuted. In all cases the *assamees* and *zemindars* have offered no objections to the rates fixed.

In Sirsawan the commutation rates show—

	Rs.	a.	p.
Domut, ...	5	7	1
Mutyar, ...	4	1	0
Bhoor, ...	3	2	4

The wet and dry rates in the same villages give—

	Rs.	a.	p.
Domut, ...	5	5	9
Mutyar, ...	3	14	6
Bhoor, ...	2	8	10

The rates recently used by the Settlement Officer in assessing the adjoining and similar circle of Ajaon in Meergunge were—

	Rs.	a.	p.
Domut, ...	5	8	0
Mutyar, ...	4	0	0
Bhoor, ...	3	3	0

The *zemindars* there are perfectly contented with the assessment on those rates.

In Kabur the commutation cases give averages—

	Rs.	a.	p.
Domut, ...	5	1	9
Mutyar, ...	3	13	4
Bhoor, ...	2	15	7

The wet and dry rates applied to the same areas give—

	Rs.	a.	p.
Domut, ...	5	1	1
Mutyar, ...	3	13	11
Bhoor, ...	2	11	6

These rates are slightly higher than those used in the adjoining circle of Shahee in Meergunge, but that circle has less irrigation than Kabur, and is inferior in its *mutyar*.

The commutation rates on the whole 41 villages give an average—

	Rs.	a.	p.
Domut, ...	5	3	10
Mutyar, ...	3	14	10
Bhoor, ...	3	0	6

The wet and dry rates give on the same villages—

Domut, ...	5	1	6
Mutyar, ...	3	14	5
Bhoor, ...	2	10	8

In all cases it will be observed that the proposed rent-rates work out slightly below the commutation rates. This will always be the case, as commutations usually take place in the better villages.

The results given by the proposed rates on the whole tract are—

	Rs.	a.	p.
By wet and dry rates, ...	1,97,867	0	0
By average soil rates, ...	1,98,850	0	0
By crop rates, ...	2,02,332	0	0
By commutation averages, ...	2,01,318	0	0

Roughly speaking, then, we have an estimated outturn by soil-rates of Rs. 1,98,000, which would give a *jumma*, at Rs. 55, of Rs. 99,000+9,900=1,08,900, as against the expiring *jumma* of Rs. 86,322; giving an increase in the land revenue of Rs. 12,678, or 14·6 per cent., and in the total demands of Rs. 22,578, or 26·1 per cent.

The incidence of the estimated land revenue and total demand on present areas are shown below:—

	Total.			*Malgoozaree.*			*Cultivated.*		
	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.
Land revenue, ...	1	12	5	2	0	9	2	5	1
Total demand, ...	1	15	3	2	4	1	2	8	10

There now remains only to show what proportion of this increase is due to the canals. In the last settlement No. IV. statements we have 13,120 acres entered as irrigable, as against 22,649 in the present statements. The difference is 9,525 acres. Now, of the land entered as irrigable at the present measurements, there are 10,576 acres entered as irrigable from canals. As all the canals were constructed after last settlement, this would point to a decrease in irrigation from other sources of 1,047 acres.

Of the 103 villages in this tract, 42 have come under the action of the canals. In the remainder the same sources of irrigation exist now as at last settlement. Taking these two classes of villages separately we get—

	Last Settlement Irrigated area.	*Present Irrigated area.*	*Present Cultivated area.*
Canal-irrigated villages, ...	4,859	11,781	18,151
The remaining villages, ...	8,261	10,868	24,506

Of the 11,781 acres entered as irrigable in the canal villages, 10,576 are from canals only, the remainder, 1,205 acres, from other sources, as against 4,859 acres at last settlement, thereby showing that canal-irrigation in 3,654 acres has merely taken the place of the former river and well-irrigation. Thus, at the utmost stretch, even supposing that were it not for the canals irrigation would have been at a stand-still, we can only give the canals credit for an increase of 6,922 acres of irrigation, which, multiplied by one-sixth the difference between the assumed irrigated and unirrigated rate, would give Rs. 9,517-1-0, on which, 50 per cent. would give Rs. 4,758-14-0.

The assumption, however, that there would have been no increase in irrigation were it not for the canals is hardly borne out by the irrigated areas of the villages not irrigated by canals, in which we find an increase in irrigation of 2,607 acres, or 31 per cent.

In the canal-irrigated villages the increase has been 6,822 acres, or 140 per cent. Deducting in proportion to the increase in the villages not under canal influence, we get a result of 5,296 acres × 1·6 = 7,282. This, I think, is all the increase in the assets the canals can fairly claim as their due. Taken at 50 per cent., this amount would give Rs. 3,641 as the increase in the Government revenue due to the canals.

With regard to the future influence of the canals on this tract, it will be sufficient to mention that, while the present canals irrigate partially 42 villages, the proposed extensions will irrigate completely 76 villages in all, with a cultivated area of 31,831 acres, and a present irrigable area of 15,485 acres. We may therefore look for a large

increase in canal-irrigation if the proposed scheme be sanctioned.

In conclusion, I would remark that in the present state of the canal question it would seem impossible to declare the *jummas* in either of these *pergunnahs* permanent, as, in the event of the canal-rates being raised, the *jumma* of those villages which have been assessed at irrigated rates will have to be lowered. In the event of the rates remaining the same, the *jumma* of the villages through which the new canals are hereafter carried will be capable of considerable enhancement. The only difference in the two plans would be, that by the former Government would reap the full benefit of the water, and by the latter only 55 per cent., *plus* the rate already paid on an increased acreage.

(Sd.) F. W. PORTER,
Assistant Settlement Officer.

APPENDIX A.

Statement showing the number of proprietors and caste of sharers in Pergunnahs Sirsawan and Kabur, Tuhseel Buheree.

Number.	Pergunnahs.	Number of proprietors.		Caste of sharers.																						
		Number of *khalsa* sharers.	Number of *mugrooga* sharers.	Puthans.	Sheikhs.	Thakoors.	Faqeers.	Kayeths.	Goshaeens.	Jats.	Syeds.	Brahmins.	Koormees.	Bunniahs.	Kumbahs.	Moghuls.	Khuttrees.	Byragees.	Goldsmiths.	Mewatees.	Kisans.	Baeens.	Eurasians.	Bunjarahs.	Quovals or Singers.	Total.
1	Kabur, ...	590	214	108	352	120	16	48	2	35	20	54	17	14	5	10	2	1	1	...	...	...	...	...	...	805
2	Sirsawan, ...	294	42	43	58	10	4	8	...	81	...	9	51	...	11	...	1	...	...	9	26	7	1	2	15	336
	Total, ...	884	256	151	410	130	20	56	2	116	20	63	68	14	16	10	3	1	1	9	26	7	1	2	15	1,141

APPENDIX B.

Census Statement of Pergunnahs Kabur and Sirsawan, Tuhseel Buheree, Zillah Bareilly.

Tuhseel.	Pergunnah.	HINDOOS.								MAHOMEDANS AND OTHERS.								TOTAL.								
		AGRICULTURAL.				NON-AGRICULTURAL.				AGRICULTURAL.				NON-AGRICULTURAL.												
		Males.		*Females.*		*Males.*		*Females.*		*Males.*		*Females.*		*Males.*		*Females.*										
		Adult.	Children.	Adult.	Children.	Adult.	Children.	Adult.	Children.	Adult.	Children.	Adult.	Children.	Adult.	Children.	Adult.	Children.	Adult.	Adult males.	Adult females.	Children.	Boys.	Girls.	Males.	Females.	Total.
Buheree.	Kabur, (area in square miles, 54·4.)	6,271	3,956	5,588	3,389	1,903	1,206	1,770	1,070	1,231	864	1,203	775	1,703	1,152	1,696	1,058	21,365	11,108	10,257	13,470	7,178	6,292	18,286	16,549	34,835
	Sirsawan, (area in square miles, 32·4.)	4,064	2,640	3,509	2,403	912	618	821	520	1,069	720	931	672	1,183	758	1,039	679	13,528	7,228	6,300	9,010	4,736	4,274	11,964	10,574	22,538
	Total (area in square miles, 86·8.)	10,335	6,596	9,097	5,792	2,815	1,824	2,591	1,590	2,300	1,584	2,134	1,447	2,886	1,910	2,735	1,737	34,893	18,336	16,557	22,480	11,914	10,566	30,250	27,123	57,373

APPENDIX C.

Statement showing the distribution of the cultivated areas among the several castes of Pergunnah Kabur, Tuhseel Buheree, Zillah Bareilly.

Number.	Castes.	Chuppurbund assamees cultivating in their own village.			Cultivating as pahis from other villages.			Total.		
		Assamees.	Holdings.	Land in acres.	Assamees.	Holdings.	Land in acres.	Assamees.	Holdings.	Land in acres.
1	Koormees, ...	1,331	2,155	7,980	91	90	283	1,422	2,245	8,263
2	Weavers, ...	123	132	204	8	8	38	131	140	242
3	Brahmins, ...	303	307	1,229	81	71	161	384	378	1,390
4	Gooshaeens, ...	16	13	38	4	4	16	20	17	54
5	Sweepers, ...	113	108	130	6	5	3	119	113	133
6	Chumars, ...	547	556	1,673	50	48	81	597	604	1,754
7	Oilmen, ...	99	97	304	11	10	29	110	107	333
8	Blacksmiths, ...	58	66	220	3	3	10	61	69	230
9	Tailors, ...	38	35	74	4	3	6	42	38	80
10	Carpenters, ...	132	127	500	11	11	26	143	138	526
11	Mewatees, ...	98	94	417	19	19	43	117	113	460
12	Barbers, ...	90	90	291	15	14	18	105	104	309
13	Thakoors, ...	254	249	1,253	39	29	125	293	278	1,378
14	Bhats or Bards,	8	8	7	3	3	1	11	11	8
15	Faqeers, ...	104	98	207	19	17	33	123	115	240
16	Goldsmiths, ...	8	8	20	1	1	1	9	9	21
17	Puthans, ...	355	447	1,760	141	135	505	496	582	2,265
18	Jats, ...	275	279	2,150	21	21	58	296	300	2,208
19	Muraos, ...	401	462	1,440	20	19	28	421	481	1,468
20	Washermen, ...	101	107	419	12	12	23	113	119	442
21	Dhooneahs, ...	49	48	53	5	5	4	54	53	57
22	Kisans, ...	319	368	2,059	26	24	83	345	392	2,142
23	Bhoorjees, ...	7	7	6	...	...	...	7	7	6
24	Kayeths, ...	53	57	214	42	40	121	95	97	335
25	Sheikhs, ...	183	145	434	57	45	229	240	190	663
26	Syeds, ...	31	22	94	4	4	4	35	26	98
27	Dyers, ...	7	7	14	...	...	...	7	7	14
28	Kahars, ...	173	171	389	40	37	48	213	208	437
29	Bunjaras, ...	13	13	35	8	7	14	21	20	49
30	Aheers, ...	28	27	133	3	3	15	31	30	148
31	Goojurs, ...	25	45	160	2	2	9	27	47	169
32	Kulals, ...	19	18	36	1	1	1	20	19	37
33	Bhuttearas, ...	6	4	8	1	1	1	7	5	9
34	Gudduriias, ...	48	52	194	10	9	21	58	61	215
35	Byragees, ...	5	4	13	3	3	6	8	7	19
36	Barees, ...	1	1	1	...	...	...	1	1	1
37	Hulwaees, ...	3	3	3	4	4	2	7	7	5
38	Tumbolees, ...	2	2	29	...	...	...	2	2	29
39	Butchers, ...	6	6	7	3	3	4	9	9	11
40	Bunniahs, ...	5	4	8	7	5	19	12	9	27
41	Ghosees, ...	29	26	117	5	5	15	34	31	132
42	Quovals or Singers,	2	2	1	...	...	...	2	2	1
43	Moghuls, ...	32	22	51	4	4	12	36	26	63
44	Buffoons or Bhands,	16	14	22	12	12	24	28	26	46
45	Malees, ...	26	18	32	1	1	2	27	19	34
46	Munnihars, ...	5	5	3	2	2	2	7	7	5
47	Tasha Nawzes, ...	1	1	...	...	...	...	1	1	...
48	Turks, ...	1	1	5	...	...	...	1	1	5
49	Bahleems, ...	33	28	263	4	4	6	37	32	269
50	Bhuttees, ...	25	22	175	...	...	...	25	22	175
51	Kudooms, ...	2	2	21	...	...	...	2	2	21
52	Khuttrees, ...	4	4	14	...	...	...	4	4	14
53	Khumrahs, ...	13	12	20	...	...	...	13	12	20
54	Nutts, ...	1	1	...	...	...	...	1	1	...
55	Eunuchs, ...	1	1	4	...	...	...	1	1	4
56	Bhistees, ...	1	1	1	...	...	...	1	1	1
57	Cheepees, ...	1	1	...	...	...	...	1	1	...
58	Masons, ...	2	2	15	...	...	...	2	2	15
59	Kolees, ...	...	...	...	1	1	1	1	1	1
60	Beldars, ...	5	11	32	...	...	...	5	11	32
	Total, ...	5,637	6,616	24,982	804	745	2,131	6,441	7,361	27,113

APPENDIX C.—(concluded.)

Statement showing the distribution of the cultivated areas among the several castes of Pergunnah Sirsawan, Tuhseel Buheree, Zillah Bareilly.

Number.	Castes.	Chuppurbund assamees cultivating in their own villages.			Cultivating as pahis from other villages.			Total.		
		Assamees.	Holdings.	Land in acres.	Assamees.	Holdings.	Land in acres.	Assamees.	Holdings.	Land in acres.
1	Koormees, ...	666	848	4,530	53	59	373	719	907	4,903
2	Carpenters, ...	70	75	248	8	8	22	78	83	270
3	Washermen, ...	88	100	300	11	11	24	99	111	324
4	Blacksmiths, ...	52	56	130	5	5	9	57	61	139
5	Kahars, ...	106	110	209	12	12	17	118	122	226
6	Barbers, ...	61	71	181	4	4	11	65	75	192
7	Brahmins, ...	138	164	446	28	31	50	166	195	496
8	Chumars, ...	270	299	737	27	28	59	297	327	796
9	Kulals, ...	9	9	10	...	...	...	9	9	10
10	Weavers, ...	87	94	63	2	3	3	89	97	66
11	Dhooniahs, ...	45	47	60	1	1	1	46	48	61
12	Tailors, ...	22	26	57	1	1	1	23	27	58
13	Faqeers, ...	75	82	169	2	2	7	77	84	176
14	Sweepers, ...	64	73	57	1	1	6	65	74	63
15	Muraos, ...	288	333	950	21	28	69	309	361	1,019
16	Kisans, ...	315	366	2,006	55	56	163	370	422	2,169
17	Goojurs, ...	20	21	96	...	...	...	20	21	96
18	Mewatees, ...	139	153	811	8	8	43	147	161	854
19	Kayeths, ...	17	18	56	19	21	65	36	39	121
20	Puthans, ...	52	59	344	29	31	192	81	90	536
21	Oilmen, ...	43	49	114	4	4	14	47	53	128
22	Jats, ...	175	207	1,211	32	45	246	207	252	1,457
23	Gardeners, ...	26	31	57	...	...	...	26	31	57
24	Thakoors, ...	41	46	232	2	2	28	43	48	260
25	Bhoorjees, ...	15	17	27	1	1	12	16	18	39
26	Gooshaeens, ...	14	14	52	6	6	9	20	20	61
27	Gudderias, ...	15	18	29	...	...	...	15	18	29
28	Goldsmiths, ...	14	14	36	...	...	...	14	14	36
29	Sheikhs, ...	29	32	193	4	4	27	33	36	220
30	Munnihars, ...	7	7	11	1	1	3	8	8	14
31	Dyers, ...	4	4	3	...	...	...	4	4	3
32	Meerasees, ...	6	7	5	1	1	17	7	8	22
33	Cheepees, ...	1	1	5	...	...	...	1	1	5
34	Bhats, ...	10	10	16	1	1	1	11	11	17
35	Bunniahs, ...	7	8	18	...	...	...	7	8	18
36	Aheers, ...	1	1	9	...	...	...	1	1	9
37	Ghosees, ...	4	4	14	...	...	...	4	4	14
38	Masons, ...	1	1	5	...	...	...	1	1	5
39	Bunjarahs, ...	121	140	376	7	9	85	128	149	461
40	Bhuttearas, ...	2	2	5	...	...	...	2	2	5
41	Butchers, ...	5	5	3	...	...	...	5	5	3
42	Bhistees, ...	5	5	3	...	...	...	5	5	3
43	Kulwars, ...	1	1	5	...	...	...	1	1	5
44	Radha Bhuguts,	3	4	2	...	...	...	3	4	2
45	Nutts, ...	1	3	24	...	...	...	1	3	24
46	Barees, ...	1	1	3	...	...	...	1	1	3
47	Bundas, ...	1	2	1	...	...	...	1	2	1
48	Syeds, ...	2	2	5	2	2	51	4	4	56
49	Eurasians, ...	...	...	...	1	1	11	1	1	11
50	Raeens, ...	...	...	...	1	1	1	1	1	1
	Total, ...	3,139	3,640	13,924	350	388	1,620	3,489	4,028	15,544

Pergunnahs.	Soils.	Kharif.								Dofuslee Crops.								
		Mukka.	Cotton.	Rices.	*Bajra.*	*Churee* and *Jowar.*	*Mash, Moong.*	*Shamakh.*	Sugarcane.	Linseed.	Wheat.	*Lahee.*	*Gojee.*	Peas.	*Cutchana.*	Melons.	Total.	Cultivated area.
Kabur, ...	*Domut,*	4,357	1,676	663	2,360	2,446	315	500	657	96	2,039	5	191	9	108	27	5,135	17,523
	Mutyar, ...	274	78	4,882	144	1,132	136	124	91	156	151	4	49	5	6	2	1,384	8,843
	Bhoor, ...	24	9	5	361	73	32	22	7	2	9	...	1	1	...	...	60	747
	Total, ...	4,655	1,763	5,550	2,865	3,651	483	646	755	254	2,199	9	241	15	114	29	6,580	27,113
Sirsawan, ...	*Domut,* ...	2,866	876	267	1,246	1,069	184	287	321	15	1,627	9	70	4	77	...	3,179	9,059
	Mutyar, ...	325	95	2,703	218	863	62	156	113	74	192	1	30	2	2	...	1,250	6,158
	Bhoor, ...	15	4	2	192	18	11	7	...	...	4	...	...	...	...	...	30	327
	Total, ...	3,206	975	2,972	1,656	1,950	257	450	434	89	1,823	10	100	6	79	...	4,459	15,544
	Total, Kabur and Sirsawan. ..	7,861	2,738	8,522	4,521	5,601	740	1,096	1,189	343	4,022	19	341	21	193	29	11,039	42,657

F. W. PORTER,

Assistant Settlement Officer,

Proposed Rates of Assessment for Pergunnah Ritcha, Tuhseel Buheree.

No. 225.—Dated Bareilly, the 3rd October, 1871.

From—S. M. MOENS, ESQ., *Settlement Officer, Bareilly,*

To—The Commissioner of the Rohilkhund Division.

SIR,

I HAVE the honour to forward herewith a report by Mr. J. S. Porter on the rent-rates proposed as a basis for the revision of assessment of *pergunnah* Ritcha, *tuhseel* Buheree. I have myself been carefully over the greater part of the *pergunnah*, and made myself fully acquainted with its resources.

The rates are the result of Mr. Porter's and my own enquiries, and were fixed by us both in consultation. I have thoroughly satisfied myself as to their adequacy, and at the same time that an assessment based on them will not press too heavily on the resources of the *pergunnah*. Mr. Porter's report gives all the necessary statistics in the usual form: there is nothing to be added that I am aware of.

I request that the Board's sanction may be obtained with as little delay as practicable, to enable me to complete the settlement papers of the district by the 1st September next.

I have, &c.,

S. M. MOENS,

Settlement Officer.

Report by J. S. PORTER, ESQ., *Assistant Settlement Officer.*

Pergunnah Ritcha is bounded to the north by the Terai *pergunnahs;* south by *pergunnahs* Nawabgunge, Crore, and Meergunge of this district; east by *pergunnah* Jehanabad; and west by *pergunnahs* Kabur and Chowmehla, *tuhseel* Buheree. It consists of 190 villages, 256 *muhals,** covering 169½ square miles, giving an average of 570 acres per village, as contrasted with the average of villages in—

* *Khalsa,*	...	242
Maafee,	...	12
Istimrar,	...	2
		256

Pergunnah	Nawabgunge,	...	444	acres.
"	Crore, ...	...	408	"
"	Meergunge, ...	...	571	"
"	Aonla, ...	...	657	"
"	Suneha, ...	...	423	"
"	Bullia, ...	...	482	"
"	Seraolee, ...	...	680	"
"	Furreedpore, ...	...	383	"
"	Sirsawun and Kabur	...	535	"

2. The tract of land forming this *pergunnah* comprises the valleys and intervening watersheds of four rivers—the Dhora, the Deorunean, the Bygool, and the Pungelee. Between the Dhora to the west and the Deorunean to the east is a large tract of rice-land, flanked by the high lands on the edge of these two rivers, and bounded to the south by the high lands south of the drainage line known as the Gora nullah.

3. The villages south of this drainage line, to the Crore borders, lie high, and are generally better than those to the north, on account of the larger porportion of loam.

They however lack the splendid irrigation of the rice villages. Between ethe Dorunean and Bygool the space intervening is bnt small. Most of the villages here lie partly on the high land and partly on the low land. Of this tract it may be said generally that the villages on the high lands adjoining the Bygool are the best, and those lying entirely in the low land the worst.

4. East of the Bygool, to the Pungelee and the Jehanabad borders, is exactly the same as to west, consisting of a strip of good villages on the east bank of the Bygool; the remainder chiefly rice-land, with here and there undulations on which the village sites are placed. Taking the *pergunnah* as a whole, the estates on the banks of the rivers and to south on the Crore border may be considered above the average. The rice villages are generally below the average in soils.

5. The northern portion of the *pergunnah*, adjoining the Terai *pergunnahs*, is exceedingly unhealthy, and is very backward both as regards cultivation and population. This state of things improves gradually as one goes further south, till in the southern villages the *pergunnah* is in as forward a state as any in the district. The metalled road to Nynee Tal runs north and south through the south-west portion of the *pergunnah*, and a good *kuchha* road from Phillibheet runs at right angles to the Nynee Tal road through the southern half. In the northern half no improvements have been made, and the large number of streams render communication at all times difficult; in the rains well nigh impossible.

6. "The great characteristic of Ritcha is its splendid and extensive irrigation," so wrote the Settlement Officer thirty-one years ago. That the irrigation has considerably increased since the above was written will be shown hereafter. It may be as well however here to notice the entire change of the system of irrigation since 1840. At that time Mr. Head wrote—" The two great streams by which irrigation is carried on are the Bygool and Dhora. There are besides some small branches, which flow to or from these rivers. There are no *kuchha* wells in this *pergunnah*, and upon these two rivers the whole irrigation, and consequently the prosperity of Ritcha depends."

7. Mr. Head's last statement about the *kuchha* wells would not apply now to the villages on the Crore border, between the Dhora and Deorunean, as there well-irrigation is used to a fair extent. In the remainder of the *pergunnah* the only wells dug are in the *gowhan* for garden produce, and in places for sugar-cane. Of the small branches mentioned by the Settlement Officer in his report, the three principal are —the Chota Dhora and the Gora nullah, draining the large rice-tract between the Deorunean and the Dhora, and falling into the latter river; and the Singhaee nullah, draining the low-lying land to the north-east of the *pergunnah*, and falling into the Bygool. Under the system prevalent at last settlement the *zemindars* erected dams at intervals on the main rivers and their branches, and so irrigated the surrounding country by *gool* and lift.

8. These numerous *zemindaree* dams and *gools* have now been done away with and replaced by Government dams on the main streams, from which canals and *gools* have been taken out, irrigating nearly the whole *pergunnah*.

9. Map accompanying this report shows the main *rajbuhas* now existing, with the revised scheme for canals as drawn out by the Canal Department. On this map the sites of the former *zemindaree* and the present Government dams have been entered. It will be seen that the country east of the Bygool is now irrigated by the Seesunyah *rajbuha* from the Banhpoor dam in the Turaien, and from the Choorglee dam on the Bygool, which latter dam irrigates the villages on the west bank of the Bygool also. The villages on the Deorunean are still irrigated under the old system from the *zemindaree* dam at Khiraee, though water-rates are taken on the area irrigated from that dam. Between the Deorunean and the Dhora the conntry is irrigated from a dam on the Chota Dhora to the north of the *pergunnah*. Into this stream water is thrown from the Ritcha.

10. The Government canal is situate to the east of this tract, but it feeds the Gora nullah in its course, and a certain amount of the water is allowed to flow down the actual bed of the Chota Dhora, thereby converting both streams into natural canals.

11. The estates on the banks of the Dhora are irrigated also from the Sherief Nuggur dams on that river. It will be seen therefore that the irrigation of the *pergunnah* is, under the present system, dependent on five dams:—

1. The Sherief Nuggur dam on the Dhora.
2. The Khiraee dam on the Deorunean.
3. The Choorglee dam on the Bygool.
4. The Dundea Nugla dam on the Chota Dhora.
5. The Banhpoor dam in the Teraien.

12. It is also noticeable that by doing away with the old *zemindaree* dams at Bhilayea, Piparea and Hurhurpoor, the whole of the country north of Khiraee between the Deorunean and Bygool has been deprived of its irrigation; this will however be remedied under the revised scheme.

13. The present proprietary body in the *pergunnah* is almost entirely the growth of the system of *mokuddummee* tenures. At the cession the supposed proprietors were the traditional *zemindars* entered in the "*duhsunni kitab.*" In numerous instances these *zemindars* could not be found, and the settlements were concluded with the *mokuddums* in preference to outside farmers, it being the opinion at the time that a settlement concluded with the *mokuddums* was a benefit conferred on the village community. (C. of report of the Commissioner, dated 16th September, 1818. Memo. by Secretary, para. 517.)

14. It seems to have escaped notice that the *mokuddum*, holding on an uncertain tenure and knowing the capabilities of the village to a fraction, was the most likely person to extract the uttermost farthing from the cultivators. These *mokuddums*, after holding for a term of years, at last obtained grants of the *zemindaree* from Government.

15. Those *zemindars* who are not lineal descendants of the old *mokuddums* have mostly purchased their rights since the cession.

16. The largest land-holding classes are the Puthans, Raeens, Koormees and thakoors, (Cf. Appendix A). Total number of *khalsa zemindars* is 731. In the *muqrooqa* there are 292 sharers. These *muqrooqas* are nearly all small patches. Of the 256 *muhals* in the *pergunnah*, 213 are in tenure *zemindaree*, 23 *putteedaree*, five imperfect *putteedaree*, and 12 *maafeedaree*; and in two *muhals* the *zemindars* hold on an *istimrar jumma*. In one case only are the superiors and inferiors proprietors, and in that instance the connection between the *zemindars*, *mokuddums* and the cultivating community is so complicated as to necessitate a separate report. The chief cultivating classes are koormees, moraos, and chumars (Cf. Appendix B). The total number of holdings is 14,593: of these 12,974 are held by *chuppurbund*, and 1,619 by *paheekasht assamees*. The average holding of the resident cultivators is 5·5 acres.

17. The number of ploughs in the *pergunnah* is 9,260, giving 8·4 cultivated acres per plough. According to the census of 1865 (Appendix C.) the population of the *pergunnah* then amounted to 98,025 souls, giving an average of 578 persons per square mile. The density in the other settled *pergunnahs* of the district is marginally noted for comparison. The agricultural male adult population was in the same year estimated at 24,107 men,—Hindoos 19,684, Mahomedans 4,423; giving an average of about 2½ men per plough, and 3·2 cultivated acres per man, as compared with the average of cultivation per agricultural male adult in *pergunnahs*.

Meergunge,	...	...	634
Furreedpore,	...	...	460
Crore,	...	...	416
Nawabgunge,	...	...	541
Aonla,	...	...	583
Suneha,	...	...	666
Seraolee,	...	...	564
Bullia,	...	...	647
Kabur and Sirsawan,		...	669

Nawabgunge,	...	...	3·6
Meergunge,	...	...	3·0
Crore,	...	...	3·9
Furreedpore,	...	...	3·4
Aonla,	...	...	3·4
Suneha,	...	...	2·8
Seraolee,	...	...	3·9
Bullia,	...	...	3·3
Kabur and Sirsawan,	...	...	3·3

18. From the above we gather that the *pergunnah* is adequately populated, and that the subdivision of profits is not so large as to require any special allowance.

19. Annexed is a list of the Government demand assessed in previous settlements, with the proportion of the assets taken at each settlement, and the consequent estimated *nikasees* :—

Settlements.	Government demand.	Proportion of assets taken.	Estimated *nikasee*.
I., ...	1,58,177	85 per cent.	1,86,090
II., ...	1,66,980	85 "	1,96,447
III., ...	1,51,852	85 "	1,78,649
VII., 1822, ...	1,60,717	66 "	2,41,075-8
IX., 1833, ...	1,43,895	66 "	2,15,844

20. During the settlement the following alterations have taken place in the Government demand :—

IX., 1833, ...			1,43,895 0 0
Increase—resumed *maafee*, ...		8,483 3 0	
Decrease—revision, ...	599 0 0		
Land taken up for canals, ...	702 8 0		
Total decrease, ...		1,301 8 0	
Net Increase, ...		7,181 11 0	
Present *Jumma*, ...			1,51,076 11 0

21. Owing to the unfortunate destruction of the records of this *tuhseel* during the mutiny, I have been unable to obtain any reliable information as to the number of transfers before that time. There seem to have been three or four farms for balances for short terms; and, as shown by the above statement, a reduction of Rs. 599 was found necessary at revision. Since the mutiny there has not been a single instance of farm or sale for arrears of revenue in the whole *pergunnah*, so that it may fairly be said that the expiring settlement has worked well, and has not pressed at all heavily on the tract. The results of private sales and sales by decree of Court since the mutiny are given below :—

Transfers.	Whole villages.	Parts.	Total area in acres.	*Jumma*.	Price realized.	Average price per acre.	Number of years' purchase.
				Rs.	Rs.	Rs. a. p.	
By private sale, ...	34	86	34,548	49,260	4,37,307	12 10 6	8·87
By decree, ...	6	19	5,065	7,530	92,168	18 3 1	12·24
Total, ...	40	105	39,613	56,790	5,29,475	13 9 10	9·32

22. I do not attach any weight to the return of private sales, as the prices are in many cases merely nominal. The prices in auction sales should however give a tolerably correct idea of what the land in the *pergunnah* is fairly worth. The *zemindars* of the district are almost unanimous in saying that 12 per cent. per annum net profits on the purchase money of an estate is the highest amount of remuneration expected by a purchaser. That under exceptional circumstances purchasers will go as low as 6 per cent., but that from 9 to 10 per cent. is the usual net profit on a purchase of land; we get therefore the following results :—

Total *khalsa* area of *pergunnah* 96,526 acres × 18 3 0 =	Rs. 17,55,566 10 0
On which 10 per cent. would give, ...	1,75,556 1 0
Add to this 5 per cent., expenses of collection and management,	8,777 8 0
and the present jumma, ...	1,51,076 11 0
Total outturn, ...	3,35,410 3 0

23. This result is not far off that finally arrived at. We come next to a comparison of the past and present agricultural state of the *pergunnah*, and a statement of the causes which may conduce to a rise or fall in the present demand. The past and present measurements show in acres :—

Settlement.	Total area.	Barren.	*Lakhiraj.*	Old waste.	Fallow.	*Cultivated.*			*Malgoozaree.*
						Irrigated.	Unirrigated.	Total.	
Past settlement, ...	105,289	8,164	18,013	12,029	3,468	27,784	35,831	63,615	79,112
Present ditto, ...	108,470	10,616	11,944	4,745	1,167	48,321	30,217	78,538	85,910
			Bagh,	1,460					

24. The difference between the past and present measurements is therefore 3,181 acres, or 3·2 per cent. The barren has increased 30 per cent. This increase is due to the increase in population and consequent growth of new village sites, and to the amount of land taken up for canals, roads, &c. The revenue-free land has decreased by 7,069 acres by the resumption of invalid *maafees*. The culturable area has decreased by 7,832 acres, and is now not quite half what it was 31 years ago. The assessable area has increased 6,798 acres, or 8·5 per cent., and the cultivated area has increased 14,923 acres, or 23·4 per cent., and is now 91·4 per cent. of the *malgoozaree* area. It is to be remarked, however, that a large portion of this increase in cultivation has already been assessed, as in it is included all the cultivated land of the resumed *maafee*. The cultivated area of the *pergunnah* being 72 per cent. of the total area, the cultivated area of the resumed *maafee* may fairly be assumed at 72 per cent. of the total area; that is, 2,089 acres. Deducting this amount, we get 9,844 acres as the total increase of cultivation now unassessed. This shows an increase of only 14·3 per cent. on the cultivated areas already assessed. At the IX., 1833 settlement, the irrigable area amounted to 27,784 acres, or 43·8 per cent. of the then cultivated area; it has now increased by 20,537 acres, or 73·8 per cent., and amounts to 48,321 acres, or 61·5 per cent. of the present cultivated area. The rents of this *pergunnah* are now taken in the same way as they were in the last settlement.

