

**AGRARIAN DISTRESS AND FARMERS' SUICIDES  
– A STUDY IN ANDHRA PRADESH**



*Enter to Learn, Leave to Serve*

**FINAL REPORT OF  
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**January - 2012**

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*“Dedicated to Millions of Crisis  
Affected Farm Households”*

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## **DECLARATION**

I, **Dr. M. Yadagira Charyulu** hereby declare that the report entitled “**Agrarian Distress and Farmers’ Suicides – A Study in Andhra Pradesh**” submitted to UGC, New Delhi, under UGC Financed Major Research Project is based on my original and independent research. I further declare that any part of the report either formed the basis for any other degree or project work.

**Dr. M. Yadagira Charyulu**

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## **ACRONYMS**

GDP	Gross Domestic Product
PACCS	Primary Agriculture Credit Cooperative Society
IADP	Intensive Agriculture District Programme
IAAP	Intensive Agriculture Area Programme
HYV	High Yielding Variety
NSC	National Seeds Corporation
NCDC	National Cooperative Development Corporation
ARDC	Agricultural Refinance and Development Corporation
ICAR	Indian Council of Agricultural Research
KVR	Krishi Vignana Kendras
NABARD	National Bank for Agriculture and Rural Development
AIBF	Accelerated Irrigation Benefit Fund
CSO	Central Statistical Organisation
RKVY	Rashtriya Krishi Vikas Yojana
NSSO	National Sample Survey Organisation
DPAP	Drough Prone Area Programme
DADP	Desert Area Development Programme
WDA	Wasteland Development Agency
NEP	New Economic Policy
TOT	Terms of Trade
ICT	Information and Communication Technology
SAP	Structural Adjustment Programme
TNC's	Trans National Companies
AOA	Agreement on Agriculture

QRs	Quantitative Restrictions
WTO	World Trade Organisation
IMF	International Monetary Fund
PPP	Public Private Participation
SEZ	Special Economic Zones
MSP	Minimum Support Price
NCRB	National Crime Records Bureau
CACP	Commission for Agricultural Costs and Prices
NGO	Non Government Organisations
NSRTC	National Seed and Research Training Centre
MNCs	Multi National Corporations
RFSTE	Research Foundation for Science, Technology and Ecology
CSE	Centre for Science and Environment
EU	European Union
US	United States
AINPPR	All India Network Project on Pesticide Residues
MRL	Maximum Residue Limit
NCF	National Commission of Farmers
T&V	Training and Visits
NAIS	National Agricultural Insurance Scheme
GCF	Gross Capital Formation
NAFED	National Agricultural Marketing Federation
FBI	Farm Business Income
SASF	The Situation Assessment Survey of Farms
RFAS	Rural Finance Access Survey
NCAER	National Council of Applied Economic Research
IAY	Indira Awas Yojana

SGDP	State Gross Domestic Product
SRC	States Reorganisation Commission
SCC	Singareni Collieries Company
SRSP	Sri Ram Sagar Project
WHO	World Health Organisation
SMR	Suicide Mortality Rates
CDR	Crude Death Rate
TISS	Tata Institute of Social Sciences
IGIDR	Indira Gandhi Institute of Development Research
MIDS	Madras Institute of Development Studies
FSR	Farmer Suicide Rate
MNREGA	Mahatma Gandhi National Rural Employment Guarantee Programme
DES	Directorate of Economics and Statistics
GCA	Gross Cropped Area
CCI	Cotton Corporation of India
TFP	Total Factor Productivity
DWACRA	Development of Women and Children in Rural Area
NAI	Net Area Irrigated
VKC	Village Knowledge Centre
BKC	Bharath Kisan Card
IDC	Irrigation Development Corporation
AMDC	Agricultural Marketing Development Corporation

*“Every thing else can wait, but not agriculture”*



*Pandit Jawahar Lal Nehru*

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**Agrarian Distress and Farmers Suicides  
– A Study in Andhra Pradesh**

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The final Report on “Agrarian Distress and Farmers Suicides – A Study in Andhra Pradesh” is designed in Six Chapters. The first chapter introduces the conceptual framework and genesis of the agrarian issues and methodology adopted for the study and profile of the study area.

The Second chapter deals with Agrarian Situation in India. It is highly based on both theoretical and statistical strengths. It elaborate on how the Indian agriculture has shaped into present context with many parameters like land use pattern, irrigation, input usage and costs, minimum support price and related issues, public investment in agriculture and Gross capital formation in agriculture and indebtedness.

The Third chapter is totally devoted to discuss the status of agriculture in Andhra Pradesh, which led the state into crisis prone farmers suicides. The land use pattern, monsoon impacts drought effects, cropping pattern scenario, input use related problems, challenges in irrigation, capital formation and investment trends in agriculture, incidence of indebtedness were analysed in detail.

The Fourth chapter, based field study results encompasses the gross root situation prevailing in the state in agriculture sector. The suicide behaviours, the socio-economic conditions of the deceased farm families, their previous and present living conditions were examined and assessed with number of parameters. The results of the field study definitely will guide to evolve better policies to over come the crisis.

The Fifty chapter deals with conceptual presentation of suicidal behaviour in general and among farmers in particular. It presents the

farmers suicide phenomena across the world, with special focus on India with state-wise suicide patterns with particular reference to Andhra Pradesh based on NCRB reports. The scholarly studies by P. Sainath, K. Nagaraj, V.S. Vyas, A.R. Vasavi, D. Narasimha Reddy, Dr. E. Revathi came in handy to indepth analysis.

The Sixth and final chapter presents policy perspectives to adress farmers suicides by focusing on corrective measures and interventions to set right the various factors that have caused the agrarian crisis based on recommendations of National Commission on Farmers, Expert Group on agricultural indebtedness, IGIDR study team, centre for Human Rights and Global Justice, Commission on Farmers' Welfare and so on.

It also presents main findings of the present study and various valid suggestions to strengthen various agricultural network with farmers friendly approach to find out a long lasting solution to the crisis which is threatening the existence of very socio-economic and democratic fabric of our great country.

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# **CHAPTER - I**

## **Introduction: Problem Setting and Methodology**

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Agriculture is still backbone to the Indian economy in many fronts. It is livelihood for more than 56 per cent of the Population. Its impact on overall GDP, poverty eradication and particularly the food security is very vital. 70 per cent of the population lives in villages and more than 80 per cent of the rural households livelihood directly and indirectly attached to agriculture and allied sectors. Agriculture is a tradition, pride and way of life for many households in India. The art of agriculture has shaped the thought, the outlook and the process of socio-economic development of the country. Agriculture continuous to be a focal point and most vibrant debatable area for all the strategies that propup during the process of socio-economic development of the country. The growth and prosperity of agriculture directly contributes for the establishment of egalitarian society in India and more particularly in rural India. As far as the egalitarian society is concerned the progress and prosperity of agricultural households and percolation of fruits of development to these communities is much essential.

The agriculture sector in India embodied with changing agrarian relations time to time with political and economic structure of the country. These relations are inherited from the feudalistic mode of production and then semi-colonial and semi feudal agrarian relations rooted in British policies. The agrarian structure in post independent India has experienced few benefits but many shocks with modernisation and globalisation of agriculture.

What the British rule did in India to the agriculture and rural community do not have too many divergent scholarly thoughts. Most of the historians, socio-economic think tank converged in one and only opinion that the agriculture and the rural community were subjected to oppression, exploitation and degeneration. The historical perspective points-out that the self sustained and self sufficient agriculture and rural economy of the pre-British period had experienced ruthless subjugation.

It is to be noted that Indian rural community system, which is characterised by self-sufficient and autonomous village units land was held commonly by the entire village, so that each household lived on subsistence production from the land allotted to it under usufructuary rights<sup>1</sup>.

In this self contained village economy, all villagers including both the patron and the clients were subject to a village level social power which originated from such institutional factors such as distribution of wealth, income, cast-hierarchy, occupational position and ideological factors like customs, taboos etc<sup>2</sup>. Each village was an almost self supporting community in the case of self contained village economy, whose members constitute a primary group. Thus, it is the primary cell of the social structure<sup>3</sup>.

The traditional Indian economy was shattered in its functioning with the on-set of colonialism, represented by British rule. Here, the British conquest differed from every previous conquests in that, while the previous

foreign conquerors left untouched the economic basis and remained as a foreign force acting from outside and withdrawing its tribute outside. British rule tinkered with this age-old system and sought to change the agrarian relations. Here also the victory of capitalism which mooted the destructive process was not accompanied by any corresponding growth of new forces. The thought and act has given rise to the “particular melancholy” attached to the misery of the Indian village under British rule, and it doesn’t have any parallel comparison in the contemporary world history<sup>4</sup>. Pre-British India was not far behind of many industrialised countries with 1.5 to 3.1 per cent growth rate of percapita income. It is well known to economic historians that in interwar India with advent of British rule, the rate of growth of percapita income declined to near zero. The shift in the trajectory of economic growth during the second decade of 20<sup>th</sup> century was basically due to the agrarian crisis. Agrarian expansion of those days (interwar period / British rule) carried costs, especially unevaluated or social costs in the shape of ecological degradation, investment decisions were constrained by environmental conditions. More particularly possibilities of agricultural growth in the region were constrained by the relatively high private costs of extraction of water for irrigation<sup>5</sup>.

The British rule in India through the agency of the East India Company led to the most vibrant changes in the way of life of Indian society. The most striking of these changes was the disintegration of the older structure of the rural community partly as a result of new land revenue system introduced by the British and partly as a result of the spurt of commercialisation of agriculture in the nineteenth century.

With the advent of railways, irrigation system, introduction of new crops especially commercial crops and setting up of a number of industries the method of production in self-sufficient rural economy had undergone a sea-change and this sort of change has reflected in the production relations also<sup>6</sup>. For the first time, during the British rule, land has become a saleable commodity. Similarly, various types of machine made goods and services penetrated into the rural market and reduced the status of village industries, and resulted in increasing dependency of the villages on out side market.

Two major types of land revenue systems were divided each of which shook the older structure of rural life in India. In Bengal and adjacent areas, early in 1793, the British converted the tax farmers and revenue collectors into private landlords, granting them some, but not all of the rights of private property on the land<sup>7</sup>. This was done on condition that the new landlords would raise greatly enhanced revenues from the cultivating peasants and pass the bulk of these revenues to the state. This land revenue system was known as the Zamindari system<sup>8</sup>.

With the introduction of permanent zamindari settlement of land in 1793, the strata of land lords was created and the concept of private property on land was fully established and the rural community system was lost forever. This has laid basis for the formal emergence and establishment of new classes in rural India. This had a far reaching effect on the rural society of Bengal and coastal districts of Andhra of old Madras province where the Zamindari system was introduced. The introduction of permanent settlement introduced an element of 'built in inequality' in the

economic structure. On one hand, the disintegrated peasantry slowly slid away from the ownership on their land to the position of tenant, share cropper and agricultural labourers. On the other, a new class of absentee landlords of various kinds who entrenched themselves in the soil by subjecting the peasantry to various forms of feudal and semi-feudal exploitation have emerged as a potent force in the agrarian structure. As large scale farming was not profitable under the primitive state of the productive forces when the productivity of labour remained low, even without participating in agricultural production the landlords could appropriate a larger income from share cropping than from employing the disintegrated peasants as agricultural labourers. The land holder-cum-share cropper relationship increasingly became the dominant form of the production relations in large parts of Bengal and Madras province. Danial Thorner<sup>9</sup> refer to this as a 'built-in-depressor' in the agrarian economy<sup>10</sup>.

In the pre-British period, the self-sufficient rural economy was based on the union of handicrafts and agriculture. The agriculturist exchanged a portion of his product with the village weaver who supplied him cloth for his family. This kind of unity in agriculture and industry was disrupted by the influx of machine made goods in the rural market. Steadily the handicrafts industry declined in the villages and the agriculturists were accustomed to depend on the machine made goods which could be purchased only with money. On one side, due to the inexorable and exorbitant demands of the state whose periodical revision of the land tax only increased the tribute which the agriculturist had to pay to the government but the income of the peasant steadily declined<sup>11</sup>. On the other hand, due to ruination of the handicrafts by the irresistible inroads of



machine goods in the rural India the agriculturist had the need of money to buy cloth and other necessities in which previously local handicraftsmen supplied him in exchange for a portion of his own agricultural products. Further, it made necessary for the agriculturist to borrow frequently and permanently from the sahuakar whose tentacles closed more and more round the toiling rural population<sup>12</sup>.

The ultimate impact of British policies was that out of the two pillars of India's rural society domestic industry and cultivation have had "weakened and almost demoralised". Most of the families lost their traditional occupations. The crabbing wreckage fell at the feet of the other, mostly in its form on the rural households desperately setting some way of financing livelihood either as tenant or agricultural labour under whatever terms<sup>13</sup>. These far-reaching changes were resulted in unequal distribution of rural resources particularly land and resulted in wider inequalities between employer and employee and ever-increasing rural unemployment.

Therefore, the initial steps of destruction of the rural community were accomplished firstly by the company's colossal direct plunder. Secondly by the neglect of irrigation and public works, which had been maintained under previous governments. Thirdly by the introduction of the British land system, which introduced commercialised activity with land and fourthly by the direct prohibition or heavy duties on the export of Indian manufactures, first into England and later to Europe. "All this however did not yet give the final blow". It came with the era of nineteenth century capitalism<sup>14</sup>.

Several authors stressed on a nexus between merchants and landlords in a colonial setting. Various forms of expropriation of surplus possible with this alliance. The neo-Marxist scholarship suggest that the distribution of assets came into being in India during colonial rule was an adverse one. Utsa Patnaik writes “the colonial atmosphere was more congenial to landlord, trader and usurer capital”. The resultant accumulation was marked by a near absence of transformation of the productive base<sup>15</sup>. Habib offers a similar interpretation “the phenomenal growth of usury was an inseparable aspect of the transformation of the Indian agrarian economy brought out by colonialism from erstwhile self-sufficiency and self-respect to virtual serfdom<sup>16</sup>”.

The impact of the British rule thus, led to disintegration of agrarian economy and evolution of a new structure of agrarian relations (that was extremely regressive). The new system hasn't paved way for the development of agriculture but on the other new social classes appeared at the top as well as at the bottom of the social scale. There are landlords, intermediaries and moneylenders at the top and tenants' at-will, share croppers and agricultural labourers at the bottom. The new pattern was of neither capitalism nor feudalism, nor was of a continuation of the Mughal arrangement. It was totally a new structure. Thus colonialism emerged with its semi-feudal and semi-colonial character<sup>17</sup>. The semi-feudalism thesis and its application to colonial Bengal connects usury with under investment, and explains incapacity of rural economy to generate investment by the power of rent and interest earning classes<sup>18</sup>.

The Indian farming community in pre-British period used traditional inputs for their agricultural operations like wooden plugging, sickle and spade cultivation with animal power, local seed, organic manure and fertilizers. Open field type of cultivation with no enclosures was practiced in India<sup>19</sup>. Rotation of crops of traditional type was followed to regain fertility. Farmers usually adopted natural methods of storage and marketing facilities and that were totally inadequate. Almost all the farmers used to adopt the same methods. The farm technology followed during those days was simple and indigenous Dr. Volker in his report on the improvement of Indian Agriculture (1889) mentions how Indians cultivated wheat centuries before the English did. Similarly cotton was cultivated in this country from very early times, so were the other major crops. Another feature of the Indian agrarian scene was the industrious peasantry which was highly skilled, having inherited this quality from their forefathers over many generations<sup>20</sup>. Good agricultural practices were a common phenomenon. These related to keeping land free of weeds; rotating the cultivation with mixed crops; keeping some land fallow for recuperation. In the sphere of irrigation too, the techniques used were much advanced. Quite a number of indigenous water raising appliances were in use. Successive rule of Britishers has uprooted the earlier structure. The tank irrigation system, which was prominent in Southern states and particularly the Deccan plateau had been grossly neglected. It resulted in dependency on ground water and thus increased private investment in agriculture. Repressive agricultural policies of British Government and dump up of machine made goods had put up increasing pressure on agricultural sector as there was a decline of both rural and urban handicrafts in the second half of the nineteenth century<sup>21</sup>. Above all, recurrent famines further deteriorated the

conditions of agriculture. Though the British rulers took no sufficient steps to develop irrigation facilities till the nineteenth century, there was a little change in the agricultural practices adopted in India<sup>22</sup>.

Land revenue in India was not a British invention, it had been collected by indigenous rulers too, but what was new about the British system of revenue was the conceptual framework which was not adopted earlier in Indian peasant agriculture. Concepts like rent, wages, cost of production and profit which were derived from British economic theory were applied to India in order to design a scientific system of revenue assessment. A high revenue demand was justified by referring to the “unearned increment”.

The British were able to create a class of people whose interests were directly tied to British rule in India with the introduction of land system. But the system helped to a class of absentee landlords who were more interested in squeezing higher land rents than in real agricultural progress. The British introduced land settlement in 1793, in Bengal and neighbouring areas and it known as ‘permanent settlement’<sup>23</sup>. The settlement raised the status of revenue collectors to that of private landlords. It fixed land revenue in perpetuity. In Zamindari system, the zamindar was required to deposit an enhanced land revenue to the state. Later the British extended the settlement to other states and created zamindars there too but they changed over to ‘temporary settlement’ under which land revenue could be reassessed after a period ranging between 25-40 years in different states. Another and a totally different land system was evolved for large parts of Bombay and Madras presidencies and subsequently extended to north-

eastern and northwestern India was called the ryotwari settlement. In this system, each peasant holding a plot of land was recognised by the landlord and made directly responsible to the state for the annual land revenue<sup>24</sup>.

It may be pointed out that in both cases the land rents fixed were excessive and both the systems were instrumental in the destruction of the organic village community based on customs and traditions. Daniel and Alice Thorner Writes; “whereas the Zamindari system made the landlords masters of the village communities, the ryotwari system pierced through the heart of the village communities by making separate arrangements between each peasant cultivator and the state<sup>25</sup>”.

In the most general statement “the imposition of English notions of property in 19<sup>th</sup> century India was argued to have strengthened a substantial class of land owners who earned an income from rent and interest at the expense of profit and the wage earner<sup>26</sup>”. The Zamindari land tenure of Eastern India, obviously alleged that played an anchor role in tilting the rural power structure against the tiller of the soil, increasingly a tenant without secured property rights and over burdened with consumption debts, subinfeudation and proliferation of insecure tenancy were problems that plagued in ryotwari areas too. Gilbert Slater was prominent among who believed and argued that land tenure system was the root of the agrarian crisis in South India<sup>27</sup>.

Excessive pressure of population resulting in a high demand for land helped zamindars to charge exorbitant rent and numerous other exactions from the tenant-cultivators. The result of the whole change in the land

system led to the emergence of subsistence agriculture. Even the ryotwari-system lost its original form and the rigorous, prompt and unelastic demands of high revenue forced peasant-cultivators to sell land to absentee landlords or money lenders. The British land system introduced by Lord Cornwallis, thus, helped the concentration of economic power in the hands of absentee landlords and moneylenders in rural India. It depressed agriculture and the peasantry.

Early 20<sup>th</sup> century observers of rural economic life often expressed views about the agrarian crisis that were consistent with the semi-feudalism framework. In this framework, the money-lender is seen to possess superior property rights on lands tilled by a landless peasant. The money lender, thus, earns income from interest on consumption loan and from crop-share. If the owner invested in land, crop-share might increase, but the demand for consumption loan would fall. Fearing this loss of interest income, the moneylender would be reluctant to make productive investment. This thesis is applied in the context of Bengal agriculture, seen as overburdened by intermediaries<sup>28</sup>.

A great deal of the poverty and indebtedness of the villagers arises from the fact that many villages are held by malguzars who have no interest whatsoever in agriculture and only regard their villages and tenants as potential sources of income to be made from loans given to them<sup>29</sup>.

## **Commercialisation of Agriculture (1850-1947):**

In spite of the domination of food crops in traditional Indian agriculture, the Indian farmers were versed with the production of commercial crops during the period 1850-1947<sup>30</sup>. Commercialisation of agriculture implies production of crops for sale rather than for family consumption. At every stage of the economic history of the nation, a part of the agricultural output was produced for the market. Then, what distinguished commercial agriculture from normal marketable surplus? It was a deliberate policy worked up under pressure from British industries. By the middle of the nineteenth century, Industrial Revolution had been completed in England; there was a tremendous demand for raw materials especially cotton, jute, sugarcane, groundnuts for the British industries<sup>31</sup>. By offering a higher bait of market price, the peasants were induced to substitute commercial crops for the food crops as the former paying more than the latter. Consequently, the peasants shifted to industrial crops and in some districts, the movement for commercial agriculture became so strong that the peasants started buying foodstuffs from the *mandis* for their domestic needs. Radha Kamal Mukherjee, the most influential academic proponent of environmental degradation due to commercialisation during the British rule stated that changes in cultivation practices and crop-choices induced by profitability had affected the natural processes of restoration of fertility. The introduction of commercial crops had upset the ancient system of crop rotation which served very well for fertilising the soil. There was over-harvest of water also. Ground water exploitation, however, had reached to unsustainable levels<sup>32</sup>. The poor felt the ecological stress more acutely than the rich, worked harder to extract more from the soil and

damaged the soil the more<sup>33</sup>. This led to a fall in the production of food and consequently this period was marked by the occurrence of most terrible famines in the economic history of India. Commercial agriculture also to some extent was the causative factor for mounting demand for land and higher expectations on revenue by the state and excessive rents extracted by the landlords from the peasantry<sup>34</sup>.

Another school of thought presents both favourable and oppressive times for the farmers during the British rule. The introduction of right to property in private land, increased market oriented production, better irrigation and transport facilities, growth of usury capital and flow of money into land etc., brought about far reaching changes in agrarian land structure as well as the agrarian condition in India – at lines favourable and at lines oppressive for the farmers. This process had resulted in both development and degradation. Few sections of peasants benefited by sending their children to school, getting government employment, diversified their occupation, some of them even moved to towns. At the same time larger sections affected badly due to ‘extraction of surplus’ from agriculture through exorbitant land revenue, price mechanism and of their cess and it led to great misery and indebtedness. Obviously, the peasant movements of that time primarily centered around the demand for retaining a greater share of agrarian surplus for the cultivators, whether it was against zamindar or the land lord or the government<sup>35</sup>.

The process of commercial agriculture necessitated by the Industrial Revolution was intensified by the development of an elaborate network of railways in India after 1850. Railways linked the interior of the country



with ports and harbours and urban marketing centers and thus Indian agriculture began to produce for world markets. Large quantities of wheat from Punjab, jute from Bengal and cotton from Bombay poured in for export to England. The same railways which carried commercial crops from the various parts of the country brought back the foreign machine-made manufactures to India. Thus, railways and link-roads connecting the hinter-land of country with commercial and trading centers were instrumental in intensifying commercialisation of agriculture on one hand and sharpening competition of machine-made goods with Indian handicrafts, on the other. These factors led to the ruin of Indian industries<sup>36</sup>. At the stroke of independence, the Indian economy has been at the receiving end with collapsed industries, degenerated agriculture, denuded resources and divided hearts. Mounting pressure of population and migration across the borders resulted in shortage of food grains. Thus economic planning process has invariably concentrated on the development of agriculture sector<sup>37</sup>.

### **Indian Agriculture – Economic Planning:**

On the eve of the First Plan, agriculture was in a hopeless and deplorable condition. Our farmers were in heavy debt to the village money lenders. They were having small and scattered holdings. They had neither the money nor the knowledge to use proper equipment, good seeds and chemical manures. Except in certain areas they were dependent on rainfall and thus on the vagaries of the monsoons. Productivity of land as well as labour had been declining and was generally the lowest in the world. In spite of the fact that nearly 70 per cent of our working population was

engaged in cultivation, the country was not self-sufficient in food grains but had to depend on imports of food grains. Besides, the partition of the country in 1947 worsened the agricultural situation as India was given more people but less fertile land to support. During this time the Planning Commission has kept three broad objectives for the development of agriculture: a) Increase agricultural production, b) Increase employment opportunities, c) Reduce inequalities in the rural sector.

At the time of independence the country was facing food grain crisis. Hence the first five-year plan focused on the increased production of food grains. The target was fixed at 62.6 million tonnes and due to the popularisation of Japanese method of cultivation, the production of rice increased to 28.7 million tonnes. Another remarkable achievement made in the first plan was that all the production levels of rice, wheat, oilseeds, sugarcane, cotton, etc., were above their targeted levels<sup>38</sup>. Land reclamation and land development measures, application of improved seeds, fertilizers and farm practices were given importance during this plan<sup>39</sup>.

The target of food grains production was envisaged at 24 per cent higher in the second plan over that of the First Plan, with the adoption of improved technology and intensive cultivation. It also laid emphasis on diversified agriculture and development of livestock. The level of food production in the second plan was around 76 million tonnes. The net irrigated area increased from 51.5 million acres in the First Five-Year Plan to 70 million acres. Strengthening of PACCS was also taken up in the Second Five-Year Plan<sup>40</sup>.

**Table – 1.1**  
**Share of Agriculture in Five-Year Plans**

Sl. No.	Plan	Actual public sector outlay (Rs. in crores)	Outlay on agriculture and irrigation (Rs. in crores)	per centage share
1.	First plan (1951-56)	1,960	600	30.61
2.	Second plan (1956-61)	4,600	950	20.65
3.	Third plan (1961-66)	8,500	1,750	20.59
4.	Annual plans (1966-69)	6,625	1,578	23.82
5.	Fourth plan (1969-74)	15,900	3,810	23.96
6.	Fifth plan (1974-79)	39,430	8,740	22.17
7.	Annual plans (1979-80)	-	-	-
8.	Sixth plan (1980-85)	1,09,290	26,130	23.91
9.	Seventh plan (1985-90)	2,18,730	48,100	21.99
10.	Annual plans (1990-92)	-	-	-
11.	Eighth plan (1992-97)	4,95,670	1,02,730	20.73
12.	Ninth plan (1997-2002)	7,26,000	1,66,583	22.95
13.	Tenth plan (2002-2007)	15,25,369	<b>3,5073</b>	20.0
14.	Eleventh plan (2007-12) *	36,44,718	6,74,105	18.49

(\* upto 2010-11 financial year)

Source: Planning Commission, GOI, New Delhi.

The third plan provided large outlay for the development of more irrigation projects and small irrigation schemes, soil conservation programmes and development of co-operatives<sup>41</sup>. The programmes were aimed at doubling the rate of agricultural production. The two specific priority goals envisaged were viz., (1) to produce enough food grains and make the economy self-sufficient and (2) to produce commercial crops to meet requirement of industrial sector and of exports. Food grains production actually increased by 32 per cent<sup>42</sup>.

Inspite of many such efforts the third plan failed in agricultural front. Only 10 per cent increase was obtained against the target of 30 per cent in

agricultural production. Green revolution has given new thrust to agriculture sector in this plan period. The IADP, IAAP and HYV programmes were initiated and extended to larger cultivated area. Specialised institutions, such as, National Seeds Corporation (NSC), National Co-operative Development Corporation (NCDC) and Agricultural Refinance and Development Corporation (ARDC) were established.

Fourth Five Year Plan (1969-74) had two major objectives for the development of agricultural sector. The first objective was aimed at the annual growth of 5 per cent in agriculture and second objective was aimed at facilitating the development of large number of rural population including small cultivators, dry land farmers, rural landless agricultural labourers etc.

Centrally sponsored scheme of integrated dry land agricultural development was launched with 24 pilot projects in the selected areas for demonstrating dry land technology during 1970-71. All India coordinated research projects for dry land agriculture under the purview of Indian Council of Agricultural Research (ICAR) was also started. A central scheme on soil conservation was extended to eight more catchment areas to cover 80 million hectares under soil conservation programme. On the whole, the plan achieved an annual growth of 2.8 per cent in agricultural production as against the targeted growth rate of 5 per cent.

At the time of implementing fifth plan (1974-79) the economy was facing severe inflation. The major objectives of this plan were (1) to achieve self-reliance and (2) to adopt suitable measures to raise the

standard of living of rural people below the poverty line through agricultural development. During this plan earlier strategies of agricultural production were further strengthened. High yielding varieties of cereals, multiple cropping practices and water management methods were adopted mainly in the command areas of major and medium irrigation projects. The foodgrain production achieved during this plan was 125 million tonnes. Sugarcane, pulses and cotton production exceeded the targets. Gross cropped area increased to 173.92 million hectares during 1977-78, Krishi Vignana Kendras (KVK) and training centers were established for imparting advanced and potential agricultural technology to the farmers. National seed projects were also launched in the states of Andhra Pradesh, Maharashtra, Bihar and Karnataka.

The sixth plan (1980-85) was aimed at achieving an annual growth rate of 3.8 per cent in agriculture. To achieve this objective, it has devised strategies for steady growth of foodgrains production and substantial increase in production of pulses and self-sufficiency in oilseeds production. Wheat and rice production was increased in accordance with prescribed targets during the plan, whereas production of rest of the crops was not in tune with the targets. The production of foodgrains at the end of the plan stood at 138.1 million tonnes. NABARD was established in July 1982. The total agricultural credit advanced was Rs.5,556 crore in 1984<sup>43</sup>.

The average annual production of foodgrains during seventh plan (1985-90) stood at 155 million tonnes. Production of cereals recorded 34.76 million tonnes in 1989. The production of pulses and oilseeds reached a record level of 14.06 million tonnes and 18.46 million tonnes

respectively during 1990-91. Similarly, sugarcane production recorded a higher level of 240 million tonnes in 1990-91. The area under high yielding varieties was 63.1 million hectares against the targeted area of 70 million hectares. Agricultural credit sanctioned from institutional sources increased to Rs. 12,570 crore in 1989-90. During this plan development of dairy and fisheries was given prominence and as a result production increased substantially.

The aim of the Eighth Plan (1992-97) was to generate surplus of food grains for export and to attain self-sufficiency in pulses and oilseeds. The growth rate expected was four per cent in respect of gross value of output and three per cent with regard to the added products. The targets set for 1996-97 were 88 million tonnes for rice, and 17 million tonnes for pulses. Regarding oilseeds targeted production was 23 million tonnes. The production of sugarcane was expected to be 275 million tonnes. The actual output of these crops was higher than the target, except foodgrains. The foodgrains target was 210 million tonnes, but the actual output was 199 million tonnes, however, was the highest output recorded upto that time. The strategy spelt out to achieve the targeted production levels was laying emphasis on dry land farming, spreading benefits of green revolution to eastern region and improving efficiency of irrigation.

In order to achieve the objectives of removing the incidence of poverty and unemployment, ensuring food and nutritional security, Ninth Plan (1997-2002) put the target for annual growth rate at 4.7 per cent in agriculture production. The plan has estimated that demand for food grains was likely to increase from 197 million tonnes in 1996-97 to 298 million in

the year 2011-2012. Hence, the production should increase from 199 million in 1996-97 to 337 million tonnes in 2011-2012<sup>44</sup>. The actual production in agriculture sector for many products was very disappointing during this plan. The plan targeted 243 million tonnes of food grains production, but the actual production was 212 million tonnes. What is pathetic that the actual production of oil seeds at the end of Ninth Plan was less than the base level (1996-97) output. Similar negative growth rate was found in cotton also.

**Table – 1.2**  
**Average GDP Growth Rates – Overall and in Agriculture**

*(Per cent per year at 1999-2000 price)*

<b>Sl. No.</b>	<b>Period</b>	<b>Total Economy</b>	<b>Agriculture and Allied Sectors</b>
1.	Pre-green revolution 1951-52 to 1967-68	3.69	2.54
2.	Green revolution period 1968-69 to 1980-81	3.52	2.44
3.	Post Green revolution period 1981-82 to 1990-91	5.40	3.52
4.	Early reforms period 1991-92 to 1996-97	5.69	3.66
5.	Post reforms Period Ninth Plan 1997-98 to 2001-02	5.52	2.50
6.	Tenth plan period 2002-03 to 2006-07	7.77	2.47
7.	Eleventh Plan (2007 to 2012) 2007-08	9.3	5.5
8.	2008-09	6.8	0.1
9.	2009-10	8.0	0.4
10.	2010-11	8.6	5.4

*Source: National Accounts Statistics (New Series), Central Statistical Organization, Ministry of Statistics and Programme Implementation, New Delhi.*

Low and volatile growth rates in Indian agriculture and allied sectors reflected in the average annual growth rate of value added in the sector. It declined from 4.7 per cent during the Eighth Plan to 2.1 per cent during the Ninth Plan. In contrast to the target of annual average growth rate of 4 per cent during the Tenth Plan (2002-2007) agricultural growth rate in the first year (2002-2003) was negative (-6.9 per cent) due to a severe drought of 2002, with a favourable monsoon the growth rate stood at an impressive 10.0 per cent in 2003-04. But deficient rainfall 2004-05 again caused a decline in food grains production as well as rate of growth of agriculture and allied sectors to 0.7 per cent. The CSO estimates of national income for 2005-06 have put the growth rate at 2.3 per cent for the agriculture and allied sectors. The overall performance of the agriculture and allied sectors was abysmal with a growth rate of 2.47 per cent against the growth rate of the economy of 7.77 per cent.

The Eleventh plan (2007-12) with the basic objective of inclusive growth has envisaged annual average growth rate of four per cent in agricultural GDP. According to plan document the poor performance of agriculture in the past decade is partly due to the emergence of technology fatigue in the intensively irrigated crop regions. ICAR has been strengthened and restructured to give focus on research in strategic areas to diversify cropping systems and raise the yield potential of rainfed areas<sup>45</sup>.

The plan has allocated 18.49 per cent of the outlay to the agriculture sector. Accelerated Irrigation Benefit Fund Programme (AIBF) was started to provide incentives to the states to complete the irrigation projects in



time-bound manner. A central assistance programme Rashtriya Krishi Vikas Yojana (RKVY) has been launched to guide the district level agricultural plans. Live stock sector also given importance. The performance of agriculture and allied sector was of inconsistent one. Out of first four years of the plan the agricultural GDP growth rate was dismal in 2008-09 and 2009-10, but the growth rate was over above to the target in 2007-08 and 2010-11. The current financial year 2011-12 is again a crisis year for agriculture. Severe drought across the country and particularly in Southern States is causing major concern. With both Rabi and Kharif showing poor performance, the farmers' suicides are on rise again.

Low productivity has badly affected the growth of Indian agriculture. This had been accomplished by huge difference between the overall GDP of the economy and Agricultural GDP. Whether it is pre-green revolution period or post green revolution period, early reforms period or post-reforms period or even during Tenth and Eleventh Plans the GDP of agriculture and allied sectors never matched with overall GDP. Infact, for certain years it was negative. During 2008-09 and 2009-10 of Eleventh Plan the GDP growth rate of agriculture sector was 0.1 and 0.4, while overall GDP growth rate was 6.8 and 8.0 per cent respectively<sup>46</sup>. The yield levels also so miserable that the average annual yield of rice in 2006 was 30 quintals and it is only one-third of that of Egypt and little less than one half of the annual yield of China. Even in case of wheat, the crop which has recorded highest increase in India in the last 50 years the average annual yield is much lower than compared to U.K. and China. For every crop in India the average yield ranges 30 to 50 per cent of highest average yield in the world<sup>47</sup>.

The development, expansion and diversification of agriculture sector during the plans has enveloped few positive and many negative results. The agriculture sector still is in the hands of gamble of monsoons. Nearly 60 per cent of the cultivated area is still rain-fed. Despite concerted efforts the cultivated area and production of pulses, oilseeds and horticulture products is not encouraging. The so cherished new agricultural technology have had benefited limited crops like wheat, rice and cotton and few regions and few middle, upper middle and rich peasantry. Even these crops experienced shocks in production and marketing in few states. The planning has not addressed the volatility in agricultural prices. The demand and supply principle and agricultural price situation has been at the mercy of global players. On irrigation front the failure is miserable. In spite of launching of AIBF, many irrigation projects are in initial stages. The public investment into agriculture has declined from 35 per cent in 1960-61 to 22 per cent 2010-11. The planning system has grossly failed to implement land reforms in true spirit and to provide tenancy rights. Across the country the tenants are in dire straits. The notable point here is that the planning process failed to address the agrarian crisis and resultant farmers suicides. During 1995-2011, more than 2.5 lakh farmers were committed suicide. The planning in India has failed to co-ordinate various agencies involved in agricultural development to percolate the benefits to the small and marginal farmers who constitute more than 75 per cent of total farm households.

## **Agriculture: Phase of Institutional and Technical Reforms:**

Productivity in Agriculture mainly depends on two sets of reforms – Institutional and Technological. Among the institutional rigidities such as the existence of feudal relations, small size of farms, sub division and fragmentation, insecurity of tenancy rights, high rents etc. act as disincentives to the peasantry to raise production and prove to be bottlenecks in the overall development of agriculture and rural economy. They weaken the capacity of the farmers to save and invest in agriculture and also to enjoy the fruits of their labour. Consequently institutional reforms were emerged. The socialists believed that the existence of feudal and semi-feudal relations in rural communities is the root cause of agrarian distress. The emancipation of the peasantry from the bondages of institutional depressors will unleash forces which shall automatically raise levels of production in agriculture.

The institutional reforms have been designed to impact agrarian relations and landholding structure which play an important role in the performance of the agricultural sector. Land reforms have been on the national agenda since independence to improve the performance of agriculture as well as for rural re-construction and to achieve egalitarian society. In addition, creating greater access of land to the landless rural poor is an important component of poverty alleviation programmes. Land reforms, in spite of all the limitations in implementation, did play an important role in changing the agrarian structure in India. The Institutional reform measures implemented at the all India level were a) abolition of

intermediaries, b) tenancy reforms, c) ceiling legislation and d) other government initiatives.

In implementation of land reforms, particularly tenancy reforms and land ceiling legislation the government of India has miserably failed. Still lakhs of tenants are unprotected and oral tenancy and sub-tenancy are the worst forms of tenancy system in India. It is causing more damage to the overall growth of agriculture and as well as to the living conditions of the tenants. As far as distribution of surplus land at all India level is concerned upto March 2004, the area declared surplus was 73.36 lakh acres and out of that 54.03 lakh acres was distributed among 57.46 lakh beneficiaries. It is surprising to note that the surplus land declared so far is less than two per cent of the cultivated area. According to NSSO 26<sup>th</sup> round the surplus land to any estimation should be 30 million acres but not 7.3 million acres<sup>48</sup>.

Further, land policy in India has undergone broadly four phases since Independence. Land reforms were in the forefront in the first and longest phase (1950-72). During the second phase (1972-85) attention was shifted to bring uncultivated land into cultivation. In the third phase (1985-95) water and soil conservation was given more importance through Watershed Development, Drought-Prone Area Development (DPAP) and Desert-Area Development Programmes (DADP). A Central Government sponsored Wasteland Development Agency (WDA) was established to focus on wasteland and degraded land. The fourth and current phase of policy (1995 onwards) centres on debates about the necessity to continue with land legislation and efforts to improve land revenue administration and, in particular, clarity in land records.

To counter the whatever pattry success of institutional reforms, the technological reforms were introduced with a package programme in the form of green revolution. Prior to green revolution the yields of different crops were stagnant. Hayami and Ruttan aptly remarked that arguably, the Japan experience of 20<sup>th</sup> century of successfully overcoming of the agrarian barrier, to which in turn aided industrialisation by providing food, material and saving has been generalised in monsoon dependent Asia. However, in India and other Asian countries land yield was stagnant throughout history until the very recent green revolution and innovative models of development and improved agricultural investment on biological, chemical inputs and irrigation<sup>49</sup>.

The genesis for green revolution in India can be traced back to the IADP (Intensive Agricultural District Programme) launched in 1960. It was intended to bring technological break through in agricultural production through commercialization of agriculture. The basic objective was to revolutionise agricultural operations, activating the tradition bond farming community and to boost up the yield of major crops.

The programme was based on the argument that, it is more economical to concentrate man power and resources in selected areas than to spread the development efforts on a uniform basis throughout the country<sup>50</sup>. The districts were selected on the basis of assured water supply, minimum natural hazards, maximum potentialities for increasing agricultural production within a comparatively short time and with a well developed village institutions like co-operatives and Panchayats. Besides

IADP, the acute food shortage in 1960's led to the introduction of other agricultural programmes like IAAP and HYVP. All these programmes were intended to modernize the agriculture sector. These programmes eventually led to green revolution, wherein the food production was doubled in between 1950 and 1970. Ironically, the much aspired trickle down did not take place and the poor remained where they were. The gap between haves and have-nots widened as all the benefits of green revolution were reaped by large farmers, and by the regions with assured irrigation facility<sup>51</sup>. In spite of such weakness, the green revolution has created much awareness among the farming community. The present fruits of higher production levels in agriculture are no doubt routed through green revolution. When the community and agricultural development programmes were implemented there was an implicit assumption that, accessibility to the means of production will cut across socio-economic structure i.e. all farmers will have equal access to productive resources, and as such, would take advantage of the services provided. But this has not been realised due to many inherent contradictions in the socio-economic conditions of rural India and pro-rich agrarian structure enveloped by green revolution led to capitalistic mode of production.

Green revolution no doubt has given greater thrust to the yield and production levels of major crops. Backwardness in irrigation, rural electrification and other infrastructure, fragmented holdings, existence of small and marginal farmers in larger chunk have had resulted in a situation where anticipated spread effects are so weak. There is no proper control and planning on crop pattern. Mass mania among the farm households irrespective of land holding size and soil and climatic conditions has

thrived them to go for 'mono crop' cultivation. Wheat in Punjab, cotton in Telangana, Vidarbha and parts of Karnataka, groundnut in Ananthapur, Rice in Coastal belt, sugarcane in Uttar Pradesh and Maharashtra are some of the examples. This has led to shortage of pulses, oilseeds, nutritional rich coarse grains and some times even of rice. Green revolution process has not accompanied by the price policy and marketisation of the products. Thus, unscientific way of forging ahead with green revolution, without appropriate preparedness has rooted wrong signals in agrarian economy, where pauperisation of small and marginal farmers and decline of farm households and increase of agriculture and non-agriculture labour households has taken place. The displacement of labour from agriculture has been significant. It widened the gap between rich and poor peasantry, regional inequalities on rise and also resulted in large scale migration. The small and marginal farmers, tenants and share croppers also shifted to commercial crops without proper financial and infrastructural sources. Commercialisation has increased cost of production in manifold way, but the out prices were beneficial to neither farmers nor consumers. This has landed the peasantry into debt trap and resulted in mass suicides. This phenomenon is significantly high in rain-fed regions.

### **Globalisation Context:**

The Globalization may not new to India, has entered during 1991 with strong motives guided by uni-polar world with sole prescription of USA. As a follow up, New Economic Policy (NEP) came into force in India in 1991 under the discursive principles of globalisation. The neo-liberal economic programme encompassed agriculture, industry and other

sectors of the economy. State intervention is gradually on declining trend. The Dunkel Draft and the Uruguay Round Consultations have had far-reaching impacts on policy formulations, foreign trade frame work and Terms of Trade (TOT) in agriculture. Some of the academic studies spelt out that economic reforms played a potential role in development of science and technology, Information and Communication Technology (ICT), space technology and many service provider industries. But from agriculture, small scale industries, petty trading and rural development side the picture is highly conflicting and somewhat gloomy. In principle the term globalisation refers to elements of widespread interconnectivity in all aspects of life across the world by broadening, widening, deepening and speeding the scope and implementation of reforms to connect native economies with the world economy. This is all to provide equal play level to world nations irrespective of their socio-economic capabilities. But in true sense the entire process has been dictated by the international trade and financial bodies like WTO, IMF and the World Bank. Gradually the emphasis was on neo-liberal ideologies and the basic objective of the agenda and its related Structural Adjustment Programme (SAP) was to create the required environment to privatise all the production channels and governance and open the economy for Trans National companies (TNCs).

As a part of WTO agreements the Agreement on Agriculture (AOA) has come into force from January 1<sup>st</sup>, 1995. It was intended to establish a fair and market oriented agricultural trading system. As per the agreement quantitative restrictions (QRs) have been liberalised on many items including agricultural goods. By April, 2001, 147 agricultural products,



343 textile products and 226 manufacturing goods were liberalised from QRs.

The Indian economy has been substantially overhauled with the introduction of globalization led liberalization policies. Import and customs duties of many products were drastically lowered or totally dropped to enable unrestricted imports into the country<sup>52</sup>. Subsidies to agriculture were reduced sharply and government has started reducing its investment in agriculture and private investment (by individual farmers) has become imperative.

Fifteen years of economic liberalisation has affected Indian agriculture in many ways. The agrarian economy of India with more than 75 per cent of small and marginal farmers, large scale illiteracy and fighting with resource crunch, poverty and indebtedness, malnutrition, poor conditions of health and sanitation etc. hasn't well prepared to meet the challenges of globalisation. It was argued<sup>53</sup> that the official approach deliberately created barriers to agricultural development and growth in agriculture simply by skewing the terms of trade against agriculture through protectionist trade policies and overhauled exchange rate. The process of economic reforms promised to make agriculture sector more competitive, efficient and productive to global market through deregulated agricultural credit structure, contract farming, putting aside state led land reforms, involvement of private investment in agriculture research, 'triple p formula' (PPP) in agricultural extension system. It also promised diversification of agriculture in developing economies including India towards high valued and universally sought-after crops such as fruits, vegetables, flowers and medicinal plants and more opportunities to farming

community towards export market with free trade and openness. It is expected that this will provide greater freedom to the farmers to improve their efficiency and gain from liberalised global trade.

The actual scenario of Indian agriculture has been some what different to these promises and assurances. Economic reforms have manifested large-scale crisis by creating new problems and exacerbating the existing ones. Landlessness and inequalities in landholding pattern have increased sharply in post-reform period due to concentration of land through purchases or leasing in by big land owners in the name of corporate farming and Special Economic Zones (SEZs) (Ramachandran, Ramkumar, 2000; Athreya 2003)<sup>54</sup>. Commercialisation and corporatisation of agriculture has increased the land prices substantially and small farmers were thrown out of land market. The lopsided growth rate has led to a drastic decline in share of agriculture in GDP from 50.0 per cent of 1950's to 18 per cent in 2011, but the dependency of population on agriculture has decline marginally from 70 per cent to 56.0 per cent during the same period. The number of operational holding have increased from 50.77 millions in 1960-61 to 101.27 millions in 2009 as per the NSSO estimates. Average operational area also declined from 2.63 hectares to 1.06 hectares during the same period. This amply indicates the marginalisation of land asset and a significant increase in the chunk of small and marginal farmers. The rate of growth of agricultural output during the pre-reform period of 1980s has increased by four per cent per annum, which was higher than population growth rate. India achieved self-sufficiency in food production and export of rice and wheat was on envil. But in the post-reform period the rate of growth of agricultural output dropped to a level of two per cent

per annum. During 10<sup>th</sup> plan and present 11<sup>th</sup> plan the average rate of growth of GDP in agriculture has been just around one per cent. As a result percapita availability of food grains also decreased from 474 grains of 1973-74 to 426 grains in 2009-10.

The mid-term appraisal of Eleventh Plan presented a gloomy picture of growth rate of agricultural output being at around 2.0 to 2.5 per cent. There has been even negative growth rate in agricultural output during the year 2008-09. All this can be attributed to the 'U' turn policies of the government against the agriculture sector with the dictate from WTO and its allies. In the name of opening of Indian agriculture to global markets, output prices have been exposed to volatility of global prices. The cropping pattern also guided by these price movements and farmers lured by higher world prices shifted to high value cash crops in place of food crops (Venu Menon, 2006)<sup>55</sup>. Devaluation of rupee made Indian exports cheaper; this is also another reason for shift towards commercial crops. During the last decade area under food grains declined by 18 per cent and area under cotton increased by 25 per cent (Vandana Shiva, 2005). Another school of thought argue that the phase of globalisation has changed the consumption pattern in rural areas and demand for high value products like fruits, vegetables, milk, meat, fish and eggs on rise from higher income strata cutting across different sections of the society. This sort of tendency also one of the reasons for shift in cropping pattern towards high value commercial crops (Gulati, Muller, 2003)<sup>56</sup>. Diminishing profitability of agriculture is another area of concern (Sen and Bhatia 2004)<sup>57</sup>. Surjit study on farm business income from paddy cultivation in seven most important paddy growing states shows that out of seven states growth rate was

negative in four states in post-reform period (1993-94 to 2002-03) and slowed down in other three states<sup>58</sup>. Balamuralidar Posani (2009) in his empirical study observed that inter-sectoral terms of trade i.e., the ratio of total prices received by agriculture sector to the total prices received by non-agricultural sectors has been against to the agriculture sector<sup>59</sup>.

The high valued commercial crops and for that matter cultivation of paddy has become high-cost prone since the period of green revolution. The cost of cultivation has further increased due to entry of TNCs and other global agents into input and output market of agriculture sector. As mentioned earlier the public investment in agriculture is declining and the individual private investment on irrigation, seeds, fertilizers and pesticides has been increasing sharply. On the other market prices of agricultural commodities and Minimum Support Price (MSP) given by the government are highly uncondusive to the small and marginal farmers and even to the middle and upper middle class peasants. With this the agriculture has become a high cost and low income generating profession. That is input-output parity (computed by comparing the input price index with output price index of agriculture sector) which was favourable in 90's has remained lower than hundred since 1994-95 indicating declining profitability of agriculture (Posani 2009)<sup>60</sup>. Basing on NSSO estimations on percapita income and consumption of farm households Misra and Posani (Misra, 2007 and Posani 2009) arrived at a conclusion that what the economic reforms promised in terms of favourable terms of trade (TOT) towards agriculture sector, a sizeable increase in output prices and with which real incomes of the farm households increase significantly has been proved actually otherwise<sup>61</sup>. There was an erosion of real incomes of the farm

households due to frequent volatility in global output prices. Exports of agricultural products also not picked up as assumed by protagonists of economic reforms, rather the imports witnessed a major rise after mid 1990s. The Planning Commission has estimated that in last 15 years the ratio of dollar value of agricultural exports and imports slid by 3.8 per cent points. Huge imports at many times of many primary commodities like cotton, tea, coffee, coir, spices, fruits and vegetables has led to a sharp fall in domestic prices. It resulted in huge loss to farming community. It is the result of more openness of our agriculture to international market, absence of QRs and ineffectiveness of low level tariffs (Bhalla G.S. 2004, Ghosh 2005)<sup>62</sup>. Reduction of input subsidies is another major fallout on small and marginal farmers. Undoubtedly the subsidies played a considerable role in the success of green revolution (Sen 1992)<sup>63</sup>. But the reduction of these subsidies to a greater extent and leaving the farming community to the mercy of market inconsistencies has been one of the basic reasons for the erosion of profitability of agriculture and the consequent agrarian crisis in post-reform period. Except an increase in subsidy on electricity (no to say about low voltage and frequent breakdowns) subsidy on all other inputs decreased from earlier 1.9 to 1.4 of GDP during 1995 and 2006 (Sen 1992, Acharya and Jogi 2004)<sup>64</sup>.

Cultivation of commercial crops of high yielding variety which picked up in post-reform period has added more pressure on irrigation and particularly ground water in rain fed regions, purchase of company seeds and application of high doses of fertilisers and pesticides. Undoubtedly it has increased the cost of cultivation in manifold way. The large scale unemployment also played a major role in propping up agrarian crisis in

rural areas. NSSO statistics speaks that the rate of growth of employment in agriculture has come down from 2.07 per cent of pre-reform period to 0.66 in post reform period.

Decline in gross capital formation and public investment in agriculture and its resultant impacts on research, extension and irrigation on one side and a fallout in social and development banking and a return to the fold of private financiers and money lenders on the other are some of the major issues of post-globalisation agrarian scenario of India. Government of India itself in its report admitted that sluggish growth in Indian agriculture during the phase of economic reforms was significantly caused by irresponsive agricultural research, nearly broken down extension, inadequate production, distribution and regulation of seeds (GOI, 2005, pp.197).

As far as input side is concerned dearth of irrigational water, spurious seeds, adulterated pesticides from unregulated private dealers and its resultant recurring crop failures, inconsistent market prices have pushed the farmers into mounting indebtedness<sup>65</sup>.

The macro perspective of the Indian agriculture in the context of grand failure in rationalisation of landed property, super imposition of green revolution without proper infrastructural facilities have ended up with some disquieting features, which were uncondusive to the progress of Indian agriculture in general and small and marginal farmers in particular. The decelerating capital formation and public investment in agriculture and a sharp decline in share of agriculture in GDP but continuous higher dependency on agriculture for livelihood, adverse terms of trade, falling

returns – cost ratio of agricultural output, neglect of semi-arid region and dry land cultivation and above all changed priorities of the government in light of neo-liberalism policies have had compounded the problems of Indian agriculture and routed it to a distress. The dichotomy between institutional and technical reforms also played a construed negative role. Technical reforms in the form of green revolution worked as counter-productive to socio-economic change and establishment of egalitarian society in India and more particularly in rural India. Introduction of new technology has lured the farmers of small and marginal holdings to commercialise and capitalise agriculture to reap the benefits. But without proper landed property, water source, adequate capital, technical know-how and flaws in market support the farmers have entered into the fray and received many major setbacks. As a fallout on already pondering small and marginal farmers, the globalisation further accentuated the problems of Indian farmers and this has taken the shape of crisis and ultimate suicides by farmers at large.

Inspite of many short-term and long-term measures, the farmers' suicides are taking place with few intervals. The magnitude of suicide rate even in 2011 (14 to 15 per cent of total suicides reported by NCRB) unveils the fact that farmer suicides are still being reported from the country side and particularly from Andhra Pradesh and Maharashtra. The incidents may be sporadic in recent months, even one such suicide is a shame on the part of civil society. As mentioned earlier the agrarian problem hasn't been taken up as the responsibility of the society to tackle and find appropriate solution. Instead of that the onus is on individual victim and his/her household. Massive volume of agrarian problems have been forged by the

globalisation led agents but the socio-economic burden is on individual households. The globalization has unleashed the new spectrum of consumerism. With agriculture being less remunerative the burden has been further intensified and many number of farmers entered into debt trap and ended their life abruptly due to psychological, sociological and economic isolation. The situation is almost similar in many states with varied intensity. Among southern states Andhra Pradesh is also encountering the problem more seriously. The Telangana region of Andhra Pradesh bearing the real brunt as cotton is the major cultivated cash crop. Some of the coastal districts, particularly Guntur and Prakasham and Ananthapur from Rayalaseema also are experiencing the problem with same intensity. Thus, a modest attempt has been made to assess the agrarian crisis and its resultant farmers suicides in Andhra Pradesh with a household (of deceased farmers) study in four districts of Andhra Pradesh viz., Ananthapur from Rayalaseema, Guntur from Coastal Andhra and Warangal and Mahabubnagar from Telangana with following methodology.

### **Significance of Study:**

In the emerging agrarian situation, spate of farmers' suicides during 1995 – 2010 across the country have been attracting the attention of academicians, social groups and policy makers. It has been well understood that not a single problem but culmination of many inter-related and inter-affecting issues have been causative factors for such suicides. Agrarian crisis and its resultant farmer suicides in high magnitude badly affected not only the concerned agricultural families but also have had impact on entire



socio-economic set up of the concerned states and the nation at large. The agrarian crisis has propped up social tensions in rural areas due to enlarged socio-economic inequalities. It has given scope for ethical and human relation issues within the family and outside. These definitely have grater impact as smooth and qualitative development of the rural economy. Central and state governments have come up with many committees to look into the ground realities and suggest remedies. As the agrarian crisis is not propped up in a single year or decade, the approaches to control it and arrive at permanent solution needs careful understanding of the situation at micro level and of its comprehensive nature. Andhra Pradesh is one of the major affected states by agrarian crisis and resultant farmer suicides. Some of the districts in Rayalaseema, North Coastal Andhra and particularly entire Telangana Region are the worst affected areas in the state. The trends in farmer suicides in Telangana region have their own significance and manifestation. Though we may come across few studies here and there on agrarian crisis, there is no comprehensive work on this issue with social focus on farmer suicides and its various dimensions. Thus, the proposed research work under major research project can provide some insights of the problem at grass root level. The outcome of the research project can provide solid knowledge base on these different issues and can help state and national governments to take necessary measures to reduce these social and economic tensions by strengthening and reorganising agriculture sector in particular and rural economy at large. It can be useful for further research and be beneficial to the intellectuals and civil society organisations to continue their endeavour to mitigate the woes of farming community.

### **Objectives:**

1. To Understand and analyse agrarian scenario in Indian economy in general with a special focus on Andhra Pradesh.
2. To observe and assess trends in farmers' suicides in Andhra Pradesh, with particular reference to Telangana Region.
3. To look into the factors that led to farmers suicides in the study area and their impact on socio-economic, psychological and moral aspects of affected households, and in turn on entire gambit of socio-economic set up as such.
4. To examine the government sponsored measures and their impact to tackle this problem.
5. To come up with appropriate alternative policy measures to find a long lasting solution to the agrarian crisis and its resultant suicides of farmers.

### **Hypothesis:**

1. Institutional and market driven policies of globalised world economic phenomena have changed socio-economic scenario of the rural India.
2. Globalisation led liberalisation policies and reforms in agriculture have caused distress among small and marginal farmers in particular and the agrarian economy in general.
3. Institutional policy formulations obviously proved as temporary packages and failed to find out sustainable relief to the problems of agriculture sector in a comprehensive manner.

## **Methodology:**

In order to realise the objectives of proposed research project, two districts from Telangana region viz., Warangal and Mahabubnagar, Anantapur from Rayalaseema and Guntur from Coastal Andhra region have been marked out for detailed study with a pre-tested and structured questionnaire. One hundred (100) suicide affected households from each district will be taken as respondent households for the study. Thus, this project study will be basically relying on primary data. Warangal and Mahabubnagar districts which are highly crisis prone districts of Telangana Region have been selected for the purpose of the study. These two districts have distinct agro-climatic conditions and vast cultivated area under cotton crop. Anantapur is a shadow area with lowest rainfall and highly unfavourable climatic conditions. It is also most vulnerable district where, farmers' suicides are on high note. Surprisingly agriculturally rich Guntur district also experienced the gravity of the farmers' suicides. Here, the suicides were not among the land owners but, among the tillers of the soil i.e., tenants and share croppers. Landlessness is very high in this district as the distribution of the land is highly skewed.

The data arrived from the empirical study will be processed with relevant statistical tools and then analysed scientifically to test the objectives and finally to come to a conclusion. Secondary information will be gathered from relevant official documents, scholarly articles of eminent personalities who are working on agrarian issues. Information will also be

gathered by visiting different organisations, institutions, individuals associated with the cause.

### **Limitations of the Study:**

1. Suicides may occur due to economic, social and psychological reasons. Suicides on account of agrarian distress may be one of the causes, thus it may not be generalised. As the information will be gathered from the members of the deceased farmers the economic, social and psychological stress faced by the farmers who committed suicide may or may not be reflected in true sense.
2. As the primary data is based on recall method the accuracy of the information may or may not be hundred percent dependable.
3. In Indian agriculture more than seventy percent are small and marginal farm households. Most of the suicides have been reported from the households of these categories and the present study is based on the information given by these families. However, the findings of the study may also be relevant to the farmers of other categories.
4. The study is limited to four districts and four hundred sample households. Thus the inferences drawn from the study may or may not be generalised. However, the conclusions of the study may be indicative of the overall crisis in agriculture.
5. The statistical data pertaining to farmers suicides in Andhra Pradesh by district-wise are not as organised as state-wise at All India level, the inferences and analysis is primarily based on scholarly articles.

## **Chapterisation:**

- Chapter-I** : Introduction: Problem Setting and Methodology.
- Chapter-II** : Agricultural Situation in India
- Chapter-III** : Status of Agriculture in Andhra Pradesh
- Chapter-IV** : Farmers Suicide Phenomena
- Chapter-V** : Socio-Economic Dimension of Farmers Suicides in Andhra Pradesh – Field Study Results.
- Chapter-VI** : Policy Perspectives, Summary and Conclusions

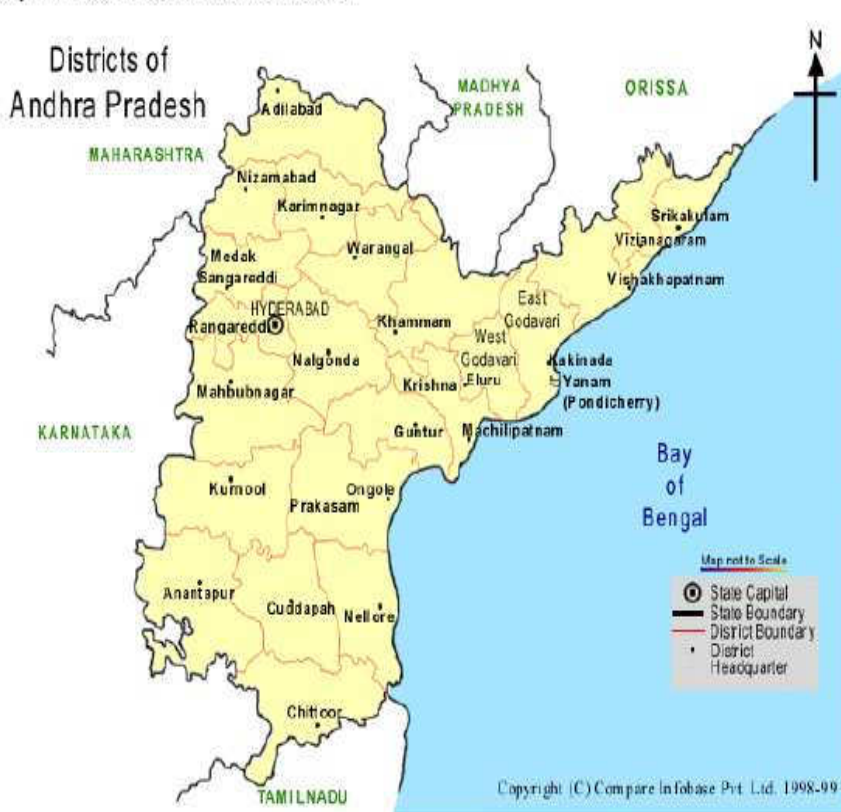
## PROFILE OF ANDHRA PRADESH

The recorded history of Andhra Pradesh area can be traced to the Iron Age Maha Janapad period. During the Kakatiya Dynasty entire Telugu land was under one unified rule. The end of Kakatiya dynasty opened the influence of rulers of Delhi. During the British rule the Andhra region was under British rule and the Telangana region under direct rule of Nizams. In 1956 on November 1<sup>st</sup> the Telangana region has been merged with Andhra and present Andhra Pradesh has come into existence.

Andhra Pradesh is situated in a tropical between 1214<sup>0</sup> North to 1915<sup>0</sup> North and 7610<sup>0</sup> East to 8445<sup>0</sup> East. It is bounded on the East by the Bay of Bengal, on the North-East by Orissa and Madhya Pradesh, on the North by Maharashtra, on the West by Karnataka and in the South by Tamilnadu. Thus it is bounded by land on three sides and covered by the water of Bay of Bengal on the Eastern side.

The State of Andhra Pradesh now has 3 distinct regions viz., Telangana, Rayalaseema and Coastal Andhra. It is the fourth largest state in the Indian union with an area of about 2,75,045 thousand sq.kms. accounting for 8.4 per cent of the total geographical area of the country. According to 2011 censuses, it has a population of 8,46,65,533 of which 4,25,09,881 is male population and 4,21,55,652 female population. The male, female population rate is 50.20 : 49.80 and the density of the population is 308. It is 5<sup>th</sup> populous state in India. There are 23 districts, 81 revenue divisions, 1,127 mandals and 21,905 grama panchayaths.

Map 1: The districts of Andhra Pradesh



States SC and ST population to the total population is 16.14 and 6.56 per cent respectively. The literacy rate in the state is 67.66 per cent of which 75.76 is male literacy and 59.56 per cent is female literacy. Among the districts the highest literacy rate is in Hyderabad with 78.80 per cent and lowest in Mahaboobnagar district with 44.41 per cent. The sex ratio for the state is 992 females for 1,000 males. Nizamabad district has recorded highest sex ratio in favour of female with 1038 female for 1000 male population. The quick estimates provide that the gross state domestic product of Andhra Pradesh for the financial year 2010-11 at constant 2004-05 prices is Rs.4,879,233 crores. The gross area irrigated by all sources during 2009-10 is 57.65 lakh hectares and it accounts for 45.89 of the gross

cropped area. Some of the important irrigation projects in existence are Nagarjunasagar, Sriramsagar, Srishailam. Govt. of Andhra Pradesh is lingering on Jalayagnam since 2004 to complete a number of major, medium and minor irrigation projects with a proposed expenditure of Rs.1 lakh crores. But recent estimations raised the expenditure level to Rs. 2 lakh crores. Lift irrigation schemes, drip irrigation, sprinkle irrigation works are being given top priority as subsidized schemes.

The Andhra Pradesh is endowed with bountiful natural resources having good soils, diversified cropping pattern and major irrigation systems fed by rivers like Godavari, Krishna, Thungabhadra, Penna, Nagavali, Vamsadhara etc. Over a decade the state of Andhra Pradesh is experiencing unprecedented drought in both Kharif and Rabi seasons.

The pattern of growth of agriculture has however brought uneven development, across regions in the state and characterized by low productivity and degradation of natural resources, consequently the growth of agriculture has tended to be slacken in the recent years. It has 15,572 large, medium and small scale industries contributing nearly 23 per cent to SGDP. It has 10,217 length of highways. The total length of railways is 4,998.94 kms. consisting of South Central Southern and South-east railways. Rajiv Gandhi International Airport at Shamshabad in Hyderabad is feather in the cap. The service sector is contributing around 53 per cent to the SGDP. Tirupathi, Bhadrachalam, Srisailam, Yadagirigutta and Simhachalam are some of the famous pilgrim centres.



Andhra Pradesh is also endowed with a variety of soils ranging from poor coastal sands to highly fertile deltaic alluviums. Red soils occupy over 66 per cent of the cultivated area and are mostly situated in Rayalaseema and Telangana districts.

The rainfall in Andhra Pradesh is being influenced by both South-West and North-East Monsoons. The normal annual rainfall of the State is 940 mm. Major portion (68.5 per cent) of rain fall is contributed by South-West Monsoon (June-Sept.) followed by (22.3 per cent) North-East Monsoon (Oct-Dec). The rest 9.2 per cent of the rainfall is received during the winter and summer months.

The regional imbalances across the regions and injustice to the Telangana region on many fronts has evoked forceful agitation in recent months. There is a strong will among the Telanganites to have their own state to overcome many pending problems and above all their self-respect.

It is in the headlines since 1994-95 with large scale farmers suicides. The recent NCRB report puts it as 31,120 during 1995-2010. The state has drawn attention of many agricultural economists and scholars to look into the genesis of the problems of Andhra Pradesh agrarian economy.

## PROFILE OF TELANGANA

Telangana forms the core of Sathavahana Empire (221 BC – 218 AD), Part of Chalukya Empire in South India (Between 5<sup>th</sup> and 11<sup>th</sup> Century AD) Kotilingala in Karimnagar was their first capital before moving to Dharanikota. The region experienced its golden age during the reign of Kakatiya Dynasty. Rudramadevi and Prataparudra were prominent rulers. Telangana came under the rule of Delhi Sultanate in the 14<sup>th</sup> century. In the early 18<sup>th</sup> century Muslim Asafjahi dynasty established a separate state known as Hyderabad. Telangana witnessed rebellion in the form of peasant revolt, actively supported by communists between 1946 and 1951. The revolt was against atrocities of Jagirdars and Deshmukhs and later against Osman Ali Khan, Asifjah VII.

Dr. Burgula Ramakrishna Rao was the first democratically elected Chief Minister of Hyderabad state in 1952. Violent agitations by Telanganites to send back bureaucrats from Madras state resulted in mulki rules (rule by natives of Hyderabad). The state reorganisation commission (SRC) under Fazal Ali was appointed in December 1953, to study the modalities to create states on linguistic basis. Obviously the SRC was not in favour of immediate merger of Telangana Region with Andhra state despite their common language.

Telangana is situated in the central stretch of the eastern seaboard of the Indian Peninsula. Of the three regions of the state of Andhra Pradesh, Telangana has the largest area, with 114,800 square kilometres (44,300 sq.m). The population of Telangana as per 2011 census is 3,52,86,757.



The Telangana region has rich natural resources. 45 per cent of the forest area of Andhra Pradesh state is in Telangana region, spread across five districts. 20 per cent of the coal deposits in the country are in Telangana region. The Singareni Collieries Company (SCC) excavates coal for industrial purposes and for thermal power stations. There are limestone deposits in the region which cater the needs of cement factories. Telangana has other resources such as bauxite and mica.

In Telangana the nature of soil is basically red earths and with loomy sub-soils and Black cotton soils are common in Adilabad and Nizamabad districts. It consists of 60 per cent of the land area. The major crops grown are paddy, cotton, groundnut, chillies, turmeric and coarse grains. In spite of its richness in natural resources, Telangana has been grossly neglected and relegated to a position of backward region.

Telangana region is famous for its handicrafts of Pambarthi of Warangal district, Nirmal paintings, Pochampalli and Gadwal sarees and so on. Yadagiri gutta, Vemulawada, Bhadrakali Temple, Bhadrachalam, South Indian church of Medak are some of the important pilgrimage centers.

Some of the prominent poets of the Telangana region in the early era include Pothana, Kancherla Gopanna, Bhakta Ramadasu, Palkuriki Somanatha. Modern era poets include Padma Vibhushan Kaloji Narayana Rao, Sahitya Akademy award recipient Dasarathi Krishnamacharya and Jnanpith award recipient Dr. C. Narayana Reddy.

Bonalu, Bathukamma, Dasserah, Diwali, Eid-ul-Fitr, Eid-ul-Adha, Milad-un-Nabi, Christmas, Sankranti and Ugadi are prominent festivals in Telangana.

69 per cent of catchment area of river Krishna and 79 per cent of river Godavari is in Telangana, but Telangana region gets less than 15 per cent of the river water. The Coastal Andhra has usurped 80per cent of assured waters of Krishna allocated to the State by the Bachawat Tribunal. 90per cent of surplus waters, yet to be allocated, are reserved for the Raayalaseema, denying the Telangana its rightful share. The Godavari waters have already been harnessed to irrigate more than 12 lakh acres in Coastal Andhra, while the corresponding figure for Telangana is 4 lakh acres. The proposed Polavaram Project on Godavari is to serve the Coastal Andhra region is six times larger than the proposed Ichampalli project to serve the backward Telangana region. The net area under tank irrigation in

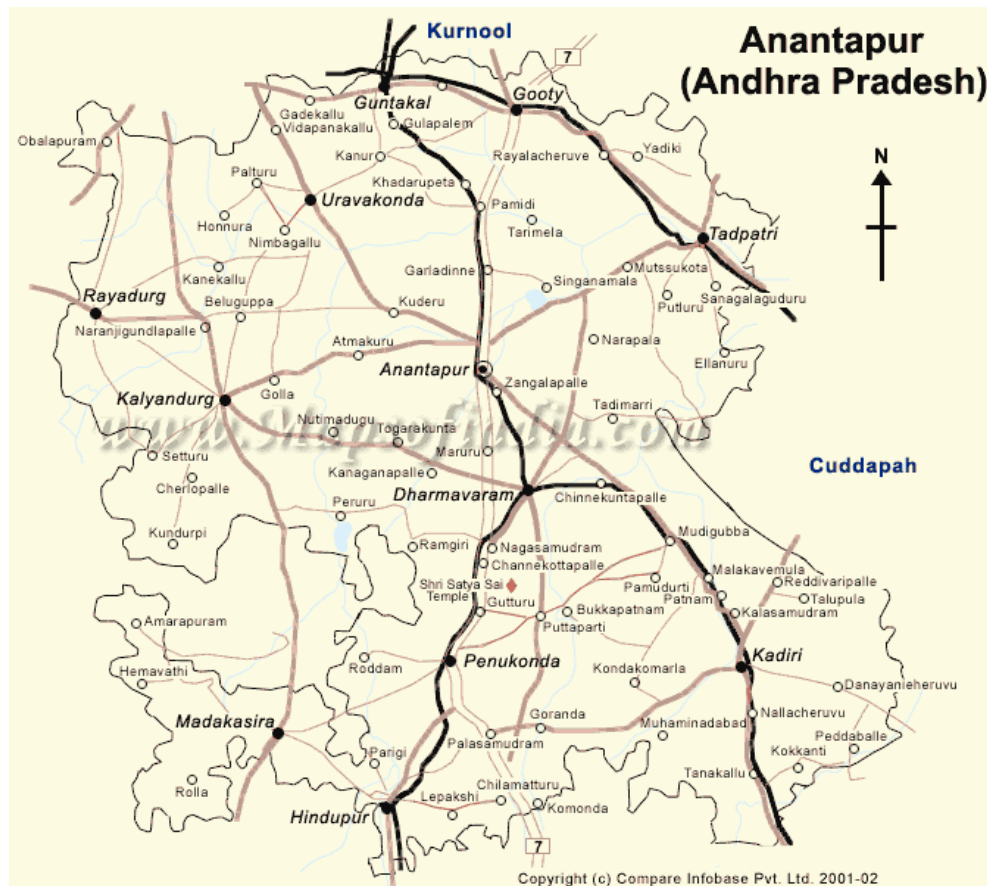
the Telangana region has declined by 78per cent between 1956 and 2010. Except SRSP, the entire Telangana region depends on tanks and bore wells for irrigation and only few pockets of Karimnagar, Warangal are getting irrigation water through SRSP and parts of Nalgonda and Khammam through Nagarjuna Sagar left canal. Except that the entire Telangana region depends on the mercy of monsoons. The Telangana farmers mostly depend on well irrigation. The farmers of Coastal Andhra get low cost canal water subsidized by the State, while the Telangana farmers are forced to have their own source of irrigation through erection of bore-wells.

The net cultivated area in the Telangana region has decreased by 25 per cent during the period 1956 and 2010, while it has increased by 4.25 per cent in Coastal Andhra region. 40 per cent of the cultivated area in the state is in Telangana region, and the institutional credit available to the telangana farmers is very meagre. They get 18per cent, 23per cent and 28per cent of the total credit provided by the District Cooperative Central Banks (DCCB) (short term), the Andhra Pradesh Cooperative Central Bank (long term) and the Scheduled Commercial Banks respectively. Inadequate institutional credit is forcing the Telangana farmers to fell into the debt trap laid by the private moneylenders, leading to an unprecedented number of suicides during the last fifteen years.

For allocation of Backward Regions Grand Fund (BRGF), the central government has located 13 districts from the state of Andhra Pradesh in 2009-10. Out of such 13 districts, 9 districts (except Hyderabad) are from Telangana region alone and it speaks the gravity of the situation.

## PROFILE OF ANANTHAPUR DISTRICT

Ananthapur is familiarly known as “Hande Ananthapuram”. Ananthapur and a few other places were gifted by the Vijayanagar rulers to Hanumappa Naidu of the Hande family. The place subsequently came under the Qutub Shahis, Mughals, and the Nawabs of Cuddapah, although the Hande chiefs continued to rule as their subordinates. Later, it came into the possession of Hyder Ali and Tipu Sultan. After Tipu’s death, it was taken back by Siddappa. Ananthapur district was formed in the year 1882 having been separated from Bellary district.



With the formation of Andhra Pradesh, Ananthapur district merged in the state with other Rayalaseema districts. Ananthapur district lies, between 13' – 14' and 15' – 15' Northern latitude and 76' – 50' and 78' – 30' Eastern longitude. It is bounded by Bellary, Kurnool districts, Cuddapah and Kolar districts on Southeast and North respectively. The district has been divided into 3 Revenue divisions consisting of 63 Revenue Mandals and 964 revenue villages.

Ananthapur district has the geographical area of 19,13,000 hectares and out of that 13 per cent is under forests. The net sown area is 9.23 lakh hectares, which forms 48.25 per cent of total geographical. 76 per cent of the soils are red soils and remaining 24 per cent are black soils. The total population of the district as per 2011 census is 4,083,315 and out of that 50.57 per cent are male and 49.43 per cent female population. Density of the population is 213 per sq.km. The sex ratio also improved a bit with an increase from 958 female of 2001 to 977 in 2011 per 1000 male population. The literacy rate also improved much from 56.13 per cent of 2001 to 64.28 in 2011. 14 per cent of the total population belongs to schedule castes and 3.51 per cent belongs to scheduled tribes.

Ananthapur is the only arid district in the state with scanty annual rainfall of 536 mm. It lies in shadow area and suffers from frequent severe droughts. Only 14.08 per cent of total cropped area is under irrigation and remaining entire area is under rainfed cultivation. 70.83 per cent of gross irrigated area is under tube-well cultivation. 75 per cent of the total cultivated area is under groundnut. Other important crops are sunflower,

gram and rice. The average yield of major crops is less than half a tonne per acre and thus reflects highly adverse agricultural environment that exists in the district. The area under horticulture, spices and vegetables also decreased significantly due to unfavourable climatic conditions.

The historical places and pilgrimage centres consists of Alur Fort, Hemavathi fort, Penukonda fort and Raidurga fort and Veerabhadra Temple, Babayya Darga of Penugonda, Puttaparthi, etc., Ananthapur is well known for its silk and cotton industry. Dharmavaram silk sarees are popular all over the world. It is also famous for Barites high grade line stone, iron ore and asbestos. It is one of the 13 districts identified under BRGF scheme.

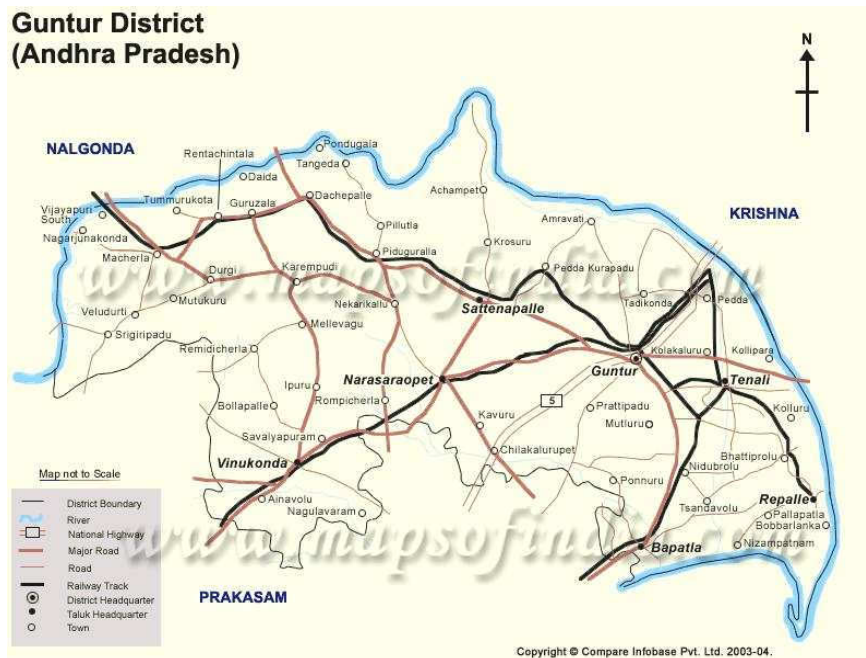


## Ananthapur District

Sl. No.	Description	2011	2001
1.	<b>Actual Population</b>	<b>4,083,315</b>	<b>3,640,478</b>
2.	Male	2,064,928	1,859,588
3.	Female	2,018,387	1,780,890
4.	<b>Population Growth</b>	<b>12.16per cent</b>	<b>14.34per cent</b>
5.	Area Sq.km.	19,130	19,130
6.	<b>Density/km2</b>	<b>213</b>	<b>190</b>
7.	Proportion to Andhra Pradesh Population	4.82per cent	4.78per cent
8.	<b>Sex Ratio (per 1000)</b>	<b>977</b>	<b>958</b>
9.	Child Sex Ratio (0-6 age)	927	959
10.	<b>Average Literacy</b>	<b>64.28</b>	<b>56.13</b>
11.	Male Literacy	74.09	68.38
12.	Female Literacy	54.31	43.34
13.	<b>Total Child population (0-6 age)</b>	<b>426,922</b>	<b>479,853</b>
14.	Male population (0-6 age)	221,539	244,990
15.	Female population (0-6 age)	205,383	234,863
16.	<b>Literates</b>	<b>2,350,294</b>	<b>1,774,088</b>
17.	Male literates	1,365,701	1,104,042
18.	Female literates	984,593	679,046
19.	<b>Child Proportion (0-6 age)</b>	<b>10.46per cent</b>	<b>13.18per cent</b>
20.	Boys Proportion (0-6 age)	10.73per cent	13.17per cent
21.	Girls Proportion (0-6 age)	10.18per cent	13.19per cent

## PROFILE OF GUNTUR DISTRICT

Guntur District is home to the second oldest evidence of humans in India, in the form of Palaeolithic (old stone age) implements. Ancient history can be traced from the time of Sala kings who ruled during the 5<sup>th</sup> century BCE. Prior to formation of the state of Andhra Pradesh Guntur along with other coastal districts was under direct British rule along with the Madras presidency and with the formation of Andhra Pradesh it merged in the state along with other coastal districts on November 1<sup>st</sup>, 1956.



The Krishna River forms the northeastern and eastern boundary of the district, separating Guntur district from Krishna district. The districts are bounded on the southeast by the Bay of Bengal, on the south by Prakasam district, on the west by Mahabubnagar district, and on the northwest by Nalgonda district.

It has three revenue divisions, 57 mandals, 729 revenue villages and 1051 gram panchayats. It has 20 large and medium scale and 300 small scale industries. Places of historical importance in Guntur district are Amaravathi, Bhattiprolu, Kotappakonda, Undavalli caves, Gurazala, Macherla and the archeological museum situated in Guntur.

The population of the district according to the census 2011 is 4,889,230, of which male population is 2,441,128 and female population 2,448,102. The decadal growth rate was 9.50 per cent as against 8.72 per cent of 2001 census. The density of the population of the district has been 429 per sq.km. The sex ratio is better than the state and all India level with 1003 female to 1000 male population. The literacy rate of the district stands at 67.99 and is better than the 62.54 per cent of 2001 census. Work force to the total population is 47.86, 73.94 per cent of districts population is depending on agriculture for its livelihood. Tenant cultivation is high in this district. The total geographical area is 11,17,066 hectares of which 12.86 percentage is under forests and the net area sown is 54.90 per cent. Nagarjuna Sagar and Krishna western delta projects provide canal water for irrigation. In addition, the district has good ground water potential and lift irrigation schemes. Black cotton soils are common type in Guntur district with a mix of red clayey, loamy sandy soils. Major crops cultivated in the district are paddy, chillies, cotton, tobacco and black gram. Chillies research centre is located in Guntur city. Guntur area is internationally known for export of chillies, cotton and tobacco. The Guntur region is identified as a major transportation and textile hub of India.

## Guntur District

Sl. No.	Description	2011	2001
1.	<b>Actual Population</b>	<b>4,889,230</b>	<b>4,465,144</b>
2.	Male	2,441,128	2,250,279
3.	Female	2,448,102	2,214,865
4.	<b>Population Growth</b>	<b>9.50 per cent</b>	<b>8.72 per cent</b>
5.	Area Sq.km.	11,391	11,391
6.	<b>Density/km<sup>2</sup></b>	<b>429</b>	<b>392</b>
7.	Proportion to Andhra Pradesh Population	5.77per cent	5.86per cent
8.	<b>Sex Ratio (per 1000)</b>	<b>1003</b>	<b>984</b>
9.	Child Sex Ratio (0-6 age)	948	959
10.	<b>Average Literacy</b>	<b>67.99</b>	<b>62.54</b>
11.	Male Literacy	75.40	71.24
12.	Female Literacy	60.64	53.74
13.	<b>Total Child population (0-6 age)</b>	<b>466,285</b>	<b>538,285</b>
14.	Male population (0-6 age)	239,408	274,754
15.	Female population (0-6 age)	226,877	263,531
16.	<b>Literates</b>	<b>3,006,999</b>	<b>2,455,965</b>
17.	Male literates	1,660,019	1,407,402
18.	Female literates	1,346,980	1,048,563
19.	<b>Child Proportion (0-6 age)</b>	<b>9.54 per cent</b>	<b>12.06 per cent</b>
20.	Boys Proportion (0-6 age)	9.81per cent	12.21per cent
21.	Girls Proportion (0-6 age)	9.27per cent	11.90 per cent

## PROFILE OF WARANGAL DISTRICT

Warangal district is located in the northern area in the state of Andhra Pradesh, India. The administrative seat is Warangal. This city is also called as tri-city, as it includes Warangal, Hanamkonda and Kazipet. Warangal has been recently in the news because of the Separate Telangana issue. It has been a major centre for the movement and its rebirth.

Warangal was the capital of Kakatiya kingdom ruled by the Kakatiya dynasty from the 12<sup>th</sup> to the 14<sup>th</sup> centuries. The old name of this newly formed city was Orugallu. The Kakatiyas left many monuments, including an impressive fortress, four massive stone gateways, the Swayambhu temple dedicated to Shiva, and the Ramappa temple situated near Ramappa lake.



Warangal was under Delhi Sultanate for fifty years and remained part of Mughal empire since 1687 and parts of Hyderabad state in 1724. As per States Reorganisation Act, in 1956 Warangal as part of Hyderabad was merged in Andhra Pradesh along with other Telangana districts.

The district lies between the latitude of 17-19<sup>0</sup> and 18-36<sup>0</sup> north and longitudes of 78-49<sup>0</sup> and 80-49<sup>0</sup> east, and is above midsea level by 870 ft – 1700ft. It is bounded on the north by Karimnagar district, on the west by Medak district, on the south by Nalgonda district and by Khammam district on the east and south-east. The geographical area of the district is 12,846 sq.kms with 3 revenue divisions, 51 revenue mandals. The soils of the district comprise of sandy loams with parches of shallow black cotton soils, and at places even medium and deep black cotton soil.

The population of the district as per 2011 census is 3,522,644. The male and female population is 1,766,257 and 1,756,387 respectively. The density of the population of the district per sq.km is 274. The average literacy of the district is 66.16 per cent. The sex ratio's is 994 per 1000 males.

The normal annual rainfall of the district is 1048.1 mm. Besides SRSP canal with 1.5 lakh acres assured ayacut, the important irrigation sources in the district are historically reknowned Ramappa, Ghapur (m), Pakhal and Lakhnnavaram lakes and Salivagu project under which considerable area is under irrigation. The other sources of irrigation in the district are rain-fed tanks, wells, tube wells and hill-streams which require good monsoon waters.

The principal cereal crops grown in the district are Rice and Maize. In the production of rice the district occupies 4<sup>th</sup> place in Telangana region and 11<sup>th</sup> place in Andhra Pradesh. Among cash crops cotton and chillies are the prominent crops.

Frequent drought conditions and insufficient rainfall in certain parts of the district have been causing major setback to the farming community. Irrigation in Warangal and to say in entire Telangana depends on ground water sources, the recurrent failure of monsoons is depleting the ground water table. Even the major historical lakes are also not getting sufficient inflow. As the major commercial crop of the district is cotton both natural and man made disasters have resulted in suicides by farmers across the district.

In 2006 the Indian government named Warangal one of the country's 250 most backward districts (out of a total of 640). It is one of the thirteen districts in Andhra Pradesh currently receiving funds under Backward Regions Grant Fund Programme (BRGF).

The district is famous for producing cotton. Cotton ginning is done here and supplied to places like Mumbai and Coimbatore. It is famous for textile production since ancient times. Once most famous Azam Jahi Spinning mill was later closed due to irresponsible and inept political leadership. The district is home to the Regional Research Center of the Acharya N.G. Ranga Agricultural University. This district is famous for red chilly exports.

Warangal district is an excellent abode of fine arts and literature. It is the birth place of the most coveted poet Pothana. Freedom fighter and great poet of contemporary period Kaloji Narayana Rao hails from this district. Educationally it is famous next to Hyderabad with NIT, Kakatiya Medical College, kakatiya University. The Kazipet Railway Junction is the gateway of South India, which connects South and North India.

Warangal is famous for its historical places such as Ramappa, Laknavaram, Thousand Pillars Temple, Bhadrakali Temple and Warangal Fort. The bi-annual Sammakka – Saramma Jatra, which is better known as ‘Medaram Jatra’ also attracts lakhs of pilgrims from all over the state and other adjoining states.



## Warangal District

Sl. No.	Description	2011	2001
1.	<b>Actual Population</b>	<b>3,522,644</b>	<b>3,246,004</b>
2.	Male	1,766,257	1,644,895
3.	Female	1,756,387	1,601,109
4.	<b>Population Growth</b>	<b>8.52 per cent</b>	<b>15.15 per cent</b>
5.	Area Sq.km.	12,847	12,847
6.	<b>Density/km<sup>2</sup></b>	<b>274</b>	<b>253</b>
7.	Proportion to Andhra Pradesh Population	4.16 per cent	4.26 per cent
8.	<b>Sex Ratio (per 1000)</b>	<b>994</b>	<b>973</b>
9.	Child Sex Ratio (0-6 age)	912	955
10.	<b>Average Literacy</b>	<b>66.16</b>	<b>57.13</b>
11.	Male Literacy	75.91	68.88
12.	Female Literacy	56.45	45.09
13.	<b>Total Child population (0-6 age)</b>	<b>324,410</b>	<b>452,747</b>
14.	Male population (0-6 age)	169,654	231,568
15.	Female population (0-6 age)	154,756	221,179
16.	<b>Literates</b>	<b>2,116,037</b>	<b>1,595,745</b>
17.	Male literates	1,211,953	973,527
18.	Female literates	904,084	622,218
19.	<b>Child Proportion (0-6 age)</b>	<b>9.21 per cent</b>	<b>13.95 per cent</b>
20.	Boys Proportion (0-6 age)	9.61 per cent	14.08 per cent
21.	Girls Proportion (0-6 age)	8.81 per cent	13.81 per cent

## **PROFILE OF MAHABUBNAGAR DISTRICT**

Mahabubnagar was formerly known as 'Rukmammapeta' or Palamuru or Cholawadi. It has been named as Mahabubnagar on 4<sup>th</sup> December 1890 in honour of Mir Mahabub Ali Khan Asaf Jah VI, the Nizham of Hyderabad (1869-1911 AD). The history of Mahabubnagar probably began as Buddhist, but many historical temples were destroyed by Asaf Jahi rulers.

It is said that the famous Golconda diamonds including the most famous KOHINOOR Diamond came from this district. Mahabubnagar district is located between 150-55' and 170-29' Northern latitude and 770-15' and 790-15' Eastern of longitude. It is the second largest district in the state in terms of area. It is bounded on the north by Ranga Reddy and Nalgonda districts, on the east by Nalgonda and Guntur districts, on the south by the rivers Krishna and Tungabhadra and on the west by Raichur and Gulbarga districts of Karnataka State. The area of the district is 18,432 sq.km. The forests in this district are known to contain timber trees like bijasal, Nalla maddi, Eppa (*Hardwickia binata*), brushwood, tarvar and so on. Part of Nallamala forest range surpasses through the district. Two important rivers, viz, Krishna and Tungabhadra and Dindi, tributaries of river Krishna / Peddavagu and Chinnavagu flow through the district. The soils are commonly Red sandy, Black cotton and loamy soils. The normal rainfall of the district is 604 mm. But over the last decade except 2005-06, the rainfall was much short of normal rainfall.



The district on administrative purpose has been divided into 5 revenue divisions, consisting of 64 mandals and 1475 villages. Paddy, Jawar, Ragi, Bajra, Redgram, Greengram and Millets are important crops. The net area sown is 8,76,700 hectares out of which 3,02,700 hectares is under forest cover. Stone metal, line stone, black and colour granite and laterite are some of the important minerals. Apart from agriculture, sheep rearing and handloom weaving are major economic activities. It has one medical college and many Engineering and other professional colleges. In 2006 the Indian government named Mahabubnagar district as one of the country's 250 most backward districts. It is one of the thirteen districts in Andhra Pradesh currently receiving funds from the Backward Regions Grant Fund Programme (BRGF).

Total population of the district as per 2011 census stands at 4,042, 191 roughly equal to the nation of Liberia or the US state of 'Oregon'. It

ranked 55<sup>th</sup> district at all India level in population, of which 50.62 per cent are male and 49.38 per cent are female population. The density of the population of the district is 219 per sq.km. The sex ratio increased very marginally during 2001-2011 from 972 to 975 female population per 1000 male population and it is lower than A.P. and all India level statistics. The literacy level of the district also very much behind to many districts, state and all India literacy level. The literacy rate of the district stands at 56.06, of which male literacy is at 66.27 and female literacy at 45.65 per cent. It has many historical temples, dargas and churches. Alampur Lord Siva temple is known as Southern gate of Srisailam. Manyam kund Venkateshwar temple is known as Pedala Tirupathi (poor people tirupathi).

Inspite of bounty of river flows the Mahabubnagar is highly drought prone district and well known as 'Palamuru Jilla'. Here, the migration is on high note. Almost in all villages, one can find 50 to 60 per cent of migration of youth in search of livelihood. The principal food crops in the district are rice, jowar, bajra and ragi. Important commercial crops are groundnut, castor, chillies and tobacco and red-gram is the major pulse crop. Mahabubnagar district has abundant minerals like Diamonds, Gold, Semi Precious / Abrasive / Decorative stones, Asbestos, Clays, Quartz / Quartzite, Feldspar / Nephilene Syenite, Limestone Slabs etc. Surprisingly most of the mineral reserves in the district are still untapped.

The economy of the district is predominantly depends on agriculture. The district is well known for artistic silk sarees of Narayanpet, Kothakota, Gadwal and Tippadampally which are noted for their Silk and Zari sarees and having command on the good market through out the country.

## Mahabubnagar District

Sl. No.	Description	2011	2001
1.	<b>Actual Population</b>	<b>4,042,191</b>	<b>3,513,934</b>
2.	Male	2,046,247	1,782,340
3.	Female	1,995,944	1,731,594
4.	<b>Population Growth</b>	<b>15.03 per cent</b>	<b>14.20 per cent</b>
5.	Area Sq.km.	18,432	18,432
6.	<b>Density/km2</b>	<b>219</b>	<b>191</b>
7.	Proportion to Andhra Pradesh Population	4.77 per cent	4.61 per cent
8.	<b>Sex Ratio (per 1000)</b>	<b>975</b>	<b>972</b>
9.	Child Sex Ratio (0-6 age)	932	952
10.	<b>Average Literacy</b>	<b>56.06</b>	<b>44.41</b>
11.	Male Literacy	66.27	56.63
12.	Female Literacy	45.65	31.89
13.	<b>Total Child population (0-6 age)</b>	<b>501,878</b>	<b>547,506</b>
14.	Male population (0-6 age)	259,810	280,552
15.	Female population (0-6 age)	242,068	266,954
16.	<b>Literates</b>	<b>1,984,586</b>	<b>1,317,521</b>
17.	Male literates	1,183,860	850,414
18.	Female literates	800,726	467,107
19.	<b>Child Proportion (0-6 age)</b>	<b>12.42 per cent</b>	<b>15.58 per cent</b>
20.	Boys Proportion (0-6 age)	12.70 per cent	15.74 per cent
21.	Girls Proportion (0-6 age)	12.13 per cent	15.42 per cent

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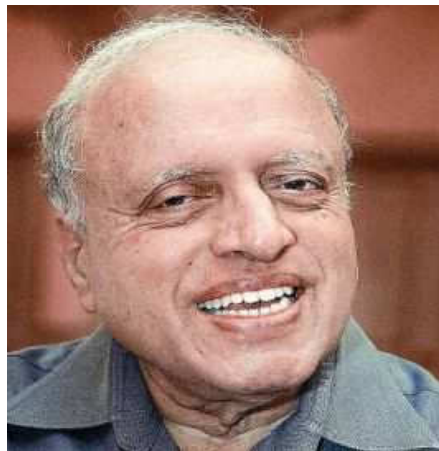
## **CHAPTER - II**

### **Agricultural Situation in India**

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*“Some thing is terrible wrong in the country side”*



*M.S. Swaminathan*

Agriculture, in most developing countries including India is the core sector providing basic livelihood to the significant proportion of the population, particularly of rural areas. The historical background of Indian agriculture dates back to 9000 BC<sup>1</sup>. India had its prestigious place in the world market even before the entry of British rule. Indian products reached the world via existing trading networks and foreign crops were introduced to India<sup>2</sup>. Referring to Vedic period Gupta says that summer monsoons may have been longer and contained excessive moisture and it would have been to aid the winter monsoon rainfall required for winter crops<sup>3</sup>.

Long lasting water storage systems were designed during middle ages (200 – 1200 AD). Kallanai dam was built on river Kaveri and considered as one of the oldest water – regulation structures in the world still in use<sup>4</sup>. Noboru Karashima's study on agrarian society in South India during Chola Empire (875 – 1279 AD) reveals that during this period land pattern was transformed from collective holding of land by a group of people to individual plots of land, each with their own irrigation system<sup>5</sup>.

The early modern era (1200 – 1757 AD) has witnessed mix of Indian, Arabic and Persian technologies in construction of water works<sup>6</sup>. The land management was particularly strong during the regime of Akbar the Great (1556 to 1605 AD)<sup>7</sup>. During the colonial British era (1757 – 1947) irrigation was given importance in the states of present Punjab and Andhra Pradesh and later they become the centers of agrarian reforms. The

second half of 19<sup>th</sup> century saw some increase in land under cultivation and agricultural production was realised at an average rate of about 1 per cent per year by the later 19<sup>th</sup> century. Agricultural performance was dismal in the inter war period (1918 – 1939) and from 1891 to 1946 the rate of growth of output of all crops was 0.4 per cent. There were significant regional and inter crop differences. During the inter war period population growth accelerated while food output decelerated leading to declining food availability per person and the problem was more acute in Bengal<sup>8</sup>.

India had been major exporter of tea, coffee and spices to European countries well before the beginning of British rule. “The rule began with outright plunder, and a land revenue system which extracted the uttermost farthing not only from the living but also from the dead cultivators. It was a pure loot”<sup>9</sup>. At the stroke of Independence Indian agriculture has been degenerated, the production levels reached to a lowest level and population increased enormously with partition. Less land and more dependency had been the feature of Indian agriculture. The similar tendency has been prevailing even today. Since independence, India has become one of the largest producers of wheat, potato, spices, rubber, tea, fishing, fruits and vegetables in the world. Number of agricultural institutions of research, management, banking and development have been established. The post-green revolution period has brought out a seachange in entire process of agricultural production. It has made an indelible mark on both positive and negative sides of Indian agriculture<sup>10</sup>. In order to rehabilitate and consolidate the economy, the first five year plan has given clear emphasis on agricultural programmes<sup>11</sup>. Institutional reforms and green revolution initiated during 1950’s and 1960’s had been the part of framework to set

right the rural scenario and to revolutionise the yield and production of the major crops<sup>12</sup>.

This two pronged approach was evolved to minimize inequalities in landed property and assure rights of ownership and tenancy regulation and to provide basic food to taming millions. But these programmes were relatively unable to provide a break through in rural development via agricultural development. Prof. Hanmantha Rao states that the most serious deficiency in respect of agricultural performance has been the continued imbalance in the growth of agriculture sector to the rest of the economy<sup>13</sup>. To quote again Prof. Hanmantha Rao, the green revolution has provided enough impetus to the growth of agriculture in India, but with backwardness in irrigation, rural electrification and other basic infrastructure, it could not provide anticipated spread effects<sup>14</sup>. Uncertainty and inconsistency in new agricultural technology without proper preparedness on infrastructural front and especially on irrigation front where more than 80 per cent of cultivable land directly and indirectly depends on monsoons, which are highly volatile in nature has been fatal to the progress of Indian agriculture. The phase of green revolution has unleashed the new farm technology by promoting aggressive application of HYV Seeds, fertilisers and pesticides. The dry land regions of the country, which are highly rain-fed comprise nearly 75 per cent of the total cultivable area have been under greater stress. The new variety seeds of any crop invariably require more water. India now is the biggest user of ground water for agriculture in the world (Shah, 2009)<sup>15</sup>. During 1970 – 2007 eighty per cent additional irrigation has been contributed by the ground water to be mere closure to the present status, between 2000-01 and 2006-

07, about sixty per cent of the irrigation in the country was from ground water source – Infact, share of surface water has declined from 60 per cent to 30 per cent in the first decade of 21<sup>st</sup> century<sup>16</sup>. In water scarce dry land areas ground water sources have been exploited indiscriminatively. Extraction of ground water has been so intensified that number of wells and bore wells increased from 18.5 million in 2001 to 27 million by 2009. A comparison of these years on extraction ground water speaks the naked truth that safer districts were reduced from 82 to 55 per cent and unsafe, semi critical and critical districts were increased 9 to 31 per cent, 5 to 35 per cent and 7 to 35 per cent respectively<sup>17</sup>.

To feed over a 120 million population with 232 million tonnes of food grains from 178 million hectares of potential irrigation area (for that matter not of this entirely irrigated) is a herculian task. It is the right time to evolve appropriate technologies to increase the cultivable land, production and to improve the living standards of the farmers of dry land areas. There are areas where there is no facility to give any irrigation and even protective or life saving irrigation to the crops. Out of 108 million hectare of rain-fed area, 47 million hectares are dry lands. The dry land contributed 42 per cent of the total foodgrain production of the country. These areas produce 75 per cent of pulses and 90 per cent of sorghun, millets and groundnut. These lands besides being water deficient are characterised by high evaporation rates, low humidity and high run off and soil erosion. It is the area, where farmers are encountering may problems for survival of themselves and their cattle. Here, the life is in lowest strata to the benchmark of poverty line. Most of the farmers suicides reported in the country are from the rainfed dry land areas<sup>18</sup>.



## Land Holding Pattern:

**Table – 2.1**  
**Certain Key Characteristics of Operational Holdings**

		1960-61 (17 <sup>th</sup> )	1970-71 (26 <sup>th</sup> )	1980-81 (37 <sup>th</sup> )	1991-92 (48 <sup>th</sup> )	2003 (59 <sup>th</sup> )
1.	Number of operational holdings (millions)	50.77	57.07	71.04	93.45	101.27
2.	1.1 per centage increase	---	12.4	24.5	31.5	8.4
3.	Area operated (million hectares)	133.48	125.68	118.57	125.10	107.65
4.	Average area operated (hectares)	2.63	2.20	1.67	1.34	1.06

*Source: NSSO, Some Aspects of Operational Land Holdings in India, Various Rounds.*

**Table – 2.2**  
**Changes in the Size Distribution of Operational Holdings and Operated Area: 1960-61 to 2002-03**

Category of Holdings	Percentage of Operational Holdings					Percentage of Operated Area				
	1960-61 (17 <sup>th</sup> )	1970-71 (26 <sup>th</sup> )	1980-81 (37 <sup>th</sup> )	1991-92 (48 <sup>th</sup> )	2003 (59 <sup>th</sup> )	1960-61 (17 <sup>th</sup> )	1970-71 (26 <sup>th</sup> )	1980-81 (37 <sup>th</sup> )	1991-92 (48 <sup>th</sup> )	2003 (59 <sup>th</sup> )
Marginal	39.1	45.8	56.0	62.8	71.0	6.9	9.2	11.5	15.6	22.6
Small	22.6	22.4	19.3	17.8	16.6	12.3	14.8	16.6	18.7	20.9
Semi Medium	19.8	17.7	14.2	12.0	9.2	20.7	22.6	23.6	24.1	22.5
Medium	14.0	11.1	8.6	6.1	4.3	31.2	30.5	30.1	26.4	22.2
Large	4.5	3.1	1.9	1.3	0.8	29.0	23.0	18.2	15.2	11.8
All Sizes	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

*Source: NSSO, Some Aspects of Operational Land Holdings in India, Various Rounds.*

The excess dependency on agriculture on one side and a sharp shrink in growth of productive employment along with overall employment is adding more and more pressure on existing land holdings. Various rounds of NSSO show that the percentage increase in operational holdings has decreased from 24.5 per cent in 1980-81 to 8.4 in 2003-04. The average area operated also declined from 2.30 ha. in 1960-61 to 1.06 ha. in 2003-04. Marginalization of land holdings has been so vibrant that as the percentage of operational holdings of marginal holding size have increased steadily, the percentage of operational holdings in the hands of medium and large sized holding categories have decreased similarly. For example, the percentage of operational holdings in marginal holdings category has increased from 39.1 per cent in 1960-61 to 71.0 in 2003-04. Along with this the percentage of operated area also increased in this category from 6.9 to 22.6 and for small farmers from 12.3 to 20.9 per cent. This amply indicates the crisis in agriculture and land transformation from big sized holdings to marginal holdings due to globalized stratification of rural economy. It also reflects high volt pressure on landed property due to skewed land distribution. Though the official land reforms have miserably failed, the land transformation is mostly due to global market induced occupational diversification and migration of upper and upper middle classes from rural to urban areas. Decline in joint family system and thrust for nucleus families also one of the reasons for this transformation. As population scientists stated, the additional increase in population is more in rural areas and among poorer communities. These sections are in major chunk in rural India. The diversification of activities among these sections is very low and thus the pressure on existing land is mounting. Apart from this, the small and marginal farmer households primarily depend on family

labour and personal cultivation and for this reason the operational holdings will be relatively more than that of medium and large sized holdings. For medium size holding categories, the operated area decreased from 31.2 to 22.2 per cent and for large holding category the decrease is further sharper from 29.0 to 11.8 per cent during the said period. It is because of high prevalence of absentee landlordism and tenancy cultivation in these land holding categories and especially in large sized holdings.

### **Subsidies:**

Subsidies are another important incentive and no doubt emerged as major impulse to increase the agricultural growth to a certain extent. But it has been a major issue of policy debates. These subsidies should not become a permanent policy matter. Indiscriminative agricultural subsidies may lead to misuse of resources, environmental stress in the form of degradation of land and water and in the long run they are fiscally unsustainable<sup>19</sup>. Without proper soil testing heavy subsidies on fertilisers also prove counter-productive. These subsidies are mostly beneficial to the farmers under irrigated tracts. During the initial stages of technological revolution in agriculture subsidies may be justified. In due course it was found that the rich states, highly irrigated areas, certain crops and rich farmers usurped relatively higher share of input subsidies either of power, irrigation, fertilizer and credit. It is also estimated that the cultivators are receiving only 50 per cent of so called budgetary subsidy support.

It is also dangerous to withdraw subsidies without improving the supply and efficiency of inputs. Another issue of concern is without a

control on input prices, more particularly on seeds, fertilizers and pesticides the subsidies may not be as effective as expected. In other words fertilizer and pesticide companies are getting more profits in the guise of subsidies by increasing the selling costs without justification. What to say about inferior and intermittent powers supply, low quality, uneconomic designing and delay, inefficient management and leakages in construction of irrigational sources and adulterated and spurious seeds and pesticides. All these problems are adding to the imputed costs and directly and indirectly impacting the overall growth of agriculture on one side and the living conditions of the farming community, more especially the small and marginal farmers on the other.

### **Irrigation:**

Water is the crucial input in agriculture. Even today only 40 per cent of the cultivated area is under irrigation. Around 70 per cent of the available potential from minor irrigation sources consists predominantly of ground water sources and all such source has been utilised. Only the ground water in Eastern and North-East is to be tapped, where 75 per cent potential is still untapped<sup>20</sup>. The Bharat Nirman programme initiated in 2005 proposed creation of irrigation to 10 million hectares in a period of four years. One study indicates that over 400 major and medium irrigation projects were in the pipeline at various stages. For example, in Andhra Pradesh much dreamed Jalayagnam with an estimated initial cost of one lakh crores has been limping at various stages since 2004. Though works were not completed but the cost of Jalayagnam escalated to nearly two lakh crores due to inflationary tendency.

**Table 2.3**  
**Net area under Irrigation by Sources – All India**

(Area in percentage)

Year	Canals		Tanks	Tube-wells and other wells	Other sources
	Govt.	Private			
1950-51	34.4	5.45	17.3	28.7	14.2
1980-81	37.3	2.1	8.2	45.6	6.5
1990-91	35.31	0.99	6.2	51.4	6.1
2000-01	28.58	0.36	4.4	61.35	5.2
2004-05	24.5	0.36	2.9	59.3	12.8
2005-06	25.16	0.35	3.47	58.56	12.43
2006-07	24.8	0.38	3.35	59.0	12.11

*Source: Directorate of Economics and Statistics, Ministry of Agriculture.*

The progress on irrigation is not as encouraging as compared to the target due to small amounts of investment. To complete all these cherished projects across the country the investment has to be doubled even to complete them within 10 to 15 years time<sup>21</sup>. As far as rainfed agriculture is concerned, where the bulk of poor lives irrigation development is highly neglected. Much publicised watershed development programme has been mostly on paper and does not appear to be making much headway except in isolated cases, basically due to the initiative of NGOs. Traditional water harvesting structures such as tanks and lakes have been grossly neglected and become virtually defunct. There are about 1,20,000 tanks in Southern India consisting Andhra Pradesh, Tamil Nadu and Karnataka<sup>22</sup>. Altogether there are 2,08,000 tanks in India, irrigating about 2.3 million hectares

(1997). The net area irrigated by tanks declined by 29 per cent points between 1990-2000 and further by 32 per cent points between 2001 and 2008<sup>23</sup>. Situation in Telangana is the best case, where thousands of traditional tanks and lakes have been totally neglected, even the removal of silt has not been taken care. All these areas now become highly vulnerable areas and facing the wrath of the situation. Again these are the areas where suicides among farmers are high. Climate change also playing challenge with irrigation system in South Asia in general and in India in particular.

**Table – 2.4**  
**Net Irrigated Area by Sources in India**

('000 Hectares)

Year	Canals		Tanks	Tube Wells & Other wells	Other	Total Sources	NIA / NSA (%)
	Govt.	Private					
1950-51	8300	---	3600	6000	3000	20900	17.56
1990-91	16973	480	2944	24694	2932	48023	33.41
2000-01	15789	199	2525	33277	2892	54682	38.75

*Note:* NIA denotes: Net Irrigated Area and NSA denotes Net Sown Area

*Source:* Ministry of Statistics and Programme Implementation, Statistical Abstract of India, 2004.

**Table – 2.5****Use of Energy for Irrigation by Source across States**

State	Per centage of Farmer Households Irrigating Land Using		State	Per centage of Farmer Households Irrigating Land Using	
	Diesel Pumps	Electric Pumps		Diesel Pumps	Electric Pumps
Andhra Pradesh	20	78	Kerala	15	85
Assam	87	4	Madhya Pradesh	34	65
Bihar	97	2	Maharashtra	12	87
Chhattisgarh	28	63	Orissa	61	38
Gujarat	35	63	Punjab	29	71
Haryana	53	47	Rajasthan	61	34
Jammu&Kashmir	22	75	Tamil Nadu	27	72
Jharkhand	81	2	Uttar Pradesh	84	16
Karnataka	7	89	West Bengal	87	13
All India				66	33

*Source: NSSO, Situation Assessment Survey of Farmers, 2003*

Net area irrigated under different sources provided by Ministry of Agriculture amply reflects the increasing dependency on ground waters in India. The per centage area under canal irrigation (managed by the government expenditure), which was 34.4 per cent in 1950-51, slightly increased to 37.3 per cent in 1980-81, but then onwards it experienced a slide. In 2006-07, for which the latest information is available, the per centage area under canal irrigation has further decreased to 24.8 to the total net area irrigated. The major set back has come from tank irrigation source. The per centage area under tank irrigation in 1950-51 was 17.3, but sharply declined to 8.2 per cent in 1980-81 and further to 4.4 per cent in 2000-01.

By 2006-07 the share of tank irrigation shrunk to 3.35. This significant decrease in tank irrigation has forced the farmers of the southern states to depend on ground water. With this the share of tube wells and other wells has increased phenomenally from 28.7 per cent in 1950-51 to 59.0 per cent in 2006-07. It even reached to a peak of 61.35 per cent in 2000-01. From the post globalization period the priorities of public investment in agriculture have been highly adverse and the individual farmers are induced to depend on their own irrigation source. Higher dependency on bore wells resulted in higher personal investment in agriculture. In our agrarian economy more than 75 per cent of the operational land holdings are small and marginal sized holdings. These farm households, depending on (bore) well irrigation are spending huge amounts on erection and maintenance of bore wells including electricity charges and thus entering into debt trap.

Though at all India level the use of electrical pumpsets are just 33 per cent, in all most all southern states it is high. For example in Andhra Pradesh 78 per cent, Karnataka 89 per cent, Maharashtra 87 per cent, Kerala 85 per cent and Madhya Pradesh 65 per cent and in Chattisgarh 63 per cent of irrigated land is cultivated through electrical pumpsets. This shows the more reliance on extraction of ground water, which proves costlier on economic and environmental fronts. On economic front once a farmer depends on bore well irrigation he has to maintain it regularly, which involves imputed costs. In many southern states failure of bore wells is one of the prime causes of farmers indebtedness and resultant suicides.



## **Climate Change:**

The impact of climate change will be one of major deciding factors influencing the future food security of mankind. Agriculture is not only sensitive to climate change but, at the same time, is one of the drivers of climate change. Understanding the weather changes over a period of time and adjusting the agricultural practices towards higher yield and growth rate is a bigger challenge to the agrarian economies across the world<sup>24</sup>. As 75 per cent of world population lives in tropics and primary occupation of two thirds of this population is agriculture, the faster and drastic climate changes may result in wider consequences that affect the very basic livelihood. Many studies have expressed serious concern over impacts of climate change on Indian agriculture. Sinha and Swaminathan (1991)<sup>25</sup>, Sinha et al., (1998)<sup>26</sup> observed that during the past 25 years, significant changes in climate have been observed both in southern and northern regions. The sever drought situations of 2005 and more particularly of 2009 have been cited as striking examples of effect of climate change an Indian agriculture. It was estimated that the rainfall deficiency to the extent of 22 per cent has affected food grains production in Kharif by a short fall of 8-10 per cent<sup>27</sup>. Explicitly, the rainfed areas across the country are facing this problem periodically with varying intensity. For example in Andhra Pradesh, Ananthapur, Srikakulam and almost eight districts of Telangana are experiencing this problem frequently.

**Table – 2.6****Monsoon Performance: 2001 to 2010 (June – September)**

Year	Number of meteorological subdivisions			percentage of districts with normal / excess rainfall	percentage of long period average rainfall for the country as a whole
	Normal	excess	deficient / scanty		
2001	29	1	5	67	92
2002	14	1	21	39	81
2003	26	7	3	77	102
2004	23	0	13	56	86
2005	23	9	4	72	99
2006	20	6	10	60	99
2007	17	13	6	72	105
2008	30	2	4	76	98
2009	10	3	23	41	77
2010	17	14	5	69	102

Source: *Indian Meteorological Department, 2010*

The time of arrival and performance of the monsoon is very crucial for Indian agriculture, as 75 per cent of the cultivated area is basically rainfed. Some times we may find a mix of drought in one part / region and flash floods in other parts / regions at a time. These two extreme situations have badly affected and affecting the production levels of Indian agriculture frequently. The present (2011-12) agriculture season also proved very fatal to the farmers of the country at large and particularly in Andhra Pradesh. Allmost 872 revenue mandals are facing sever drought condition. Crop failure in nearly 40 lakh acres is posing serious threat to the agriculture and existence of the farmers. Flash floods in Kharif at the time harvesting damaged the crop extensively. If we go through the production trends since 1950's, the impact of monsoon is quite visible.

Regional vulnerabilities due to potential effect of climate change on agriculture much more depending on topographical condition of particular area / region. It may result in shifts in sowing times, length of growing seasons, which may alter the planting and harvesting time of crops. Warmer temperatures may call for much greater efficiency of water use. Weed and insect pests may shift their range and direction. It was estimated that even minimal increase in temperatures would decrease the yield of many crops, because such crops nearer exhaustion to maximum temperature tolerance stage (IPCC 2001). Variability of precipitation, longer and flash floods, drought periods, volatility in agricultural seasons, impact on effectiveness of irrigation methods, drop in cultivated area and decline in growth rates of agricultural production are some of the effects of climate change<sup>28</sup>. A study on few locations of Andhra Pradesh observed that water requirement for all the major crops in rainfed areas would increase by a minimum 49.0 mm to a maximum of 174.3 mm for different crops during 2005-2020<sup>29</sup> (G.S.L.H.V. Prasada Rao, 2010).

### **Seed Sector:**

Seed is the basic and crucial input for attaining sustained growth in agricultural production<sup>30</sup>. A radical change has taken place in the production, supply and application of seeds in due course, strikingly due to green revolution and then globalisation. In view of higher production targets to counterfeit malthusian syndrome application of HYV seeds was started in 1966. National seeds corporation and state seed corporations have taken up the marathan programme with active collaboration of agricultural research centers to brought out high yielding varieties in all

major crops. By 1997-98 coverage area under HYV seed was as high as 90 per cent, in case of rice it was 75 per cent and of coarse grains 55 per cent. Prior to globalization the organized seed sector particularly for food crops and cereals was dominated by the public sector<sup>31</sup>. In 1998, the World Banks structural adjustment policies forced India to open up its seed sector to MNCs like Cargill, Mansanto and Syngental<sup>32</sup>.

The global corporates have changed the input economy overnight. Farm saved seeds were replaced by corporate seeds. Public sector and its seed policy has become a tool in the hands of WTO dictat. These seeds have added more pressure on usage of irrigational water and application of more doses of fertilizers and pesticides. Thus a nexus between seed – fertilizer – pesticide corporate companies has taken over the Indian agricultural input market in to their fold. Inspite of efforts in the form of seed policy reforms through the seeds bill 2004, establishment of National Seed and Research Training Centre (NSRTC), establishment of seed banks the central government has been in helpless condition to protect the legitimate rights of the farmers in preparation, saving / purchase of seeds for small amounts.

Vandana Shiva aptly says that the seed is one of basic reasons for large scale farmers suicides in India<sup>33</sup>. MNCs seeds obviously prevent seed savings by farmers through patents and genetically engineered seeds with non-renewable traits. As a result farmers have to buy new seeds for every season. This has invariably increased seed costs and ultimately the indebtedness of the farmers. The shift from indigenious saved seeds to corporate seeds also manifested a shift in cropping pattern from a diversified

one to monoculture in agriculture. This can be barely witnessed from Kashmir to Kanyakumari, particularly in suicide-ridden southern states of Maharashtra, Andhra Pradesh, Karnataka, where cotton has become dominant mono crop and primary culprit crop for large scale suicides. Earlier millets, pulses, oilseeds were cultivated along with paddy, but now it turned to cotton monoculture, obviously imposed by the MNCs by luring the farmers with high yield and profit. But this sort of monoculture has increased the risk of crop failure. When Monsanto first introduced Bt Cotton in 2002, farmers lost 1 billion rupees due to crop failure<sup>34</sup>. Another estimation says that, massive failure of Bt Cotton costs farmers to a total of Rs.1.3 billion over 1,05,000 acres in only one growing season<sup>35</sup>. In Vidarbha region of Maharashtra also the Monsanto's GMO Bt. Cotton has unleashed the saga of suicides (4000 per year, 10 per day). Earlier the farmers were used to purchase cotton seed Rs. 7/- per kg, introduction of Bt cotton escalated the price to Rs. 1700/- per kg. The fraudulent claims of Monsanto on yield of its GM seeds also proved wrong. It promised 1500 kg/year, but when farmers harvested it resulted in 300-400 kg/year on average.

Priya Kumar in his research paper based on several case studies comments that centuries of indigenous knowledge, traditional cultivation practices and sharing techniques are being compromised. Many farmers have lost their right to cultivate and control the agricultural production cycle. As a result, farmers increasingly find themselves indebted and disempowered and it most alarmingly resulted in large scale suicides. Even the lifestyles and cultural origins of rural India are being threatened. The Survey conducted by Research Foundation for Science, Technology and

Ecology (RFSTE) discovered that in reality bollworm pests attacked Bt crop far more often than compared to simple hybrid and organic cotton crops<sup>36</sup>. Once Bt cotton is planted the cycle of systematic destabilisation begins and not much can be done to mitigate losses that will soon be incurred by the farmers<sup>37</sup>. Cross pollination is inevitable, and is preferred tactic to gain new customers. Bt crop is supposed to be surrounded by a 5 row deep sanitary organic band resulting in cultivation ratio of 80:20<sup>38</sup>. The Bt cotton seeds are approximately four times more expensive than both organic and hybrid seeds<sup>39</sup>. Almost all the farmers must give up their right to harvest their own seed, which they have evolved over the decades. Once enters into Bt seed cultivation, the farmer will be locked into a cycle of dependency on agro-business conglomerate. It needs as may as 30 times spray of pesticide to fight bollworm and such an excess usage of chemical has killed off many natural enemies of bollworm pests including centrain wasp and spider species<sup>40</sup>. In that vicious circle the farmers are forced to purchase pesticides, herbicides and insecticides on a continuous basis. Rural farmers have experienced “deskilling” of cultivation techniques, which carries with it social and ecological consequences<sup>41</sup>. The cultural importance of knowledge sharing is being lost to scientific IPRs. Thus the farmers are trapped in nexues of seed – pesticide – fertilizer producing companies-dealers-retailers – financiers. The result is that in the cotton crop belt of southern states i.e. Andhra Pradesh, Maharashtra, Karnataka, Madhya Pradesh and Chattisgarh, farmers are worstly affected with massive crop failure, low yield, high input costs and all this has been led to high indebtedness. It is evident from NCBR reports and Sainath extensive work that nearly 60 per cent of the farmer suicides have been reported from these southern states including Kerala<sup>42</sup>.

## Fertilizers and Pesticides:

**Table – 2.7**  
**Consumption of Fertilizers**

(Kg./Hectare)

Year	Urea	DAP*	MOP**	Complex	Nitrogen (N)	Phosphate (P)	Potash (K)	Total (N+P+K)
2000-01	191.86	58.84	18.29	47.80	109.20	42.15	15.67	167.02
2001-02	199.17	61.81	19.93	49.63	113.10	43.82	16.67	173.60
2002-03	184.93	54.73	19.12	48.10	104.74	40.19	16.01	160.94
2003-04	197.67	56.24	18.41	47.57	110.77	41.24	15.98	167.99
2004-05	206.65	62.56	24.06	55.08	117.13	46.24	20.61	183.98
2005-06	222.97	67.64	27.31	66.94	127.23	52.04	24.13	203.40
2006-07	243.37	73.81	25.86	67.99	137.73	55.43	23.35	216.51
2007-08	259.63	74.97	28.80	65.70	144.19	55.15	26.36	225.70
2008-09	266.49	92.31	40.78	68.05	150.90	65.06	33.13	249.09
2009-10	266.74	104.92	46.34	80.25	155.80	72.74	36.32	264.86

Source: Economic Survey, Annual Report 2011.