25. The method is described by Mr. Head in the 3rd para. of his report, where he writes:—" The *butaee* payment, or occasionally the *kunkoot*, is, with one or two exceptions, universal for the common *khureef* and *rubbee* lands, although sugar, cotton, tobacco, *mukka*, and one *or* two garden crops always pay money rents." When the inspection of this *pergunnah* was first commenced, there were found six villages only in which fixed money rents on all crops were prevalent, and these all to the extreme south, on the Crore borders.

26. The large number of commutation suits instituted and decided have increased this number largely since. Except in these six villages, the land paying fixed money-rents as entered in the attested *khuteounee* is nearly all held by noraos, and is distributed in small portions among the villages of the *pergunnah*. The attested *khuteounees* show :—

Land.	*Buttaee.*	*Nuqshi.*	Rent.	Average rent per acre.
			Rs. a. p.	Rs. a. p.
Seer, ...	1,507	1,925	...	...
Mouroosee, ...	49,971	2,631	15,517 13 0	5 14 4
Ghair Mouroosee, ...	20,608	732	3,452 1 0	4 11 5
Rent-free, ...	1,164	...	...	...
Total, ...	73,250	5,288	18,969 14 0	5 10 2

27. The *nuqshi* land being almost all in the best villages, the rent on it cannot be taken as a fair criterion of the average rent which the *assamees* could pay over the

whole *pergunnah*. We must therefore fall back on the rise in produce prices as the measure of the increase in rents in the *buttaee* land; and as the rent of the *zubtee* land has not perceptibly increased, the increased area under *zubtee* crops would give a near approach to the increase in assets due to the increased cultivation of the better staples.

28. Before passing on to these points, I would notice the very small increase in *mouroosee* holdings in the *pergunnah*. This appears due to the migratory nature of the *assamees* in the north of the *pergunnah*, and to the constant changing of fields under *buttaee* tenures. The old records of *mouroosee* and *ghair mouroosee* holdings in 73 villages show, when compared with the present record in the same villages, the following results:—

	Cultivated area.	*Mouroosee.*	*Ghair Mouroosee.*
IX., 1833 settlement, ...	25,375	20,842	4,533
Present, ditto, ...	29,190	20,972	8,220

29. The increase in produce prices has been already shown both in Kabur and Jehanabad to be about 30 per cent. As regards the increase in the better staples, from the crop statement of last settlement of 75 villages, I find the amount of the *zubtee* to be 1,864 acres, or 8 per cent. of the then cultivated area. The amount of *zubtee* in the same villages by the present crop statement is 6,501 acres, or 23 per cent. of the now cultivated area, showing an increase of 4,637 acres, or 248 per cent. Taking this as an average in acres, the total increase in the *pergunnah* would be 12,967 acres. The *zubtee* crops in the present crop statement are 19,634 acres.

30. The rent on this area at the average prevalent *zubtee* rates would be Rs. 1,03,423-12-0, giving an average per acre of Rs. 5-4-3. Then the increase due to the spread of the cultivation of the better staples would be 12,967 acres × 5-4-3 = Rs. 68,279.

31. To sum up, there are four points indicating a rise in the rental during the expiring settlement. They are—

(1)—An increase of 23·4 per cent. in cultivation.

(2)—A rise of 30 per cent. in produce prices.

(3)—An increase of 73·8 in the irrigable area.

(4)—An increase of 248 per cent. in the cultivation of the better staples.

32. Starting from the estimated rental at last settlement as shown by the assessed demand, and assuming that all the above causes have had their full influence on the *pergunnah*, we can get a rough estimate of the highest outturn under the most favourable circumstances. Thus the last settlement estimated *nikasee*, taken as half as much again as the assessed demand, gives Rs. 2,15,844, giving on the cultivated area an average of Rs. 3-6-3 per acre. The cultivated area at last settlement was 63,615 acres; of this 8 per cent., or 5,089 acres were, as above shown, under *zubtee*, at a rental of Rs. 5-4-3 per acre, showing a total rental of Rs. 26,796-12-0. We have then left an estimated rental of Rs. 1,89,047-4 on 58,526 acres of ordinary *khureef* and *rubbee*, showing an average estimated rate of 3-3-8 per acre. The crops in the present cultivated area, 78,538 acres, were in the year of measurement distributed as follows:—

Zubtee, ...	19,634
Khurreef and *rubbee*, ...	59,904

33. The rent on the *zubtee* land at the present prevalent rates is Rs. 1,03,423-12-0; add for 59,904 acres, ordinary *rubbee* and *khureef*, at Rs. 3-3-8, the last settlement rate as above deduced, Rs. 1,93,440, *plus* 30 per cent. rise in produce prices on the *buttaee* land, Rs. 58,032—total Rs. 3,54,895-12-0. There remains to add for the increase in irrigation. As this has been already taken in for the *nuqshi* lands, it must here

be calculated on the *buttaee* lands only. These are 75 per cent. of the total cultivated area. Then 75 per cent. of the increased area irrigable, that is, 15,403 acres, should only be taken into account.

34. The average rate on the irrigated area by estimated soil-rates is Rs. 414-11-0 per acre; the average dry rate Rs. 3-4-11,—showing a difference of Rs. 1-9-11. Then 15,403 acres × 1-9-11 = 25,029-14, would show the increase in assets due to irrigation were its influence fully developed. Adding in this amount, we get an estimate of Rs. 3,79,925-10-0 as the highest possible outturn of the *pergunnah*. The *huftgana nikasees* for the last ten years show an average of 2,73,557. This includes only the revenue on the resumed *maafee*, and no rent on the *zemindaree maafee* land.

35. To get at the correct estimate by the *huftgana* papers we must deduct from the total cultivated area, ... 6,253 acres.

Resumed *maafee*,	...	...	5,089 ,,
Rent-free land,	...	...	1,164 ,,

leaving 72,285 cultivated acres; and from the total *nikasee*, Rs. 2,73,557, we must deduct Rs. 8,483, the revenue on the resumed *maafees*, leaving Rs. 2,65,074, which, divided by 72,285 acres, gives an average per acre of Rs. 3-10-8, which, applied to the total cultivated area of the *pergunnah*, gives an outturn of Rs. 2,87,972. That this estimate must necessarily be exceedingly low is clear from the fact that no account has been taken of the large amount of land entered by the *zemindars* as their *seer*, and no allowance has been made for false entries in the papers. That these papers cannot be relied on at all appears from the fact that the difference between the average *huftgana nikasees* of the first five years of this decade, and of the last five years, is only Rs. 5,000 on the whole *pergunnah*. This fact speaks for itself.

36. We have now three estimates on the *pergunnah*:—

	Rs.	a.	p.
1.—By the *huftgana* papers, which is the low-water mark,	2,87,972	0	0
2.—By the sale prices, which should be pretty near the mark, ...	3,35,410	0	0
3.—The out-turn calculated on the last settlement estimates with the most favourable assumptions; this is the high-water mark, ...	3,79,925	10	0

37. I can now pass on to the circles for assessment. As has already been stated, there are in the *pergunnah* two classes of villages, the upland and the lowland. This classification would however be scarcely feasible, as so great a difference in rents, population, climate, and cultivation exists between the northern and southern villages of the same class of soil. I have therefore concluded to divide the *peryunnah* into three circles:—

1.—The southern.

2.—The centre.

3.—The northern *mar* or jungle circle.

38. Leaving the difference between the uplands and lowlands to be dealt with in assessing, this classification has the obvious merit of being the same as that used by Mr. Head in the IX., 1833 settlement both of Ritcha and Jehanabad, and again used by Mr. Colvin in his recent settlement of *pergunnah* Jehanabad; so that it affords great facilities for comparison. The main differences between these circles are in climate, population, cultivation, and the rate of rent taken. In circle I. the climate is good; in circle II. sickness is very prevalent after the rains; and in circle III. the country is generally unhealthy during part of the hot weather and the whole of the rains. As

regards the remaining differences, the following comparative tables will best exemplify them :—

Circles.	Percentge of cultivation to *malgoozaree* area.	Percentage of Crops.						*Dofuslee*
		Khureef.			*Rubbee.*			
		1st Class.	2nd Class.	3rd Class.	I.	II.	III.	
I., ...	93·4	33·7	41·0	25·3	62·2	28·2	9·6	30·8
II., ...	92·6	31·0	45·0	23·3	63·0	27·5	9·5	29·2
III, ...	78·4	21·2	21·8	25·0	49·4	31·3	19·3	23·7

Circles.	Number of ploughs.	Average cultivated land per plough in acres.	Percentage of assets taken as rent.
I., ...	6,077	8·2	45 to 50
II., ...	2,400	8·5	33 to 45
III., ...	783	10 5	25 to 33

39. A map showing the circles, and the prevalent percentage of rent taken in each village, accompanies this report.

40. Before passing on to the circles and the soil rate, I should here remark on the crop-rates worked out for the *pergunnah*. They have been worked out in the same way as in Kabur and Sirsawan, on a series of 887 trials in all crops on which kind payments are made. Taking the average per acre of these trials as the average yield per acre in the *pergunnah*, crop-rates have been deduced for each circle on the prevalent percentage of produce taken as rent in such circle, after deducting one-sixth for cutting, carrying, &c. The results are—

Crops.	Outturn per acre in Bareilly. maunds and seers.	Outturn, deducting one-sixth.	Rate per rupee in Bareilly, seers.	Rent at 45 per cent. for circle I.	Assumed rent-rates for circle I.	Rent at 40 per cent. for circle II.	Assumed rent-rates for circle II.	Rent at 30 per cent. for circle III.	Assumed rent-rates for circle III.
	Mds. s.	Mds. s.	Seers.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Bajrah, &c., ...	7 15	6 6	39	3 13 6	2 14 0	2 8 4	2 8 0	1 14 3	1 14 0
Rice, ...	11 30	9 32	44	4 1 7	4 2 0	3 9 0	3 9 0	2 10 9	2 10 0
Wheat, ...	8 20	7 3	28	4 8 9	4 9 0	4 0 8	4 1 0	3 0 6	3 0 0
Oats, Barley, *Gojye*,	8 4	6 30	32	3 12 9	3 13 0	3 6 0	3 6 0	2 8 6	2 8 0
Bijhra, ...	8 30	7 12	36	3 10 4	3 10 0	3 3 5	3 3 0	2 6 10	2 6 0
Gram, Peas, ...	8 0	6 27	38	3 2 7	3 3 0	2 10 11	2 11 0	2 1 8	2 1 0
Musoor, &c, ...	6 0	5 0	40	2 4 0	2 4 0	2 0 0	2 0 0	1 8 0	1 8 0

41. The crops rented at money-rates—sugar, &c.,—have been taken at the average rate now prevalent in each circle :—

Crops.	Circle I.	Circle II.	Circle III.
	Rs. a. p.	Rs. a. p.	Rs. a. p.
Sugar (without fallow), ...	9 9 0	8 0 0	6 6 0
Pundrah (fallow), ...	5 12 0	5 0 0	4 0 0
Cotton, ...	6 6 0	5 10 0	4 12 0
Mukka, ...	3 3 0	2 10 0	2 3 0
Garden produce, ...	6 6 0	5 10 0	4 12 0

42. With the exception of *pundrah* and *cutcheana*, which have been included in the above rates, all the *dosahee* crops have been assumed at half *purhul* rates. These rates give on the crop statement of the year of measurement (Appendix D.):—

I.—Circle, ...	Rs.	2,32,761
II.—Circle, ...	„	82,862
III.—Circle, ...	„	23,026
Total, ...	Rs.	3,38,649

43. *Circle I.*—This circle comprises 128 villages, 171 mubals. Of these, 164 are *khalsa*, two *istimrar*, and five revenue-free. The past and present measurements show—

Settlement.	Total.	Barren.	Revenue free.	Waste.	Cultivated.			Malgoozaree.	Jumma.
					Irrigable.	Dry.	Total.		
									Rs.
IX. 1833, ...	65,200	4,830	11,442	6,863	19,064	23,001	42,065	48,928	1,02,430-0
Present, ...	66,945	6,295	7,117	8,503	33,686	16,344	50,030	53,533	1,07,716-3

44. The above shows the following differences:—

Difference in measurement, ...	1,745	acres or	2·6 per cent.
Increase in barren, ...	1,465	„	30·3 „
Decrease in revenue free, ...	4,325	„	37·7 „
Decrease in waste, ...	3,360	„	48·9 „
Increase in cultivation, ...	7,965	„	18·9 „
Increase in *malgoozaree*, ...	4,605	„	9·4 „

45. The cultivated area is 93·4 per cent. of the *malgoozaree*, and the irrigable area is 67·3 per cent. of the cultivated area, as against 45·3 per cent. at last settlement.

The soils in this circle are as follows:—

Soils.	Irrigable.	Dry.	Total.
Domut, ...	18,406	8,484	26,890
Mutyar, ...	15,070	7,654	22,724
Bhoor, ...	210	206	416
Total, ...	33,686	16,344	50,030

46. The rent-rates assumed at last settlement by Mr. Head were—

	Irrigable.			Dry.		
	Rs.	a.	p.	Rs.	a.	p.
Doomut and *Mutyar*, ...	4	3	6	3	6	0
Bhoor, ...	3	11	3	3	0	0

My assumed rates are given below:—

Soils.	Irrigable.			Dry.			Average.			All-round rent-rate.		
	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.
Domut, ...	5	8	0	4	0	0	5	0	0	4	10	9
Mutyar, ...	4	12	0	3	6	0	4	4	6			
Bhoor, ...	4	0	0	2	12	0	3	6	0			

47. I have put separate rates on the *domut* and *mutyar*, as the *domut* is in most places considered superior to the *mutyar*. This is shown by crop-rates, which give—

		Rs.	a.	p.
In Circle I.—*Domut*,	... ...	4	14	10
Mutyar,	... ...	4	5	6
Bhoor,	... ...	3	8	9
In Circle II.—*Domut*,	... ...	4	5	5
Mutyar,	... ...	3	12	1
Bhoor,	... ...	3	2	10
In Circle III.—*Domut*,	... ...	2	14	9
Mutyar,	... ...	2	10	10

48. Though the two soils assimilate now closely towards the north of the *pergunnah*, the assumed wet and dry rates give—

On the cultivated area a *nikasee* of ...	...	Rs. 2,33,990
The average rates give	...	,, 2,33,141
The crop rates give	...	,, 2,32,761

49. In 57 villages of this circle rents have been commuted from kind to money; that the parties are not dissatisfied with the results is proved by the fact that many cultivators and zemindars have applied for the same rates since. The total cultivated area of the commuted villages is 25,481 acres, the *nikasee*, by the commutation rates is Rs. 1,23,639. The *nikasee* of these same villages by the wet and dry rates is Rs. 1,23,164-12; the difference is due to the fact that the commuted villages are some of them above the average. A comparison with the rates of the neighbouring *pergunnahs* which have been assessed shows—

		Rs.	a.	p.
Kabur ...	*Domut*, ...	5	2	0
	Mutyar, ...	3	14	0
	Bhoor, ...	2	10	0

The wet and dry rates of the *pergunnah* are slightly higher on the *domut* than those of this circle in Ritcha, but lower on *mutyar* and *bhoor*,—such being the relative value of the soils in each *pergunnah*. The all-round rate is also some four annas per acre lower in Kabur, owing to the less amount of irrigation,—the irrigated area in Kabur being 48 per cent., and in this circle of Ritcha 67·3 per cent. on the cultivated area.

In the north circle of *pergunnah* Crore, the average soil-rates used for assessing were—

		Rs.	a.	p.
Domut,	... ...	5	10	0
Mutyar,	... ...	3	10	0
Bhoor,	... ...	3	0	0

50. The *domut* rate falls higher, and the *mutyar* rate lower than in this circle of Ritcha. This is correct, as the *domut* is there superior, and the *mutyar* inferior to the corresponding soils here. The estimated rates for the second or adjoining circle of Nawabgunge give on that circle an all-round rent-rate of Rs. 4-7-8 per acre, showing a difference of only 3 annas and 1 pie per acre from the all-round rate here estimated. This difference is accounted for by the irrigation, which is only 61·6 per cent. of the cultivated area. In the 4th circle of Jehanabad, the all-round rate by estimated soil-rates falls even lower, being Rs. 4-4-7 per acre, but the actual assessment at 50 per cent. on the assets falls at Rs. 2-3-6 per acre, showing an estimated all-round rent-rate of Rs. 4-7-0 per acre. The irrigation here also is less than in Ritcha, being only 37·5 per cent. of the cultivated area. The estimated outturn by soil-rates being in round numbers about Rs. 2,34,000, should give therefore a *jumma* of Rs. 1,17,000 *plus* cesses, Rs. 11,700 = 1,28,700, showing an increase in the land revenue of Rs. 9,283-13, or 8·6 per cent., and in the total demand, of Rs. 20,983-13, or 19·4 per cent.

51. *Circle II.*—The intermediate or centre circle contains 47 villages (*khalsa* 43, and *maafee* 4).

The areas of this circle by former and present measurements are—

Settlement.	Total.	Barren.	Revenue-free.	Waste.	Cultivated.			Culturable.	*Jumma.*
					Irrigable.	Dry.	Total.		
									Rs. a.
Former, ...	25,676	2,172	3,122	5,079	7,109	8,194	15,303	20,382	32,625 0
Present, ...	26,817	2,960	2,026	1,597	12,144	8,090	20,234	21,831	33,950 8

52. The difference in measurements is here 1,141 acres, or 4·4 per cent.

The barren has increased by ...	788	„	„ 36·2	„
The revenue-free area has decreased by	1,096	„	„ 38·1	„
The waste land has decreased by	3,482	„	„ 68·5	„
The cultivated area has increased	4,931	„	„ 32·2	„
The culturable area has increased	1,449	„	„ 7·1	„

53. The cultivated area is now 92·6 per cent. of the culturable, and the irrigable area is now 60 per cent. of the cultivated, as against 46·4 per cent. at last settlement; showing an increase of 5,035 acres.

The distribution of soil in this circle is—

Soils.	Irrigable.	Dry.	Total.
Domut, ...	7,280	4,471	11,751
Mutyar, ...	5,083	3,356	8,439
Bhoor, ...	19	25	44
Total ...	12,382	7,852	2,234

54. The rent-rates assumed at last settlement in this circle were—

	Irrigable.	*Dry.*
	Rs. a. p.	Rs. a. p.
Domut and *Mutyar*, ...	3 13 6	2 14 8
Bhoor, ...	3 6 0	2 8 0

55. The rent-rates now assumed are—

Soils.	Irrigable.	Dry.	Average.
Domut, ...	5 0 0	3 6 0	4 6 0
Mutyar, ...	4 3 0	3 0 0	3 11 6
Bhoor, ...	3 0 0	2 0 0	2 6 0

These rates give the following *nikasee* in the circle:—

	Rs. a. p.
By wet and dry rates, ...	82,949 11 0
Average soil rates, ...	82,897 11 0
The crop rates give, ...	82,862 0 0

The soil-rates lately used by Mr. Colvin in assessing the neighbouring and similar tracts comprised in the 2nd circle of *pergunnah* Jehanabad fall at an average all-round rate of Rs. 4-1-4 per cultivated acre. The rates here assumed fall at Rs. 4-1-7 per acre,

the estimated *jummabundee* by wet and dry rates being in round numbers Rs. 82,900. We get an estimated *jumma* of Rs. 41,450 + 4,145 cesses = 45,595, giving an increase in land revenue of Rs. 7,499-8, or 22·0 per cent., and in total demand of Rs. 11,644-8, or 34·2 per cent.

57. *Circle III.*—The *mar* or jungle circle contains 15 villages, 21 *muhals* (*khalsa* 18, *maafee* 3).

The measurements are given below :—

Settlement.	Total.	Barren	Revenue free.	Waste.	Cultivated.			Culturable.	Jumma.
					Irrigable.	Dry.	Total.		
IX., 1833, ...	14,413	1,162	3,449	3,535	1,611	4,636	6,247	9,802	8,840
Present, ...	14,708	1,361	2,801	2,272	2,491	5,783	8,374	10,546	9,410

58. The above shows a difference in measurement of 295 acres, or 2 per cent; an increase in barren of 199 acres; and a decrease in revenue-free of 1,283 acres. The culturable area has increased 744 acres, or 7·5 per cent., and the cultivated area increased 2,027 acres, or 32·4 per cent., and is now 78·4 per cent. of the *malgoozaree*. Irrigation has increased by 880 acres; from 25·7 per cent. to 30·1 per cent. of the cultivated area.

59. The soils in this circle are—

Soils.	Irrigable.	Dry.	Total.
Domut, ...	1,398	2,062	3,460
Mutyar, ...	1,093	3,721	4,814
Total, ...	2,491	5,783	8,274

The rates assumed on this circle at last settlement were—

	Irrigable.	Dry.
	Rs. a. p.	Rs. a. p.
Domut and *Mutyar*, ...	2 5 6	1 8 0
Bhoor, ...	1 11 0	1 2 3

The rates now assumed are—

Soils.	Wet.	Dry.	Average.
Domut, ...	3 8 0	2 8 0	2 14 6
Mutyar, ...	3 4 0	2 4 0	2 7 0

The results of these rates are—

	Rs.	a.	p.
Wet and Dry rates, ...	21,872	8	0
Average soil rates, ...	21,789	8	0
The crop rates in the same circle give, ...	2,306	0	0

The circle corresponds with Mr. Colvin's first and second circles in Jehanabad. The average given by applying the soil-rates used in these circles to the soil areas is Rs. 2-10-8 per acre. The average given by my estimated soil rates in the circle is Rs. 2-10-3. The difference is so slight as to require no explanation. The estimated outturn of this circle is in round numbers 21,900, giving a *jumma* of 10,950 + 1,095 cesses = 12,045, and an increase in the Government revenue of Rs. 1,540, or 16·3 per cent.; and in the total demand of Rs. 2,635, or 28·0 per cent. The soil rates show,

therefore, an estimated land revenue of Rs. 1,69,400, being an increase of Rs. 18,323-5-0, or 12·1 per cent. on the expiring demand. The estimated total demand is Rs. 1,86,340, giving an increase of Rs. 35,263-5-0, or 23·3 per cent. on the expiring demand; and present estimated land revenue on the present areas are given below :—

Demands.	On total area.	On *malgoozaree.*	On cultivation.
Expiring demand, ...	1 6 3	1 12 3	1 14 9
Present estimated land revenue, ...	1 8 11	1 15 6	2 2 5

60. There now remains only to see how much of this increase is due to the influence of the canals. Annexed is a statement showing *chuckwar* the irrigation at the IX., 1833 and present settlements:—

Chucks.	Settlement.	Cultivated area.	Irrigated.	Dry.
Chuck I., ...	IX., 1833, ...	42,065	19,064	23,001
	Present, ...	50,030	33,686	16,344
		Canals, ...	29,151	...
		Other sources,	4,535	...
Chuck II., ...	IX., 1833, ...	15,303	7,109	8,194
	Present, ...	20,234	12,144	8,090
		Canals, ...	9,462	...
		Other sources,	2,682	...
Chuck III., ...	IX., 1833, ...	6,247	1,611	4,636
	Present, ...	8,274	2,491	5,783
		Canals, ...	2,258	...
		Other sources,	233	...

Thus the total increase in irrigated area which could be attributed to the canals would be in circle I., 14,622 acres. The average irrigated rate in circle I. is 5-2-5; the average unirrigated, Rs. 3-11-0—difference, Rs. 1-7-5, which, applied to 14,622 acres, gives Rs. 21,400 increase in assets, or 10,700 increase in revenue; in the same way, in circles II. and III. the difference between the average irrigated and dry rates being Re. 1-7-3 and Re. 1-0-0 per acre, respectively. We get therefore in circle II., 5,035 acres × 1-7-3 = 7,316-8-0 increase in assets, or Rs. 3,658-4-0 increase in revenue; and in circle III., 880 acres × 1 = 880 increase in assets, or Rs. 440 increase in revenue. Then under this computation we get an increase in revenue on the *pergunnah* of Rs. 14,798-4-0 due to the canals. This I look upon as the highest possible credit which can be given to the canals, as we here work on the strained assumption that were it not for the canals no increase whatever would have taken place in the irrigation of the whole *pergunnah.*

61. This assumption is disproved by the fact that in 34 villages in the *pergunnah* which have not come under the influence of the canals, the irrigation statement* shows an increase of 60 per cent. in irrigation. Then taking the assumption most unfavourable to the canals, namely, that had no canals ever been introduced, irrigation would have increased in the same ratio as in these 34 villages, we get the following supposed increase in irrigation without canals:—

* Settlement.	Cultivated area.	Wet.	Dry.
IX., 1833, ...	10,541	1,738	8,803
Present, ...	12,665	2,785	9,880

		Acres.
Sixty per cent., ...	=	16,620
Increase in irrigation with canals, ...		20,537
Balance in favour of the canals, ...		3,917

	Acres.	Acres.		Rs. a. p.	Rs.
Then, as	20,537 :	3,917	::	14,798-4-0 :	2,774

62. This again does not do justice to the canals, as most of the villages which have not been influenced by the canals are to the south of the *pergunnah*; and in them wells are practicable, whilst in those where the canal has been introduced, wells are never used. Leaving out these southern villages, in all 18, we have 16 villages untouched by the canals in which the irrigation has increased from 1,026 acres to 1,254 acres, or only 22 per cent. We then get:—

		Acres.
Supposed increase without canals, 22 per cent.,	=	6,094
Ditto ditto, with canals, 73·8, „	=	20,537
Balance in favour of canals, ...	=	14,443

	Acres.	Acres.		Rs. a.	Rs.
Thus, as	20,537 :	14,443	::	14,798-4 :	10,407

This last is, I conceive, much closer to what is really due to the canals.

In conclusion, I would call the attention of the authorities to the position of the village of Kuchnaree, which is situated in the middle of Ritcha, whilst it is included in *pergunnah* Jehanabad. I should recommend that it be transferred to this *pergunnah*.

J. S. PORTER,

Asst. Settlement Officer.

APPENDIX A.

Statement showing the number of proprietors, caste of sharers, and the tenure of the villages in Pergunnah Ritcha, Tuhseel Buheree.

	Number of sharers.	Caste of sharers.																			Tenure of Villages.						Remarks.
		Kayeth.	Puthan.	Koormee.	Sheikh.	Thakoor.	Byragee.	Bunniah.	Jat.	Brahmin.	Faqeer.	Khuttree.	Syed.	Raeen.	Kumboh.	Goshaeen.	Dhoona.	Malee.	Bunjara.	Brimbeharee.	Zemindaree.		Perfect Putteedaree.		Imperfect Putteedaree.		
																					Number of *muhals.*	Number of sharers.	Number of *muhals.*	Number of sharers	Number of *muhals.*	Number of sharers.	
Khalsa, ...	731	77	162	101	40	84	2	32	16	33	...	27	47	103	6	1	...	...	...	...	214	530	23	163	5	38	
Muqrooqa, ...	292	10	45	20	40	...	30	4	1	10	42	1	45	25	...	6	4	3	5	1	...	...	...	...	...	...	
Total, ...	1,023	87	207	121	80	84	32	36	17	43	42	28	92	128	6	7	4	3	5	1	214	530	23	163	5	38	
Maafee, ...	84	3	16	...	3	...	...	4	...	4	...	...	...	...	54	...	...	...	...	...	13	82	.	...	1	2	Including *istimrar muhals.*

APPENDIX B.

Statement showing the distribution of the cultivated area among the several castes of pergunnah Ritcha, Tuhseel Buheree.

Number.	Castes.	Chupperbund assamees cultivating in their own villages.			Cultivating as pahis from other villages.			Total.		
		Assamees.	Holdings.	Land in acres.	Assamees.	Holdings.	Land in acres.	Assamees.	Holdings.	Land in acres.
1	Koormees, ...	3,165	3,119	21,488	683	585	2,603	3,848	3,704	24,091
2	Weavers, ...	296	285	681	24	24	20	320	309	701
3	Brahmins, ...	833	761	3,467	142	126	357	975	887	3,824
4	Gooshaeens, ...	48	46	152	6	6	15	54	52	167
5	Sweepers, ...	167	169	181	2	2	1	169	171	182
6	Chumars, ...	1,254	1,286	5,051	107	102	562	1,361	1,388	5,613
7	Oilmen, ...	138	140	709	17	15	22	155	155	731
8	Blacksmiths, ...	134	132	602	12	12	29	146	144	631
9	Tailors, ...	63	61	177	11	11	22	74	72	199
10	Carpenters, ...	271	235	1,132	71	55	421	342	290	1,553
11	Mewatees, ...	217	205	1,926	53	47	109	270	252	2,035
12	Barbers, ...	180	165	620	22	20	27	202	185	647
13	Thakoors, ...	183	181	1,125	35	28	188	218	209	1,313
14	Dhoonahs, ...	86	80	244	7	7	14	93	87	258
15	Faqueers, ...	293	282	859	42	39	78	335	321	937
16	Washermen, ...	232	232	875	31	30	53	263	262	928
17	Puthans, ...	332	293	1,324	66	68	330	398	361	1,654
18	Aheers, ...	858	869	4,122	34	34	102	892	903	4,224
19	Kayeths, ...	191	159	689	53	49	228	244	208	917
20	Jats, ...	409	366	5,063	28	22	113	437	388	5,176
21	Kahars, ...	296	289	2,104	25	23	29	321	312	2,133
22	Lodhas, ...	90	87	664	3	3	7	93	90	671
23	Moraos, ...	1,784	1,704	3,397	53	49	55	1,837	1,753	3,452
24	Khutiks, ...	8	8	14	4	4	5	12	12	19
25	Butchers, ...	16	15	73	1	1	1	17	16	74
26	Raees, ...	584	541	8,616	73	70	371	657	611	8,987
27	Sheikhs, ...	175	163	786	31	29	108	206	192	894
28	Beldars, ...	468	417	2,967	78	74	209	546	491	3,176
29	Bunjarahs, ...	53	48	280	14	13	73	67	61	353
30	Gudareahs, ...	77	68	298	3	3	2	80	71	300
31	Moghuls, ...	10	8	25	1	1	2	11	9	27
32	Kisans, ...	117	109	674	14	13	32	131	122	706
33	Syeds, ...	41	34	273	12	12	49	53	46	322
34	Bhoorgees, ...	29	35	89	4	4	9	33	39	98
35	Bards or Bhats, ...	10	10	27	5	5	31	15	15	58
36	Bhistees, ...	10	8	38	...	...	...	10	8	38
37	Malees, ...	17	17	32	1	1	1	18	18	33
38	Goojurs, ...	103	101	433	4	4	7	107	105	440
39	Dyers, ...	13	14	50	...	...	...	13	14	50
40	Bunniahs, ...	13	13	76	2	2	1	15	15	77
41	Acharuj, ...	2	2	2	1	1	1	3	3	3
42	Kulals, ...	39	39	87	3	3	2	42	42	89
43	Dalehras, ...	11	10	56	5	5	2	16	15	58
44	Mirdhas, ...	2	2	4	...	...	...	2	2	4
45	Dhanooks, ...	24	22	32	2	2	5	26	24	37
46	Nutts, ...	4	4	31	...	...	...	4	4	31
47	Byragees, ...	43	54	159	5	5	41	48	59	200
48	Rahdhas, ...	4	9	4	...	...	...	4	9	4
49	Mahajuns, ...	6	7	28	...	...	...	6	7	28
50	Koomhars, ...	1	1	4	...	...	...	1	1	4
51	Turks, ...	17	16	202	...	...	...	17	16	202
52	Koomhras, ...	14	14	30	1	1	1	15	15	31
53	Putwas, ...	2	2	6	...	...	...	2	2	6
54	Bilochs, ...	2	2	18	...	...	...	2	2	18
55	Goldsmiths, ...	7	7	11	...	...	...	7	7	11
56	Jogees, ...	2	2	3	...	...	...	2	2	3
57	Merasees, ...	5	5	27	2	2	2	7	7	29
58	Munehars, ...	14	14	49	2	2	5	16	16	54
59	Cheepees, ...	1	1	8	...	...	...	1	1	8
60	Korees, ...	3	3	8	...	...	...	3	3	8
61	Bugwaees, ...	1	1	4	...	...	...	1	1	4
62	Barees, ...	2	2	5	...	...	...	2	2	5
63	Mochees, ...	...	...	...	1	1	9	1	1	9
64	Chereemars, ...	...	...	...	2	2	1	2	2	1
65	Pandeys, ...	...	...	...	1	1	1	1	1	1
66	Quovals, ...	...	...	...	1	1	1	1	1	1
	Total, ...	13,470	12,974	72,181	1,800	1,619	6,357	15,270	14,593	78,538

APPENDIX C.