\* Diammonium Phosphate

\*\* Muriate of Potash

The usage of chemical fertilizers has become important component of agricultural inputs with the introduction of green revolution. The package programme under new technology obviously imposed intensive cultivation. The adoption HYV seeds also induced the farmers to apply more and more doses of fertilizers to get higher yield and production. As far as the consumption of fertilizers is concerned there has been a phenomenal increase from a meagre 66,000 tonnes in 1952-53 to 264.86 lakh tonnes in 2009-10. No doubt, the application of fertilizers has added

substantial to food grains production. It has been estimated that an increase in fertilizer consumption by 40 to 60 kgs per acre can yield an additional 30 – 45 million tonnes of food grains. Infact, indiscriminative and excessive usage of fertilizers can lead to serious problems with regard to quality of soil and environmental concerns. Tenth five year plan admitted that imbalance in the use of nitrogenous, phosphatic and potassic fertilizers due to their price variance can cause increasing deficiency of micro nutrients which affects the growth of the crop and interferes in proper uptake of the crop<sup>43</sup>. It also cause a decrease in carbon / organic matter content of the soil. It has been observed that more than five states Punjab, Haryana, Uttar Pradesh, Andhra Pradesh and Tamilnadu together accounted for 50 per cent of the consumption of fertilizers. It is also evident from the studies that the rainfed areas accounted for only about 20 per cent of the total fertilizer consumption. With the WTO agreement the fertilizer market also captured by the MNCs. Another area of concern is undue shortage, intermittent supply and sky ricketing prices of fertilizers.

During last one and half year the prices of all most all the fertilizers have doubled per bag of 50 kgs. For example, the price of DAP between March 2010 and September 2011 has increased from Rs.486.20 to 956, 10:26:26 from Rs.374.24 to 840, 28:28:00 from 389.00 to Rs.981.75. Further, within three months period on average the price of fertilizers additionally increased by Rs.300 per bag. For all major crops the additional burden on farmer per acre has increased from Rs.651 to Rs.1800<sup>44</sup>. As mentioned earlier, in more than 99 per cent cases the farmers apply the fertilizers without soil testing. For example, in Telangana region potassium content in the soil is more, but the farmers with their innocence applying



fertilizers over and above the required dosage. Agro economy senior scientist of ANGRAU expresses that with regular soil test and application of required type and dose of fertilizers it is possible to reduce the additional burden of the farmers to a greater extent<sup>45</sup>.

Another saga of agricultural input market is related to application of pesticides. Earlier green revolution and presently the globalization led agriculture are the prime causative factors for more and more usage of pesticides, particularly on commercial crops. It is observed from studies by many expert groups that not a single crop is left without applying the pesticides, whether food crops, commercial crops, vegetables, fruits or flowers. Just as the seed market, the pesticide market is totally under the control of MNCs. Their advertising section and resultant marketing and profits are more important to them than the welfare of the farmers. It is really a trap in which the Indian farmers are totally succumbed. Currently 67 types of pesticides banned or restricted abroad including EU and US are in active use in India<sup>46</sup>. Centre for Science and Environment (CSE), a Delhi based non-profit organization with documentary evidence reveals that may insecticides, herbicides, fungicides and plant growth regulators that are known for damaging nervous system, induce genetic disorders, wreck the reproductive system can cause cancer and toxic to bees and aquatic animals are being used extensively in the country. All India Network Project on Pesticide Residues (AINPPR) in its monitoring report 2009-10 says that because of unrestricted use of pesticides traces of Chlorpyrifos, which is known to affect nervous system, and a suspected hormone system disruptor are found in fruits, vegetables and food grains beyond the maximum residue limit (MRL) permissible in food items. Endosulfan, another more

controversial and dangerous agrochemical that induces genetic disorder and was banned globally in stockholm convention was a widely used pesticide in the country till May 2011, when Supreme Court temporarily banned it.

Another side of the coin is that application of pesticides is increased in manifold way from 24.3 thousand tonnes in 1970-71 to 38.0 thousand tonnes by 2006-07. With the entry of Bt seeds particularly of cotton, application of pesticides has increased significantly. This is mainly because of resistance developed by targeted pests towards applied pesticides. The hybrid and Bt seeds of MNCs frequently turn (ed) into spurious seeds and this inevitably induce(d) farmers to apply higher and higher doses of more and more toxic chemicals to sustain the crop<sup>47</sup>. Excessive and indiscriminate use of fertilizers and pesticides brings physiological changes in plants leading to multiplication and proliferation of pests and this in turn imbibes the farmers to go for application of more number of different pesticides. It is also important that application of pesticides needs scientific approach and much care. Most of our farmers lack this approach and thus leading to many health hazards. Application of higher doses of pesticides than the required quantity (which is not known to most of the farmers) appears as residue that may persist and accumulate within the ecoweb.

Prof. R.K. Mahajan, agricultural economist of Punjab University, commenting on pesticide usage reacts that green revolution is not as green as it was earlier, it has now become brown and pale. Overuse and misuse of pesticides in Punjab has led to serious ailments such as renal failure, still born babies, birth defects and cancer. The cost of pesticides is another major issue for farmers. Once the farmer enters into the pesticide trap, he

has to purchase them continuously at exorbitant rates fixed by the dealer. Adulterated and spurious pesticides and their mounting cost is one of the major reasons for indebtedness among the farmers.

### **Research and Extension:**

The research and extension activities stand as backbone to the entire agricultural activity. Sound research and extension will add impetus to the knowledge and skill based agricultural operations. The farmers, if provided with the fruits of these activities can lead to optimum utilization of resources. It not only flourishes the farmers but also the Indian agriculture. But in real terms, the National Commission on Farmers (NCF) aptly remarks that there is a large knowledge gap between yields in research stations and actual yields in farmers fields. There is only marginal increase in funds on research and extension over the years<sup>48</sup>. India spends only 0.5 per cent of its GDP on research and extension activities. Obviously, in recently concluded All India Science Congress, Prime Minister has promised to increase it to one percent of GDP.

A review of research, development and extension activities in agriculture by the Indian council of Agricultural Research (ICAR) during tenth plan period revealed several weaknesses. Such as, there is inadequate emphasis on the needs of rainfed areas, which account for 60 per cent of cultivated area; Focus is biased towards rice and wheat only; Lack of planning in programme implementation and focus on relevance and opportunities of the areas; Inadequate preference to emerging challenges such as post harvest; marketing and environmental concerns; and Lack of

accountability, weak interaction between researchers and extension workers and farmers. From the soil testing to selection of crop, tilling to seed, fertilizer and pesticide selection and their application, process of production to post-harvest operations the farmers invariably need active and productive support from research centres and extension workers. Number of field studies obviously, revealed that due to absence of this support system farmers at large are on losing end on many counts. Wrong selection of the crop, seed, fertilizer and pesticides on one side and improper usage of irrigational water and other inputs on the other resulting in vulnerability of farming community and particularly the small and marginal farmers with tiny lands, where intensity of the use of these inputs is high.

With regard to private sector partnership in agricultural activities, it is likely to tend towards profitable crops and enterprises of resource rich farmers in well resource endowed regions. Moreover, private sector is not interested in research and development related to better techniques of soil and water conservation, rainfed agriculture, cropping patterns, environmental impacts, and long term sustainability<sup>49</sup>. As far as extension is concerned, existing Training and Visit (T&V) system of extension is top down in its approach and there is little or marginal participation of the farmers. In the absence of public provision of such services, the resource poor and gullible farmers are becoming the victims of exploitation by the unscrupulous traders and money lenders merely interested in selling inputs such as seeds, fertilizers and pesticides, but not in the general interest of the farming community.

## **Agricultural Insurance:**

Another area where, the government can support the farmers in times of crop failure and unprecedented climatic disorders is crop insurance since more than 60 per cent of cultivated area is under rainfed cultivation, the crop insurance adds much importance to the farmers. National Agricultural Insurance Scheme (NAIS) introduced from rabi 1999-2000 has received much criticism than appreciation<sup>50</sup>. Field surveys reported that the agricultural insurance schemes by and large ineffective<sup>51</sup> due to application of it to unit area, calculation of generated income, low indemnity level, delay in settlement of claims. Many farmers have opposed compulsory insurance for loans from banks, they never got compensation inspite of low yields and crop failure. The major problem in implementation of crop insurance is non-availability of data pertaining to yield at village level and lack of trained personnel and proper institution to calculate yield level every year. The alternative proposal has been area-based rainfall index insurance with attractive features and less adverse effects and more innovative in secondary financial market<sup>52</sup>. But this also hasn't spread to many areas (except pilot project by BASIX in few parts of Karnataka and Andhra Pradesh) due to number of technical problems<sup>53</sup>.

## **Investment and Capital Formation:**

Among the various inputs that influence the agriculture in both micro and macro perspective it is the investment in agriculture sector that play a vital role. For every activity and process of agricultural development investment is most essential component. Over the years public investment

in agriculture has shown a secular declining tendency. The period of green revolution supported by public sector investment has augmented the agricultural growth, as well as incomes of the farmers with certain limitations. Since 1980s, the public investment and Gross Capital Formation (GCF) in agriculture in relation to GDP also started declining.

**Table – 2.8**  
**Gross Capital Formation (GCF) in Agriculture & Allied Sector**  
**(at 1999-2000 prices)**

(Rs. in crore)

Year	GCF in Agriculture & Allied Sector			Share of Agriculture & Allied Sector in Total GCF (%)		
	Public Sector	Private Sector	Total	Public Sector	Private Sector	Total
1999-00	8,668	41,483	50,151	5.99	11.87	10.15
2000-01	8,085	37,395	45,480	5.76	11.32	9.66
2001-02	9,712	47,266	56,978	6.72	13.74	11.66
2002-03	8,734	46,934	55,668	6.50	11.52	10.27
2003-04	10,805	42,737	53,542	7.42	9.17	8.75
2004-05	13,019	44,830	57,849	7.80	7.72	7.74
2005-06	15,947	50,118	66,065	7.86	7.21	7.36
2006-07	18,755	54,530	73,285	8.05	6.91	7.17
2007-08	22,107	57,221	79,328	7.62	6.42	6.72

*Source: Central Statistical Organization, New Delhi; National Accounts Statistics, 2009*

This has adversely affected irrigation and rural infrastructure<sup>54</sup>. The decline in public investment in agriculture on one side and inability of private investment to fill the gap on the other has resulted in deceleration in capital formation in agriculture since 1980s. Whatever the public

investment has made in agriculture bulk of it is on canal irrigation and that of private investment on ground water exploitation<sup>55</sup>. Due to inconsistency in investment pattern and actual funding and nexus between politicians, bureaucrats, contractors and engineers the major irrigation projects are at stake and the management of canal irrigation system has been jeopardized. Institutional support is very less and further decreasing in construction and maintenance of minor irrigation, more particularly, the tanks and well irrigation. It is causing high indebtedness among the farmers and negative externalities in several regions especially arid and semi-arid regions due to over exploitation of ground water resources. These areas are largely coming under the dark zone<sup>56</sup>. In absolute terms, public investments in agriculture have been stagnating or falling over the areas. The Gross capital formation in agriculture is shockingly low.

The share of agriculture in total Gross Capital Formation (GCF) had progressively come down from 15.4 per cent in 1980-81 to about 8 per cent by the end of the ninth plan (2001-02) and that as a percentage of GDP it has declined from 3.5 in 1980-81 to 1.3 in 2001-02<sup>57</sup>. According to economic survey 2002-03<sup>58</sup>, during 1993-94 and 1995-96, the share of public sector declined to 32.3% in GCF in agriculture, then to 26.6 per cent during 1996-97 to 1998-99 and further to 24.8 per cent during 1999-2000 to 2001-02. All India Debt and Investment Survey reveals a decline in the GFC of rural households from 9.6 per cent in 1962 to 6.5 per cent in 1982 and further to 3.7 in 1992. These surveys also show a decline in the number of cultivator households reporting investment in farm business from 19.3 per cent in 1972 to 11.89 per cent in 1992 suggesting a vicious circle of low income, low investment and low output<sup>59</sup>. The decline in public

investment is reflected most ominously in the area of irrigation. The investment in irrigation has sharply come down from 23 per cent in first five year plan to a mere five per cent now notwithstanding to Bharath Nirman and Accelerated Irrigation Benefit Fund (AIBF).

**Table – 2.9**  
**Gross Capital Formation (GCF) in Agriculture at Current Prices**

(Rs. in Crores)

Year	Total GCF	Public GCF	Private GCF	Share of Public (%)	Share of Private (%)	GCF in Agril. as per cent of Total GDP	GCF in Agril. as per cent of Agril. GDP	GCF in Agril. as per cent of Aggregate GCF
1980-81	04342	01876	02466	43.2	56.8	3.0	09.2	16.1
1990-91	15839	03586	12253	22.6	77.4	2.8	10.5	11.5
1995-96	17392	05952	11440	34.2	65.8	1.7	06.9	06.3
1999-00	50151	08670	41481	17.3	82.7	2.6	11.2	09.8
2000-01	46432	08176	38256	17.6	82.4	2.2	10.3	09.2
2001-02	60366	10353	50013	17.2	82.8	2.6	12.4	11.1
2002-03	61883	09564	52319	15.5	84.5	2.5	13.1	10.1
2003-04	61827	12218	49609	19.8	80.2	2.2	11.6	08.4
2004-05	70786	13610	57176	19.2	80.8	2.3	13.2	07.6

Source: CSO, National Accounts Statistics, Various Years



**Table – 2.10****GCF in Agriculture and Allied Activities**

Year	Agriculture & allied activities		GCF/GDP in agriculture & allied activities	GCF in agriculture as per cent of total GDP	Share of Agrl. GCF in TGCF
	GCF	GDP			
2004-05	76,096	5,65,426	13.46	2.56	7.5
2005-06	86,611	5,94,487	14.57	2.66	7.3
2006-07	90,710	6,19,190	14.65	2.54	6.6
2007-08	1,05,034	6,55,080	16.03	2.69	6.5
2008-09P	1,28,659	6,54,118	19.67	3.09	5.3
2009-10QE	1,33,377	6,56,975	20.3	2.97	7.7

*Notes: P – Provisional*

*QE – Quick Estimates*

*Source: Central Statistical Organisation, New Delhi*

This even looks worse considering the fact that the share of plan outlay itself has shrunk dramatically in the total government expenditure on one hand and share of public sector in total plan outlay is also sliding very sharply on the other. In contrast to this massive tax concessions to corporate sector have reached to a staggering Rs.1,58,000 crore, this has been practically admitted by the then finance minister in his 2006-07 budget speech. According to recent report of RBI, while the public investment in agriculture decelerated from 3.4 per cent of agricultural GDP during 1976-80 to 2.6 per cent during 2005-06, budgetary subsidies to agriculture have surged from three per cent to seven per cent of the GDP during the same period. The bulk of subsidies obviously appropriated by big farmers with more than 10 acres of cultivable land, while fertilizer

subsidies are going mostly to corporate owned fertilizer units. In this entire scenario, the corporate sector bigwigs and rich farmers are encashing the benefits from present investment subsidy pattern, while the small and marginal farmers are at the receiving end. The latest estimation of GCF in agriculture and allied sectors at 2004-05 prices shows an inconsistent share of agricultural GCF to the total GCF. From 7.5 per cent in 2004-05, it decreased to 7.3, 6.6 and 6.5 in consecutive three years respectively (i.e., 2005-06, 2006-07, 2007-08).

The provisional estimates for 2008-09 show an uptrend to 8.3 per cent and then quick estimates for 2009-10 show again a shrink in share of GCF to TGCF to 7.7. With regard to agricultural gross capital formation to total GDP also show the similar trend. In 2004-05 GCF in agriculture to total GDP was 2.56 per cent and increased to 3.09 in 2008-09 but shrank to 2.97 per cent in 2009-10. In between there are ups and downs during 2005-06 and 2006-07. Further, a gradual decline in public investment is the prime cause of agrarian distress. The statistics based on 2004-05 prices show that except the year 2006-07, the public sector investment in total investment in agriculture has shown a decelerating trend. From 20.5 per cent in 2004-05 the share has decreased to 17.6 per cent. On the other, the share of private sector investment in agriculture to total investment in agriculture has surged from 79.5 per cent to 82.4 per cent during the same period.

**Table – 2.11**

**Public and Private Investment in Agriculture and Allied Sectors  
(at 2004-05 prices)**

Year	Investment in Agriculture & Allied Sectors (Rs. in crore)			Share in investment (per cent)	
	Total	Public	Private	Public	Private
2004-05	78848	16183	62665	20.5	79.5
2005-06	93121	19909	73211	21.4	78.6
2006-07	94400	22978	71422	24.3	75.7
2007-08	110006	23039	86967	20.9	79.1
2008-09	138597	24452	114145	17.6	82.4

*Source: CSO, New Delhi.*

**GDP and Agriculture:**

The status of agriculture can barely be witnessed by the trends in GDP in agriculture and the overall GDP. Over the years there is a huge gap between the overall GDP and agricultural GDP. The recent CSO estimates are replica of this tendency. In 2005-06 the gap between over GDP growth and agricultural GDP growth was 4.3, by 2009-10 the gap has increased significantly to 7.4, where the GDP growth in agriculture recorded as (-) 0.2 per cent. It indicates an alarming situation in agriculture sector, which in turn causing distress among the farmers.

**Table – 2.12**  
**Share of Agriculture in GDP and Employment**

<b>Year</b>	<b>Share of Agriculture in GDP at 1999-2000 prices (%)</b>	<b>Share of Agriculture in Employment – UPSS (%)</b>
1972-73	41.0	73.9
1993-94	30.0	63.9
1999-00	25.0	60.2
2004-05	19.3	56.5
2005-06	18.27	---
2006-07	17.36	---
2007-08	16.80	---
2008-09	15.71	---
2009-10	14.62	---
2010-11	14.19	54.2

*Source: CSO, New Delhi.*

**Table – 2.13**  
**Growth in agriculture and allied sector GDP vis-a-vis total GDP from 2005-06 to 2010-11 (at 2004-05 prices)**

<b>Year</b>	<b>Growth Rate</b>	<b>Growth rate in Agriculture and allied sector (%)</b>
2005-06	9.5	5.1
2006-07	9.6	4.2
2007-08	9.3	5.8
2008-09	6.8	(-) 0.1
2009-10	8.0	0.4
2010-11	8.6	5.4

*Source: CSO, New Delhi.*

With the lopsided growth pattern in Indian economy since the beginning of the planning process and then globalisation induced policy frame work, the agriculture is on silver line on two counts. Firstly, the share of agricultural GDP in overall GDP has declined steadily and sharply from 50 per cent and above in 1950-51 to 14.19 per cent in 2011. This tendency can be seen as the sign of development process of an economy. But, the share of agriculture in employment is still too high. The 2011 census shows it as 54.2 per cent. This is the real paradox, that causing inbuilt pressure in agriculture, where too many people have to share too few GDP output. It is the major causative factor for sharp decline in GCF in agriculture and as well as growth rate in agricultural GDP. It is also proving counter productive as far as per worker productivity and land productivity is concerned.

The CSO statistics between 1972-73 and 2004-05 shows that the ratio per productivity in agriculture to non-agriculture has come down 1.2 to 0.26 during this period. In contrast, the ratio of per worker productivity in non-agriculture to agriculture has improved from 3.92 to 5.12 during the same period. Another dimension is the decline in growth rate of employment in economy from 1.74 per cent during 1983-1994 to 1.08 per cent during 1994-2005. The growth rate of employment in agriculture has shown a further decline from 1.41 to 0.63 during the same period. The compound growth rates of area, production and yield of major crops also resemble the similar tendency.

## Production Trends:

**Table – 2.14**  
**Compound Growth Rates of Area, Production and Yield**

	1980-81 to 1990-91			1990-91 to 2000-01			2000-01 to 2009-10		
	Area	Production	Yield	Area	Production	Yield	Area	Production	Yield
Rice	0.40	3.56	3.47	0.15	1.14	0.99	-0.03	1.59	1.61
Wheat	0.46	3.57	3.10	0.74	2.13	1.35	1.21	1.89	0.68
Coarse Cereals	-1.34	0.40	1.62	-1.58	0.25	1.87	-0.76	2.46	3.97
Total Cereals	-0.26	3.03	2.90	-0.25	1.32	1.58	0.09	1.88	3.19
Total Pulses	-0.09	1.52	1.61	-0.87	-0.74	0.16	1.17	2.61	1.64
Total Foodgrains	-0.23	2.85	2.74	-0.44	1.16	1.11	0.29	1.96	2.94
Sugarcane	1.44	2.70	1.24	1.41	1.22	-0.16	0.77	0.93	0.16
Oilseeds	1.51	5.20	2.43	-0.07	0.18	1.26	2.26	4.82	3.79
Cotton	-1.25	2.80	4.10	0.82	0.15	-0.69	2.13	13.58	11.22
Non Food crops	1.12	3.77	2.31	-0.09	1.20	0.62	1.72	6.44	5.05
All Crops	0.10	3.19	2.56	-0.25	1.58	0.90	1.36	5.32	4.52

*Source: Ministry of Agriculture, Area and Production of Principal Crops in India, various years*

Except one or two crops, for all major crops the compound growth rates for 2000-01 to 2009-10 over the 1980-81 to 1989-90 decade have shown a decreasing tendency. For example, the area under rice has shown a negative growth of - 0.03 for 2001-02 to 2009-10 decade over 1980-81 to 1989-90 decade. The compound growth of production and yield of rice has shown a decline from 3.62 to 1.59 and yield from 3.19 to 1.61 respectively

during the same period. Though growth of area under wheat slightly increased from 0.46 to 1.21, the growth rates of production and yield decreased from 3.57 to 1.89 and 3.10 to 0.68 respectively between the above mentioned two decades. There is a positive improvement in compound growth rate in cultivated area, production and yield of coarse cereals, particularly the production and yield recorded notable growth from 0.40 to 2.46 and 1.62 to 3.97 respectively. This is the result of the slow pace and erratic irrigation development and more emphasis on rainfed agriculture.

Among commercial crops the cotton has registered a phenomenal growth in all the three parameters, from 1-25 to 2.13 in area under cotton cultivation, but more strikingly production and yield from 2.80 to 13.58 and 4.10 to 11.22 respectively between two decades. Infact, the progress in cotton cultivation obviously, coincided with large scale suicides of cotton growers in southern states. More than 60 per cent of total suicides have been reported from five cotton growing southern states<sup>60</sup>. As far as oilseeds are concerned the cultivated area and yield shown a positive growth trend in later decade than previous decade, but the growth rate in production has decreased from 5.20 to 4.82 during the said period. The irony is that sugarcane crop has registered reversal growth trend in all the three parameters. The area under sugarcane decreased from 1.44 to 0.77, production and yield from 2.70 to 0.93 and 1.24 to 0.16 respectively. “Something bitterly going wrong in Indian agriculture”, the remark made by Dr. M.S. Swaminathan worth to mention here.

## **Output Prices – MSP:**

By going through direct economic cost high input usage and dependency on ground water for irrigation, Nadkarni observes that post-green revolution period has witnessed an alarming increase in input costs by 31 per cent in real terms and 39 per cent in monetary terms during 1970-71 and 1984-85. He concludes that the output prices were have not raised in relation to input prices and above that environmental costs have increased. As the years rolled the impact of higher input costs were resulted in huge losses to farming community and aggravated the agrarian crisis<sup>61</sup>. It was viewed that reforms in non-agriculture sector would shift the Terms of Trade (TOT) in favour of agriculture and lead to expansion of private sector investment into agriculture and further it will lead to a higher growth in agriculture. But except in 2001-02 and 2002-03 the terms of trade has been against to the agriculture, because this strategy has not worked as it is based on a wrong assumption that favourable prices alone can propel agricultural growth<sup>62</sup>. Since 1960's the TOT has been playing hide and Seek' with agriculture and as well as industry. The edge happened to be in favour of industrial sector for many years<sup>63</sup>. Simple increase in agricultural output price may not be treated as favourable TOT to agriculture. Unlike in industrial sector the favourable TOT may not be beneficial to the producers (farmers) as such at large. Globally tinted agricultural output prices usually will have volatility and the delay in policy decisions always hurt the small and marginal peasants, who sell away their produce without much concern to the price advantage due to high indebtedness. The agricultural price policy in the form of incentive or supportive prices for agricultural commodities, to begin with, was related to cost of the production plus a



reasonable margin of profit for the producer. But subsequently, the concept has been distorted and fixing of supportive prices has been related to parity of prices between farm produce and industrial manufacturers and further on to export prices. This has resulted in uncertain and high voltage fluctuations in food prices. The pricing of farm products has been distanced from the labour costs, irrigation costs and other inherent costs that vary from region to region. The CACP, decision making body on MSP to agricultural commodities takes into consideration of overall shortage of food grains as reflected by the trend in wholesale prices, and to check the rate of inflation in the interest of consumers. Although MSP is supposedly based on cost plus formula, its fixation by the government is influenced by various non-economic factors such as demands from the chief ministers of surplus states and rich farm lobbies with strong political maneuvering<sup>64</sup>. Some times continuous rise in MSP has surpassed the market prices and issue prices. The policy has been reviewed and the government is announcing moderate price increases since 2001. Infact, the support prices are benefiting only few states like Punjab, Haryana, Uttar Prasad and Andhra Pradesh and crops like rice and wheat and few sections of rich and middle peasantry<sup>65</sup>. The higher support prices tend to hurt consumers and have adverse impact on overall GDP and poverty reduction<sup>66</sup>. It is also observed that bottom 80 per cent of rural and total urban population is worse off. Thus support prices in general neither beneficial to large chunk of small and marginal farmers nor to the middle and poor consumers of the society. The MSP policy has been favouring only rice and wheat to greater extent and thus diversification of agriculture is at stake.

**Table – 2.15**  
**Minimum Support Price**  
(According to crop year)

(as on 21-10-2010)  
(Rs. per quintal)

Sl. No.	Commodity	Variety	2006-07	2007-08	2008-09	2009-10	(#) increase in MSP 2009-10 over 2008-09	2010-11	(#) increase in MSP 2010-11 over 2009-10
	<b><u>Kharif Crops</u></b>								
1.	Paddy	Common	580 <sup>^</sup>	645 <sup>\$\$</sup> /850 <sup>~</sup>	850 <sup>\$</sup>	950 <sup>&amp;</sup>	100(11.8)	1000	50(5.3)
		Grade 'A'	610 <sup>^</sup>	675 <sup>\$\$</sup> /880 <sup>~</sup>	880 <sup>\$</sup>	980 <sup>&amp;</sup>	100(11.4)	1030	50(5.1)
2.	Jowar	Hybrid	540	600	840	840	0.0	880	40(4.8)
		Maldandi	555	620	860	860	0.0	900	40(4.7)
3.	Maize		540	620	840	840	0.0	900	40(4.8)
4.	Cotton	Medium staple	1770	1800	2500 <sup>a</sup>	2500 <sup>a</sup>	0.0	2500 <sup>a</sup>	0(0.0)
		Long staple	1990	2030	3000 <sup>aa</sup>	3000 <sup>aa</sup>	0.0	3000 <sup>aa</sup>	0(0.0)
5.	Groundnut in shell		1520	1550	2100	2100	0.0	2300	200(9.5)
	<b><u>Rabi Crops</u></b>								
6.	Wheat		750 <sup>\$\$</sup>	1000	1080	1100	20(1.85)	1120	20(1.8)
	<b><u>Other Crops</u></b>								
7.	Sugarcane		80.25	81.18	81.18	129.84 <sup>*</sup>	48.66(59.9)	139.12 <sup>*</sup>	9.28(7.1)

Source: Economic Survey, GOI, New Delhi, 2010-11

<sup>^</sup> An additional incentive bonus of Rs.100 per quintal was payable over the Minimum Support Price (MSP)

<sup>~</sup> From 12.06.2008

<sup>\$</sup> An additional incentive bonus of Rs.50 per quintal was payable over the Minimum Support Price (MSP)

<sup>\$\$</sup> An additional incentive bonus of Rs.100 per quintal was payable over the Minimum Support Price (MSP)

<sup>&</sup> An additional incentive bonus of Rs.50 per quintal was payable over the Minimum Support Price (MSP)

<sup>a</sup> Staple length (mm) of 24.5 – 25.4 and Micronaire value of 4.3 – 5.1

<sup>aa</sup> Staple length (mm) of 29.5 – 30.5 and Micronaire value of 3.5 – 4.3

<sup>\*</sup> Fair and remunerative price.

**Table – 2.16**  
**Minimum Support Price – A Comparison**

(Rs. per quintal)

	<b>2009-10</b>	<b>2010-11</b>	<b>Difference between 2010-11 and 2009-10 prices (in Rs.)</b>
<b>Kharif Crops</b>			
Paddy (common)	950	1000	50
Paddy (Gr.A)	980	1030	50
Jowar (Hybrid)	840	880	40
Jowar (Maldandi)	860	900	40
Maize	840	880	40
Groundnut in shell	2100	2300	200
Cotton	2500	2500	0
<b>Rabi Crops</b>			
Wheat	1100	1120	20

*Source: www.indiabudget.nic.in*

The year wise increase in MSP is scientifically not in accordance with the increase in input prices and as well as demand and supply conditions. For example, the additional increase in MSP of Rice ranges hardly from Rs.50 – 100, but the input prices are increasing very sharply. For example, price of Urea and other complex fertilizers is doubled within one year. In the present year 2011-12, the fertilizer units increased the price thrice in a year. The output price for paddy never increased more than 4 per cent and of wheat by 2 per cent since 2000-01. The announcement of MSP is like fishing out of water. In a debt driven agrarian market in India the trader – financier – middlemen nexus actively acts upon to depress the output price below the MSP. Most of the small and marginal farmers are selling their

output even before the announcement of MSP at throw away prices. During 2011-12 also, the announcement of MSP has been made after 70 per cent of the agriculture produce reached the traders. The unprecedented gap between the retail price (consumer price) farm gate price (price received by the actual producer (farmer)) is also very huge depending on the crop and location. For all important food crops, the ratio between retail price and farm gate price is highly adverse to the farmers. Particularly for vegetables the situation is more precarious and that to in cities and Metropolies. One such study points out that the ratio between retail price and farm gate price for vegetables is 10:1. However, the price crash is another twist of the agricultural marketing scenario. The impact of globalized agricultural market, the output prices are highly volatile<sup>67</sup> (Vandana Shiva). Usually, the global prices go on sky ricketing during the lean period between (March – September). It is the time when, the output reaches the traders and agents. By the time of harvesting the price experience a crash<sup>68</sup> (Vandanashiva). WTO imposed imports and smuggled cheaper rice from adjoining countries also causing sudden crash in output prices. The price crash of commercial crops is even dramatic and pathetic. For cotton the quintal price slashed from Rs. 6000 to 3000, Pepper prices have fallen from Rs.27,000 per quintal to Rs.5,400 per quintal in subsequent years. Coffee prices dropped to a low of Rs.35 – 40 a kg frequently. The better grade cardamom prices dip by 75 per cent. Prof. Abnijit Sen, aptly remarks that the terms of trade have shifted 5 to 6 per cent against agriculture since late 1990s, the profitability of agriculture has fallen by 25-40 per cent depending on the surge in input prices, a decline in output prices and crop, season and region. The minimum support price (MSP) for rice per quintal raised by 42 per cent during a five year period 2006-07 and 2010-11. The MSP of Jowar and Maize raised by 38.6 per cent,

wheat by 33.0 per cent, sugarcane by 33.9 and for cotton by 29.2 per cent and, 33.66 per cent for medium and long staple respectively. Surprisingly for the last two years the MSP for cotton has been stagnant at Rs.2500 and Rs.3000 per quintal for medium and long staple that was fixed in 2008-09. In contrast to this input prices increased with jet speed.

### **Marketing:**

Marketing is one of the major compounds that influence progress and sustainance of agriculture and ultimately the farm households. From 1950s onwards the central government along with concerned states and specialized institution taking up measures to strengthen the agricultural marketing. The format of regulated markets, establishment of NAFED have worked better prior to the phase of clear impacts of globalized economic reforms. From the days of 1950s to present situation the small and marginal farmers relatively less benefited with the governmental market support. Earlier excessive bureaucratisation has given more room for middlemen, who appropriated huge margins. Now the global players have been ruling the agricultural market, causing high volatility in output prices which are highly conducive to the traders than the actual farmers. For that matter, the poor peasants are by and large away from the main stream market due to their high indebtedness. It is all a sort of vicious circle consisting of 'poverty - deprivation of resources - dependency on non-institutional lending agencies - tie up with trader for inputs - forced / distress sales - less remunerative price - indebtedness and ultimate crisis'. Opening the agricultural products to the global market under WTO Agreement on Agriculture (AOA) hasn't benefited the farmers at large (though few regions, rich farmers and many

trades got benefited). The price crash due to trade liberalization has both micro and macro impacts. All most all Southern states are the worst affected states of this phenomenon. For example, rubber plantation farmers of Kerala, cotton growers of Maharashtra, Karnataka, Andhra Pradesh, Madhya Pradesh and in later period Chattisgarh are badly affected by the frequent ups and downs of output prices. Output subsidy and export subsidy induced cheap imports from developed world and neighbouring China, Nepal and even Bangladesh played havoc with the fate of Indian farming community. There are number of factual reports on worst impacts of volatile output prices. From Punjab to Kerala and from wheat and rice to tomatoes the farmers were forced to spoil their own produce due to deprivation of minimum price to meet even harvesting costs. It is one of the prime causes of indebtedness and suicides of farmers at large scale in cotton growing Southern states. The striking example in this context is cotton, when the exports of cotton were liberalized in 2001 in the backdrop of high international prices, in a single year, there was a jump of 3,74,000 tonnes in the export of raw cotton – more than a ten fold jump in a single year, compared to just 34,000 tonnes of total exports in previous three years. Lured by high prices, lakhs of farmers diversified and switched over to cotton, especially in Telangana, Vidarbha and North Karnataka taking heavy loans at exorbitant interest rates to meet the switchover costs and high input costs of cotton cultivation. But the world prices of cotton started crashing from the end of 1996 onwards and by 2001 practically reached to half the level of 1995. The sugarcane growers also faced the same situation in later years. At macro level though the agricultural exports show an increase in absolute terms from Rs.34,653.94 crore in 2002-03 to 49802.92 crore in 2005-06, the share of agricultural exports in total exports of the country fell

from 13.58 to 10.95 per cent for the same period. The average growth rates for different periods computed<sup>69</sup> show a sharp drop in exports in post reform period. The average growth rate of exports during 1993-94 - 1996-97 was 22.5 per cent, it decreased to 9.4 per cent during 2001-02 - 2004-05. Even it recorded a -3.3 per cent negative growth rate during 1997-98 - 2000-01, the peak period of economic reforms. During the fifteen year period from 1990-91 - 2004-05 agricultural exports increased by 139 per cent, while imports increased by 500 per cent.

### **Farm Business Income:**

The sluggish and inconsistent output prices on one side and sky ricketing input prices and ever escalating investment in agriculture on the other have virtually forced the farmers to land in low income – high debt trap. The NSSO report (497) on income and expenditure of farm households reveals that from cultivation an average household gets a net monthly income of Rs.969 (annual income of Rs.11,628). It is much below to the required income of more than Rs.20,000 to cross the poverty line (based on earlier estimates). A study by Sen and Bhatia (2004)<sup>70</sup> based on cost of cultivation data indicates a decline in growth of farm business income (FBI) over time. FBI per hectare sharply declined from 3.21 per cent per annum during 1980s to 1.02 per cent during 1990s. FBI per cultivator also shown a drastic deceleration from 1.78 per cent per annum to a mere 0.03 per cent for the said period (Dev. 2007). The study also indicates that the average farm business income was around Rs.23,092 per annum in 1999-2000 and this income was hardly sufficient to meet the basic necessities of life.

**Table 2.17**  
**Incidence of Indebtedness in Major States: 2003**

State	Estimated of indebted farmer Households	Per cent of Indebted Farmer households	average loan per Household, Rupees
Andhra Pradesh	49493	82.0	23965
Tamil Nadu	28954	74.5	23963
Punjab	12069	65.4	41576
Kerala	14126	64.4	33907
Karnataka	24897	61.6	18135
Maharashtra	36098	54.8	16973
Haryana	10330	53.1	26007
Rajasthan	27828	52.4	18372
Gujarat	19644	51.9	15526
Madhya Pradesh	32110	50.8	14218
West Bengal	23696	50.1	10931
Orissa	20250	47.8	5871
Uttar Pradesh	69199	40.3	7425
Himachal Pradesh	3030	33.4	9618
Bihar	23383	33.0	4476
Jammu & Kashmir	3003	31.8	1903
Assam	4536	18.1	813
<b>All India</b>	<b>434242</b>	<b>48.6</b>	<b>12585</b>

*Source: National Sample Survey Organization (NSSO). Situation Assessment Survey of Farmers, 2003.*



The culmination of all the factors discussed so far ultimately led to the indebtedness of farmers. According to 59<sup>th</sup> round NSSO survey (report No.498) out of 147.9 million rural households in India about 89.4 million are farm households and among them nearly 50 per cent are indebted. The average liability in cash or kind has been valued above Rs.300. The data also reveals that the percentage of farmers' households in indebtedness by source of loan at all India level shows that 56 per cent obtain loan from institutional sources and 64 from non-institutional sources. The total is more than 100 per cent because of multiplicity of loans by farmers from different sources. The situation in Southern states and particularly in Andhra Pradesh so precarious that 82 per cent of farm households are indebted to one or the other source. Further, 54 per cent of farm households are indebted to formal sources and 77 per cent to informal sources, indicating the gravity of the crisis in agriculture. The same report (No. 498) of NSSO gives us the picture about the status of small and marginal farmers in credit structure. It shows that the share of formal source of credit to the total credit received by the small and marginal farmers varies from 22.6 to 58 per cent and varies from 65 to 68 per cent for medium and large farmers. Dependency on informal sources is high in Andhra Pradesh, Maharashtra, Karnataka, Punjab and Tamilnadu. For example, small and marginal farmers of Andhra Pradesh are depending on non-institutional sources to the tune of 73 to 83 per cent. NSSO data reveals that among different social groups BCs are more indebted to informal sources relatively than other groups and indebtedness to formal sources is lower for STs when compared to others. The Situation Assessment Survey of Farmers (SASF) reveals that the average amount of outstanding loan at all Indian level per farmer household was Rs.12,588.

**Table 2.18****Share of Rural Household Debt by Source, India, 1951-1991 (%)**

<b>Credit Agency</b>	<b>1951</b>	<b>1961</b>	<b>1971</b>	<b>1981</b>	<b>1991</b>	<b>2010</b>
cooperatives and Commercial Banks	5.7	10.3	24.4	58.6	58.8	52.8
Government and other formal sources	3.1	5.5	7.3	4.6	7.5	7.8
<b>All Institutional Agencies</b>	<b>8.8</b>	<b>15.8</b>	<b>31.7</b>	<b>63.2</b>	<b>66.3</b>	<b>60.6</b>
Professional and Agriculturists Moneylenders	68.6	62.0	36.1	16.1	17.5	18.2
Traders		7.2	8.4	3.1	2.2	4.8
Landlords		7.6	8.6	4.0	4.0	5.7
Relatives and Friends	14.4	6.4	13.1	11.2	4.6	4.4
Other Sources	8.2	0.8	2.1	2.4	2.3	4.6
<b>All Non-Institutional Agencies</b>	<b>91.2</b>	<b>84.0</b>	<b>68.3</b>	<b>36.8</b>	<b>30.6</b>	<b>37.7</b>
Sources not specified	0.0	0.2	0.0	0.0	3.1	1.7
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

*Note: In 1951, landlords and traders are lumped together within "other sources"*

*Source: All-India Rural Credit Survey for 1951, All-India Debt and Investment Survey for the other years*

State-wise indebtedness shows that the states which experienced early onset of green revolution and then economic reform induced input intensive diversified agriculture the farmers are more indebted than the other backward states. For example, average debt per farm household is high in Punjab followed by Kerala, Haryana, Andhra Pradesh and Tamil Nadu, which are known as relatively developed states. The incidence of indebtedness of farm households is high again in these states. For example, it is as high as 82.0 per cent in Andhra Pradesh followed by Tamil Nadu, Punjab, Kerala, Karnataka and Maharashtra and most of them are southern states which witnessed / witnessing high incidence of farmers' suicides over

the years. The data also reveals further that among the five worst affected states of farmers' suicides except Kerala in all other states large proportion of the credit was incurred on productive activities of agriculture.

In spite of that indebtedness and outstanding debt per farmer household was higher in these states. Within the southern states the dependency on money lenders is relatively high in Andhra Pradesh. The incidence of indebtedness among different social groups (NSSO report 498) reveals that the indebtedness was relatively less for STs (36.3 per cent), followed by SCs (50.2), BCs (51.4) and others (49.4). The average amount of outstanding also varied among the different social groups. It was Rs.5,056 for STs, Rs.7167 for SCs, Rs.13,489 for BCs and 18,118 for Others. It indicates that loans are cornered more and more by large farmers and caste groups other than STs and SCs. The recent NSS study also shows that 50 per cent rural debt is mainly owed to capital intensive farming such as Bt cotton seeds, agrochemicals and irrigation. Both capital and current expenditure in farm business were stated as two important purposes of taking loan. The study states that at all India level out of every 1000 rupees taken as loan by farmers 584 rupees were borrowed for capital intensive agriculture. Most interesting finding by another study is that the highest proportion of indebted farmers are from backward committees with 42 per cent indebtedness<sup>71</sup>.

**Table 2.19****Distribution of Debt by Sources across Major States: 2003**

(In percentages)

State	Institutional				Non-Institutional				Total
	Govt.	Co-Op.	Bank	All	Money lenders	Traders	Others	All	
Maharashtra	1.2	48.5	34.1	83.8	6.8	0.8	8.6	16.2	100
Kerala	4.9	28.3	49.1	82.3	7.4	1.7	8.5	17.6	100
Uttaranchal	31.5	4.8	39.8	76.1	5.9	1.7	16.3	23.9	100
Orissa	13.0	18.1	43.7	74.8	14.8	0.8	9.5	25.1	100
Chhattisgarh	1.3	20.6	50.5	72.4	13.0	4.2	10.5	27.7	100
Gujarat	0.5	41.8	27.2	69.5	6.5	4.4	19.6	30.5	100
Karnataka	1.9	16.9	50.1	68.9	20.0	1.9	9.3	31.2	100
Haryana	1.1	23.9	42.6	67.6	24.1	3.1	5.3	32.5	100
Jammu & Kashmir	13.1	0.2	54.3	67.6	1.1	15.5	15.7	32.3	100
Himachal Pradesh	6.1	11.6	47.6	65.3	7.2	5.5	22.0	34.7	100
Jharkhand	3.9	4.5	55.7	64.1	19.0	1.7	15.2	35.9	100
Uttar Pradesh	2.4	6.7	51.2	60.3	19.1	2.9	17.7	39.7	100
West Bengal	10.3	19.2	28.5	58.0	13.0	10.7	18.4	42.1	100
Madhya Pradesh	1.9	16.9	38.1	56.9	22.6	9.0	11.4	43.0	100
Tamil Nadu	2.0	23.3	28.1	53.4	39.7	0.4	6.4	46.5	100
Punjab	1.9	17.6	28.4	47.9	36.3	8.2	7.6	52.1	100
Bihar	2.2	2.5	37.0	41.7	32.8	1.1	24.6	58.5	100
Assam	7.0	2.7	27.8	37.5	15.5	12.0	35.1	62.6	100
Rajasthan	1.3	5.9	27.0	34.2	36.5	19.2	10.1	65.8	100
Andhra Pradesh	1.0	10.4	20.0	31.4	53.4	4.8	10.4	68.6	100
All India	2.5	19.6	35.6	57.7	25.7	5.2	11.5	42.4	100

Source: NSSO: Situation Assessment Survey of Farmers, 2003.

Another interesting point is that 70 per cent of indebted farmers own less than two hectares of land<sup>72</sup>. The RBI in its report (2003) itself clearly mentioned that the World Bank terms and conditions have had effect on rural credit in general and rural-credit to small and marginal farmers in particular from nationalised banks and cooperative societies. The credit flow to the small and marginal farmers infact, declined from 15.9 per cent in June 1990 to 9.8 per cent in March 2003. The same trend was continued in both short and long term credit. The short term credit advanced to agriculture to the total bank credit has come down from 13.3 per cent in 1980-81 to 8.6 per cent in 1990-91 and further to 6.1 per cent in 1999-2000. It is also stated by the NSSO study that only 28.4 per cent of farmer households were indebted to institutional agencies. Rural Finance Access Survey (RFAS) carried out by World Bank and NCAER (2003) conducted in Uttar Pradesh and Andhra Pradesh had shown that only 19.9 per cent of rural households in Uttar Pradesh and 24 per cent in Andhra Pradesh were indebted to institutional agencies. The cooperative credit structure which is known for its nearness to the farming community miserably failed in delivering the agricultural credit. Out of total credit advances by institutional sources, the share of cooperative societies has been just 27 per cent, while the commercial and regional banks advanced 62 per cent<sup>73</sup>. SASF, 2003 also states that in many states, particularly in Andhra Pradesh and Rajasthan, the total debt of the farm households from all institutional agencies put together was less than that from money lenders.

**Table – 2.20****Distribution of Debt by Interest Rates and Source for Cultivator Households: 2002**

Interest Rate	Instructional % cultivators Households	Non-Instructional % cultivators Households
Nil	0.5	17.4
0-6	1.8	2.3
6-10	3.0	0.3
10-12	7.4	0.6
12-15	50.0	1.6
15-20	34.8	2.7
20-25	1.4	36.2
25-30	0.0	0.3
>30	0.3	38.2
<b>All</b>	<b>100</b>	<b>100</b>

*Sources: NSSO, Household Indebtedness in India, All India Debt and Investment Survey (January – December, 2003), NSS 59<sup>th</sup> Rough, Report No. 501, 2005*

Based on NSSO data an interesting observation is made that annual agricultural income at all India level comes to around Rs.25,380 and it is also estimated that annual income from cultivation comes around Rs.11,628 per household (45 per cent of total agricultural income). It has been highest at Rs.33,864 in Punjab followed by 15,192 in Karnataka, Rs.8,916 in Andhra Pradesh and a least of Rs.4,032 in Rajasthan<sup>74</sup>. It is also interesting to note that the percapita income from agriculture rather decreased during the so called the path of economic development over the years. For example, in West Bengal, the percapita income of paddy farmers has fallen by 28 per cent since 1996-97. During the same period, the income of sugarcane

growers in Uttar Pradesh slid by 32 per cent and in Maharashtra by 40 per cent<sup>75</sup>. Another study by Patnaik (2006) reveals that the path of development has widened the gap between rural and urban economy. The rural landlessness has increased very sharply over the past twenty years<sup>76</sup>. The landlessness has increased from 35 per cent between 1987 and 1998 to 45 per cent between 1999-2000 and further to 55 per cent within two years between 2003-2005.

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## **CHAPTER – III**

### **Status of Agriculture in Andhra Pradesh**

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***“Unless we urgently address agricultural issues, the country may have to revert to a ship-to-mouth existence once again”***



***Dr. A.P.J. Abdul Kalam***

Agriculture in Andhra Pradesh is in advanced state of crisis<sup>1</sup>. While discussing this crisis, it is important to be aware of the factors that have rooted and forged the crisis. Farmers of three regions are facing the agrarian problems, but affect is highly acute in Telangana districts and Ananthapur of Rayalaseema districts. In addition, the burden has fallen disproportionately on small and marginal farmers, tenant farmers and rural labourers<sup>2</sup>.

The most extreme manifestation of the crisis has been the suicides by farmers, who are typically driven to the desperate act by the inability to repay debt incurred in the process of cultivation, which has become a volatile and economically less viable activity. But this is only the tip of the iceberg of generalised rural distress which had become prevalent across the state, and has also been expressed in terms of extreme acts such as kidney sales and hunger deaths in certain areas<sup>3</sup>. The problems of farming community are evident, ranging from frequent droughts and soil degeneration, lack of institutional credit and insurance leading to excessive reliance on private money lenders, problems in accessing reliable and reasonably priced inputs to problems of market imperfections and high volatility of crop prices. But the crisis is also reflected in other features of the rural economy: the decline in agricultural employment and stagnation in non-farm employment leading to reduced food consumption, forced migration of workers; and decline in per capital calorie consumption among the poor and middle class.

It is becoming increasingly evident that the difficulties confronting agriculture in Andhra Pradesh are complex and multi dimensional, and infact require a complete reversal of the present economic strategy followed in the state, if these problems are to be adequately addressed. The problems faced by different states in agriculture sector are common, but ofcourse what happened in rural Andhra Pradesh has been particularly severe. The state of Andhra Pradesh has become almost a laboratory for every extreme form of neoliberal economic experiment.

The Andhra Pradesh Economy is basically an agrarian economy. In the state more than 58.5 per cent of population is depending on agriculture. Its contribution to state GDP is to the tune of 10.29 per cent in 2010-11.

**Table – 3.1**  
**Sectoral Contribution to GDP in Andhra Pradesh and All India**

Sl. No.	Industry	2010-11		2011-12		% change over previous year		% contribution (2011-12)	
		A.P.	All India	A.P.	All India	A.P.	All India	A.P.	All India
1.	Agriculture	6920	160771	7669	167091	10.83	3.93	10.29	13.63
2.	Industries	20456	326560	21995	343212	7.52	5.10	29.52	27.99
3.	Services	41305	650955	44845	716035	8.57	10.00	60.19	58.39
4.	GSDP/GDP	68681	1138286	74509	1226338	8.49	7.74	100.00	100.00

*Source: Economic Survey of A.P., 2011-12*



The state of Andhra Pradesh is geographically divided into Coastal Andhra, Rayalaseema, Telangana regions. While Coastal Andhra, Rayalaseema were under British rule, the Telangana (erstwhile Hyderabad State) was under Nizam rule. These three regions have distinct agro-climatic conditions. In the first phase of Green Revolution, two districts were selected under the package programme and in due course the Andhra Pradesh emerged as 'Annapurna' (Rice Bowl of India). The paradoxical situation is that in these three regions, there are highly backward districts, for example Northern districts of Coastal Andhra, Ananthapur and Chittoor of Rayalaseema and nine out of ten districts of Telangana are drought prone and highly backward districts.

It is the state which has initiated the economic reforms in the very early stage of globalization process. In pursuit of structural adjustment programme the then state government has changed its priorities under the influence of various agreements with the World Bank. The concentration was more on service sector development rather than agriculture and rural industries. In due course many states have followed the same philosophy. The advent of WTO deliberations from 1991-1995 have opened up the Indian Economy to the global markets and the state of Andhra Pradesh was in forefront in this endeavour. The reforms period has witnessed many changes in the economic policies of the state and agriculture has been badly affected due to such policies and often acted as factors of distress. There are few key factors such as agro climatic conditions, land holdings, irrigation, distribution of land holdings, cropping pattern, crop intensity, input use, adoption of technology and investments in agriculture which have highly influenced the growth of area, production and productivity of

crops. This has resulted in high indebtedness among farm households. The entire manifestation needs a close observation, which will throw light on the issues that have propped up the crisis and ultimate suicides<sup>4</sup>.

### **Agro – Climatic regional Classification:**

The state of Andhra Pradesh is spread over an area of 2,75,069 sq kms and it accounts for 8.37 per cent of the total area of the country. It is classified into three distinct regions viz., Coastal Andhra, Rayalaseema and Telangana. In the total area of the State, Coastal Andhra accounts for 33.78 per cent. Rayalaseema accounts for 24.47 per cent and Telangana accounts for 41.75 per cent. Coastal Andhra region is endowed with fertile alluvial soils formed by deltas under the three rivers - Godavari, Krishna and Penna. It is served by the southwest and northwest monsoons and enjoys the highest rainfall in the state. Normally, it receives about 1000 mm of rain on an average. The soils in Rayalaseema are rocky and this region suffers from uncertain and scanty rainfall. Normally it is less than 700mm but it has rich mineral sources and potential for forest wealth. Telangana gets rains from South- West monsoon, but most of the districts experience volatility in rainfall and its topography presents serious handicap to the development of agriculture.

### **Rain Fall Pattern:**

The average annual rainfall received by Andhra Pradesh from 1994-95 to 2004-05 and 2010-11 shows a frequent volatility. Except 1996-97 and 1998-99, the average annual rainfall was less than 1000 mm. During a

period of eleven years (1994-95 to 2004-05), the lowest average annual rainfall was recorded as 670 mm in 1999-2000. From 2000-01 onwards there is a gradual decline in average annual rainfall from 850 mm to 623 mm in 2004-05 and it further slided to 539.4 in 2010-11. During this year 872 mandals were declared as drought affected. The situation is characterised by prolonged dry spells coinciding with moisture sensitive stages in some crops and leading to terminal stress in certain crops resulting in crop failure<sup>5</sup>.

**Table – 3.2**

**Average Annual Rainfall in Andhra Pradesh (Millimeter)**

Year	Average Rainfall
1994-95	809
1995-96	930
1996-97	1015
1997-98	753
1998-99	1053
1999-00	670
2000-01	850
2001-02	797
2002-03	816
2003-04	714
2004-05	623
2010-11	539.4

*Source: DES, Hyderabad*

**Table 3.3**  
**Effects of Rainfall**

<b>Year</b>	<b>Rainfall</b>	<b>All crops</b>	<b>Food grains</b>	<b>Agrl. growth</b>	<b>GSDP growth</b>
1999-00	-20	0.2	9	-	-
2000-01	-2	4	24	15.50	7.94
2001-02	-7	-3	7	-7.85	4.20
2002-03	-35	-11	-24	-20.55	3.26
2003-04	-0.43	-4	-2	23.94	9.27
2004-05	-25	-1	-3	3.92	6.19
2005-06	22	3	24	8.72	8.14
2006-07	-6	2	15	-6.56	7.15

*Source: DES, Hyderabad*

Looking at the average rainfall record over the years, Andhra Pradesh has been receiving less than the average rainfall. Most of the reservoirs are getting dried up. This is a big blow to the farming community, especially small and medium farmers in the State. Data shows clearly that since 1999-2000, there have been no sufficient rains in the state. Except 2004-05, for all the years the data is available the average annual rainfall was quite less than the normal rainfall. It was much deficient in the 2002-03. The consecutive shortage of rainfall rendered the farmers in helpless condition and with no other option left, the dependency on bore-well cultivation has gone up, through they are well aware of high investment involved in it. The deficiency in rainfall has affected growth of all crops, food grains agricultural growth and GSDP. In worst years of monsoon growth of food grains, all crops and with that agricultural growth has been badly affected. In all deficient rainfall situations, the growth in all these parameters was negative. However its impact on state GDP was not

as much as on other parameters. But in worst monsoon years the state GDP decreased significantly. For example, when the rainfall was 35 percent less than normal rainfall the GSDP recorded as 3.26 percent and it was the lowest GSDP for official data available from Directorate of Economics and Statistics, Hyderabad.

### **Drought in the State:**

Drought is one of important dimensions of natural hazards. Frequent occurrence of droughts will have serious implications on the entire economy. Indian Meteorological Department defines drought as a situation when the rainfall deficiency is less than 25 per cent. However the Government of India gave more importance to other aspects of the drought viz., loss of cropped area, decline in agricultural production, loss of employment, decline in fodder supplies, scarcity of drinking water and migration of labour in identifying the drought stricken areas and to provide relief measures. From time to time, the state government identify the drought affected areas and provide relief measures. With a few exceptions almost the entire state was affected by the drought since 1997. From 1999-2000 to 2003-04 except for 2000-01, in all other years occurrence of drought was in high frequency. In 2001-02 and 2002-03 except Hyderabad number of Mandals of all the 22 districts were declared as drought affected. During the period between 2003-2010, again for majority years many districts have experienced drought situation and more particularly the districts of Telangana Region. 2008-09 was the worst agricultural year for the state and Telangana region. Even in present agricultural year 2011-12 over 872 mandals from 22 districts have been declared as drought affected.

Government estimates show that, during the current drought period, at least 1.38 crore agricultural labourers have lost opportunities for gainful employment and atleast one crore small and medium farmers have been forced to leave their land fallow for want of water. Many studies show that there has been a large-scale migration by landless agricultural labourers and marginal and small farmers to urban areas to sustain through this season. As there is no possibility of keeping the cattle alive, there is a distress sale of cattle for slaughter in the State. All these changing conditions lead us to believe that the state has entered into a socioeconomic drought. Unless the State Government takes effective measures to mitigate the drought problem, there may be a famine in the State, which may lead to ecological drought<sup>7</sup>.

Andhra Pradesh is basically in the zone of South west monsoon, which is generally active from June to September. This is the principal rainy season in the State. The state has the benefit of North East monsoon also to a limited extent. Almost all districts in the State recorded a rainfall less than the normal rainfall during the drought years mentioned above. For example, the deviation of the actual rainfall from normal rainfall across the districts varied from -3.02 per cent in Cuddapah to -26.02 per cent in Karimnagar in 1997, and from -6 per cent in Nizamabad to -54 per cent in Cuddapah in 2002.

The State has passed through various phases in drought situation viz., metrological drought, hydrological drought, soil moisture drought and agricultural drought. The drought has major impact on the area under total

cereals and millets which declined by 11 per cent between 1990s and 2000s. The area under oil seeds also declined by 8.69 per cent. While the area under chillies declined by 8.8 per cent, there was a marginal increase in the area under cotton. The drought also affected the production and yield levels of many crops both food and non-food commercial crops.

**Table – 3.4**  
**Drought Prone Districts**

Year	No. of drought affected mandals	Districts with >40-50 per cent of mandals drought affected	No. of districts
1999-00	689	Mahabubnagar, Nalgonda, Warangal, Medak, Srikakulam, Visakapatnak, Prakasam, Chittoor, Cuddapah, Nellore, Ananthapur, Kurnool, Ranga Reddy	13
2000-01	142	mahabubnagar, Ananthapur, Nalgonda	3
2001-02	995	Mahabubnagar, Nalgonda, Warangal, Medak, Nizamabad, Srikakulam, Guntur, Visakapatnak, East Godavari, Vizianagaram, Prakasam, West Godavari, Krishna, Chittoor, Cuddapah, Nellore, Ananthapur, Kurnool, Ranga Reddy, Khammam, Adilabad	22
2002-03	1087	Mahabubnagar, Nalgonda, Warangal, Medak, Nizamabad, Srikakulam, Guntur, Visakapatnak, East Godavari, Vizianagaram, Prakasam, West Godavari, Krishna, Chittoor, Cuddapah, Nellore, Ananthapur, Kurnool, Ranga Reddy, Khammam, Adilabad	22
2003-04	453	Karimnagar, Chittoor, Nizamabad, Prakasam, Cudapah, Nellore, Ananthapur, Kurnool.	8
2011-12	872	Mahabubnagar, Nalgonda, Warangal, Medak, Nizamabad, Srikakulam, Guntur, Visakapatnak, East Godavari, Vizianagaram, Prakasam, West Godavari, Krishna, Chittoor, Cuddapah, Nellore, Ananthapur, Kurnool, Ranga Reddy, Khammam, Adilabad	22

*Source: DES, Hyderabad.*

### **Changes in Land – Use Pattern:**

During the last 20 years, the net sown area in the State increased only marginally i.e. from 39.36 per cent to 40.09 to total geographical area. The forest area remained more or less the same at 22 per cent, well short of the recommended 33 per cent to maintain ecological balance. There is a marginal decline in the barren and uncultivable land, cultivable wastes, permanent pastures and other grazing lands, land under miscellaneous tree crops and groves and current fallows. But there is an increase in the land put to non-agricultural uses and other fallow lands including cultivable wastes. Permanent pastures and land under miscellaneous trees and groves are used for non-agricultural purposes rather than bringing the same under cultivation.

### **Changes in the Distribution of Land Holdings:**

The distribution of land holdings is very skewed in the State. Marginal holdings form more than 60 per cent of total holdings with around 20 per cent of area operated.



**Table – 3.5**

**Changing Structure of the Agrarian Economy in Andhra Pradesh:  
The Percentage Distribution of Operational Holdings by Size Class,  
1956-2006**

Year	Share in Number of Holding (in lakh hectares)					Share in Operated Area (per cent)					Avg. Size
	Marginal	Small	Semi- medium	Medium	Large	Marginal	Small	Semi- medium	Medium	Large	
1955-56	38.6	18.3	17.7	16.7	8.7	7.9	9.7	16.1	28.1	38.2	2.43
1970-71	46.0	18.5	17.4	12.7	4.3	8.0	11.3	19.2	30.8	30.7	2.51
1976-77	46.6	20.3	17.4	12.2	3.4	9.3	12.8	20.8	23.3	24.8	-
1980-81	49.3	20.9	16.0	9.1	2.1	13.1	16.2	23.3	28.7	18.7	1.94
1985-86	54.2	20.8	15.2	8.0	1.8	14.5	17.3	24.0	27.3	16.3	-
1990-91	56.0	21.2	14.5	6.9	1.3	16.4	19.6	25.2	26.1	12.8	1.50
2000-01	60.9	21.8	12.4	4.3	0.6	21.6	24.8	26.4	19.8	7.5	1.25
2005-06	61.6	21.9	12.0	4.0	0.5	22.7	25.8	26.5	19.0	6.1	1.20

*Note:* 1) Marginal – 0 to 1 hectare; Small – 1 to 2 hectare; Semi-medium – 2 to 4 hectare; Medium – 4 to 10 hectare; and Large – 10, and above hectare; 2) Avg - Average Size of the Holding is given in hectares.  
*Source :* Directorate of Economics and Statistics (DES), Hyderabad.