Census Statement of Pergunnah Ritcha, Tuhseel Buheree.

Tuhseel.	Pergunnah.	HINDOOS.								MAHOMEDANS.								TOTAL.								
		AGRICULTURAL.				NON-AGRICULTURAL.				AGRICULTURAL.				NON-AGRICULTURAL.												
		Males.		*Females.*		*Males.*		*Females.*		*Males.*		*Females.*		*Males.*		*Females.*										
		Adult.	Children.	Adult.	Children.	Adult.	Children.	Adult.	Children.	Adult.	Children.	Adult.	Children.	Adult.	Children.	Adult.	Children	Adult.	Adult Males.	Adult Females.	Children.	Boys.	Girls.	Males.	Females.	Total.
Buheree.	Ritcha,	19,684	11,094	16,343	10,505	4,487	2,319	3,609	2,220	4,423	2,572	3,894	2,429	4,755	2,843	4,338	2,510	61,533	33,349	28,184	36,492	18,828	17,664	52,177	45,848	98,025

Circles.	Soils.	Sugar-cane.	Pandrah.	Cotton.	Mukha.	Catcheana.	Dofuslee Crops. Gram and kussa.	Catcheana.	Musoor.	Linseed.	Pundrah.	Melons.	Lahee.	Total dofuslee crops.	Total khureef and rubbee crops.
Circle I.	*Domut,*	2,556	1,080	1,991	6,058	[illegible]	2,192	614	694	656	1,656	...	41	9,852	26,890
	Mutyar, ...	426	154	151	327		1,152	69	839	1,729	373	...	...	5,500	22,724
	Bhoor, ...	...	12	19	55	..	23	...	14	...	3	...	...	67	416
	Total, ...	2,982	1,246	2,161	6,440	6	3,367	683	1,547	2,385	2,032	...	41	15,419	50,030
Circle II.	*Domut,*	1,379	583	685	1,764	[illegible]	836	129	378	296	871	14	11	3,734	11,751
	Mutyar, ...	129	55	39	94		580	21	406	523	167	...	8	2,079	8,439
	Bhoor, ...	...	...	1	9	..	4	...	...	...	...	...	...	11	44
	Total, ...	1,508	638	725	1,867	[illegible]	1,420	150	784	819	1,038	14	19	5,824	20,234
Circle III.	*Domut,*	156	120	184	676		120	12	229	71	132	...	47	949	3,460
	Mutyar, ...	19	9	21	74		234	6	371	293	36	4	...	1,020	4,814
	Total, ...	175	129	205	750		354	18	600	364	168	4	47	1,969	8,274
	TOTAL PERGUNNAH, ...	1,665	2,013	3,091	9,057	8	5,141	851	2,931	3,568	3,238	18	107	23,212	78,538

J. S. PORTER,

Assistant Settlement Officer.

Proposed Rates of Assessment for Pergunnah Serowlee.

Dated 15th April, 1870.

By S. M. MOENS, ESQ., *Settlement Officer, Bareilly.*

PERGUNNAH SEROWLEE is bounded to the north and north-west by Rampore, to the south-west by Pergunnah Bissowlee of Budaon, to the east and south by Aonla. It is the most northern of the four pergunnahs which compose Tehseel Aonla. It was transferred from Moradabad to this district after last settlement. It then comprised 74 mouzahs; of these 20 were transferred to the Rampore territory in 1861, and two were added from other pergunnahs, making the present total number of villages 56. There are 74 mehals, of which four are jageer. The area is 38,091 acres, giving an average of 680 acres to each village. The average area in Crore, per village, was 408 acres, and in Meergunge 571.

2. The pergunnah, though it contains some good land, especially in the khadir villages, is, taken as a whole, nearly the worst in the district: 55 per cent. of its cultivated area is bhoor, and only 17 per cent. is irrigated. These two facts taken together should make one very cautious in assessment.

I inspected the villages in a season of drought. In parts I found great tracts of mere sand drifted here and there into ridges; the soil was too loose even to admit of "merhs" to demarcate the fields, and only a few straggling feeble stumps of bajrah showed that the land was not barren. In places the thin layer of light soil had been swept off the surface by the fierce May winds, leaving the barren stratum of indurated clay exposed to view. Parts of the pergunnah, however, where the substratum admits of the construction of wells, are very good and fertile, growing magnificent wheat. Everything, however, depends on irrigation. A branch from the Ramgunga canal passing through the pergunnah would change it into a garden. Population is abundant, the cultivators are laborious, the will is there, nothing is wanting but the water. Well irrigation, where the depth to water, as here, is such as not to admit of the use of a "dhenklie," is a long process, and the labour at the cultivator's command is limited. He can only look to the members of his family for assistance, he has no capital which would enable him to employ hired labour. Imagine the godsend a canal would be which would enable the village to irrigate their whole rubbee by flow in three or four days. The amount of rubbee would be largely increased; cane and cotton cultivation would rapidly extend; and the nature of soil would be gradually improved from the manure which it would be worth the cultivators while to expend on the land, and from the deposits left by the water. I have seen these effects strongly marked in Nawabgunge, which I have traversed this last season. There, canal irrigated land, which at last settlement fetched 8 annas a beegah with difficulty, is now greedily taken at 14 and 15, and even 18 annas. To return to Serowlee, however, the pergunnah may be broadly described as an elevated plateau rising in parts into ridges of sandhill, and sinking to the north-east into the khadir of the Ramgunga, and to the south and south-west into the lowland in the bed of the Aril river. There are only five khadir villages, all the rest are on the upland; among the latter there is a very general similarity in soils. They differ only in the proportion of bhoor, the amount of irrigation, and such casual circumstances as the caste of the cultivators, &c., &c. There are good markets for the produce in the large kusbehs of Serowlee and Sheopoori. Roads are few and bad; there is only one fair kutcha road, that to Chundowsee. Irrigation is almost entirely from kutcha wells, worked by 'lao and chursa.' The depth to water is usually from 20 to 25 feet. The wells, as a rule, only last one year;

though occasionally where in "mota," they last from 5 to 20 years, and even longer. These, however, are rare. The fortunate holders of wells so situated do not pay a fraction higher rent than is paid by fields where the well lasts only one harvest. This shows how the rents are dependent on custom, and how little influence has as yet been exerted by competition.

Rents are paid almost entirely in money, so that the zemindars have as yet derived little or no benefit from the high produce prices that have ruled of late years, except in so far as they have caused the extension of cultivation. The produce, being so largely dependent on the seasons, is very fluctuating and, as might be expected, khureef occupies much the largest proportion of the cultivation; cane and cotton are but little grown. The former only occupies 2¼, and the latter 5¾ per cent. of the cultivated area.

See Appendix A.

There is very little 'dosahee' except in the khadir villages; altogether the pergunnah differs widely from those already reported on, where water was within 12 feet of the surface, and irrigation by dhenklie generally practicable.

3. The comparative statistics of past and present measurements are as follow, in acres :—

	At last settlement.	By present measurement.	Increase per cent.	Decrease per cent.
Total area, ...	37,627	38,091	1·2	...
Lakhiraj, ...	1,637	2,014	23·0	...
Barren, ...	6,969	4,157	...	40·3
Old waste, ...	8,511	3,218	...	62·2
New fallow, ...	1,185	211	...	82·2
Cutivated, ...	19,325	28,491	47·4	...
Malgoozaree, ...	29,021	31,920	9·9	...

The great increase in the amount of lakhiraj is caused by the grant of two villages in jageer to the Nawab of Rampore. The increase in cultivation is very large, 47 per cent. of the entire malgoozaree area; 89 per cent. is cultivated, a large proportion for a bhoor pergunnah.

4. With cultivation irrigation has also increased. The areas at last settlement, as contrasted with the results of the new measurements, are shown thus, in acres :—

	Wet.	Dry.	Total.	Percentage of wet to total cultivation.
Cultivation at last settlement,... ...	2,031	17,294	19,325	10·5
Ditto by new measurements, ...	4,928	23,563	28,491	17·3

There has, therefore, been not only an absolute increase of 2,897 acres in the wet area, but a relative one of 6·8 per cent. on the whole cultivated area, notwithstanding the very great extension of cultivation. The proportion of wet to dry is still, however, exceedingly low for Bareilly.

5. Produce prices have risen considerably (see Appendix B.) The average prices of the chief staples in the five years 1232-1236 F. S. before last settlement, as

contrasted with the average prices of ten years 1266-1275 F. S., are shown thus in Bareilly seers and chittacks per rupee :—

	1232-1236 F. S.		1266-1275 F. S.	
	S.	c.	S.	c.
Bajrah, ...	43	8	26	14
Rice, ...	61	8	32	8
Wheat, ...	37	8	24	0
Gram, ...	50	0	26	13
Barley, ...	60	0	30	11

The average all-round increase has been 44 per cent.; and as rents are almost universally in money, the cultivators have reaped the benefit of the increase in prices, though, as a matter of fact, they are no better off than the cultivators in the Buttai pergunnahs, who have been practically paying far higher rates, but in grain instead of cash.

See Appendix C.

6. On a total area of 49½ square miles the density of population is 564 per square mile.

It was found to be in Meergunge, 634
Ditto Furreedpore, 460
Ditto Crore, 316

The average cultivated area per head of adult male agriculturists is :—

In Serowlee, 3·9 acres.
Furreedpore, 3·4 „
Crore, 3·2 „
Meergunge, 3·0 „

The cultivated area is subdivided into 7,198 holdings, with an average of 3·9 acres per holding, or less than in Meergunge, where the average was 4·9. The cultivators are of all castes, the chief being Kisans, Aheer, Thakoor, Chumar, Brahmin and Pathan; 79 per cent. of the cultivation is carried on by residents in their own villages, the remainder by Pahis The Mahomedans, who are chiefly non-agricultural, form rather less than one-fifth of the whole population.

See Appendix D.

7. With so dense a population a heavy increase in the value of agricultural produce, and a very small reserve of waste, one would naturally have supposed that rents would have increased since last settlement, and this point is worth a close examination.

In the old khuteonees the rents are not entered, this source of information is therefore closed. From Mr. Money's report, para. 30, it appears that the average rent-rate on the cultivated area was Rs. 3-5-5 per acre, but the pergunnah has since been much modified.

Leaving the villages transferred to Rampore out of account, and putting on the remainder the average circle rates given in para. 30 of his report, the average rent-rate comes out Rs. 3-0-8 per acre on the khalsa villages of the pergunnah as now constituted. Mr. Money's initial jumma on the cultivated area of 19,325 acres was Rs. 38,004, and he states in para. 31 that he assumed 62 per cent. of the assets to obtain his jumma; hence his assumed nikasee was Rs. 61,300, which gives Rs. 3-2-9 per acre. The actual rent-rate, however, was a little lower than this; as Mr. Money, differing from Mr. J. Muir, took the amount of waste into account in estimating his jummabundee; we may therefore conclude that the actual rent-rate was about Rs. 3 per acre. The present actual rate is only Rs. 2-13-0 per acre. The general average therefore has fallen by three annas per acre. This is a very different result to that shown by any pergunnah hitherto reported. In all except Serowlee there has been a rise ranging from 8 annas to

See Appendix E.

Re. 1-2-0 per acre. The cause of the fall is not difficult to discover. At last settlement there were 9,696 acres, or one-third of the entire culturable area, lying waste; the total cultivated area being 19,325 acres. In the same villages there are now* 29,808 acres, or 89 per cent., cultivated out of a culturable area of 33,330 acres; in other words, cultivation has extended by 10,483 acres. With so large an area of waste, and an enhanced jumma, there was a general competition for labour to "stub Thornaby Waste." Land was abundant, and sinews were in demand, until the extension of cultivation and the increase of population had reached such a point as to reverse the competition to one for soil instead of sinews. The rise in rents on the old land was thus checked. It was further checked by a stipulation in the old wajib-ool-urz binding the zemindars not to enhance during the term of settlement, and most of them respected this stipulation. I have only succeeded in obtaining the old khusrahs of 29 villages out of the 56 composing the pergunnah; of these there are 7 out of Mr. Money's 13 first class villages, 12 out of 24 of his second class, and 10 out of 17 of his third class. Adopting for the present purpose of comparison Mr. Money's classification of soil, *vis.*—

* This includes the two jageer villages.

1st class domut and mutyar irrigated,
2nd ditto unirrigated and bhoor irrigated,
3rd ditto dry bhoor,

the results are as follow in acres,—

	1st class.	2nd class.	3rd class.	Total.
At present measurement, ...	1,913	4,949	9,723	16,585
At last settlement, ...	968	4,395	4,925	10,288

We see then that of the total increase in these villages of 6,297 acres, 4,798 acres, or 76½ per cent., is in the worst land—dry bhoor. The extension of cultivation being almost entirely in the poorest soil, while the natural rise in rents to the full extent in better land has been artificially checked, it is no longer a matter of surprise that the general *average* rent-rate per acre all round has fallen. Rents, however, have not fallen on the old land; with few exceptions they have remained stationary. Classifying these villages exactly as Mr. Money did, and applying his soil rates to the soil areas in each class, we get a total result of Rs. 44,208.

The actual nikasee on the same area, by the recently attested khuteonees, is Rs. 43,646.

If the privileged rates on lands held by Brahmins, Ahbasis, relatives and dependants of the zemindars, and others, be eliminated, the actual nikasee would be Rs. 3 or 4,000 higher still.

If, then, his rates, being rather above the actual rent-rates of the time, give a result almost identical with the present actual nikasee, I think we may conclude that there has been no fall in rents though the average rent-rate per acre over the pergunnah has fallen.

I expressly defend myself from political economists by stating that I allow that the rents on the old lands ought to have risen largely, but as yet there are no hulkabundee schools, and the Thakoor zemindars and Brahmin cultivators have not yet studied Ricardo and Mill. I can only take facts as they are, and leave to others the consideration of what ought to have taken place, but didn't.

8. The initial jumma of last settlement was Rs. 38,004; the expiring jumma is Rs. 37,858-8-0.

The variations are shown as follows :—

			Rs.	a.	p.
Increase by resumption of mâafees, ...	...		779	8	0
Summary settlement for alluvion, ...	...		27	0	0
Rassudee increments of jumma, ...	...		604	0	0
		Rs.	1,410	8	0
Decrease by remission for over-assessment,	Rs. 197				
Ditto for diluvion, ...	„ 40				
Revenue-free grants in reward for mutiny services,	„ 1,319	=	1,556	0	0
Net decrease, ...		Rs.	145	8	0

Half of one village has been sold at auction for balances during the currency of the settlement; 5¼ villages have been farmed, of which one was farmed twice, and in one (Burser) a reduction of jumma to the amount of Rs. 197 was allowed. Of the farmed villages three belonged to the same owners, and the balances were caused, not by severity of assessment, as the jummas were moderate, but by quarrels among the Thakoor sharers. The amount of transfers of proprietary right is given in the annexed table:—

	Biswas.	Biswansees.	Cutch.	Acres.	Jumma.				Price.				Average per acre.		
					Rs.	a.	p.		Rs.	a.	p.		Rs.	a.	p.
Sales, ...	96	6	7¾	2,310	2,755	7	3		23,202	0	0		10	0	8
Mortgages, ...	117	5	3½	5,971	6,629	14	2		49,770	0	0		8	5	1
Auctions by decrees of Court.	175	...	15¾	5,401	5,708	1	8		39,161	5	9		7	4	0

The average sale price per acre is but little lower than in the much superior pergunnah of Meergunge, where it was Rs. 10-10-8 per acre; while the averages on mortgages and auctions are both higher in Serowlee.

From this, knowing that Meergunge was not over-assessed, and that it is a more productive pergunnah than Serowlee, I should argue that the assessment of the latter was a fair one also. Since 1848 the jumma has been collected with regularity, though, no doubt, at its first introduction it pressed heavily. Mr. Money divided the villages composing the pergunnah into three classes, on which he fixed the following rates :—

Name of soil.	1st class.			2nd class.			3rd class.		
	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.
Chunchur assumed to be cultivated, ...	4	3	8	3	5	2	2	8	0
Suwaee and mutyar irrigated, ...	6	0	0	4	13	6	4	0	0
Ditto ditto not irrigated, and bhoor irrigated, ...	4	0	0	3	3	8	2	10	9
Bhoor not irrigated, ...	2	0	0	1	9	10	1	5	4

His classification I cannot think a correct one. Some of his 3rd class villages are fully equal to some of his 1st class. There are but two natural classes, *viz.*, first, the five khadir villages, all of which were in Mr. Money's 1st class; and, secondly, the remainder of the pergunnah. In these latter villages the 1st class bhoor of one is precisely similar to the 1st class bhoor of another. The domut of one is naturally no better or worse than the domut of the rest. The only differences are casual, such as the amount of labour and manure bestowed, the caste of the cultivators, the number of cultivators at privileged rates, and so on. Mr. Money, from his report, seems to have investigated the average rate per acre paid on each village; then to have sorted out the villages, putting all paying from Rs. 2 to Rs. 2-12-10 all round per acre into his 3rd

class, those paying from Rs. 3 to Rs. 3-12-10 in his 2nd, and those from Rs. 4 to Rs. 6 in his 1st. He then distributed the rents on the soils in the khusrah as above.

Here again, I think his distribution was faulty. Wet mutyar in this pergunnah is not as productive, nor does it pay as high rents as irrigated domut. There is, too, a wide difference in the bhoor—so wide that I have found it absolutely necessary to divide it into two classes. My 1st class bhoor is level, my 2nd class is irregular and sloping sand, which cannot, as a rule, be irrigated, as it so quickly absorbs the water. The one grows rubbee and khureef alternately; the other grows khureef only, with very rare exceptions. In the one rents run from Rs. 2-6 to Rs. 3-10 per acre; in the other from Re. 1-6 to Rs. 2, rarely higher than the latter.

9. I have worked out rates here as in other pergunnahs, and I propose to base my assessment on the following rent-rates per acre:—

		Wet.	*Dry.*
Circle I., ...	Domut, ...	Rs. 4 12	Rs. 3 10
	Mutyar, ...	„ 4 0	„ 3 0
	Bhoor, 1st class, ...	„ 3 8	„ 2 8
	ditto, 2nd class, ...	„ 3 0	„ 1 12
Circle II. ...	Domut, ...	„ 5 10	
	Mutyar, ...	„ 4 0	
	Bhoor, ...	„ 3 4	

The latter contain five khadir villages only. What little upland there is is very fine and all irrigable from wells, if requisite. The khadir requires no irrigation, as water is within from six to eight feet of the surface. It remains to show the results given by these rates. The soils of the cultivated area in these two circles are as follow, in acres:—

	Domut.		*Mutyar.*		*Bhoor 1st.*		*Bhoor 2nd.*	
	Wet.	Dry.	Wet.	Dry.	Wet.	Dry.	Wet.	Dry.
1st or bangur circle, ...	2,892	6,657	567	1,194	821	7,898	212	6,376
2nd or khadir circle, ...	379	919	9	83	42	447	...	...

In the 1st circle, taking only one class of bhoor—*i. e.*, amalgamating 1st and 2nd class bhoor—the rates fall at Rs. 3-6-4 on wet and Rs. 2-2-7 on dry bhoor. I note this as it may be useful for comparison with other pergunnahs where the distinction has not been drawn.

In the 1st circle the rates give a jummabundee of Rs. 78,118. From the table in appendix it will be seen that 22,598 acres are cultivated by tenants at an aggregate rent of Rs. 62,201, which gives an average of Rs. 2-12-0 per acre. This rate, applied to the cultivated area to eliminate seer, gives a total of Rs. 78,350, or very close to my jummabundee by rates. In this circle I have taken the actual rents as the basis of my assessment, without calculating on any large prospective general enhancement. I doubt much whether the bhoor, which occupies nearly 54 per cent. of the area, can bear any increase to the present rates; and of the better soils a considerable proportion is cultivated by Thakoors, Brahmins and Ahbasis, who have always held at low rates, and will probably continue to do so. In a bhoor circle, with but little available waste, and only 12 per cent. of irrigation, one cannot be too careful and moderate in assessment. Some allowance must be made for bad seasons; and 55 per cent. of the gross assets, besides putwarees' fees, income-tax, lumberdars' cess, cost of management and collections, chowpal expenses, &c., do not leave much margin where there is no waste in reserve. Some enhancements will take place certainly on the better soils; but I

have considered it wiser and safer, in so poor a circle, to leave them out of account, as a margin to cover losses on bad seasons. This is fully in accordance with the instructions laid down in the Lieutenant-Governor's Minute of the 6th June, 1868.

In the 2nd circle my rates give a jummabundee of Rs. 9,258. The ryottee average rate by the khuteonees is Rs. 3-10-9 per acre, which on the cultivated area only gives Rs. 6,900. Here the land is exceedingly good, and I distrust the khuteonees. Mr. Money's average rate at last settlement was Rs. 4-3-8 on the circle, though it contained eight other inferior villages. His soil-rates were Rs. 6, 4, and 2 per acre. There are numerous cultivators holding at exceedingly low rates, which will undoubtedly be enhanced as soon as the jummas are out, though not to the full village rates for non-privileged assamees, which are already somewhat higher than the average rates I have proposed. When I was in Kusbeh Serowlee, a number of cultivators put in a petition to me to the effect that the zemindars, on account of the settlement, would not allow them to break up the domut waste, of which there was a considerable amount. They offered to take it on lease at from 12 annas to 1 Re. per kutcha beegah, and find security for the rent. This, I think, is conclusive evidence that my estimate is not too high as an average for privileged and non-privileged together. Again, in the neighbouring khadir villages of Aonla, the cultivators have eagerly accepted these rates in commutation suits for ordinary crops; garden cultivation, of course, rating higher. Finally, these rates are already in force in Goorganwan and Sheopooree, large neighbouring villages of Aonla, of exactly similar character, with similar castes of cultivators.

10. The resultant jummabundee on the cultivated area of the pergunnah, by my rates, is Rs. 87,376, or roughly, Rs. 87,300, which gives, at 55 per cent., a jumma of Rs. 48,015. The following table shows the incidence of the demand of last settlement on the survey areas, of the time of the expiring demand on the present area, and the estimated demand by the proposed rates at 55 per cent. of the assets, including—

	On total area per acre.	On culturable area per acre.	On cultivated area per acre.
	R. a. p.	R. a. p.	R. a. p.
Initial demand of last settlement, ...	1 0 2	1 4 10	1 15 5
Expiring demand, ...	0 15 10	1 3 0	1 5 3
New estimated demand, ...	1 4 2	1 8 0	1 11 0

It will be observed that the new jumma falls at a lower rate on cultivation than the jumma of last settlement; but it must be recollected that the Government share has been reduced, and that at last survey there was a large proportion of waste. As Mr. Money calculated on much of this being broken up, he assessed it prospectively, which, of course, increased the rate on the actually cultivated area. My rates on the total and malgoozaree areas fall respectively 27 and 26½ per cent. higher than the rates of last expiring demand, and 25 and 18 per cent. above the rates of last settlement, notwithstanding the reduction in the Government share. The objection may be urged that as the value of produce has increased by 44 per cent., rents will increase proportionally. I reply that I have to look to existing facts. Where rents are taken in kind, the objection would have some weight, bearing in mind always that the cost of cultivation has increased also; but even then the cultivator can never pay the full equivalent in money of the kind-rates, as the whole risk of bad seasons falls on him, and he rarely has any capital to meet the losses of a bad year. Where there are old established money rates all ratio to the actual produce has been lost; and, under Act X., we can only decree, in enhancement suits, the rates actually paid by assamees of a similar status for similar land in the neighbourhood. In Minute of the Lieutenant-

Governor, of 6th June, 1868, it is especially laid down that Settlement Officers are not to be influenced by any expectation of a future *general* rise in rents. I have been, therefore, now and heretofore, most careful to base my rent-rate on existing facts. I am convinced that rents generally will rise, but it is impossible to judge now of the extent of the enhancement. I have, therefore, been very careful in the case of each village, where I have calculated on enhancement taking place, to consider whether my reasons and proofs are sufficiently strong to convince a Court of Appeal, should the cultivators object to my decision. Hitherto in no one single case has my decision in a rent case been modified or reversed. I presume that the settlement now formed will not be permanent, as the whole pergunnah will be affected by the new Ramgunga Canal or its branches. Taking all the wet and dry, and without reference to soils, the rent of the former is to that of the latter as Rs. 4-5-6 to Rs. 2-10-4 per acre, or, in other words, the wet rent is 64 per cent. higher than the dry. This will give some idea of the vast increase in rents which would in time result from an extension of irrigation, and how great would be the pecuniary loss to Government from a permanent settlement. The tenures as usual in this district, are simple. Of the 70 khalsa mehals, 51 are pure zemindaree; 7 are perfect, and 12 imperfect putteedaree. A general map, showing the classification of villages and circle rates for the whole tehseel of Aonla will accompany the report for pergunnah Aonla.

APPENDIX A.

Produce or Jinswar Statement of Pergunnah Serowlee, Tehseel Aonla, Zillah Bareilly.

Circles.	Total present area in acres.	Minhaee area	Culturable waste	Baghs.	New fallow.	Cultivated area in acres.	Khurreef Crops. Sugar-cane	Pandruh.	Mukka.	Cotton	Vegetables.	Sunn.	Indigo	Rice.	Churrie and Jowar,	Bajra.	Mote.	Moong	Mash.	Kodon	Shamakh.	Urhur.	Lahee	Total Khurreef
I., ...	34,101	4,760	1,952	630	147	26,612	500	362	107	1,483	161	20	17	1,423	1,699	9,820	294	115	730	...	15	4	10	16,760
				In	parts of	100	1·88	1·36	0·40	5·57	0·60	0·08	0·07	5·35	6·38	36·90	1·10	0·43	2·75	...	0·06	0·01	0·04	62·98
II., ...	3,990	1,411	516	120	64	1,879	138	99	15	148	11	...	...	148	110	158	12	...	129	1	2	...	2	973
						100	7·34	5·27	0·80	7·88	0·58	...	...	7·88	5·85	8·42	0·63	...	6·86	0·05	0·10	...	0·01	51·67
Total, ...	38,091	6,171	2,468	750	211	28,491	638	461	122	1,631	172	20	17	1,571	1,809	9,978	306	115	859	1	17	4	12	17,733
				In	parts of	100	2·24	1·62	0·42	5·72	0·62	0·07	0·06	5·51	6·35	35·02	1·08	0·40	3·03	...	0·06	0·01	0·04	62·25

Circles.	Rubbee Crops. Wheat.	Melons.	Kussoom.	Barley.	Gojye.	Bijhra.	Gram.	Mussoor.	Linseed.	Sirson.	Total Rubbee Crops.
I., ...	7,764	22	3	659	214	92	1,080	7	7	4	9,852
	29·17	0·07	0·01	2·48	0·80	0·35	4·07	0·03	0·03	0·01	37·02
II., ...	705	15	2	60	13	29	78	4	...	...	906
	37·63	0·80	0·11	3·19	0·69	1·54	4·15	0·22	...	...	48·23
Total, ...	8,469	37	5	719	227	121	1,158	11	7	4	10,758
	29·73	0·12	0·02	2·52	0·80	0·42	4·06	0·04	0·03	0·01	37·75

Dofuslee Crops. Crops.	Circles. First.	Second.	Total.
Kacheana, ...	161	11	172
Wheat, ...	333	78	411
Melons, ...	1	3	4
Barley, ...	221	16	237
Gojye, ...	32	6	38
Bijhra, ...	52	...	52
Gram, ...	447	55	502
Mussoor, ...	1	3	4
Linseed, ...	67	1	68
Doan, ...	1	1	2
Total, ...	1,316	174	1,490

APPENDIX B.

Prices Current in Pergunnah Serowlee, Tehseel Aonla.

Crops.	1246 F.S.	1247.	1248.	1249.	1250.	1251.	1252.	1253.	1254.	1255.	1256.	1257.	1258.	1259.	1260.	1261.
	M. S.	M. S.	M. S.	M. S.	M. S.	M. S.	M. S.	M. S.	M. S.	M. S.	M. S.	M. S.	M. S.	M. S.	M. S.	M. S.
Bijhra, ...	1 0	0 30	0 30	0 35	0 28	1 0	0 30	0 35	0 30	0 32	0 22	0 36	0 30	1 10	1 0	1 0
Sathee, ...	1 5	1 0	0 37	1 5	0 35	0 35	1 0	1 5	1 0	0 38	0 35	1 0	0 35	1 10	1 10	1 0
Mash, ...	0 30	0 25	0 25	0 30	0 20	0 35	0 25	0 30	0 27	0 28	0 20	0 30	0 25	1 0	0 35	0 35
Moong, ...	0 32	0 28	0 28	0 32	0 22	0 37½	0 28	0 32	0 30	0 30	0 22	0 32	0 27	1 5	0 37½	0 37
Mote, ...	0 34	0 28	0 28	0 32	0 21	0 35	0 28	0 35	0 32	0 30	0 24	0 34	0 26	1 0	1 0	0 35
Mukka, ...	1 10	1 5	0 37½	1 5	0 35	1 0	1 5	1 5	1 0	1 0	0 35	1 0	0 35	1 0	1 10	1 0
Uncleaned cotton or kupas, ...	0 15	0 12	0 12	0 14	0 13	0 12	0 14	0 15	0 12	0 15	0 14	0 12	0 12	0 14	0 12	0 14
Wheat, ...	0 30	0 25	0 35	0 28	0 22	0 30	0 20	0 25	0 25	0 27	0 20	0 20	0 25	1 0	0 25	0 25
Barley, ...	1 0	0 35	1 5	0 35	0 30	0 35	0 25	0 32	0 30	0 32	0 25	0 25	0 30	1 20	0 30	0 30
Gram, ...	0 35	0 28	1 0	0 29	0 24	0 32	0 22	0 27	0 27	0 30	0 22½	0 22	0 27	1 5	0 27	0 28
Mussoor, ...	1 5	0 32	1 0	0 32	0 30	0 34	0 25	0 30	0 32	0 32	0 25	0 30	0 30	1 10	0 32	0 31

Crops.	1262.	1263.	1264.	1265.	1266.	1267.	1268.	1269.	1270.	1271.	1272.	1273.	1274.	1275 F.S.	Average of 10 years, 1266-1275.	Average of 30 years.
	M. S.	M. S.	M. S.	M. S.	M. S.	M. S.	M. S.	M. S.	M. S.	M. S.	M. S.	M. S.	M. S.	M. S.	S. Ch.	S. Ch
Bijhra, ...	1 0	1 5	1 0	1 10	0 35	0 30	0 25	1 0	0 30	0 20	0 19	0 25	0 25	0 20	26 14½	33 5¼
Sathee, ...	1 0	1 2½	0 37½	1 15	1 0	1 0	0 25	1 5	1 0	0 25	0 25	0 30	0 30	0 25	32 8	38 5¼
Mash, ...	0 30	1 0	0 37½	1 5	0 30	0 25	0 18	0 35	0 25	0 18	0 17	0 22	0 22	0 18	28 0	29 6¾
Moong, ...	0 35	1 2½	1 0	1 10	0 32	0 30	0 22	1 0	0 24	0 20	0 19	0 23	0 23	0 19	25 3¼	30 10½
Mote, ...	0 35	1 2½	0 35	1 10	0 32	0 28	0 20	0 37½	0 25	0 20	0 19	0 22	0 22	0 17	24 11¼	30 5¾
Mukka, ...	0 37½	1 0	0 37	1 10	1 0	1 0	0 25	1 5	1 0	0 25	0 25	0 30	0 30	0 25	32 8	38 5½
Uncleaned cotton, or kupas, ...	0 12	0 10	0 14	0 15	0 15	0 14	0 12	0 11	0 10	0 12	0 8	0 7½	0 7	0 7	10 5½	12 3½
Wheat, ...	0 22	0 30	0 30	1 5	0 30	0 32	0 16	0 32	0 32	0 17	0 20	0 22	0 22	0 17	24 0	26 5
Barley, ...	0 28	0 34	0 35	1 30	1 0	1 0	0 20	1 0	1 0	0 25	0 25	0 25	0 30	0 22	30 11¼	33 12
Gram, ...	0 25	0 32	0 32	1 30	0 35	0 35	0 18	0 35	0 35	0 22	0 22	0 23	0 25	0 18	26 12¾	29 12
Massoor, ...	0 30	0 35	0 34	1 30	1 0	1 0	0 20	1 0	1 0	0 25	0 24	0 25	0 28	0 22	30 6½	33 6¾

APPENDIX C.