The proportion of marginal holdings to total number of holdings was 38.6 lakh ha. in 1955-56 and by 2005-06 increased to 61.6 lakh hectares, smallholdings also increased slightly from 18.3 to 21.9 lakh ha. At the same time medium and large holdings declined<sup>6</sup> very sharply from 16.7 to 4.0 and 8.7 to 0.5 lakh hectares respectively. It amply shows the marginalisation of the land holdings in the state. It also implies the division and sub division land holdings. Though land reforms failed in the state, subdivision of large holdings in order to evade ceiling legislation did take

place resulting in the increase of marginal holdings. The average size of holding declined from 2.43 hectares to 1.20 hectares between 1955-56 and 2005-06. The statistics on distribution of land holdings across regions provided by DES, Hyderabad indicates that the highest proportion i.e. 47.74 per cent of the total holdings are in Telangana, followed by Coastal Andhra with 34.88 per cent and Rayalaseema with 17.38 per cent. The concentration of marginal holdings is highest in Coastal Andhra, here the proportion of marginal holdings to total holdings was 62.77 per cent in 1980-81 and that reached almost 70 per cent by 2005-06. However, the rise in marginal holdings in Rayalaseema has been slow with about five percentage points, compared to 7.25 percentage points in Coastal Andhra and 10.35 percentage points in Telangana, The average size of holding is highest in Rayalaseema and lowest in Coastal Andhra. Both in Rayalaseema and Telangana the average size is higher than the State average<sup>8</sup>.

### **Land Reforms in Andhra Pradesh:**

Agrarian relations and landholding structure play an important role in the performance of the agricultural sector. Land reforms have been on the national agenda since Independence to improve the performance of agriculture as well as for rural re-construction. In addition, creating greater access to land for the landless rural poor is an important component of poverty alleviation programmes. The landlessness is so acute in Andhra Pradesh that the landless households are 52.3 per cent to the total rural households, even in 1999-2000.

**Table – 3.6**  
**Landless Households in India and Andhra Pradesh**

Year	Landless households	
	India	Andhra Pradesh
1987-88	35.4	45.9
1993-94	38.7	49.5
1999-00	40.9	52.3

*Source: Undeserved Death, Edit K.S. Bhat, S.Vijaya Kumar Book, Published by council for Social Development.*

Land reforms, inspite of all the limitations in implementation, did play an important role in changing the agrarian structure in Andhra Pradesh. Following the pattern at the all-India level, the land reforms in Andhra Pradesh had three components: abolition of intermediaries, tenancy reforms, ceiling legislation and the other government initiatives<sup>9</sup>.

Legislative measures were also initiated following Article 46 of the Constitution that made it obligatory for the states to promote the interests of Scheduled Castes and Scheduled Tribes and to protect them from social injustice and all forms of exploitation. State governments have accepted the policy of prohibiting the transfer of land from tribals to non-tribals and the restoration of alienated tribal lands to tribals. In 1977, the government of Andhra Pradesh enacted the Assigned Land Prohibition Act which ruled that land that had been ‘assigned’ by the government to the landless and tribals could not be resold and used for purposes other than agriculture. To improve women’s access to land and landed property, Andhra Pradesh

along with Karnataka and Tamil Nadu amended the Hindu Succession Act, 1956, to legally protect the right of women to property including land.

The Madras Estates (Abolition and Conversion into Ryotwari) Act 1948 was the first legislation after Independence which removed intermediaries. It brought all land in Andhra area under ryotwari system. In the Telangana region, the jagirdari tenurial system ended with the Abolition of Jagirdari Act of 1949 (GOI, 2004). With respect to tenancy, the Hyderabad Tenancy and Agricultural Lands Act was enacted in 1950 which gave protection to nearly six lakh tenants who held over 75 lakh acres of land, constituting 33 per cent of the total cultivated area. This was considered one of the progressive acts of legislation in the state. The AP (Andhra Area) Tenancy Act, 1956 was passed to ensure that a tenant was not evicted from his/her holding except by going to court. This legislation has given a mixed result as it often led to concealed tenancy (Reddy, 2006).

Legislation on ceilings on agricultural holdings was enacted in two phases, 1955-72 and 1972 to the present. The Andhra Pradesh Land Reforms (Ceiling on Agriculture Holdings) Acts were passed in 1961 and 1973. As in most states, the first round of legislation in 1961 was a miserable failure, but the second one from 1973 had some impact. Against an estimated surplus land of 20 lakh acres, only 7.9 lakh acres were declared surplus, of which 6.47 lakh acres were taken possession by the government and 5.82 lakh acres were distributed among 4.79 lakh beneficiaries till August 2004 (GOAP, 2004). This amounted to about 4 per cent of the net sown area. Of the beneficiaries, 42 per cent were SCs who were assigned 39 per cent of the land, while STs constituted 14 per cent of

the beneficiaries and received 20 per cent of the land. A major step in land distribution in the state was the assignment of government land to the landless poor, which accounted for 12.5 per cent of the net sown area. By the end of 2002, an area of 43.21 lakh acres of government land was assigned to 23.98 lakh beneficiaries of whom 24 per cent were SCs and 28 per cent were STs (GOAP, 2004). During the years 2004-09, the State Government has taken land distribution to poor as its regular welfare programme and this itself shows the magnitude of landlessness among the poorer sections.

Though the ceiling legislation was not effective in the redistribution of land, it did act as a constraint on the acquisition of more land by the rich. In addition, the political mobilization of rural masses inspired by the radical political parties and the Naxalite movement arrested the process of acquiring more land by the rich. The rich peasantry began to sell their land and shift to other vocations in non-agricultural activities in urban areas. As a result, on one hand the surplus land under land ceiling and government wasteland was distributed to SCs and other rural poor. On the other, land was acquired for cultivation by communities which had been involved in off-farm activities earlier. Subsequently, the concentration of land in a few hands and large holdings declined. In the process, the power of the dominant cultivating castes in agrarian society has declined while backward communities acquired more control over the land (Reddy, 2006).

Infact, all these measures are a drop in the ocean of agrarian problems of the state and for that matter for the entire country. Violation of all sorts of legislations is a common phenomenon. Especially, the tribal

lands and lands belonging to poor peasants being forcibly acquired and allotted to SEZs, industries and for mining activities on large scale in recent years.

Land relations in Andhra Pradesh are extremely complicated which have led to serious problems for actual cultivators<sup>10</sup>. Unregistered cultivators, tenants, share croppers and tribal cultivators all of them facing difficulties in accessing institutional credit and other facilities available to farmers with land titles. Among others, the Farmers Welfare Commission (GOI, 2004) made the following three recommendations on land issues. (a) There is a need to record and register actual cultivators including tenants and women cultivators, and provide passbooks to them, to ensure that they gain access to institutional credit and other inputs; (b) The land rights of tribals in the agency areas must be protected; and (c) Considerable scope exists for further land redistribution particularly, when waste and cultivable lands are taken into account. In order to develop the lands, complementary inputs for cultivation (initial land development, input minikits, credit, etc.) should be provided to all assignees. It also made a radical recommendation that the future assignments of land should be in the name of women.

### **Changes in Irrigation:**

The position of the state in respect of most critical input i.e. irrigation is not very encouraging. Between 1957-58 and 2004-05 actually there is a decline in net area sown by 10 percentage points (Table 3.7). However crop intensity has increased indicating the prominence of intensive cultivation. Both Gross and Net irrigated area increased 30.0 and

25.0 percentage points. However almost the entire increase burdened the ground water sources, increased the cost of production of cultivators and ultimate indebtedness among large number of farmers, particularly the small and marginal farmers. The statistics based on table 3.8 shows that irrigation through wells covered about 43 per cent of net irrigated area, 38.08 per cent by canal and 14.58 per cent by tanks. Over the last two decades the increase in irrigation coverage was eight percentage points (i.e. from 35.25 per cent to 43.44 per cent) and this increase was accounted by wells. During this period Net Area Irrigated (NAI) under tube wells recorded a compound growth rate of 10.51 per cent per annum, which is contributed, mainly by Telangana and Rayalaseema regions. The NAI under other wells grew by 2.10 per cent per annum. On the other hand, there was a decline in the area irrigated through the other two prominent sources viz., canals and tanks. The NAI under canals and tanks recorded compound growth rates of -0.38 per cent and -2.15 per cent respectively. Thus the additional irrigation facilities created in the State over the last two decades are ground water based and they are not sustainable especially in the scarce rainfall regions. Over exploitation of ground water results in the falling of water table and causes environmental problems through increase in salinity. It may lead to the increase in the cost of power for lifting the water. Sometimes power shortage may also act as a constraint for using this source of irrigation. It is heartening to note that very little attempt has been made to improve sustainable sources of irrigation canals and traditional tanks over the last two decades<sup>11</sup>.

**Table – 3.7**

**Changes in Cropped and Irrigated Area in Andhra Pradesh**

<b>Sl. No.</b>	<b>Area</b>	<b>1957-58</b>	<b>1980-81</b>	<b>1990-91</b>	<b>2004-05</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>
1.	Net Area Sown	112.3	108.7	110.4	100.9
2.	Gross Area Sown	122.5	125.6	127.9	121.5
3.	Cropping Intensity	1.09	1.16	1.16	1.20
4.	Net Area Irrigated	27.8	34.5	43.5	37.1
5.	Gross Area Irrigated	33.2	44.3	54.2	47.7
6.	Irrigation Intensity	1.19	1.28	1.25	1.29

*Note: Figures presented are in lakh hectares.*

*Source: 1) DES, Hyderabad, 2) Subrahmanyam and Aparna (2007)*

The figures presented in table 3.9 shows that except few districts from North Coastal, Telangana and Rayalaseema regions which are highly backward in irrigation since the formation of Andhra Pradesh, all other districts experienced a decline in both net area sown and net area irrigated with varied intensity.

Regional variations on irrigation front by different sources are highly discriminative. The tank irrigation which has its historical prominence in Telangana and Rayalaseema has been absolutely overlooked and neglected. Funding by state is almost zero for innovation and maintenance of tanks and thus there is a decline in irrigation under tanks by 38 percentage points in Telangana. On the other well irrigation which is high investment prone has increased by 42.5 per cent in this region.



**Table 3.8**  
**Source-wise Irrigation in Andhra Pradesh (Relative shares in percentage)**

Year	Canal Irrigation				Tank Irrigation				Well Irrigation			
	CA	RS	TG	AP	CA	RS	TG	AP	CA	RS	TG	AP
1956-57	84	7	9	100 (1274)	39	16	45	100 (1180)	26	34	40	100 (321)
1960-61	83	7	10	100 (1331)	48	16	36	100 (1148)	27	35	38	100 (328)
1970-71	76	10	14	100 (1578)	46	14	40	100 (1113)	41	43	16	100 (501)
1980-81	75	9	16	100 (1695)	54	7	39	100 (900)	28	29	43	100 (777)
1990-91	73	8	19	100 (1871)	51	9	40	100 (969)	24	23	53	100 (1304)
2000-01	74	8	18	100 (1649)	55	8	37	100 (727)	24	22	54	100 (1883)
2001-02	77	7	16	100 (1562)	52	14	34	100 (568)	24	23	53	100 (1927)
2002-03	82	6	12	100 (1209)	56	8	36	100 (426)	27	23	50	100 (1842)
2003-04	81	7	12	100 (1137)	55	6	39	100 (490)	29	21	50	100 (1870)
2004-05	83	8	9	100 (1346)	67	6	27	100 (477)	27	21	52	100 (1904)
2005-06	74	9	17	100 (1572)	49	13	38	100 (662)	25	20	55	100 (1986)
2006-07	76	7	17	100 (1623)	56	6	38	100 (602)	25	20	55	100 (1883)
2007-08	78	8	14	100 (1610)	62	10	28	100 (585)	24	19	57	100 (2287)

Source: Statistical Abstracts, AP and Compendium of Area and Land use Statistics, AP, 2006

Note: Figures in parentheses are irrigated area in '000 ha. CA – Coastal Andhra, RS – Rayalaseema, TG – Telangana

**Table – 3.9**

**Contribution of Districts to the Total Cropped and Irrigated Area declined in Andhra Pradesh**

Range	Net Sown Area		Net Irrigated Area	
	Districts	Contb.	Districts	Contb.
1	2	3	4	5
Very High	Mahabubnagar (17.5), Nalgonda (13.4), Chittoor (12.3), Karimnagar (10.6)	53.8	West Godavari (13.1), Guntur (13.0), Krishna (11.5), prakasam (10.1)	47.4
High	Nizamabad (7.5), Prakasam (6.4), Khammam (6.2), Rangareddy (4.8)	24.9	Nalgonda (8.8), Karimnagar (8.4), Ananthapur (6.8), Visakhapatnam (5.8), Nizamabad (5.2)	35.0
Low	East Godavari (4.1), Adilabad (3.9), Srikakulam (3.5), Krishna (3.2), Visakhapatnam & Vizianagaram (2.4), Guntur (1.9), Kurnool (0.8), Warangal (0.7), West Godavari (0.6), Kadapa (0.4), Medak (0.1)	21.3	Khammam (4.3), Mahabubnagar (4.0), Nellore (3.50), East Godavari (3.2), Vizianagaram (3.0), Chittoor (2.9), Medak (2.5), Srikakulam (2.3), Rangareddy (1.3).	27.0
Increase	Ananthapur (1.5), Nellore (1.1).	2.6	Adilabad (4.3), Warangal (4.0), Kadapa (1.1), Kurnool (0.2)	9.6

*Note:* 1) Figures presented in parentheses are per centages of each district to the total area declined in the state and col. 3 and 5 are the per centage contribution of the group of district; 2) Contb. – Contribution of district to the total at the state level.

*Source:* 1) Subrahmanyam and Aparna (2007), 2) DES, Hyderabad.

At the regional level, by the triennium ending 1999-2000, irrigation coverage was the highest in Coastal Andhra (55.28per cent) and the lowest in Rayalaseema (26.71per cent). In the Telangana region it was 40.16per cent. Over the last two decades the increase in irrigation coverage was three percentage points in Coastal Andhra, four percentage points in Raayalaseema and 14 percentage points in Telangana. The increase in irrigation in Telangana is formed mainly in the form of tube well irrigation,

where the role of government investment is almost zero. The major sources of irrigation are canals in Coastal Andhra and wells in Rayalaseema and Telangana. Whatever the changes that have taken place in Andhra Pradesh and more particularly in Telangana region and Ananthapur and Chittoor are not at all conducive to the farming community. The dependency on well irrigation and especially, bore-well irrigation to the magnitude of 70 per cent and above (as per the latest estimation) has invariably overburdened the farmers in general and small and marginal farmers in particular in entire Telangana region and Ananthapur district of Rayalaseema. Higher dependency on well irrigation and recurrent failure of tube-wells has resulted in high indebtedness. It is one of the chief causes of suicides by farmers in the State and especially in the areas mentioned above.

### **Bore-Well:**

The Majority of the small and medium farmers were caught in a “Bore-well trap”. Analysis on increasing number of bore-wells indicate that between 1975 and 1999 number of bore-wells increased from 8.20 lakhs to 22.22 lakhs, of which 13.36 lakhs are in Telangana, followed by 4.71 lakhs in Rayalaseema and 4.16 lakhs in coastal Andhra regions. The area under bore-well irrigation has increased from 1 million hectares to 2.6 million hectares. Despite the advent of new technologies in water lifting, area irrigated per well has gone down marginally from 1.22 acre to 1.19 acre, indicating declining water yields. The area under ground water irrigation has increased rapidly in the recent years.

The recent history of farmers' suicides shows that more than 80 per cent of suicides have taken place in Telangana and Rayalaseema districts, where farmers are largely depending on bore-wells. It is not surprising to note that in Musampally village of Nalgonda (P.Sainath 2005), there are more number of bore-wells than its total population. In Telangana districts to dig a bore well the estimate cost ranges from Rs.35,000/- to Rs. 90,000/- and in some areas it goes beyond the maximum cost. In addition Rs.20,000/- is the minimum requirement to purchase motor pump set.

**Table – 3.10**  
**Percentage of Investment lost due to failure of Bore-wells across Regions in Andhra Pradesh**

<b>Region</b>	<b>Marginal</b>	<b>Small</b>	<b>Medium</b>	<b>Large</b>	<b>All</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>
North Coastal Andhra	25.0	-	15.0	56.8	30.4
South Coastal Andhra	58.0	49.8	49.1	34.2	45.9
Rayalaseema	61.9	47.8	54.4	59.6	54.9
South Telangana	59.8	74.3	63.0	67.4	66.5
North Telangana	32.9	46.1	52.5	59.1	51.6
All Sample districts	55.9	53.2	55.9	58.5	56.1

*Source: 1) Primary survey conducted during 2004; 2) DES, Hyderabad.*

Thrust for irrigation water among the farmers of dry land regions of the state has resulted in “Bore-well mania”. The researchers and media reported several instances where many farmers have gone for multiple number of bore wells, one after the another, until they succeed. In all these attempts, the success rate is just 5 to 10 per cent. In Andhra Pradesh, failure of bore wells is very common phenomena in the dry land regions. In many

instances bore-well failure has resulted in crop failure, high indebtedness and ultimate suicides.

A primary survey conducted on loss of investment due to failure of bore-wells amply establishes that failure rate is more than 50 per cent of the total bore-wells erected by the farmers across the regions. However, the rate of failure is highest in Telangana region with over 59 per cent failure. Followed by Rayalaseema with 55 per cent and least in Coastal Andhra with 38 per cent of failure. The high incidence of bore-well failure and its resultant indebtedness and suicides in Telangana and in Ananthapur of the Rayalaseema regions is the manifestation of gross injustice done to these regions.

### **Changes in Cropping Pattern:**

The soil, climate and water resources in Andhra Pradesh are conducive for growing a variety of crops. The statistics provided by Economic Survey of the state for the year 2010-11 show that at the triennium ending with 2010-2011, rice is the prominent crop in the state and cultivated on 38.07 per cent of gross cropped area. Among other crops, groundnut occupied 17.93 per cent, cotton 9.87 per cent, fruits and vegetables 6.62 per cent, jowar 4.24 per cent, black gram 3.59 per cent, maize 3.43. Per cent and red gram 3.33 per cent. Major contribution of rice production in the state comes from Coastal Andhra. Rice is cultivated on 44.95 per cent of GCA in Coastal Andhra followed by black gram is 7.45 per cent and fruits and vegetables is 7.96 per cent of cultivated land. In Rayalaseema, the most prominent crop is groundnut, which occupied 47.14

per cent of GCA, followed by rice 10.52 per cent, cotton 5.52 per cent, jowar 4.73 per cent, gram 3.78 per cent, fruits and vegetables 8.15 per cent respectively and 2.54 per cent of GCA was under red gram. In Telangana region the most prominent crops are rice with 29.21 per cent followed by cotton 17.2 per cent, jowar 11.21 per cent, maize 7.83 per cent, groundnut 5.75 per cent, green gram 5.55 per cent, red gram 4.8 per cent, castor 5.01 per cent and fruits and vegetables 4.32 per cent of GCA respectively. The growth in cropped area of cotton is phenomenal in Telangana, where 52.5 per cent of area is under cotton to the total area under cotton in the state.

The cultivation of rice, bajra, ragi, horsegram, blackgram, sesamum, coconut, ginger, sugar cane, tobacco, fruits and vegetables, fibre crops and fodder crops are concentrated more in Coastal Andhra. The cultivation of small millets, bengal gram, groundnut, rape and mustard oil seeds as a whole are concentrated more in Rayalaseema. The cultivation of rice, cotton, jowar, maize, red gram, castor, linseed, chillies are concentrated more in Telangana.

**Table – 3.11**  
**Changes in Cropping Pattern in Andhra Pradesh**

(Per cent of Cropped Area)

Crop	Year		
	1958	1998	2006
Rice	23.1	30.5	38.07
Jowar	20.8	6.1	4.24
Pulses	10.7	11.9	12.71
Food Grains	73.1	53.2	66.61
Ground Nut	10.5	15.3	17.93
Oil Seeds	15.3	20.8	21.38
Cotton	3.1	8.2	9.87

*Source:* 1) *Undeserved Death*, Edit K.S.Bhat, S.Vijaya Kumar Book, published by Council for Social Development, 2003. 2) *DEs*, Hyderabad, 2006.

Generally farmers respond accordingly to the changes in availability of resources and prices and profitability of the crops changes in selection of the crops both in variety and area. The crop pattern in Andhra Pradesh is subjected to a considerable change over the last two decades. There was an increase in the area under rice, through out the period, where statistics are available from 1958 to 2006. The area under all other cereals and millets except maize recorded a drastic decline. Consequently, the proportion of area under total food grains declined from 73.1 per cent of GCA in 1958 to 53.2 per cent in 1998, but increased to 66.61 per cent in 2006. On the other hand there was a marginal increase in the proportion of area under pulses from 11.24 per cent to 12.70 per cent during the same period. This increase is contributed mainly by the increase in area under bengal gram, red gram and black gram. The proportion of area under oil seeds increased from 15.3

per cent in 1958 to 20.8 per cent in 1998 and further to 21.38 per cent in 2006. Thus, there was a shift from the cultivation of food grains especially coarse cereals and millets to the more risky commercial crops like cotton, chillies, fruits and vegetables in the state during the last three decades.

The available data reveals that, the extent of the shift has spread over four decades, but it should be noted that a substantial part of this change occurred in the more recent past. There has been large reduction in the acreage under jowar and other millets such as ragi and an increase in the area under groundnut, cotton and oilseeds. Several factors have contributed to this shift towards non-food cash crops. There was the obvious need for farmers' households to access more cash income in order to meet a range of cash expenses for immediate consumption and production purposes. In addition, there was a pattern of increasing expenditure on education and health. Cash crop production typically entails more monetized inputs, such as seeds, fertilizers and pesticides, and these were obviously financed by incurring debt, most often with the input dealers themselves who also act as traders. Once such a money debt was incurred, cash crop production will further be necessitated by the need to repay interest and principal. It is just like another vicious circle and it will become almost impossible for farmers to move back to the old subsistence crops that did not command a market.

### **Application of Fertilizers and Pesticides:**

New technology has brought several forms of inorganic fertilizers and farmers have totally forgotten the value of organic fertilizers. Following the advice of dealers, farmers have started over- use of fertilizers and this has



lead to financial burden on small and marginal farmers. Though exact reason is not known for over-use of fertilizers, it is surprising to note that all India average for fertilizers consumption per hectare was 88 kg in 1980s and 188 kgs in 2000s. But the corresponding figures for Andhra Pradesh were 47 and 338 kgs.

By and large, fertilizers application varies from one region to another and it is related to the extent as well as the quality of irrigation. Studies found that average application of fertilizers ranges from 72 kg to 150 kg per hectare. Particularly in Telangana and Rayalaseema districts, fertilizers application is 150 kg per hectare on average. In addition, it is estimated that fertilizer costs have increased fourfold since 1992. For example the cost of a 50 kg DAP has increased from Rs.200 in 1990s to Rs.1000 by 2011. Apart from that several complaints were made about adulterated pesticides and fertilizers.

The Data indicates much variation between the recommended level and actual application of fertilizers. Crop-wise data highlights that for paddy in one hectare the recommended level is 160 kgs whereas farmers are applying 237 kgs. That means 48 per cent excess than the recommended level. Similarly for groundnut and cotton it is 18.3 and 17 per cent excess than the recommended level respectively. However, for sugarcane, sunflower and jowar more than 30 per cent less volume of fertilizers are being used than recommended levels. In most of the states the trend is prevailing in similar with few variations.

**Table – 3.12**  
**Application of Fertilizers in Andhra Pradesh**

(Kg / ha.)

Crop	Application	Recommended Level	Per cent of excess
Paddy	358	160	123.75
Ground Nut	142	12	183.0
Cotton	281	240	17
Chillies	241	240	1
Sugarcane	138	300	-54
Sunflower	89	130	-31.5
Jowar	62	130	-52.3

*Source: DES, Hyderabad.*

The pesticide usage is another area major concern in the context of agrarian crisis. India is the twelfth largest producer of pesticides in the world. Among the states, Andhra Pradesh alone consumes 22.5% of pesticides produced in the country. In usage of pesticides, the state is in third position after Punjab and Haryana. Cotton belt of Telangana region is the highest user of pesticides within the state. Among various districts, Guntur tops in consumption of pesticides, where paddy, chillies and cotton are the major crops. Nizamabad, Khammam, Warangal and Mahabubnagar are in following positions. Number of toxic pesticides, which are banned in developed countries are in usage in the state. Irrespective of the crop, whether it is paddy, cotton, chillies, groundnut, fruits or vegetables the application of pesticides has become common phenomena. Adulterated spurious seeds and pesticides are also common phenomena in Andhra Pradesh. Most of such pesticides are being produced in and around twin cities of Hyderabad. In Warangal district there are many complaints on this issue.

**Table 3.13**  
**Pesticides usage in Different States**

Sl. No	State	Usage per Hector	Sl. No	State	Usage per Hector
1.	Andhra Pradesh	728	8.	Bihar	94
2.	Panjab	823	9.	Madhya Pradesh	53
3.	Haryana	743	10.	Maharashtra	184
4.	Gujarath	447	11.	Rajasthan	162
5.	Tamilnadu	410	12.	Uttar Pradesh	288
6.	West Bengal	431	13.	Orissa	103
7.	Kerala	383	14.	Karnataka	216

*Source: Ministry of Agriculture, GOI New Delhi.*

While analysing distress suicide syndrome of the cotton farmers, Glenn Davis Stone stated that cotton is the classic “Pesticide treadmill” crop.

### **Minimum Support Price (MSP) for Different Crops:**

Prices of agricultural commodities are crucial from the point of view of changes in cropping pattern and returns from cultivation. In a subsistence economy, the price responsiveness is expected to be quite less. However, with the onset of green revolution there is a lot of change in responsiveness of farmers to the output price. During the last two decades across the state a change in the attitude of farmers has been noticed that they are ready to affect changes in the crop area based on the price advantage. Under the influence of prices, jowar in the first phase and groundnut and maize in the

second phase were replaced by rice, sunflower, and ultimately in favour of the commercial crops like cotton and chillies. The particulars of prices of some important crops for the last decade given in the table reveals two important features i.e. a rising trend on one hand and fluctuations on the other. The Table shows that in respect of rice, the price per quintal was Rs. 310 in 1993-94 to Rs.600 in 2004-05, and at present in 2011-12 to Rs.1000. It shows a constant rise in the price of paddy. It is the price advantage that rice enjoyed as related to maize and jowar, there was a considerable shift towards the cultivation of rice, of course, yield increasing varieties and improved irrigation facilities have added to this. However, the cost of cultivation of paddy is always more than the MSP. For example, in 2011-12 the cost of cultivation of paddy is Rs.1600 per quintal. Maize is an important crop which has shown greater increase in yield, is subjected to very frequent fluctuations in the prices, though they have shown uptrend over these years. By and large, prices in rabi are relatively higher when compared to kharif. Groundnut is the other crop, which has shown no doubt a rising trend in its MSP during the last 15 years, but we can also notice periodic fluctuations in the price of groundnut. Sometimes month to month price variation was of the order of more than Rs.200.

In the case of commercial crops also we can notice wide fluctuations. In case of chillies, no definite trend is discernible. The fact is that in the year 1993-94 the market price reached all time low during the last decade. The following two years 1994-95, 1995-96, showed an uptrend but 1996-97 again recorded a lower price. The similar trend has prevailed during 2000-01 and 2004-05. Thus, the price fluctuations in respect of chilly are quite frequent and wide. As could be seen price fluctuations are far and wide even

on monthly basis. It is because of this volatile nature of prices in the recent past that there has been a decline in the area under chilly cultivation. A major reason attributed for such wide fluctuations is that of changes in demand from other countries. Cotton price, which was about Rs. 500 in 1975-76, has gradually risen to a level of Rs. 786 by 1988-89. The price more or less remained stable during the next two years. But there was a sudden spurt in the price of cotton in 1991-92 showing an upward position at Rs. 1233. In the next year, it fell to a level of about 1000. In the next two years, it again went up but thereafter the prices have fallen marginally. During the entire period from 1993-94 to 2004-05, the cotton prices fluctuated very vibrantly. There is no consistency in market price between any two years. It is also pertinent to notice the fluctuations on the monthly basis within the peak season between December and February. It is during the last 5 years that we notice very frequent changes even on day to day basis and subjected to price fluctuations.

**Table – 3.14****MSP and Market Price for Major Agriculture Commodities,  
Andhra Pradesh**

Year	Paddy		Cotton		Chillies	Groundnut	
	MSP (Rs./qtl.)	Market Price	MSP (Rs./qtl.)	Market Price	Market Price	MSP (Rs./qtl.)	Market Price
1993-94	310	377	900/1050	1210	1762	800	978
1994-95	340	436	1000/1200	1791	3113	860	905
1995-96	360	458	1150/1350	1477	3184	900	904
1996-97	380	492	1180/1380	1681	2802	920	1334
1997-98	415	559	1330/1530	1841	3113	980	1201
1998-99	440	598	1440/1650	2082	3896	1040	1305
1999-00	490	875	1575/1775	1732	3534	1155	1341
2000-01	510	662	1625/1825	1852	2941	1220	1366
2001-02	530	749	1675/1875	1805	2895	1340	1367
2002-03	550	827	1695/1895	1836	3233	1355	1455
2003-04	550	NA	1725/1925	1964	2441	1400	1791
2004-05	600	NA	1760	NA	NA	1520	NA
2010-11	1050	1100	4000	3800	NA	NA	2600

*Source: Directorate of Economics and Statistics: Statistical Bastract of Andhra Pradesh (compiled for various years), government of Andhra Pradesh, Hyderabad; Director of Economics and Statistics (2003): Glimpses of Identified Growth Engines from Agriculture to Gross State Domestic Product, government of A.P. Hyderabad.*

Price fluctuations are attributed to changes in national and international forces. However, it is not understandable as to what makes the price to vary day to day or month to month particularly during peak arrivals. One of the important observations made in this regard is the actual prices have been quite less than the expected prices by the farmers. This has become a source of frustration and agony resulting in periodic protests from the farmers' organisations during the last few years. Frequent fluctuations in market prices of all major crops for consecutive longer period is causing

distress among the farmers. Vandana Shiva aptly remarked that these sudden ups and downs in market prices and that to in peak periods are damaging the opportunities of the farmers and playing with their fortunes and above all resulting in suicides during sudden crash in prices.

Apart from price, farmers are experiencing several problems in the marketing of their products such as, grading, weighing, delayed payments in cash, excess collections and periodic closure of markets etc. Farmers' organisations realised the problems of marketing and they started agitations which no doubt, were able to minimise the problems but they could not succeed in getting a fair price. In view of the unprecedented farmers suicides the government is intervening periodically to increase the price from its down trend. But it is giving temporary relief only. For many years the farmers of Telangana region are struggling with Cotton Corporation of India (CCI) to purchase their product at remunerative price. But even at this juncture of crisis, it is paradoxical that buyers and especially the CCI is withdrawing from purchases within 20 days or so on some pretext or the other and denying the opportunity of fair and profitable marketing<sup>12</sup>.

### **Production Trends of Different Crops:**

If we look at the growth of yields per hectare for food grains, non-food grains and total crops as a whole, it will be clear that growth rates have come down during the 1990s and the first half of the current decade in the state as compared to 1980s. During the second-half of the 1990s, the growth of food grains yield revived but, again came down in the recent past. The growth of yield of non-food crops came down drastically during the second-

half of the 1990s because of which the growth of the overall agricultural yield fell down. However there has been some improvement in the yield of non-food crops in the recent period with consequent impact on overall agricultural yields. It is evident from the yield of different crops that in our county it is below the world average except for wheat and sugarcane. There is, therefore wider scope to increase the productivity in our country with the application of the latest available technology. Prof. Ch. Hanumantha Rao (2005) analysed agricultural growth from the first decade of the plan period and suggested that provision of irrigation facilities, strengthening of extension services, developing biotechnologically improved seeds along with adequate supply of institutional credit are very much essential to raise farm productivity and profitability<sup>13</sup>.

Both at the state level and at the regional levels, there was no significant growth in the area under rice, either in the 1980s or in the 2000s. The fluctuations were found to be much higher in Rayalaseema and Telangana when compared to Coastal Andhra. The yields, which recorded a significant growth in all the regions in the eighties, were not statistically significant in the later period, rather there was an increase in the instability. Both the area and production of the coarse cereals viz., Jowar, Bajra and Ragi recorded significant negative growth in both the periods in all the regions, while the growth rates of yields remained statistically insignificant with a few exceptions. But maize recorded a significant positive growth in area in the nineties in Coastal Andhra and Telangana. For maize the instability in yields and production are much higher. Pulses showed a significant growth in area in all the regions during the last two decades. However the yield rates remained more or less stagnant<sup>14</sup>. Sugarcane and



tobacco showed a dismal performance in both area and productivity, in all the regions. The rates of growth recorded in both the decades are not statistically significant. The area under cotton recorded a significant positive growth in the three regions in both the periods exception being Rayalaseema in 80's. But there was a deceleration in the rates of growth in later period, with an exception to Telangana. The yield growth rates are not statistically significant at the state level as well as at the regional level with an exception to Telangana where yields recorded a positive growth in both the periods but the rate of growth in later period was much lower<sup>15</sup>.

**Table – 3.15**

**Comparison of Area and Production of Kharif 2010-11 Actuals with First Advance Estimate of 2011-12 in Andhra Pradesh**

Sl. No.	Crop	Area (Lakh Hectares)			Production (Lakh tons)		
		2010-11 actuals	As per Advance estimates 2011-12	per cent of Dev.	2010-11 actuals	As per Advance estimates 2011-12	per cent of Dev.
1.	Paddy	29.22	27.50	-5.89	75.10	77.00	2.53
2.	Maize	4.40	4.56	3.64	16.41	15.50	-5.55
3.	Redgram	6.30	4.92	-21.90	2.61	2.07	-20.69
4.	Blackgram	0.82	0.56	-31.71	0.46	0.22	-52.17
5.	Greengram	2.61	1.51	-42.15	1.22	0.63	-48.36
6.	<b>Total Pulses</b>	<b>9.88</b>	<b>7.13</b>	<b>-27.83</b>	<b>4.35</b>	<b>3.00</b>	<b>-31.03</b>
7.	<b>Food grains</b>	<b>45.80</b>	<b>41.02</b>	<b>-10.44</b>	<b>98.56</b>	<b>97.44</b>	<b>-1.14</b>
8.	Groundnut	13.47	10.04	-25.46	8.88	6.53	-26.46
9.	Sesamum	0.82	0.32	-60.98	0.14	0.07	-50.00
10.	Soyabean	1.27	1.17	-7.87	2.13	1.72	-19.25
11.	<b>Total Oil seeds</b>	<b>17.84</b>	<b>13.87</b>	<b>-22.25</b>	<b>12.67</b>	<b>9.58</b>	<b>-24.39</b>
12.	cotton	17.76	18.19	2.42	38.97	42.80	9.83

*Source: Economic Survey of A.P., 2011-12.*

Production indicators give the first indication of the problem. The growth rate of aggregate agricultural output of the state has declined from 3.4 per cent per annum in the 1980s to 2.3 per cent per annum in the 2000s. Yield growth also declined. For example, the growth rate of rice yield declined steeply from an annual rate of 3.1 per cent in the 1980s to 1.3 per cent in the 2000s; for cotton the corresponding figures were 3.4 per cent and 1.4 per cent. National-level studies estimated that crop yields in Andhra Pradesh declined by 1.8 per cent per year over the 2000s. In addition, the volatility of yields has also been higher in the later period<sup>16</sup>.

The advanced estimates given by Economic Survey 2011-12 provides valid information pertaining to area and production of different crops in the state. For area and production of total food grains, total oilseeds there is a negative growth in 2011-12 over the 2010-11. For total pulses regarding area under cultivation it is -27.83, for food grains -10.44 and for total oil seeds it is -22.25 per cent. The major set back in area and production is recorded in total pulses and the highest slide is experienced by green gram. Area and production of paddy, decelerated by 5.89 percentage points, but the production increased by 2.53 per cent. The decrease in production of total pulses strikingly higher than the area under pulses with -31.03 per cent. The production oil seeds also decreased more than the area under these crops with -24.39 per cent during 2011-12 over 2010-11. Among oilseeds sesamum realised highest negative growth of -50.0 per cent followed by groundnut with -26.46 per cent. Among all crops considered for study only cotton has shown a positive trend in both area and production. The area under cotton has increased by 2.42 per cent and the production by 9.83 per cent.

## Crop Insurance:

The trend in implementation of crop insurance scheme in the state for a period of 2000-01 to 2002-03 shows an uptrend in farmers and area covered and in sum assured, premium collected, claims paid and the percentage of farmers benefited.

But the overall picture is miserable that, crop insurance coverage has been very meager in the state when compared to the number of cultivators during the year 2002-03. Only 13 per cent of total cultivators were insured and just 5 (five) per cent of cultivators were benefited.

**Table – 3.16**  
**Coverage of Crop Insurance Scheme Particulars**

Years	Farmers covered (Nos.)	Area covered (Ha.)	Sum insured (Rs.)	Premium collected (Rs.)	Claims paid (Rs.)	Farmers benefited (Nos.)	% of farmers benefited to the farmers covered
2000-01	1986781	2711829	20209608300	552005774	349133410	151253	7.61
2001-02	1776159	2641691	20028054331	545516173	884724160	302715	17.04
2002-03	1824398	2660717	2270734271	600329787	2332091048	635106	34.81

*Source: Undeserved Death, Edit K.S. Bhat, S.Vijaya Kumar Book Published by Council for Social Development*

As the land records are improper and not updated, number of rightful farmers were excluded. The women cultivators, tenants and share croppers are almost out of the ambit of insurance scheme. Prior to 1999 mode of

CCIS was followed in the state for crop insurance. From 1999 rabi onwards it was replaced by National Agricultural Insurance Scheme (NAIS). With the failure of this scheme due to many defects, the crop insurance based on Rainfall Index has been introduced on pilot basis. However, the NAIS is in active implementation in majority districts covering 14 crops. In spite of change in 'modus operandi' in recent years the situation has not improved much. There is a need to promote insurance in the mode of overall farm insurance for all crops for covering risks of weather, pests and diseases, other vagaries and the farm family itself.

### **Extension Services:**

The performance of the state in terms of agricultural extension services has been found relatively poor when compared to other states. For instance, an agricultural extension officer in Andhra Pradesh has to cover more than 10 villages and roughly 3700 farm families whereas in states like Maharashtra and West Bengal it is only two or four villages.

Agricultural extension services account for only nine per cent of the farmers' information on agricultural technology in the State. With the virtual breakdown of the extension machinery, small and marginal farmers have become increasingly dependent on private agents for extension services. Input dealers (30 per cent) and other progressive farmers (34 per cent) constitute the major sources of information. Such agents were subject to less regulation than before, leading to circumstances in which resource poor farmers became victims of exploitation. Jayati Gosh aptly remarked that public agricultural extension services have all but disappeared, leaving

farmers to the mercy of private dealers of seed and other inputs, who function without adequate regulation creating problems of wrong crop choices, excessively high input prices, spurious inputs and extortion. Public crop marketing services have also declined in spread and scope, and marketing margins imposed by private traders have therefore increased. All this happened over a period when farmers were actively encouraged to shift to cash crops. It is thus causing indiscriminate selection of crop irrespective of the nature of the soil, purchase of MNC seeds with 60 per cent germination assurance, application of fertilizers and pesticides not based on scientific recommended level depending on crop, topography, climatic conditions and nature and fertility of the soil.

**GFC and Agricultural Investment:**

**Table – 3.17**

**Growth of Gross Fixed Capital Formation in Agriculture**

<b>State</b>	<b>Source</b>	<b>1980-81 to 1989-90</b>	<b>1990-91 to 1999-00</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
Andhra Pradesh	Public	7.6	3.9
Andhra Pradesh	Private	5.2	-1.7
Andhra Pradesh	overall	6.9	1.1
India	Overall	-1.0	2.0

*Source: Subramanyam and Aparna, 2007; compiled from DES reports.*

The growth in Gross Fixed Capital formation in any sector is an indicator of its inherent strength. But the GFC formation in agriculture in the state is decreasing over the period. The available statistical information

shows that GFC formation in agriculture in the state between 1980-81 to 1989-90 decade to 1990-91 to 1999-2000 has decreased in both public and private sectors from 7.6 to 3.9 and 5.2 to -1.7 per cent respectively. The overall GFC formation also declined from 6.9 to 1.1 per cent. However, at all India level it increased slightly from -1.0 to 2.0 per cent.

The purpose of investment in any sector is to generate capital in the form of infrastructure, creation of production assets and improvement in the quality of natural resources and assets. Investment in agriculture comes from two sources viz., public and private. Public investment is meant mainly for asset formation and improvement in quality of existing assets. Public investment may induce private investment. Public investment in agriculture in India is funded by State Governments and the Union Government. Here public investment in agriculture refers to the sum of capital expenditure on all heads of agriculture in the State incurred by State Government.

The total public investment in agriculture in the State at current prices steadily increased from Rs. 124 crores per year during 5th Five Year Plan period to Rs. 795 crores per year during the 8th Five Year Plan period (1992-93 to 1996-97). But at constant prices it declined steadily over the plan periods from Rs. 202 crores during the 5th Plan to Rs. 125 crores during the annual plans 1991-92 and 1992-93. During the 8th Plan period though it increased to Rs, 181 crores per year, it did not rise to the level prevailing in the 5th Plan period. Public investment in agriculture under capital expenditure per hectare of net sown area at constant prices also declined steadily from Rs. 182 per year during 5th plan period to Rs. 113 per year during the annual plans. But during the 8th plan period it increased to

Rs. 174 per year, though failed to reach the level prevailing during the 5th Plan period. The average annual investment during the period 1974-75 to 1996-97 comes to Rs. 160 per hectare. During the same period the investment per hectare declined at the rate of 0.78. Further the planned expenditure on agriculture and allied sections and particularly on irrigation and flood control have declined sharply over the period.

**Table – 3.18**  
**Public Investment on Agriculture in Andhra Pradesh**

	1974-75 to 1978-79 5 <sup>th</sup> Plan	1980-81 to 1984-85 6 <sup>th</sup> Plan	1985-86 to 1989-90 7 <sup>th</sup> Plan	1990-91 and 1991-92	1992-93 to 1996-97 8 <sup>th</sup> Plan
Capital expenditure on Agriculture & allied heads Rs. crore/year					
a) at current prices	124	212	339	372	795
b) at 1980-81 prices	202	162	151	125	181
Capital expenditure per hectare of net sown area at constant prices Rupees per year.	182	147	142	113	174
capital expenditure on agriculture and related heads					
a) As per cent of NSDP agriculture at current prices	5.58	5.15	5.23	3.01	4.19
b) As per cent of NSDP total at current prices	2.61	2.15	1.83	1.09	1.39

*Source: Ramesh Chand (2000) Emerging Trends and regional Variations in Agriculture investments and their implication for Growth and Equity, Policy paper II, NCAP.*

**Table – 3.19****Sector-wise State Plan Expenditure in Andhra Pradesh**

Year	Agriculture and Allied Activity (per cent)	Irrigation and Flood Control (in Rs. Crore)
1980-81	11.78	58.10
1990-91	4.42	23.98
1992-93	8.20	31.73
1993-94	0.03	28.77
1994-95	2.19	31.11
1995-96	2.69	22.74
1996-97	2.59	22.59
1997-98	4.80	21.30
1998-99	4.10	18.73
1999-00	3.78	26.48
2000-01	3.91	19.42
2001-02	1.77	14.12
2002-03	2.15	17.88

*Source: Directorate of Economics and Statistics: Statistical Abstract of Andhra Pradesh (compiled for various years), government of Andhra Pradesh, Hyderabad.*

In the State Domestic Product (SDP) from agriculture, capital formation in agriculture accounted for only 5.58 per cent at current prices, during 5<sup>th</sup> Plan period and it declined to 3.01 per cent during the annual plan periods 1990-91 and 1991-92. However, during the 8<sup>th</sup> Plan period, it increased to 4.19 per cent. In total NSDP, it accounted for 2.61 per cent during the 5<sup>th</sup> Plan period and it declined to 1.09 per cent during annual plan periods 1990-91 and 1991-92. But during the 8<sup>th</sup> Plan period it increased to



1.39 per cent. However, such increase is very marginal. At all India level also the trend is similar during a period between 1989-2005, the public investment into agriculture has decelerated from 19.5 to 5.9 per cent<sup>17</sup>. The available statistics from 1980-81 to 2002-03 also show that the plan expenditure on agriculture and allied activities decreased from 11.78 to a mere 2.15 to and on irrigation from 58.10 per cent to 17.88 to the total state expenditure with a periodical ups and downs. Many recent scholarly studies also substantiate the official statistics available upto 2003. The gradual and sharp decline in GFC formation and public investment into agriculture is the basic reason for the growing crisis in agriculture and distress among farmers.

### **Agricultural Credit:**

Adequate and timely availability of credit is important for agricultural growth. Its importance grows with commercialisation. The major institutional sources of credit to the farmers are co-operatives and commercial banks. The credit provided by these institutions is not only inadequate, but unequally distributed across the regions. For example the primary co-operative credit distribution amply reflects the regional variation. In 1980-81, 64 per cent of the credit advanced by co-operatives was concentrated in Coastal Andhra with 37 per cent of the cropped area. Telangana with 41 per cent of cropped area received 26 per cent while Rayalaseema received 11 per cent of the credit with 23 per cent of the cropped area. The inequalities in the distribution of credit observed to be accelerated over time. In 1990-91 out of the total credit advanced 81 per cent has gone to Coastal Andhra and a meagre 11 and 9 per cent to Telangana and Rayalaseema respectively. Inadequate institutional credit is landing the

farm households into heavy debt burden. The proximate cause of farmers suicides is usually inability to cope with the burden of debt, which farmers find themselves unable to repay due to obvious reasons. In most cases, the debt was contracted to private money lenders, as the massive decline in agricultural credit from banks and co-operatives has reduced access especially of small and marginal cultivators to institutional credit. All India credit and investment survey shows that the dependency non-institutional agencies and that to on money lenders is comparatively high in Andhra Pradesh. As much as 82 per cent agricultural credit is been supported by these institutions. Whatever the institutional support provided to agriculture is being appropriated by the big land owners.

The regional distribution of long-term credit advanced by DCCBs was less unequal in 1980-81, but this pattern was radically changed in 1990-91, when nearly 70 per cent of the long-term credit advanced was appropriated by Coastal Andhra.

The agricultural credit advanced by the commercial banks also has regional variations. Out of the total outstanding credit of Rs. 2247 crores provided in 1991 as much as Rs.1,006 crores (44.77 per cent) was advanced to Coastal Andhra, Rs.838 crores (37.29 per cent) was advanced to Telangana. However, compared to co-operative credit distribution of credit by commercial banks across regions was much less unequal<sup>18</sup>.

### **Changes in the Cost of Production:**

In the crop economy, cost of production is an important indicator of efficiency. In order to examine how the cost of production is varying

overtime in the state, three crops, which have high surplus i.e., rice, groundnut, and cotton are considered here and the data on the cost drawn from the reports of CACP are analyzed. These three crops together account for nearly 55 per cent of the gross cropped area.

Paddy was produced at a lower cost in the State when compared to Punjab and Madhya Pradesh (other major rice growing states) as in 1974-75. It was 15.9 per cent lower than that of Punjab. But in the 80s and 90s and further in 2000s, this favourable situation was reversed. During this period, the excess cost over the cost in Punjab varied between nine per cent and 18 per cent<sup>19</sup>.

**Table – 3.20**  
**Cost of Production in Major States**

*(Rs. per quintal)*

<b>Item</b>	<b>Year</b>	<b>Andhra Pradesh</b>	<b>Punjab</b>	<b>Madhya Pradesh</b>	<b>Excess over Punjab (%)</b>
Paddy	1994-95	341.74	290.36	331.09	17.7
	1995-96	363.60	330.81	327.45	9.9
	1996-97	405.82	344.81	389.44	17.7
	<b>Year</b>	<b>Andhra Pradesh</b>	<b>Gujarat</b>	<b>Madhya Pradesh</b>	<b>Excess over M.P. (%)</b>
Ground Nut	1994-95	1248.98	788.74	988.50	26.3
	1995-96	1073.93	1209.38	1046.30	2.6
	1996-97	1244.85	903.46	1219.72	2.1
	<b>Year</b>	<b>Andhra Pradesh</b>	<b>Maharashtra</b>	<b>Tamil Nadu</b>	<b>Excess over Maharashtra (%)</b>
Cotton	1994-95	1424.00	1293.15	1253.63	10.1
	1996-97	1839.1	1548.81	2008.97	18.3

*Source: DES, Hyderabad.*

The cost of production of groundnut is higher in the state than that of Madhya Pradesh and Tamil Nadu. In the early 90s, the excess cost over the cost in Madhya Pradesh was 26 per cent. However by the mid nineties, the situation improved and the excess cost reduced to two per cent. But it is very difficult to draw any definite conclusion based on one or two years data owing to the nature of the crop.

Cotton is also produced at a very high cost in the state, when compared to Maharashtra and Tamilnadu, The position of this crop is worse than that of rice and groundnut since 90s with the cost of production being higher by more than 65 per cent<sup>20</sup>. The statistics provided by DES, Hyderabad for 1994-95, 1995-96 and 1996-97 on changes in cost of production of three different crops and majorly produced crops in the state i.e., paddy, groundnut and cotton also substantiates the foregoing analysis and amply shows that the cost of production in the state is higher compared to Punjab, Gujarath, Maharashtra, Madhya Pradesh. For paddy the cost of production in the state is over and above Madhya Pradesh and Punjab. When compared with Punjab it is excess in all the years for which comparison is made between 9 and 18 per cent. For groundnut the cost of production excess to Madhya Pradesh is at highest in 1994-95 at 26.3 per cent. But it gradually decreased to 2.6 and 2.1 in next two years. Except 1995-96, the cost of production of groundnut is higher in the state than Gujarath also. For cotton, the data available for 1994-95 and 1996-97 shows that the cost of production in the state is excess over the cost of production is Maharashtra and it increased from 10.1 per cent in 1994-95 to 18.3 in 1996-97.

## **Indebtedness:**

Many studies at All India level and state level have unanimously identified the mounting debt as the prime cause of farmers suicides. The factors that have explained in detail have dragged the most of the farm households into a situation, where cost of cultivation on one side and expenditure on household maintenance and on health, education etc., on the other have increased the expenditure levels. But the income generating capacity hasn't increase in tune with the expenditure for obvious reasons explained in earlier chapters and present chapter. All this is resulting in high magnitude of indebtedness among the farm households. The serious concern is that 82 per cent of farm households in the state are indebted to either institution or non-institutional agencies or both. Irrespective of social groups, size class of land holdings the indebtedness is significantly high. The situation assessment survey of farmers on their indebtedness conducted by NSSO (2005) amply reveals status of indebtedness among the farm households. In comparison to All India level indebtedness of 48.6 per cent among all social groups, the state level figure is highly staggering at 82.0 per cent. It is highest among BCs and OCs with a slight variation among STs and SCs. The highest and lowest debt ranges of 83.6 (OCs) and 78.0 (STs) barely reflects the gravity of the problem.

**Table – 3.21**

**Nature of Indebtedness of Farm Households in Andhra Pradesh**

**A) Outstanding loans by purpose of loans (for different social categories):**

Social Category	% of Indebted Farm Households	Outstanding Debt	Capital Expenditure in Agriculture	Current Expenditure in Agriculture	Non-farm Expenditure	Consumption Expenditure	Marriage and Ceremonies	Education	Medical Treatment	Other Expenditure
STs	78.0	12760	11.9	40.3	3.8	18.5	6.6	1.9	0.1	19.5
SCs	79.4	12720	17.1	33.3	1.5	15.4	11.5	0.2	4.2	16.7
OBCs	83.2	23697	23.3	35.9	3.9	12.1	11.2	1.2	3.2	9.3
Others	83.6	37802	26.8	41.6	2.7	8.7	7.6	1.9	1.4	9.3
All – A.P.	82.0	23965	23.4	38.1	3.2	11.5	9.6	1.4	2.4	10.5
All – India	48.6	12585	30.6	27.8	6.7	8.8	11.1	0.8	3.3	10.8

**B) Outstanding loans by purpose of loans (for different classes as per the extent of land possessed in ha):**

Size Class of Land Possessed	Outstanding Debt	Capital Expenditure in Agriculture	Current Expenditure in Agriculture	Non-farm Expenditure	Consumption Expenditure	Marriage and Ceremonies	Education	Medical Treatment	Other Expenditure
< 0.01	12362	26.1	3.4	2.2	24.6	13.8	0.0	7.5	22.4
0.01 – 0.40	12192	13.6	19.8	5.1	16.6	19.1	1.2	5.6	19.0
0.40 – 1.00	18163	15.8	31.5	6.0	14.4	12.4	1.8	3.5	14.5
1.00 – 2.00	33043	29.0	37.5	1.2	10.8	9.0	0.4	1.5	10.6
2.00 – 4.00	29981	25.9	48.2	0.9	10.0	5.0	2.8	1.6	5.5
4.00 – 10.00	44865	31.2	49.6	3.9	5.4	4.6	1.5	0.6	3.1
10.00 >	103817	26.9	64.2	0.0	4.5	2.3	0.0	1.6	0.5
All sizes	23965	23.4	38.1	3.2	11.5	9.6	1.4	2.4	10.5

**C) Distribution of outstanding loans (in Rs.) by source of loan for each size class of land possessed by farmer households**

<b>Size Class of Land Possessed</b>	<b>Government</b>	<b>Cooperative Society</b>	<b>Bank</b>	<b>Agricultural / Professional Money lender</b>	<b>Trader</b>	<b>Relatives and Friends</b>	<b>Doctor, Lawyer and Other Professionals</b>	<b>Others</b>
< 0.01	0.7	4.8	11.4	75.2	2.0	3.6	0.0	2.4
0.01 – 0.40	1.6	6.7	11.0	63.8	2.6	9.8	1.4	3.3
0.40 – 1.00	1.8	7.4	15.9	59.9	3.7	6.7	0.2	4.5
1.00 – 2.00	0.3	11.1	15.2	54.6	4.8	6.9	0.6	6.5
2.00 – 4.00	1.3	15.2	25.0	50.2	5.4	1.0	0.2	1.6
4.00 – 10.00	0.4	13.4	34.8	39.4	2.6	2.1	3.6	3.7
10.00 >	0.0	3.0	46.5	19.8	29.8	0.9	0.0	0.0
All sizes	1.0	10.4	20.0	53.4	4.8	5.3	0.9	4.1

*Source: NSSO (2005a), Situation Assessment Survey of Farmers: Indebtedness of Farmer Households, 59<sup>th</sup> Round, Ministry of Statistics and Programme Implementation, government of India.*

In spite of both capital and current expenditures are relatively in higher level the indebtedness is on high note. Indebtedness due to consumption expenditure is relatively high among STs, SCs and BC than the others. Again the small and marginal land holders, basically belong to ST, SC and BC social groups have more expenditures on consumption, marriages, medical expenses and thus indebted in much more magnitude, when compared to OCs, who possess relatively higher land asset. Again small and marginal farmers are more indebted to money lenders. 66.3 percent of farm households with less than one hectare are indebted to money lenders. As we move up the ladder of the land size, the indebtedness to money lenders has decreased. Indebtedness to multiple agencies is another dimension of the issue. In recent times indebtedness to MFIs has caused socio-economic tensions and its related suicides in Telangana. In recently conducted study (Galab and Reddy, 2007) on an average, a farm household of irrespective of farm size was indebted to the extent of Rs.2,13,887 in the state of Andhra Pradesh. As indebtedness to money lenders within the different social groups, land class sizes of the farm households is in high magnitude, the pressure will be more on head of the family. When natural and man-made disasters are resulting in inconsistency in production and income levels of farm households on one side and more pressure from private agencies and money lenders on the other forcing the head of the family to take unprecedented decision.

As we go through the above scenario, it is very much understandable that not a single factor but many have contributed to the agrarian distress in Andhra Pradesh. For a birds-eye-view on this alarming situation, the



following analysis will be very useful. There is a gradual decrease in the public investment in agriculture in the state. The rate of growth of public investment in agriculture decelerated from 8.5 per cent in 1980's to 1.4 per cent in 1990's (Dev and Ravi, 2003.). The average annual Total Factor Productivity (TFP) growth in case of India was 1.3 per cent, compared to 0.8 per cent in Andhra Pradesh during 1990's (E. Revathi, 2006). The irrigation sector has been grossly neglected. Recurrent failure of monsoons during the later and early parts of 1990's and 2000 respectively intensified the woes of the agrarian community. The aftermath effects of green revolution and globalisation have shown ruthless impact on agricultural families in general and particularly on small and marginal farmers, who could not withstand the onslaught. In the pregreen revolution period, the farmers were able to use local seeds, organic fertilizers and indigenous plant protection measures. With post effects of green revolution and entry of global traders into agricultural input market during the reform period, the farmers have been invariably forced to buy company seeds and pesticides regularly. And in due course, the application of fertilizers and pesticides increased in manifold way and it has become customary to purchase non-local seeds from global companies in pursuit of increase in the soil fertility and thus enhancement in agricultural production and productivity.

Another important impact of green revolution has been commercialization of agriculture. Paradoxically the shift towards cash crops has taken place more strikingly from late 1980's. As the government has been unable to provide adequate irrigation to the cultivated area, it failed to impose changes in cropping pattern. The extension activities are also so weak that the farmers are selecting the crops on their own experience. The

Psychological demonstrative effect has its vital role in the selection of crop by the farming community. Another reason for non-judicious cropping pattern has been lack of selective and supportive price system. Neither central government nor the state governments have proper approach and mechanism to implement appropriate cropping pattern. In such a situation inspite of high risk the farmers are growing cotton to the larger extent. The cultivated area under cotton crop in India and in the state of Andhra Pradesh has increased in manifold way. Next to cotton a sizeable increase can be witnessed in chilies and ground nut. The commercial crops and particularly cotton and chilies require company seeds and high doses of pesticides.

Another major area of concern is irrigation and wherein private investment is by and large increasing rapidly. Particularly in dry regions like Telangana, the expenditure is increasing staggeringly with gradual decrease in ground water level. One of the basic reasons of farmers' suicides has been identified as escalating expenditure on irrigation facility. In some cases in Nalgonda and Mahabubnagar districts of Telangana region, the farmers have to dig bore wells 100s ft's to 300fts of depth to get the water. In certain cases, the farmers were forced to dig number of bore wells in their tiny lands due to failure of earlier bore wells. In the Telangana region which has witnessed the real brunt of the situation, the farmers' suicides have started from nearly 1990's. Though in the initial years, the suicides were sporadic, the incidents took a rapid turn in the later years. In Andhra Pradesh, more number of suicides have taken place in Telangana region, that too majority of the farmers who committed suicide were cotton growers of rain-fed cultivation of this region. As already mentioned the post green revolution effects have increased the capital expenditure of farming community to a

greater extent. In the initial stages, even small and marginal farmers could withstand the capitalization of agriculture but in due course intensive cultivation caused the degradation of soil fertility and thus application of higher doses of fertilizers and pesticides and use of HYV seeds has become inevitable. For the agricultural families in general and small and marginal farmers in particular obviously dependency on credit for their productive and consumption needs has been a regular phenomenon. The over capitalization of agriculture in post green revolution and post globalisation periods has increased the dependency of the farmers on private lenders. The institutional credit support in the state though relatively improved, not in a position to cater the needs of marginalized farmers. Further small and marginal farmers with their meagre land assets are deprived of institutional credit facility. Micro level credit with the help of DWCRA groups though successful in the state, but served the rural credit needs to a smaller extent. The micro finance system has its own demerits. During the last few years this system has provoked suicides and socio-economic tensions. In these situations, the dependency on money lender-cum-trader-commission agent and private financiers is on high note and resulting in high volume of indebtedness and its manifestation in the form of suicides.

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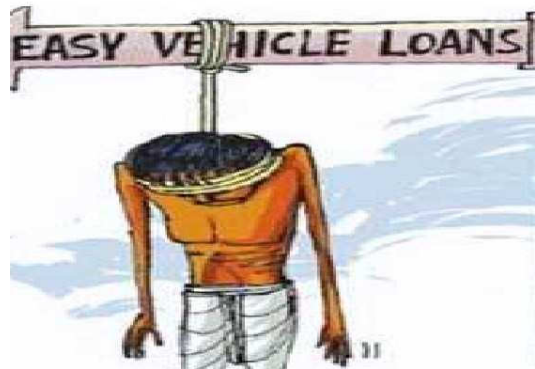
## **CHAPTER - IV**

### **Farmers Suicide Phenomena**

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*“Is agriculture a noose around the neck”*



This chapter deals with the conceptual framework of suicides. Farmers suicides occurred in different countries have been analysed based on WHO and other prominent studies. The suicide phenomena in India across the states have been discussed at length basing on NCRB reports, extensive work done by P. Sainath, K. Nagaraj and other scholars. Suicides among farmers in Andhra Pradesh also examined basing on various scholarly studies.

The word suicide is coined by Sir Thomas Browne in the year 1642 and it originated from the Latin word *suicidium* means “to kill oneself”. Suicide is the act of intentionally causing one’s own death<sup>1</sup>. Suicide is often committed out of despair, or attributed to some underlying disorder which includes depression, bipolar disorder, schizophrenia, alcoholism and drug abuse pressures or misfortunes such as financial difficulties or troubles with interpersonal relationships may play a significant role<sup>2</sup>. The word suicide was came to use in 1643 A.D. The WHO estimates that over one million people die by suicide every year<sup>3</sup>. It also identified the suicide as thirteenth leading cause of death world wide. It is particularly more leading cause of death among teenagers and adults under 35. The rate of suicide is far higher in men than women.