Census Statement of Pergunnah Serowlee, Tehseel Aonla.

HINDOOS.

Agricultural.						Non-agricultural.					
Males.			*Females.*			*Males.*			*Females.*		
Adult.	Minor.	Total.	Adult.	Minor.	Total.	Adult.	Minor.	Total.	Adult.	Minor.	Total.
6,177	3,460	9,637	5,415	3,185	8,600	2,460	1,356	3,816	2,267	1,270	3,537

MAHOMEDANS AND OTHERS.

Agricultural.						Non-agricultural.					
Males.			*Females.*			*Males.*			*Females.*		
Adult.	Minor.	Total.	Adult.	Minor.	Total.	Adult.	Minor.	Total.	Adult.	Minor.	Total.
1,084	557	1,641	985	603	1,588	1,133	661	1,794	1,091	550	1,641

TOTAL.								Total.	Number of persons to each square British statute mile of 640 acres each.
Adult.	Adult Males.	Adult Females.	Children.	Boys.	Girls.	Males.	Females.		
20,612	10,854	9,758	11,642	6,034	5,608	16,888	15,366	32,254	564

Total agricultural adult males = 7,261 ; cultivated area 28,491 ; which gives 3·9 acres per male adult.

APPENDIX D.

Statement showing the Distribution of the Cultivated Area among the several Castes in Pergunnah Serowlee, Tehseel Aonla.

Number.	Castes.	*Chhuppurbund Assamees cultivating in their own villages.*				*Cultivating as Paheer in other villages.*				Total.			
		Assamees.	Holdings.	Land in pucka beegahs.		Assamees.	Holdings.	Land in pucka beegahs.		Assamees.	Holdings.	Land in pucka beegahs.	
1	Kisans, ...	958	803	5,737	4	504	454	2,526	2	1,462	1,257	8,263	6
2	Aheers, ...	647	546	4,761	..	113	110	721	13	760	656	5,482	13
3	Chumars, ...	603	501	3,500	13	146	128	532	1	749	629	4,032	14
4	Morsos, ...	457	455	1,933	17	71	54	278	10	528	509	2,212	7
5	Thakoors, ...	427	347	3,265	9	177	132	868	10	604	479	4,133	19
6	Brahmins, ...	353	339	2,557	15	305	254	1,422	7	658	593	3,980	2
7	Ahbasis, ...	304	304	1,989	3	126	109	992	15	430	413	2,981	18
8	Pathans, ...	301	268	1,920	7	194	170	1,103	15	495	438	3,024	2
9	Guduryas, ...	230	204	1,660	12	7	7	27	1	237	211	1,687	13
10	Pandays, ...	228	191	1,858	11	174	134	876	7	402	325	2,734	18
11	Sheikhs, ...	189	166	631	1	205	182	816	1	394	348	1,447	2
12	Sweepers, ...	125	124	293	2	22	22	51	12	147	146	344	14
13	Kahars, ...	117	98	607	14	16	15	60	15	133	113	668	9
14	Moghuls, ...	111	91	760	19	57	46	314	19	168	137	1,075	18
15	Lohars, ...	75	67	422	16	24	23	89	1	99	90	511	17
16	Buneeas, ...	71	58	352	13	23	15	156	5	94	73	508	18
17	Dhobees, ...	70	69	296	13	13	13	50	4	83	82	346	17
18	Carpenters, ...	69	52	458	14	21	20	89	7	90	72	548	1

APPENDIX D.

Statement showing the Distribution of the Cultivated Area among the several Castes in Pergunnah Serowlee, Tehseel Aonla—(concluded).

Number.	Castes.	Chhuppurbund Assamees cultivating in their own villages.				Cultivating as Pahees in other villages.				Total.			
		Assamees.	Holdings.	Land in pucka beegahs.		Assamees.	Holdings.	Land in pucka beegahs.		Assamees.	Holdings.	Land in pucka beegahs.	
19	Barbers, ...	67	52	133	11	22	18	82	15	89	70	216	6
20	Kayeths, ...	60	52	488	13	46	40	52	3	106	92	540	16
21	Faqeers, ...	49	45	250	2	39	20	67	10	88	65	317	12
22	Mewatees, ...	48	47	633	9	11	11	121	12	59	58	755	1
23	Goshaeens, ...	29	24	142	3	9	8	19	17	38	32	162	...
24	Syuds, ...	24	14	68	0	11	9	27	3	35	23	90	13
25	Weavers, ...	19	17	81	4	4	4	16	17	23	21	98	1
26	Khuteeks, ...	19	19	70	4	...	...	...	...	19	19	70	14
27	Byragees, ...	18	18	47	10	1	1	4	9	19	19	51	19
28	Potters, ...	18	17	17	17	2	2	2	16	20	19	20	13
29	Dhooneeas, ...	17	14	45	9	3	3	8	18	20	17	54	7
30	Oil-men, ...	31	28	634	9	7	6	35	17	38	34	670	6
31	Bhoorjees, ...	15	15	43	17	1	1	...	10	16	16	44	7
32	Puseeas, ...	15	12	117	6	...	...	...	..	15	12	117	6
33	Tailors, ...	14	13	67	17	4	4	3	8	18	17	71	5
34	Goojurs, ..	13	9	46	18	5	5	15	7	18	14	62	5
35	Dosadhs, ...	11	11	29	19	4	4	6	14	15	15	36	13
36	Flower-sellers,	9	9	12	15	1	1	1	4	10	10	13	19
37	Bhishtees, ...	6	6	26	14	1	1	1	3	7	7	27	17
38	Sonars, ...	6	6	45	19	1	1	...	17	7	7	46	16
39	Beldars, ...	5	5	9	14	...	...	...	...	5	5	9	14
40	Kerees, ...	5	5	12	18	5	5	15	15	10	10	28	13
41	Dulehras, ...	4	4	17	10	...	...	...	...	4	4	17	10
42	Mahajuns, ...	3	3	15	18	4	2	15	11	7	5	31	9
43	Koormees, ...	3	3	31	11	...	...	...	...	3	3	31	11
44	Munhars, ...	3	3	21	15	...	...	...	...	3	3	21	15
45	Tumolees, ...	2	2	1	9	...	...	...	...	2	2	1	9
46	Bards, ...	2	2	4	11	3	3	9	5	5	5	13	16
47	Khuttrees, ...	1	1	1	5	...	...	...	...	1	1	1	5
48	Jats, ...	1	1	3	18	...	...	...	...	1	1	3	18
49	Lodhas, ...	1	1	3	13	...	...	...	...	1	1	3	13
50	Butchers, ...	1	1	18	7	...	...	...	...	1	1	18	7
51	Meerasees, ...	1	1	1	4	1	1	1	7	2	2	2	11
52	Dancing girls, ...	1	1	2	6	...	...	...	...	1	1	2	6
53	Acharujs, ...	...	...	...	..	3	3	8	13	3	3	8	13
54	Chowbay, ...	...	...	...	...	1	1	4	7	1	1	4	7
55	Guddees, ...	...	...	...	...	3	3	23	19	3	3	23	19
56	Toorks, ...	...	...	...	..	1	1	4	18	1	1	4	18
57	Dyers, ..	...	...	...	...	1	1	3	4	1	1	3	4
58	Bhuteearas, ...	...	...	...	...	5	5	5	19	5	5	5	19
59	Mirdhas, ...	...	...	...	...	1	1	...	17	1	1	...	17
60	Putwas, ...	...	...	...	...	1	1	1	13	1	1	1	13
	Total, ...	5,856	5,144	36,153	18	2,399	2,054	11,541	13	8,255	7,198	47,695	11

Average per holding, 6·66 p. = 4·1 acres.
= 26·4 b. c.

Ditto Assamee, 5·8 = 3·6 acres.
= 23·2 b. c.

APPENDIX E.

Statement showing Distribution of the Cultivated Area in each Circle of Pergunnah Serowlee, Tehseel Aonla.

Circles.	Seer and khud-kasht of proprietors in acres.	Cultivated by Assamees with occupancy rights in acres.			Cultivated by Tenants-at-will in acres.			Total.	
		Land paying rents in kind.	Land paying money rents.	Rents.	Land paying rents in kind.	Land paying money rents.	Rents.	Zemindaree rent-free lands in acres.	Cultivated area in acres.
				Rs. a. p.			Rs. a. p		
Total Circle I, Serowlee, ..	2,704	445	16,221	42,798 15 0	375	6,376	19,402 3 0	491	26,612
II., ...	300	3	969	3,312 7 0	17	549	2,258 11 9	41	1,879
Total of the Pergunnah, ...	3,004	448	17,190	46,111 6 0	392	6,925	21,660 14 9	532	28,491

Alphabetical and Chukwar List of Villages in Pergunnah Furreedpore.

Number.	Names of Villages.
	Turaien Circle.
1	Bhugotipore, ilaka Mohunpore.
2	Bukusha.
3	Bundea khoord.
4	Choonaiya puttee Khulpore.
5	Deeppore.
6	Dhimunpoorah.
7	Ghousgunge Turaien.
8	Gobindpore Konkherah.
9	Gopalpore.
10	Gujaingpore.
11	Hirdeypore.
12	Hurhurpore, ilaka Nugurea.
13	Jhubra puttee.
14	Juroul.
15	Kopoorpoor Mohaiyodeennuggur.
16	Khulpore.
17	Manpore Hirdepore.
18	Do., ilaka Khulpore.
19	Do., Tilok Singh.
20	Nugurea Nouberamud.
21	Do., Kullan Hurchund.
22	Do. do., Neelami.
23	Do. do., Rampershad Singh.
24	Pahladpore.
25	Puttee Turaien.
26	Qadirgunge, muhal Kullean Singh.
27	Qadirgunge, 2nd muhal.
28	Raipore Huns.
29	Raipore Lakemun.
30	Roorea.
31	Sipahya.
32	Sheorajpore Munjha.
33	Sumda, ilaka Nugurea.
34	Sydpore, Do. do.
35	Tirha.
36	Toomurea.
37	Tujpoorah Numudea.
	Adhkuchha Circle.
38	Atouria, ilaka Sheopoori.
39	Behra, puttee Soorkh.
40	Do., do. Subz.
41	Do., do. Zurd.
42	Bhugwanpore Balrampore.
43	Bulleea.
44	Chittea Chuttunpore.
45	Chumur Sookutea.
46	Dhindowli.
47	Dhundurwa, muhal 15 bis.
48	Do., do. 5 do.
49	Khimmoonugla.
50	Khoord.
51	Khuni Nawadah.
52	Khunpoorah.
53	Khurugpore, ilaka Raipore.
54	Kirpea.
55	Kulleanpore Nuwudea.
56	Mohunpore, ilaka Taripore.
57	Taripore.
58	Sindhoa Nukkigunge.
59	Sookutea Singhabari oorf Ahir Sookutea.
	Domut-Mutyar Circle.
60	Adeenpore.
61	Ahmudpore.
62	Ahrola.
63	Amileea.
64	Beharipore.
65	Bhanpore.
66	Bharowa.
67	Bhawunpore Neamutoollahpore.
68	Bhojepore puttee Kuthura.
69	Do., do. Nore.
70	Bhugwanpore, ilaka Jehn.
71	Bosaha.
72	Brahimpore Mahomed Hossein.
73	Bunjurea, ilaka Guynera.
74	Burnhaee.
75	Burwa Hoseinpore.
76	Chundakha Tondi.
77	Dhounrerah, muhal Mr. Berkeley.
78	Do., ditto Lekha Singh.
79	Dhuknee, muhal Gopal Pershad.
80	Dhukni, muhal Gunesh Kooer.
81	Dundea Het Ram.

Number.	Names of Villages.
	Domut Mutyar Circle.—(concluded.)
82	Dhunee Dhur Nugla.
83	Fyznugur, muhal Shimali.
84	Do., do. Janoobi.
85	Girdhurpoor Nuvudeea.
86	Goolabnuggur, puttee Buldeo Singh.
87	Do., do. Chowdree Noubut Ram.
88	Goolurea Hazari Lall.
89	Do. Jagut.
90	Gujnera.
91	Gunesh Khera.
92	Hajipore Khujooria.
93	Hurdooa.
94	Hurnathpore.
95	Jadounpore.
96	Keshampore, Puttee Bumbaie.
97	Khujooria Sumput.
98	Do. Jouner.
99	Khummuria Angudpore.
100	Khund Seera.
101	Khurdaba, ilaka Gujnera.
102	Kooan Dandah.
103	Kooan Rampore.
104	Koormoosi.
105	Koormoorah.
106	Kowa Khera.
107	Kukra Kullan.
108	Kuleanpore, ilaka Inayetpore.
109	Kupoorpore Mulhpore, muhal Zurd.
110	Do. do., muhal Lakhi.
111	Kureina Doulutpore.
112	Kurnapore.
113	Lodhpore Moondea.
114	Maikpore puttee, ilaka Kapoorpore.
115	Do. do., Kullan.
116	Mehturpore Peetum Rai.
117	Mirzapore.
118	Muheshpore, muhal Ghurhi.
119	Do. Do. Shurqi.
120	Mugrasa.
121	Mulhooa.
122	Mulhpore.
123	Mundourah.
124	Nugee Rampore.
125	Oodeypore, ilaka Gunesh Khera.
126	Oodeypore.
127	Oolehtapore.
128	Oomedpore Bhoota.
129	Pow Nugla.
130	Pundowli.
131	Putna.
132	Raghopore.
133	Rampoorah Purbeen.
134	Rawul Kullan.
135	Do. Khoord.
136	Ritcha, muhal Begum.
137	Do., do. Ranee Mewa Kouer.
138	Roopapore.
139	Roopeeapore.
140	Rusoolpore Bahumpore.
141	Sahjunpore Peetum Rai.
142	Sahora Khoord.
143	Do. Kullan.
144	Shahabazpore.
145	Simra Babur Nugla.
146	Do. Keshopore.
147	Singhaee, puttee Jugut.
148	Do., Kullan.
149	Soonhan, muhal Het Ram.
150	Do., do. Kheali Ram.
151	Sunoura Deh Zubtee.
152	Sunoura Morarpore.
	Bhoor Circle, East.
153	Amirta, muhal Tirwa.
154	Do., do. Furreedpore.
155	Amirtee, Do. Tiswa.
156	Amirtee, puttee Fureedpore.
157	Arjoonpore.
158	Athaeen.
159	Athanah.
160	Athkorea.
161	Anounean.
162	Atoria, puttee Jalalpore.
163	Atoria, puttee Beesulpore.

Alphabetical and Chukwar List of Villages in Pergunnah Fureedpore.—(Contd.)

Number.	Names of Villages.
	Bhoor Circle, East.—(continued.)
164	Bairampore.
165	Bewul Burkutpore.
166	Do. Busuntpore.
167	Do. Doongurpore.
168	Bhaoopore, muhal Crore.
169	Do., do. Furreedpore.
170	Bhitourah.
171	Bhooria.
172	Birahimpore Mundea.
173	Bilhowa.
174	Buseepoorah.
175	Bisurea.
176	Boodhouli.
177	Budra Kasimpore.
178	Bumbia Shunkerpore.
179	Berkherah.
180	Chittea, puttee Fyzoo.
181	Do., do. Jellalpore.
182	Do., Goshaen.
183	Chukerpore.
184	Chundokha Chida oorf Chundokhia.
185	Choonooan, puttee Bewul.
186	Dubborah.
187	Dheerpore.
188	Dhurumpore.
189	Dundeah, puttee Soorkh.
190	Do., muhal Sufed.
191	Do., do. Shitab Rai.
192	Gangipore, muhal Thakooran.
193	Gangipoorah, muhal Zurd.
194	Ghoolloopoorah.
195	Girdhurpore, muhal Madho Singh.
196	Do., do. Jydeo Singh.
197	Goodurpore.
198	Goolurea Mukrundpore.
199	Gungapore, ilaka Dubborah.
200	Hamoonpoorah.
201	Hassonnuggur.
202	Iradutnuggur.
203	Jotepore.
204	Jamoonean.
205	Jawahurgunge.
206	Khairshadi.
207	Kyrooa.
208	Keerutpore Dhuree.
209	Khanpore.
210	Khurdaba, ilaka Kooandadah.
211	Khurugpore, ilaka Khuteli.
212	Khuteli, muhal Crore.
213	Kukra, muhal Tissowa.
214	Do., Khoord, puttee Fureedpore.
215	Kulleanpore, ilaka Bilhowa.
216	Kunga, ilaka Pipurthura.
217	Do., do. Chukurpore.
218	Lodhipore.
219	Meena Shurfapore, muhal Soorkha.
220	Do., do. Zungari.
221	Do., do. Zurd.
222	Mirzapore Khuteli.
223	Mahobea, puttee Crore.
224	Do., do. Jellalpore.
225	Moondea Bhugwuntpore.
226	Mahmoodpore, puttee Beesulpore.
227	Do., muhal Crore.
228	Do., puttee Jellalpore.
229	Mukrundpore, ilaka Boodholi.
230	Munkapore.
231	Nundanguni, muhal Dal Singh.
232	Do., do. Intizam-ool-nissa.
233	Do., do. Tirbhoun Singh.
234	Nugurea Raghonath.
235	Do. Lalla.
236	Do., muhal Chub Lall.
237	Do., do. Munrakhun.
238	Nugurea, puttee Bilhowa.
239	Do., do. Crore.
240	Nunudea, ilaka Saholia Maholia.
241	Oodhunpore, ilaka Boodholi.
242	Oodeypore Bheekumpore.
243	Pipurthura.
244	Reonan Dhimra.
245	Do. Kulan.
	Bhoor Circle, East.—(concluded.)
246	Reonan Puttee.
247	Do. Ghat.
248	Rampooria, ilaka Boodholi.
249	Rampoorah Khummunpore.
250	Shahpore.
251	Sheikhapore.
252	Simra, ilaka Nugurea.
253	Sookuttea, ilaka Pipurthura.
254	Soonean, three puttees.
255	Soonean, puttee Tissowa.
256	Do., do. Boodholi.
257	Do., do. Balmakund.
258	Do. Khumurea, puttee Beesulpore.
259	Suleympore, puttee Tissowa.
260	Do., do. Jellalpore.
261	Sahobea Maholea.
262	Sahgunpore, puttee Kuttra.
263	Do., muzrah Budowli.
	Bhoor Circle, West.
264	Ahirgunge.
265	Akberpore.
266	Amrekh Khas.
267	Amrekh, puttee Dhundurooa.
268	Asokepore, puttee 15 bis.
269	Do., do. 5 do.
270	Amirta, ilaka Sheopoori.
271	Ausur.
272	Bahunpore, muhal 8 bis.
273	Do., do. 12 do.
274	Bakurgunge.
275	Basawunpore.
276	Belpore, puttee Attaoollah.
277	Do, puttee Noubut Ram.
278	Beerpore.
279	Bheekumpore, ilaka Basawunpore.
280	Do., do. Sahora.
281	Bhitarah.
282	Bhiturea.
283	Bhogepore, puttee Asur.
284	Do., do. Ram Nath.
285	Bhugwanpore Phoolwa.
286	Do. Koondun.
287	Bhugoutipore.
288	Bhugwuntapore.
289	Bhudpoorah.
290	Bhurtapore.
291	Bhurtpore.
292	Birahimpore Koondun.
293	Biknapore.
294	Bikoo Nugla.
295	Bilehra, puttee Mohun Singh.
296	Do., puttee Mr. Berkeley.
297	Budullea, puttee 15 bis.
298	Do., do. 5 do.
299	Buhadurpore Crore.
300	Do. Tissowa.
301	Bukyniam, three puttees.
302	Do., puttee Jugut.
303	Do., do. Nauturf.
304	Bungurea, ilaka Jehur.
305	Burgawan.
306	Buruhda.
307	Busokhur Mohunpore.
308	Bygoolpore.
309	Chahirpore.
310	Choundhera.
311	Deorunean.
312	Doulutpore with Nawada Bun, puttee Crore.
313	Dotteka.
314	Dugrowlee.
315	Duhlow.
316	Dulpoorah.
317	Dulputpore.
318	Eesapore.
319	Futtehgunge, puttee Walayet Begum.
320	Do., do. Ahmed Beg.
321	Futtehpore.
322	Furrukhpore Majhawa.
323	Do. Nauturf.
324	Gharumpore.
325	Gousgunge Terae.

Alphabetical and Chukwar List of Villages in Pergunnah Fureedpore.—(Concld.)

Number.	Names of Villages.
	Bhoor Circle, West.—(continued.)
326	Gokul Nugurea.
327	Gulhtooa.
328	Gungapore, Rampore, Gopalpore.
329	Heinpore.
330	Hirdeypore Peetumberpore.
331	Do. oorf Undherpoorah.
332	Hurhurpore Hajeepore, muhal Shimali.
333	Do. do., puttee Janoubi.
334	Hurela, puttee Chundun Singh.
335	Do., do. Bheekhum Singh.
336	Hureli Alipore.
337	Hassanpore.
338	Inayutpore Abbepore.
339	Ismaelpore.
340	Jadounpore Gole Nugla.
341	Jehur.
342	Jehee.
343	Jugunean, puttee Tissowa.
344	Do., muhal Jymul Singh.
345	Do., Kullan, muhal Shunkur Sahai.
346	Do., muhal Chotey Khan.
347	Do., do. Bhawani Sahai.
348	Jutowa.
349	Jogether.
350	Kayrota, muhal Lalta Pershad.
351	Do., do. Rughobur Dyal.
352	Keerutpore Purewa.
353	Kesurpore.
354	Khata.
355	Khimpoora.
356	Khugoorea, ilaka Sheopoori.
357	Khummurea, ilaka Jehur.
358	Kishenpore, ilaka Tura.
359	Kishenpore Chowdree.
360	Kishora.
361	Koolyan Oogunpore.
362	Do., ilaka Khumpoorah.
363	Kothla, puttee Furreedpore.
364	Do., do. Jellalpore.
365	Kalee Nugla.
366	Kalipore.
367	Kummunpore, puttee Lalta Pershad.
368	Do., do. Rampoora.
369	Do., do. Mummoo.
370	Do., do. Kheali Ram.
371	Kurunpore Kullan.
372	Kurunpore, ilaka Jehur.
373	Kurunpore do., Shunkurpore.
374	Kurtolee.
375	Khwajeepore.
376	Ladholi Kullan.
377	Do. Khoord.
378	Do. puttee Basawunpore.
379	Latifpore.
380	Laungpore.
381	Lukhunpore.
382	Lukhourah.
383	Maime.
384	Magee Nugla.
385	Mithunpore Teja Singh.
386	Mewa, puttee Tura.
387	Mewa, do. Nugurea.
388	Mirjanpore.
389	Majhowa Muzra Bibbia.
390	Makoond Nugla.
391	Mohunpore, ilaka Raepore.
392	Mugunpore.
393	Mujhooa Het Ram.
394	Muksoodunpore.
395	Mulookpore, muhal 15 bis.
396	Do., do. 5 do.
397	Munmutapore.
398	Musutipore.
399	Muteha Nugla.
400	Nawada Bun, muhal Furreedpore.
401	Nawada Bilseri.

Number.	Names of Villages.
	Bhoor Circle, West.—(concluded.)
402	Nawada Asakh.
403	Nuwudea Deb Zubtee.
404	Nakasooa.
405	Nuwadea Koonjul.
406	Do. Tirhohun Singh.
407	Do. ilaka Bhudpoorah.
408	Nuwurea.
409	Nugla Joshee.
410	Nowgawan, puttee Het Ram.
411	Do., Lalta Pershad.
412	Nugurea Bikrum.
413	Nuvulpore puttee.
414	Oochusia Kummunpore.
415	Do. Jhada.
416	Oodhrunpore, ilaka Nugurea.
417	Oogunpore Abbipore.
418	Ourungabad.
419	Pipra puttee.
420	Pirtheepore.
421	Puchoumee Oogunpore.
422	Do. Wahidpore.
423	Do. Khuleelpore.
424	Pudaruthpore.
425	Pudhera.
426	Pudhera Puttee.
427	Puhlow, puttee Jehur.
428	Puhlow, muhal Augur Singh.
429	Purbuta.
430	Qusbah Surai.
431	Rugnapore.
432	Rujan Puruspore, muhal Brahmin.
433	Do. do., do. Peetum Rae.
434	Rampoorah Ruttun.
435	Do. Sooltanpore.
436	Do., ilaka Lakhora.
437	Do., ilaka Tissowa.
438	Russooeyan, puttee 12½ bis.
439	Do., do. 7½ do.
440	Rypoorah.
441	Shahpoorah, puttee 15 bis.
442	Do., do. 5 do.
443	Sheopooree.
444	Shunkerpore.
445	Simra Hurchund Singh.
446	Do., ilaka Raipore Bullia.
447	Sissya, ilaka Bhudpoorah.
448	Do. Mugunpore.
449	Sitbrapore.
450	Sookhdeopore.
451	Subdulpore, puttee Jehur.
452	Do., do. Noubut Rai.
453	Sahjunpore.
454	Serai Noubut Rai.
455	Serai, puttee Soojan Singh.
456	Surkura.
457	Sarendah.
458	Suchoumee.
459	Saidehee.
460	Suttargunge.
461	Sydapore, ilaka Boodholi.
462	Do., puttee Raja Ram.
463	Sydpore Ghasee.
464	Tahirpore.
465	Tandah Secunderpore.
466	Do. Nautruf.
467	Tarao Puttee.
468	Tatarpore Crore.
469	Do. Furreedpore.
470	Tighra, puttee Bhowunpore.
471	Do., do. Towluk Singh.
472	Tissowa.
473	Tukhtpore, muhal Soorkh.
474	Do., do. Zurd.
475	Tura, puttee oorf Qutubpore.
476	Tura Khas.
477	Tikoo Nugla.

Alphabetical and Chuckwar List of Pergunnah Suneha, Tuhseel Aonla:—Khadir Circle, Bangur Circle I., Bangur Circle II.

Number.	Names of Villages.
	Khadir Circle.
1	Agdandi, muhal Khunjun Singh.
2	Ditto, ditto Bhola Nath.
3	Ditto, ditto Jowala Pershad.
4	Aynchore Jhoona Nuggur.
5	Beebani.
6	Bhojpore Rusoolpore.
7	Bullae Bhugwuntpore, muhal Than Singh.
8	Ditto, ditto Soorkh.
9	Ditto, ditto Subz.
10	Chandpore, Yacoobpore, muhal Lall Singh.
11	Ditto, ditto, Bhola Singh.
12	Choorha Nuwudeea.
13	Daseepore.
14	Dhurpore.
15	Dhukeea.
16	Ghousgunge.
17	Gynee.
18	Kishen Singhpore.
19	Koondurea Fyzoollahpore.
20	Kamalpore, muhal Tekyt Rai.
21	Ditto, ditto Lalta Pershad.
22	Mirzapore.
23	Moosharufpore, muhal Deep Chund.
24	Ditto, ditto Jowala Pershad.
25	Mujnoonpore.
26	Nowgawan.
27	Rahmanpore.
28	Rufeeabad.
29	Shahbazpore, muhal Midan Singh.
30	Ditto, ditto Thakoor Singh.
31	Shibnuggur.
32	Zynpore Qadirabad.
	Bangur Circle I.
33	Abra.
34	Ahmednuggur oorf Bisharutgunge.
35	Alumpore Jafirabad, muhal Soorkh.
36	Ditto, ditto Zurd 8½ bis.
37	Ditto, ditto Sufed.
38	Ditto, ditto 7½ bis.
39	Antpore.
40	Babiana.
41	Bachhera.
42	Beharipore Jagheer.
43	Behta Buzoorg, muhal Hadiyar Khan.
44	Ditto, ditto Ally Akbar Khan.
45	Ditto, ditto Soorkh.
46	Ditto, ditto Osman Khan.
47	Ditto, ditto Mooltani.
48	Ditto, ditto Jungee Khan.
49	Bheekumpore Raepore.
50	Bhojpore.
51	Champatpore.
52	Deochara.
53	Hashumpore.
54	Hydergunge oorf Aligunge, muhal Sufed.
55	Ditto, ditto Zurd.
56	Ditto, ditto Subz.
57	Ditto, ditto Sindhoria.
58	Jamalpore.
59	Jetpore Shureefpore.
60	Karampore.
61	Khoosroopore.
62	Kinhurpore.
63	Kishenpore Zahidpore, muhal Seeta Ram.
64	Ditto, ditto Seva Ram.
65	Ditto, ditto Kheali Ram.
66	Koondurea Ikhlaspore.
67	Kudounon, muhal 18½ bis.
68	Ditto, ditto Lakhl 1½ bis.
69	Khylun Deh Jagheer.
70	Luchmunpore.
71	Madouna.
72	Maholeea, muhal Bhoop Singh.
73	Ditto, ditto Zalim Singh.
74	Ditto, ditto Asmani.
75	Ditto, ditto Subz.
76	Makrundpore Dharajeet.
77	Mujhgawan.
78	Ditto Milik Bahadoorgunge.
	Bangur Circle I.—(concluded.)
79	Milik Munsa Rampore.
80	Munsa Rampore, muhal Asmani.
81	Ditto, ditto Zalim Singh.
82	Ditto, ditto Koomkurun Singh.
83	Nakatpore.
84	Nougawan.
85	Nuglah.
86	Pemrajpore, puttee Gunesh Singh.
87	Ditto, muhal Chummun Singh.
88	Ditto, ditto Dallun Singh.
89	Pundree.
90	Pura Buha-ood-deenpore, 12½ bis.
91	Ditto, muhal 7½ bis.
92	Rajoopore.
93	Rampore Buzoorg.
94	Sheikhoopore.
95	Shib Nuggur.
96	Sisounan.
97	Sooltanpore.
98	Sydpore Kunnee, puttee Subz.
99	Ditto, muhal Surubsookh (Soorkh).
	Bangur Circle II.
100	Amroula.
101	Antooa.
102	Anunpore.
103	Bakergunge, muhal Nirput Singh.
104	Ditto, ditto Bhugwunt Singh.
105	Bhindourah.
106	Bhumourah.
107	Bulleaweran, muhal Chummun Singh.
108	Ditto, ditto Dallun Singh.
109	Ditto, ditto Gunesh Singh.
110	Chakurpore.
111	Chujree Balkishenpore.
112	Chundpore Mutki.
113	Delaeepore.
114	Dhakourah.
115	Futtehgunge, muhal Goolzaree Mull.
116	Ditto, puttee Nijabut Khan.
117	Godoulee, muhal Khalsa.
118	Rusoolpore, muzrah Godowlee.
119	Choorha, ditto ditto.
120	Hassanpore.
121	Hosseinpore, muhal Gunga Pershad.
122	Ditto, ditto Ally Akbar Khan.
123	Ditto, ditto Hadiyar Khan.
124	Ditto, ditto Nusrutyar Khan.
125	Himmutpore Sahurpore.
126	Huzrutpore.
127	Ismaelpore.
128	Jagmanpore.
129	Jalal Nuggur.
130	Jogether Doorgunpore.
131	Kachhiana.
132	Keonan Soorutpore.
133	Keonan Shadipore, muhal Bhugwunt Singh.
134	Ditto, ditto Shah Mahomed Khan.
135	Ditto, ditto Gobind Pershad.
136	Ditto, ditto Maqruqa.
137	Ditto, ditto Choonnee Lall.
138	Ditto, ditto Mussumat Beebun.
139	Ditto, ditto Asa Ram.
140	Ditto, ditto Kazim Ali Khan.
141	Ditto, ditto Hubeeb Khan.
142	Kherah.
143	Kholee
144	Kirpea Khas.
145	Ditto Arazi.
146	Koondree Khoord.
147	Kosaree.
148	Madourah, puttee Gulzaree Mull.
149	Makrundpore Tara Chund.
150	Mahomedgunge.
151	Mujhara.
152	Mundourah Puttee.
153	Nutoee, muhal Chet Ram.
154	Ditto, ditto Peary Lall.
155	Nisoee.
156	Nouhara Hussunpore.
157	Noorpore Buzoorg.
158	Nugureea.