A number of factors are associated with the risk of suicide including mental illness, drug addiction, availability of methods, family history, and socio-economic factors<sup>4</sup>. While external circumstances, such as traumatic



event may trigger suicide and it does not seem to be an independent cause. It is generally accepted that suicide is the outcome of a complex interplay of a etiological factors which are psychological, biological and sociological in origin<sup>5</sup>. Depression, one of the most commonly diagnosed psychiatric disorders is increasing in numbers in various segments of the population world wide. Factors such as unemployment, poverty, homelessness and discrimination may trigger suicidal thoughts. One study found that lack of social support, a deficit in feelings of belongingness and living alone were crucial predictors of a suicide attempt. The leading method of suicide varies between countries. The leading methods in different regions include hanging, pesticide poisoning and firearms. As per WHO mortality data, world wide 30 per cent of suicides were committed by pesticides.

In the eighteenth century Emile Durkheim developed a theory of suicide suggested that the rate of suicide would vary with the degree of social integration of an individual, suicide would therefore be dependent on factors like an individuals employment, occupation or social status educational attainment, or religious affiliation, indicators of stable durable social relationships<sup>6</sup>. Durkheim argued that individuals are constrained and affected by larger social forces. Suicide is generally considered an individual act. Durkheim's study of suicide rates led him to conclude that suicide is more than individual act and that larger social forces of integration and regulation affect it<sup>7</sup>.

In recent years bio-psychological factors contributing much to the suicidal behaviours along with aetiological factors<sup>8</sup>. Predispositions to suicidality include genetic, biological and historical factors associated with

suicidal risk. It also depends on previous suicidal behaviours and impulsivity of an individual. Precipitants and stressors are more dynamic in nature and cause acute risk. The way an individual takes of things and how often an individual thinks about of suicide is also an important factor<sup>9</sup>. The impacts of suicide by an individual on his/her family members, friends and relatives will be much more vibrant. Particularly the family has to suffer from mental, physical, social, economic and emotional agony for fairly longer period. All this will have a psychological stress on the family members. If the suicider is a male head of the family the aftermath situation to be faced by the spouse will be more pathetic and penetrative.

With farmers suicides making the headlines and taking big toll across the world and especially in third world countries in post globalisation era, the focus has been now on the causes, impacts and prevention of such suicides. The data from WHO shows the reported farmers suicide rates per 1,00,000 population varies from over 80 per year to less than one (1) across the world. Recent figures for Mexico and Brazil were about four (4), UK about nine (9) and India and the USA were around 11. Variations in India are very dramatic. In Bihar, poorest state in the country the reported suicides were one (1) per cent per one lakh population. Whereas in richer southern states of Maharashtra and Andhra Pradesh the FSR was about 15 each and in Kerala the rate was almost 30<sup>10</sup>. Despite the popular image of farming as peaceful and healthy way of life, agriculture has highest rates of mortality than in any industry<sup>11</sup>. Suicide among farmers has taken the dimension of universal phenomenon. Farming environments are characterised by a broad and changeable range of physical, biological,

chemical, social and economic hazards that are similar across the globe with variations in intensity.

Thus, it is important to view the issue of farmers suicide from a global perspective. Though farming practices, production systems, type of farmers, socio-economic and cultural behaviours are diverse; there are commonalities across the farms, which influence the psychology of the farmers<sup>12</sup>. Most of the farms continue to be family – owned and operated and are exposed to volatility of input and output markets, variability of natural factors and influence of respective government policy perspectives. Farmers are thus exposed to high volume of stress. Along with physical stressors and hazards of the farmer environment (natural factors), the policy mechanism of the government and economic dynamics of farm management (human factors) magnify problems of the farm households. It is a fact that, there is no customary or mandatory retirement age for farmers all over the world and many tend to work beyond the customary retirement age<sup>13</sup>. It is paradoxical that we can find a child of eight years and an aged eighty years old participating in different farm activities<sup>14</sup>.

The suicides are not merely a response to changes in the economic and social world of agriculturists. Rather, the very structure of agriculture that is iniquitous and which is now compounded by multiple risks that the marginalised face accounts for the denouement of this tragedy. Agriculture, long embedded with the caste system and its key source of reproduction, is now the site of economic modernity. For those economically and socially marginal in the system, the games of the new agricultural modernity induce and indict them into new risks. But the individualised economic actor

remains embedded within the social and cultural fabric of his or her society and is therefore circumscribed by its norms and values of honour, shame, and responsibility. What results is the working of two differing sets of cultural logics; that of the new economic regime that privileges the individual acting for his or her own economic benefit and the pressures of the social world that enforces them to subscribe to its dictums and priorities<sup>15</sup>.

In the seminal introduction to his classic, *Pig Earth*, John Berger provides a sharp critique of the destruction of the peasantries of the world. The living conditions, the degree of exploitation and suffering may be desperate, but he cannot contemplate the disappearance of what gives meaning to everything he knows, which is, precisely, his will to survive”<sup>16</sup>. The current predicament in Indian agriculture is one which in a true Durkheimian way is represented in the conditions of loss of meaning, confusion and disorientation among marginal cultivators. That most victims choose to end their lives by consuming pesticides symbolizes the key source of distress; agriculture itself and its new inputs, engaging with which has led to their ruination<sup>17</sup>.

Eric Hobsbawn aptly remarked (in Aroghi, 2000) that the Indian agriculture embedded in an unsustainable model of production, in which the significant symbols and meanings of agriculture and land itself are fast altering, and in which the State remains a distant actor, the mass of rural subjects, marginalized and overlooked, will probably provide the labour on which the nation will march towards its urban shift and for which agriculturists will be largely unremunerated and unremembered<sup>18</sup>.

Roles between work, home and family are often blurred, with farming as an occupation and way of life for many farmers. In India, more particularly such sort of tendency is visible in highly striking manner. Often family problems coincided with economic problems have caused suicides. Many researchers had shown that indebtedness and monetary concerns were reported to be the major reasons for suicide among farmers. In England more concern towards family problems has been identified as major cause of suicide among farmers<sup>19</sup>. It is not to generalize the behavioural trends, but even the farm households in India are more concerned about the maintenance of the family and fulfillment of health, education and other socio-economic needs of the family members. In post-globalization era the farming has become highly vulnerable occupation across the world and suicides among farmers with an alarming rate were reported from India, Sri Lanka, USA, Canada, England, Australia and African countries. It is surprising to note that in Australia and England, male farmers have higher rate of suicide than the other rural male<sup>20</sup>. In Australia, there is a strong correlation between droughts and suicide rate among farmers.

There is a direct connection between the severe economic crisis of African Continent, struggle of indigenous population of Latin America, farmers' committing suicide in Australia / England, or in India – this connection is established with globalization connecting each continent including different social categories within the larger framework of global capital or capitalism<sup>21</sup>. This is the reason why it is stated that the Australian hinterland is slowly becoming the centre for farmers committing suicide. In

rural Australia 17 people in every 1,00,000 committed suicide between 1988 and 1998. In total in Australia nearly 2,000 farmers have committed suicide in the last five years, “1,000 in just three provinces of the U.S. since 1999, and at least one in every month in the United Kingdom” (The Hindu, 2006). Here the apparent reasons are: ongoing drought and financial debts restructuring (Pirani, 2006), falling commodity prices. However the ultimate reason is the way the globalization has created the volatile economy and depeasantised / displaced large number of categories.

In India not only natural disasters, but man-made disasters and that to mainly due to political reasons have caused farmers’ suicides with greater intensity. In India the preventive measures are predominantly short-term, temporary sporadic and instantaneous, but not with long term comprehensive strategies.

More or less there is a commonality in the arguments of large number of scholars who understood farmers suicide from the longer perspective of globalization, there are different debates which try to locate agrarian crisis and farmer suicides from different perspectives<sup>22</sup>. The first debate is centered around ‘ecocide’ and this perspective basically tries to argue that ecocide is the result of intense use of hybrid seeds, chemicals and pesticides. This has spilled over to economic and social life style of the farm households and too much market oriented use of hybrid and GM seeds, fertilizers and pesticides which ultimately created a situation of debt trap, leading to suicide<sup>23</sup>.

The second debate is based on the issue of state policy<sup>24</sup>. The state policy on investment in agriculture, subsidies, MSP, irrigation and institutional lending and on regulating the private lending. This argument focuses on the failure of state policy on these issues, which invariably thrown farm households in general and small and marginal farmers in particular to the mercy of market forces. The market forces hand in glove with TNCs applied all sorts exploitative mechanism that ruined the farmers.

The other debate tries to identify the crisis with negative growth of the economy in recent past due to multiple changes that have taken place in the context of globalization<sup>25</sup>.

Vandana Shiva tries to establish the linkage between various factors forged by globalization that led to the farmers' suicides in the country. She states that farmers' suicides are a result of indebtedness, and debt is a result of rising costs of agricultural inputs and falling prices of agricultural produce. Farmers' suicides are therefore an inevitable outcome of an agrarian policy which favours corporate welfare and ignores welfare of the farmers<sup>26</sup>.

The fourth argument relates the phenomenon of farmers suicides to the world Bank model of agriculture or Mc Kinsey Model of development (popularly known as) that created ample space for industry driven agriculture, which not only exacerbated the crisis leading to an environmental catastrophe but also destroyed millions of rural livelihoods<sup>27</sup>.

Fifth debate tries to go into the wider context of several changes that have affected structural, social and rural gambit of the Indian nation. It argues that the worst situation that the farming communities experiencing during the last four or five decades are the result of these changes. The scholarly works on Punjab, Maharashtra and Andhra Pradesh tries to correlate crisis to the sociological and political economy approach. Gyanmudra (2005) focuses on complex factors such as biological, genetic, psychological, social, cultural, financial and environmental factors for the eruption and expansion of the agrarian crisis<sup>28</sup>.

Increasing indebtedness among the farmers is another important perspective, the fifth debate putforth by the scholars. Many of the research studies in suicides ridden states have amply established the very strong correlation between indebtedness and the suicides by farmers<sup>29</sup>.

One more argument based on Durkheim theory focuses on individualisation, socio-economic exclusion of agrarian communities from mainstream economic development process in the context of rapid economic growth and its resultant digital divide<sup>30</sup>.

Finally (?) multiple issues, such as, incessant floods, manipulation of prices by traders, supply of spurious seeds and pesticides, decline in prices of agricultural produce, increase in the cost of agricultural inputs recurrent drought, crop loss, increasing debt burden, psychological stress and above all neglect of agriculture and farmers interests by the successive



governments have been attributed to the widespread phenomenon of farmers suicides.

Another dimension of suicides is suicide among female farmers, which is on rise. The stress on farm women is more than the men, because, they have to experience stress not only of farm related but also of physical, social and financial well being of family members. Many experts of this field and especially P. Sainath pointed out that female farmers are not at all considered as farmers by the affected state governments on the pretext of entitlement of land ownership. Thus not only general farmers' suicides, but more strikingly the female farmers' suicides were under reported. As farming has become less remunerative, farming women have to perform multiple tasks of both farm and non-farm activities. They often face more stress and fatigue due to performance of multiple tasks and with a conflict between traditional role of housewife and pressures to earn non-farm / off-farm income to meet growing needs of the family. Apart from farming they have to bear the burden of performing household chores. This makes these farm women high risk prone category for suicide. Suicides among this gender had been reportedly increasing in India, Australia and England.

Another case of serious concern is the problems of the spouse of deceased farmer. With sudden death of the husband she has to perform multiple tasks by keeping aside her physical and psychological agony. Studies on this aspect<sup>31</sup> have enveloped the woes of the spouse with overburdened activities. Fighting for livelihood of the family, fighting for compensation or exgratia, getting the confidence of the lenders and going ahead with the task of farm operations add more and more stress on spouse.

As most of the women do not have land entitlement, a spouse of deceased farmer may not get support from government machinery. She may be denied institutional credit. Many empirical studies, including present study, have observed the multiple problems faced by the spouse at grass root level.

### **Farmers' Suicides in India:**

The phenomena of farmer suicides in India has become the centre of considerable concern from the 1990s. Though in 1980 stray incidents of suicides by cotton farmers and weavers hit the headlines from Warangal, Prakasham and Guntur districts of Andhra Pradesh, the real wave of suicides started from the early 1990s and it is continuing till to date. One of the major reporters of these suicides is the Rural Affairs Editor of the Hindu, P. Sainath. The first state where suicides were reported was Maharashtra. The official record provided by NCRB shows that as many as 2,56,913 farmers committed suicide in the country during 1995-2010<sup>32</sup>. The year 2010 witnessed 15,964 farmer suicides across the country. From the year 1995, since the NCRB started tabulation of farm suicides, the big 5 states viz., Maharashtra, Karnataka, Andhra Pradesh, Madhya Pradesh, Chattisgarh are the worst affected states. Except for 1995 and 1996, Maharashtra topped the list of farmers suicides. The suicide trend among the big 5 states is such that between 1995-2002 Karnataka is in second position and Andhra Pradesh in third position. But the situation turned against the state of Andhra Pradesh since 2003 and it is in second position for five out of eight years of tabulation. However the total figure of suicides for the last 16 years substantiates that the positions of above three states haven't changed. Over these 16 years percentage of suicides in

‘Big5’ states of all farm suicides in India ranged from 52.34 to 68.22. For period of eight years from 2003 to 2010 the share of big5 rather increased and recorded as 65.14 per cent in comparison to 56.13 per cent for a period of 16 years from 1995 to 2010. This barely reflects the increase in gravity of the situation since 2003. From Punjab to Kerala almost every state has reported cases of suicides. Obviously, many state governments are denying their own official records prepared by crime branch and understating the number of suicides. For example, in Andhra Pradesh 2525 suicides were recorded by NCRB in 2010, but, the state government officially recognised only 95 cases as genuine farmer suicides. Infact within a span of one month in between November and December, 2011 as many as 95 farmers have ended their life.

**Table 4.1****Farm Suicides: All India totals and number for five worst – affected states (Big 5) 1995-2010**

Year	Maharashtra	Andhra Pradesh	Karnataka	Madhya Pradesh (Chhattisgarh)	Yearly total for big 5	Yearly total All India farm suicides	Big 5 Fs as % of all farm suicides
1995	1038	1196	2490	1239	6008	10720	56.04
1996	1981	1706	2011	1809	7507	13729	54.68
1997	1917	1097	1832	2390	7236	13622	53.12
1998	2409	1813	1883	2278	8383	16015	52.34
1999	2423	1974	2379	2654	9430	16082	58.64
2000	3022	1525	2630	2660	9837	16603	59.25
2001	3536	1509	2505	2824	10374	16415	63.20
2002	3695	1896	2340	2578	10509	17971	58.48
<b>Totals 1995-02</b>	<b>20066</b>	<b>12716</b>	<b>18070</b>	<b>18432</b>	<b>69282</b>	<b>121157</b>	<b>57.67</b>
2003	3836	1800	2678	2511	10825	17164	63.07
2004	4147	2666	1963	3033	11809	18241	64.74
2005	3926	2490	1883	2660	10959	17131	63.97
2006	4453	2607	1720	2858	11638	17060	68.22
2007	4238	1797	2135	2856	11026	16632	66.29
2008	3802	2105	1737	3152	10797	16196	66.66
2009	2872	2414	2282	3197	10765	17368	61.98
2010	3141	2525	2585	2363	10614	15964	66.49
<b>Totals 2003-10</b>	<b>30415</b>	<b>18404</b>	<b>16983</b>	<b>22630</b>	<b>88433</b>	<b>135756</b>	<b>65.14</b>
<b>Total 1995-10</b>	<b>50481</b>	<b>31120</b>	<b>35053</b>	<b>41062</b>	<b>157717</b>	<b>256913</b>	<b>56.13</b>

*Source: Table derived from National Crime Records Bureau 'Accidental deaths & suicides in India' 1995-2010.*

*Courtesy, The Hindu, October 29, 2011.*

Palagummi Sainath, senior journalist and megase awardee, who relentlessly working over 13 years on farmers suicides in the country and especially in southern states expressed serious concern over the state of suicides. He states that for every three hours six farmers suicides are taking place as per official records of NCRB. He also emphasises that many number of such suicides by farmers were not reported and recognised due to technical snags. Union Agriculture Ministry even created new categories of 'eligible' and 'ineligible' suicides. There are some 40 clauses on the enquiry list. The suicide would be eligible and compensated only if all the clauses were completed. The agriculture officer, Village Revenue Officer and S.I. of concerned Police Station has to conduct the enquiry. How the illiterate, shock driven affected family will face the situation is a basic question. As far as Maharashtra is concerned it reigned without a break as worst affected state and created nightmare to thousands of farm households. But it is a paradoxical that it is in first position among big states in percapital income with 74,027 in 2010. Suicide mortality rates (SMR) among farmers to the total male suicides at all India level and for major states affected by suicides also substantiates the uptrend in farmers suicides. The data available from 1995 shows that even as Crude Death Rate (CDR) is declining very sharply, the SMR is rather on rise. Between 1995-2006 SMR for all males increased from 12.5 to 14.4 per cent. But in mean time SMR of male farmers increased from 10.5 to 18.2. Though the number of farmers suicides are less in Kerala than the 'big 5' states, the SMR in Kerala has been staggeringly high. It increased from 127.4 in 1995 to 260.4 per cent in 2006. The SMR in Karnataka is higher than national average for the entire period and particularly for SMR of farmers. For Maharashtra and Andhra Pradesh SMR of farmers has started to rise with a rapid race from 1998 onwards. However, SMR of farmers for Punjab is

much below to the national average. Another dimension of the data on suicides based on NCRB reports between 1995-2010 is annual average and its difference between two discreet periods i.e. 1995-2002 and 2003-2010 for states whose annual average of farm suicides either risen or fall over 100 farm suicides between the two periods. Maharashtra with 1294 additional increase in annual average farm suicides is on top of the list and followed by Andhra Pradesh with 711 increase. Though the Karnataka is in second place in total suicides, the difference in annual average farm suicides show a fall of 136 during the same period, indicating a declining trend in later period but with slow pace. Surprisingly, the farm suicides are on rise in Madhya Pradesh and Chattisgarh with +525, where the cotton cultivation has started oflate.

**Table 4.2**

**Farm suicide annual averages in select states 1995-2002 & 2003-10**

State	Farm suicides annual average		Difference (2 <sup>nd</sup> Avg. – 1 <sup>st</sup> Avg.)
	1995-2002	2003-2010	
Andhra Pradesh	1590	2301	711
Assam	155	291	135
Karnataka	2259	2123	-136
Kerala	1292	1071	-221
MP + Chhattisgarh	2304	2829	+525
Maharashtra	2508	3802	+1294
Tamil Nadu	992	866	-126
Uttar Pradesh	640	531	-109
West Bengal	1426	990	-436

*Source: NCRB Accidental Deaths & Suicides in India reports 1995-2010.*

**Table 4.3**  
**Age-adjusted SMR for All Males and for Male Farmers**

Year	India		Andhra Pradesh		Karnataka		Kerala		Maharashtra		Punjab	
	All males	Farmers Male	All males	Farmers Male	All males	Farmers Male	All males	Farmers Male	All males	Farmers Male	All males	Farmers Male
1995	12.5	10.5	11.4	13.6	31.8	33.6	42.0	127.4	17.4	14.7	4.4	5.2
1996	11.9	12.2	13.3	24.4	24.8	30.9	40.2	109.3	16.0	23.5	4.1	7.3
1997	12.9	12.7	14.8	17.5	28.1	31.3	45.7	138.8	17.7	23.9	4.0	6.1
1998	13.8	14.8	16.6	28.8	30.0	30.1	47.4	172.7	18.9	29.0	5.3	5.9
1999	14.4	15.3	18.1	30.0	33.4	41.4	49.6	182.4	18.5	30.6	6.6	4.8
2000	14.2	15.7	17.4	22.8	33.2	43.5	47.4	184.6	19.6	37.3	5.5	4.1
2001	14.0	16.2	18.2	25.6	32.3	44.5	48.3	161.8	20.6	44.1	3.4	2.4
2002	14.3	18.1	21.2	31.8	32.6	41.6	50.5	258.5	20.3	47.3	3.3	2.3
2003	14.5	18.0	20.7	28.5	33.2	48.3	48.5	298.0	20.6	50.8	4.1	1.5
2004	14.4	19.2	24.7	44.6	31.2	35.5	45.8	183.4	20.3	57.3	4.1	4.3
2005	14.1	18.3	23.7	41.2	29.5	34.7	47.0	249.3	19.3	55.1	3.8	2.8
2006	14.4	18.2	23.4	41.6	30.2	30.4	44.9	360.4	20.6	62.6	4.7	5.1

Sources: NCRB (various years), as in Mishra (2006c).

Note: SMR denotes Suicide Mortality Rate (suicide deaths per 1,00,000 per sons). Unavailability of data at all India level leads to exclusion of (a) Andaman and Nicobar Islands, Pondicherry, Rajasthan, Sikkim, and Tamil Nadu in SMR for male farmers in 1995, (b) Pondicherry in SMR for male farmers in 1996, and (c) Jharkhand in both the categories in 2003.

The agrarian crisis and its impacted suicides among farm households is the worst phenomenon witnessed by the Indian Economy. Though differ in intensity, but, every state has experienced the unwarrented situation. Form Punjab to Kerala farming is in distress since 1995. Impacts of green revolution earlier and now the post-globalisation effects have pauperised the farming community in many ways. The data provided by NCRB on farmers suicides for 29 states and 6 UTs from 2001 to 2008 amply show the magnanimity of the crisis. Among 29 states, no state has reported zero suicides for the entire period. Except Mizoram, Nagaland and Manipur in all other states the farmer suicides have taken place on substantial form during the said period.



**Table 4.4**  
**Farmer Suicides from 2001-2008**

State / UT	2001	2002	2003	2004	2005	2006	2007	2008
Andhra Pradesh	1509	1896	1800	2666	2490	2607	1797	2105
Arunachal Pradesh	17	27	11	20	25	4	15	12
Assam	167	271	187	331	299	322	278	197
Bihar	61	80	46	23	39	46	86	67
Chhattisgarh	1452	1238	1066	1395	1412	1483	1593	1773
Goa	18	11	18	8	11	5	0	6
Gujarath	594	570	581	523	615	487	317	526
Haryana	145	190	207	160	140	190	179	150
Himachal Pradesh	22	25	34	52	20	22	15	188
Jammu & Kashmir	15	16	8	1	2	34	33	6
Jharkhand	27	21	21	21	124	103	113	71
Karnataka	2505	2340	2678	1963	1883	1720	2135	1737
Kerala	1035	1533	1583	903	1118	1124	1232	820
Madhya Pradesh	1372	1340	1445	1638	1248	1375	1263	1379
Maharashtra	3536	3695	3836	4147	3926	4453	4238	3802
Manipur	0	3	4	2	2	0	0	2
Meghalaya	4	8	4	11	4	3	18	9
Mizoram	0	3	0	2	0	1	0	0
Nagaland	0	0	0	0	0	2	0	2
Orissa	256	345	365	379	254	283	240	260
Punjab	45	40	26	74	47	85	88	66
Rajasthan	505	587	636	749	461	395	618	796
Sikkim	18	8	31	49	41	35	21	60
Tamil Nadu	985	1455	1052	1599	1255	426	484	512
Tripura	41	41	4	15	29	7	0	50
Uttar Pradesh	688	525	387	496	522	411	486	745
Uttarakhand	21	34	41	22	24	51	28	28
West Bengal	1246	1518	1036	822	965	1189	1102	759
Delhi	18	33	8	13	7	3	23	16

Among the 29 states, farmers suicides are being reported from all the ten (10) big states. As per the suicides taken place during 2001-2008 these ten states can be ranked as follows in descending order. 1) Maharashtra, 2) Karnataka, 3) Andhra Pradesh, 4) Chattisgarh, 5) Madhya Pradesh, 6) Kerala, 7) West Bengal, 8) Tamil Nadu, 9) Rajasthan, and 10) Gujarat. In BIMAROU states also the farmers suicides are taking place, but the magnitude is much less. It is not to state that these states are not encountering the agrarian problems. Infact most of the farmers of these states are still in subsistence agriculture and not in the race of high cost input use and globalization driven high value agri-technology. It is so pathetic and shameful that in Delhi, the capital city of the nation, where dependency on agriculture is very marginal 121 farmers suicides were reported during the same period. Even in UTs, there is evidence of farmers suicide phenomenon except Lakshadweep. As far as 'big 5' states are concerned, the suicides rate of farmers is rather increasing from 2003 onwards. As mentioned earlier, the figures for 'big 5' states for 2009, 2010 provided by NCRB shows that the tendency on rise in these states.

Punjab being the leader of economic development with higher percapita till 1990s has been lagging behind Maharashtra, Gujarat, Haryana, Union Territory of Delhi. In comparison to many other states, Punjab is in comfortable position in its economic development. But, the tragedy is that it is also witnessing farmers suicides due to heavy indebtedness. Between debt and death the farmers are choosing latter<sup>33</sup>. The state which is contributing 75 per cent of wheat and 34 per cent of rice to the central pool is facing the agrarian crisis. The state government officially

considered just 2116 as farmers suicides since 1986. However Kissan organisations, Sidhu (2006), IDC (2006) put it as 2000 suicides per year. Punjab which is in forefront of modernisation of agriculture is experiencing skyrocketing input costs and a down turn in output prices. Not only high input usage but many multiple causes are the factors behind farmers suicides in Punjab<sup>34</sup>.

Anita Gill and Lakhwinder Singh, based on field studies in Punjab observed that low yields, rising cost of cultivation and resultant indebtedness and dipping incomes as the major causative factors of distress and suicides among the farmers of Punjab, who are known for their hardworking nature and withstand to difficulties (Gill and Singh, 2006)<sup>35</sup>.

In Maharashtra, Karnataka, Andhra Pradesh, Madhya Pradesh and Chattisgarh, the situation is precarious. The basic reason behind the farmers suicides is indebtedness in these states and far that matter in the country side. In Punjab the even growers of food crops are facing the wrath of the situation. In 'big 5' states cotton is the major causative crop of suicides. Writing on experiences from Vidarbha of Maharashtra, Neelima Deshmukh (2010)<sup>36</sup> states that eastern part of Vidarbha comprising Nagpur, Bhandra, Chandrapur, Gondia, Gadchiroli – known as the rice belt is less affected in comparison to the west part consisting of Wardha, Amaravati, Akola, Yeotmal (Yavatmal) Washim and Buldhan districts known as cotton belt. It is this area where from maximum number of farmer suicides have been taking place. P. Sainath, the eminent journalist and Prof. K. Nagaraj of MIDS worked extensively in this region and explored many inherent causes

behind the suicides with case to case experiences of the affected farm households.

Tata Institute of Social Sciences (TISS) on the request of Mumbai High Court to go into the genesis of farmers suicides in Jalana and Vidarbha districts says that the crisis is not only confined to farmers with landed property but to landless tenants and share croppers who had leased in land on short-term and long-term basis. Many such families which are out of the ambit / purview of institutional credit have had caught up in vicious circle of indebtedness. 75 per cent of farmers had loan commitments to non-institutional sources. The report embraced all the issues discussed earlier. Indira Gandhi Institute of Development Research (IGIDR) report is also another important study which assessed that overall indebtedness had the highest incidence among various causes of distress with 66 per cent sample stating it as a single risk factor among different risk factors sighted. Thus, it concludes that economic crisis is the main cause of distress among deceased households. It further states that economic crisis in the form of indebtedness, agrarian crisis due to crop failure and other related causes are interconnected. It also observed that the farmers' suicides have propped up social problems in the households such as family disputes, domestic altercations, impending marriage of family members, children education, illness, alcoholism and further degradation of family living conditions (IGIDR, 2006). B.B. Mohanty on the basis of a field study in Amaravati and Yavatmal districts of Maharashtra concluded that majority of deceased households were small farmer households, which had been badly affected by the introduction and manifestation of neo-liberal policies of 1990s (Mohanty 2005). He also observed that the situation had been more grave in the areas

where high value cash crops were cultivated and where the area was under HYV seeds extensively<sup>37</sup>. (Mohanty 2005) He writes that most of the suicides among small farmers (93 per cent) were coincided with harvest period, which emphasises the importance of crop failure as most vulnerable economic cause of distress for them.

Enveloping the agrarian situation in Maharashtra, Srijit Mishra (2006) states that the suicide mortality rate (SMR) for farmers in the state has increased from 15 in 1995 to 57 in 2004. The rain – dependent cotton growing farmers of Vidarbha and particularly in Amaravati division and in selected districts the SMR is staggeringly high at 115.6 as compared to SMR of the state<sup>38</sup>. Further, he argues that declining profitability because of dumping in the global market by US, low import tariffs, failure of monopoly cotton procurement scheme and withdrawal of the state from its role in investment in agriculture, provision of formal credit and extension services are the major issues of concern in the context of farmers' suicides. The state of Maharashtra with 12 per cent contribution from agriculture to the SGDP and 51 per cent dependency on agriculture for livelihood, first rank in percapita income and highly advanced state with nation's economic capital is also on headlines with its dark part of farmers' suicides. As stated earlier since the year 1995 from which NCRB started enumeration of farmers suicides, Maharashtra is in first place with a total of 50,481 suicides during 1995-2010.

Karnataka is the state with second highest farmers suicides since 1995. Over the past couple of years, the characteristics of Karnataka agriculture have changed from non-capitalistic path to the capitalist path.

The crisis can be related to the uneven<sup>39</sup> capitalist development. The beginning of capitalist mode of agriculture dates back to the colonialism, then the introduction of green revolution has allowed a large number of new categories into India agrarian economy and caused eventual new agrarian relations in Karnataka along with elsewhere in the country side. Use of new technology, seeds, fertilizers, pesticides, fragmentation of landholdings, increase in landlessness are some of the characteristics propped up by the capitalistic agriculture. During 1980s, TOT going against the agriculture with unremunerative prices, urban biased policies. Farmers' organisations resisted with long marches, bandh calls and rallies and no farmer committed suicide in this period.

However, likewise, at the all India level, the globalisation induced crisis in agriculture has unleashed farmers suicides in Karnataka. The World Bank dictated agricultural policies and reforms in Electricity, Co-operative Sector, subsidies, investment system and credit policy have pushed the crisis further. New technology, subsequent severe droughts accentuated the crisis and turned into unabated farmers suicides. The total suicides in Karnataka from 1995 to 2010 were reported as 35,053 by NCRB. However, one solace in the tragedy is that relatively there is a down-ward trend in suicides in Karnataka for the period 2003-2010 in comparison to the earlier 1995-2002 period. The beginning of the suicides in Karnataka can traced back to the year 1998, when two farmers from Bidar, involved in cultivation of 'turdal' committed suicide<sup>40</sup>. Region-wise break-up of suicides shows that old Mysore and old Bombay presidency and old Hyderabad region are the worst affected areas. Most of those who committed suicide lived near the tail end of the canal amply reflects the failure of the state irrigation policy<sup>41</sup>. The

spate of farmers suicides not only in Karnataka but at all India level can be correlated to the burden of high indebtedness due to quite low level possibility of assured income flow from agriculture in comparison to non-agricultural enterprises<sup>42</sup>.

As the concentration of national media is on rampant farmers suicides in Maharashtra, the plight of farmers in Madhya Pradesh and Chattisgarh hasn't attracted the much attention of either national or regional media. Infact, the suicides among farm households in these two states are in alarming way. Based on statistics provided by the NCRB, there two states are in fourth and fifth place in number of farmer suicides taken place to the total suicides at all India level during 1995-2010. A study conducted by Madras Institute of Development Studies (MIDS) puts it as over 2000 farmers' suicides every year in these two states since 1997. For few years these numbers are more than in many other states and some times including Maharashtra, Madhya Pradesh appears be a problem states for farmers, though this has not been acknowledged well<sup>43</sup>. The study says that there is an increase in farmers suicide in the state by 11 per cent over a period of 1997-2005. The farmer suicides per one lakh population for 'big 5' states presented by NCRB gives more alarming picture than the study results of MIDS, which puts the Chattisgarh on top of the list.

**Table 4.5**

**Farmers Suicides per one lakh Population in ‘big 5’ States**

State	2001	2002	2003	2004	2005	2006
Maharashtra	3.65	3.76	3.84	4.10	3.82	4.28
Andhra Pradesh	1.98	2.46	2.31	3.39	3.13	3.24
Karnataka	4.74	4.21	4.58	3.21	2.94	2.57
Madhya Pradesh	2.27	2.25	2.46	2.83	2.19	2.45
Chhattisgarh	6.97	5.83	4.93	6.33	6.29	6.49

*Source: National Crime Records Bureau*

However, based on farmer suicide rate (FSR), Chattisgarh is in third position with 33.7 suicides per 1,00,000 farmers. Kerala with 142.9 and Maharashtra with 36.4 per one lakh farmers are in first and second positions. Even for the suicide Mortality rate (SMR), the criterion developed by Prof. Srijit Mishra calculated for male suicides per 1,00,000 farmers, Chattisgarh with 44.8 stands in third place. Again Kerala ranks highest with 194.7 and Maharashtra second with 50.6 per 1,00,000 farmers. The cultivators of soyabean, mustard and pulses from both the states also committed suicide because of abrupt policies of the state governments, which imported 60 lakh tonnes of palmolein in just a year 2007 and 15,000 tonnes of ‘grain’ from Kabul and Pakistan virtually ruined the farmers. The shift towards wheat and cotton from 2001 onwards proved more costlier to the precious lives of farmers, from where the suicides in these two states increased phenomenally. As usual the state governments of these two states absolutely denying to accept the truth placed by the NCRB. The political bosses and as well as the officials of agriculture department are brushing aside the scholarly studies done by MISD, IGIDR, P. Sainath of the Hindu.



After a break, farmer suicides are raking up in Kerala again in 2011. The debt-trapped farmers of Wayanad and Kottayam districts are taking their own life. Palakkad and Kasaragode are the other two major districts affected by the crisis. Infact, Kerala is on top among the farm suicides affected states during 2001-2006 with highest FSR and SMR. The agrarian crisis and farmers distress in Kerala are closely linked to the neo-liberal policies implemented in the country. The linkage between the two is more in the regions of the state that are heavily dependent on export – oriented crops such as Rubber, Tea, Coffee and Pepper. The worst affected are the small farmers, as they are more vulnerable to crop losses’ and price declines<sup>44</sup>. Among the different regions, Wayanad of Kerala state is the worst affected region with over 500 farmers suicides and it has become Kerala’s Vidarbha<sup>45</sup>. Gods own land, has become God forsaken Ghost land. Kerala at it is, the suicide capital of India, liberalisation through unemployment, poverty and debt in one form or another scripts these suicides<sup>46</sup>. Another important dimension of agrarian crisis is asset loss through the sale of land. The farmers who committed suicides, irrespective of the size of holdings, had sought sale of land for repaying debts and it is considered to be the last resort of a farmer. In Kerala sale of land in lowest class size has increased due to the crisis. 23.53 per cent farmers of lowest size class sold out 14.54 per cent of their total holdings<sup>47</sup>.

The state of West Bengal, ‘Rice Bowl of India’ is also facing the problem of farmers’ suicides. As per the records of NCRB for 2001-2008, it is in seventh place among 29 states of India in terms of farmers suicides. As many as 8637 farmers committed suicide in the state during the said period.

Burdwan is the worst affected district. In some parts the agricultural produce set ablaze due to lack of basic storage facilities, pointing at the abysmal conditions in the state<sup>48</sup>. In West Bengal inability to combat with inflation is one of the causes of farmers suicides<sup>49</sup>. Though there is a drop (-436) in farmers suicides in between 1995-2002 and 2003-2010, the suicides are taking place sporadically even in 2012. The redesigned procurement policy of state for rice and vegetables is paying dividends. However, the situation has to be taken with serious note. But as any other state government, the West Bengal ruling and opposition parties are playing their own political game.

Another Southern state, Tamil Nadu is in eighth position in farmers suicides as per NCRB reports. 7768 farmers suicides were taken place in the state during 2001-08. However, there is a drop (-126) in suicides in the state on average in between 1995-2002 and 2003-2010. It is to be noted here that suicides were increased in crude figures in 2009 and reported as 1060 to its 512 in 2008. According to a study conducted by Centre for Suicide Research, University of Oxford, both pesticide – related and non-pesticide suicides among farmers are growing annually at 3.9 per cent. In certain regions of Kerala, Andhra Pradesh, West Bengal, Tamil Nadu and Pondicherry nearly 60 per cent of suicides occurred due to consumption of pesticides.

Rajasthan and Gujarath are in ninth and tenth positions with 4347 and 4213 farmers suicides during 2001-2008. P. Sainath reports that pesticide suicides are higher in Gujarath with 84 per cent than the national average of

24.8 per cent. But the Gujarath government is not acknowledging them as farmer suicides.

Further, these two states were not in the grouping done by P. Sainath based on NCRB reports for 1995-2010, which explicit, the states with more than 100 suicides 'either' plus or 'minus' of annual average suicides between 1995-2002 and 2003-2010. This is an indication of the fact that these states are still facing the problem of farmers' suicides with relatively less magnitude. Not only these two states but in all other 19 states also farmers are in dire straits. The intensity may be counted on numbers but suicidal death of a single farmer is shame on the part of civil society in an so accomplished agrarian economy since centuries.

### **Farmers' Suicides in Andhra Pradesh:**

Andhra Pradesh is the first state that witnessed the farmers' suicides in the country. During 1980s suicide by farmers was reported from Prakasham and Guntur districts, where cultivators of cotton taken their own lives. These early warnings of crisis in agriculture were ignored as aberrations<sup>50</sup> (Galab, Revathi and Prudhvikar Reddy, 2010) and it resulted in spate of farmers suicides in due course. From 1990s the suicides are taking place unabatedly and these suicides are highly occurring in ranified dry land regions of Telangana (nine out of ten districts), Rayalaseema (Ananthapur). Guntur district of coastal belt is also in the midst of suicide turmoile. The NCRB reports on farmers' suicides from 1995 to 2010 placed the state in third position in the country consecutively for the entire period. Further more, the suicides in the state in between 2003-2010 were taken place more

in number than Karnataka. It amply implies that virtually the state of Andhra Pradesh is in second position in farmers suicides during this period by pushing back Karnataka. Infact, except for 2003, 2007 and 2010 Andhra Pradesh outnumbered Karnataka in farmers suicides. Annual average farmer suicides for 1995-2002 and 2003-2010 presented by Sainath based on NCRB reports also placed the state in second rank with additional 711 suicides in later period over the previous period. The age adjusted SMR for male farmers computed and presented by Srijit Mishra again puts it in Third place after Punjab and Maharashtra<sup>51</sup>. Actually the suicides reported in the state in 2010 are higher than the combined number of suicides of Madhya Pradesh and Chhattisgarh. As mentioned several times earlier, infact, the facts and figures are purely based on official (NCRB) reports, excluding number of cases either denied by officials or not reported to any statutory body. Sainath aptly remarked that for every three hours 95 farmers were attempting suicide and many such cases were either under reported or unnoticed<sup>52</sup> (Sainath, P. TV9 talk on 7.1.2012).

The saga of suicides embraced majority districts. however, paucity of reliable statistical data on district-wise farmers' suicides (except few scholarly articles by Sainath, K. Nagaraj, D. Narsimha Reddy, Jayati Gosh and others) in Andhra Pradesh since 1995 is the major constraint in systematic presentation of the analysis on regional variations.

**Table – 4.6**

**Official Statistics on Farmers Suicides in Andhra Pradesh\* 1997-2011.**

Sl. No.	District	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	Total
1.	Adilabad	9	18	23	25	25	25	2	68	60	83	48	42	18	6	0	452
2.	Ananthapur	9	9	27	35	60	22	13	59	70	65	90	95	40	41	19	654
3.	Chittor	0	6	2	4	1	4	7	33	21	26	24	17	9	0	0	154
4.	East Godavari	0	1	0	0	1	0	0	4	2	3	2	1	0	8	2	154
5.	Guntur	5	12	1	4	5	1	4	69	24	31	22	36	3	20	19	256
6.	Kadapa	0	0	0	0	1	5	3	18	17	9	26	21	10	4	1	115
7.	Karimnagar	12	15	15	36	38	36	11	96	73	48	55	64	42	0	0	541
8.	Khammam	1	7	0	9	4	7	2	37	23	22	7	12	2	0	0	133
9.	Krishna	1	0	2	0	1	0	1	23	13	6	4	2	4	6	2	65
10.	Kurnool	13	6	3	6	11	7	1	77	64	72	68	66	59	22	9	484
11.	Mahabubnagar	4	15	20	9	22	17	4	112	57	35	30	29	17	4	0	375
12.	Medak	2	1	5	5	11	25	17	92	45	30	28	32	32	21	7	353
13.	Nalgonda	10	9	8	15	19	11	34	53	52	48	13	43	17	11	0	343
14.	Nellore	0	0	0	1	0	2	7	6	7	1	2	2	3	0	0	31
15.	Nizamabad	1	3	6	8	24	9	8	64	27	12	17	7	10	0	0	196
16.	Prakasham	0	4	4	1	1	0	0	44	9	8	10	8	0	9	6	104
17.	Rangareddy	0	4	2	1	6	5	2	56	40	19	21	18	25	0	0	199
18.	Srikakulam	0	0	0	1	0	0	0	4	1	0	0	1	1	2	1	11
19.	Visakhapatnam	0	0	0	0	0	0	0	9	5	2	1	1	2	3	0	23
20.	Vizianagaram	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	2
21.	West Godavari	0	0	0	0	0	0	0	8	0	0	1	1	1	0	0	11
22.	Warangal	46	78	79	95	97	77	27	112	45	32	24	11	2	0	0	725
	<b>Total</b>	<b>113</b>	<b>188</b>	<b>197</b>	<b>255</b>	<b>327</b>	<b>253</b>	<b>143</b>	<b>1045</b>	<b>655</b>	<b>552</b>	<b>493</b>	<b>509</b>	<b>297</b>	<b>158</b>	<b>66</b>	<b>5251</b>
	NCRB Data**	1097	1813	1974	1525	1509	1896	1800	2666	2490	2607	1797	2105	2414	2525	NA	31120

Source: [www.agrariancrisis.in](http://www.agrariancrisis.in)

\* Statistics given by the State Government which it treated as 'genuine'.

\*\* Between 1997-2010

If we look at official statistics on farmers suicides provide by the Government of Andhra Pradesh in any account unmatched with the figures provided by the NCRB. The governments at central and state level are making a division in farmers suicides as 'Genuine' and 'not genuine'. The affected family has to prove the genuinely by filling up all the 40 clauses. The agricultural officer, Revenue Officer and concerned S.I. has to certify it as genuine farmer suicide. The statistics gathered from the states recorded by Crime Record. Bureaus of concerned states are compiled and presented by the NCRB. It is very surprising that there are significant variations in the statistics given by the state government and NCRB. For, most of the years figures provided by the state government are 10 to 15 per cent of the NCRB figures. Except for the year 2004, the difference in the statistics is highly disgusting for any measure. The way the state government understates the statistics compiled by its own bureaucratic machinery is highly abominable. Irrespective of the political parties at the helm of affairs the 'under-reporting' has been a common phenomena. The year 2010, for which the NCRB has reported highest number of farmer suicides at 2525, the state government treated just 125 as genuine cases. Even for the year 2011, it recognised only 66 farmers suicides as genuine, where the independent farmers' organisations stated 95 suicides just in a month between November and December 2011. Even the total suicides the state government accepted between 1997-2011 are 5251, which are significantly lower than the NCRB figures of 31,120.

However available data and studies shows that the intensity much higher in nine Telangana districts, Ananthapur of Rayalaseema and surprisingly in Guntur, the rich district of coastal belt than poorer

Vizianagaram and Srikakulam districts of north-coastal Andhra. The cotton belt of Telangana region is the worst affected area since 1995 and the reported suicides are on rise in this region after 2003. The recent spurt in farmers suicides in the state were mainly reported from Telangana districts including Warangal, Adilabad, Medak, Mahabubnagar and Khammam. For a period of eith years from 1997-98 over 400 cotton farmers killed themselves in Warangal district alone. In Telangana districts cotton is the major crop next to paddy. All other crops such as coarse grains, pulses and oilseeds were either slowly vanished from the crop pattern or relegated to a marginal or substitutable crop. In many villages of Warangal and Mahabubnagar districts, where the research team has toured found paddy and cotton as ‘by-choice’ crops of the farmers, irrespective of the size of land holding, nature of the soil and economic position of them. The situation is almost similar in most of the Telangana districts with little variations here and there. Globalised input market has been playing havoc with farmers of this region with their market oriented tactics. Cost of cultivation in this rain fed region is increasing year after year for all crops more particularly since 2001. In Warangal district alone there are about 13,000 pesticide dealer. They not only supply pesticides but also fulfill credit needs of the farmers with their sub-dealer network at Mandal level<sup>53</sup>. The dealers at district headquarter are now playing the role of money lender-trader-cum-agent role. Whether it is seed, fertilizer, pesticide or credit, for all these inputs the farmers are depending on these dealers in entire Telangana region. This phenomena is not only confined to Telangana but also to all other suicide affected districts of other regions and for that matter to the states where suicides are taking place. Probably, the first comprehensive report on agrarian crisis and farmers suicides in Warangal district was presented by Sudershan Reddy and

Venkateshwar Rao identified crop failure and debt burden as the major causes behind the distress and suicides<sup>54</sup>. Next to Warangal Mahabubnagar is another affected district, which is known for its drought prone climatic conditions and high migration levels. Here, cultivators of groundnut, cotton and paddy are the victims of agrarian crisis. Nalgonda, Karimnagar, Medak, Adilabad and Khamma are the other districts where the suicides are taking place periodically. For example, just in a month between November and December of 2011, in six districts 95 farmers suicides were reported. The entire Telangana is highly depending on well irrigation and that to bore-well irrigation. Bore-well cultivation is high cost-prone and needs heavy investment to meet both fixed and variable capital needs. Erection of bore-well itself is a costlier effort involving anywhere Rs.50,000 to over Rs.1,00,000. In the region, where bore-well failure is a common phenomenon, the burden on farmers is more and resulting high-volt indebtedness. Recurrent drought is the feature of this region. In each district we may find few favourable and agriculturally developed pockets but many distressed and disgruntled areas with unfavourable monsoons, scanty rainfall and unseasonal rains. In these areas the extension services are almost absent. In spite of higher catchment area of both Krishna and Godavari rivers, this region is highly neglected in irrigation development. Out of 872 mandals declared as drought prone during 2011, majority of them are from Telangana region. Further more out of 13 districts under BRGF programme from the state, to provide relieve to the backward districts nine (9) districts are from this region alone speaks the gravity of the situation.

Here, in this region high indebtedness, high priced inputs over the MRP, adulterated spurious seeds and pesticides, frequent bore-well failure



and crop failure, higher dependency on private financiers for both productive and consumptional needs are common features. It is this tendency provoked micro-financiers to take the fate of needy poor women and households into their fold. These districts also hit headlines of print and electronic media with micro-finance induced suicides during 2010-11. The crisis is the major factor behind large scale migration from many districts to Gulf, Surath and Bhiwandi for livelihood including Mahabubnagar, Karimnagar, Warangal and Medak. In most parts of Telangana cotton cultivation has become monoculture. The MSP policy of the government, international prices and marketisation of TNCs and their local dealers drived the farmers towards cotton cultivation and it is the major cause behind the distress and suicides.

The scenario in Ananthapur district envelopes another Saga. It is the highly drought prone district lying in shadow area with most unfavourable climatic conditions. The district usually recieves lowest rainfall in the state. Without irrigational development entire cultivation is on the mercy of ground water irrigation. Farmers suicides have been reported from the district at large scale since 1997 along with the Telangana districts. For few years the district topped the list. The land holdings in the district are highly small and marginal in the size than other districts of the state. Personal cultivation is the major feature of Ananthapur district. Here, leasing the land for cultivation is very marginal. In this district suicides among farmers were reported from large sized land owners also. Next to Telangana districts, Ananthapur is highly depending bore-well cultivation. Groundnut cultivation has emerged as monoculture in the district due to its high-volt semi-arid nature. Whatever input related mechanism analysed for Telangana districts played its role in this district also. Abrupt imports of edible oils, especially

palmoil are one side and unfavourable MSP and marketing for groundnut on the other resulted in crisis among farmers in the district. Sainath is the first scholar to report the suicides from this district along with Telangana districts. Farmers suicide were reported from Kurnool district also but sporadically.

The suicide phenomenon in coastal districts is highly pendoxical. The poorest north-coastal districts of coastal belt Srikakulam and Vizianagaram reported very few suicides. While one of the richest districts of Coastal Andhra, Guntur district witnessed more number of farmers suicides. The micro-level situation almost resembles the situation prevailing in the country and the world. Srikakulam and Vizianagaram districts have highly adversed agro-climatic conditions, illiteracy is more and agriculture is in subsistence nature. Thus farmers in these districts in general are not taking up challenging tasks in agriculture as their counter parts in Ananthapur and Telangana districts. In Guntur district where paddy is the major cultivating crop also reported number of suicide cases. Here, agrarian situation is such that the tenant cultivation is in very high magnitude. Most of the suicides reported from the district are from tenants, who has to bear the double burden i.e., huge rent amount to the owner and then investment in agriculture. Here, in the district cultivators of paddy, chillies and cotton have been badly affected by the ongoing crisis in agriculture. Further, tenants are out of ambit of institutional credit due to technical hindrances. In Guntur district the cost of cultivation in general higher than many other districts for cultivation of food crops due to highest application of fertilizers and pesticides.

Many experts individually and as well as part of committees constituted by the state government have worked extensively on issues related to farmers' suicide. All such studies have commonly identified the mounting debt as the prime cause of agrarian distress. They also identified number of subsidiary causes like recurrent monsoon failures, volatile nature of national and global markets, unprecedented hike in input prices, unpredictable output prices, reduction in subsidies, lack of institutional credit support, gross negligence of community irrigation system, failure of bore-wells, spurious seeds and pesticides, social obligations and increasing expenditure on non-food items and so on.

Jayati Ghosh commission on farmer's welfare observed that the agrarian crisis in Andhra Pradesh can be linked to a combination of wrong policies of liberalization and globalization policies of central and state governments and failures at the level of implementation. As the Telangana region is the worst affected area in Andhra Pradesh with regard to agrarian crisis and its resultant farmer suicides, a specific attention has been focused on the agrarian crisis of this region.

Prof. Y.K. Alag, former planning commission member, commenting on farmers suicides in general and in Andhra Pradesh in particular advocates that the profitability rates of farmers have been declining since 1990. At the same time, the state has reduced its intervention leaving the farmers at the mercy of markets.

Parthasarathy and Shameem<sup>55</sup> (1998) studied the suicides of cotton farmers of Warangal district that occurred towards the end of 1997. They

examined the variables like rainfall, irrigation, production, yields, prices and credit facilities. They observed that though there were problems due to adverse rainfall leading to low yields, adverse prices, rising cost of cultivation, bad position of co-operative credit agencies, growing power of moneylender-trader-landlord combine have culminated into growing indebtedness and subsequent suicides in many cases.

While discussing Parathasarathy and Shameem's analysis of the causes of suicides, E. Revathi (1998) felt that there are some missing issues. Firstly, She points out that irrigation is an implicit cause for the soaring debts of the farmers. The cotton farmers of Warangal almost entirely depend on private irrigation. She observes that in the creation of private irrigation, farmers make heavy investments that lead to accumulation of debts. The source of credit from non-institutional agencies is the second one, another reason for the farmers' suicides she puts it is negative role of the commission agent and pesticide dealers network that finances the credit needs of the farmers. They charge 15 to 20 per cent higher price over the normal price. She observed that such kind of tie up with pesticides dealers who also supply seeds often tightening the nose around the farmers' neck. Finally, she points out that the politics and economics of neglect of the region for decades also have a role in the suicides<sup>56</sup>.

Justice P.A. Chowdary, who headed the farmers' commission of experts on agriculture in A.P., has come up with the observation that so far "climate has been considered as the most unpredictable variable affecting the agricultural sector, but the influence of global market forces whose behaviour is always not amenable to prediction and control of native

government has become another crucial factor affecting the progress and well-being of farmers<sup>57</sup>.

S. Malla Reddy, Vice-President, All India Kisan Sabha has identified six major factors for agrarian crisis led farmers suicides. They are, land, water, credit, inputs, output price and marketing. Commenting on the situation in Andhra Pradesh, he expressed that the state government which is largely behind the entire scenario is not at all willing set right the agrarian situation. 60 per cent of cultivators, particularly tenants and women do not have title deeds and deprived of governmental support. On irrigation front the government is totally failed to conserve 2000-4000 TMC of water going to Bay of Bengal. The state government is highly neglecting the strong chain of 74,000 tanks. Conservation of existing surface water can provide irrigation for four million acres with marginal investment. While the government with its Irrigation Development Corporation (IDC) has just erected 13.5 lakh wells during 1956-2004. The farmers on their own erected 26 lakh wells with an investment of 12.5 thousand crores of personal investment during the same period. While small countries like Pakistan and Bangladesh providing 20 to 25 per cent input subsidies, Indian economy virtually reduced all the subsidies. The extension network is in near collapse with 2500 to 3000 vacancies of extension officers. Unless these adverse situations are not addressed with concerted efforts, the suicide phenomenon cannot be reversed.

B.V. Raghavulu CPI (M) state secretary, Andhra Pradesh has echoed similar views by stating that “the recurring drought in the state was a minor factor behind the agrarian distress when compared with the havoc brought

by globalized market forces. The government encouraged farmers towards commercial crops such as cotton, chillies, tobacco and castor. But the ill-equipped small and marginal farmers could not cope up with the externalities of market forces that huge investments made on commercial crops went down the drain, while the debt burden went up. As the repayment of old debt has become a burden, most of the farmers could not get new loans. This has mounted the pressure and the very existence of farmers has been in question.

Andhra Pradesh Rythu Sangham, General Secretary B. Thulasidas states that contrary to the popular belief commercial banks have harassed farmers no less than private lenders by using coercive methods and police force. It has played a strong psychological havoc with the farming community. According to the noted journalist and Magsaysay Awardee P. Sainath, a sudden crash in prices of ground nut in Ananthapur, of cotton in Telangana districts has caused the death of number of farmers by swallowing pesticides with unbearable debt burden on their back. He also noted that most of the suicide cases were reported from small farmers and as many as 45 per cent of them were women.

T. Laxmipathy with his observation on farmers' situation in Mahabubnagar district expressed that the farmers are anguished on two accounts. Their current crop is wrecked by the power cuts and whatever products that they could salvage of the Kharif do not yield a price that could even partially recover the costs. He noted that it is in the case of paddy as well as cotton.

The collapse of rural credit, soaring input costs, mindless misuse of water resources, the neglect of traditional irrigation systems, imports that devastated successful farmers, the breakdown of the public health system, insensitivity to the fate of the small farmer, the harshness of the banks and creditors all these policy issues created the climate where farmers took their own lives,” says P. Madhu General Secretary of the Andhra Pradesh Agricultural Workers Union. Sainath aptly remarked that drought is policy-driven in arid and semi-arid regions of Telangana and Rayalaseema and so the suicides.

The analysis on suicide phenomena among the farmers reflects the worst state of agrarian situation in the country. Farmers of all most all states are the sufferers of new phenomena with variations. Ten out of 29 states and among them ‘big 5’ states are in worst position with unparallel suicides.

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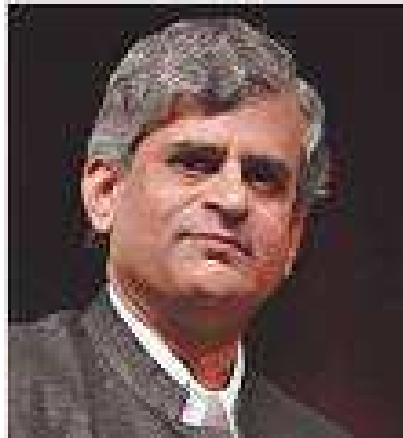
## **CHAPTER - V**

### **Socio-Economic dimension of Farmers Suicides in Andhra Pradesh – Field Study Results**

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*“How agonised we are over how people (farmers) die. How untroubled we are by how they live”*



*P. Sainath*

This chapter is based on field study results. The statistical information and general information has been collected through structured questionnaire served to 400 sample households of deceased farmers of four (4) districts i.e., Warangal, Mahabubnagar from Telangana, Ananthapur from Rayalaseema and Guntur from Coastal Andhra region. The information has been elicited from the survived spouse and family members of the deceased farmers through recall method. Accuracy and quality of information given by the spouse and family members has been ascertained through group discussions with neighbours of locality, noted and elderly persons of the village.

The socio-economic background of the respondent households and the deceased farmers, the major and subsidiary causes for suicide, the agrarian relatives, the experience in agriculture have been accounted and analysed. Further the land particulars, cropping pattern yield, expenditure on agricultural operations particularly on bore-wells and household maintenance income levels of the deceased farmers are also assessed and analysed. The debt and outstanding particulars of the deceased farmers households were examined to assess the present status of the households.

In addition to that the condition of the spouse and family member in post-suicidal death scenario has been analysed on the basis of support received by the family from the government and other agencies, living levels of the households, major problems faced by the households in

general, present status of the household with regard to certain parameters, utilisation of relief measures and finally stress faced by the spouse of deceased farmers has been analysed.

### **Table – 5.1**

#### **Community-wise Distribution of Respondent Households**

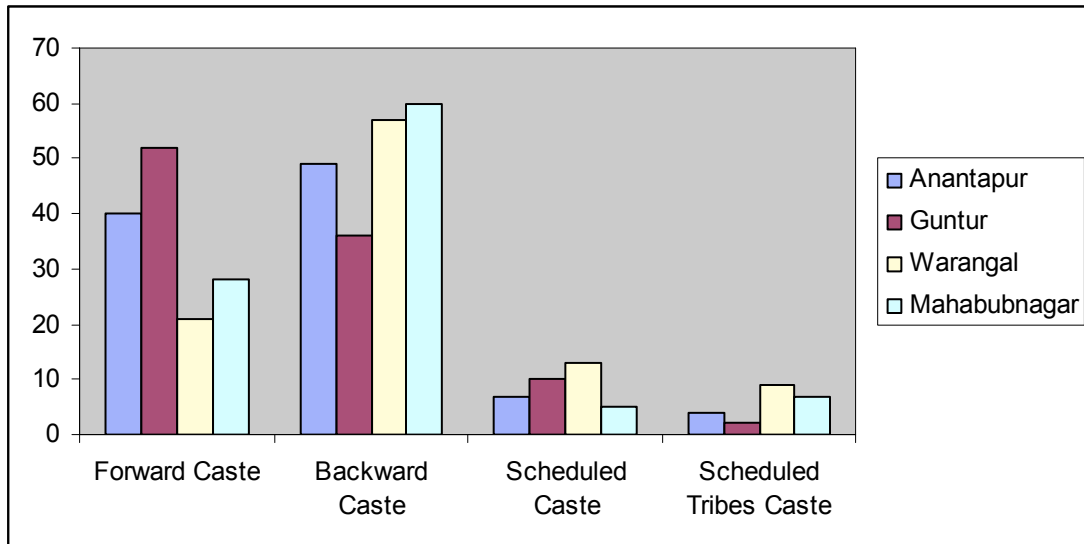
In an agrarian economy rooted with crisis and ultimate manifestation in the form of suicides, looking towards social strata may be some what pathetic but it is the reality. In rural economy a slow but steady transformation is taking place across the country. The upper caste households, which earlier, dominated agrarian economy now virtually shifted to towns and cities and metropolis with diversified occupations and ambitions. Particularly in certain regions where the agriculture is dominantly rainfed, this sort of transformation is more visible and penetrative. The present rural agrarian economy is dominated by backward caste (BC) households. A further deep analysis envelopes that the backward class communities which depended on artistic occupations with pride and prestige were in due course thrown out of their traditional occupations with the spurt of globalization and taken shelter under disguised agricultural activities. Though some of them might have tiny bits of land to their possession but largely they are either small farmers or marginal farmers. As far as scheduled castes (SCs) are concerned, the rural transformation hasn't benefited so far to a greater extent. On the other wherever the scheduled tribes (STs) are in agriculture, their hard work and simple living might kept them away from the catastrophe. Further it can be

added that the culture of cultivation of STs is more diversified in form than the other social communities.

**Table – 5.1**  
**Community – Wise Distribution of Respondent households**

Sl. No.	District	Forward Caste	Backward Caste	Scheduled Caste	Scheduled Tribes	Total
1.	Ananthapur	40 (10.00)	49 (12.25)	7 (1.75)	4 (1.00)	100
2.	Guntur	52 (13.00)	36 (9.00)	10 (2.50)	2 (0.5)	100
3.	Warangal	21 (5.25)	57 (14.25)	13 (3.25)	9 (2.25)	100
4.	Mahabubnagar	28 (7.00)	60 (15.00)	5 (1.25)	7 (1.75)	100
	<b>Total</b>	<b>141 (35.25)</b>	<b>202 (50.50)</b>	<b>35 (8.75)</b>	<b>22 (5.50)</b>	<b>400</b>

*Source: Field study*





The present study pertaining to agrarian crisis and its resultant and suicides based on information at household level. The information has been gathered with regarding to agricultural situation that has led to death of the deceased farmer and the present status of the households. The information has been collected from the spouse and other family members. In such cases respondents may be the spouse or son of the deceased farmer.