Alphabetical and Chuckwar List of Pergunnah Suneha, Tuhseel Aonla:—Khadir Circle, Bangur Circle I., Bangur Circle II.—(concluded.)

Number.	Names of Villages.
	Bangur Circle II.—(continued.)
159	Nuwudeea.
160	Nuwudeea Weran.
161	Puchtour.
162	Pahladpore.
163	Pandee.
164	Pukhornee.
165	Pumaree.
166	Rampoorah Khoord.
167	Rooleea.
168	Sadoollahgunge.
169	Sattarnuggur, muhal 15 bis.
170	Ditto, ditto Mussumat Gourtee.
	Bangur Circle II.—(concluded.)
171	Sattarnuggur, muhal Mussumat Moonna.
172	Serohi, muhal Punjab Rai.
173	Ditto, ditto Kullean Rai.
174	Ditto, ditto Afzulnissa.
175	Sheikhoopore oorf Beharipore.
176	Sohasa.
177	Sooteerah.
178	Sureree.
179	Tagaeen Dut Nuggur.
180	Yoosufpore.
181	Zamanpore.

Alphabetical and Chuckwar List of Pergunnah Aonla:—Khadir Circle, Bangur Circles I., II. and III.

Number.	Names of Villages.
	Khadir Circle.
1	Ajaon.
2	Anroodpore.
3	Bhujnaee.
4	Budagaon.
5	Goolureea.
6	Goorgawan.
7	Hajeepore.
8	Jhowa Nugla.
9	Pipureea Ooprala, muhal Moomtazoolnissa.
10	Ditto ditto, do. Allahdad Khan.
11	Rajpore Kulan.
12	Rookhara.
13	Sheopooree Deh, maafee.
	Bangur Circle I.
14	Abadanpore.
15	Alinuggur.
16	Aonla khas.
17	Bare Khera, muhal 18¾ bis.
18	Ditto, ditto 1¼ bis.
19	Beehut, muhal Gholam Ahmed.
20	Ditto, ditto Kunjee Mull.
21	Ditto, ditto Rahim Bux.
22	Beerpoorah.
23	Bahoorah Khera.
24	Bhooreepore, muhal Asmani.
25	Ditto, ditto Zurd.
26	Ditto, ditto Soorkh.
27	Bijynuglah.
28	Choaldhra.
29	Chumpatpore, muhal Sufed.
30	Ditto, ditto Mooltani.
31	Debee, muhal Sufed.
32	Ditto, ditto Zurd.
33	Deokolah, muhal Sufed.
34	Ditto, ditto Subz.
35	Ditto, ditto Zurd.
36	Dhilwari, ditto 12½ bis.
37	Ditto, ditto 7½ bis.
38	Dhurumpore, muhal Chimmun Singh.
39	Ditto, ditto Zalim Singh.
40	Ditto, ditto Buljeet Singh.
41	Ditto, ditto Nirunjun Singh.
42	Ditto, ditto Ruttun Singh.
43	Digoee, muhal 15 bis.
44	Puttee Digoee, muhal Mooltani.
45	Ditto, ditto Soorkh.
46	Durka, ditto Zurd.
47	Ditto, ditto Soorkh.
48	Durabnuggur, ditto Janoobi.
49	Ditto, ditto Jankey Pershad.
50	Ditto, ditto Khandey Rai.
51	Goblee.
	Bangur Circle I.—(continued.)
52	Goojakhera, muhal Sindhoori.
53	Ditto, ditto Sufed.
54	Gotha Khundwa, muhal Choonnee Lall.
55	Ditto, ditto 5 bis.
56	Jangterah, muhal Nullu-ood-dowla Khan.
57	Ditto, ditto Moonshee Madho Singh.
58	Kamthainan.
59	Katounan.
60	Khireea.
61	Khurugpore, muhal Kunhae Lall.
62	Ditto, ditto Kesho Ram.
63	Kutehla.
64	Kishenpore, muhal Khushal Singh.
65	Ditto, ditto Nurput Singh.
66	Ditto, ditto Ram Singh.
67	Ditto, ditto Mohun Singh.
68	Kulleanpore, ditto Lekhraj.
69	Ditto, ditto Hur Lall.
70	Ditto, ditto Mussumat Khema.
71	Kunthree Jaferpore.
72	Khungawan Oorla, muhal Soorkh.
73	Ditto ditto, ditto Zungari.
74	Ditto ditto, ditto Zurd.
75	Ditto ditto, ditto Abi.
76	Kusoomra, muhal Madho Singh.
77	Ditto, ditto Khoorrum Singh.
78	Kutsaree.
79	Lodhipore.
80	Mahmoodpore.
81	Majhowa, muhal Izzut-oon-nissa.
82	Ditto, ditto Altaf Hossein.
83	Majhara Dowlutpore, muhal Zurd.
84	Ditto ditto, ditto Lakhi.
85	Ditto ditto, ditto Sufed.
86	Manpoorah, muhal Sufed.
87	Ditto, ditto Zurd.
88	Meerpore Chetee oorf Phoondunnuggur.
89	Mirzapore, muhal Sindhooree.
90	Ditto, ditto Lakhi.
91	Ditto, ditto Subz.
92	Ditto, ditto Zurd.
93	Moosurha.
94	Mootluqpore.
95	Mouchundpore.
96	Munounah khas.
97	Ditto, muhal Burkhoordarpore.
98	Ditto, ditto Lallpore.
99	Ditto, ditto Shahnoorpore.
100	Nugureea Sethum, muhal Wulayet Ali.
101	Ditto, ditto, Khunjun Singh.
102	Noorpore, muhal Oomrao Singh.
103	Ditto, ditto Lakhi.
104	Ditto, ditto Sufed.
105	Oorla, muhal Duryao Singh.

Alphabetical and Chuckwar List of Pergunnah Aonla:—Khadir Circle, Bangur Circles I., II. and III.—(Concld.)

Number.	Names of Villages.
	Bangur Circle I.—(concluded.)
106	Oorla muhal Muqruqa.
107	Ditto, ditto Goolab Konwer.
108	Ditto, ditto Nishan Singh.
109	Ditto, ditto Mohun Singh.
110	Ditto, ditto Chet Ram.
111	Ditto, ditto Dulgunjun Singh.
112	Ooseitha.
113	Punwureea, muhal Zurd.
114	Punwureea, muhal Soorkh.
115	Puttee Qoorki.
116	Pygah.
117	Rahtooeea.
118	Raepore.
119	Reoti.
120	Rusoola, muhal Zurd.
121	Ditto, ditto Soorkh.
122	Suholia.
123	Sukroura, muhal Khurugpore.
124	Ditto, ditto Bhoop Singh, 10 bis.
125	Tah.
126	Tandah.
127	Targunj, muhal Lakhi.
128	Ditto, ditto Mooltani.
129	Ditto, ditto Subz.
130	Ditto, ditto Soorkh.
131	Tighra Khanpore.
132	Tukori.
133	Toomurea.
	Bangur Circle II.
134	Aspore.
135	Aturchendi.
136	Bada Susa, muhal 15 bis.
137	Do. do., do. 5 bis.
138	Behta Laluch.
139	Beharipoorah, muhal Ghurbi.
140	Ditto, ditto Shurqi.
141	Behta Joonan.
142	Ditto Chouhan, muhal ⅔rd.
143	Ditto ditto, ditto ⅓rd.
144	Bheekumpore.
145	Bhimlour Rusoolpore.
146	Bhurthana.
147	Bujhera.
148	Durputpore.
	Bangur Circle II.—(concluded.)
149	Durooapore, muhal Ghurbi.
150	Ditto, ditto Shurqi.
151	Ghoonsee.
152	Islamabad.
153	Khungawan Sheam.
154	Kirpea.
155	Konwurpore.
156	Koodha.
157	Kuchoor Dandee.
158	Looharee.
159	Manpore.
160	Mulgawan, muhal Sufed.
161	Ditto, ditto Zurd.
162	Phoolasee.
163	Puthree.
164	Rajpore.
165	Rahgawan.
166	Rampoorah.
167	Sendhee, muhal Mahomedpore Rathra.
168	Ditto, ditto Koodha.
169	Shadi Nuggur.
	Bangur Circle III.
170	Adhoopoorah.
171	Bagurpore.
172	Bahjooeea.
173	Bheempore.
174	Bilouree.
175	Chukurpore.
176	Chukurpore Ramnuggur.
177	Karela.
178	Keeruthpore, muhal Soorkh.
179	Ditto, ditto Zungari.
180	Ditto, ditto Zurd.
181	Ditto, ditto Lakhi.
182	Khumurea Dandee.
183	Kullea.
184	Kurwa Tal.
185	Mahtee Dandee.
186	Mahomedpore Puthree.
187	Nowgawan.
188	Nugurea Deh Zabti.
189	Puras.
190	Sendha.
191	Sengrampore.

List of Villages in Pergunnah Kabur, Tuhseel Buheree, Zillah Bareilly.

Number.	Names of Villages.
1	Adilpore.
2	Bahoodanpore.
3	Bairumnuggur.
4	Bakoulie.
5	Bareepore.
6	Bargawan, puttee Doorga Pershad.
7	Ditto, ditto Bheem Sein.
8	Ditto, ditto Abdool Nubbee.
9	Ditto, ditto Kishen Lall.
10	Beondha, muhal 17½ bis.
11	Ditto, ditto 2½ do.
12	Bhola Nubbeepore.
13	Bhukhawa.
14	Dandia.
15	Dhakea, puttee Shimali.
16	Ditto, ditto Janoobi.
17	Ditto, ditto Muqrooqa.
18	Dhameepore.
19	Dharmoonpoora.
20	Doongurpore.
21	Gahtooea, muhal Sufed.
22	Ditto, ditto Soorkh.
23	Ditto, ditto Asmani.
24	Ditto, ditto Lakhi.
25	Goolurea.
26	Islampore.
27	Ismaelpore, muhal 15 bis.
28	Ditto, ditto 5 do.
29	Itowa, muhal Khalisa.
30	Ditto, muhal Muqrooqa.
31	Jam.
32	Jashanpore.
33	Jawahirpore, puttee Janoobi.
34	Ditto, ditto Shimali.
35	Kabra Kishenpore.
36	Kabur khas.
37	Kamalpore.
38	Ditto Meerpore.
39	Kanchanpore.
40	Kanwurpore.
41	Keshopore.
42	Komurgurh.
43	Lakhmeepore.
44	Madhkurpore.
45	Mandanpore.
46	Manpore.
47	Mohommudpore.
48	Mohee-ood-deenpore, muhal 10 bis.

List of Villages in Pergunnah Kabur, Tuhseel Buheree, Zillah Bareilly.—(Concld.)

Number.	Names of Villages.	Number.	Names of Villages.
49	Mohee-ood-deenpore, muhal 7½ bis.	70	Rujoo Nugla.
50	Ditto ditto, ditto 2 do.	71	Rughonathpore.
51	Ditto ditto, ditto ½ do.	72	Rujpoora.
52	Morarpore.	73	Rampore.
53	Muwyee, puttee Janoobi.	74	Rusoolpore.
54	Ditto, ditto Shimali.	75	Salehpore Mujahedpore.
55	Noorabad, muhal Shurqi.	76	Seensyee.
56	Ditto, ditto Ghurbi.	77	Shahpore, muhal Askurun Singh.
57	Ditto, ditto 2 bis.	78	Shahpore, muhal Nawab Begum.
58	Nugurea.	79	Shergurh.
59	Nundpore.	80	Shureefnugur, muhal Soorkh Shimali.
60	Nuwayil.	81	Ditto, ditto Soorkh Janoobi.
61	Oomurpore.	82	Ditto, ditto Mooltani.
62	Pipoulie.	83	Ditto, ditto Golabi.
63	Pudherah.	84	Ditto, ditto Zurd.
64	Puhladpore, puttee Shimali.	85	Sisounah.
65	Puhladpore, puttee Janoobi.	86	Tandah.
66	Punwurea.	87	Thirea, puttee Zenut-ool-nissa.
67	Pygah, muhal Sufed.	88	Ditto, ditto Buldeo Singh.
68	Ditto, ditto Mahavure.	89	Tilwanchee.
69	Qusbapore.		

List of Villages in Pergunnah Sirsawan, Tuhseel Buheree, Zillah Bareilly.

Number.	Names of Villages.	Number.	Names of Villages.
1	Abhoopoorah.	34	Munkura, muhal 17½ bis.
2	Beesulpore.	35	Ditto, ditto 2½ do.
3	Bhojpore.	36	Mahomedpore.
4	Bhoorasee.	37	Mavee.
5	Bhoonta, muhal 17¾ bis.	38	Niamutpore, puttee Zurd.
6	Ditto, ditto 2¼ do.	39	Ditto, ditto Soorkh.
7	Bilsa.	40	Ditto, ditto Subz.
8	Binaeea.	41	Ditto, ditto Sufed.
9	Boochee.	42	Pipra.
10	Bullee, muhal North.	43	Pudmee, puttee North.
11	Ditto, ditto South.	44	Ditto, ditto South Zurd.
12	Chungasee, muhal Soorkh.	45	Pudmee, ditto Abi.
13	Ditto, ditto Subz.	46	Pudree, ditto North 13 bis.
14	Dhakea, muhal North.	47	Ditto, ditto South 7 do.
15	Ditto, ditto South.	48	Purewa.
16	Gokulpore.	49	Purusrampore, muhal Zurd.
17	Goolurea.	50	Ditto, ditto Zungari.
18	Jafirpore, muhal North, Ram Dial.	51	Qootubpore.
19	Ditto, ditto South, Mahumud Ali.	52	Serai.
20	Jagut.	53	Sainjunee, puttee North.
21	Jeea Nugla.	54	Ditto, ditto South.
22	Kunukpooree.	55	Sehora.
23	Kymureea, muhal Shimali Mooltani.	56	Sheeshgurh.
24	Ditto, Janoobi Subz.	57	Shuhpoorah.
25	Ditto, Munjhi Soorkh.	58	Sultanpore.
26	Lakha.	59	Tandah Umurnugur.
27	Lakhunpore.	60	Tighree, muhal Zurd.
28	Madnapore, muhal South.	61	Ditto, ditto Soorkh.
29	Ditto, ditto North.	62	Ditto, ditto Sufed.
30	Manpore, muhal Kunhai Lall.	63	Ditto, ditto Subz.
31	Ditto, ditto Mussumat Jasodha.	64	Ditto, ditto Asmani.
32	Mulsa Khera, muhal 18 bis.	65	Ditto, ditto Muqrooqa.
33	Ditto, ditto 2 do.		

Alphabetical and Chukwar List of Pergunnah Ritcha.

Number.	Names of Villages.	Number.	Names of Villages.
1	Abhepore, muhal Alahi Bux.	10	Anundeepore, muhal Jowala Nath.
2	Ditto, ditto Gomani Begum.	11	Ditto, ditto Ramdye.
3	Ditto, ditto Heera Lall.	12	Ditto, ditto Zurd.
4	Ditto, ditto Muqrooqa.	13	Aspore Khera.
5	Aklabad, muhal Zungari.	14	Aturea.
6	Ditto, ditto Mooltani.	15	Baikur Nunda.
7	Amirta.	16	Baikurshahpore.
8	Anroodhpore, muhal Sufed.	17	Bajpore.
9	Ditto, ditto Mooltani.	18	Bukynean Kale Khan.

Alphabetical and Chukwar List of Pergunnah Ritcha.—(Contd.)

Number.	Names of Villages.
19	Bukynean Salah, muhal Gholam Mohee-ood-din.
20	Ditto, ditto Ahsan Ali.
21	Ditto, ditto 2 bis. Gholam Mohee-ood-din.
22	Ditto, ditto Gholam Moostafa.
23	Balpore.
24	Bansbojh.
25	Bhairpoorah.
26	Bhairpooree.
27	Bheekumpore.
28	Bhojpore, muhal Koondun Lall.
29	Ditto, ditto Chet Ram.
30	Ditto, ditto Poorun Mull.
31	Bhola Bhoolanian, muhal 15 bis.
32	Ditto ditto, ditto 5 do.
33	Bhoputpore.
34	Bhoorwa.
35	Bhudruk.
36	Bichhoura.
37	Bichpooree.
38	Boochunpore, muhal Khalisa.
39	Bahadurgunj, muhal Oulea Begum.
40	Ditto, ditto Mookhtear Begum.
41	Ditto, ditto Lakhi.
42	Ditto, ditto Ahmed Shah Khan.
43	Ditto, ditto Sufed.
44	Ditto, ditto Muqrooqa.
45	Bunjurea.
46	Busoopoorah, muhal Asmani.
47	Ditto, ditto Soorkh.
48	Ditto, ditto Zurd.
49	Ditto, ditto Sufed.
50	Chuttea, muhal Incha Ram.
51	Ditto, ditto Zorawar.
52	Ditto, ditto Raja Ram.
53	Ditto, ditto Khooshal Rai.
54	Chuk Pukhoornee.
55	Chuk Nurkhoonda.
56	Chundpore Choobukia.
57	Chooreylee.
58	Choorcila.
59	Charee Dandee.
60	Dumkhoda.
61	Dumkhodea.
62	Dopuhrea, muhal Holas Singh.
63	Ditto, ditto Kifayetoollah Khan.
64	Dhunooan, muhal Birkbhan.
65	Ditto, ditto Pershadi Lall.
66	Deorunean, muhal Zungari.
67	Ditto, ditto Mooltani.
68	Ditto, ditto Sufed.
69	Ditto, ditto Muqrooqa.
70	Ditto, ditto Subz.
71	Ditto, ditto Zurd.
72	Dandee Humeer, muhal Ramanuj Dass.
73	Ditto, ditto Dhurum Dass.
74	Dundea Nugla.
75	Dhukea, muhal Subz.
76	Ditto, ditto Zurd.
77	Ditto, ditto Soorkh.
78	Girdhurpore.
79	Goolurea Gholam Russool.
80	Goonha Huttoo, muhal Sufed 10 bis.
81	Ditto, ditto Mooltani 10 do.
82	Ditto, ditto Muqrooqa.
83	Ditto, ditto Maafee.
84	Goorwarah.
85	Gopalpore.
86	Gountea Ramnuggur.
87	Gurgeya.
88	Gnoo Nugla.
89	Hafizgunge.
90	Hussunpore.
91	Hussunpore, muzrah Koondra.
92	Hushman, muhal Sufed.
93	Ditto, ditto Lakhi.
94	Ditto, ditto Zurd.
95	Ditto, ditto Subz.
96	Inayetpore.
97	Itowa.
98	Jafira.
99	Jam, muhal 5 bis. Janoobi.
100	Do., ditto 1 „ ditto.
101	Do., ditto 4 „ ditto.
102	Jam, muhal 10 bis. Shimali.
103	Jam Khujoor, muhal 10 bis.
104	Ditto, ditto Ramdial 5 bis.
105	Ditto, ditto Atma Ram.
106	Jokhunpore.
107	Jagun Dandee.
108	Jamoonean.
109	Khata.
110	Khirna.
111	Khirnee.
112	Khumuseea Gobadandi.
113	Khoonda Ramnuggur.
114	Kuchnaree.
115	Koondra, muhal Shimali.
116	Ditto, ditto Janoobi.
117	Kumalpore, muhal Shimali.
118	Ditto, ditto Janoobi.
119	Kuleanpore.
120	Kunmun.
121	Kurunpore.
122	Kuthurea.
123	Madhopore khoord.
124	Madhopore kullan.
125	Miteepore.
126	Minturpore, muhal Balaqi Singh.
127	Ditto, ditto Beerbul Singh.
128	Moondea Nubbee Bux.
129	Moondea Ooda, muhal Sufed.
130	Ditto do., do. Subz.
131	Moondea Nuseer.
132	Moondea Jagheer, muhal Muqrooqa.
133	Mohunpore.
134	Munnoonuggur.
135	Mungudpore.
136	Mugrai Raie Nuwadah.
137	Muqsoodunpore.
138	Morarpore.
139	Nirbhooa.
140	Nurkhoonda.
141	Nugurea.
142	Nugla.
143	Oodra Thiria.
144	Oodra.
145	Pygah, muhal Mussumat Toorsa.
146	Ditto, ditto Ram Sahai.
147	Ditto, ditto Gholam Moostafa.
148	Pipra, muhal Shimali.
149	Ditto, ditto Moujh.
150	Ditto, ditto Janoobi.
151	Poorenean Poorynee.
152	Poorynean Tal.
153	Puchooa, muhal 15 bis.
154	Ditto, ditto 5 do.
155	Pukhoomee, muhal Ghurbi.
156	Ditto, ditto Shurki.
157	Raath.
158	Rypoorah, muhal Ghaneemutoollah.
159	Ditto, ditto Bhola Nath.
160	Raepoorah Ghinsham, muhal Shimali.
161	Raepoorah, muhal Janoobi.
162	Ritcha khas.
163	Rohelee.
164	Rohunian, muhal Karamut Ali.
165	Ditto, ditto Moorteza Khan.
166	Rumpoorah, muhal Shimali.
167	Ditto, ditto Sufed.
168	Ditto, ditto Asmani.
169	Ditto, ditto Lakhi.
170	Ditto, ditto Zungari.
171	Salar nugla.
172	Saidpore.
173	Sedha.
174	Semkherah.
175	Shahpore Dandee.
176	Sheikhpore.
177	Shunkurpore.
178	Sendhourah, muhal Kewul Ram.
179	Ditto, ditto Poorun Dass.
180	Singhthera.
181	Singhouti, muhal 18 bis.
182	Ditto, ditto 5 do.
183	Tandah 2 bis.
184	Tandah 8 bis.
185	Tah Kasimpore.

Alphabetical and Chukwar List of Pergunnah Ritcha.—(Concld.)

Number.	Names of Villages.
186	Tejnuggur.
187	Thirea.
188	Toolsheepore.
189	Tukia.
	Circle II.
190	Aurithpore.
191	Allygunge.
192	Arsia Bojh.
193	Bukynean Khujooreea.
194	Beharipore.
195	Bhilaia.
196	Bhogpore.
197	Bhojpore Jogether.
198	Bhurounee.
199	Bishnoopore Goolurea.
200	Bounda.
201	Bahadurpore.
202	Chuka.
203	Choundhera, muhal Ilahi Bux.
204	Ditto, ditto Hushmut Khan.
205	Chitounean.
206	Dabeepoorah.
207	Dayabojh.
208	Ekghura, muhal Hadiyar Khan.
209	Ditto, ditto Mahomed Yar.
210	Ditto, ditto Khodayar.
211	Ditto, ditto Gholam Hossein.
212	Furreedpore.
213	Goolurea, muhal Abdool Ghunee.
214	Ditto, ditto Alla Hossein.
215	Goonhan Jawaher Lall, muhal Mussumat Bussoo, 8 bis., 6 bis.
216	Ditto, ditto 7½ bis.
217	Ditto, ditto 4 bis., 4 bis.
218	Gonee Khera.
219	Gotha, muhal Shimali.
220	Ditto, ditto Janoobi.
221	Gowaree, muhal Moonnee Lall.
222	Ditto, ditto Asmani
223	Ditto, ditto Lochun Singh.
224	Hossein nugla.
225	Hurhurpore Bhurooa, muhal 17½ bis.
226	Ditto, ditto 2½ do.
227	Jussace Nuggur.
228	Khujooreea.
229	Khootia.
	Circle II.—(concluded.)
230	Lubeda.
231	Lubedee.
232	Mooseepore, muhal Zurd.
233	Ditto, ditto Soorkh.
234	Oojunpore.
235	Pipurea.
236	Puchpera.
237	Putrasee.
238	Sungeen Khera.
239	Senira.
240	Sookuteea.
241	Suberha.
242	Thirea Nuthmul, muhal Bika Singh.
243	Ditto, ditto Lal Singh.
244	Yacoobgunge.
	Circle III.
245	Amkherah.
246	Chungelee.
247	Chitounean Mulpore.
248	Furdia Munkura, muhal Jamaeeut Begum.
249	Ditto, ditto Badsha Begum.
250	Hurhurpore Sumkhia.
251	Kunhetee.
252	Nadelee.
253	Otursea Somakbya, muhal Mendhai Lall.
254	Ditto, ditto Gholam Ghous.
255	Ditto, ditto Gholam Jeelani.
256	Ootursea Mahobea, muhal Zungari.
257	Ditto, ditto Shimali.
258	Pundrah.
259	Raee Nawadah.
	Maafee Villages.
260	Beharipore.
261	Bissdhurun Jagheer.
262	Busunt Nuggur.
263	Dhunooan, muhal maafee Fuzulgunge.
264	Kunthurea Jagheer.
265	Koolooaganda Jagheer.
266	Mittapore.
267	Moondea Jagheer.
268	Neamutpore, maafee muzrah Boollumpore.
269	Oonaiee Jagheer.
270	Pundree Jagheer.
271	Selhee Jagheer.
272	Toorsumpore.

Alphabetical and Chukwar List of Pergunnah Nawabgunge.

Number.	Names of Villages.
	Circle I.
1	Alum Dandee.
2	Beerpore.
3	Behareepore Peetum Rae.
4	Bhudpoorah.
5	Bikrumpore.
6	Bhudhepoorah Luchmeenarain.
7	Buhir khas.
8	Bukoocheea Kishenpore.
9	Burkhun.
10	Burkunah.
11	Dulelnuggur Jagheer.
12	Dumodurpore.
13	Goolurhaee.
14	Jigineean Bhugwuntpore.
15	Jurpa Mohunpore.
16	Khutowa.
17	Konwurpore Toolshee puttee.
18	Koondmun.
19	Kishenpore Kooeen.
20	Mithee Nuwudeea.
21	Moondeea Mullookpore.
22	Mozufferpore.
23	Mohummudpore.
24	Mundunpore.
25	Nowgawan Bhugwuntpore.
	Circle II.
26	Nuktee Narainpore.
27	Nuwudea Doorga Pershad.
28	Nuwudea Laik Ram.
29	Pehna.
30	Pehnean.
31	Pooryneean.
32	Rae Nugla.
33	Silhra.
34	Sithoura.
35	Ubdula.
36	Ubhe Rajpore.
37	Udhkuta.
38	Umeer Nuggur.
39	Ainthpore.
40	Aspore Duryao Singh.
41	Aspore, muhal Lakhi.
42	Ditto, ditto Sufed.
43	Ditto, ditto Mooltani.
44	Ditto, ditto 3 bis.
45	Bebuha.
46	Bebuhaee.
47	Beeja Neaw.
48	Behareepore Gubbi Mul.
49	Ditto, muhal Asmani.
50	Behareepore Puchtour.

Alphabetical and Chukwar List of Pergunnah Nawabgunge.—(Contd.)

Number.	Names of Villages.
	Circle II.—(continued.)
51	Bhaoo nugla *alias* Burauria.
52	Bhoora.
53	Bhowa nugla Koonoo nugla.
54	Bhowa nugla, muhal Akber Ali.
55	Bhowa nugla, muhal Bilas Singh.
56	Bhugowteepore.
57	Bijasun, muhal Sufed.
58	Ditto, ditto Soorkh.
59	Ditto, ditto Zurd.
60	Bijaureea-oorf Nawabgunge.
61	Bilas Nuggur, muhal Soorkh.
62	Ditto, ditto Zurd.
63	Ditto, ditto Subz.
64	Ditto, ditto Sufed.
65	Bisheshurpore.
66	Bithree.
67	Bookhara, muhal Mussumat Oomedi.
68	Ditto, ditto Khoshal.
69	Milikin Boolundnugur, muhal Sufed.
70	Ditto ditto, ditto Mooltani.
71	Buboora Bubooree.
72	Budhep,oorah, muhal Zurd.
73	Ditto ditto Zungari.
74	Ditto' ditto Subz.
75	Ditto' ditto Soorkh.
76	Ditto, ditto Abi.
77	Buhor Nugla.
78	Bukynean.
79	Bumhunpooree Milik.
80	Bumhunpooree Nuwudea, muhal Jewun Sahai.
81	Ditto, ditto Dalchund.
82	Burour.
83	Buroura, muhal Janoobi.
84	Ditto, ditto Shimali.
85	Bursea, ditto Lakhi.
86	Ditto, ditto Zurd.
87	Busenga.
88	Buthooa.
89	Chinan.
90	Choonnooan.
91	Chutteea Peetum Rai.
92	Debee Khera.
93	Dais Nugur.
94	Dhimree, muhal Ali Hosein Khan.
95	Ditto, ditto Oomrao Singh.
96	Dhonrerah.
97	Dhunore Jagheer.
98	Dhukeea Sheikh Mohabut.
99	Dhukeea Mr. Berkeley.
100	Dabawut, muhal Sufed.
101	Ditto, ditto Lakhi.
102	Ditto, ditto Zurd.
103	Ditto, ditto Soorkh.
104	Dundeea Nujmoolnisa, muhal 14 bis.
105	Ditto, ditto Subz.
106	Ditto, ditto Soorkh.
107	Ditto, ditto Zurd.
108	Dundeea, Byrum Nugla.
109	Dundeea, Ashgur Ali.
110	Dundeea, Dya Ram.
111	Dundeea, Misr Byj Nath.
112	Dundeea, Fyzoolla.
113	End Jagheer.
114	Fazilpore.
115	Furreedpore, muhal Dooli Chund.
116	Ditto, ditto Akber Ali.
117	Ditto, ditto Lalta Pershad.
118	Ditto, ditto Mungli Lall.
119	Fureedapore Ganga, muhal Potha Lall.
120	Ditto, ditto Kesri Pershad.
121	Fyzoollahpore, muhal 10 bis.
122	Ditto, ditto 6¼ do.
123	Ditto, ditto 2½ do.
124	Ditto, ditto 1 do.
125	Ditto, ditto 1¼ do.
126	Gaila Tandah, muhal Chutter Biharee Lall.
127	Ditto, ditto Mool Chund.
128	Goojrowla.
129	Goolureea Petum Rai.
130	Gooleel Dandi.
131	Goorgawan, muhal Zurd.
132	Ditto, ditto Soorkh.
133	Ditto, ditto Shingurfee.
	Circle II.—(continued.)
134	Gooorgawan muhal Subz.
135	Ditto, ditto Lakhi.
136	Goopalpore, muhal Sufed.
137	Ditto, ditto Soorkh.
138	Grem, muhal 10 bis.
139	Ditto, ditto 7 bis.
140	Ditto, ditto 3 bis.
141	Gurgaeea.
142	Hafizgunge, 7 puttees.
143	Himkurpore Chumrowa.
144	Hunsah.
145	Hunsnee.
146	Hurherpore Mutkully.
147	Hurdooa, muhal ⅔rd.
148	Ditto, ditto ⅓rd.
149	Huttelee.
150	Inaetpore.
151	Jerounian.
152	Jhoura Mukrundpore, muhal Noorjehan Begum.
153	Ditto ditto, muhal Cheda Lall.
154	Jeant Jagheer.
155	Jugutpore.
156	Jumuneean.
157	Jubeda Jubedee.
158	Jurelee.
159	Khampore oorf Gungapore.
160	Khatah.
161	Khilcheepore.
162	Khujooreea, muhal Subz.
163	Ditto, ditto Asmani.
164	Ditto, ditto Zurd.
165	Ditto, ditto Soorkh.
166	Khizurpore, muhal Shurqi.
167	Ditto, ditto Junoobi.
168	Khunjunpore Khunjunean.
169	Koohereea.
170	Konwurpore, muhal Soorkh.
171	Ditto, ditto Zurd.
172	Koondmunpore.
173	Kutchnura.
174	Kulleanpore.
175	Kumlapore Mahrab Khan.
176	Ditto, Furzund Ali.
177	Kumooan.
178	Kotha Mukkhun.
179	Kataiya.
180	Kataiya, muhal Zurd.
181	Ditto, ditto Sufed.
182	Ditto, ditto Soorkh.
183	Khirooa.
184	Ladpore Oosmanpore.
185	Lahee Khera.
186	Lumbuha khera Talib Hossein.
187	Ditto, Bhugwunt Pershad.
188	Marugpore Maqruqa, muhal Arifshah.
189	Ditto, ditto, ditto, Bhawani Pershad.
190	Ditto, ditto, ditto, Khoshal Singh.
191	Meeanpore.
192	Mirzapore Jagheer.
193	Moondea Bhikumpore.
194	Ditto Teli, muhal Gholam Jeelani.
195	Ditto, ditto Ajjoo Khan.
196	Moondea Jugroop.
197	Mujhana Qumroolnissa.
198	Moojhana.
199	Morarpore, 2½ bis.
200	Ditto, 7½ do.
201	Morarpore, Sherepore Jupun Nugurea.
202	Moortzanuggur oorf Dundea.
203	Moazum Nugla.
204	Ditto, ditto muhal khalsa.
205	Ditto, ditto Istimrar.
206	Mudhoo Nugla.
207	Mudhkerpore.
208	Mukrundpore.
209	Mulhpore.
210	Museet Wallenuggur.
211	Mut Killa.
212	Nowgawan Wiran.
213	Nowa Nugla.
214	Nukutteea.
215	Nurhee Nowa Nugla, muhal Peetum Rai.
216	Ditto ditto ditto, Rani Gunesh Konwer.

Alphabetical and Chukwar List of Pergunnah Nawabgunge.—(Contd.)

Number.	Names of Villages.
	Circle II.—(continued.)
217	Nuwadah Imamabad.
218	Nuwudeea Rughoo Nath, muhal Koer Sein.
219	Ditto, ditto Dabee Sahai.
220	Nuwudea Qussab, muhal 10 bis.
221	Ditto ditto, ditto 10 do.
222	Nuwadah Ikramoollah.
223	Oodhrunpore.
224	Ditto Milik.
225	Oomerpore.
226	Ourungabad, muhal Kesri Singh.
227	Ditto, ditto Soorkh.
228	Ditto, ditto Mooltani.
229	Peearee Nawadah, muhal Raheem-ood-deen.
230	Ditto ditto, Muhal Maazoollah.
231	Ditto ditto, Mohd. Syud Khan.
232	Ditto ditto, Muqrooqa.
233	Phoolwa, muhal Soorkh.
234	Ditto, ditto Zurd.
235	Ditto, ditto Asmani.
236	Pipra Nigohee.
237	Pahladpore.
238	Pukureea.
239	Pundree, muhal Kirpa Ram.
240	Ditto, ditto Toolsee Ram.
241	Pundra.
242	Punwureea Purteetpore.
243	Punwureea.
244	Panooa.
245	Purewa, muhal Junoobi.
246	Ditto, ditto Shimali.
247	Purothee.
248	Pygah.
249	Puchpera.
250	Puchtour.
251	Purewa, muhal Zurd.
252	Ditto, ditto Sufed.
253	Puttee Sithun.
254	Ram Nugureea.
255	Richola Kifayetoollah Khan.
256	Rookumpore.
257	Rooppore.
258	Rumpoorah nisf.
259	Rumputtea, muhal Sufed.
260	Ditto, ditto Soorkh.
261	Rumputtea Bisharut Ali.
262	Rutna Chowdree.
263	Richola Chowdree.
264	Sethul.
265	Shahpore.
266	Sherepore.
267	Sithra, 17½ bis.
268	Ditto, 2½ do.
269	Sicholia.
270	Sookuttea, muhal Hooseinee Begum.
271	Ditto, ditto Ameer Beg.
272	Soondree, muhal Baboo Gunga Pershad.
273	Ditto, ditto Jeydeo Ram.
274	Soondiawah, muhal Janoobi.
275	Ditto, ditto Shimali.
276	Soonour.
277	Soorha.
278	Sooteea kullan.
279	Ditto khoord.
280	Soorujpore Burouria.
281	Sahodur Nugla.
282	Suddurpore.
283	Surkura.
284	Sumohun.
285	Siroura.
286	Sydpore Siroura.
287	Sydoopore Jeesookh Rai.
288	Sydpore Neela Dhur.
289	Tah, muhal Raheem-ood-deen.
290	Do., ditto Munee Ram.
291	Tanda Saadut.
292	Tear Nuzranadar.
293	Tighree.
294	Thireea.
295	Thireea, muhal Soorkh.
296	Ditto, ditto Subz.
297	Toomureea.
298	Ubhypore Moollanpore.
299	Udhkutta.

Number.	Names of Villages
	Circle II.—(concluded.)
300	Ukhtearpore Nuwudea, muhal Zurd.
301	Ditto, ditto Goolabi.
302	Ditto, ditto Soorkh.
303	Ditto, ditto Zungari.
304	Ullahpore.
305	Umsaha.
306	Umudabad.
307	Ulinuggur Jareli.
308	Unundapore.
309	Utunga Chundpore, muhal Fukr-ood-deen.
310	Ditto, ditto Mostafa Khan.
311	Ditto, ditto Karamat Khan.
312	Ditto, ditto Tufuzool Hossein.
313	Ditto, ditto Mahomed Hossein. Khan.
314	Yacoobpore.
	Circle III.
315	Bheekumpore.
316	Bhola Manpore.
317	Bhugouteepore Pubrapore.
318	Busee Rumpoorah.
319	Boolundnugur Jagheer, puttee 10 bis., oorf Bhutpoorah.
320	Ditto, puttee 10 bis. oorf Lubehea.
321	Budagaon Gungapore.
322	Budhepooruh, muhal Shimali.
323	Ditto, ditto Janoobi.
324	Choukhundee.
325	Chumnunnuggur muhal Ahmed Hossein.
326	Ditto, ditto Ahmed Shere Khan.
327	Chundpoora, Sufdar Ali.
328	Chundowa Chumrowa.
329	Chundpore Kheali Ram.
330	Chuteeapore.
331	Chuteea, muhal Sufed.
332	Ditto, ditto Zurd.
333	Ditto, ditto Soorkh.
334	Deoruneean.
335	Deoruneean, muhal Jagheer.
336	Ditto, ditto Khalisa.
337	Dhimra, puttee Nund Lall.
338	Dhimur Goolureea, muhal Gunga Ram.
339	Ditto, ditto Doree Lall.
340	Ditto, ditto Kanji Mull.
341	Dhimmipore.
342	Dhurumpore.
343	Dhukeea Saadut Ali.
344	Milik Mahomedpore in Dhukea.
345	Dhundooa.
346	Dubra, muhal Deena Nath.
347	Ditto, ditto Bishen Sahai.
348	Dubbree, muhal Kullean Singh.
349	Ditto, ditto Purus Ram.
350	Duneapore Mungli Lall.
351	Dibnapore.
352	Dundeea Mohsun Khan.
353	Dundea, muhal Zurd.
354	Ditto, ditto Abi.
355	Ditto, ditto Mooltani.
356	Furreednpore Peetum Rae.
357	Ghatumpore.
358	Goolureea Maheeput.
359	Gosulpore, muhal Soorkh.
360	Ditto, ditto Mooltani.
361	Ditto, ditto Zurd.
362	Ditto, ditto Subz.
363	Gungapore, muhal 15 bis.
364	Ditto, ditto 5 do.
365	Gungapore Milik.
366	Himkura.
367	Hurhurpore Chowdree.
368	Hurdooa.
369	Jaspore, muhal Mussumat Luchmee.
370	Ditto, ditto Wuli Khan.
371	Jugee Dandee.
372	Jugrajpore.
373	Jogether, muhal Murdan Ali.
374	Ditto, ditto Mussumat Punna.
375	Kasheepore.
376	Khaee Khera.
377	Khoh.

Alphabetical and Chukwar List of Pergunnah Nawabgunge.—(Concld.)

Number.	Names of Villages.	Number.	Names of Villages.
	Circle III.—(continued.)		*Circle III.*—(concluded.)
378	Khumureea.	415	Peetumberpore.
379	Khutola.	416	Pundree Noumahla.
380	Kooeean.	417	Purus Rampore.
381	Kooandandah.	418	Pirtheepore Nuwudea, muhal Noorool Husun.
382	Konwerpore Dankonwer.	419	Ditto, ditto 4 bis.
383	Koolhoos, muhal Motee Singh.	420	Ditto, ditto 3 do.
384	Ditto, ditto Pemraj.	421	Ditto, ditto 3 do.
385	Ditto, ditto Jogil Kishore.	422	Qootubpore.
386	Kishunpore.	423	Raepore Bumunpooree.
387	Kutchnaree, muhal Zurd.	424	Richhola.
388	Ditto, ditto Zungari.	425	Rughonathpore.
389	Ditto, ditto Soorkh.	426	Rumpoorah, muhal Sahib-oon-nissa.
390	Kulleanpore.	427	Ditto, ditto Hikmut Ali.
391	Lumkherah, muhal Soorkh.	428	Russoola, Ahmed Hossein.
392	Ditto, ditto Muqrooqa.	429	Ditto, Qumur-oon-nisa.
393	Ditto, ditto Abi.	430	Rutna Choonnee Lall.
394	Madhopore.	431	Shahpore Inayetoollahpore.
395	Milik Madho.	432	Sunekpore.
396	Milik Alinugur, muzrah Shahpore.	433	Suntokhpore.
397	Mohunpore.	434	Subhapore.
398	Moondeea Chowdree.	435	Tandah Dyanutpore.
399	Moondeea Bishen Sahai.	436	Ditto Inayetpore.
400	Mobarikpore.	437	Tujjooa.
401	Mooseypore.	438	Tujpoorah, muhal Zurd.
402	Muheshpore.	439	Ditto, ditto Soorkh.
403	Mahmoodapore, muhal Shahamut Khan.	440	Uhrola.
404	Ditto, ditto Shunkur Sahai.	441	Ulleah.
405	Mutkapore.	442	Ulleahpore.
406	Muthrapore.	443	Unundapore.
407	Nirundpore.	444	Unundeepore, muhal Subz.
408	Nukutpore.	445	Ditto, ditto Soorkh.
409	Nurhurpore, muhal Zurd.	446	Ditto, ditto Zurd.
410	Ditto, ditto Subz.	447	Ditto, ditto 3 bis.
411	Ditto, ditto Lakhi.	448	Usooa.
412	Ditto, ditto Soorkh.	449	Utunga Oogee.
413	Nurhurpore, muhal Goolabi.	450	Zohrapore, Jadonpore, including 10 bis. of Dhunea puttee.
414	Ditto, ditto Mooltani.		

Alphabetical and Chukwar List of Villages in Pergunnah Bullia.

Number.	Names of Villages.	Number.	Names of Village.
	Circle I.		*Circle I.*—(concluded.)
1	Akha.	38	Kutka Rumun, muhal Misri Lall.
2	Badraee Kooeean.	39	Kymooan.
3	Bahunpore, muhal 12½ bis.	40	Lahur, muhal Jogul Kishore, 10 bis.
4	Ditto, ditto 7½ do.	41	Ditto, ditto Janki Pershad, 10 do.
5	Bunara.	42	Lunghora.
6	Behareepore.	43	May Keerutpore.
7	Bichhooria Sirsa.	44	Miluk Mujhara.
8	Buleeah.	45	Nawudea.
9	Bullia khas.		Bis. bis. cut.
10	Chandowa.	46	Nourungpore, muhal, ... 16 3 5
11	Chandpore.	47	Ditto, ditto Golabi,... 1 2 5
12	Dhuka.	48	Ditto, ditto Asmani, 1 2 5
13	Dhukea.	49	Ditto, ditto Sindhuri, 1 2 5
14	Dhunourah.	50	Ourungabad.
15	Dulputpore, muhal Janki Pershad.	51	Rampore Kankur, muhal 10 bis., Janki Pershad.
16	Ditto, ditto Madho Singh.		
17	Ditto, ditto Soburrun Singh, 7½ bis.	52	Rampore, Kankur, muhal 8 bis., 8 bis., Mujlis Rae.
18	Dupta Shampore.		
19	Fathapore Sarathoo.	53	Rampore Kankur, muhal 31 bis., 8 bis., Peetum Rae.
20	Ferozepore.		
21	Ghilourah.	54	Rufeeabad.
22	Ghura.	55	Singha, muhal Bhola Singh.
23	Himmutpore.	56	Ditto, ditto Deoraj.
24	Huri Rampore, muhal 10 bis. Dhunourah.	57	Sirdarnuggur.
25	Ditto, ditto 10 bis. Toulukpore.	58	Sukora.
26	Irasi Mutnaza.	59	Toorkoonean, muhal Tirmul Singh.
27	Jhinjri muhal 10 bis., Janki Pershad.	60	Ditto, ditto Man Singh.
28	Ditto, ditto 10 bis., Jogul Kishore.		
29	Ditto, ditto Maqrooqa.		*Circle II.*
30	Jugutpore, muhal 10 bis., Thakooran.		
31	Ditto, ditto Mr. Berkeley.	61	Bhugwanpore.
32	Kakree.	62	Bidoulee.
33	Katha Bhurt.	63	Bilaspore, ilaka Bullia.
34	Khatah.	64	Ditto, ditto Dupta.
35	Koni Pertapore.	65	Dirahmpore.
36	Kutka Rumun, muhal 10 bis., Bulbhudder Singh.	66	Keerutpore.
		67	Saraoo.
37	Ditto ditto, muhal Buldeo Singh.	68	Tolukpore.

Alphabetical and Chukwar List of Villages in Pergunnah Seraolee.

Number.	Names of Villages.	Number.	Names of Villages.
	Khadir Circle.		*Bangur Circle.*—(concluded.)
1	Dhounrerah.	40	Henga Nugla.
2	Peeas.	41	Hurdasspore, muhal Girdhari Lall.
3	Serowlee, puttee Eastern Khadir Circle.	42	Ditto, ditto Nur Singh.
4	Ditto, ditto Sufed.	43	Ditto, ditto Moomtazoolnisa.
5	Ditto, ditto Zurd.	44	Islamnuggur oorf Duleeppore.
6	Ditto, ditto Soorkh.	45	Juggunathpore, muhal East.
7	Shahpore.	46	Ditto, ditto Shurqi.
8	Unjunee.	47	Jungbazpore.
	Bangur Circle.	48	Kala Bhoj, muhal Mussumat Gunga Kower.
		49	Ditto, ditto Benarsi Dass.
		50	Kulleanpore Hybutpore.
9	Ajmere.	51	Kesurpore.
10	Alumpore Kat Unchut.	52	Khurugpore.
11	Bura Thanpore.	53	Tilour Buzoorg.
12	Beharipore.	54	Ditto ¾th share.
13	Beodhan Buzoorg.	55	Ditto ¼th share.
14	Beodhan Buzoorg Arazi.	56	Namdargunj, puttee South.
15	Beodhan khoord.	57	Ditto, ditto North.
16	Bheempore Khutolee.	58	Nawabpoorah, muhal Soorkh.
17	Bhoputnuggur oorf Rampoorah.	59	Ditto, ditto Zurd.
18	Bursur Secunderpore, muhal Dhurum Das.	60	Ditto, ditto Pati Ram.
19	Ditto, ditto Gholam Abbas.	61	Oody Bhanpore.
20	Chukerpore Jagheer Poodo Ram.	62	Ourungabad.
21	Ditto, muhal Kashi Ram.	63	Phoondapore oorf Atta.
22	Ditto, ditto Ameer Khan.	64	Pultha.
23	Chundpoorah Shibnuggur.	65	Puchtour.
24	Chundpoorah, muhal 10 bis.	66	Pipurea Beerpore Jagheer.
25	Ditto, ditto Choonnee Lall.	67	Pirtheepore.
26	Ditto, ditto Jawahur Lall.	68	Ramnuggur.
27	Deosarah, muhal Shurqi	69	Rumpoorah Bhoor.
28	Ditto, ditto Ghurbi.	70	Soonrasi.
29	Dhanoura Gooraie, muhal Soorkh.	71	Sohna.
30	Ditto, ditto Subz.	72	Shahbazpore.
31	Ditto, ditto Muqrooqa.	73	Takh oorf Sookutea.
32	Dustumpore.	74	Tarne Mulhpore.
33	Gooraie.	75	Tonderpore, muhal Chuterput Rai.
34	Goolurea Aril, muhal Soorkh.	76	Ditto, ditto Nyn Sookh.
35	Ditto, ditto Lakhi.	77	Takhourah, muhal Sufed.
36	Ditto, ditto Sufed.	78	Ditto, ditto Zungari.
37	Ditto, ditto Zurd.	79	Ditto, ditto Soorkh.
38	Ditto, ditto Bhoor.	80	Umerpore.
39	Gurbah.		

Alphabetical and Chukwar List of Villages in Pergunnah Meergunge.

Number.	Names of Villages.	Number.	Names of Villages.
	Circle I.		*Circle I.*—(continued.)
1	Aksorah.	28	Bakynian Chumputpore, muhal Thakooran.
2	Anundpore, muhal Janoobi.	29	Bullea.
3	Ditto, ditto Shimali.	30	Bulaee.
4	Asud Nuggur.	31	Basawunpore, muhal Mussumat Goura.
5	Asufpore.	32	Ditto, ditto Doongur Mull.
6	Behareepore, muhal Chutur Singh.	33	Bajpore.
7	Ditto, ditto Dhurum Singh.	34	Chukerpore *alias* Lumkum.
8	Ditto, ditto Faroo Singh.	35	Chuneta.
9	Ditto, ditto Kullean Singh.	36	Dodah, puttee Midaee Lall.
10	Behareepore.	37	Ditto, muhal Balgir.
11	Bethum Nowgawan.	38	Ditto, ditto Jai Lall.
12	Ditto, ditto muhal Muqrooqa,	39	Delpore.
13	Bikrumpore.	40	Dhuneta.
14	Bufree Buzoorg.	41	Durea Abdoollagunj.
15	Bufree Abdoolnabeepore, muhal Dhurni Dhur.	42	Dhuneli oorf Dhukea South.
16	Ditto, muhal Faqeer Chund.	43	Ditto ditto, muhal North.
17	Chitowli Nugla.	44	Dhuntea.
18	Bahroli.	45	Dhurumpore.
19	Bhagowteepore.	46	Dwara.
20	Bhamoora.	47	Doongurpore.
21	Buddepoora, muhal 17 bis.	48	Doonka, puttee Sobha Ram.
22	Ditto, ditto 3 do.	49	Doonka, muhal Mulloo Singh.
23	Bugrow.	50	Ditto, ditto, Benee Ram.
24	Bahadoorpore.	51	Doonkee.
25	Bahadoorpore Banee Ram.	52	Ferozepore.
26	Bakynian Beerpore.	53	Fidaeepore.
27	Bakynian Chumputpore, puttee Musulmans.	54	Ghatgaon.

Alphabetical and Chukwar List of Villages in Pergunnah Meergunge.—(Contd.)

Number.	Names of Villages.
	Circle I.—(continued.)
55	Ghatgaon Miluk Het Ram.
56	Gouhana.
57	Gora Loknathpore.
58	Gulurea.
59	Guhbura.
60	Hoor Hooree.
61	Hounspore.
62	Hurdi Khoord.
63	Huri Rampore.
64	Hussanpore.
65	Jam.
66	Jeea Nugla.
67	Joonhaee, muhal Janoobi.
68	Ditto ditto Shimali.
69	Jugutpore.
70	Jutpoorah.
71	Kasheenathpore.
72	Kashipore.
73	Kesurpore.
74	Khanpore.
75	Khumurea Azimpore.
76	Khujoorea.
77	Khursynee.
78	Khumnoo Nugla.
79	Koorka.
80	Koolcha Muhal Khalisa.
81	Ditto, ditto Muqrooqa.
82	Karampore.
83	Kurora, muhal Mr. Berkeley.
84	Ditto, ditto Aboo Torab Khan.
85	Lallpore.
86	Labhera Doorga Pershad.
87	Museehabad.
88	Meernugur Nowgawan.
89	Mehman Nugla.
90	Meondi Buzoorg.
91	Mirzapore.
92	Mobarikpore.
93	Mundwa Banseepore.
94	Munkura.
95	Nugurea.
96	Noreli Rasoolpore, muhal Soorkh.
97	Ditto ditto, puttee Sufed.
98	Nurkhera.
99	Oomurpore.
100	Oundh.
101	Pempore.
102	Pipurea, muhal Mussumat Jhonka.
103	Ditto, ditto Buldeo Singh.
104	Ditto, ditto Khooshal Singh.
105	Ditto, ditto Mool Chund.
106	Ditto, ditto Deep Singh.
107	Ditto, ditto Jhanghun Singh.
108	Pouncha Buzoorg.
109	Pouncha khoord muhal Sufed.
110	Ditto, ditto Zurd.
111	Ditto, ditto Abi.
112	Paharpore.
113	Pertappore.
114	Qootubpore, puttee Chutur Singh.
115	Ditto, muhal Taroo Singh.
116	Ditto, ditto Dhurum Singh.
117	Ditto, ditto Kullean Singh.
118	Raiya Nugla.
119	Roostum Nuggur.
120	Rampoorah.
121	Rusoolea.
122	Sehnsa.
123	Sewa.
124	Shahi khas, muhal 5 bis.
125	Ditto, ditto 15 do.
126	Shahpore, muhal Sobha Ram.
127	Ditto, ditto Jai Lall.
128	Ditto, ditto Midhae Lall.
129	Sheshoun khera.
130	Shumshpore.
131	Simrawa, puttee Chiddo Khan.
132	Ditto, muhal Peer Buksh.
133	Ditto, ditto Chotey Khan.
134	Singra.
135	Sookh, muhal Shimali.
136	Ditto, ditto South.
137	Sookuttea.
138	Sooltanpore.
139	Surondhi Angudpore.
140	Sulempore.
141	Thirea Kulleanpore.
142	Ditto Buzoorg.
143	Tilmas, muhal Shafaat Khan.
144	Ditto, ditto Soojan Singh.
145	Toorsa puttee, muhal Mahyar Khan.
146	Ditto, ditto Karamut Khan.
147	Toorsa, puttee Jangee Khan.
148	Ditto ditto, &co.
	Jagheer Villages.
149	Boojhera Jagheer.
150	Dibna.
151	Pyga Nugree maafee.
	Circle II.
152	Birahimpore.
153	Bulloopoorah, muhal 14 bis.
154	Ditto, ditto 6 „
155	Bunya Meergunge.
156	Busyee.
157	Chooraee.
158	Deodass.
159	Moond Alumpore.
160	Golab.
161	Goghaee, puttee Afghans.
162	Ditto, ditto Kayethan.
163	Gunneshpore.
164	Gujadhurpore.
165	Hurdi Kullan.
166	Jouner.
167	Khumurea.
168	Kirkuttee.
169	Kolcha.
170	Labheree.
171	Mohunpore.
172	Mogra Meergunge.
173	Mundunpore.
174	Mousenah, muhal Tusudduq Hosein.
175	Ditto, ditto Altaf Hossein.
176	Ditto, ditto Ahmud Hossein.
177	Ditto, ditto Latafut Hossein.
178	Nousanah khalisa.
179	Nugurea Kulleanpore, muhal Khalisa.
180	Ditto, ditto Muqrooqa.
181	Nuguree Saadut.
182	Nundgaon.
183	Nuthpoorah.
184	Ourungabad.
185	Parora.
186	Pipra.
187	Pultha.
188	Purchaee.
189	Rass.
190	Soojaatpore.
191	Shunjurpore.
192	Silrapore.
193	Singrampore.
194	Sehora.
195	Suhjenan.
196	Sindholi.
197	Thirea.
198	Thirea khoord, muhal Ghurbi.
199	Thirea khoord, muhal Shurqi.
	Jagheer Villages.
200	Mohummudgunge.
	Circle III.
201	Bhoora.
202	Busuntpore.
203	Dhimur puttee.
204	Goburhaee.
205	Hafizgunj.
206	Jytpoorah.
207	Kupoorpore.
208	Kutrobee Buzoorg.

Alphabetical and Chukwar List of Villages in Pergunnah Meergunge.—(Concld.)

Number.	Names of Villages.	Number.	Names of Villages.
	Circle III.—(continued.)		*Circle III.*—(concluded.)
209	Kynee Shibnuggur.	217	Sissowa, muhal Abbas Khan.
210	Lubhera.	218	Ditto, ditto Poorun Mul.
211	Moghutpore.	219	Ditto, ditto Shafee-ood-deen.
212	Mudnapore.	220	Ditto, ditto Khodeja Begum.
213	Routapore.	221	Ditto, ditto Sahib Singh.
214	Shanpore.	222	Sikha.
215	Simurea, muhal Shimbhoo Nath.	223	Tatarpore.
216	Ditto, ditto Janki Pershad.		

Alphabetical and Chukwar List of Pergunnah and Tuhseel Beesulpore.—Circle I.

Number.	Names of Villages.	Number.	Names of Villages.
1	Abhepore.	64	Bhugouteepore, ditto 10 bis.
2	Adhkutta.	65	Ditto, ditto 5 do.
3	Adilabad.	66	Ditto, ditto 5 do.
4	Ahirpoora Nugra.	67	Bhugwuntpore, Crore.
5	Ahirwarah.	68	Ditto Talooqa Kajar Bojhi.
6	Akberabad.	69	Bhusonda.
7	Akbergunj Simra.	70	Bhynpoorah.
8	Akhola.	71	Bhynsta.
9	Akholee.	72	Bichpooree, ilaka Chitee.
10	Akhoda.	73	Ditto, muhal Choonnee Lall.
11	Allahabad Simra, muhal ⅔rd.	74	Ditto, ditto Sewa Ram.
12	Ditto ditto, ditto ⅓rd.	75	Bikrumpore.
13	Ambdar.	76	Bilsunda, muhal 16 bis.
14	Amkhirea ilaka Pugar.	77	Ditto, ditto 4 do.
15	Amkhirea Jalalpore.	78	Budhoulee, muhal Chheda Khan.
16	Amkhera Lucknow.	79	Ditto, ditto Jan Beebee.
17	Amilea.	80	Boodhoulea.
18	Amileagungee.	81	Bohita.
19	Amirta khas.	82	Buda Gaon.
20	Amra Crore, muhal 12 bis.	83	Budhepoorah Gharun.
21	Ditto, ditto 8 do.	84	Budhera.
22	Andaha.	85	Buhadoorpore Hookmi, muhal Nynsookh.
23	Arazi Busooea.	86	Ditto ditto, muhal Ram Sookh.
24	Arazi Koondri Shurqa.	87	Ditto ditto, ditto Teeka Ram.
25	Ditto Muqrooqa Soohela.	88	Ditto ditto, ditto Cheta.
26	Arjoonpore.	89	Ditto Wyran.
27	Arsea Bajh, muhal Zurd.	90	Budhian.
28	Ditto, ditto Lakhi.	91	Bukynian Deechhut.
29	Athkonah, ditto Subz.	92	Ditto ilaka Rampore.
30	Ditto, ditto Zurd.	93	Bullea Mukrundpore.
31	Azumpore Burkhera, muhal Soorkh.	94	Bumroulee.
32	Ditto ditto, ditto Zungari.	95	Bunda.
33	Ditto ditto, ditto Zurd.	96	Bara Mow, muhal Mussumat Moonna.
34	Bahoora, muhal 15 bis.	97	Ditto, ditto Mussumat Lall Kooer.
35	Ditto, ditto 5 do.	98	Ditto, ditto Dhurum Dass.
36	Behareepore Koomerkha, muhal Sufed.	99	Bursingpore.
37	Ditto ditto, ditto Mahavuree.	100	Bursee.
38	Beharee Heera, muhal Sufed.	101	Burkhura.
39	Ditto ditto, ditto Zurd,	102	Burkhera.
40	Ditto ditto, ditto Lakhi.	103	Ditto, ilaka Pusgawan.
41	Behareepore khoord.	104	Ditto Kuta, muhal Gopal Singh.
42	Beneepore.	105	Ditto ditto, ditto Oomrao Singh.
43	Behtee.	106	Ditto Kulan.
44	Bhaeepore, muhal Ahmud Hosein.	107	Ditto Yaseen, muhal 15 bis.
45	Ditto, ditto Siraj-ood-deen.	108	Ditto ditto, ditto 5 do.
46	Bheekumpore oorf Purempore.	109	Busara, muhal Junoobi
47	Bhainsta Gwalpore.	110	Ditto, ditto Shimali.
48	Bhainsahee Purbutpore.	111	Busooeea khas.
49	Bhitera.	112	Busoola
50	Bhogapore.	113	Byd Khera.
51	Bhoputpore, 10 bis.	114	Chitee oorf Eentgaon, muhal Dhurum Singh.
52	Ditto, 5 do.	115	Ditto, ditto Hurchund Singh.
53	Ditto, 5 do.	116	Ditto, ditto Zurd.
54	Bhooda, muhal Soorkh.	117	Ditto, ditto Mundoo Singh.
55	Ditto, ditto Subz	118	Ditto, ditto Pem Kooer.
56	Ditto, ditto Zurd.	119	Ditto, ditto Bahadoor Singh.
57	Bhourooa, ditto Soorkh.	120	Ditto, ditto Subz.
58	Ditto, ditto Mooltani.	121	Ditto, ditto Gopal Singh.
59	Ditto, ditto Zurd.	122	Choorra Suookulpore.
60	Bhudera.	123	Chootkana.
61	Bhuderee.	124	Choukhundee.
62	Bhudeng Kunja, muhal Soorkh.	125	Chounsura.
63	Ditto ditto, ditto Zurd.	126	Chousur Pudea.

Alphabetical and Chukwar List of Pergunnah and Tuhseel Beesulpore.—Circle I.—(contd.)

Number.	Names of Villages.
127	Chounsur, 2 puttees.
128	Chintapore.
129	Chundpoorah.
130	Churkhola.
131	Chitea Sewa Ram.
132	Dhumoonpoorah
133	Deokullea.
134	Deorea khoord.
135	Dhimurpore.
136	Dhoksee.
137	Dhukurea.
138	Dhukwarah.
139	Dhukea Runjeet.
140	Dhukea Kullan.
141	Dhukea Maik, muhal Zurd.
142	Ditto ditto, ditto Soorkh.
143	Dhungowan.
144	Durlea.
145	Doogeepore Bhudgawan.
146	Doulatpore.
147	Doulatpore Shimali.
148	Ditto Janoobi.
149	Ditto Heera, muhal Zurd.
150	Ditto ditto, ditto Soorkh.
151	Dundea Bhugut.
152	Dundea Rajah, muhal 12½ bis.
153	Ditto ditto, ditto 7½ do.
154	Ditto Luchhi, muhal 17½ do.
155	Ditto ditto, ditto 2½ do.
156	Eenta Rora.
157	Fyzoollah Gunj.
158	Guhlooea, muhal Zungari.
159	Ditto, ditto Zurd.
160	Ditto, ditto Senduria.
161	Gangoopoorah.
162	Ghazeepore Poornapore.
163	Gajirha.
164	Ghooree.
165	Ghooree puttee.
166	Ghoongchea.
167	Ghunshampore.
168	Gobul Piteepoorah.
169	Goojroura
170	Goolurea Muchoapore.
171	Goolurea Radhey, muhal Shimali.
172	Ditto ditto, ditto Subz.
173	Ditto ditto, ditto Soorkh.
174	Goolurea Murori, 12 bis.
175	Ditto ditto, 8 do.
176	Ditto Mushmoela Qusbah.
177	Goolainda.
178	Gauhunean.
179	Gajhendee, muhal Sufed.
180	Ditto, ditto Zurd.
181	Gujhenda, muhal Peer Khan.
182	Ditto, ditto Het Ram.
183	Ghyaspore.
184	Hafiznuggur Bunahan.
185	Heerapore Deohee.
186	Hempore, muhal Sufed.
187	Ditto, ditto Mooltani.
188	Hurhurpore.
189	Huroonuggur.
190	Hurraepore.
191	Hutowa
192	Ikhtearpore, 10 bis.
193	Ditto, 7½ do.
194	Ditto, 2½ do.
195	Jadonpore Khoord.
196	Jadonpore Nutha.
197	Jehora Kulyanpore, muhal Shimali.
198	Ditto ditto, ditto Janoobi.
199	Jusouli Doo bari.
200	Jogeether.
201	Jugdeespore.
202	Jugeepore Jaitpore.
203	Julalpore.
204	Jumoonean, ilaka Chitee.
205	Jypalpore.
206	Kajurbojhi, muhal Soorkh.
207	Ditto, ditto Zurd.
208	Keshopore.
209	Khandepore.
210	Khanpore oorf Byrumpore.
211	Khirkea.
212	Khootrayoon, muhal Soorkh.
213	Ditto, ditto Sufed.
214	Khugaee.
215	Khujoorea.
216	Ditto, Puchpera, 15 bis.
217	Ditto, ditto 5 do.
218	Khumurea, talooqa Hutooa.
219	Khumurea Nundea.
220	Khungaon, muhal Rughbur Dyal.
221	Ditto, ditto 8 bis.
222	Khurugpore khoord, muhal Ali.
223	Ditto ditto, ditto Soorkh.
224	Ditto Kulan.
225	Kunhrapore.
226	Kishnee.
227	Kitunpore.
228	Kokila.
229	Kokilee, muhal 12½ bis.
230	Ditto, ditto 7½ do.
231	Kooraeea, talooqa Mudgawan.
232	Kuleanpore Bhurt.
233	Ditto, ilaka Behti.
234	Kumpura.
235	Kunpuree.
236	Kurkherah, muhal Shimali.
237	Ditto, ditto Junoobi.
238	Kurnaiya, ditto 17½ bis.
239	Ditto, ditto 2½ do.
240	Kurunka Oochusea, muhal Kesho Ram.
241	Ditto, ditto Lall Shah.
242	Kutuk Warah, muhal 15 bis.
243	Ditto, ditto 2-15-10.
244	Ditto, ditto 2--4-10.
245	Kychooa.
246	Kythoolea.
247	Ladpore.
248	Lilhur.
249	Loungha.
250	Lukha Khas.
251	Lukhnow Kulan.
252	Mudhpoori.
253	Mudhaeea oorf Ram Sala.
254	Mudra Mán.
255	Mudra Sookhee.
256	Mahadewa.
257	Muhowa.
258	Maholea, muhal Zungari.
259	Ditto, ditto Zurd.
260	Munuhra.
261	Muheshpore, muhal 13 bis.
262	Ditto, ditto 7 do.
263	Mahomedpore Bhujja.
264	Ditto, talooqa Rampore.
265	Mahomedgunj oorf Amkhirea.
266	Ditto, ditto Rampoorah.
267	Mukrundpore, ilaka Simroli.
268	Ditto, do. Nukha.
269	Mullukpore.
270	Manpore, muhal Zurd.
271	Ditto, ditto Soorkh.
272	Ditto, ditto Muroree.
273	Mar.
274	Meerpore Bohunpore, muhal Subz.
275	Ditto, ditto Abi.
276	Meerpore, ilaka Hurraepore.
277	Mighaee.
278	Mighounan.
279	Miluk Gountea, muhal Soorkh.
280	Ditto, ditto Subz.
281	Mawaiea.
282	Moollaupore, muhal 12½ bis.
283	Ditto, ditto 2½ do.
284	Ditto, ditto 5 do.
285	Moondgawan.
286	Moondea Bilehra, muhal Zurd.
287	Ditto, ditto Soorkh.
288	Ditto, ditto Goolabi.
289	Ditto, ditto Subz.
290	Moondea Bhugwuntpore, muhal Zurd.
291	Ditto, ditto Zungari.
292	Ditto, ditto Roshun Singh.
293	Moondea Crore.
294	Ditto Koondree.
295	Ditto Hoolas.
296	Moradabad oorf Nukuttea.