The data pertaining to community wise distribution of respondents in the study area presented in table 5.1 clearly speaks that 50 per cent of the respondents of deceased farmers' households belongs to BC community. This is the community that bearing the brunt of the agrarian crisis as well as globalization led financial crisis. The generational psychological tendency reflects that the households of these particular social strata never compromise on certain aspects. The emerging opportunities and challenges on one side and luring socio-economic upscaling on the other is fixing most of the families into more income and more consumption syndrome. This eventually taking most of these (households) into a financial trap where the consumptional needs are increasing substantially but the income generating channels are squeezing day by day. Thus facing the crisis more acutely. As mentioned earlier, in Warangal, Mahabubnagar and Ananthapur districts where the agriculture predominantly depends on monsoons deceased farmers were more from backward caste households. In Guntur district where more than 90 per cent of households' cultivated area is under assured irrigation the deceased farmers from forward caste (FC) households were relatively more. It is appropriate here to mention that in Guntur district migration among the forward caste households is relatively very less than that of other districts. It is to be noted that out of 400

respondents of deceased households roughly 14 per cent are from SC and ST communities. Among the SCs the affected households are more in Warangal followed by Guntur, Ananthapur respectively. Regarding STs the affected households are more again in Warangal followed by Mahabubnagar, Ananthapur and Guntur respectively.

**Table – 5.2**  
**Age particulars of Deceased Farmers**

Age is the crucial factor of human society which moulds and remoulds psychological behaviour. It is the age which speaks about ambitions, attitudes, emotions and responsibilities. Virtually all these aspects will have strong imprint on psychological status of human beings. The age group of emerging youth will have more aspirations, ambitions and a full throated vigour to take up the challenge reach innovative new heights in any given occupation. If a particular occupation not only throws big challenges but also less dependable for opportunities to improve their living conditions the outcome will be disastrous for the younger generation. It is the more vulnerable generation which can not control its emotions. Successive reports of NCRB have clearly manifested that the suicide phenomena is more among the younger generation. The second stage of youth is more crucial than the first stage. During the second stage the youth obviously deeply involve in family maintenance apart from his occupational challenges. In this age group the caring of growing children on one side and looking after the aging parents on the other adds more financial burden. It is also the age where human being visualises growth and stabilization of his family both physically and financially.

**Table – 5.2**  
**Age Particulars of Deceased Farmers**

Sl. No.	District	20-35	36-50	51-60	60 above	Total
1.	Ananthapur	21 (5.25)	65 (16.25)	11 (2.75)	3 (0.75)	100
2.	Guntur	30 (7.5)	50 (12.5)	17 (4.25)	3 (0.75)	100
3.	Warangal	28 (7.00)	52 (13.00)	19 (4.75)	1 (0.25)	100
4.	Mahabubnagar	23 (5.75)	61 (3.25)	13 (15.25)	3 (0.75)	100
	<b>Total</b>	<b>102 (25.5)</b>	<b>228 (57.00)</b>	<b>60 (15.00)</b>	<b>10 (2.50)</b>	<b>400</b>

*Source: Field study*

Coming to the agriculture sector and distress related farmers suicides, this age related psychological status of human beings has been amply reflected. The micro level information of the deceased farmer households presented in Table - 5.2 states that 57 per cent of suicides were taken place in the age group of 36 - 50 years. In globalisation driven socioeconomic scenario this age group is facing a lot of stress and strain on many counts. Children's education, health care of family members, purchase of durable and non durable commodities to upscale the social strata, marriage of a sister / daughter, developmental activities in agriculture, expenditure on entertainment and social customs above all daunting consumptional needs are bringing tremendous pressure on their financial position. Agriculture being less remunerative the stress is more and causing unprecedented suicides among the farmers across the country

and more particularly in Southern states. In all the districts of the sample study, more number of deceased farmers were of 36 - 50 years age group with slight variations. The highest number of suicides in this age group were reported from Ananthapur district (65) and closely followed by Mahabubnagar (61), Warangal (52) and Guntur (50) respectively. The second highest number of suicides among the farmers were occurred in the age group of 20 - 35 years. As stated earlier, it is the age group with high volt ambitions and emotions. It is the age group which can easily driven by changing socio economic bench mark. Most of the youth of the age group depending on agriculture are experiencing relentless hard work but less income due to many indogenous and exogenous factors that are driving the agriculture into distress sector. In the sample area 25 per cent of deceased farmers were in this age group and the highest was reported from Guntur district and very closely followed by Warangal, Mahabubnagar and Ananthapur districts respectively. Within the age group of 51 - 60 years the deceased farmers were of 15 per cent among the total deceased farmers. In spite of pressing needs due to various reasons, this age group relatively less restive than younger age group. But this age group attaches more importance to social status and self-respect. In agriculture households where income is relatively less and consumptional needs are more demanding than others, the farmers of this age group also are committing suicides by succumbing to the inbuilt psychological pressure from various corners. In the case study are the deceased farmers of this group were more in Warangal followed by Guntur, Mahabubnagar and Ananthapur districts respectively. Suicides were reported from even in the age group of 60 and above years. Among the sample 2.50 per cent of the deceased farmers were in this age group. Though the number of suicides both in crude and

percentage terms may be less but it is more pathetic that the people in this age group, who considered as senior citizens and should lead peaceful and happily life are prone to commit suicides. It is the tragedy of agriculture sector, that the helpless old aged farmers without a hope and mounting poverty taking unprecedented route.

**Table – 5.3**  
**Educational Status of Deceased Farmers**

Educational status of an individual plays a pivotal role in designing the way of life. Usually literacy resembles the light of knowledge and the illiteracy the darkness. Naturally a literate can think rationally and behave in a better way than the illiterates in shaping up socio economic, cultural and ethical aptitude. A literate can judge things in a better way and can take proper decisions. A literate can have wide opportunities, and acquire latest skills and with that the occupational mobility will be more. The application of educational qualification basically depends on the availability of opportunities and the status of existing occupation. In our agriculture sector the correlation between the level of education and the prosperity of agriculture well proved in many cases in post green revolution period and also in post globalisation period. But this cannot be generalised due to inherent rigidities and lacunas in agriculture sector. Obviously the agriculture sector has turned into a stagnant sector over the years in terms of employment and as well as growth rate. Whereas the share of agriculture in overall GDP is just around 14 per cent, the dependency on this sector is as much high as 56 per cent. This amply reflects at macro level that occupational mobility of rural households is very marginal. The

agricultural operations have become more technical and cumbersome with the involvement of number of agencies in input and output markets. Infact in the unorganised agriculture sector the bargaining power of the producer is very weak. The dominant role of local, national and global market agencies eventually deciding the fate of farmers. During the selection of crop, type of seed, fertilizer, pesticides and agriculture related other operations the external forces are working strongly on the decision making of an individual farmer, who is mostly illiterate or less educated.

**Table – 5.3**  
**Educational Status of Deceased Farmers**

Sl. No.	District	illiteracy	Primary Education	Secondary Education	Collegiate	Technical	Total
1.	Ananthapur	38 (9.5)	40 (10.00)	17 (4.25)	2 (0.50)	3 (0.75)	100
2.	Guntur	29 (7.25)	54 (13.5)	12 (3.00)	1 (0.25)	4 (1.00)	100
3.	Warangal	42 (10.50)	37 (9.25)	14 (3.50)	3 (0.75)	4 (1.00)	100
4.	Mahabubnagar	58 (14.50)	27 (6.75)	12 (3.00)	1 (0.25)	2 (0.5)	100
	<b>Total</b>	<b>167</b> <b>(41.75)</b>	<b>158</b> <b>(39.50)</b>	<b>55</b> <b>(13.75)</b>	<b>7</b> <b>(1.75)</b>	<b>13</b> <b>(3.25)</b>	<b>400</b>

*Source: Field study*

As per table 5.3 in sample area nearly 42 per cent of the deceased farmers were illiterates, another 40 per cent completed primary education. The farmers with weak bargaining capacity, added with low educational level and large scale illiteracy can experience a lot of exploitation in the

hands of market players in every sphere of agricultural activity. They may not have proper awareness at the selection of crop, seeds, fertilizers and pesticides. They may not aware of governmental supportive system and approach levels. With less education and illiteracy they may not have proper avenues to share their opinion and problems. In most of the suicide cases lack of sharing of problems and getting way out of problems has been one of the basic reasons. In the study area this sort of tendency has been reported by the respondents of the households of deceased farmers. As the education level increases, such hasty decision making may be less. But we cannot sweepingly make a statement that highly educated will not commit suicide. It is the fact that in the study area five per cent of the deceased farmers were educated upto college level with technical educational skills behind them. As far as agriculture sector is concerned educated youth are much reluctant to take up agriculture as their main occupation due to non-remunerative nature and too many inconsistencies. Infact, Dr. M.S. Swaminathan, eminent scholar and chairman of National Commission on Farmers aptly remarked that it is the prime obligation of the state to see and adopt policies to attract educated youth towards agriculture.

#### **Table – 5.4**

##### **Mode of Suicide by Deceased Farmers**

Committing suicide is a crime in the eyes of law according to IPC section 306. No individual takes his own life without a strong reason. In distress driven Indian agriculture the suicide phenomena has become more serious issue since 1995. Why a farmer wants to commit suicide is not a big question in this present context. When both nature and government's

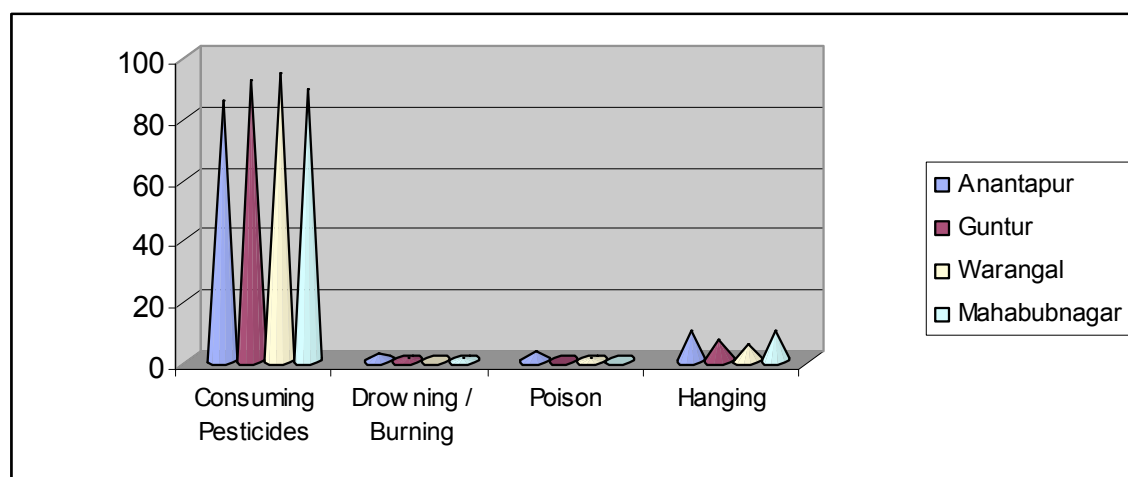
policy making is adverse to the well being of farming community such tendency eventually props up. The globalisation led agrarian distress has created havoc among lakhs of farm households. Deep rooted debt burden, ever increasing input costs, inconsistent output prices, imperfect market conditions and strong clutches of money lender-trader, agent has rendered the farming community in general and more particularly the small and marginal farmers in highly helpless condition. When the farmer has to face social, economic and ethical onslaught with the declining income and rising indebtedness on one side and less hope on future of agriculture might have forced to take the ultimate step. During the study in sample area the family members of 400 sample households narrated many heart-rending situations that they have faced during the time of suicide committed by their family member. They stated (given in table 5.4) that 90 per cent of the deceased farmers had taken their lives by consuming pesticide either at house or in their own agricultural land. It is almost similar “*modus operandi*” followed by the deceased farmers in four sample districts. “It is the tragedy that **the pesticide that has to save the life of the crop has virtually taken the life of the farmer**”.



**Table – 5.4**  
**Mode of Suicide by Deceased Farmers**

Sl. No.	District	Consuming Pesticides	Drowning / Burning	Poison	Hanging	Total
1.	Ananthapur	85 (21.25)	2 (0.50)	3 (0.75)	10 (2.50)	100
2.	Guntur	92 (23.00)	1 (0.25)	0 (0.00)	7 (1.75)	100
3.	Warangal	94 (23.50)	0 (0.00)	1 (0.25)	5 (1.25)	100
4.	Mahabubnagar	89 (22.25)	1 (0.25)	0 (0.00)	10 (2.50)	100
	<b>Total</b>	<b>360</b> <b>(90.00)</b>	<b>4</b> <b>(1.00)</b>	<b>4</b> <b>(1.00)</b>	<b>32</b> <b>(8.00)</b>	<b>400</b>

Source: Field study



The family members of the deceased farmers during the interviews have stated that they have undergone mental, physical and financial stress to save the life of the deceased farmer but haven't succeeded. The worry written sorrow faces have told that the deceased farmer has not given a

chance to save his life. As per the revelations by the members of the family 1/3<sup>rd</sup> of the deceased farmers died at home, 25 per cent in government hospitals, 20 per cent in the field itself, 13 per cent in private hospitals and remaining on the way to the hospital. Non-accessibility of government hospital within a short distance has caused immense damage to the affected families. In case where the family members have taken the affected farmers to the private hospital the expenditure was so abnormal. With sudden death of earning member, the family will be in wilderness in coping with the situation and ends up with additional debt burden.

**Table – 5.5**  
**Age Particulars of Family members of Deceased Farmers**

Sl. No.	District	Male	Female	0-5	6-15	16-45	46-60	60 and above	Total
1.	Ananthapur	123 (12.46)	135 (13.67)	36 (3.64)	110 (11.14)	64 (6.48)	30 (3.03)	18 (1.82)	258
2.	Guntur	130 (13.71)	132 (13.39)	32 (3.24)	112 (11.34)	58 (5.87)	32 (3.24)	28 (2.83)	262
3.	Warangal	108 (10.94)	112 (11.34)	23 (2.83)	85 (8.61)	72 (7.29)	25 (2.53)	15 (1.51)	220
4.	Mahabubnagar	145 (14.69)	102 (10.33)	40 (4.05)	64 (6.48)	52 (5.26)	46 (4.66)	45 (4.55)	247
	<b>Total</b>	<b>506 (51.26)</b>	<b>481 (48.73)</b>	<b>132 (13.37)</b>	<b>371 (37.58)</b>	<b>131 (13.27)</b>	<b>133 (13.47)</b>	<b>106 (10.73)</b>	<b>987</b>

*Source: Field study*

The composition of a family resembles the socio-economic position of that particular family. The age composition of the family members amply reflects the burden of the earning member. If the members of family are more in earning age the family will be relatively in better position. If

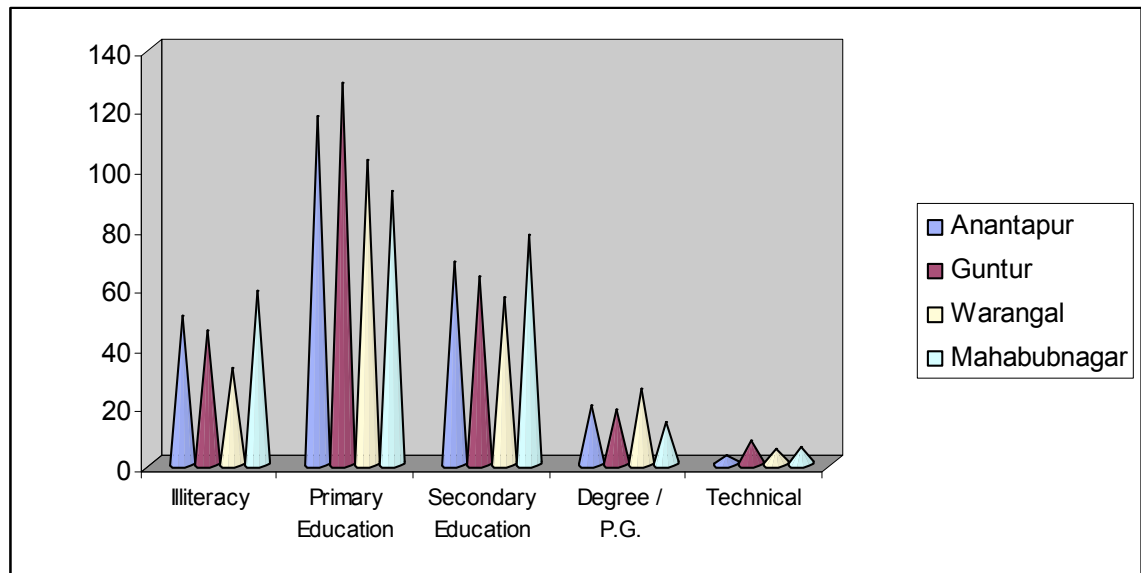
the members of the family are in school going age or/and in the age of senior citizen are more in number the dependency on earning member will be high and the burden will be more. In the sample districts the family composition (shown in table 5.5) of the deceased farmers is not at all conducive to provide better living to the family members. The per cent of population below 15 years and above 60 years put together comes to 61 per cent. This clearly indicates more commitments of the earning member, the head of the family. It is quite interesting to note that the per cent of family members in 16 - 45 years and 46 - 60 years age group are in similar level. As per the information given by the respondents and other family members, most of the members of the family in above mentioned two age groups are still working in agriculture and only a few of them diversified to other non-agricultural occupations. The trend pertaining to age composition is almost similar in all the sample districts with slight variation. The age composition of the sample households reflects that bringing up the children, medical expenditure on aged members and the marriage expenditure of either sister or daughter has added more pressure on the deceased farmer. In globalised consumption pattern the expenditure on entertainment, communication network and transportation also increasing day by day. The inconsistent income on the one hand and increasing financial stress on the other might caused distress and despair among the earning member and especially on head of the family and thus have created a situational movement to take an irretrievable drastic step.

**Table – 5.6**

**Literacy levels of Deceased Farmers’ Family Members**

Sl. No.	District	Illiteracy	Primary Education	Secondary Education	Degree / P.G.	Technical	Total
1.	Ananthapur	50 (5.06)	117 (11.85)	68 (6.88)	20 (2.02)	3 (0.13)	258
2.	Guntur	45 (4.55)	128 (12.96)	63 (6.38)	18 (1.82)	8 (0.81)	262
3.	Warangal	32 (3.24)	102 (10.33)	56 (5.67)	25 (2.52)	5 (0.50)	220
4.	Mahabubnagar	58 (5.87)	92 (9.32)	77 (7.80)	14 (1.41)	6 (0.60)	247
	<b>Total</b>	<b>185 (18.74)</b>	<b>439 (44.47)</b>	<b>264 (26.74)</b>	<b>77 (7.88)</b>	<b>22 (2.22)</b>	<b>987</b>

Source: Field study



Literacy levels of family members are interestingly quite different from that of deceased farmers. Among the deceased farmers illiteracy was

upto 41.75 per cent. But for the family members of sample households the illiteracy is just 18.74 per cent. It aptly shows that the second generation is very fond of attaining some sort of basic education to get better opportunity in non-farm activities. In all four sample districts, illiteracy ranged from 3.24 per cent to 5.87 per cent among the total population of the sample. 44.47 per cent of the family members to the total population of the sample households are either continuing or completed the primary education. 26.74 per cent are either continuing or completed secondary education. The remaining 10 per cent family members are in higher and technical education. The educational status of present rural generations has both positive and negative dimensions. In positive terms, attainment of basic education can play as a catalyst to get more awareness on occupational issues on one side and it can also give a way for diversified occupational mobility. On negative side educated youth without employment opportunity can prove counter-productive to the existing opportunity and overall development of the family. Presently unemployment among educated youth is on high note and causing more concern to the policy makers. As mentioned earlier Dr. M.S. Swaminathan aptly said that educated youth are reluctant to take up the agriculture as primary occupation. Without alternative employment opportunities on one side and inevitable dependency on unproductive agriculture on the other is thriving most of the family members of rural households into distress. It is high time for the policy makers to re-think on their policy framework to provide employment linked education at every stage.

**Table – 5.7**  
**Experience of the Deceased Farmers’ in Agriculture**

*(in years)*

Sl. No.	District	1-5	6-10	11-15	16-20	21-25	Total
1.	Ananthapur	2 (0.5)	3 (0.75)	7 (1.75)	40 (10.00)	48 (12.00)	100
2.	Guntur	0 (0.00)	18 (4.5)	24 (6.00)	32 (8.00)	26 (6.50)	100
3.	Warangal	2 (0.50)	34 (8.50)	27 (6.75)	27 (6.75)	10 (2.50)	100
4.	Mahabubnagar	3 (0.75)	35 (8.75)	22 (5.50)	22 (5.50)	18 (4.50)	100
	<b>Total</b>	<b>7 (1.75)</b>	<b>99 (24.75)</b>	<b>80 (20.00)</b>	<b>121 (30.25)</b>	<b>102 (25.5)</b>	<b>400</b>

*Source: Field study*

In Indian agriculture for majority of agrarian families, agriculture is a part of life, way of life and a tradition. For generations these families are depending on agriculture inspite of recurrent shocks. It is to be noted here that there has not been any significant and qualitative improvement in overall socio-economic well being of the farming community and more particularly that of small and marginal farmers. This is more strikingly visible in the areas of backward dry land regions where rainfed cultivation is predominant. Further highest number of suicides are being reported from these areas. When agriculture is in unorganised sector without any sustainable positive input - output markets prolonged experience in cultivation may not add any advantage to the farm households. It is so disturbing that even with 21 to 25 years of experience in cultivation the farmers are not in a position to come out from clutches of poverty. The data given in table 5.7 speaks that in study area out of 400 deceased farmers

25.5 per cent had 21 to 25 years of experience in agriculture. In spite of such rich experience the farmers are not in a position to take agricultural decisions judiciously. The market vagaries driving them to a point where there is no light at the end of the tunnel. Naturally as an individual gains more experience in particular occupation he reaches to a stage of stability and further basing on such stability he can reach new heights. But as far as agriculture is concerned the situation is quite disquieting that 35.2 per cent of the deceased farmers of the sample household had 16 to 20 years of experience in agriculture.

**Table – 5.8**  
**Major Causative Crop for the Suicide**

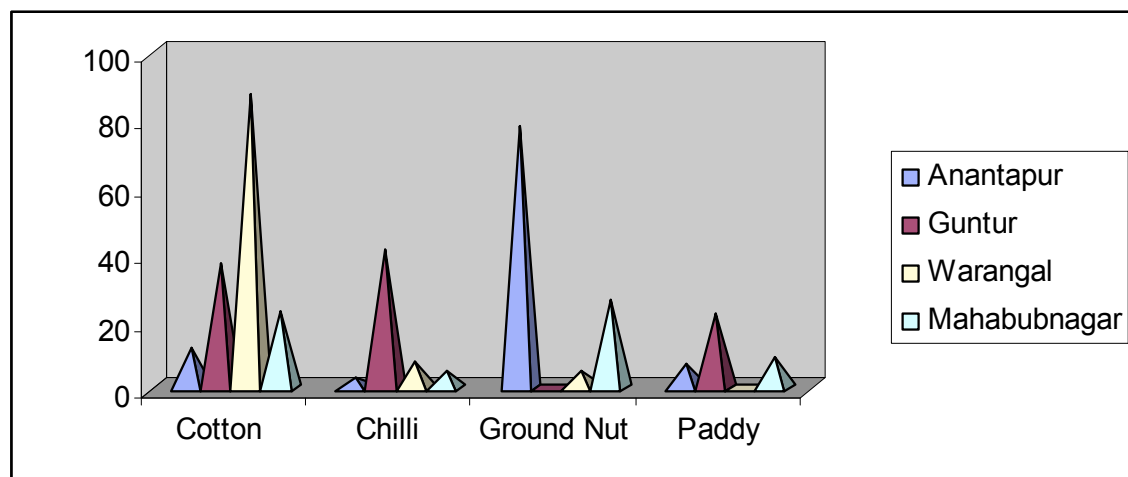
Commercialisation of Indian agriculture dates back to the advent of British era. But the real beginning of commercialisation in large scale has started from the days of green revolution. In order to improve the living conditions of farm households and boost up the exports commercialisation has been given much importance. Though at the macro level shift towards commercial crops might be slow, but at micro level most of the dry land farming is centred around commercial crops. The farmers of dry land regions with rainfed cultivation are taking commercial crops as their main cropping pattern. For obvious reasons commercial cropping is attached to high profitability on one side and high level risk and volatility on the other side. During the last 15 years or so the farmers of southern states are facing major risk with the cultivation of commercial crops and more particularly with the cultivation of cotton. Out of the 2.5 lakh farmers committed suicide across the country 60 per cent of such suicides were reported from

southern states. The agro-climatic conditions, the minimum support price (MSP), the market structure and input - output related other factors are affecting the cultivators. The cultivators of chillies, castor, groundnut, paddy, jute and wheat were also committed suicide in different parts of the country.

**Table – 5.8**  
**Major Causative Crop for the Suicide**

Sl. No.	District	Cotton			Chilli	Ground Nut	Paddy	Total
		BT	N-BT	Total				
1.	Ananthapur	7 (1.75)	5 (1.25)	12 (3.00)	3 (0.75)	78 (19.50)	7 (1.75)	100
2.	Guntur	23 (5.75)	14 (3.50)	37 (9.25)	41 (10.25)	0	22 (5.50)	100
3.	Warangal	55 (13.75)	32 (8.00)	87 (21.75)	8 (2.00)	5 (1.25)	0	100
4.	Mahabubnagar	37 (9.25)	23 (5.75)	60 (15.00)	5 (1.25)	26 (6.50)	9 (2.25)	100
	<b>Total</b>	<b>122 (30.50)</b>	<b>74 (18.50)</b>	<b>196 (49.00)</b>	<b>57 (14.25)</b>	<b>109 (27.25)</b>	<b>38 (9.50)</b>	<b>400</b>

Source: Field study





Cotton growers of Telangana in Andhra Pradesh, Vidarbha, parts of Karnataka, Madhya Pradesh and Chattisgarh and cultivators of coconut plantations in Kerala committed suicide in large scale and the tendency is still going on with little variation. As per the data given in table 5.8, among the 400 deceased farmers 49 per cent committed suicide because of cultivation of cotton. Further among 196 deceased farmers who cultivated cotton, more than 60 per cent were affected by B.T. cotton cultivation. Obviously the cultivation of cotton invariably forces the farmer to enter into the trap of indebtedness caused by high expenditure levels and low and uncertain returns and involvement of number of middlemen. The output market of the cotton is highly ruled by the global players. Frequent crop failure, heavy expenditure on seeds, pesticides and water on one side and volatile output market on the other are causing major damage to cotton cultivators. For many times spurious and adulterated seeds and pesticides also are playing havoc with the farmers. The output per acre in most of the cases is not to the level prescribed by the companies. With the high expectations on cotton prices the farmers with small and marginal holdings also are investing more and more on inputs and other operational activities by lending from the private financiers at exorbitant interest rates. The impact of cotton on deceased farmers households is more significant in Warangal and Mahabubnagar districts of Telangana. Out of 196 deceased farmers affected by cotton more than 70 per cent were from these two districts alone. Next to cotton, groundnut was the major causative crop for farmers' suicide in study area. The impact of groundnut was more in Ananthapur district. Out of 109 deceased farmers, for whose death groundnut was the major causative crop 71 per cent were from Ananthapur

district, followed by Mahbubnagar where cotton is third major crop. Cultivation of chillies also caused suicides. It was high in Guntur district where chilli is the major crop. Out of 57 farmers affected by chilli crop around 80 per cent were from this district only and remotely followed by Warangal, Mahabubnagar and Ananthapur districts respectively. Due to globalisation induced impacts cultivation of paddy also caused suicides in the study area. It is high in Guntur district where paddy is one of the important crops. Out of 38 deceased farmers affected by paddy nearly 70 per cent were from Guntur district. Whether it is cotton, groundnut, chilli or paddy the inconsistent and erratic import - export policy of the government has caused frequent ups and downs in market prices.

From the days of green revolution intensive cultivation and cultivation of commercial crops has eroded the fertility of cultivable land and caused immense damage to agricultural environment. The cultivators of food crops also are incurring huge amounts on methods of cultivation. The announcement of minimum support price (MSP) for agricultural products at a time when the output is out of the hands of farmers has been benefiting the traders and commission agents. Frequent U-turn policies of the government to open gates for exports and instantly for sudden imports have played with the fortunes of crores of farm households. Sudden imports when produce is with the farmers naturally dubs the market prices and sudden exports when the output is with traders and millers escalates the price of that particular produce. These frequent sudden decisions have ruined the farming community and benefited the middlemen much at the cost of farmers. Vandana Shiva has pointed it as one of the basic causative factors for farmers suicides in post globalisation period.

## **Table – 5.9**

### **Major and Subsidiary Causes for Suicidal Death.**

Dr. M.S. Swaminathan says that “something going wrong in Indian agriculture”. It is true that Indian agriculture is passing through serious distress. The distress is a result of many historical and contemporary factors. Whether British rule or green revolution or globalisation all these situations have had contributed and further aggravated crisis in Indian agriculture with ultimate suicides of the farmers. Always the Indian farmers willfully welcome new policies, new technologies and new stakeholders in pursuit of higher production and resultant food stocks to provide food security to the crores of population. The farmers with their dedication and hard work converted the Indian economy into a self sufficient economy in food production. But the reality is that in shaping up the agriculture they lost their pride and succumbed to the unplanned agrarian policies and too much intervention of global payers on one side and environmental catastrophe on the other. The intentional withdrawal of public investment in agriculture in the name of liberalisation and privatisation the farm households in general and small and marginal farmers, tenants and sharecroppers in particular were mercilessly left to the exploitation of market forces. The seed pesticide and finance nexus between multinational corporations and native traders has caused unprecedented shootup in input costs. The companies have been given full freedom to fix the input prices and to increase them whenever they want. In recent years the cost of these inputs increased by 100 per cent to 500 per centage points. The public

sector banking system just fulfilling one fourth of credit requirement of the farming community. The tenants and share croppers are out of the purview of institutional agencies. On irrigation front dependency on ground water has increased enormously. Gradual decline of public investment in irrigation has led the individual farmers to make and maintain their own arrangements for irrigation. In rain fed areas farmers are depending on open wells and bore-wells. Due to environmental degradation average rainfall across the country has taken the route of inconsistency. Excessive usage of ground water has led to faster depletion of the ground waters. Thus the dependency on bore-wells has become more and more costly. Obviously southern states and more particularly Andhra Pradesh and Tamilnadu known for tanks and lakes. The negligence on the part of policy makers in maintenance of these tanks irrigation under this source has decreased significantly over the years. With the absence of community tanks and other irrigational facilities gradually the responsibility of irrigation has fell on individual farmers. Apart from these factors ever increasing consumptional needs and low level returns from the occupation have resulted in high range of indebtedness among the farming community. All these factors culminated into a crisis where the farmers lost their hope in their betterment with agriculture.

**Table – 5.9**  
**Major and Subsidiary Causes for Suicidal Death**

Sl. No.	District	Major cause	Subsidiary Causes						
		Debt. Problems	Agri. Investment	Family Maintenance	Bore-well Failure	Dowry	Loan Repayments	Exp. on Education	Medical Expenditure
1.	Ananthapur	100	82	28	48	5	56	5	12
2.	Guntur	100	92	62	0	8	49	4	24
3.	Warangal	100	80	48	40	12	25	15	16
4.	Mahabubnagar	100	94	52	45	13	18	9	28

*Source: Field study*

The study area results shown in table 5.9 also substantiate the macro perspective of the agrarian crisis. Infact we may not separate the farmer or the tiller of the soil from main stream agriculture. Thus crisis in agriculture is nothing but crisis of farming community. The respondents of all the sample households stated that debt burden is the major cause for the suicidal death of deceased farmers. They also revealed the related / subsidiary causes for huge indebtedness of households. Among the related causes on average 87 per cent of suicidal deaths were caused due to agricultural investment only. It shows that the farmers are spending the loan amount basically on productive activities but the productive investment is not giving desired returns and causing distress among the farming community due to above mentioned many factors. In all four districts it has been stated as one of the basic related cause of suicidal death

of deceased farmer. Family maintenance has been pointed as another significant related cause by the family members. On average 47.5 per cent of the deceased farmers households were affected by expenditure on family maintenance. In present globalised scenario expenditure on health, education, entertainment, transportation and social obligations are on rise. For most of the small and marginal farmers maintenance of family itself is a major problem. In order to meet such expenditure also the farm households are knocking the doors of the financiers. Indebtedness of agricultural families is of cumulative one. Not only present debt but the debt amount proceeded from ancestors imposing huge burden on head of the family. 37 per cent of affected households have said loan repayment as one of the related causes for the suicidal death of their family member. In rain fed areas like Warangal and Mahabubnagar of Telangana region and Ananthapur in Rayalaseema region farmers are highly depending on bore-well cultivation. With uncertain rainfall and over exploitation of ground water the water levels are depleting so fastly. The result is in the form of recurrent failure of bore-wells. In most of the Telangana districts it is one of the major causative factor of suicidal deaths. In Warangal, Mahabubnagar and Nalgonda districts of Telangana region the farmers are on spree of erecting bore-wells one after the other due to recurrent failures. Subsequently with failure of every bore-well the indebtedness is mounting from thousand to lakhs of rupees. In Ananthapur, Warangal and Mahabubnagar districts on an average 44.3 per cent suicidal deaths of farmers were due to bore-well failure.

In modern days education and health care have become imminent and expensive with privatisation on unprecedented levels. Expenditure on both education and health has been stated as subsidiary causes of death of their family member by 28.25 per cent of the households. In spite of

protection from law and vigilance by the government authority, the dowry has been continuing as one of the serious social evils. Even in average family the payment of dowry is in lakhs of rupees. An average agriculturist may not perform the marriage of his sister / daughter without going for huge loan or by selling away part of the land. Both these factors causing distress among farmers and resulting in suicides. Nearly 10 per cent of suicidal deaths in sample area were caused due to dowry related indebtedness. All these factors cumulatively resulted in high indebtedness and without a way out from indebtedness on one side and economic, social and moral pressure from different corners on the other might forced the farmers to take the route of suicide.

**Table – 5.10**

**Agrarian Relations of the Deceased Farmers**

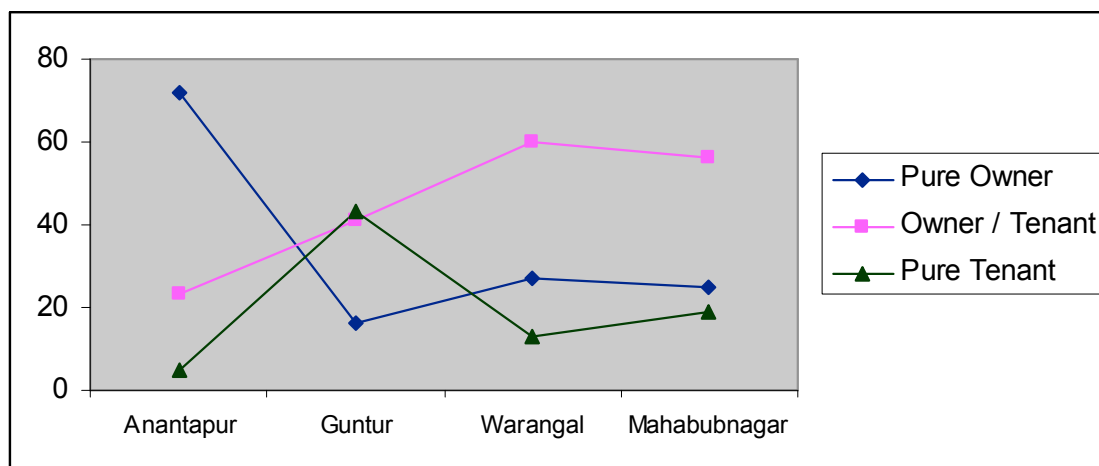
In Indian agriculture tenancy is a big problem since the days of British rule. The permanent land settlement system introduced during the British rule has created three important systems. They are Zamindar, Mahalwari and Ryothwari systems. First two systems created division in the ranks of agrarian relations in the form of land lords / owners, tenants and share croppers. Even the ryotwari system has unleashed the absentee landlordism and intensified the tenancy system. The abolishment of intermediaries and establishment of ryotwari system to entire country, has not solved problem of tenancy. The grand failure of land reforms and mounting pressure on land from the landless and the distress in agriculture have created an unprecedented situation where the percentage of farm households are decreasing and labour households are increasing year after

year. In our agriculture the category of owner cum tenant is sharply increasing. As 75 per cent of agricultural households belong to small and marginal households, the farmers with tiny lands taking the land for lease from those households which are not in a position to do cultivation on their own.

**Table – 5.10**  
**Agrarian Relation of the Deceased Farmers**

Sl. No.	District	Pure Owner	Owner / Tenant	Pure Tenant	Total
1.	Ananthapur	72 (18.00)	23 (5.75)	5 (1.25)	100
2.	Guntur	16 (4.00)	41 (10.25)	43 (10.75)	100
3.	Warangal	27 (6.75)	60 (15.00)	13 (3.25)	100
4.	Mahabubnagar	25 (6.25)	56 (14.00)	19 (4.75)	100
	<b>Total</b>	<b>140</b> <b>(35.00)</b>	<b>180</b> <b>(45.00)</b>	<b>80</b> <b>(20.00)</b>	<b>400</b>

Source: Field study





The field study results show that the tenancy problem is also on acute in three regions of Andhra Pradesh. But relatively it is higher in Guntur district. This category is more vulnerable in two ways. Firstly as small peasants the entitlement towards institutional credit is very meager. Secondly as tenant they are totally out of the gambit of credit structure. Another striking point is that they have to pay rent in advance and as well as invest thousands of rupees on agricultural operations by borrowing from private agencies. Not only in sample area but in entire Indian agriculture the tenancy is mostly in the form of oral tenancy. From the days of independence till to date the tenants are grossly unprotected. Thus the most of the suicides were reported from these owner cum tenants and pure tenant categories. In agriculturally rich Guntur district for most of the large sized land holders cultivation of the total land is a big problem and thus tenancy is in more striking manner. Within the Telangana region also tenancy cultivation is on large scale due to high magnitude of landlessness. A sharp decline in rural occupations also is the causative factor for high intensity of tenancy. With the commercialisation of agriculture and recent trends of globalization the land rents are sky ricketing. In cotton growing areas of southern states the land owners are demanding advance rent without concern to the outcome of the agriculture of that particular season. In Indian tenancy system the tenants have to bare the entire investment expenditure on agricultural activities. With a hope on higher production and remunerative price these tenants are spending huge amounts on agriculture by borrowing from private financiers and money lenders. If every thing goes well also the returns from commercial crops are not keeping pace with escalating expenditure levels. In our agriculture frequent droughts are very common. Inconsistent and scanty rainfall on one side and

high input costs, spurious seeds and pesticides and market imperfections on the other are frequently putting the farmers in dire straits. The tenant farmer with ultimate dependency on private financiers may not come out of the vicious circle of indebtedness.

It is evident from table 5.10 that in sample study most of the deceased farmers were either owner cum tenants or pure tenants. Out of 400 deceased farmers 65 per cent were of these two categories. The tenants among deceased farmers were more in Guntur district. Out of 100 deceased farmers households studied in this district 84 per cent belong to these two categories and closely followed by Mahabubnagar district with 75 per cent and Warangal district with 73 per cent. In Guntur district pure tenants among deceased farmers were more with more than 50 per cent. In owner cum tenant category the affected households were more in Warangal district. Further in Ananthapur district pure owners were more among the deceased farmers. Out of 100 deceased farmers households taken for the study 72 per cent affected families belong to pure owner category. As Ananthapur district is highly drought prone and shadow area, cultivation itself is a challenge to the farming community. Thus here leasing-out the land is also a big problem. In Warangal district since the days of Nizam rule cotton cultivation has been predominant with the existence of number of Ginning mills and erstwhile Azamjahi mill. Cotton cultivation has become a part of tradition in most parts of Warangal district. For a division in cropping pattern between food and non-food crops taking the land for lease is a common phenomena in this district. On the other in Mahabubnagar district where the migration is on high note over the decades lease-in and lease-out are quiet common.

### **Table – 5.11**

#### **Land Particulars of the Deceased Farmers**

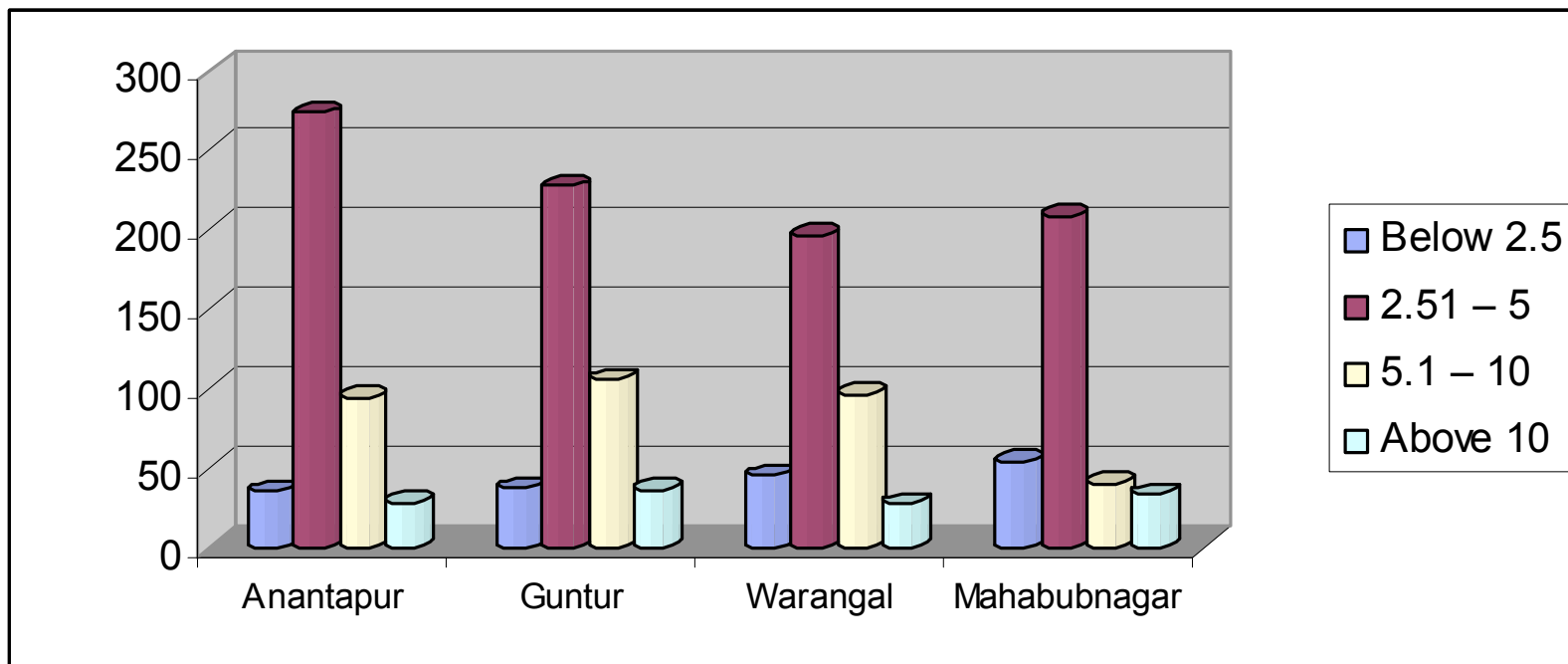
Land is a social, economic and psychological attachment to the Indian farmers over the centuries. It is the symbol of status and pride to the rural households. Through the generations it is the livelihood, an art of living and a part of life to the farm households. The farm households' emotional attachment with the land is such that they can go to any extent except leaving the land and cultivation. Whether it is remunerative or non remunerative, full time occupation or seasonal occupation, getting the returns or encountering the risks they are with the land, they will be with the land and ready to face the challenge and even ready to do the sacrifice. For most of the agricultural families agriculture is their joy, their sorrow, their life, their death and every thing. As per the latest NSSO survey only 27 per cent of the agricultural families are reluctant to continue in agriculture. It is a bare fact that inspite of lot of risk and uncertainty, sheer negligence by policy makers and unabated suicides in the post globalization scenario agriculture is still the main occupation of more than 55 per cent of the population.

**Table – 5.11**  
**Land Particulars of the Deceased Farmers' Households**

District	Ananthapur		Guntur		Warangal		Mahabubnagar		Total	
	No. of Farmers	Land	No. of Farmers	Land	No. of Farmers	Land	No. of Farmers	Land	No. of Farmers	Land
Below 2.5	19 (4.75)	35 (2.28)	24 (6.00)	37 (2.41)	29 (8.25)	45 (2.83)	36 (9.00)	54 (3.52)	108 (27.00)	171 (11.14)
2.51 – 5	70 (17.50)	273 (17.79)	58 (14.50)	227 (14.79)	57 (14.25)	196 (12.77)	55 (13.75)	208 (13.55)	240 (60.00)	904 (58.93)
5.1 – 10	9 (2.25)	94 (6.12)	15 (3.75)	105 (6.84)	12 (3.00)	96 (6.25)	6 (1.50)	40 (2.60)	42 (10.50)	335 (21.83)
Above 10	2 (0.50)	28 (1.82)	3 (0.75)	36 (2.34)	2 (0.50)	27 (1.76)	3 (0.75)	33 (2.15)	10 (2.50)	124 (8.03)
<b>Total</b>	<b>100 (25.00)</b>	<b>430 (28.03)</b>	<b>100 (25.00)</b>	<b>405 (26.40)</b>	<b>100 (25.00)</b>	<b>364 (23.72)</b>	<b>100 (25.00)</b>	<b>335 (21.83)</b>	<b>400 (100.00)</b>	<b>1535 (100.00)</b>

Source: Field study

### Land Particulars of the Deceased Farmers' Households



As mentioned earlier 75 per cent of agricultural households are small and marginal farm households. The field study results at micro level presented in table 5.11 substantiates this fact. In the sample area 87 per cent of the deceased farmers were from small and marginal farmer households. Among the 108 marginal farmers who committed suicide Mahabubnagar tops the list with 36 deceased farmers. The lowest number of deceased farmers of this category were from Ananthapur district with 19 farmers and Warangal and Guntur districts are in between these two positions with 29 and 24 deceased farmers respectively. All the sample districts put together 27 per cent out of 400 deceased farmers were from the marginal farmers category. The most vulnerable category of the farmers who worstly effected by the agrarian crisis are small farmers. Many field studies have established that small farmers with reasonable land holding are taking up challenges of innovative agriculture, opting commercial crops, investing huge amounts and exposing themselves to the onslaught of market imperfections and distress driven suicides. Within the study area this is the category which has badly effected by unfavourable agricultural situation. Most of the households of this category belong to BC communities. The socio-economic and cultural living styles of these social strata are quite specific. These social communities with their rural artisan background were forcibly pushed towards the agriculture in the name of modernisation and globalization. These sections of the society with relatively larger family size, more aspirations and ambitions throwing their heart and soul into agriculture. This particular section is now the up coming section in rural stratification and transformation. Most of these families struggling in between the limited income and unlimited expenditure levels. Among the 400 deceased farmers

60 per cent were from small farmers category. Ananthapur district tops the list of deceased farmers of this category with 70 out of 240 and closely followed Guntur with 58 and Warangal and Mahabubnagar each with 55 deceased farmers respectively. As far as medium and large holding size categories are concerned obviously the farmers will have more avenues to combat the crisis. The households of these categories will have higher shock absorbing capacity than small and marginal farmers. Thus naturally inspite of mounting agrarian problems and indebtedness, farmers of this category are relatively under control group. But it is not to say that the farmers of these categories are totally in safer zone. The field study results show that 13 per cent of total deceased farmers were from these medium and large sized land holding categories. Relatively the Guntur district tops the list, followed by Ananthapur and Mahabubnagar respectively.

**Table – 5.12**

**Irrigated Land Particulars of the Deceased Farmers Households**

Irrigation is the potential input that influences the cropping pattern, production, productivity and income generation capacity of the agricultural families. The sources of irrigation in general are canals, tanks, lakes and wells. Canal irrigation has its own limitations due to major irrigation policy of the Government. Gradually, irrigation under tanks is declining very sharply in Southern states, where tank irrigation is the major source of irrigation. In Telangana region tanks are known for irrigating more than 75 per cent of cultivable lands. Now it has reduced to double digit. Whatever the irrigation the wet land is getting in Telangana districts and drought prone Rayalaseema districts particularly in Ananthapur district is coming through tanks. But the gross negligence on maintenance of tanks and illegal occupation of tank areas for construction and other non-agricultural purposes has reduced the potential of tank irrigation. Now it is the well irrigation that has been major source of irrigation in most of the Southern states including the three districts of study area i.e. Warangal, Mahabubnagar and Ananthapur. As mentioned in earlier chapters, the rain fed dry land cultivation is around 60 per cent at macro level.



**Table – 5.12**  
**Irrigated Land Particulars of the Deceased Farmers' Households**

Land size (Acres)	Ananthapur			Guntur			Warangal			Mahabubnagar			Total		
	Dry	Wet	Total	Dry	Wet	Total	Dry	Wet	Total	Dry	Wet	Total	Dry	Wet	Total
Below 2.5	23 (1.49)	12 (0.78)	35 (2.28)	15 (0.97)	22 (1.43)	37 (2.41)	27 (1.76)	18 (1.17)	45 (2.93)	34 (2.21)	20 (1.30)	54 (3.52)	99 (6.45)	72 (4.69)	171 (11.14)
2.51 – 5	161 (10.49)	112 (7.20)	273 (17.39)	115 (7.49)	112 (7.30)	227 (14.79)	116 (7.56)	80 (5.21)	196 (12.77)	121 (7.88)	87 (5.67)	208 (13.55)	513 (33.44)	391 (25.48)	904 (58.93)
5.1 – 10	62 (4.04)	32 (2.08)	94 (6.12)	20 (1.30)	85 (5.54)	105 (6.84)	56 (3.65)	40 (2.60)	96 (6.25)	21 (1.36)	19 (1.23)	40 (2.60)	159 (10.36)	176 (11.47)	335 (21.83)
Above 10	18 (1.17)	10 (0.68)	28 (1.82)	26 (1.69)	10 (0.68)	36 (2.34)	10 (0.68)	17 (1.10)	27 (1.76)	9 (0.58)	24 (1.56)	33 (2.15)	63 (4.10)	61 (3.97)	124 (8.08)
<b>Total</b>	<b>264</b> <b>(17.20)</b>	<b>166</b> <b>(10.82)</b>	<b>430</b> <b>(28.03)</b>	<b>176</b> <b>(11.47)</b>	<b>229</b> <b>(14.93)</b>	<b>405</b> <b>(26.400)</b>	<b>209</b> <b>(13.62)</b>	<b>155</b> <b>(10.10)</b>	<b>364</b> <b>(23.72)</b>	<b>185</b> <b>(12.05)</b>	<b>150</b> <b>(9.77)</b>	<b>335</b> <b>(21.83)</b>	<b>834</b> <b>54.36)</b>	<b>700</b> <b>(45.64)</b>	<b>1534</b>

Source: Field study

In the study area except Guntur, the dry land cultivation is also around 55 to 65 per cent. Except Guntur, the other districts do not have canal irrigation to their lands. In all categories of land holding sizes the dry land cultivation is higher than the wet land in these three districts. It is to state that around 55 to 65 per cent of the land of sample households is on the mercy of monsoons. With dry land cultivation entirely depending on bore-well cultivation, the private (individual farmers) investment has been increasing enormously. Dependency on ground water for irrigation limiting the cropping pattern to certain crops. Gradually monoculture has taken place of multiculture. Prior to the green revolution the dry land farmers usually cultivated coarse grains which are less risky though less remunerative. The post green revolution and then post-globalisation periods have induced and intensified the cultivation of commercial crops in dry lands. Presently cotton, chillies, groundnut and castor and so on are the dominant crops of dry land areas. In the study area also first three crops are highly dominant crops. In dry land cultivation, where irrigation is highly uncertain and soil is less fertile, selection of a particular crop is also a challenging task for the farming community. Cultivation of commercial crops in these dry lands invariably induces the farmers to supplement with more doses of fertilizers and pesticides to get more yield per acre. It is also increasing the input costs of the farmers to a greater extent. It is this form of cultivation, the basic reason for high indebtedness among farmers of dry land regions and resultant suicides across the country. The magnitude is particularly high in southern parts of the country. The field results in sample area also show the similar trend. In Warangal, Mahabubnagar and Ananthapur districts the major reason for suicides by the farmers is due to dry land cultivation and that to commercial crops. In these districts including Guntur, cultivation of

paddy in wet lands also supplemented the course of distress. In Guntur district primarily both paddy and chillies had caused the distress among farmers and particularly to tenants. Cultivation of paddy also has become challenging to the farmers due to high input costs including labour costs. The foregoing analysis shows that farmers under dry and wet land cultivation and that of both food and non-food crops are facing the problem of high indebtedness and resultant distress. But the intensity is more in dry land cultivation. In the study area deceased farmers cultivated more on dry lands.

**Table – 5.13**  
**Cropping Pattern of the Deceased Farmers**

Cropping pattern implies the share of cultivated area under different crops. Cropping pattern in an economy reflects the food habits and export capacity of the country. It also influences the economic status of farm households. In other way the food habits of the population, income and profit motivations of the farmers influence the cropping pattern. Obviously the physical factors such as climate, rainfall, type of soil, fertility of the soil availability of inputs, size of land, availability of irrigation, government policy, the relative price of output, global agrarian scenario, income and profit motivation and above all the dynamism of the farmers influences the cropping pattern. Over a period of 60 years the cropping pattern between food and non-food crops has changed from 78 : 22 ratio to 64 : 36. Basically the green revolution has prompted the farming community to take up commercial crops. Further the period of globalization has given ample thrust to the commercialisation of agriculture. The green revolution has benefited

well irrigated regions, crops like wheat, paddy and cotton and favoured big land holders of 10 acres and above. The other side of green revolution on one side and further accentuation due to the spurt of globalisation on other side have unleashed capitalistic mode of agriculture which warrants heavy investment. Irrespective of the land holding size each and every household went on spending huge amounts on agriculture by borrowing at higher interest rates from non-institutional agencies. The farm households whether cultivating paddy, wheat, cotton, chillies, groundnut, sugarcane or coconut have suffered much with increase in investment on one side and inconsistent output and its price level on the other. It has virtually pauperised lakhs of farm households. It ultimately dragged them into debt trap which further resulted in large scale suicides. As presented earlier, more than 60 per cent farmers suicides were reported from cotton growing southern states. It is not to undermine the gravity of the situation in Punjab, Utter Pradesh, West Bengal, Orissa and other states where the farmer suicides were reported alarmingly. As far as the field area is concerned cotton, paddy, chillies and ground are the major causative crops for the large scale suicides of the farmers in these districts. Especially in Telangana region cotton is the major causative crop for the suicidal deaths of the farmers. The overall situation also states that highest number of farmers suicides were caused by cultivation of cotton crop.

**Table – 5.13**

**Cropping pattern of the Deceased Farmers (Crop – Wise)**

District	Kharif		Rabi		Total	
	Cotton		Cotton		Cotton	
	No.of Farmers	No.of Acres	No.of Farmers	No.of Acres	No.of Farmers	No.of Acres
Ananthapur	22	68				
Guntur	18	58				
Warangal	64	139				
Mahabubnagar	45	108				
<b>Total</b>	<b>149</b> <b>(37.25)</b>	<b>373</b> <b>(24.31)</b>				

*Source: Field study*

Season	Kharif		Rabi		Total	
Crop	Paddy		Paddy		Paddy	
Respondents	No.of Farmers	No.of Acres	No.of Farmers	No.of Acres	No.of Farmer	No.of Acres
Ananthapur	18	87	3	28	21	115
Guntur	37	201	18	110	55	311
Warangal	10	76	7	52	17	128
Mahabubnagar	18	78	2	18	20	96
<b>Total</b>	<b>83</b> <b>(20.75)</b>	<b>442</b> <b>(28.81)</b>	<b>30</b> <b>(7.5)</b>	<b>208</b> <b>(13.55)</b>	<b>113</b> <b>(28.25)</b>	<b>650</b> <b>(42.37)</b>

*Source: Field study*

Season	Kharif		Rabi		Total	
Crop	Chilli		Chilli		Chilli	
Respondents	No.of Farmer	No.of Acres	No.of Farmer	No.of Acres	No.of Farmer	No.of Acres
Ananthapur	5	39	3	18	8	57
Guntur	32	72	20	50	52	122
Warangal	16	68	7	30	23	98
Mahabubnagar	8	37	4	20	12	57
<b>Total</b>	<b>61</b> <b>(15.25)</b>	<b>216</b> <b>(14.08)</b>	<b>34</b> <b>(8.5)</b>	<b>118</b> <b>(7.69)</b>	<b>95</b> <b>(23.75)</b>	<b>334</b> <b>(21.77)</b>

Source: Field study

Season	Kharif		Rabi		Total	
Crop	Ground Nut		Ground Nut		Ground Nut	
Respondents	No.of Farmers	No.of Acres	No.of Farmers	No.of Acres	No.of Farmer	No.of Acres
Ananthapur	55	236	20	80	75	316
Guntur	13	74	7	41	20	115
Warangal	10	81	5	47	15	128
Mahabubnagar	29	112	12	50	41	162
<b>Total</b>	<b>107</b> <b>(26.75)</b>	<b>503</b> <b>(32.79)</b>	<b>44</b> <b>(11.0)</b>	<b>218</b> <b>(14.21)</b>	<b>151</b> <b>(37.75)</b>	<b>721</b> <b>(47.00)</b>

Source: Field study

As per the data shown in table 5.13 out of 400 deceased farmers, 37.25 per cent (149) of deceased farmers committed suicides by succumbing to the indebtedness caused by cotton cultivation. Out of such 149 deceased farmers 73 per cent were from Warangal and Mahabubnagar districts alone. Next to cotton, groundnut has caused major damage to the sample households. 107 deceased farmers of the total households committed suicide due to cultivation of groundnut. In Ananthapur it is the crop, that primarily caused the suicides. More than 50 per cent of the farmer suicides due to groundnut cultivation were reported from this district. Next to Ananthapur, the households of Mahabubnagar district were badly affected by suicide of their family members due to cultivation of groundnut. Next to cotton and groundnut, cultivation of paddy also given a rude shock to the farm households in sample districts. Out of 400 deceased farmers 20 per cent (83) were committed suicide due to cultivation of paddy. It was highest in Guntur district with around 50 per cent of suicides. Among 83 deceased farmers affected by paddy cultivation next to Guntur are from Ananthapur, Mahabubnagar and Warangal districts respectively? In Guntur district, cultivation of chillies also did a lot of damage to the sample households. Out of 61 affected families around 50 per cent were again from Guntur district. Next to Guntur farm households of Warangal district were highly affected with the cultivation of chillies. The overall picture encompasses that cultivation of commercial crops has resulted in farmer suicides in sample districts. In each district all these crops had their impact on farmers suicides with varied intensity. Infact cultivation of a particular crop by a particular farmer is not a sin at all. Naturally the farmers go along with their fellow farmers in selection of cropping pattern. Usually they select high priced crop with an expectation of income and profit maximization and take up the risk

of cultivating commercial crops. When general agrarian economy is in crisis cultivation of any crop without sufficient capital base virtually lands the farmers in high indebtedness. When there is persistent volatility in output prices of each and every crop uncertainty looms large on the fate of the farmers' socio-economic status. When there is no way out to come out of the crisis some of the farmers may take unwarranted decision.

#### **Table – 5.14**

##### **Average yield and price particulars**

There is a direct relationship between yield of a particular crop cultivated by the farmers and their living conditions. In a highly globalized and capitalised present agrarian situation obviously the farmer has to get expected yield to meet growing productive and consumptional expenditure. With the input market in the hands of multinationals, a gradual withdrawal of government expenditure into agriculture and partial fulfillment of agricultural lending by commercial banks the farmers in general, small and marginal farmers in particular are landing at the door steps of private financiers. The expenditure on irrigation and its maintenance and expenditure on health, education and related aspects are invariably forcing the farmers to opt risky but high income generating commercial crops. However in present agrarian situation whether it is food crop or non food crop the expenditure levels are more and expectations also more. If these two are mismatched the farmer will be in a fix. In present globalization led agrarian crisis the large scale farmer suicides are due to this mismatch between expected income and expenditure levels. In cotton belt of southern states where suicides are at alarming rate the price received by the farmer



per acre output is much less than the production cost. On average the cost of cultivation of cotton per acre ranges around Rs.20,000/-. In normal situation the expected output ranges between 5-8 quintals. But the actual yield ranges around 5-6 quintals. In a given situation if the climate is not conducive, the seed or pesticide proved as spurious and adulterated in practice, the price of output is volatile the actual yield will be much lesser than expected yield. In most of the rainfed tracts of cotton belt of southern states either one factor or the culmination of all these factors are frequently playing havoc with the farming community.