Alphabetical and Chukwar List of Pergunnah and Tuhseel Beesulpore, Circle I.—(concld.)

No.	Names of Villages.	No.	Names of Villages.
297	Moosaypore Jey Singh.	371	Purewa ilaka Kishnee.
298	Moosaypore Kulan, muhal Soorkh.	372	Ditto muhal Zurd.
299	Ditto, ditto Subz.	373	Ditto ditto Soorkh.
300	Mooselee.	374	Puraie.
301	Moosurha.	375	Pustrasuh.
302	Muraman.	376	Putrusia, muhal Zurd.
303	Museet.	377	Ditto ditto Sendoori.
304	Mutenan.	378	Putunean.
305	Munkapore, muhal Zurd.	379	Pynean Ram Kishen.
306	Ditto, ditto Subz.	380	Qasimpore.
307	Munean.	381	Qaboolpore.
308	Mynee.	382	Qusbah puttee.
309	Nawada Muheshpore, muhal Zurd.	383	Rajoopore.
310	Ditto, ditto Sufed.	384	Rampore Amrit.
311	Ditto, ditto Soorkh.	385	Rumanpore.
312	Ditto, ditto Subz.	386	Rusoolpore.
313	Nubbinuggur, muhal 9 bis.		Bis. Bis. Cut.
314	Ditto, ditto 6 do.	387	Rusyan Khanpore muhal 9 19 19¾.
315	Ditto, ditto 5 do.	388	Ditto ditto 6 13 7.
316	Nand.	389	Ditto ditto 3 6 13¼.
317	Narainpore, muhal Subz.	390	Richhola Ghasee 15 bis.
318	Ditto, ditto Zurd.	391	Ditto ditto 5 do
319	Ditto, ditto Soorkh.	392	Ditto Subul.
320	Nurotum Nugla.	393	Richhoolea.
321	Nusroollahpore.	394	Rohunean.
322	Nuwudea Bhugut.	395	Roorea Ghoorea muhal 15 bis.
323	Nuvudea Buljeet.	396	Ditto, ditto 5 do.
324	Nunia Dandee.	397	Roorea.
325	Nooranpore.	398	Rumpoorah.
326	Nowgawan Suntokh.	399	Rumpoorah Runau.
327	Nugeepore Bhudurea.	400	Rumpooruh Nougawan.
328	Nugra, talooqa Moosepore.	401	Rundheta.
329	Nugra Fiza.	402	Sabepore.
330	Nugra Rata.	403	Sahdian.
331	Nugurea Futtehpore.	404	Samee Nawadah.
332	Ditto Tilagir.	405	Seetulpore.
333	Oochusea, muhal Shurqi.	406	Shahbazpore.
334	Ditto, ditto Mahavuree.	407	Shuhpooruh.
335	Oogunpore, muhal Junoobi.	408	Shekhoopore.
336	Ditto, ditto Shimali.	409	Sheopoori Nuvudea, muhal 17½ bis.
337	Ditto, ditto.	410	Ditto ditto 2½ do.
338	Ditto Murori.	411	Shergunge muhal Shimali.
339	Oolilka.	412	Ditto, ditto Junoobi.
340	Oomra Khan Singh.	413	Simra Mahiput.
341	Oomurea.	414	Sungaon.
342	Puhargunge.	415	Sittargunge, muhal 15 Bis.
343	Phoota Koean.	416	Ditto, ditto 5 do.
344	Phursaha Choorha.	417	Sondha.
345	Pipra khas.	418	Soodni, muhal Soorkh.
346	Pipurghunan.	419	Ditto, ditto Mooltani.
347	Pipurea Sunjurpore.	420	Ditto, ditto Zurd.
348	Pipurea ilaka Pugar.	421	Sohela.
349	Pipurea Nundun muhal Shimali.	422	Sookutea Juskurunpore.
350	Ditto, ditto Junoobi.	423	Soondhia.
351	Pirtheepore.	424	Sufoura.
352	Poornapore.	425	Sookhia.
353	Poorynian.	426	Tajpore.
354	Poorynan.	427	Tedha Lekhraj.
355	Puchenda oorf Puchpera.	428	Ditto Sree Ram.
356	Puchpera Pookha.	429	Tehree.
357	Pundree muhal Zurd.	430	Tiholea.
358	Ditto, ditto Soorkh.	431	Toorha.
359	Ditto, Murori.	432	Waira, muhal Zurd.
360	Pukurea Bhundooa.	433	Ditto, ditto Soorkh.
361	Ditto, talooga Oomurea.	434	Ditto, ditto Goolabi.
362	Ditto, Munglee.	435	Ditto, ditto Subz.
363	Purasi Ram Kishun, muhal Junoobi.	436	Ditto, ditto Mooltani.
364	Ditto ditto Shimali.	437	Ditto, ditto Lakhi.
365	Purasi oorf Pursea.	438	Ditto, ditto Zungari.
366	Purbutpore Puttee.	439	Ditto, ditto Sufed.
367	Purtab Dandi.	440	Kurumpore maafee.
368	Pursundee, muhal Sufed.	441	Lilour Goozranpore, ditto.
369	Ditto, ditto Soorkh.	442	Poorynean maafee.
370	Purewa Anoop.	443	Tikree maafee.

Alphabetical List of Pergunnah Beesulpore, Circle II.

No.	Names of Villages.	No.	Names of Villages.
1	Adilabad Murori.	7	Amilea Murori.
2	Agyaree.	8	Behta.
3	Ajan.	9	Bhugwantpore ilaka Kureli.
4	Allahabad Devul, muhal Zurd.	10	Bhyrpoori muhal Lakhi.
5	Ditto ditto, ditto Bindrabun.	11	Ditto, ditto Sufed.
6	Ditto ditto, ditto Gunga Pershad.	12	Ditto, ditto Zurd.

Alphabetical List of Pergunnah Beesulpore, Circle II.—(concld.)

Number.	Name of Villages.	Number.	Name of Villages.
13	Bilaspore.	84	Manpore Julalpore.
14	Birea muhal Ghurbi.	85	Meerpore Humoopore.
15	Birea, ditto Shurki.	86	Meerpore Rutunpore.
16	Bouni muhal 17½ Bis.	87	Meerpore Oodeit.
17	Ditto, ditto 2½ do.	88	Meerpore Girind.
18	Budheporah Murori.	89	Meerpore Heerpore.
19	Ditto talooka Koosman.	90	Meerpore talooqa Dhukurea.
20	Bukynian talooka Muhud.	91	Minturpore.
21	Burgudo.	92	Miteepore.
22	Busaee Poorynean.	93	Moondea Sem Nugur.
23	Chandpore.	94	Moosyepore Dyagir.
24	Chuk Sheopoori.	95	Mudhkurpore.
25	Chuprowa Kooeean.	96	Mudhaeea, muhal Soorkh.
26	Chithea Hilgee.	97	Ditto, ditto Asmani.
27	Deohnan puttee.	98	Mudhooapore.
28	Deora.	99	Muh Khas.
29	Deorajpore.	100	Mujhgawan.
30	Deoria Kullan, muhal Zungari.	101	Mukrundpore Roshun Singh.
31	Ditto, ditto Zurd.	102	Mulkapore.
32	Dhooria, muhal Shimali.	103	Munpoorah.
33	Ditto, ditto Junoobi.	104	Murori, muhal Zurd.
34	Eesapore.	105	Ditto, ditto Lakhi.
35	Fazilpore, oorf Raepore.	106	Nugawan Ummur, muhal Soorkh.
36	Gajna Sudherpore muhal Sufed.	107	Ditto ditto, ditto Sufed.
37	Ditto ditto, ditto Soorkh.	108	Nowa Nugla.
38	Ghunghora, muhal Zurd.	109	Nuwudea Murori.
39	Ditto, ditto Jowahir Lall.	110	Oodurha.
40	Ghoori khoord muhal Sheogholam Singh.	111	Orajhar.
41	Ditto ditto Dwarka Dass.	112	Pipurea Singeepore.
42	Gopalpore.	113	Puchtour Kooeean.
43	Gouhurpore.	114	Pukurea.
44	Goolurea talooqa Soodni.	115	Puseapore.
45	Heerapore.	116	Pusgawan.
46	Hurraee, muhal Zurd.	117	Putijea, muhal Kheoraj Singh.
47	Ditto, ditto Soorkh.	118	Ditto, ditto Shama Churrun.
48	Iradutpore Pugar.	119	Pynean Himmut.
49	Jadoupore puttee.	120	Pyut Bojhee.
50	Jumoonean.	121	Raepore.
51	Jusaee Nagur.	122	Rumbojha, muhal Soorkh.
52	Jogia Bari.	123	Ditto, ditto Sufed.
53	Jugutpore.	124	Ram Nuggur Jugutpore.
54	Jhumpa.	125	Rampore Basuntpore.
55	Khukhooman, muhal Nujm-ood-deen.	126	Raath.
56	Ditto, ditto 7 bis.	127	Rautapore, muhal Gopal Rum.
57	Ditto, ditto Nujmooddeen.	128	Ditto, ditto 7 bis.
58	Ditto, ditto Chokhey Lall.	129	Sand Deo.
59	Khan Ghat.	130	Sayer.
60	Khurdaha.	131	Shahpore.
61	Khurdahaee, muhal 18 bis.	132	Seetulpore Muroree.
62	Ditto. ditto 2 do.	133	Shampore.
63	Kishunpore.	134	Sheregunj khoord.
64	Kooraiya.	135	Simra Inchha Ram.
65	Ditto Kulan.	136	Simbooapore.
66	Koosman.	137	Simrauli.
67	Konhara.	138	Sindhoura Khurugpore.
68	Kuleanpore, Zillah Kureli.	139	Ditto Bundhooa.
69	Kureli, muhal Sufed.	140	Singhooa.
70	Ditto, ditto Golabi.	141	Singeepore.
71	Kurunpore Laiq Ram.	142	Sissaiya Berkeley.
72	Kurunpore.	143	Ditto Jalalpore.
73	Ditto Chuk.	144	Sehas, muhal 15 bis.
74	Kushtooa.	145	Ditto, ditto 5 do.
75	Kutaiya.	146	Soorha, muhal Begum Jan.
76	Lohicha.	147	Ditto, ditto Girdharee Lall.
77	Lamooan, muhal Man Singh.	148	Surnean oorf Sarae.
78	Ditto, ditto Bhoop Singh.	149	Tilchhee.
79	Ditto, ditto Anund Singh.	150	Tilsunda Husowa.
80	Madhopore, muhal Chet Ram.	151	Toolapore, muhal 15 bis.
81	Ditto, ditto Junoobi.	152	Ditto ditto 5 do,
82	Mahomedpore talooqa Kureli.	153	Pulea Maafee.
83	Ditto, ilaka Kishunpore.		

S. M. MOENS,

Settlement Officer.

ORDERS OF GOVERNMENT.

No. 259 OF 1883.

RESOLUTION.

REVENUE DEPARTMENT.

Dated Allahabad, the 29th January, 1883.

READ—

Letter from the Secretary, Board of Revenue, North-Western Provinces, No. $\frac{216}{I.-96}$, dated the 30th April, 1881, with which was submitted the report on the revision of settlement of the present district of Bareilly and of tahsíl Bisalpur, now forming part of the district of Pilibhít.

OBSERVATIONS.—The district of Bareilly at the time of the recent settlement comprised nine tahsíls, with sixteen parganas, tahsíl Mirganj being reckoned by the Settlement Officer as one pargana. Two tahsíls, with three parganas, then formed the sub-division of Pilibhít, and were separately assessed by Mr. E. Colvin, whose report has already been reviewed by Government. The settlement of the remaining seven tahsíls, six of which (the seventh, Bisalpur, is now included in the newly-created district of Pilibhít) form the present district, was entrusted to Mr. Moens in 1865, and was completed by him in 1872. The work was in his charge from first to last, and nine out of thirteen parganas were actually assessed by him. The remaining four parganas were assessed, under his supervision, by his Assistant, Mr. F. W. Porter, who was appointed in 1867. Various causes, chief among which was the revision of the assessment of the two northern parganas, Richha and Chaumahla, delayed until 1881 the submission of Mr. Moens' report by the Board.

2. The tract of country settled by Mr. Moens, which for convenience will be termed the Bareilly district, contains 1,971 square miles. It forms part of the wide sub-Himalayan plain, and, being destitute of hills, slopes from north to south in a scarcely perceptible gradation. Numerous streams, taking their rise for the most part at the foot of the hills or in the Tarái, and flowing southward, intersect the northern and centre parts of the district. Chief among these are the Deoha, the Eastern Bahgul, and the Kicha and Western Bahgul; while diagonally across the southern part of the district, the Rámganga, a river fed by hill waters, into which the streams just named find their way, flows in an uncertain course through a rich alluvial valley. The extreme north of the district, which marches with the Tarái, being damp and unhealthy, supports a somewhat scanty population, and bears traces of having belonged at no distant period to the submontane forest tract. With each mile to the southwards the character of the country improves, presenting before long the appearance of a fertile, well-cultivated, and well-inhabited plain.

3. The natural soils of the district are the loam, clay, and sand of the uplands or *bángar*, and the alluvial soil of the riverain tracts or *khádir*. Of the soils the loam is, on the whole, the best. It is easy of tillage, being light and porous, and bears the greatest proportion of valuable crops. The clay (*matyár*), which is ranked second, varies in quality from a soil of a blue-black colour, yielding under favourable circum-

stances crops as good as, if not better than, those grown on good loam, to a white pasty-coloured variety, of hardly more value than poor sand. Sand (*bhúr*) forms the third class, and unless manured and irrigated, it is reserved chiefly for the coarser autumn crops. The alluvial soils of the *khádir* are of qualities varying from a shifting sand, which hardly gives a footing to rank grass, to a fine deposit of mud, yielding the finest crops without irrigation. The loam is the most evenly and universally distributed of the soils. Clay is found chiefly in the northern parganas, diminishing in quantity as the Rámganga is approached, a rule reversed in the case of the sand, which is scarcely to be found in the north of the district, while it predominates in the high lands bordering on the valley of the Rámganga. The north of the district is its more fertile part, containing as it does the best soils and a large proportion of them.

4. Owing to the sub-Himalayan position of the district, and its rainfall averaging forty-two inches, the necessity for artificial irrigation is not so keenly felt in Bareilly as in less-favoured districts. The natural moisture of the country enables the crops to dispense with the constant waterings necessary in drier parts of the country. The water, except in the high ridges to the south-west of the district, where the spring-level varies from sixteen to twenty-six feet from the surface, is nowhere found at more than fourteen feet from the surface. Earthen wells of the rudest kind, mere "holes in the ground," lasting in most places for one season, are an ordinary means of irrigation, being easily dug in many parts of the district. Besides the well-irrigation, much of the irrigable land is watered from tanks and swamps and from the streams which thread through the country. Across the latter dams are flung, and the water stored behind the dams is distributed among the villages whose labour has built the dams. In the north part of the district this system formerly caused much stoppage to the drainage lines of the country, and it likewise led to many disputes regarding the use of the water and the management of its distribution. But the Canal Department many years ago took the matter in hand, and a scientific system of irrigation was introduced. Masonry dams have been built on some of the larger streams, from which channels carry the water between the watersheds of the streams; the old channels have been re-aligned; and though works on a comparatively small scale only, these canals, according to the settlement returns, supply nearly a fourth of the recorded irrigation of the district, which amounts in all to 390,911 acres, or 44 per cent. of the total cultivated area. These figures show an increase of 113,615 acres on the irrigated area of the former settlement, and an increase of 4·3 per cent. in the proportion of irrigated to unirrigated land. In times of severe drought, however, the canals fail to meet fully the emergencies of the country, since the scanty supply of the streams that feed them is then seriously curtailed. For, as yet no canal drawing its water from a snow-fed stream traverses the district, nor does any large extension of canal-irrigation in the district seem at all likely. And the "irrigated" area of the settlement returns would more correctly have been styled "irrigable;" since lands which, according to the crop with which they are sown, may be watered in different years, and not only those watered in one particular year, are entered in them as irrigated.

5. The population at the time of the former settlement cannot be exactly ascertained, but it probably was considerably below that of the census of 1872, which showed a return of 1,220,579 inhabitants. The latest census gives 1,210,286, thus showing a falling off, due no doubt to the scarcity of 1877-78. Decrease is confined to tahsíls Faríd pur, Nawábganj, and Bisalpur, in which it is considerable, and it is there compensated in some degree by increase in the other tahsíls, chiefly in the northern tahsíl, Baheri. The average density per square mile is now 614, a high incidence, considering the scanty population of the two northern parganas. There is no town of note in the district except Bareilly, Aonla with 11,153 and Bisalpur with 9,250 inhabitants standing next to it in order of size. Though one person in every seven or eight of the population is Muhammadan, the agricultural classes are almost entirely Hindus. Kurmis, Lodhs, Kisans, and Muraos form a considerable proportion of the cultivating population, being found chiefly in the best cultivated parganas lying in the centre and north of the district ; while to the south, where the soil is light and inferior, Thakurs predominate.

6. With the increase of population and the extended market which improved communications had thrown open to agricultural produce, a marked extension in cultivation was inevitable. Comparison of the returns of the present and former settlements shows the area under the plough to have increased from 693,501 acres to 883,993, or more than a fourth. The statistics in full are given in para. 9 of the Board's review. Summarised they show that, in 1832, 51 per cent. of the total area was cultivated, while 18·7 per cent. was returned as culturable, and 30·3 per cent. as unculturable, covered with groves, and revenue-free. The returns 35 years later showed 70 per cent. of the area as cultivated, 12 per cent. as culturable, and 18 per cent. as barren, wooded, and revenue-free. The decrease under the last head is explained by the resumption of numerous revenue-free tenures. In all 82 per cent. of the assessable area is under the plough, the increase since last settlement being general, but most marked in the Aonla tahsíl. At the present time six of the thirteen parganas have less than 10 per cent. as a reserve of culturable waste, the proportion being notably small in Karor and in Bisalpur, in the north-east part of which, however, there is a considerable amount of forest land, which is excluded from the culturable area. The figures deserve attention, as pointing to a time when unless emigration or the development of manufacturing industry intervene, we may find the culturable area entirely taken up, and the population of the district dependent solely on agriculture.

7. The chapter in Mr. Moens' report on the various kinds of crops, and the method of sowing, raising, and dealing with them, is of great interest. As will be seen later on, produce experiments entered largely into his work and were made on an extensive scale. The results of these experiments are given, and the average produce of each crop per acre recorded. It is satisfactory to know that an officer of such exceptional experience as Mr. Moens discredited the statement that the soil has been weakened by over-cropping ; and that his experiments go to show that the Indian cultivator gets more out of the soil

than those imagine who are disposed to judge of his skill by the primitiveness of his implements and methods. Autumn crops preponderate in Bareilly, while a sixth of the cultivated area is double-cropped, gram, masur, wheat, barley, and oilseeds being sown after the early rice and Indian-corn has been cut. Wheat stands at the head of the list of crops, with 206,875 acres, nearly a fourth of the entire cultivation; rice follows, covering over a fifth; while a sixth of the area is under bajra. Sugarcane was in the years of survey sown in 50,078 acres, and has shown a marked increase in recent years. No attempt has been made by Mr. Moens to estimate the annual value of the gross outturn of the cultivated area. But from the figures supplied by his report, the value of the sugarcane produce alone may be roughly estimated at 31 lakhs of rupees, a sum nearly double the revenue of the district. It is to be feared, however, that the portion of the value filtering into the tenants' hands is comparatively small. The crop is usually grown on advances made by sugar-refiners; and when, as is often the case, the refiner is also the landlord, or is supported in his dealings by the landlord, the tenant, who has once opened an advance account with the refiner, is engaged in an unequal struggle, having no option left but to sell his *ras* or cane-juice at a price considerably below the rate at which, when ready, it might be sold by him for cash in the market. The rapid increase in recent years of the number of sugar-refiners testifies to the generally remunerative character of the trade. Wheat and rice rank next to sugar in importance as exports, and along with sugar may be said to constitute the chief articles of trade in the district, which is purely agricultural in its character.

50,078 acres at (say, average of) Rs. 62 per acre; price Rs. 17 a hundred kucha maunds (*vide* page 98 of report).

8. Mr. Moens has given an interesting sketch of the history of Bareilly from the earliest historic times until its cession to the British in 1801. It may be briefly described as the record of the long struggle of the Katheria Rajputs to resist the yoke of Musalman supremacy. In 1424 the Katherias were finally defeated. But though broken in strength, they were not subdued; and in the 18th century, when the Delhi Empire was tottering to its fall, their leaders found themselves independent in all but name. Their internal jealousies prevented them from seizing the opportunity afforded by the paralysis of the ruling power, and general anarchy prevailed. In the midst of it an Afghan slave, Daud Khan, noted for his bravery, who had quitted his master and adoptive father in Kandahar and come to Hindustan, collected a band of his freebooting countrymen and extended his influence at the sword's point. His adopted son, Ali Muhammad Khan, a Jat by birth, founded the Rohilla power, which ceased to exist in the person of his successor, Hafiz Rahmat Khan (son of Daud's master), who in 1774 died at the head of his troops, fighting gallantly against the forces of the Nawab Vazir of Oudh and their English auxiliaries. A jágír of certain parganas was by treaty granted to Faizullah Khan, son of Ali Muhammad Khan, but the rest of Rohilkhand remained in the hands of the Nawab Vazirs of Oudh; and after 27 years of misrule and oppression, which had well nigh reduced it to a wilderness, it was ceded to the British in 1801. The long struggles which

had torn the district were then set at rest, but not the old enmity between Hindu and Muhammadan, which has more than once re-appeared.

9. It cannot be said that the revenue administration during the early years of British rule was such as to restore prosperity to the desolate and untilled land. To understand fully the economic conditions of the district at that time, a slight sketch of its previous revenue history is requisite, though the data, as given in the report, are necessarily scanty and open to doubt. The earliest records (those of Akbar) show that at the end of the 16th century the revenue stood at Rs. 5,32,359 in our money (though the exact value of Akbar's currency, as measured by our own, is much disputed), and was nearly equivalent to the rental, some 8 per cent. being allowed for the trouble of collection.* The *zamindár* existed, but was not the *proprietor* in our sense of the word. Farming found no place in Akbar's system, though it was introduced by his successors side by side with management through the zamindárs. The Rohillas, on the other hand, made farming the corner-stone of their financial system, and it is still in force in the small Rohilla State of Rámpur. The villages are leased to the highest bidder, the tenants' rights being protected by a clause fixing their rents during the currency of the lease. Proprietors are not recognised; the only favour conceded to zamindárs is permission to hold their *sír* land at privileged rates, and the revenue practically corresponds with the rent-roll. From a fiscal point of view the farming system was a success under the Rohillas. In 1754 the revenue of the Bareilly district stood at Rs. 15,25,000, or over 16 lakhs of our money, a large sum for that time, and not far short of the assessment of a hundred and twenty years later. After 25 years of Oudh rule the revenue of the district had fallen to half that amount, a sufficient comment on the administration of the Nawáb Vazirs.

*Gazetteer, Bareilly, p. 602.

10. The figures given in the margin show the amount of the revenue under successive assessments made during our rule, and they tell their tale clearly enough. The first six assessments cannot be called *settlements* in the modern sense of the word, for no classification of soils was attempted, and the land was not even measured until the passing of Regulation VII. of 1822. At the outset the system of farming pure and simple was maintained, and proprietary rights were scarcely recognised. Villages were put up to the highest bidders, and suspicion that the assessments were unduly low made the district officers willing to accept the bids of mere speculators. The officials who prepared the estimates were liable to disgrace if these seemed not sufficiently high; and as they received a commission on collections and no regular salary, their interest lay in forcing the bids as high as possible. Still an attempt was made to shield the tenants from extortion, as the earlier leases show; and a distinct promise of permanent settlement with the farmers engaging was held out at both the first and third settlements. This was set aside by the Court of Directors; and after the third settlement complaints were raised

		Rs.
1801—3	... ...	9,06,897
1804—6	... ...	9,27,118
1807—10	... ...	13,08,213
1811—15	... ...	16,26,438
1816—20	... ...	16,25,873
1821—33	... ...	16,22,600
Revenue of last settlement.	Initial ...	14,87,236
	Expiring ...	13,78,320

in consequence, and a combination was formed to compel Government to reduce its demand. The effort was unsuccessful, and the fourth settlement, made under the direction of the Junior Member of the Board, fixed the revenue at over 16 lakhs, at which sum it stood with little variation for 22 years. The salient feature of the fourth settlement is its recognition of zamindárs ; and where these were wanting, as was often the case (the Rohilla rule having gone far to obliterate the zamindári rights that formerly existed), the *mukaddams* or headmen, who possessed no pro-
Vide Gazetteer, p. 606. prietary title, were set up in their place. The fourth settlement failed to work satisfactorily, heavy balances accrued, and the drought of 1815-16 intensified the distress. The authorities, however, set their faces against any reduction of the demand, and the fifth settlement closely resembled its predecessor. A fall of prices which continued for some years demonstrated the impracticability of an assessment which had been borne with difficulty in years of high prices; and in 1830 Mr. Boulderson, the Collector, was directed to re-settle under Regulation VII. of 1822 villages whose revenue could not be paid. His inquiries extended to 412 villages, and his just and careful revision of the assessment effected substantial relief. The land was for the first time measured by him, the proprietary rights of the zamindárs were ascertained and acknowledged, and the Government demand was fixed at 78 or 79 per cent. of the rental. Further, Mr. Boulderson desired to secure the rights of resident tenants by fixing their rents for the period of settlement. This he failed to effect, and until Act X. of 1859 was passed no tenant had any legal fixity of rent or tenure. The regular settlement under Regulation IX. of 1833 followed close on Mr. Boulderson's inquiries and revision, and it resulted in a further reduction of the revenue. This settlement, made by Messrs. Conolly, Head, R. Money, and James Muir, was the first complete settlement based on a survey and classification of soils and villages. Moderation was enjoined on the assessing officers, and the demand was definitely fixed at 66 per cent. of the rent-roll. The work of the Settlement Officers varied widely in details, for the first two classified their villages in compact tracts of a generally similar character, while the latter two paid little regard to locality, dividing their villages into good, middling, and bad. Mr. Muir worked on revenue-rates, his colleagues on soil-rates. But the general result of their labours was a fair, and in Mr. Muir's parganas a light, assessment which worked well. During the currency of this settlement only 18 villages out of 3,326 were sold for arrears, and farms on account of arrears of revenue were rare, except in the years following the great famine of 1838-39. With the rise of prices that set in from 1860, the profits from the soil increased largely, landlords being gainers especially in estates where rents were paid in kind. The expiring jama of the district stood at more than a lakh less than when first given out, owing to large grants of land having been made to the Nawab of Rámpur for mutiny services and transferred to his territory.

11. Mr. Moens' report shows that the district contained at the time of his settlement 2,570 villages (*mauzas*), with 3,362 estates (*maháls*), the former averaging 490 acres in area, the latter 379 acres ; and that the disintegration of villages into maháls and separate portions (*pattis*) has gone on rapidly during the last 30 years. Four-fifths of the estates were at the

time of the recent settlement held undivided by a single person or family, and most of the remainder were perfect and imperfect co-parcenary estates held in simple proportionate shares. Seventy-four villages were held revenue-free, and in a few a superior proprietary right was found to exist over and above that of the managing possessors. From an antiquarian point of view the tenures are of little interest, the Rohilla rule having swept away most traces of older forms of property. Though a few of the proprietors possess title-deeds attesting the antiquity of their families, the titles of a large proportion of the landholders have been created within the period of British rule. The records of the earliest settlement show that only 461 men engaged with the Government for the two districts of Bareilly and Sháhjahánpur, but at the recent settlement 23,122 persons were recorded proprietors in Bareilly alone. The increase, due partly to actual growth in numbers, is probably also in part due to greater detail and accuracy of record. In point of numbers, Thakurs, holding chiefly in the south of the district, predominate, forming more than a third of the entire number of recorded proprietors. Musalmans follow with 5,750, Kayaths and Brahmans with 2,773 and 2,398 respectively. The purely trading castes are poorly represented in point of numbers, but figures do not adequately represent their influence or the amount of their property; for, in spite of their small numbers, they have very strongly established themselves in two rich parganas, Suneha and Bisalpur, and they now form an important factor in the proprietary class in nearly every pargana. The large number of Kayath landlords is noticeable, and their existence is attributed to the influence exercised by the kanúngos in the earlier settlements. They are largely found, with many of the trader and Musalman proprietors, in the head-quarters tahsíl of Karor.

12. Mr. Moens has little to say in favour of the Bareilly landlords. Taking them as a whole, the tie that binds them to their lands is a pecuniary one only. As a class they are said not to do much to improve their estates; and the most energetic in the management of their property, the Raies, are described as hard landlords to all their tenants, except those who are thoroughly subservient. Three-fourths of the landlords are absentees, mostly residents of the city of Bareilly, and in the two unhealthy northern parganas the proportion of resident landlords does not exceed 2 per cent. The highest percentage of residents is 20 in Farídpur. The area cultivated by proprietors (*sír*) is, as might be expected, extremely small, less than one acre in 18, one acre in three being an ordinary proportion in some parts of the country. No less than 35 per cent. of the entire area of the district changed hands during the currency of the last settlement, and (if the returns are to be trusted) one entire pargana (Chaumahla) did so, parts of it more than once. At first proprietary rights were not in any way acknowledged by the British administration, and the tenants were secured, in theory at all events, from vexatious enhancement. But the feeling in favour of a body of landlords began to make itself felt, and a class of proprietors was created, some without the vestige of a right to such favourable treatment, whose share in the rental was fixed successively at one-fifth, one-third, and one-half, and upon whom no liability as to the treatment by them of their estates was laid. And we now find

in the Bareilly district a body of landlords, three-fourths non-resident, who intercept a large proportion of the rental, without making much or any effort in return to improve their estates.