**Table – 5.14.1**  
**Average Yield and Price Particulars of District**  
**(Ananthapur)**

*Acre/Qtl.*

Sl. No.	Crop	Normal yield	Actual Yield	Expected Price	Received Price	Difference
1	Cotton	5 – 7	5.15	2250	1400	850
2	Paddy	5 – 6	6.06	2500	1350	850
3	Chilli	3 – 4	6.11	1100	750	350
4	Ground nut	5 – 8	5.24	1500	900	600

*Source: Field study*

**Table – 5.14.2**  
**Average yield and price Particulars of District**  
**(Guntur)**

*Acre/Qtl.*

Sl. No.	Crop	Normal yield	Actual Yield	Expected Price	Received Price	Difference
1	Cotton	6 – 8	6.09	2000	1200	800
2	Paddy	6 – 8	7.14	2000	1500	500
3	Chilli	8 – 10	10.08	1200	750	450
4	Ground nut	6 – 8	5.25	1350	650	700

*Source: Field study*

**Table – 5.14.3**  
**Average yield and price Particulars of District**  
**(Warangal)**

<i>Acre/Qtl.</i>						
<b>Sl. No.</b>	<b>Crop</b>	<b>Normal yield</b>	<b>Actual Yield</b>	<b>Expected Price</b>	<b>Received Price</b>	<b>Difference</b>
1	Cotton	5 – 6	5.09	2500	1250	1250
2	Paddy	5 – 6	5.19	2800	1450	1350
3	Chilli	6 – 8	8.29	1200	850	350
4	Ground nut	5 – 8	4.24	1500	900	600

*Source: Field study*

**Table – 5.14.4**  
**Average yield and price Particulars of District**  
**(Mahabubnagar)**

<i>Acre/Qtl.</i>						
<b>Sl. No.</b>	<b>Crop</b>	<b>Normal yield</b>	<b>Actual Yield</b>	<b>Expected Price</b>	<b>Received Price</b>	<b>Difference</b>
1	Cotton	5 – 7	5.06	2000	1300	700
2	Paddy	5 – 6	5.12	2500	1250	1250
3	Chilli	3 – 4	6.22	1050	750	300
4	Ground nut	5 – 8	5.29	1400	900	600

*Source: Field study*

The field study results presented in tables 5.14.1 to 5.14.4 shows that in all the four districts the actual yield of majority crops was less than the probable yield except chillies. In Ananthapur, Warangal and Mahabubnagar districts the average actual yield of cotton was similar at five quintals per acre but less than the probable yield. In Guntur district the actual yield of cotton was just more than the other districts at six quintals per acre but less than probable yield expected at six to eight quintals. For paddy the probable yield range was between five to six quintals. Again in Ananthapur, Warangal and Mahboobnagar districts the actual yield was same at five quintals per acre in Warangal and Mahbubnagar districts. In Ananthapur the actual yield was six quintals. Again in Guntur the actual yield was higher than the other districts with seven quintals per acre. For chillies and groundnut also the probable yield was high in Guntur district. The actual yield of chillies was the highest in Guntur district at ten quintals per acre, followed by Warangal district with eight quintals. In Mahboobnagar and Ananthapur the actual yield of chillies was more than the probable yield at six quintals each in two districts. As far as groundnut is concerned the actual yield was similar with five quintals per acre in three districts except Warangal district where it was four quintals. But the probable yield was between five to eight quintals in three districts except with six to eight quintals in Guntur. In Ananthapur and Mahbubnagar actual yield of chillies was more than the probable yield and in remaining two districts i.e. Guntur and Warangal the actual yield was at the upper limit of probable yield with ten and eight quintals per acre respectively. With regard to the expected price and received price of the deceased farmers in all the sample districts and for all the crops taken for study the received price was less than the expected price. For cotton the difference between expected price and received price ranged between

Rs.1250 and Rs.700. The highest difference was in Warangal and the lowest in Mahabubnagar district. For paddy the difference between expected price and received price was highest in Warangal district with Rs.1350 and the lower in Guntur district with Rs.450 and the lowest with Rs.300 in Mahbubnagar district. Regarding groundnut the highest difference between expected and received price was Rs.700 in Guntur district. In all other three districts the difference between these two prices was similar with Rs.600.

**Table – 5.15**

**Average agricultural expenditure of Deceased Farmers**

Introduction of green revolution has significantly increased the cost of production in agriculture. Introduction of HYV seeds, application of fertilizers and pesticides, progressive use of mechanisation, dependency on ground water and its resultant over use of electricity and seasonal shortage of labour have increased the expenditure levels of the farmers phenomenally. Further the globalisation accentuated the situation with input market going into the hands of multi-national corporations. Genetically engineered seeds, BT seeds were progressively replaced the indigenous seeds and hybrid seeds. Application of pesticides, herbicides, germicides and so has been on rise. The multi national corporations promoted their business with a linkage with local dealers and agents. These companies with their agents thronged into advertisement market and lured farmers with high productivity and thus more income. Infact the nexus between multinational corporations and local traders pertaining to seeds, fertilizers and pesticides created a situation where the farmer has to ponder around that vicious circle.

**Table – 5.15.1**  
**Average Agricultural Expenditure of the Deceased Farmers of District**  
**(Ananthapur)**

(Acre/Rupees)

<b>Crop</b>	<b>Seeds</b>	<b>Fertilizers</b>	<b>Organic Manure</b>	<b>Pesticides</b>	<b>Bio-Pesticides</b>	<b>Bullock</b>	<b>Tractor</b>	<b>Irrigation</b>	<b>Electricity</b>	<b>Labour</b>	<b>Total</b>
Cotton	1500.00	2300.16	-	4300.17	-	940.26	500.12	1350.21	900.91	3300.03	14091.96
Chilli	1150.11	1000.11	-	4000.19	-	1200.00	850.16	900.13	300.19	3500.19	12901.96
Paddy	1500.16	1800.23	-	1200.18	-	800.00	1100.21	700.61	900.30	1200.11	9201.80
Ground Nut	900.13	1500.51	-	900.20	-	750.00	800.26	800.31	600.02	1800.00	8051.43

*Source: Field study*

**Table – 5.15.2****Average agricultural expenditure of the deceased Farmers of District  
(Guntur)**

(Acre/Rupees)

<b>Crop</b>	<b>Seeds</b>	<b>Fertilizers</b>	<b>Organic Manure</b>	<b>Pesticides</b>	<b>Bio-Pesticides</b>	<b>Bullock</b>	<b>Tractor</b>	<b>Irrigation</b>	<b>Electricity</b>	<b>Labour</b>	<b>Total</b>
Cotton	1300.50	3600.21	1000.60	6000.30	1000.11	1100.11	800.01	900.60	600.20	2600.11	18902.75
Chilli	1200.20	4000.12	900.21	8000.10	600.12	1600.40	700.70	2500.80	800.90	3600.11	23903.66
Paddy	1200.10	1300.70	1500.70	1500.03	500.14	1000	1000.60	500.90	600.80	1800.10	10904.07
ground Nut	950.00	1400.60	400.90	1000.30	700.16	800.90	900.09	1000.10	400.00	2000.20	9553.25

*Source: Field study*

**Table – 5.15.3**  
**Average agricultural expenditure of the deceased Farmers of District**  
**(Warangal)**

(Acre/Rupees)

<b>Crop</b>	<b>Seeds</b>	<b>Fertilizers</b>	<b>Organic Manure</b>	<b>Pesticides</b>	<b>Bio-Pesticides</b>	<b>Bullock</b>	<b>Tractor</b>	<b>Irrigation</b>	<b>Electricity</b>	<b>Labour</b>	<b>Total</b>
Cotton	1600.15	3000.50	-	4000.06	-	500.50	600.09	1500.06	1000.01	2500.01	14701.38
Chilli	1500.00	4500.06	-	5800.29	-	900.04	700.01	1000.01	1600.06	3600.02	19600.49
Paddy	800.40	1800.10	-	1500.10	-	600.80	400.02	1100.80	800.80	2000.60	9003.62
Groundnut	550.10	1400.20	-	1300.80	-	800.60	500.30	800.16	300.07	500.80	6153.03

*Source: Field study*



**Table – 5.15.4**  
**Average agricultural expenditure of the deceased Farmers of District**  
**(Mahabubnagar)**

(Acre/Rupees)

<b>Crop</b>	<b>Seeds</b>	<b>Fertilizers</b>	<b>Organic Manure</b>	<b>Pesticides</b>	<b>Bio-Pesticides</b>	<b>Bullock</b>	<b>Tractor</b>	<b>Irrigation</b>	<b>Electricity</b>	<b>Labour</b>	<b>Total</b>
Cotton	1600.10	2700.10	-	3000.50	-	800.50	600.90	2000.02	1200.63	2000.50	13903.25
Chilli	1400.60	3000.30	-	3200.70	-	1000.6	1300.30	2200.04	1000.62	2800.10	15903.88
Paddy	1000.80	2000.08	-	1000.00	-	500.70	1000.40	1500.80	600.91	2000.80	9604.49
Groundnut	950.90	2300.90	-	1500.80	-	600.80	400.60	900.60	1000.19	1900.90	9555.69

*Source: Field study*

As per the statistics given in 5.15.1 to 5.15.4 the average expenditure levels in all four districts of the study area are in substantial form. With regard to cotton the minimum and maximum expenditure per acre ranged between Rs.12900 to Rs.15832 excluding rent paid by the tenants. The minimum average expenditure was incurred by the deceased farmers of Warangal district and maximum by deceased farmers of Guntur district. For cultivation of cotton in all sample districts expenditure on pesticides was substantially more than other inputs. It was high again in Guntur district with Rs.6000/- per acre and the lowest expenditure was incurred by the deceased farmers of Mahabubnagar district. Next to pesticides, expenditure on fertilizers was more in three districts except Ananthapur. But next to fertilizers, expenditure on labour was more in all sample districts and it ranged from Rs. 2000/- to 3300/- and the districts with these two positions were Mahaboobnagar and Ananthapur. In Mahaboobnagar, Ananthapur and Warangal districts expenditure on irrigation was significantly high due to higher dependency on ground water because these districts have greater volume of rainfed cultivation. The deceased farmers were spent relatively huge amounts on maintenance of their cattle, machinery and electrical / diesel pump-sets. Such expenditure was not confined only to the cotton but spread over to other crops of study area. For chillies also the expenditure on pesticides was relatively much higher than other inputs. Again the deceased farmers of Guntur district were spent highest of Rs.8000/- on pesticides and the lowest amount of Rs.3200/- was incurred by deceased farmers of Mahabubnagar district. Once again the expenditure on fertilizers was next to pesticides in three districts except Ananthapur where expenditure on labour was in second place. Expenditure on fertilizers for chillies was highest in Warangal with Rs.4,500/- and lowest in Mahabubnagar with Rs.1,000/-.

Expenditure on labour was in third position in three districts except Ananthapur. For cultivation of paddy the deceased farmers spent relatively more amount on fertilizers than on pesticides. But when we consider expenditure on other inputs expenditure on labour was relatively more in Guntur and Warangal districts and almost equal to the expenditure on fertilizer. The expenditure incurred on fertilizers for cultivation of paddy was less in Guntur district because of, usage of organic manure to some extent in this district. The deceased farmers incurred an amount of Rs.1,500/- per acre on an average on organic manure in this district. With regard to cultivation of groundnut the expenditure on fertilizers and labour was relatively higher in Ananthapur district. And in Guntur district the expenditure on labour was relatively higher than the expenditure on other inputs. In Warangal and Mahabubnagar districts expenditure on fertilizers was relatively more. As stated earlier the expenditure on purchase of seeds has its own significance. As the farmers have no other options but to purchase company seeds the expenditure on seeds was relatively higher than expenditure on other inputs except expenditure on pesticides, fertilizers and labour in majority districts of the study area. The seed cost bore by cotton growers was relatively more than other crops in entire sample area. The deceased farmers of Warangal and Mahabubnagar districts incurred more expenditure at Rs.1,600/- per acre on cotton and the lowest expenditure of Rs.550/- was spent on groundnut in Warangal district. The Guntur district has its own significance in usage of inputs where expenditure on organic manure and bio-pesticides was in sizeable amount.

**Table – 5.16**  
**Average Expenditure on Erection of Bore-wells by the**  
**Deceased Farmers**

The growth and prosperity of agriculture and in turn socio economic well being of farm households depends on availability of irrigational water. During British regime the irrigation development was grossly neglected and was confined to one or two provinces. Since the beginning of planned economic development of independent India the government has initiated many irrigation projects across the important rivers. The multipurpose projects constructed during the era of Pandit Nehru are the important sources of major irrigation even today. The successive governments are giving priority to medium, minor and micro irrigation projects also. During 2004 the UPA government came up with mega project to irrigate lakhs of acres of rainfed regions under AIBF. In most of the southern states tank irrigation was one of the major sources. The government has given top priority to the major and medium irrigation projects and neglected traditional minor irrigation sources such as tanks, lakes, wells and open wells. Particularly in Telangana region the strong irrigation network in the form of tank irrigation was dismantled with a blind eye given by the government. The projects across Krishna and Godavari rivers have been partially fulfilling the irrigational needs of Karimnagar, Warangal, Nalgonda and Khammam districts. Except that entire Telangana region is frequently a drought prone region. Thus onus is on ground water sources. Frequent and inconsistent rain fall and excessive usage of ground water resulting in faster depletion of ground water. Most of the tanks, which have historical prominence including Pakhala, Ramappa, Laknavaram of Warangal district have been meted with

step motherly treatment. Even the clearance of silt has not been taken up over the years and thus water storage capacity has declined sharply and with that the ayacut under many such tanks decreased significantly. With the absence of appropriate alternative source of irrigation the farmers of rainfed regions are invariably depending generally on common wells and more particularly on tube wells. Further most of the farmers erecting their bore-wells without scientific approval from geologist. Obviously for that matter in a weakest extension network prevailed in Indian agriculture the availability of services of geologist and water management department is a remote chance. As Telangana districts are in the deccan plateau and Ananthapur district is in rocky and shadow region the failure of bore-wells has been a common phenomena.

**Table – 5.16.1****Average Expenditure on Erection of Bore-well by the Deceased Farmers  
(Ananthapur District)**

(Expenditure per Bore-well)

<b>Number of Bore-wells / Wells</b>	<b>No. of Farmers</b>	<b>Tube wells</b>	<b>Depth (in feet)</b>	<b>Yielding inches</b>	<b>Failed Bore-wells</b>	<b>Insured</b>	<b>Expenditure on erection Rs.</b>	<b>Maintenance Rs.</b>	<b>Total</b>
0 – 1	38	38	150 – 200	1.5 inches	28	No	26000	1500	27500
2	14	28	250 – 300	2.0 inches	14	No	46000	2000	48000
3	6	18	350 – 400	2.5 inches	15	No	80000	2500	82500
4	3	12	> 400	> 3 inches	8	No	90000	3500	93500

*Source: Field study*

**Table – 5.16.2**  
**Average Expenditure on Erection of Bore-well by the deceased Farmers**  
**(Guntur District)**

(Expenditure per Bore-well)

<b>Number of Bore-wells / Wells</b>	<b>No. of Farmers</b>	<b>Tube wells</b>	<b>Depth (in feet)</b>	<b>Yielding inches</b>	<b>Failed Bore-wells</b>	<b>Insured</b>	<b>Expenditure on erection Rs.</b>	<b>Maintenance Rs.</b>	<b>Total</b>
1	30	30	150 – 200	1.5 inches	10	No	20000	1000	21000
2	8	16	200 – 250	2.0 inches	6	No	48000	1500	49500
3	6	18	250 – 300	2.5 inches	4	No	65000	2500	67500
4	3	12	> 300	> 3 inches	4	No	100000	3500	103500

*Source: Field study*

**Table – 5.16.3**  
**Average Expenditure on Erection of Bore-well by the deceased Farmers**  
**(Warangal District)**

(Expenditure per Bore-well)

<b>Number of Bore-wells / Wells</b>	<b>No. of Farmers</b>	<b>Tube wells</b>	<b>Depth (in feet)</b>	<b>Yielding inches</b>	<b>Failed Bore-wells</b>	<b>Insured</b>	<b>Expenditure on Erection Rs.</b>	<b>Maintenance Rs.</b>	<b>Total</b>
1	32	32	150 – 200	1.5 inches	22	No	35000	1500	36500
2	16	32	200 – 250	2.0 inches	12	No	46000	2500	48500
3	5	15	250 – 300	2.5 inches	6	No	50000	3000	53000
4	3	12	> 300	> 3 inches	4	No	95000	5000	100000

*Source: Field study*



**Table – 5.16.4**  
**Average Expenditure on Erection of Bore-well by the deceased Farmers**  
**Mahabubnagar District**

(Expenditure per Bore-well)

<b>Number of Bore-wells / Wells</b>	<b>No. of Farmers</b>	<b>Tube wells</b>	<b>Depth (in feet)</b>	<b>Yielding inches</b>	<b>Failed Bore-wells</b>	<b>Insured</b>	<b>Expenditure on Erection Rs.</b>	<b>Maintenance Rs.</b>	<b>Total</b>
1	41	41	150 – 200	1.5 inches	36	No	40000	1500	41500
2	12	24	250 – 300	2.0 inches	15	No	68000	2000	70000
3	3	9	350 – 400	2.5 inches	9	No	85000	2500	87500
4	4	16	> 400	> 3 inches	10	No	100000	3000	103000

*Source: Field study*

The information presented in tables 5.16.1 to 5.16.4 shows that in study area 47 to 61 per cent of deceased farmer households are depending on bore-wells. In Ananthapur district 61 farmers erected 96 bore-wells. Out of that 38 farmers erected single bore-well 14 farmers two, six farmers three and remaining three farmers four bore-wells each. The rate of failure of bore-wells was such staggering that nearly 60 per cent of bore-wells on average were failed due to either wrong selection of the place or subsequent dropout in water table. The average expenditure on erection of bore-well ranged from a minimum of Rs.26,000/- to a maximum of Rs.90,000. The maintenance cost also high with an average range of a minimum of Rs.1500 to maximum of Rs.3000/-. In Warangal district 58 farmers erected 91 bore-wells with an average expenditure of Rs.35,000 to 95,000. In this district nearly 50 per cent bore-wells were failed due to the reasons explained earlier. The maintenance cost of bore-well by the deceased farmers of Warangal district was relatively higher than the other districts and it ranged between Rs.1500 and Rs.5,000 per bore-well. In Mahabubnagar district 60 farmers erected 90 bore-wells with an expenditure level ranged from a minimum of Rs.40,000 to maximum of one lakh. The maintenance cost was ranged from Rs.1500 to 3000. In this district around 80 per cent of bore-wells failed due to obvious reasons.

The over all picture shows that erection of bore-wells by the deceased farmers was in highest preposition and they spent thousands of rupees on erection and maintenance of bore-wells. But the recurrent failure of bore-wells has not only increased the expenditure levels but also the indebtedness in an alarming way. In many cases in Telangana districts the number of bore-wells erected were more than the number of households of a particular

village. This has happened more particularly in Nalgonda district of Telangana region. Further in some of the villages single farmers constructed more than 24 bore-wells in a space of one acre land. This also happened in Ramannapet Mandal of Nalgonda district. It is the sad saga of Telangana farmers that frequent failure of bore-wells and erection of one bore-well after the other has resulted in mounting indebtedness and subsequent farmers suicides.

**Table – 5.17**

**Average Expenditure on Household maintenance by Deceased Farmers**

In present globalisation lead spree of consumerism the maintenance of households expenditure has become herculean task. The globalised economic activity enduring middle class and even poorer section of the society on many counts. With the entry of second and third generation population the expenditure pattern has changed phenomenally. The awareness on health and education on one side and maintenance of cell phones, TV sets, two wheelers and expenditure on liquor and smoking have become fashion and as well as part of life.

**Table – 5.17.1**  
**Average expenditure on Household maintenance by Deceased Farmers**  
**(Ananthapur District)**

(Yearly)

<b>General Expenditure Levels</b>	<b>Food Items</b>	<b>Clothing</b>	<b>Educa-tion</b>	<b>Health</b>	<b>Liquor</b>	<b>Tobacco</b>	<b>Construc-tion</b>	<b>Transport</b>	<b>Electricity</b>	<b>Communi-cation</b>	<b>Social Functions</b>	<b>Disputes</b>
Nil Expenditure	-	-	12	-	10	21	2	-	-	-	-	65
Below 10000	88	100	77	79	80	79	59	100	99	100	100	17
10001 – 25000	12	-	7	12	10	-	22	-	-	-	-	18
25001 – 35000	-	-	2	6	-	-	6	-	1	-	-	-
35001 – 45000	-	-	2	3	-	-	11	-	-	-	-	-
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

*Source: Field study*

**Table – 5.17.2**  
**Average expenditure on Household maintenance by Deceased Farmers**  
**(Guntur District)**

(Yearly)

<b>General Expenditure Levels</b>	<b>Food Items</b>	<b>Clothing</b>	<b>Educa-tion</b>	<b>Health</b>	<b>Liquor</b>	<b>Tobacco</b>	<b>Construc-tion</b>	<b>Transport</b>	<b>Electricity</b>	<b>Communi-cation</b>	<b>Social Functions</b>	<b>Disputes</b>
Nil Expenditure	-	-	-	-	22	45	10	-	-	-	-	49
Below 10000	72	89	75	78	70	54	43	100	100	100	100	51
10001 – 25000	20	11	17	12	7	1	30	-	-	-	-	-
25001 – 35000	8	-	4	9	1	-	3	-	-	-	-	-
35001 – 45000	-	-	4	1	-	-	14	-	-	-	-	-
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

*Source: Field study*

**Table – 5.17.3**

**Average expenditure on Household maintenance by Deceased Farmers  
(Warangal District)**

(Yearly)

<b>General Expenditure Levels</b>	<b>Food Items</b>	<b>Clothing</b>	<b>Educa-tion</b>	<b>Health</b>	<b>Liquor</b>	<b>Tobacco</b>	<b>Construc-tion</b>	<b>Transport</b>	<b>Electricity</b>	<b>Communi-cation</b>	<b>Social Functions</b>	<b>Disputes</b>
Nil Expenditure	-	-	-	-	-	-	2	-	-	-	-	95
Below 10000	99	100	94	92	99	98	85	99	100	100	100	05
10001 – 25000	1	-	4	4	1	2	9	1	-	-	-	-
25001 – 35000	-	-	1	2	-	-	1	-	-	-	-	-
35001 – 45000	-	-	1	2	-	-	3	-	-	-	-	-
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

*Source: Field study*

**Table – 5.17.4**  
**Average expenditure on Household maintenance by Deceased Farmers**  
**(Mahabubnagar District)**

(Yearly)

<b>General Expenditure Levels</b>	<b>Food Items</b>	<b>Clothing</b>	<b>Educa-tion</b>	<b>Health</b>	<b>Liquor</b>	<b>Tobacco</b>	<b>Construc-tion</b>	<b>Transport</b>	<b>Electricity</b>	<b>Communi-cation</b>	<b>Social Functions</b>	<b>Disputes</b>
Nil Expenditure	-	-	39	-	11	11	18	1	16	7	2	63
Below 10000	99	100	57	94	85	89	54	91	84	93	98	37
10001 – 25000	1	-	2	2	4	-	17	8	-	-	-	-
25001 – 35000	-	-	1	2	-	-	9	-	-	-	-	-
35001 – 45000	-	-	1	2	-	-	2	-	-	-	-	-
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

*Source: Field study*

As far as average household maintenance expenditure of deceased farmers of the study area given in tables 5.17.1 to 5.17.4 is concerned majority of the deceased farmers spent below Rs.10,000 on all items taken for the study. The number of deceased farmers spent on different items within the range of below Rs.10,000 differs from one district to other district with certain similarities. For example on clothing, transportation, electricity, communication and social functions almost all the deceased farmers incurred below Rs.10,000. On food items 72 per cent of the deceased farmers from Guntur 88 per cent from Ananthapur 99 per cent from Warangal and Mahabubnagar district spent below Rs.10,000. 12 deceased farmers from Ananthapur, 20 from Guntur, one each from Warangal and Mahabubnagar districts spent between Rs.10,001 to 25,000 on food items and in Guntur district eight deceased farmers spent between Rs.25,001 to 35,000 on food. On clothing, except Guntur, in remaining three districts 100 per cent deceased farmers spent below Rs.10,000 on clothing. On education highest expenditure incurred by majority of the deceased farmers was below Rs.10,000. It was highest in Warangal district with 94 and lowest in Mahabubnagar with 57 per cent of the deceased farmers. In Guntur district some of the deceased farmers spent more than Rs.10,000 on education. 17 per cent of such farmers in this district spent between Rs.10,0001 to 25,000, and the four deceased farmers spent between Rs. 25,001 to 35,000 and the remaining four spent between of Rs.35,001 to 45,000. In Ananthapur, Warangal and Mahabubnagar districts the expenditure on education crossed Rs.10,000 stigma but very few were in higher ranges of expenditure. In Ananthapur two and in Warangal and Mahabubnagar districts one each spent on education at the highest ranges of expenditure levels taken for the study. With regard to expenditure on health in Ananthapur and Guntur districts the



expenditure pattern was similar. In Guntur and Ananthapur districts 78 and 79 per cent deceased farmers spent below Rs.10,000. 12 deceased farmers each in these two districts spent between Rs.10,000 to 25,000, nine and six farmers spent between Rs.25,001 to 35,000 and one and three deceased farmers spent between Rs.35,001 to 45,000 from these districts respectively. On the other the expenditure on health in Warangal and Mahabubnagar also had similarities. 92 farmers in Warangal and 94 in Mahabubnagar incurred below Rs.10,000, four from Warangal and two from Mahabubnagar spent in the range between Rs.10,001 to 25,000, two each from these two districts spent between Rs.25,001 to 35,000 and another two each between Rs.35,001 to 45,000 on health care respectively.

The first two parameters discussed so far reflect the expenditure on necessities. As far as education and health concerned the expenditure on them resembles the thrust for human development. In globalized socio-economic setup awareness on health and education is increasing more and more. In knowledge based societies the expenditure on these two items is essential for human development. Irrespective of levels of income and the social strata each and every family spending substantial amount on health and education. The field results also substantiating the general tendency. The statistics put forth so far aptly shows that not only expenditure on health and education but transportation, communication, electricity and social obligations have had become more imperative. In order to move with the globalised socio-economic situation, the households spending huge amounts to fulfill varied desires and ambitions of their family members. The variation in consumption pattern provided by Lorenz curve is working within Indian context. The field study also reflects the same. In comparison to earlier generations the expenditure on parameters discussed above increased significantly for the present

generations. The expenditure on liquor and tobacco has become a common phenomena in most of the families with few exceptions. Government of Andhra Pradesh depending on liquor sales for its budgetary support over the last two decades. The “belt shops” in each and every nook end corner of the village are spreading the addiction towards liquor. In sample districts 70 to 99 per cent of deceased farmers incurred less than Rs.10,000 on average on liquor. Non-addicted families towards liquor and tobacco were more in Guntur district. Some of the families also spent more than Rs.10,000 on liquor and tobacco. Expenditure on construction also formed as one of the major part of expenditure. 80 to 98 per cent of deceased farmer households spent on construction of their house. Over the last two decades under Indira Awas Yojana (IAY) and Rajiv Gruha Kalpa the government has been sanctioning house sites and providing credit on subsidy basis to construct the house. In majority cases the construction hasn't been completed with subsidised credit support. Thus the households are spending huge additional amounts to complete the construction by borrowing from private financiers at higher interest rates. With that most of the households are landing on high indebtedness cathedral.

In the study area all the districts put together 127 deceased farmers spent more than Rs.10,000 on construction activity. Among them 49 deceased farmers spent more than Rs.25,000/- on construction. Expenditure on disputes on one or the other issue also causing strain to the farmers. In some of the cases minor disputes also leading to the prolonged litigations and huge expenditures. With regard to expenditure on disputes, the deceased farmers of Guntur district spent around Rs.10,000. More than 50 per cent of the deceased farmers of the district were involved in the disputes. Next to Guntur relatively more number of deceased farmers from Mahabubnagar spent huge amounts to

fight / settle their disputes. In Anathapur among the 35 deceased farmers who incurred expenditure on disputes 51 per cent spent between Rs.10,000 to 25,000 and 49 per cent less than Rs.10,000. Among two Telangana districts expenditure on disputes was high in Mahabubnagar with 37 deceased farmers who spent less than Rs.10,000 and in Warangal district only five deceased farmers incurred less than Rs.10,000 to settle their disputes.

**Table – 5.18**

**Average Income Particulars of the Deceased Farmers**

For any occupation returns from it is the benchmark of success / failure of the endeavour. Obviously in any occupation expected income induces the interest towards the occupation. If the income realised at the end is nearer to the expectation it will be encouraging to the individual to go for further investment and reap the maximum benefits out of it. In Indian agriculture over the generations returns from agricultural activities are not so encouraging due to many inherent reasons. The agriculture is an unorganized sector and the farmer is not in a position to fix the price for his produce. The output price of agricultural commodities is primarily depending on the market forces and global players. The tiller of the soil is not getting the remunerative price. Most of the small and marginal farmers selling out their produce in immediate post harvest period and the price at that time will be at the lowest of that season. Due to high indebtedness the farmers are going for distress sales at throw away price. When the price of agricultural products scales up the produce may not be in the hands of farmers but with the middlemen. Thus the net income of the farmers is usually below to the expenditure levels.

**Table – 5.18.1**  
**Average Income of the Deceased Farmers’**  
**(Ananthapur District)**

(In Rupees)

<b>Income Levels</b>	<b>As a Farmer</b>	<b>As a Labour</b>	<b>Non-Agriculture</b>
Below 10000	16	42	36
10001 – 20000	23	2	3
20001 – 30000	28	1	2
30001 – 40000	24	-	-
40001 – 50000	3	-	-
50001 – Above	6	-	-
<b>Total</b>	<b>100</b>	<b>45</b>	<b>41</b>

*Source: Field study*

**Table – 4.18.2**  
**Average Income of the Deceased Farmers’**  
**(Guntur District)**

(In Rupees)

<b>Income Levels</b>	<b>As a Farmer</b>	<b>As a Labour</b>	<b>Non-Agriculture</b>
Below 10000	2	86	43
10001 – 20000	12	14	9
20001 – 30000	23	-	5
30001 – 40000	12	-	1
40001 – 50000	23	-	-
50001 – Above	18	-	-
<b>Total</b>	<b>100</b>	<b>100</b>	<b>58</b>

*Source: Field study*

**Table – 5.18.3**  
**Average Income of the Deceased Farmers’**  
**(Warangal District)**

(In Rupees)

<b>Income Levels</b>	<b>As a Farmer</b>	<b>As a Labour</b>	<b>Non-Agriculture</b>
Below 10000	12	43	18
10001 – 20000	33	2	3
20001 – 30000	28	1	1
30001 – 40000	10	-	-
40001 – 50000	8	-	-
50001 – Above	9		
<b>Total</b>	<b>100</b>	<b>46</b>	<b>22</b>

*Source: Field study*

**Table – 5.18.4**  
**Average Income of the Deceased Farmers’**  
**(Mahabubnagar District)**

(In Rupees)

<b>Income Levels</b>	<b>As a Farmer</b>	<b>As a Labour</b>	<b>Non-Agriculture</b>
Below 10000	20	37	24
10001 – 20000	21	6	1
20001 – 30000	26	1	3
30001 – 40000	14	-	-
40001 – 50000	8	-	-
50001 – Above	11	-	-
<b>Total</b>	<b>100</b>	<b>43</b>	<b>27</b>

*Source: Field study*

Statistics given in 5.18.1 to 5.18.4 speaks that in study area average income levels of deceased farmers amply reflects that most of the farmers earned less than 10,000 on average per annum. Out of 400 sample 80 per cent of deceased farmers earned less than Rs.40,000 per annum as a farmer. Within the 20 per cent who earned more than Rs.40,000 per annum majority of them were from Guntur district. In rainfed dominated areas of Ananthapur, Warangal and Mahabubnagar districts bulk of the deceased farmers earned below Rs.30,000 per annum. As per the field results 67 per cent of farmers in these districts earned less than Rs.30,000 income. As a labourer income earned by deceased farmers of Ananthapur, Warangal and Mahabubnagar was so measurable that 43 to 46 per cent of farmers could earn additional income not more than Rs.10,000 per annum. Only three to seven per cent deceased farmers of these three districts earned between Rs.10,000 to 30,000. In Guntur district as a labourer entire deceased farmers earned below Rs.20,000 per annum, but 86 per cent of them earned less than Rs.10,000. As far as the income from non-agricultural activities, 58 deceased farmers from Guntur district earned income in the range of Rs.10,000 to 30,000. But 80 per cent of them could earn below Rs.10,000. In all other three districts the income earned from non-agricultural activities was below Rs.30,000. But again here most of the deceased farmers could earn less than Rs.10,000 per annum.

**Table – 5.19**

**Source of the Debt of Deceased Farmers' Households – District wise**

In the economic history of Indian agriculture indebtedness among agricultural households has its own saga. The Royal commission on agriculture aptly remarked that “the Indian farmers born with debt live with debt die with debt and inherits the debt”. It is true for the Indian farmers not only in yester years but also in present situation. Since the independence the GOI has concentrated on estimation of rural credit and its reorganisation. All India rural credit and investment surveys of time to time and various rounds of NSSO revealed the extent of indebtedness among agricultural households. It has been estimated that nearly one third of rural households and that to agricultural households are in debt. With the progress of the economy in various fronts, the income levels as well as expenditure levels are increasing simultaneously. Due to certain inherent limitations increase in income levels are relatively much lower to increase in expenditure levels. The commercialisation of agriculture has increased expenditure on agricultural inputs significantly. The consumptional expenditure is also increasing phenomenally due to westernized consumptional instinct among Indians and more particularly among Indian youth and middle class. Such vehement consumerism not only confined to cities but also to the rural areas. The speedy expansion of communication network across the country flaring up the consumerism. In most of the rural areas we may not find protected / safe drinking water but can get cool drinks.

With inconsistent inflow of income and ever increasing expenditure on production and consumptional needs, the farm households in general and

the small and marginal in particular are invariably depending on borrowing from different sources. In the field study 100 per cent households of deceased farmers borrowed from both institutional and non institutional sources. In spite of liberalised banking system the banking sector is not in a position to provide credit to a greater extent to the agricultural sector. At macro level the entire commercial bank network could provide one fourth credit needs of agricultural families. The co-operative sector is a failed story with little exceptions. A recent study done by The Hindustan Times, Investments India Economic Times reveals that 70 per cent of rural credit has been provided by money lenders and institutional agencies provided only 21 percent.

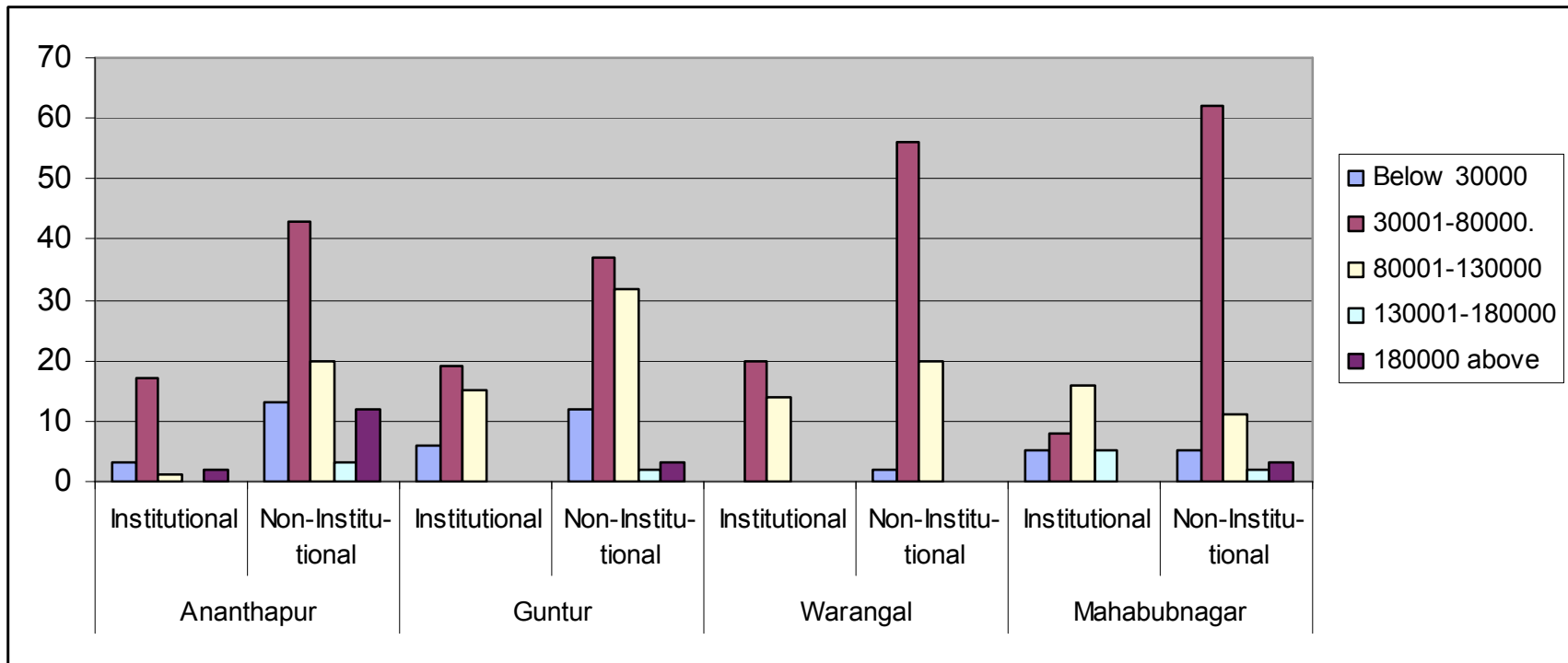


**Table – 5.19**  
**Sources of Debt of the Deceased Farmers' Households**  
**(District wise)**

Debt	Ananthapur			Guntur			Warangal			Mahabubnagar			Total			Grand Total
	Institutional		Non-Institutional	Institutional		Non-Institutional	Institutional		Non-Institutional	Institutional		Non-Institutional	Institutional		Non-Institutional	
	Co-op. Banks	Commercial Banks	Money Lenders	Co-op. Banks	Commercial Banks	Money Lenders	Co-op. Banks	Commercial Banks	Money Lenders	Co-op. Banks	Commercial Banks	Money Lenders	Co-op. Banks	Commercial Banks	Money Lenders	
Below 30000	3	-	13	6	-	12	-	-	2	5	-	5	14	-	32	46
30001-80000	7	10	43	7	12	37	12	8	56	-	8	62	26	38	198	262
80001-130000	1	-	20	5	10	32	10	4	20	14	2	11	30	16	83	129
130001-180000	-	-	3	-	-	2	-	-	-	5	-	2	5	-	7	12
180000 above	2	-	12	-	-	3	-	-	-	-	-	3	2	-	18	20
<b>Total</b>	<b>13</b>	<b>10</b>	<b>91</b>	<b>18</b>	<b>22</b>	<b>86</b>	<b>22</b>	<b>12</b>	<b>78</b>	<b>24</b>	<b>10</b>	<b>83</b>	<b>77</b>	<b>54</b>	<b>336</b>	<b>467</b>

*Source: Field study*

### Sources of Debt of the Deceased Farmers' Households



Even in the field study the situation presented in table 5.19 is similar to that at macro level. Institutional agencies provided only 27 per cent credit to the deceased farmers' households. The remaining 73 per cent credit was provided by non-institutional agencies i.e., money lenders. Among the 400 sample households more than 50 per cent were indebted to both institutional and non-institutional agencies to the tune of Rs.30,000 to Rs.80,000 on average. Out of 260 deceased farmers who were indebted in this range of amount more than 75 per cent were indebted to non-institutional agencies. This tendency was similar across the districts. Another major number of deceased farmers i.e. 129 were indebted upto 1.30 lakhs and out of them nearly 65 per cent were indebted to money lenders again. Within this range of indebtedness deceased farmers were more from Guntur district and they were indebted to above mentioned two agencies. Within the range of 1.30 lakhs to 1.80 lakhs debt all together 12 deceased farmers borrowed from both the agencies, but more from money lenders. Among the total deceased farmers 20 farmers were indebted to the lending agencies over and above 1.80 lakhs rupees and that to 90 per cent of them to money lenders.

The above analysis clearly emphasises that in all the debt ranges taken for the study predominance of money lenders was quite visible. In four sample districts irrespective of acreage and social status the deceased farmers obviously relied on money lenders for credit. This is mainly due to imperfection in institutional agricultural credit market in India. Not only small and marginal farmers but farmers of medium and large sized holdings are also depending on money lenders for their productive and consumptional needs. In our Indian agriculture prevalence of tenant cultivation is on high

note in many states. In Andhra Pradesh nearly 40 per cent of cultivation is in the hands of either tenants or share croppers. The tenants at large are not in a position to get institutional credit support. Thus they have to depend basically on money lenders. Tenant cultivation is also one of the basic causes. In our Indian agriculture it is a common phenomenon that inspite of long term continuance in agriculture sector, the farmers still carry on their productive and consumptional activities with fresh borrowings even before clearance of old debt. In areas of dry land cultivation the situation is more alarming. Among four sample districts except Guntur, the other three districts are known for dry land cultivation. In these districts dependency on ground water for irrigation is quite high and thus expenditures are more. Most of the farmers and tenants of the study area are not in a position to come out of clutches of indebtedness. Both natural and manmade disasters are aggravating the indebtedness and thus leading to large scale suicides. The four districts taken for the study are highly affected with farmers suicides due to the reasons discussed above.

## **Table – 5.20**

### **Outstanding Credit of Deceased Farmers' Households**

High incidence of indebtedness among the farming community has been identified as the major causative factor for the agrarian distress and its resultant farmers suicides in India. With increasing expenditures and inability to repay the old debt, the outstanding credit is mounting for the farming community in general. Even before clearing the old debt, the farm households are going for fresh loans to meet both productive and consumptional needs. Insufficient capital formation on one side and recurrent crop failures on the other and further non-remunerative agriculture are resulting in huge surge in outstanding loans. Irrespective of social strata and land holding size majority of the farmers are encountering the indebtedness with high magnitude to money lenders, who performs many activities such as lender, trader and commission agent. The global agents with a nexus with local traders having their stronghold on input and output markets and thus farmers lingering around loan further loan – outstanding and indebtedness circle.

**Table – 5.20.1**  
**Outstanding Credit of the Deceased Farmers' Households**  
**(Ananthapur District)**

Ranges	Institutional			Non-Institutional		
	BF	AF	Total	BF	AF	Total
Below 30000	3	-	3	10	15	25
30001-80000	13	5	18	43	48	91
80001-130000	3	2	5	20	35	55
130001-180000	2	2	4	3	7	10
180000 above	1	1	2	10	12	22
<b>Total</b>	<b>22</b>	<b>10</b>	<b>32</b> <b>(13.60)</b>	<b>86</b>	<b>117</b>	<b>203</b> <b>(86.40)</b>

*Source: Field study*

**Table – 5.20.2**  
**Outstanding Credit of the Deceased Farmers' Households**  
**(Guntur District)**

Ranges	Institutional			Non-Institutional		
	BF	AF	Total	BF	AF	Total
Below 30000	6	-	6	10	18	28
30001-80000	7	2	9	32	39	71
80001-130000	5	2	7	25	25	50
130001-180000	3	2	5	20	24	44
180000 above	6	6	12	5	8	13
<b>Total</b>	<b>27</b>	<b>12</b>	<b>39</b> <b>(15.91)</b>	<b>92</b>	<b>114</b>	<b>206</b> <b>(84.10)</b>

*Source: Field study*

**Table – 5.20.3**  
**Outstanding Credit of the Deceased Farmers’ Households**  
**(Warangal District)**

Ranges	Institutional			Non-Institutional		
	BF	AF	Total	BF	AF	Total
Below 30000	12	2	14	2	7	9
30001-80000	8	4	12	56	60	116
80001-130000	2	2	4	20	30	50
130001-180000	2	1	3	6	9	15
180000 above	-	-	-	2	4	6
<b>Total</b>	<b>24</b>	<b>09</b>	<b>33</b> <b>(14.41)</b>	<b>86</b>	<b>110</b>	<b>196</b> <b>(85.59)</b>

*Source: Field study*

**Table – 5.20.4**  
**Outstanding Credit of the Deceased Farmers’ Households**  
**(Mahabubnagar District)**

Ranges	Institutional			Non-Institutional		
	BF	AF	Total	BF	AF	Total
Below 30000	12	10	22	3	14	17
30001-80000	14	8	22	45	62	107
80001-130000	12	2	14	11	29	40
130001-180000	3	2	5	2	16	18
180000 above	-	-	-	2	3	5
<b>Total</b>	<b>41</b>	<b>22</b>	<b>63</b> <b>(25.20)</b>	<b>64</b>	<b>123</b>	<b>187</b> <b>(74.80)</b>

*Source: Field study*

The field study results of all four districts shown in tables 5.20.1 to 5.20.4 depict that the entire sample households have had bearing outstanding credit for both institutional non-institutional agencies in both the periods i.e. before and after periods of suicidal death of the farmers. Obviously the outstanding loan amount which was due to non-institutional agencies particularly to money lenders is significantly high in our study area as it is prevailing at macro level. The predominance of money lenders is so high that 74.8 to 86.4 per cent of the households have had outstanding loan to be paid to them. Loan outstanding to the money lenders is highest in Ananthapur district with 86.4 per cent and lowest in Mahabubnagar district with 74.8 per cent and in between these two ends Warangal and Guntur districts are slightly behind Ananthapur district with 85.59 and 84.1 per cent of outstanding respectively. In all the districts high out standing loan amount is between 30,000 to 80,000 and 80001 to 130000. Out of the total households which have had the outstanding credit to the non-institutional agencies 73.23 per cent households are having outstanding credit in these two ranges. For obvious reasons, the poor households require credit with regular intervals for both production and consumptional purposes. They highly depend on money lender-cum-trader-cum agents for inputs like seeds, pesticides and fertilizers and for consumptional needs. As the purchase is based on credit, the lender charges more price than MRP and includes additional charges. In our field study, may such instances were reported by the households. This practice, they witnessed prior to death of their bread-earner and also after the tragedy. The 'modus-operandi' of present lender-cum-trader-cum-agent is more penetrative and exploitative than the traditional money lenders. In present globalized socio-economic structure financial needs of every household increased phenomenally with



multiplicity. With more clever practices in their role from lender to commission agent (Atdidar) in the form of advance loans and a tie-up with the farm produce with a fixed price decided by them, regular contract with farmers and less stress on sureties they have become ultimate approachable source of credit. Linkup with farm produce is the weakest linkage in the entire episode. It is this bonding that forcing the majority farm households to sell their produce at throw-away-price. It is landing them again into debt trap. With the commercialisation of agriculture the role and impact of these agents increased significantly. Particularly the farm households cultivating the cotton and chillies have to apply pesticides regularly and thus they have to rush to the trader frequently (sometimes every week) stationed at district / Mandal headquarter. Due to inability to hold cash the farm households have to depend on credit to purchase pesticides till the final stage of the crop. With little or nil advance payment they provide pesticides / fertilizers on credit. As the picking of cotton begins, the trader starts pressurising the farmer to clear the debt. Due to weak financial and bargaining capacity of the farmers, the trader cleverly bind over them on purchase of seeds and inputs for future cultivation. The farm households thus invariably enters into the dragon of nexus of the lender-cum-trader-cum-commission agent and will be in their clutches for ever just as a fly rounds the light and perishes. The outstanding continuous for ever, indebtedness goes on mounting and by succumbing to the pressure the farmers ending their life abruptly.

### **Table – 5.21**

#### **Decision making of the Deceased Farmers Households (Before Death)**

In a patriarchal society like India, the decision making in household affairs highly centres around the men rather than women. This sort of trend is universal with few exceptions. Uni-centered decisions many times prove counter-productive and costly to the family. Earlier, when joint family system was in its full throat, decisions were taken with consultation among important persons of the family. On periphery there is a practice in families that men consult their counterpart on important issues but ultimate decision making lies with men. Even in the families where father is not alive, son takes over the decision making power. Through the generations women have been made to confine to their household activities. In poor and lower middle class families women equally participate in productive activities either in agriculture sector or household small scale activities. In spite of their dual role and hard work, final decision on many important issues of the family is out of their purview.

**Table – 5.21.1**

**Decision making of the Deceased Farmers' Households (before death)  
(Ananthapur District)**

<b>Sl. No.</b>	<b>Decision</b>	<b>Husband</b>	<b>Wife</b>	<b>Joint</b>
1.	Crop	70	10	20
2.	Input	60	17	23
3.	Credit	68	11	21
4.	Marketing	75	13	12
5.	Education	72	17	11
6.	Health	65	14	21
7.	Consumption	73	12	15
8.	Social Expenditure	80	10	10

*Source: Field study*

**Table – 5.21.2**

**Decision making of the Deceased Farmers' Households (before death)  
(Guntur District)**

<b>Sl. No.</b>	<b>Decision</b>	<b>Husband</b>	<b>Wife</b>	<b>Joint</b>
1.	Crop	49	14	37
2.	Input	68	12	20
3.	Credit	76	10	14
4.	Marketing	91	4	5
5.	Education	60	15	25
6.	Health	46	24	30
7.	Consumption	62	15	23
8.	Social Expenditure	45	18	37

*Source: Field study*

**Table – 5.21.3****Decision making of the Deceased Farmers' Households (before death)  
(Warangal District)**

Sl. No.	Decision	Husband	Wife	Joint
1.	Crop	89	-	11
2.	Input	93	3	4
3.	Credit	86	3	11
4.	Marketing	75	4	21
5.	Education	43	3	54
6.	Health	70	3	27
7.	Consumption	82	3	15
8.	Social Expenditure	90	2	8

*Source: Field study***Table – 5.21.4****Decision making of the Deceased Farmers' Households (before death)  
(Mahabubnagar District)**

Sl. No.	Decision	Husband	Wife	Joint
1.	Crop	83	3	14
2.	Input	87	-	13
3.	Credit	85	7	8
4.	Marketing	90	2	8
5.	Education	64	-	36
6.	Health	66	-	34
7.	Consumption	69	1	30
8.	Social Expenditure	76	-	24

*Source: Field study*

The field study results presented in tables 5.21.1 to 5.21.4 also encompassed the same situation that prevailing elsewhere in the country. Except in Guntur district in all other three districts 60 to 90 per cent of the decision making was in the hands of head of the family (Husband / deceased farmer) depending on the intensity of the issue. Male domination in decision making was of high magnitude in Telangana districts i.e., Warangal and Mahabubnagar than Ananthapur district. For example in selection of the crop, purchase of inputs, approach towards source of credit, marketing of the produce and expenditure on social obligations 75 to 93 per cent decision making was in the hands of male partner of the family. Even for daily consumption expenditure more than 69 per cent of decision was taken by the deceased farmer himself. On education and health aspects both husband and wife took the decision jointly. Among eight parameters taken for the study joint decision making was high in these two parameters. As far as joint decision making is concerned in Guntur it was highest ranging from 20 to 51 per cent for different parameters. As Guntur district is located in the heart of coastal belt and was under direct British rule for fairly longer period, the awareness among women has been relatively greater than the women in other districts. The role of women in decision making in Ananthapur was almost closer to that of the situation in Guntur district. In Warangal and Mahabubnagar districts the role of female partner in decision making was highly marginal in pre-suicide situation. It was particularly alarmingly more in Mahabubnagar district, where in all eight 8 parameters the role of female partner as individual in decision making was a big zero. Whether it is an individual or joint decision the ultimate impact will be on the entire family. In our social spectrum even today outside world is more open for men than

the women. Further the accountability of the family in all aspects mostly lies with husband (Head of the family). It is the head of the family who has to approach the lenders, provide surety and answerable to the outstanding loan. Again he has to take responsibility in performing day to day expenditure on family maintenance and for unforeseen expenditures. In present globalised socio-economic scenario the productive and consumptional expenditure pattern being greatly influenced by market and as well as group behaviour. The demonstration effect also inducing the individuals to gallop with the spree. It is to say that society and societal obligations invariably forcing the households to spend more and more on consumptional needs. But when it comes to repayment of outstanding amount the onus will be on individual (head of the family). Many times the head of the family may not share his views with family members or close friends and relatives due to his unwillingness to share the feelings and burden and thoughts connected to his prestige and self respect. In the field study the family members of the deceased farmers reported to the research team that the isolation of their head of the family in sharing the views, feelings and apprehensions has led to the unfortunate incident in their family. They said that if he had shared his feelings with others and thought for a while on the impact of his decision, the situation would be otherwise. The society which highly influences the expenditures of individuals may not own its responsibility at the time of crisis.

**Table – 5.22**  
**Support to the Households – District wise**

Now, from table 5.22 onwards, the study has concentrated on post-suicide situation and its impact on spouse, family members and their living conditions.

Any household which experiences a sudden shock in the form of demise of the bread earner, needs support from near and dear to withstand financially, physically and mentally. Though the support from near and dear is an obligatory one, the state has to extend financial support for the survival of the family. If the shock is confined to limited households, it is another aspect, but when it takes a turn of catastrophe, it is the state that has to come up with appropriate policy to protect the households. In agrarian economy such shocks have become common phenomenon over the years. Though there is no statistical evidence, but due to recurrent famines during the British regime lakhs of farm households suffered both men and material loss. The green revolution in the beginning and globalisation in the later once again unleashed crisis in Indian agriculture and resulted in large scale suicides. As it mentioned earlier in one or two instances as may 2.50 lakh farmers committed suicide across the country over last 15 years and with high intensity in southern states. What will be the status of these households in post-suicide situation?

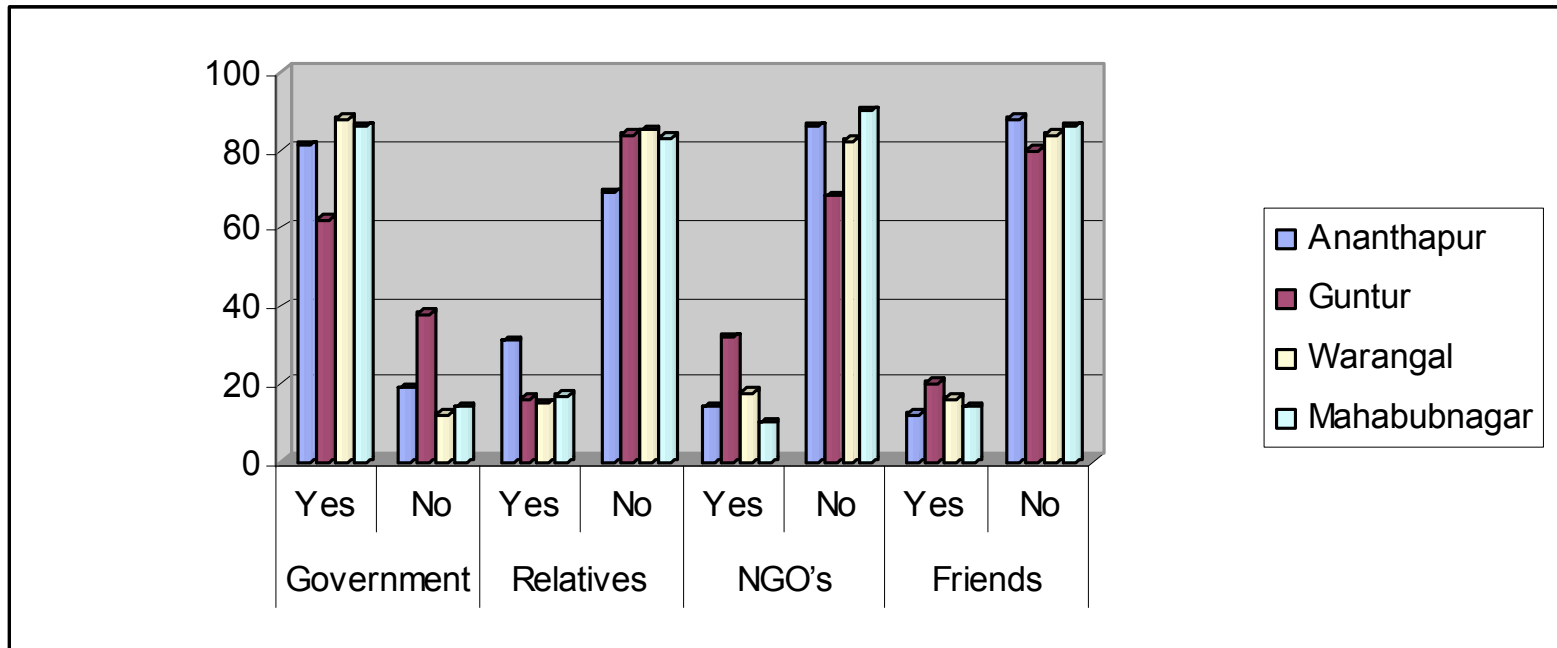
**Table – 5.22**  
**Support to the Households – District wise**

Sources → District ↓	Government		Relatives		NGO's		Friends	
	Yes	No	Yes	No	Yes	No	Yes	No
Ananthapur	81	19	31	69	14	86	12	88
Guntur	62	38	16	84	32	68	20	80
Warangal	88	12	15	85	18	82	16	84
Mahabubnagar	86	14	17	83	10	90	14	86
<b>TOTAL</b>	<b>317</b>	<b>83</b>	<b>79</b>	<b>321</b>	<b>74</b>	<b>326</b>	<b>62</b>	<b>338</b>

*Source: Field study*



### Support to the Households – District wise



Considering the gravity of the situation the state of Andhra Pradesh announced a policy of one lakh compensation to bereaved family to come out of financial agony at least. The policy was in force for a short period. With an apprehension that farmers were indulging in suicide act to get the compensation the government stopped the payment of compensation. But this apprehension was proved wrong with unabated suicides over the last 15 years. From 2004 onwards the State government enhanced the compensation from 1 lakh to 1.50 lakhs. When the research team visited the sample households expressed that the compensation from government has saved some of their lives. It is also a fact that during the process of application, sanction and disbursement of compensation bureaucratic lacunas are barely visible. Statistics presented in table 4.22 shows that in the study area except Guntur 81 to 88 per cent of deceased farmers households received the compensation. In Guntur relatively high magnitude of tenant cultivation is the causative factor behind less number of households getting the compensation. Though the government sanctioned compensation the amount obviously has not reached the hands of family members of the deceased farmers in most cases. As most of them indebted to both institutional and non-institutional agencies with high volume of outstanding, whatever the amount given as compensation gone to the lenders. At the end the farm households stationed at the same situation prior to the death of deceased farmer. In some of the cases in Warangal district the compensation was paid in the form of live stock and in other cases the amounts were deposited in the bank on the name of spouse / dependent and disbursed whenever they spend some amount on agricultural operations and duly certified by the agriculture officer. In first case in Venkatapur village of Atmakur Mandal of Warangal district she buffalos from Haryana were distributed as part of

compensation. Within two to three months she buffalo's gradually lost their energy and milk yielding capacity due to unfavourable climatic conditions and provision of fodder and become a burden to them. In later case the farm household has to satisfy the agricultural officer to get certificate for his expenditure on productive investment made on agriculture. For getting the compensation also the family members have undergone lot of stress and agony due to complacent nature of bureaucrats. First of all they have to prove the suicide as genuine and they have to go through the process of filling various forms. The time span between death of deceased farmers and the sanctioning of compensation was quite more with six months to one year. This period is actually very crucial for entire family. First of all they have to come out of rude shock given by the deceased farmer and than they have to continue their livelihood. They also have to answer the lenders and get confidence of lenders over the repayment of outstanding and especially to get further credit support to take up agricultural activities. In most of the cases without getting compensation in-time the households virtually sold-out some of their durable and non durable assets. During the field study it has been observed that around 20 per cent of deceased farmer households have not received the compensation due to technical hindrances. Some of such hindrances reported by the family members and officials as follows, (a) lapses in timely approach to the officials (b) possession of death certificate (c) sufficient proof to prove it as suicidal death due to agrarian problems and (d) involvement of politicians and middlemen to gain from the situation. In Guntur district highest number of households i.e. 38 households have not received the compensation among the 83 of such households in total sample. The lowest number of households who have not received compensation was reported from Warangal district. With regard to relatives,

NGOs and friends the support received was very nominal. The relatives, NGO's and friends provided support to the tune of 18.5, 18 and 15 per cent to the households respectively. Obviously these three types of supportive sources are undependable and even the amount of financial support from these sources will be very marginal. The farm households naturally hesitate bow before their relatives and friends for financial support. In fact they are mentally ready to face any sort of eventuality but in true sense in midst of the crisis whatever the little amount also carries high value to the affected families. Recently some of the NGOs also are coming forward to provide some sort of compensation to the affected households either in cash / kind or counselling. The ultimate result shows that inspite of compensation from government and little but valuable support from relative friends and NGOs the households have not come out of high magnitude of indebtedness.

**Table – 5.23**

**Utilisation of Relief Measures by Households**

When state of Andhra Pradesh is on headlines during 1997-2003 with large scale farmer suicides, the then administration announced compensation of one lakh rupees per farmer who committed suicide due to agrarian problems. As and when the spree of farmers' suicides was on rise in alarming way, the then government stopped the payment of compensation with a pretext that the suicides are increasing because of compensation to the tune of one lakh. From 2004 onwards the state government has started again payment of compensation and enhanced it to Rs.1.50 lakh.