13. It is a satisfaction then, in turning to the tenants, to find that so large a proportion of them are protected by their occupancy rights from arbitrary enhancement and ejectment. The settlement statistics show that tenants with right of occupancy numbered 132,103, holding 609,547 acres, while 79,155 tenants-at-will held 191,065 acres, or less than a fourth of the tenants' cultivated area. This proportion of occupancy land is very high, but it is not peculiar to Bareilly, tenant-right in the adjoining districts of Budaun and Sháhjahánpur being almost, if not quite, as strong. The noticeable point is, that the rents paid by the occupancy-tenants in the cash-paying parganas of Bareilly are higher than those paid by tenants-at-will, the former's rent averaging Rs. 3-4-4 an acre against the latter's Rs. 3-1-6. Mr. Moens explains this by saying that the best land is in possession of the occupancy-tenants. Act X. of 1859, which conferred occupancy rights on the tenant, is severely criticised by Mr. Moens, but it seems unnecessary to discuss in this place the questions that his criticism raises. Though the introduction of the measure necessarily created friction between landlord and tenant, the need for securing to tenants a right in their holdings is now generally admitted. Whether the friction would have been less and the object in view would have been attained, had fixity of rent for a given period, such as the period of settlement, been adopted, instead of legalising the accrual of rights of occupancy by the lapse of any specified period of time, need not now be considered.

14. The chapter on tenants and their different divisions is interesting, but the interest is rapidly becoming antiquarian. The old distinction between resident (*chapparband*) and non-resident cultivators (*páhi*), and the sub-division of the former into the three grades of headmen (*mukaddam*), privileged (*rakami*), and ordinary tenants, has almost ceased to be recognised in practical agricultural affairs. The mukaddam still, however, retains status in some Bareilly villages, acting as bailiff for his absentee landlord and holding at privileged rates. His low rent is simply a return for service thus rendered, and is not, as some of the early officials deemed it, a survival of proprietary right. The privileged class are defined as those tenants who, from deference to tribal feeling, religious motives, or official position, were allowed to hold at favourable rates. Where the landlord is a Rajput, his relatives or clansmen cultivating in the village are generally included in this class ; but it is noticeable that caste privileges were not found to affect rent in Bareilly to any great extent, and the plea of caste privilege was seldom raised in rent cases before the Settlement Officer. From policy, former proprietors were often allowed by those who had taken their place to retain their sír holdings at favourable rates, the custom anticipating recent legislation on the subject. On reviewing the state of the Bareilly tenants generally, Mr. Moens comes to the satisfactory conclusion that they are fairly well off :—" They have, as a rule, an ample allowance of good food. Since the last settlement, the earthen vessels, which were almost universal, have been replaced by brass or other metals. Their clothing is better and they

have more of it." Against this must be set the fact that a large number are in debt. In some villages selected for inquiry the proportion reached two-thirds. In most cases, however, the debts were on current accounts adjusted at harvest, a system of carrying on agricultural operations by no means confined to India, and in the case of a large proportion of farmers all but inevitable. The Indian banker is not less indispensable to agricultural business than are bankers elsewhere; and if the interest that he enters in his bonds and accounts is high, that is mainly because security is weak, and not because he is harder or more unscrupulous than the men who lend money to peasants and cottiers in other parts of the world.

15. Of 800,112 acres held by tenants, rents in produce are still paid on 36 per cent., or rather more than a third of the area. Forty years ago the proportion was four-fifths, and it may be assumed that a further diminution of these rents is a mere question of time. Superior crops, as cane, cotton, Indian-corn, now invariably pay cash-rents; and cash-rents are almost universal in the south of the district, where the proportion of uncertain crops, such as rice, is smaller than in the north. In produce-paying estates the proportion of the produce taken by the landlord varies from a fifth to a half. The latter has been called a rack-rent; but the keen demand for land in the more densely populated parganas has caused even it to be exceeded since the settlement, and half the produce may now be considered the rate most frequently paid in the best produce-paying tracts. In spite of the disadvantages of the system of rents in produce, Mr. Moens did not view it with unmixed dislike, and he has carefully summed up its advantages as well as its drawbacks. It is fortunate that his views were so moderate, for experience has shown, what he himself anticipated, that commutation to cash-rents may prove a fatal gift to the tenant. Where the latter's means are too scanty to bear the strain of bad seasons, and where, as in rice tracts, the crops are uncertain, produce rents possess for him a distinct advantage. The bad seasons of 1877-78 in Rohilkhand brought to light numerous instances of tenants whose rents had been commuted to cash, but who, after falling into arrears, were obliged, under dread of ejectment, to revert to produce rents more unfavourable than those at which they originally held. Landlords, when not altogether dependent upon their agents (*karindas*), invariably prefer produce rents; and it is noticeable that while less than a third of the occupancy-tenants' land pays produce rents, the proportion is considerably higher among tenants-at-will.

16. The chapter on the rise of rental is necessarily unsatisfactory, owing to the hypothetical nature of the data available. Owing to the prevalence of produce-rents at the former settlement actual statistics are not available regarding the rental, which Mr. Moens was therefore compelled to assume from the revenue then fixed. Taking the figures for what they are worth, the rental in 1837 stood at Rs. 21,12,368, or Rs. 3-1-2 an acre on the cultivated area of that year. The corrected rental of the present settlement gives an incidence of Rs. 3-9-4 an acre, an increase of 16·6 in 30 years. The rise is 2 per cent. less in the cash than in the produce-paying parganas, and the rates on money-rented lands are much higher in the latter parganas than in the former, occupancy-tenants paying Rs. 4-0-3 and Rs. 3-4-4, tenants-at-will Rs. 4-4-9 and Rs. 3-1-6, respectively. The reason

assigned for this difference is that rise of prices is at once brought home to the mind of the landlord of a tract in which rents are paid in produce, and induces him to raise his cash-rents more rapidly than is the case where the landlord is surrounded by cash-rents. This is probably true; but another likely cause in Bareilly is that while the produce-paying parganas are now superior in natural advantages, in them cash-rents are paid as a rule only on the better sort of land and for the finer kinds of crops. It is this that accounts for the high incidence (Rs. 5-10-3 an acre) of cash-rents in a pargana like Richha, where 95 per cent. of the area is held at produce-rents, the remaining 5 per cent. being devoted to superior crops paying an abnormal rent. Taking the district as a whole, the rent rise was probably below the average in some other parts of the provinces, and it lagged far behind the ascertained rise of prices. On the latter subject Mr. Moens carefully collected returns showing the prices of wheat, barley, and bajra from 1805 to 1871. These figures show that the rise has affected all classes of grains, but it is more marked in the inferior kinds. Up to 1859 the rise was comparatively slight, not averaging 10 per cent.; but between 1860 and 1871 prices rose with a bound, the average increase for that period compared with the previous 30 years being 28, 31, and 35 per cent. in the case of wheat, barley, and bajra respectively. The greater rise in the inferior grains is explained by the improvement in communications during recent years. In former times much of the wheat could not be exported, and what the rich did not buy was eaten by the poor. Now the export of wheat is steady, and the demand of the poorer classes for bajra and barley has increased, forcing a rise in their prices. The question why the rise in rental was so far behind the rise in prices is fully discussed in the report. All the causes mentioned by Mr. Moens doubtless contributed to the result, none perhaps more powerfully than the last in his enumeration, namely, that enhancement of customary rents during the period for which the Government had fixed the revenue was altogether foreign to the native mind. And some of the causes that hindered the progress of rents *pari passu* with the rise in prices, have continued to operate, and probably will always operate, so that an enhancement of rent and revenue in proportion to prices may not safely be counted upon. But comparatively slow as the rise of rental was in Bareilly during the period of last settlement, the price of land advanced with marked rapidity. In 1832 it averaged Rs. 3-1-0 an acre, or one year's rent; eleven years later Rs. 5-5-6 was the usual selling price. For the period from 1862 to 1867 this price had more than doubled, Rs. 12-9-0 being reached; and in the five succeeding years it stood at Rs. 18. The gradual increase may have been caused by the extension of cultivation and the growing proportion of rent-paying land. But the rates of interest at which investments in land have been made leaves the appreciation of land without doubt. Whereas 10 per cent. was the rate of interest sought for capital invested in land in 1832, purchasers were content with 6 per cent. in 1872, and this rate has continued ever since.

17. The work of assessment remains to be considered. The measurement of the first tahsíl, Faridpur, commenced in October, 1865; and by June, 1870, the last pargana was completed, the average rate of progress being 576 square miles a year. The work was efficiently performed,

under the superintendence of amíns, by trained patwáris or by surveyors employed and paid by them as their substitutes : and its practical accuracy was attested by the professional survey which followed two or three years later. The cost of measurements to Government, excluding the pay of the European officers and Deputy Collectors, and apparently the establishment employed in comparing and checking the maps and field books at headquarters, was Rs. 38,126, or Rs. 20-5-6 a square mile, about a fourth, the Board note in their review, of the cost of a cadastral survey. It does not appear, however, what items other than the simple work of measuring, mapping, and field book-writing are included in the latter cost. The work of inspection and assessment followed the survey with rapidity. The first rent-rate report, that on Farídpur, was submitted by Mr. Moens in August, 1867, and other reports were soon sent in. In 1869, Mr. Moens, who had borne the brunt of the work alone, was relieved by the appointment of an assistant, Mr. F. W. Porter, who remained until the conclusion of the settlement, and assessed four parganas, Richha, Kabar, Sarsáwan, and Balia, under Mr. Moens' supervision. The last rent report was submitted in October, 1871, the entire work of assessment having been completed, with exemplary energy, in a little over four years.

18. The task which the assessing officer had to perform has properly been said to be, to ascertain for each class of land its fair rent-rate, eliminating abnormal varieties in the existing rates, and not assessing upon an anticipated rise of rentals, though allowing for the probable rise of unduly low rents. The demarcation and division of soils is thus the first step in the work of assessment. Compared with the more elaborate classification of some of the later settlements the divisions of soils adopted in Bareilly appear simple, and almost crude. The parganas were divided into circles according to the physical features and the general agricultural condition of their different parts. This division was made by the assessing officer after he had visited the pargana ; but an elaborate demarcation of soils in the villages of each circle by a trained staff, whose work was subsequently checked by the assessing officer, was not attempted. The natural soils of the fields, loam, clay, sand, and alluvial, were recorded at survey ; and the entries were subsequently checked, and the tracts or *hárs* of each village marked off by the Settlement Officer at the inspection of the village. In some few circles this classification was deemed adequate for purposes of assessment. In the majority of cases the loam, sand, and alluvial soils were sub-divided into wet and dry, first and second class, but beyond this no refinement was attempted ; and if, when thus described, the system seems defective, its defects (if they really existed) were obviated by the systematic inspection made of each individual village by the assessing officer, and his close observation and wide experience. The classification of soils adopted is remarkable, in that the artificial character of soils forms no part of it. In many districts in the North-Western Provinces the renting value of the land is determined mainly by its proximity to the hamlet, and in some the natural distinctions of soil as such are almost entirely discarded in determining rents. The reverse is the case in Bareilly, where, as a rule, there are no concentric belts of well-defined land, carrying rent in proportion to their distance from the village

19. The soils having been demarcated, the rent-rates paid in the various circles on the various classes had to be ascertained. In the eight parganas forming the centre and south of the district where cash-rents generally prevailed, rates were found by the usual inductive method. No peculiar difficulty was experienced, and the work of the Settlement Officer in these parganas may be considered to have been exceptionally simple. The tenures are free from complexity, and large co-parcenary brotherhoods rare; privileged tenants are few and far between, and the amount of sír is small; while taken as a whole, the rentals recorded by the patwáris were fairly correct, and instances of concealment of the true rental and collusion between landlord, tenant, and patwári were not very frequent. Rents in produce are paid on only a small proportion of the cultivated area, and fair rates could be ascertained for it from the adjoining cash-paying lands. But in the five northern parganas, where produce-rents averaged four-fifths of the entire cultivated area, the work of educing the average rental was one of difficulty. The proportion of land on which cash-rents are paid is small, and is usually reserved for the superior crops, which pay abnormally high rates. In such a tract the Settlement Officer finds himself in great perplexity, for the recorded rentals are, as a rule, absolutely unreliable; and before an estimate of the rental can be formed, the soils have to be carefully classified, the proportions of the various crops grown on each kind of soil noted, the varying outturn and the varying proportions of the landlord's share of it ascertained and their commuted money-value calculated. The rent-rate report of Karor, the first pargana in which Mr. Moens encountered produce-rents, shows that he fully appreciated the difficulties. "I have not worked out crop or produce rates," he says in para. 15; "they involve too many arbitrary assumptions for me to place any reliance on them." This opinion was not given until after close on 4,000 produce experiments had been made in that tahsíl. The problem of assessment was there solved by rating the produce-paying area, which formed only a fourth of the entire tenant-held land, at the rates paid on similar cash-paying land, *plus* an enhancement requisite to meet the additional profits derived by the landlord from the rise in prices (see paragraph 22 of Board's review). But in the northern parganas, Mr. Moens, despite his former opinions, was driven to adopt crop-rates based on produce experiments. He thus describes his method:—"I worked out crop-rates based on the average produce derived from a vast number of experiments; from this I deducted one-sixth to allow for reductions before division; from the remainder I took the average share received in the tract by the zamindár, and commuted the grain-rent to money at the average price of 20 years, omitting the famine years. I thus obtained average money-rates for each crop. I applied these rates to the areas of each crop in each soil, and the total divided by the area gave soil-rates in money. These were compared with the results of the rent-rates fixed in the numerous suits for commutation from kind to money-rates, which rates had been accepted by both parties to the suits, and finally a conclusion was arrived at as to the fair rent-rates for each soil." The principal safeguard against error with such a system is the application of collateral tests, and this was done as far as practicable by taking commutation rates already agreed to by land-

lords and tenants, and the cash-rates paid in similar land in the neighbourhood. In Richha and Chaumahla however, owing to the small extent of the cash-paying area (less than 5 per cent.), these checks could not be fully applied.

20. The average rent-rates selected or educed varied greatly in the different parganas and circles of the district. In the larger parganas, in which five or six assessment circles had been formed, as many as twenty were used ; in the smaller parganas six or seven sufficed. Those most generally used are noted in the margin. The loam, it will be seen, was the most highly rated of the three classes of soil, the rates varying from Rs. 6-6-0 per acre on irrigated loam in Nawábganj to Rs. 2-10-0 per acre, the rate on dry loam in Aonla, where the land was of light quality, resembling sand (*bhúr*). Clay, whose inferiority to loam had not been recognised at the former settlement, paid rates varying per acre from Rs. 2-4-0 in Richha to Rs. 5 in Bisalpur. The sand is of singularly uncertain quality, the best irrigated kind in the north of the district paying Rs. 4 per acre, while on the sandy ridges of Farídpur Re. 1-8-0 per acre was the usual rate. The Settlement Officer has prepared a schedule (see report, page 180, table XLIII.) giving the average rates for each class of soil in the different parganas. It shows the average soil-rates in the produce-paying parganas to be higher than those of the cash-paying by 11·5 per cent. for loam, 9·8 for clay, and 11·6 for sand respectively, and proves that, whatever the objection to crop rentals may be, their application to the produce-paying tracts created no hardship ; for against the enhanced rental has to be set the greater fertility of some parts of the produce-paying tracts, their advantages from canal irrigation, and the large profits which enhanced prices of produce confer on the landlords, if not on the tenants. In no part of the district is the revenue collected with greater ease ; and, whatever the condition of the tenantry, nowhere are the landlords' profits greater.

	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Wet loam,	5 12 0	5 10 0	5 8 0	4 8 0
Dry loam,	4 0 0	3 8 0	3 0 0	...
Wet clay,	5 0 0	4 0 0	...	...
Dry clay,	3 3 0	2 14 0	...	...
Wet bhúr,	3 4 0	2 10 0	...	...
Dry bhúr,	2 6 0	2 0 0	1 12 0	...

21. The rental obtained for each village from the application of the circle soil rent-rates to the soils of the village was compared with the rentals educed (1) from the actual village rent-roll, (2) from crop-rates in produce-paying villages, (3) from the circle average cultivated rate. The crop-rate rental, which was obtained by applying to the area under each sort of crop in the produce-paying village the average crop-rate deduced for the circle, was usually looked on as a minimum, and any difference between it and the result obtained from the circle soil rates was carefully examined. The further precaution was adopted of comparing with the results thus arrived at the rental obtained by applying to the soils of each village the average rates at which fell the assumed rental of each main class of land in the circle, as arrived at through the rates laid upon the sub-divisions of those classes ; and variations were noted and accounted for. Thus, though crop-rates formed the basis of the rental estimate in produce-paying circles, they were not absolutely relied on for assessment purposes. And in finally fixing the assessments allowance was made for (1) inferior cultivating power and skill in the tenants, (2) the absence of waste land, (3) capital sunk in the estate by the proprietor, (4) the liability of

the crops to damage from flood or other recurring calamity, (5) the amount of the increase on the former revenue, (6) the large number of poor shareholders, (7) badness of climate, (8) distance from markets. The case of each village was fully considered, and the village note-books show that rent-rates were not allowed to fetter the discretion of the assessing officer. Waste land bearing grass or wood was usually assessed on what it yielded; but where the soil was good and the tract well populated, a certain proportion of the land, which would bring the cultivation up to the average of neighbouring villages, was made to bear a cultivated rate. The assessment when declared to the landlords was still for a time open to revision, and any well-founded complaint was considered.

22. A succinct example of Mr. Moens' method has been given in paragraph 22 of the Board's review, and further illustration is unnecessary. The general results of the assessment may be briefly stated. The cultivated area of the year of measurement (1867) was 883,993 acres, with a recorded rental of Rs. 27,54,829, the incidence per acre being Rs. 3-1-2. The declared rental after corrections for sír and other land not fairly rented stood at Rs. 31,68,743, the incidence being raised to Rs. 3-9-4 an acre. The revenue assessable on this rental would have been Rs. 15,84,371. The sum actually fixed (exclusive of cesses) amounted to Rs. 16,62,670, which assumes a rental of Rs. 33,25,340, being Rs. 1,56,597, or nearly 5 per cent., in excess of the corrected rental. Part of the excess is to be accounted for by the estimated assets from waste lands and *sayar* items. But allowing for this, it is clear that the Settlement Officer assessed, and very properly, to a certain extent on anticipated enhancements to be obtained by the levelling up of unduly low rents. In the majority of the tahsíls the percentage of assumed enhancement was very slight, varying from 2·4 to 5·4 per cent. In Aonla and Suneha the increase assumed reached nearly 10 per cent. A considerable number of enhancement suits were filed in the settlement courts, but in a very large proportion of these, agreements were come to out of court, and the full rentals were made up between landlord and tenant by private arrangement.

23. From the following schedule a comparison may at a glance be made between the amounts of the present and the former assessment :—

Year.	Cultivated area.	Revenue.	Cesses.	*Increase*		Incidence on cultivation per acre.
				On revenue	On revenue and cesses.	
	Acres.	Rs.	Rs.			Rs. a. p.
1837 ...	686,683	13,75,230	17,251	...	...	1 14 11 opening year. 1 8 11 closing year.
1867 ...	883,993	16,62,670	1,74,770	20·4	31·6	2 1 1

It shows that, including cesses, the Government demand is 31·6 per cent., or nearly 4½ lakhs, in excess of that formerly paid. This is a large increase; and as the present revenue (*mál*) represents approximately a half of the rental, instead of two-thirds as formerly, it postulates an increase of rental from Rs. 21,12,368 to Rs. 33,25,340, or nearly 57 per cent. The reasons why the district has been able to bear the increase in the revenue demand will be patent from the foregoing pages. Between 1837 and 1867

the cultivated area had increased 28·5 per cent., exactly half of the increase in the rental, and little less than the percentage of increase in the Government demand. Cash-rents have certainly risen 16·6 per cent.; and in rents in produce landlords have reaped the advantage of a rise in prices of between 35 and 40 per cent. Communications have immensely improved, and the opening of the Oudh and Rohilkhand Railway in 1873 gave a stimulus to the cultivation of the richer crops.

24. The result of the re-assessment of the parganas in detail, the increase or decrease per cent. in each, with the increase in cultivation since last settlement, and the incidence per acre of the new revenue, are given in the following schedule:—

1	2	3	4	5	6
Pargana.	Former demand.	Present demand.	Increase or decrease per cent. of new over former jama.	Increase per cent. of cultivation since last settlement.	Incidence of present demand.
	Rs.	Rs. a.			Rs a. p.
Faridpur	1,45,694	1,61,604 0	10·9	21	1 9 2
Karor	1,78,969	2,41,941 8	36·8	30	1 14 7
Balia	24,402	33,680 0	38·0	27·5	2 0 11
Suneha	56,578	73,230 0	29·4	27	2 1 11
Aonla	64,207	93,285 0	45·2	71	1 14 3
Sarauli	37,858	45,400 0	19·9	47	1 12 0
Mirganj	1,17,065	1,34,890 0	15·2	20	2 3 4
Kábar (kind-paying) ...	48,118	60,910 0	26·5	18	2 7 6
Sarsáwán (ditto) ...	38,274	36,910 0	—3·5	1·8	2 9 9
Chaumahla (ditto) ...	59,580	75,620 0	26·9	35	1 14 4
Richha (ditto) ...	1,51,412	1,66,237 0	9·7	23	2 5 3
Nawábganj (ditto) ...	1,78,381	2,28,032 8	27·8	23	2 5 2
Bisalpur	2,77,783	3,07,930 0	10·8	20	2 3 9

One pargana only, Sarsáwán, shows a decrease. The increase in the cultivation is fractional; and though it is one of the kind-paying parganas, the rise in prices did not counterbalance the high former assessment. It is still the most highly-assessed pargana of the district. The high incidence of the revenue in the *batai* parganas will be noticed. It was inevitable, partly from their superior advantages and partly from their landlords having directly benefited by the rise in prices. It is worth noting, however, that though the revenue-rate is highest in the kind-paying parganas, the increase in incidence, as compared with last settlement, is highest in the cash-paying parganas, the percentages being 27·7 and 14·3 respectively.

25. It is unnecessary to summarise in detail the enhancements in the various parganas, as this has been done already by Mr. Moens (pages 158-59 of the report). In Aonla for instance, where the increase appears severe, amounting to 45·2 per cent., or with cesses to 59 per cent., an increase in cultivation of 71 per cent. justified the enhancement, which was accepted with scarcely a complaint by the landlords, whose rent-rolls, where under the average, were soon raised to the fair amount. In Balia again, where the enhancement amounted to 38 per cent., cultivation was found to have increased 27 per cent., and the assessments were accepted without protest. In these two parganas, indeed, considerable lenity was shown, for a higher jama might according to rule have been imposed; but the Settlement Officer wisely refrained from pressing too severely on

the proprietors, whose shares were often small, and who might have suffered permanently from too abrupt and excessive an enhancement. Aonla and Balia are the two parganas where the rise in the demand was most marked; and for the other parganas similar reasons justifying the increase could be adduced.

26. Though the assessments were at first generally acquiesced in, they had to undergo a somewhat severe test. The seasons immediately following the settlement were somewhat unfavourable; and discontent, which had shown itself in numerous appeals from the Karor assessments, was fanned into a flame by a self-constituted committee, composed chiefly of landlords living in the city. After Mr. Moens had left the district, an organised opposition was raised to the assessments generally. Taken as a whole, the agitation was found to be unjustifiable; but in the two northern parganas of Chaumahla and Richha, the Board were pleased to advise that a special officer, the late Mr. R. Currie, should be deputed to enquire into the complaints. His report vindicated generally the propriety of Mr. Moens' classification of circles and soils and his revenue-rates; but in some of the sparsely cultivated and unhealthy villages adjoining the Tarái, where cultivators are settled and retained on the land with difficulty, Mr. Currie considered that the area actually under cultivation had been over-estimated and too steady an increase in it counted upon. He recommended reductions amounting in all to only Rs. 5,310, and these were made; but the general excellence of Mr. Moens' work cannot be held to have been brought into question by this result. The revenue reduced was chiefly that of villages in which rents were paid almost entirely inproduce, and where the culturable area is out of proportion to the actual amount of land under the plough in certain years. Owing to the contraction of cultivation that takes place in bad years, the settlement of such a tract is attended with peculiar difficulty; and an assessment which secures to Government a fair average return in the run of seasons must press heavily on the landlord in years of scarcity. In other respects the course of the settlement has run smoothly. In the five years ending with 1880 there was not a single case of sale for arrears of revenue, and only ten instances are reported of the exercise of the severer forms of process for recovery of arrears. As this period included the scarcity period of 1877-78, the severity of the test and the generally satisfactory results are unmistakeable. Not that the calamity of these years did not in certain instances make the pressure of the revenue to be severely felt; but the instances are very few in which an error was made in over-estimating the capabilities of the village and leaving to the landholder less than a fair share of assets.

27. The incidence of the revenue-rate on cultivation, Rs. 2-1-1, is rather in excess of that of the neighbouring tahsíl of Pilibhít (Re. 1-14-3), and is far higher than the rates of Sháhjahánpur (Re. 1-9-7) and Budaun (Re. 1-3-9). But Budaun is renowned throughout the provinces for the lightness of its revenue; and Sháhjahánpur, though possibly not so inferior to Bareilly as the difference in rates would imply, has in its northern portions a vast area of inferior land. Compared with districts like Aligarh (revenue-rate Rs. 2-6-3 per cultivated acre), the incidence of the revenue

on Bareilly is moderate. But Aligarh is one of the best and richest districts in the provinces, with exceptional facilities for irrigation; and the rate in Bareilly may with reasonable certitude be adjudged a just one.

28. In the concluding paragraphs of his report Mr. Moens recommends that his settlement should be sanctioned for twenty years only. The main ground alleged for this proposal was a fear of canal-irrigation being largely extended at enhanced water-rates, which would have to be paid from the landlords' profits, and make the burden of the revenue too heavy to be borne. To this was added the possibility that prices would fall in the case of wheat, below 26 or 27 seers for the rupee. The Senior Member of the Board of Revenue was of opinion that neither contingency is probable. The area irrigated from canals, which according to the settlement returns of 1867 formed less than a fourth of the entire irrigation of the district, has not been much increased since then, and the water-rates have not been unduly raised. The physical obstacles to a large extension of canal-irrigation are manifest, and the task that chiefly exercises, and is likely to exercise, the Irrigation Department in Rohilkhand lies in allotting and making the most of the scanty supplies which the little streams utilised by it afford. Nor does there appear any likelihood of a permanent fall in the value of grain. The steady extension of improved communications and of the wheat export trade points rather in the direction of the maintenance of rates higher even than those prevailing at the settlement. The Lieutenant-Governor and Chief Commissioner therefore concurs with the Board in recommending the confirmation of the settlement of the district for the full period of thirty years from the dates* on which the assessments of the several parganas severally took place.

*Tahsils Faridpur and Karor from July, 1869.
Tahsil Mirganj „ „ 1870.
Tahsils Aonla and Nawabganj „ „ 1871.
„ Baheri and Bisalpur „ „ 1872.

29. The work of assessment has been chiefly dwelt on in the foregoing remarks. But the preparation of the records and the exact definition of the mutual and several rights of both landlords and tenants merit notice. The care bestowed upon these was not less complete than that given to the survey and assessment of the district, and the case-work connected with them seems to have been judiciously and promptly disposed of. In respect also to the rapidity and cost with which the revision of settlement was carried out, Bareilly will compare favourably with any district in the provinces; while the rent-rate and final reports are replete with valuable information regarding the settlement operations and the agricultural condition and history of the district generally. Mr. Moens has borne testimony to the valuable help rendered to him by his Assistant, Mr. F. W. Porter (not *J. S.* Porter as erroneously written in the Board's review), and to the special merits of Mirza Vikar Ali Beg, Deputy Collector. But the success of the settlement, not merely in the institution and execution of its operations, but also in its issue and results, was due to Mr. Moens' own practical ability and sound judgment. To these and to his untiring personal exertions were due the promptitude, thoroughness, and wisdom with which the settlement was carried out; and this review of the execution of an arduous task successfully completed by Mr. Moens affords to the Lieutenant-Governor and Chief

Commissioner a fit and appropriate opportunity of recording his high appreciation of Mr. Moens' character and capacity, and his sense of the loss sustained by the Government from the premature death of so valuable an officer.

J. R. REID,

Offg. Secretary to Government,
N.-W. Provinces and Oudh.

ORDER.—Ordered, that the foregoing Resolution, with copy of the Settlement Report, be forwarded to the Secretary to the Government of India, Department of Revenue and Agriculture, with the recommendation that the confirmation of the settlement be approved.

Ordered also that a copy be forwarded to the Secretary, Board of Revenue, North-Western Provinces, for the information of the Board, with reference to his letter No. $\frac{216}{I.-96}$, dated the 30th April, 1881.

By order, &c.,

J. R. REID,

Offg. Secy. to Govt., N.-W. P. and Oudh.

No. 350R.

Extract from the Proceedings of the Government of India, in the Revenue and Agricultural Department, dated Calcutta, the 17th March, 1883.

REVENUE.

READ—

Resolution by His Honor the Lieutenant-Governor of the North-Western Provinces and Oudh, No. 259, dated the 29th January, 1883, together with a letter from the Secretary to the Board of Revenue, submitting the Settlement Report of the Bareilly district by Mr. S. M. Moens, C.S.

RESOLUTION.

The re-settlement of the district was virtually concluded in 1872, and has therefore been working for the last ten years, though only now reported for confirmation to the Government of India. The delay in the submission of settlement reports has received prominent notice on a previous occasion, and is, the Government of India believes, not likely to recur. The revision has resulted in an increase of the Government revenue, including cesses, by nearly 4½ lakhs a year, while the cost of the revision was not quite four lakhs. It is also clear from paragraph 26 of the Resolution that the enhanced revenue is on the whole collected with case, and with very slight resort even in years of drought to coercive processes. The undertaking has therefore been exceedingly profitable to the State, and the Governor-General in Council, while regretting the delay which has occurred in the submission of the final report, has no hesitation in confirming the settlement for the full period of thirty years from the dates* on which the assessments of the several parganas took effect.

* Paragraph 28 of Resolution of Government, North-Western Provinces.

2. It appears from the sixteenth and following paragraphs of the Resolution of the Local Government that, owing to the prevalence of rents in kind, the task of re-assessment was peculiarly difficult. The valuable index to the value of an estate which cash-rents afford was not available throughout a large portion of the district, and in their absence the Settlement Officer had to avail himself of a variety of ingenious methods and checks which are described at length in the Board's Review and orders of the Local Government. These it is unnecessary to recapitulate or to characterise: they were evidently controlled in application by the common sense and judgment of the Settlement Officer, and seem to have led him to correct results.

3. Mr. Moens, while acknowledging in page 120 of the Report the drawbacks of the *batái* system, maintains that it has very great counterbalancing advantages, and deprecates, with some show of reason, the change from *batái* to cash-payments. That the cultivator does not benefit from the change in tracts where the yield is precarious may be taken as a demonstrated fact. Mr. Moens' remarks on this head are therefore extremely interesting in connection with the discussions now proceeding in regard to an elastic system of revenue collection.

4. It only remains to add that the comparative celerity with which the settlement was completed was due to its being conducted from first to last by one officer, the late Mr. Moens, whose zeal and ability are highly commended by the Local Government. His Excellency the Governor-General in Council joins with His Honor the Lieutenant-Governor in expressing its sense of the value of Mr. Moens' work, and its regret at his premature death.

ORDERED that a copy of the Resolution be forwarded to the Government of the North-Western Provinces and Oudh, for information.

(True Extract,)

E. C. BUCK,

Secretary to the Government of India.

No. 799 of 1883.

REVENUE DEPARTMENT, N.-W. P. AND OUDH.

Dated Lucknow, the 30th March, 1883.

COPY of the above forwarded to the Secretary to the Board of Revenue, North-Western Provinces, for the information of the Board in continuation of Resolution No. 259, dated the 29th January last.

By order of the Hon'ble the Lieutenant-Governor of the North-Western Provinces and Chief Commissioner of Oudh,

J. R. REID,

Offg. Secy. to Govt., N.-W. P. and Oudh.