**Table – 5.23.1**  
**Utilization of Relief Measures by Households**  
**(Ananthapur District)**

Sl. No.	Relief Measures	Awareness		Applied		Beneficiaries	
		Yes	No	Yes	No	Yes	No
1.	Compensation	95	5	95	5	81	19
2.	Help line assistance	9	91	5	95	4	96
3.	Free Power	100	-	-	-	100	-
4.	Moratorium on loans	9	91	5	95	5	95
5.	Rescheduling of loans	11	89	11	89	5	95
6.	Crop Insurance	35	65	29	71	27	73

*Source: Field study*

**Table – 5.23.2**  
**Utilization of Relief Measures by Households**  
**(Guntur District)**

Sl. No.	Relief Measures	Awareness		Applied		Beneficiaries	
		Yes	No	Yes	No	Yes	No
1.	Compensation	93	7	89	11	62	38
2.	Help line assistance	8	92	2	98	1	99
3.	Free Power	49	51	34	66	34	66
4.	Moratorium on loans	3	97	-	100	34	66
5.	Rescheduling of loans	-	100	-	100	-	100
6.	Crop Insurance	4	96	-	100	-	100

*Source: Field study*

**Table – 5.23.3**  
**Utilization of Relief Measures by Households**  
**(Warangal District)**

Sl. No.	Relief Measures	Awareness		Applied		Beneficiaries	
		Yes	No	Yes	No	Yes	No
1.	Compensation	99	1	93	7	88	12
2.	Help line assistance	15	85	-	100	-	100
3.	Free Power	80	20	56	44	56	44
4.	Moratorium on loans	5	95	50	50	25	75
5.	Rescheduling of loans	-	100	-	100	-	100
6.	Crop Insurance	3	97	3	97	-	100

*Source: Field study*

**Table – 5.23.4**  
**Utilization of Relief Measures by Households**  
**(Mahabubnagar District)**

Sl. No.	Relief Measures	Awareness		Applied		Beneficiaries	
		Yes	No	Yes	No	Yes	No
1.	Compensation	56	44	55	45	38	62
2.	Help line assistance	50	50	54	46	56	44
3.	Free Power	90	10	90	10	5	95
4.	Moratorium on loans	30	70	25	75	28	72
5.	Rescheduling of loans	-	100	-	100	-	100
6.	Crop Insurance	-	100	-	100	-	100

*Source: Field study*



Whether it is one lakh or one and half lakh rupees of compensation, the suicides are taking place without halt. Infact, the farmer suicide rate has been on rise since 2003. As per the results given in tables 5.23.1 to 5.23.4 as much as 93 to 99 per cent of households are aware of compensation and 89 to 95 per cent have applied for compensation. But the percentage households which got compensation has been ranged from 62 to 86 per cent. In Guntur district where relatively cultivation is largely in the hands of tenants, the number of households which applied for compensation and who received the compensation are less than the households of other districts. Out of the 89 households applied for compensation in Guntur 62 households could get it. In Ananthapur, Warangal and Mahabubnagar districts 81 to 88 per cent households received the compensation. The households might have not received the compensation due to technical problems, where they were unable to prove the suicide as farmers' suicide. 66 to 84 per cent of households do not know about the waiving of old debts by the government. Out of 34 households who aware of loan waiver scheme, only 23 got benefited due to technical lapses in Ananthapur district. In Guntur out of 19 households 18, in Warangal 16 out of 16 and in Mahabubnagar district 20 out of 25 households could get debt relief. Most of the households of sample districts do not know about the helpline assistance. Paltry one to four households from Ananthapur, Guntur and Mahabubnagar could get helpline assistance and in Warangal district no one received such assistance. Only in recent months the helpline assistance system has been popularised. As far as the entire study area is concerned more than 95 per cent of households do not know about such assistance. It is almost in similar lines in all sample districts. The Government of Andhra Pradesh is providing free power supply to the farming community. Except in Guntur district where bore-well

cultivation is relatively lesser, the households from other three districts are enjoying free power supply. Free power supply infact created problems in the form of over extraction of ground waters on one side and heavy pressure on power supply on the other. What the government is extending help in the form of free power is over compensated by its do away with its investment on irrigation. Individual farmers' investment on irrigation such as open and bore-well increasing enormously. Further, the farmers especially in Telangana districts and Ananthapur are facing frequent power cuts, intermittent supply and low voltage. Low voltage has been causing burning of electric motors and resulting in frequent interruption in supply of irrigational water and leading to crop failure. Crop failure is one of the prime causes of high indebtedness and resultant farmers suicides in entire rainfed region. With regard to moratorium on loans and rescheduling of loans, most of the households are unable to utilise the opportunity due to lack of awareness of these facilities. Generally the government announces such schemes rising to the occasion, but the farmers are not getting required information at micro level because of nearly non existence of extension services. Almost all the households of sample districts are unaware of crop insurance scheme except few households of Ananthapur district. Just 27 per cent of the households from this district availed this scheme that to due to special provision under drought prove area programme. Crop insurance scheme in its earlier form based on unit level estimation was a total failure. Presently the government has been implementing the scheme on area-based rainfall index. Though it has more attractive features and less disadvantages, it is popular only in pilot districts and that to few parts of Karnataka and Andhra Pradesh. Ananthapur is one of such pilot district with few beneficiaries.

**Table – 5.24**

**Living Levels of Respondent Households**

In the process of economic development the status of households of different layers experience a definite improvement. But this improvement varies from one layer to the other depending on their income generating capacity and also sustainability of income generating activities. From the beginning of the planning era the government is committed to bridge the gap between haves and have not on one side and between various layers of socio-economic strata on the other. In real terms the on going process of globalisation and its impact on various sections of the society speaks that the gap is widening further and further. In a market oriented consumptional pattern many goods and services which were treated as luxuries now turned into essentials. In a mechanised way of life two wheeler, refrigerator, TV, telephone / mobile are not at all symbols of luxury. In some of the states including Andhra Pradesh possession of durable commodities mentioned above have become part of life irrespective of income earning capacity. Duesenburies demonstration effect has been acting vociferously on psychological behaviour of the consumers. Surprisingly the consumption mania is much more vibrant in rural economy and more than 50 per cent of marketing of different goods and services is concentrated in rural areas. The westernized culture of consumption has its strong imprint on Indian consumerism both in rural and urban areas. Possession of material durables has been attached to the pride and prestige of the household in the society.

**Table – 5.24.1**  
**Living Levels of Respondent Households**  
**(Ananthapur District)**

Sl. No.	Particulars	Before Status		After Status	
		Yes	No	Yes	No
1.	Cycle	43	57	45	55
2.	Fan	63	37	79	21
3.	T.V.	26	74	60	40
4.	Refrigerator	-	100	-	100
5.	Two Wheeler	10	90	28	72
6.	Gold / Silver	37	63	24	76
7.	Phone	10	90	68	32
8.	Sewing Machine	19	81	24	76
9.	House	76	24	79	21
10.	Education – Private/ Govt.	42	58	65	35
11.	Health – Private / Govt.	55	45	60	40
12.	Safe Drinking Water	23	77	50	50
13.	Sanitation	10	90	40	60

*Source: Field study*

**Table – 5.24.2**  
**Living Levels of Respondent Households**  
**(Guntur District)**

Sl. No.	Particulars	Before Status		After Status	
		Yes	No	Yes	No
1.	Cycle	40	60	75	25
2.	Fan	85	15	97	3
3.	T.V.	31	69	70	30
4.	Refrigerator	20	80	40	60
5.	Two wheelers	23	77	43	57
6.	Gold / Silver	55	45	39	61
7.	Phone	18	82	78	22
8.	Sewing Machine	20	80	35	65
9.	House	94	6	90	10
10.	Education – Private/ Govt.	45	55	85	15
11.	Health – Private / Govt.	45	55	85	15
12.	Safe Drinking Water	15	85	87	13
13.	Sanitation	10	90	45	55

*Source: Field study*

**Table – 5.24.3**  
**Living Levels of Respondent Households**  
**(Warangal District)**

Sl. No.	Particulars	Before Status		After Status	
		Yes	No	Yes	No
1.	Cycle	67	33	74	26
2.	Fan	50	50	94	6
3.	T.V.	9	91	88	12
4.	Refrigerator	10	90	34	66
5.	Two wheeler	12	88	24	76
6.	Gold / Silver	48	52	35	65
7.	Phone	9	91	69	31
8.	Sewing Machine	41	59	56	44
9.	House	80	20	60	40
10.	Education – Private/ Govt.	77	23	80	20
11.	Health – Private / Govt.	68	32	86	14
12.	Safe Drinking Water	28	72	86	14
13.	Sanitation	20	80	47	53

*Source: Field study*

**Table – 5.24.4**  
**Living Levels of Respondent Households**  
**(Mahabubnagar District)**

Sl. No.	Particulars	Before Status		After Status	
		Yes	No	Yes	No
1.	Cycle	44	56	55	45
2.	Fan	50	50	85	15
3.	T.V.	10	90	55	45
4.	Refrigerator	9	91	14	86
5.	Two wheeler	3	97	13	87
6.	Gold / Silver	31	69	23	77
7.	Phone	10	90	64	36
8.	Sewing Machine	18	84	20	80
9.	House	45	55	61	39
10.	Education – Private/ Govt.	65	35	66	34
11.	Health – Private / Govt.	15	85	56	44
12.	Safe Drinking Water	10	90	66	34
13.	Sanitation	10	90	39	61

*Source: Field study*

The field results given in Tables 5.24.1 to 5.24.4 amply shows that there is a relative improvement in levels of living pertaining to certain consumer durables and some other items and there is a phenomenal growth between before and after status of the deceased farmer household. For the analysis 13 parameters were identified. Except in gold and silver there is an improvement in the possession and consumption of all other items. With regard to consumer durables such as cycle, fan, TV, refrigerator and two wheeler there is a sizeable improvement in all the districts in 'after status'. For example the households with cycle has improved from 40 to 75 households in 'after status' in Guntur district and closely followed by Warangal district. More number of households from Warangal district have possessed TV sets with 88 and followed by Guntur district with 70 households. No other district has experienced such phenomenal growth. Even refrigerator has become important item of the households. Once again in Guntur and Warangal districts more number of households have refrigerator. In Guntur 45 and Warangal 34 households in the study area have possessed the refrigerator. The status of Mahabubnagar and Ananthapur districts with regard to consumption of above mentioned items is relatively weak. In present way of life two wheeler is also an essential means of transportation. Once again Guntur district tops in possession of two wheelers and followed by Warangal district. The Mahabubnagar and Ananthapur districts are far away from these two districts. As far as possession of telephone is concerned there is a significant improvement in all sample districts with heavy competition in communication market. With number of networks entering the field the mobile "mania" is in such a magnitude that almost every household and almost each member of the family is having their own mobile. Recently Jayaram Ramesh the Minister



for Rural Development, Government of India aptly commented that the number of mobile phones are more than the personal toilets per household. As a saying goes where five members are there in a family we may find more than six mobile phones. The status regarding education, health, safe drinking water and sanitation reflects human development of a society. In these parameters the position of Guntur and Warangal districts is quite high than the other two districts. But in these districts also more than 50 per cent of households are inaccessible to these facilities. All the districts are poorly fared in sanitation. As far as housing is concerned there is a mixed tendency. In Guntur and Warangal districts housing status experienced deceleration. Such decline is high in Warangal. Where 20 households either sold out their houses or not completed the construction. In Guntur district four households lost their ownership of housing. In Ananthapur and Mahabubnagar districts there is an increase in possession of housing in 'after status'. The increase is significantly high in Mahabubnagar where 16 households additionally got the housing status. In Ananthapur three households additionally possessed the house asset. Housing scheme under Indira Awas Yojana (IAY) is the major factor behind these two contrasting situations. The government sanctions 60,000 for SCs and Rs.45,000/- for BC rural households for construction of their own house. In most of the cases in the field area the family members stated that the amount sanctioned by the government is totally insufficient even to complete the slab work due to high material costs. The research team itself witnessed number of incomplete houses with bare walls. Entering into the status of house owner in few cases in Ananthapur and Mahabubnagar is simply not to state that they have full fledged house in their possession. In 60 per cent of the cases the team witnessed unfinished houses. Infact the housing scheme created many hardships to poor

households where they went on borrowing frequently at higher interest rates to complete the house. In sanctioning of the house under the scheme itself many kickbacks and interference of middlemen has come into picture in many studies. The research team has taken note of political maneuvering. With regard to gold and silver few households from all the sample districts sold out whatever gold in their possession. It has been revealed by the family members that sale of gold and silver saved them from the crisis in immediate post suicide situation. The trend pertaining to sale of gold has been similar in all the districts with slight variations. The overall picture about the comparative levels of living of respondent households envelops that most of the households improved their status with regard to many parameters. Actually the improvement in the after status of the households may not be treated as sustainable status because of their low and inconsistent income generating capacity. In terms of education, health and safe drinking water though the households are better placed in later period, it does not indicate that they are economically better placed. Education and health have become core areas of qualitative living in knowledge based society. In spite of low level of income, most of the families opting private institutions for their children education. Irrespective of Arogya Sree scheme health care has become costlier and for each and every minor health problem the households have to spend thousands of rupees. With regard to safe drinking water dependency on mineral drinking water is on high note even in the villages. The improvement in living status has invariably increased the expenditure levels significantly. But the income generation capacity and opportunities have not increased on par with the expenditure levels. Such situation is haunting most of the lower and middle class families and eventually these

households continuously struggling with high indebtedness. The same situation has been witnessed in the sample area.

**Table – 5.25**  
**Problems faced by the Households**  
**(After the death of Deceased Farmer)**

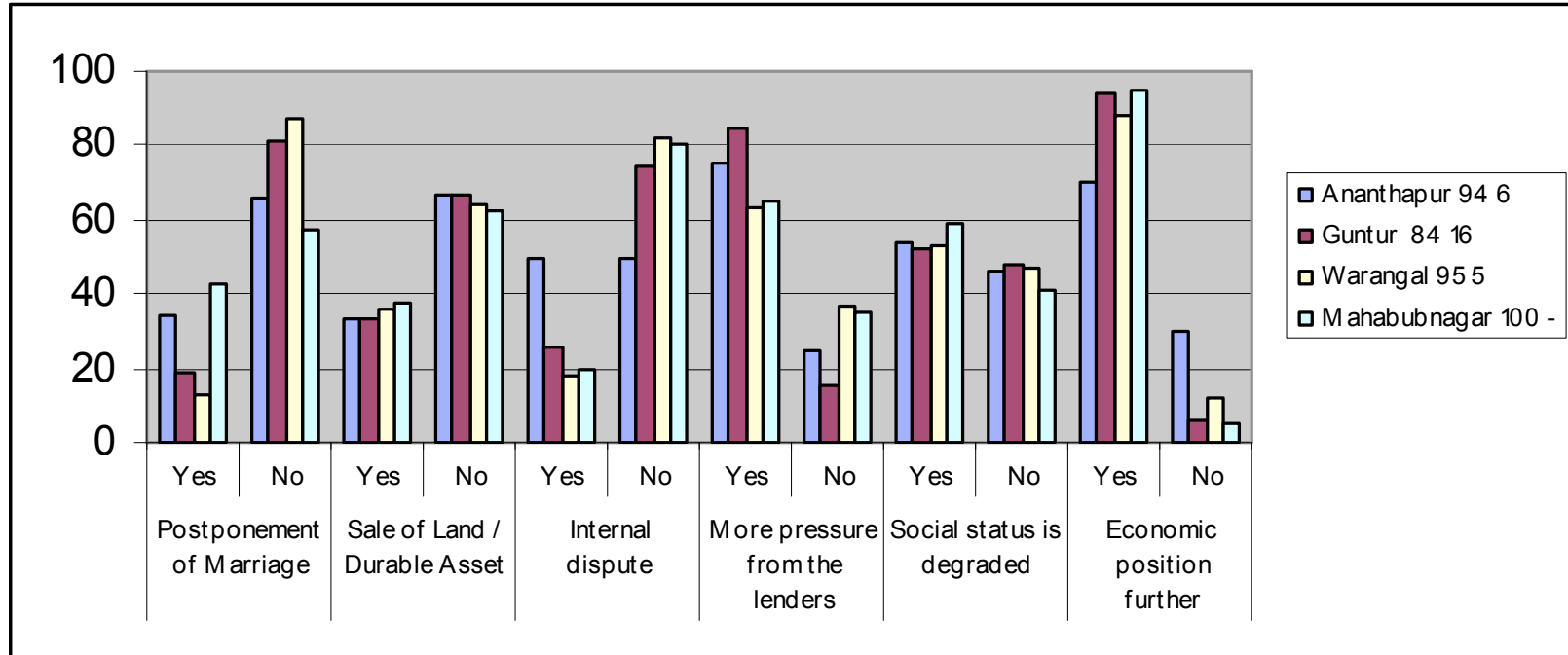
When a bread winner and head of the family suddenly demises, the burden will be more on the spouse immediately and later on growing children. If the family consists of both children and aged members the problem will be more penetrative. The spouse who has to take the responsibility of family affairs and should have to answer financial, social, household internal and external issues and agricultural investment needs. In immediate post suicidal death situation usually the family gets solace from relatives, friends and neighbours. But it does not last longer as days pass away, the family has to keep up unfulfilled promises of the deceased farmer. Especially, they have to deal with the lenders. They have to apply for governmental support. They have to reschedule their earlier outstanding and get further credit to continue their agricultural operations for livelihood and to fulfill consumptional needs. If the family has to perform marriage of a family member or any ceremony or any social obligation they have to struggle further. The spouse and children have to take up additional burden and diversify themselves towards different occupations.

**Table – 5.25**  
**Problems faced by the Households**

Districts	Additional Work Burden		Postponement of Marriage		Sale of Land / Durable Asset		Internal dispute		More pressure from the lenders		Social status is degraded		Economic position further deteriorated	
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
Ananthapur	94	6	34	66	33	67	50	50	75	25	54	46	70	30
Guntur	84	16	19	81	33	67	26	74	85	15	52	48	94	6
Warangal	95	5	13	87	36	64	18	82	63	37	53	47	88	12
Mahabubnagar	100	-	43	57	38	62	20	80	65	35	59	41	95	5

*Source: Field study*

### Problems faced by the Households



The field study results presented in table 5.25 shows that additional work burden is more on spouse and their family members. In Mahabubnagar district 100 per cent households are sharing additional work burden to get on to the situation. Next to Mahabubnagar 95 households from Warangal and 94 per cent households from Ananthapur have been taking up additional burden. The lowest has been recorded from Guntur district, but here also 84 per cent households are sharing the additional burden. In spite of heavy additional work burden the economic status of these households has not improved much. In Mahabubnagar and Guntur districts 94 and 95 per cent of the households respectively have stated that their economic position has further slided in post-suicide situation. They explained to the research team that earlier outstanding and present borrowings have added more burden. What the compensation sanctioned by the government has cleared a part of the debt. They said that earlier outstanding has to be cleared and fresh borrowings also to be repaid. This is adding pressure on households and they are not in a position to come out of the financial crisis. Some of the households sold out their gold and silver, some sold the durable and non-durables and some of them even sold out their land to get out of the imminent risk. Almost 63 to 75 per cent households expressed that lenders have pressurised more and more as the time passed away, to get atleast a part of their due amount from the compensation received by the households. The status of the most of households deteriorated both in social and economic fronts. 52 to 59 per cent of sample households have mentioned that their social status among the relatives and villagers has degraded due to high indebtedness and aftermath effects. The unwarranted situation happened to these families also caused internal disputes within the family. It may be on the issue of utilisation of compensation or on sharing the burden of family

maintenance or on repayment of outstanding credit. When the bread earner of the family suddenly demises the identity crisis also erupts among the family members. They may internally quarrel with one another to control the family affairs and to get socio-economic position and also to get upper hand over the other family members. From Ananthapur district 50 per cent of the affected households stated that internal disputes on petty issues coming in the way of growth and prosperity of the family. In other three districts some of the households narrated their internal problems to the research team. The lowest number of households from Warangal district reported about internal disputes that they encountered in post-suicidal death situation. As mentioned earlier some of the sample households have sold out their land and house property to overcome the debt burden. In all sample districts such sale of land and house has been reported, ranging from 33 per cent in Ananthapur and Guntur districts and 36 and 38 per cent in Warangal and Mahabubnagar districts respectively. The sale of durable assets has further weakened the economic position of such households. Some of them turned from land owner category to tenants and agricultural labourers. With the sudden demise of the head of the family some of the families postponed the marriage of their family members. All these impacts in post-suicide situation have positioned the households in dire situations. Most of them revealed their pathetic experiences to the research team.

## **Table – 5.26**

### **Present Status of the Households**

Whenever head of the family of a household takes his own life and that to due to financial problems arised in productive activities, the family members have to go through physical, financial and mental agony. The position in locality, in village and among friends and relations will be deteriorated. They may not be able to clear off old debts, fulfill the promises made by the deceased farmer. The research team has taken note of present position of the family based on few parameters and the results were presented in table 5.26. Among the sample households 52 to 62 per cent have stated that they could not clear-off the old debts. This might be either due to non-sanctioning of compensation in-time or inability to prove the death as farmer suicide or the outstanding is in unmanageable volume. In Ananthapur district, where recurrent drought will be on high note highest number of households in relation to other districts have not cleared old debts.



**Table – 5.26**  
**Present Status of the Households**

Districts	Clearance of Debt.		Fulfilling of promises		Land purchased		Land sold out		Livestock sold out		Cropping pattern	
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
Ananthapur	38	62	20	80	1	99	33	67	61	39	30	70
Guntur	48	52	19	81	1	99	33	67	5	95	38	62
Warangal	42	58	27	73	2	98	36	64	10	90	25	75
Mahabubnagar	46	54	38	62	5	95	38	62	8	92	30	70
<b>Total</b>	<b>174</b>	<b>226</b>	<b>104</b>	<b>296</b>	<b>9</b>	<b>391</b>	<b>152</b>	<b>258</b>	<b>84</b>	<b>316</b>	<b>123</b>	<b>277</b>

*Source: Field study*

Inspite of huge outstanding, these families inevitably have to take further loans to continue their agricultural operations and to meet daily consumptional needs. Another point to be mentioned here is that 62 to 81 per cent of the households have not fulfilled the promises made by the deceased farmer. Whether it is performance of marriage, purchase of durables and non-durables, financial commitments to the friends and relatives and so on. The households of Guntur and Ananthapur districts are in first and second highest positions wherein they could not keep up with the promises made by the deceased farmer. It is not to say that they have totally denied the promises made by the deceased farmer. Due to financial crunch and lack of immediate support from government side they might have postponed such promises. It is a well established culture of Indian agrarian society that the promises made by the elders will be fulfilled by their heirs, whatever may be the consequences. In the study area also the family members stated that they would definitely keep up the promises, but they require some more time and financial help from the government and its allied agencies. It is to be noted that purchase of land and livestock is very very marginal in study area. Only 13 households purchased livestock and nine households purchased the land. Purchase of land is relatively high in Mahabubnagar and livestock in Guntur. Inspite of deep crisis and unabated farmers suicides, the mode of agriculture and cropping pattern. virtually has not changed. They are adopting the same old methods of cultivation and relying on borrowings from money lenders. Their productive and unproductive expenditures increased further in due course. With increasing expenditure levels, they are adopting the same old cropping pattern. Inspite of shocks in the form of suicidal deaths of their head of family / family

member, they are still practicing monoculture. Whatever may be the farm size, whether he may be tenant or small farmer or marginal farmer the area under commercial crops has not declined but instead of that it increased further. All together 30 households said that their cropping pattern has changed. The field survey and the discussion of research team with the family members and elders of the village shows that whatever changes that occurred have been in favour of commercial crops with an eye on income maximisation and to get something from where they lost everything. As mentioned earlier all together 152 households sold out part of their land and 123 households part of their livestock. Highest number of households reported in this context are from Guntur district, where 71 households sold out either land or livestock. The number of households which sold out their land and livestock in other districts are very nearer to that of Guntur district. The overall picture pertaining to present status of the households clearly shows that for most of the families their present position is further deteriorated and they struggling hard to get out of the syndrome of indebtedness.

### **Table – 5.27**

#### **Stress faced by the spouse of Deceased Farmers**

Sudden death of the head of the family amidst agriculture related problems, it is heavy and irreparable loss to the family members. Particularly, the spouse has to shoulder entire responsibility. In and out the spouse has to experience lot of stress and strain. She has to feed the family first and then drive the family members to continue their regular activities. The children have to go along with their education. The problems of aged members have to be taken care. She has to lead the family in all matters with perfection and precision. She has to fulfill the promises made by her husband of both financial and social. With the sudden demise of head of the family lenders obviously lose trust on family in financial matters. It will be very tough time to spouse to deal with lenders to settle or reschedule the loans, especially of private financiers. It is also toughest job for her to get a fresh loan from them. She has to continue the agricultural activities, where her husband had left. For this she requires sufficient investment. If whatever the compensation the family receives goes to the lenders for settlement of earlier outstanding.

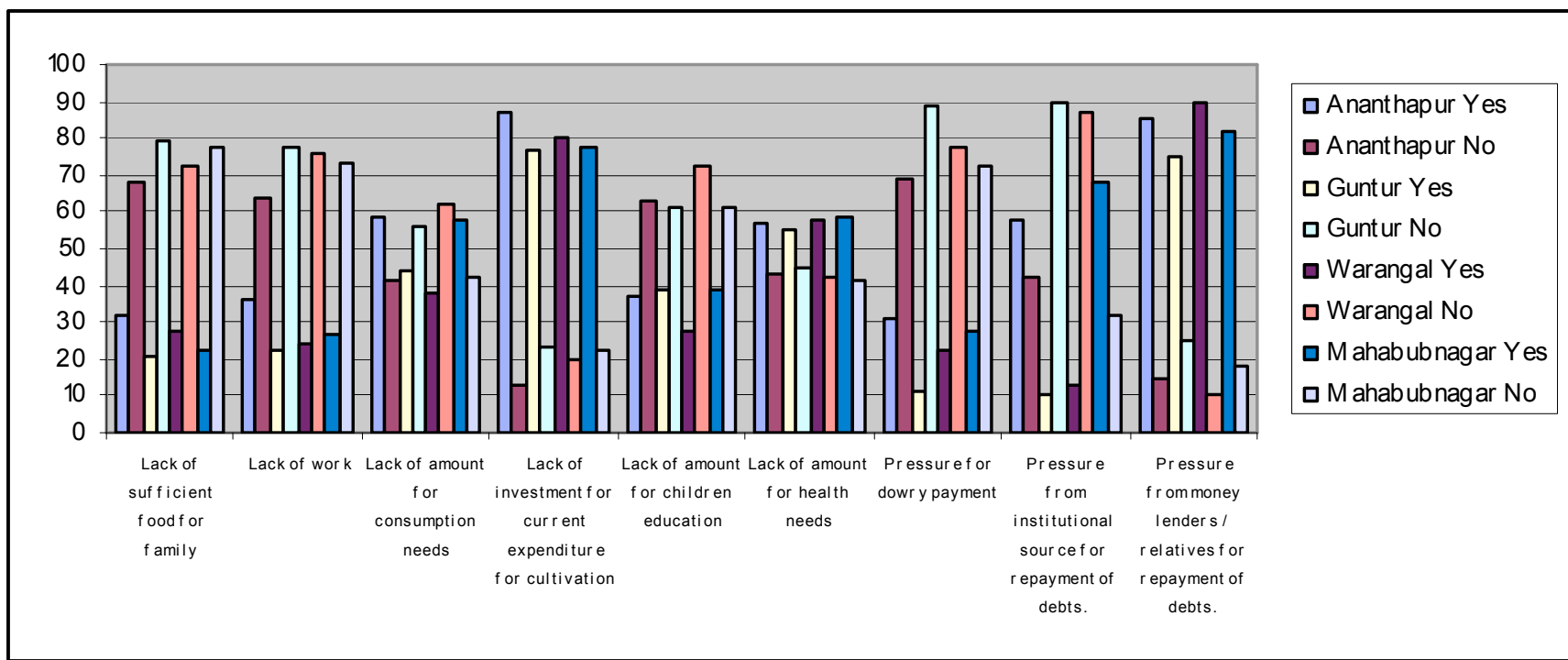
**Table – 5.27**

**Stress Faced by the Spouse of Deceased Farmers**

Sl. No.	Description of Distress event	Ananthapur		Guntur		Warangal		Mahabubnagar	
		Yes	No	Yes	No	Yes	No	Yes	No
1.	Lack of sufficient food for family	32	68	21	79	28	72	22	78
2.	Lack of work	36	64	22	78	24	76	27	73
3.	Lack of amount for consumption needs	59	41	44	56	38	62	58	42
4.	Lack of investment for current expenditure for cultivation	87	13	77	23	80	20	78	22
5.	Lack of amount for children education	37	63	39	61	28	72	39	61
6.	Lack of amount for health needs	57	43	55	45	58	42	59	41
7.	Pressure for dowry payment	31	69	11	89	22	78	28	72
8.	Pressure from institutional source for repayment of debts.	58	42	10	90	13	87	68	32
9.	Pressure from money lenders / relatives for repayment of debts.	85	15	75	25	90	10	82	18
	<b>Total</b>	<b>482</b>	<b>418</b>	<b>354</b>	<b>546</b>	<b>381</b>	<b>519</b>	<b>461</b>	<b>439</b>

*Source: Field study*

### Stress Faced by the Spouse of Deceased Farmers



To study the stress and strain of the spouse after suicidal death of the farmer, nine parameters have been selected and results were presented in table 5.27. Spouses of majority of the households are facing problems with varied intensity. Some of the families are even struggling to get sufficient food. It is so unfortunate that 21 to 32 per cent of spouses stated that their family members are not accessible to three square meal a day. Infact, state of Andhra Pradesh also witnessed starvation deaths. They also complained of lack of sufficient work. In spite of MNREGA provision of employment to rural population is still a serious problem to reckon with. With serious lacunas in estimation of poverty line and assessment of population below poverty line, most of the households on the edge are not getting the benefits as BPL group. Among the sample households 22 to 36 per cent spouses have complained about lack of opportunity to work. It is highest in Ananthapur district and lowest in Guntur district. Some of the spouses also reported lack of sufficient amount to meet consumptional needs. As much high as 59 per cent of households from Ananthapur district have insufficient financial resources to meet their consumptional needs. The farm households from Warangal and Mahabubnagar districts are very close with 58 each which lack of reported sufficient sources to meet consumption needs. The major stress faced by the spouse in post-scenario is lack of investment to continue with agricultural operations. Out of the 100 sample from each district 77 to 87 per cent have informed about insufficient resources to meet the agricultural investment. The percentage of said complained households are again highest in Ananthapur and lowest in Guntur district. But the lowest percentage is at 77 shows the gravity of the situation. The spouses of these households invariably have to search for further borrowing. The spouse has to face highly unhealthy and humiliating situation before the lenders, as she couldn't clear of the old debts. Many tearful experiences narrated by the

spouses and their family members to the research team are heart rending. Some of the families even migrated for short period to avoid the abusive reactions of money lenders and other financiers. Some of them sold out part of their land at cheaper rates to clear the old debts and to get fresh loan. Lack of investment has further hampered the income generation capacity of the households. In spite of fee-reimbursement scheme initiated after 2004 general elections by the state government, the families spending huge amounts on education to meet the recurring expenditure. Particularly, where school going children are more and that to in private institutions. Lack of sufficient amount to pay the tuition fee and other expenses, the households are foregoing better opportunities to provide qualitative education to their children. In present knowledge based society digital divide between educationally rich and poorer sections is playing vital role in deciding their socio-economic and political status. Among the sample 28 to 39 per cent spouses are not in a position to provide even basic education to their children. As most of the rural households belong to B.C., S.C. and S.T. communities they are highly backward in their educational standards and not in a position to compete with their rural neo rich and urban counter parts / students. Many number of spouses stated that their households are suffering from lack of money to meet health needs of the family. In present polluted environment each and every family is suffering from one or the other or multiple health problems. As it is in education, in health sector also corporatisation is on rampant. For small problems the people have to rush to the super speciality hospitals. Though 'Arogya Sri' scheme is doing lot to the poor people, many diseases are not covered under the scheme. The people in search of better doctor and hospital have to spend huge amounts. For coverage under 'Arogya Sri' one should have a 'white ration card'. Though many recognized hospitals are having this facility, the invisible



costs are more and the households are depending on borrowings to meet such expenses. Dowry, the social evil is still a major problem for all social groups. Women are better educated and highly qualified today and doing multifaceted jobs but the dowry system is spreading like a cancer and the demonstration effect is also working on various social groups. Dowry payment is running into lakhs of rupees even in lower and middle class sections. Not only cash but also kind payment in the form of jewelry, household articles has become common phenomena. The expenditure to perform the marriage also running into lakhs. Among the sample households 13 to 31 per cent of spouses are getting more and more pressure to pay remaining amounts of dowry due to the bridegroom, promised by the deceased farmer. Naturally such dowry payment problems have caused family disputes. To overcome such disputes, the spouse has to struggle alot. Almost all spouses of sample households and their family members faced stress due to pressure from institutional and non-institutional lending agencies. Though only 23 to 40 sample households received the loans from institutional agencies all of them felt stress of pressure from co-operatives and commercial banks. As non-performance assets (NPAs) of co-operatives and commercial banks are increasing alarmingly, they are applying stringent methods for collection of overdues. The spouse stated that the pressure is more from money lenders than the institutional agencies. However rescheduling of loans by institutional agencies is giving some relief to the households.

The foregoing analysis elaborates the socio-economic and psychological status of the households of the study are. The suicide affected households mostly are from BC community and that to small and marginal farmers. Most of the suicides occurred among the cotton cultivators,

followed by cultivators of groundnut, chillies and paddy in sample area. Indebtedness has sighted as major causative factor for the suicide of their family member by all most all the respondent households. Erection of bore-well has induced farmers to investment more amounts on irrigation and successive failure of bore-well at a higher magnitude has resulted in daunting indebtedness. Their expenditure levels on both agriculture and consumptional needs are much higher than their income levels. Thus, the indebtedness among sample households is in high volt. As the repayment capacity is weak, their outstanding loan is also in high volume.

The situation prevailing in deceased farm households in post-suicide scenario is so miserable that their socio-economic status has degraded. The tragic incident has demoralised their morale in front of lenders, relatives, friends and neighbours. Due to globalised consumerism, the households are spending on modern durable consumer goods with borrowed amounts to maintain the social status. The family head in spite of his/her financial problems has to fulfill the desires of younger generation. Most of them sold out their gold and silver and some of them land and non-durables to repay the loan amount. The households in majority have received the compensation, but it gone into the hands of lenders of both institutional and non-institutional. The spouse and family members working hard in multiple activities to cope up with situation. They complained of lack of sustainable work opportunities. The households are facing internal family disputes. The spouses are facing highly pathetic and abnormal situations to provide food, clothing and other necessities to the family members. Their future is in dolldrums. In all four districts family members of 400 households are waiting for support from the government and other agencies to sustain their livelihood, continue their occupation, to clear off there debts and live a dignified life.



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## **CHAPTER - VI**

### **Policy Perspectives, Summary and Conclusion**

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*“Sunrise everywhere, But crop grows only where the  
farmers cherish”*

Indian agriculture is at cross roads. New agriculture systems, emerging generations, globalised aspirations, ambiguous institutional policies, paralisation by analyses and so on posing challenges to Indian agriculture. The poor, marginalised and small land holders whose way of life, lively hood and very existence is agriculture are virtually facing the threat. Over the centuries on one or the other context, the agricultural communities are exposed to the exploitation. Economic history unfolds many such sad sagas. The days of primitive production process, large number of catostrophic famines, the Zamindars, Mahalwars, Jagirdars during the British regime, absentee landlordism, unprotected tenancy, revolutionised Green Revolution and unprepared gross root infrastructure and human attitudes and then globalisation and its unleashed spectrum of distress and deaths infact drived the agriculture and people depending on it into a diverging complexities. They cannot leave the agriculture, but living on agriculture is a struggle for existence. One of the NSSO studies stated that 40 per cent of population, more particularly the youth are ready to quit agriculture, if provided with alternative employment. Is it good for agriculture and country as a whole which has long cherished agricultural history and even in terms of food security and overall well-being of the economy. What is going wrong in agriculture has been interpreted by many institutions, individual scholars and governmental agencies with many commonalities and divergencies in methodologies, exploring causes and providing appropriate policy perspectives. From the days of community development projects to present MNREGA and Right to Food Act, the

central and state governments have directly and indirectly influencing the agricultural policy framework. What all these programmes have done to the agriculture is a persistent debate in academic circles. When we deal with agrarian issues four deficits are to be addressed, (i) Public investment and credit deficit, (ii) the infrastructure deficit, (iii) market economy deficit, and (iv) the knowledge deficit.

The globalisation influenced policies since 1991 have changed the entire scenario and aggravated the agrarian crisis. Whatever the corrective measures taken up time to time by the government have proved temporary and stop-gap relief. The economy in toto and agriculture in particularly shocked with sudden erupt of farmers suicides at large scale. On periphery it may look as sudden erupt, but the under currents and boiling distress and disgust among farm households underneath of silent agrarian surface are neither recognised nor well addressed by the successive governments at the central and state level. Obviously, both central and state governments on their own appointed many committees and commissions to address the agrarian crisis and its manifested suicides among farm households.

Among many such committees, National Commission on farmers (November 18, 2004) headed by Dr. M.S. Swaminathan, the eminent scholarly personality on agrarian issues is highly worth to discuss here. Basically it has followed the saying by Mao Tse-tung that “before advising farmers, listen to them” (MSSN (B 137), p. 247). Before going into action it had vide opened discussions, elicited opinions from various farmers’ organisations and their representatives. Infact, it opined that the agrarian crisis has its roots in the collapse of the rural economy. A system approach

is missing in dealing with problems of farmers' distress. The centrality of basic livelihood security concerns is missing in most government policies (Ibid, p.240). At every level of the livelihood security system, there is a tendency to make profit out of poverty (Ibdi, p.240). It is obviously known that in every governmental welfare programmes crores of huge amounts are going into the pockets of middlemen and hardly just 10 per cent is reaching the targets. It is also well known that there is no coordination among various government agencies in dealing with different components of the agrarian crisis.

The NCF has identified the unfinished agenda in land reforms, quantity and quality of irrigational water, technical fatigue, access, adequacy and timeliness of institutional credit and opportunities for assured and remunerative marketing and adverse meteorological factors as major causes of agrarian crisis and farmers' suicides. Farmers should have assured access and control over basic resources such as land, water, bio-resources, credit and insurance, technology and knowledge management and markets. On land issues it recommended (a) Distribution of surplus and waste lands to the landless poor; (b) Prevention of diversion of prime agriculture land, forest land to corporate sector for non agricultural purposes; (c) Ensure grazing rights and seasonal access to forests to tribals and access to common property resources; and (d) Setup a National land use advisory board to regulate land use pattern and sale of agricultural land with need based approach.

On irrigation, it expressed concern over the extent of rainfed agriculture, (60 per cent of gross cropped area) which is one of the major



factors behind large scale suicides. It recommended (i) a comprehensive set of reforms to enable farmers to have sustained and equitable access to farmers; (ii) Increase water supply through rain water harvesting methods and recharge systems including “Million wells recharge” programme; and (iii) Substantial increase in investment in Five Year Plans and appropriate allocation. “Store water and grain everywhere” is the popular slogan given by Dr. Swaminathan. As the rainfall normally falls annually in just 100 hours, utmost care is needed to preserve every drop of water and its judicious utilisation.

Production and productivity is another area, where growth rates are at unsatisfactory level. For this NCF has recommended a) substantial increase in public investment on agriculture infrastructure, particularly in irrigation, land development, water conservation and research and development; (b) A national network of advanced soil testing laboratories with facilities for detection of micronutrient deficiencies; and (c) Promotion of conservation farming, which will help farm households to conserve and improve soil health, water quantity and quality and biodiversity.

The credit and crop insurance policies are highly non-conducive in terms of interests and welfare of the farmers. The NCF suggests: (a) Expansion of the outreach of the formal credit system to reach really poor and needy; (b) Reduction of rate of interest for crop loans to 4 per cent simple, with government support; (c) Moratorium on debt recovery, including non-institutional credit; (d) Establishment of Agricultural Risk Fund to provide relief to farmers in the aftermath of recurrent natural

calamities; (e) Kisan Credit Cards to Women farmers, with joint pattas as collateral; and (f) Expansion of crop insurance cover to cover the entire country and all crops.

For prevention of farmers suicides, which are on rampant in all southern states and in many major states including Punjab, West Bengal, Rajasthan and Gujarath, the NCF suggested many measures. Some of them include; (a) Provision of affordable health insurance and revitalisation of primary health centres. Extension of the NHRM to suicide hotspots on priority basis; (b) State Level Farmers' Commission with representation of farmers to ensure dynamic government response to farmers' problems; (c) Restructuring of micro finance policies to serve livelihood finance; (d) Social security network for old aged with health insurance; (e) Decentralisation of water planning to realise Jal Swaraj; (f) Promotion of low cost and low risk technologies to those who cannot cope with the risk shocks and especially associated with Bt cotton; (g) Swift action on import duties to protect from volatility of international prices; (h) Village Knowledge Centres (VKCs) or Gyan Chaupals in the hotspots of farmers distress; and (i) Public awareness campaigns to make people identify early signs of suicidal behaviour.

The Durkheimian's theory of individualisation of farmers is one the major factors behind the distress related deaths. The grand failure of co-operative system in the rural economy has rendered farm houses to struggle individually on all agricultural activities. For this NCF recommended some measures to promote organised competitiveness which include: (a) Promotion of commodity based farmers' organisations such as small cotton

Farmer's Estates to combine decentralised production with centralised services in all farm activities including harvest and marketing; (b) Improvement in implementation of MSP to not only paddy and wheat but particularly also to millets and other nutrient cereals. These nutrient millets and nutrient (presently known as coarse grains) should be included in PDS; (c) MSP should be at least 50 percent over the weighted average cost of production; and (d) State Agricultural Marketing Committee Acts should shift their focus to promote grading, branding, packing and development of domestic and international markets for local produce and move towards a single Indian Market.

There is a uniform opinion among the prominent scholars working agrarian crisis that indebtedness is the basic factor behind the distress led suicides. The expert group on agricultural indebtedness constituted by RBI on recommendation of the central government under the chairmanship of Radha Krishna gone into the various factors that led to high indebtedness among the farm households.

- The expert group explicated that indebtedness is not the sole root cause but it is a symptom. Many factors such as stagnation in agriculture, increasing production and market risks, institutional vacuum and lack of alternative livelihood opportunities all in cumulatively aggravated the crisis.
- However, it noted that all these factors driven the farmers into indebtedness.

- The report of the expert group arguably stated that there is a large scope for institutional agencies to expand the credit base of farm households further.
- Institutional credit availability to agriculture should be increased.
- It suggested steps to revive positive strengths of agriculture sector to improve the credit absorptive capacity of farmers along with adequate institutional credit support.
- Expressing serious concern over the distressed state of small and marginal farmers, the expert group suggested the need to provide better institutional credit support.
- Further it felt that the small and marginal farmers should be organised through collective organisations like Self-Help Groups (SHGs) and co-operatives in a better way.
- It recommended better implementation of relief measures including Prime Minister package to reach the needy farm families. Further, it cautioned that the distributional problems of the package in 32 most backward and highly suicide affected districts through meticulous monitoring and social auditing.
- It suggested that the loans of all affected families should be rescheduled. They should be given fresh loans without any technical restrictions and stagnated interest (upto two years) on both short and long term loans should be waived.

- The expert group focusing on rainfed areas, where the crop failure and subsequent pile-up of outstanding is a common phenomena, it suggested that for every such failure rescheduling of loan and waiving the interest should be implemented on the report based on revenue authorities.
- It further suggests that the nature of credit in rainfed areas should be of cyclical credit rather than as an annual feature.
- To mitigate indebtedness among farmers more particularly among small and marginal farmers it underlines the need for formalisation of informal credit, especially vowed to money lenders.
- Further it recommended to involve Panchayat Raj Institutions (PRIs), civil societies like farmers collectives (organisations) and NGOs in arriving at negotiated settlement with moneylenders.
- It also made it clear that for financial inclusion of deprived farming community, the NABARD has to workout its modalities to rescue them from clutches of money lenders. To meet the financial resources to implement the formalisation of informal credit it suggested creation of “Moneylenders Debt Redemption Fund”.
- The Expert Group also make it clear that for inclusion of financially excluded sections a special programme by involving co-operatives, RRBs and commercial banks should be initiated to mobilise them into formal credit fold.
- The Expert Group also recommended project based credit basing on value of land and assets created by bank loans. It suggests that the

RBI and NABARD should ensure that banks comply with the instructions.

- It also felt of need to start Agency banking and Mobile banking.
- The Expert Group suggests the conversion of the Kisan credit Card (KCC) into full fledged Bharat Kisan Card (BKC) an electronic document with details of land, properties, features of cyclical credit in rainfed areas to avoid manipulation, and misuse and to implement credit programmes with transparency.

Another important investigation done by Indira Gandhi Institute for Development Research (IGIDR) commissioned by the central government in Vidarbha region of Maharashtra is also note worthy. It also highlighted the loopholes in criteria for government aid of one lakh rupees to the suicide affected families. It observed that “often the compensation was denied on the ground that the farmer was not the owner of the land and the difficulty in verifying the informal loan as cause that there was harassment for repayment”. To overcome the crisis of farmers the IGIDR recommended (a) Revitalisation of financial market; (b) implementation of Vydyanathan committee report that suggested to make co-operative credit societies accountable to reduce the number of intermediary societies and to reduce intervention by the concerned state governments and to bring them under direct regulation of RBI; (c) Working capital should be provided by Kissan Credit Cards to meet consumptional needs; (d) There should be strict supervision of institutional agencies on utilisation of investment capital otherwise overdues may mount up; (e) A statutory information body should be established to provide helpline to the farmers on various

provisions of formal credit and its benefit; (f) Regulation of money lenders by strengthening SHGs and NGOs who act as pressure groups to control them; (g) It suggested Risk Mitigation Fund to cover crop, credit and income of the farmers through insurance; (h) Along with these, the IGIDR recommended diversification of cropping pattern and strengthening of extension services; (i) Further, the it suggested administration and media coordination, awareness programmes for farm families to reduce social expenditure; (j) The most important recommendation made by the IGIDR is not to stamp a suicide attempted farmer as criminal. The decriminalisation of attempted suicide immensely helps the family in post-attempt situation. Identification of farmers suicides by police should have clear guidelines. Otherwise, the family may not get governmental support; (k) It also given certain suggestions on criteria for compensation (i) Definition of farmer / cultivator should be broaden to include tiller of the land even without legal ownership including spouse, children, other family members and tenants, (ii) Loan from money lender and other informal sources also be considered while evaluating indebtedness, (iii) independent of indebtedness status crop loss also be another criterion for providing compensation, (iv) It is also necessary to minimise errors, which can lead to under reporting of farmers suicides. The processing also be quick for early disposal of compensations, (v) Whether an individual is eligible or ineligible in the view of the officials, the government has to provide financial and other help to the survived family members in the form of preference in existing welfare schemes, old age pensions and free schooling to the children.

Centre for Human Rights and Global Justice (CHRGJ) looked at farmers problems in the context of human rights. It observed and considered the farmers suicide crisis in India as violation of human rights. The CHRGJ states that the suicide crisis in India implicates the right to life; the right to an adequate standard of living; the right to work; right to food; the right to water; the right to health; right to an effective remedy, among other rights. Here, in many contexts violation of one right inexorably linked to other rights and either way, ensuring one right will help to ensure other rights. The CHRGJ of the opinion that it is the obligatory duty of the Indian government and concerned states to ensure that no individual human being arbitrarily deprived of his right to life. In the context of farmers suicide crisis negligence on the part of State in providing opportunity to live it aptly says identification of farmer itself is a difficult process in the country side. The official data on farmers suicide is both incomplete and inadequate. When the farmers are not adequately provided with various inputs to run their business reasonably in profitable manner, the CHRGJ says that there is a violation of right to adequate standard of living. It observed that though the suicide epidemic has been going for more than a decade, yet the government has done little to intervene and regulate the key players behind the crisis and to address adequately the underlying causes.

Further, CHRGJ observes that it is the obligatory role of the state to protect water rights of the farmers. While encouraging the farmers to 'grow more' with Bt cotton, the government is virtually silent on provision of right to water to the farmers. The right to health in the form of adequate nutritional food, good sanitation, primary health care also obligatory duty of the government. When the farm families are highly deprived of these



provisions and thrown open to the globalised reform led crisis with indiscriminate application of fertilizers and pesticides, the right to health will be jeopardised.

Thus CHRGI calls on government to investigate and address the effects of economic reforms on farmers in general and cotton farmers and farmers of other cash crops in particular under human rights obligations. It suggested greater access of official credit for all farm families including women and other marginalised groups. Evolving just and equitable mechanism to ensure farmers access to irrigational water implementing provision of adequate inputs with quality and quantity. In this regard it suggested establishment of community managed “Seed Villages” and improving farmers yields by setting up Seed Technology Training Centres every where.

The Report of Commission on Farmers’ Welfare (2004), constituted by the Government of Andhra Pradesh with Jayati Gosh as chairperson has deliberated the problem of farmers suicide crisis again with Mao Tse-tung saying of ‘before advising farmers listen to them’. It held elaborate discussions with large number of farmers during field trips and consulted experts of various relevant fields and the representatives of farmers’ organisations.

The commission identified six key areas to find solutions to the current crisis, which require immediate intervention. They are 1) Irrigation, 2) Institutional credit, 3) Dry land farming, 4) Input supply, 5) High volatility of output prices and 6) rural economic diversification.

It suggested the government to: a) Correct inequalities in access to irrigation and work for sustainable water management; b) Bring all cultivators into the ambit of institutional credit, including tenant cultivators; (c) Shift policies towards dry land farming through suitable technologies, extension, price and other incentives; (d) Encourage cheaper and more sustainable input use, with greater public involvement and regulate private input supply chain; (e) Evolve special provisions to protect farmers from high volatility of output prices; and (f) Emphasise rural economic diversification towards more value – added activities and non-agricultural activities.

The commission also given detailed roadmap to the government and concerned different agencies to intervene in many major and sub areas that directly and indirectly attach and influence the six key goals identified by the commission.

On land relations it suggested the following measures: (a) To give top priority to record and register actual cultivators including women and tenants and provide passbooks to ensure access to institutional credit and other inputs; (b) The land rights of tribals in agency areas must be protected; (c) Taking waste and cultivable land into account, the government has to redistribute the land along with complementary inputs.

On debt relief it recommended: (a) The existing helpline should be used as facilitating mechanism for helping farmers in distress to access bank loans; (b) The state government should initiate a ‘Distress Fund’ with

the support from RBI and NABARD to provide financial support to banks in chronically drought prone areas, which are also highly suicide prone to permit some debt relief to cultivators; (c) The state government should approach RBI and NABARD with a request; (i) Not to charge interest and other charges for the amount rescheduled; (ii) All the excess of accumulated interest over the principal amount of loan should be automatically written off; (iii) Expand insurance coverage to all with a comprehensive plan for rural dwellers.

On irrigational issues, the commission suggested: (a) A massive programme for restoration of tanks and other minor water bodies; (b) The government should evolve a water policy based on equity principle; (c) Necessary steps to register and regulate the use of ground water resources.

Among other recommendations: (a) Strengthening of public sector extension services, particularly reoriented towards dry land crops to reduce the dependency of the farmers on input supplier cum creditor; (b) Provision of high quality inputs at affordable prices at right time and the state has to play anchor role, (c) Provision of rural non-farm employment on massive scale to improve the well-being of the rural work force, (d) The PDS has to be strengthened to provide food security for all the vulnerable households; (e) The enactment and implementation of seed bill 2004; (f) In view of serious impact of pesticides on farmers suicides, the government should take steps to change its policy towards promoting natural pest management on a mission mode; (g) A Market Price Stabilisation Fund (MPSF) should be created to strengthen to reach the small and marginal farmers.

Apart from comprehensive studies by different commissions at Central and State level individual scholars, NGOs and print and electronic media have conducted extensive studies on farmers suicides related agrarian crisis. Among them studies by P. Sainath, Megasesse awardee and senior journalist of rural affairs in The Hindu, K. Nagaraj of MIDS, D.Narsimha Reddy and Srijith Mishra, R.S. Deshpande, Vydyanathan, V.S. Vyas, E. Revathi and Galab and research centres like NIRD, CESS, Centre for sustainable Agriculture and ASHA and so on are highly worthy to mention in this context. Farmers organisations affiliated to left parties, South Indian Farmers Coordination Committee and like many associations in different states also playing their role in siding the farmers cause.

Based on recommendations proposed by various committees at central and state level, corrective measures were initiated at various levels. Especially, on recommendation of National Commission on Farmers, popularly known as Swaminathan committee, the central government has come up with National policy for farmers, 2007. The main provisions incorporated in the NPF 2007 include the following; (a) Human dimension to focus on well-being of the farmers; (b) Expanded definition of farmers to include all categories of persons engaged in agriculture sector; (c) Reforms to ensure accessibility of rural and farm assets to every man and women, particularly the poor; (d) Maximisation of income per unit of water; (e) Introduction of Drought code, Flood code and Good weather code to minimise threats and maximise the benefits, (f) New technologies to provide opportunities for launching on “Evergreen Revolution” capable of improving productivity without harming the ecology; (g) To set up National Agricultural Bio-Security System for a coordinated approach, (h)

Improve quality of all inputs, extension services and soil health; (i) Support services for women infields and forests with provision like creches, child care centres and adequate nutrition, (j) Establishment of credit counselling centres in ‘hot spots’ to help them out of debt trap; (k) Setting up of farm schools to promote farmer to farmer learning to strengthen extension services; (l) Establishment of village knowledge centres (Gyan Chaupals) to promote ICT utilities; (m) Establishment of Community Food Grain Banks, (n) Effective MSP mechanism; (o) Development of Single National Market; (p) Constitution of a cabinet committee on food security; and (q) Provisions to mould the entire process of agricultural activities to suit the farmers of future.

Along with provisions of the National Mission on Farmers, the Central Government provided Rs.17,000 crores for 32 highly affected districts across the country under BRGF. Prime Minister’s special packages for Vidarbha, Karnataka, Andhra Pradesh, Madhya Pradesh, Chattisgarh and Wayanad of Kerala as relief measures to control the suicide phenomenon. Apart from these measures the UPA government came with Right to Education, Right to Employment, Right to Food Acts.

Maharashtra, Karnataka, Andhra Pradesh, Kerala and of late Madhya Pradesh and Chattisgarh have implemented package programmes in the form of compensation to suicide affected farm households, loan waiver scheme, rescheduling of loans, reduced interest rates on farm loans like ‘pavala vaddi pathakam’ of Andhra Pradesh as short term immediate measures. These states also initiated establishment of KVKs VKCs, Farm schools, recruitment of extension officers. Agricultural Technology

Mission State Seed Acts, stringent regulatory measures on pesticides companies procurement policies and so on.

Whether all these packages, schemes under Mission – 2007 and specific programmes of concerned states have impacted on suicides and crisis? The answer is aptly provided by NCRB reports and field studies conducted by many scholars including Sainath, Nagaraj, Narsimha Reddy, Srijith Mishra, Deshpande and A.R. Vasavi that the suicide phenomenon in general hasn't slacked. Particularly in 'big 5' states the farmers suicides continued unabatedly. Infact between 2003 and 2010 suicides rather increased by 65.14 per cent in these states in comparison to 57.67 per cent between 1995-2002. In spite of under reporting of farmers suicides, the suicides in all these states increased significantly between 2003-2010. More particularly in worst affected Maharashtra, Andhra Pradesh and Karnataka. Even for the year 2010 the reported suicides in these three states are higher than in the year 2009. P. Sainath heart touchingly reveals in his one of numerous articles on farmers suicides that year in which the Prime Minister announced the package and toured the Vidarbha, the number of farmers suicides increased significantly. The new procurement policy of Kerala slightly reduced the suicide for a while but the suicide mortality rate is as high as 127 per cent in the state. In Andhra Pradesh in the year 2011 in just one month between October and November 95 suicides were reported from six districts.

The dark picture of non-stop suicides of farmers clearly emphasises the lacuna in policy perspectives of center and state governments. When the causes for large scale farmers suicides have been identified almost

similarly with slight locus-specific variations, why the 'National Policy' is not delivering the results is not a big question to answer. It is very unfortunate to state that the packages, schemes and missions simply cannot reduce until and unless policy formations are coincided with grass root problems and the fruits of such programmes reach the needy.

### **Major Findings of the Study:**

The field study results also coincided with the macro level situation. They are:

- Suicides are highest among backward class farmers, followed by farmers from forward castes.
- Farmers from schedule castes are more affected than schedule tribes.
- Farmers between the productive age group in economic sense between 36 to 50 years committed suicide in large scale.
- Even among the farmers with below 35 years and above 50 years suicides were taken place and suggests that suicides cut across the age groups and social class.
- Education level is not coincided with suicide behaviour among farmers of the study area.
- 58 percent of literates of different levels committed suicide.

- 90 per cent of the farmers choosed consumption of pesticide to end their life (This mode of suicide coincides with world figures and Punjab statistics)
- Most of the families burdened with larger family size; particularly the households from Guntur, Ananthapur and Mahabubnagar.
- Literacy levels of second generation are very encouraging.
- Irrespective of rich experience in agriculture, farmers are succumbing to the crisis. 75 per cent of farmers with more than 10 years of attachment with agriculture committed suicide. “More the experience, more the suicide rate?”
- Cotton is the major causative crop for suicide phenomena in the study area. 49 per cent suicides to the total suicides were committed by cotton growers.
- Warangal and Mahabubnagar topped in suicides by cotton cultivators and that to Bt cotton farmers.
- Groundnut was the major causative crop for suicides in Ananthapur.
- Chilli, Cotton and Paddy cultivation drived farmers to commit suicide in Guntur district.
- For the entire sample debt is the major cause for suicide.
- Shockingly, investment in agriculture also caused, the suicides with a staggering 87 per cent among the total suicides. Where the



agriculture is leading the farmers obviously threatens the very existence of the agrarian economy.

- Bore-well failure related suicides were reported on high note in three rainfed dominated districts i.e., Ananthapur, Mahabubnagar and Warangal.
- Owner-cum-Tenants were in major chunk among deceased farmers. It reflects agrarian status of southern states where tenant cultivation is the major problem.
- Owner-cum-tenant farmer suicides more in three districts, except Ananthapur.
- Suicides by pure tenants forms 20 per cent in total suicides.
- Higher scale of suicides among pure owners were reported from Ananthapur.
- 87 per cent of the suicide affected households are small and marginal farm households.
- Cultivator families with large sized holding (5-10 and above 10 acres) also affected by suicides.
- Dry land farming is in high magnitude in the sample area. More strikingly in three districts except Guntur.
- Dry land cultivation is high among small and marginal farm families.
- Monoculture has been highly prevailing in both pre and post-suicide stages.

- Cotton in Warangal and Mahabubnagar, Groundnut in Ananthapur, Paddy and Chilli turned as mono crops.
- The average actual yields for all crops were below to the expected yield in entire sample area.
- Expenditure on agricultural activities were significantly high for all crops and all districts of the sample study.
- Expenditure on cotton topped the table, followed by Chilli, Paddy and Groundnut.
- Among different inputs expenditure on pesticides, irrigation, fertilisers and labour was considerably more.
- In rainfed cotton dominated Warangal and Mahabubnagar districts expenditure on pesticides, irrigation was more than on the other inputs.
- Erection of bore-well was the major cause behind high indebtedness among suicide affected families.
- Expenditure on erection and maintenance of bore-well was significantly high in three districts, except Guntur.
- The expenditure on erection and maintenance of bore-well on average crossed Rs.2.5 lakhs.
- The significant symptom in the study area is high incidence of bore-well failure

- 50 to 75 per cent of failure of bore-wells has caused staggering expenditures and indebtedness.
- The average annual income level of the most of the deceased farmers was well-below to the poverty line.
- Expenditure on household maintenance was high on many items including food, clothing, health, education and construction.
- Expenditure on dowry, social functions also made on considerable manner.
- Every household of deceased farmer spent sizeable amounts on construction and communication.
- The expenditure levels were high cutting across the districts.
- With low income level and high magnitude of expenditures, the outstanding of majority households is significantly high.
- The role and impact of money lenders is phenomenally high ranging between 78 and 91 percent. Infact, in the study area the entire non-institutional credit has been provided by money lenders only.
- Dependency on non-institutional agencies (money lenders) has increased notably in post-suicide period. This tendency is almost in similar lines in all sample districts.
- In decision making in the family was highly concentrated in the hands of husband. Infact, individualised decision making power has proved counter productive.

- Isolation and reluctance in sharing the ideas and problems has aggravated distress among farmers in most of the cases.
- Majority of the households received the government support in the form of compensation, except Guntur, where the tenant cultivation is on high scale. The role of relatives, friends and NGOs is marginal in this context.
- The living levels of the affected farm households improved much for many parameters in post-suicide period.
- The surge in living conditions is attributed by the spouse and family members to the globalised consumption pattern.
- The spouse and family members reminded the research team repeatedly not consider the improvement in consumption of various goods and services as absolute improvement in their living conditions.
- They stated that inspite of low income and mounting debt, expenditures increasing day by day due to rising prices of each and every commodity, except their produce.
- They also expressed that increasing expenditures to maintain the livelihood landing them in vicious circle of debt trap.
- Present status of affected families in terms of possession of additional immovable property is highly bleak.

- Majority households from the sample districts were unable to cleared their entire outstanding loan but paid part of old debts with compensation they received.
- Most of the households neither purchased nor sold the land in recognisable way.
- Inspite of crisis ridden suicides, majority number of families haven't changed either mode of agriculture or their cropping pattern. That is, they still following high cost investment pattern and monoculture crop system.
- Most of the households in sample districts are aware of compensation from the state government and most of them applied.
- Farm families from Warangal and Ananthapur 81 to 88 per cent have received and utilised the compensation. The situation is grim with families from Ananthapur and Guntur districts became of their specific features.
- Free power is being enjoyed by majority households.
- More than 70 percent households donot know about moratorium on loans and also rescheduling of their loans.
- Help line assistance is also not available for majority of the farm households.
- Except in Ananthapur, no single household has benefited with crop insurance scheme.

- As Ananthapur is under pilot study of 'Rain Based Index' insurance scheme, there are few beneficiaries.
- Both spouse and family member faced more stress after the suicide of their head of the family.
- The difficulties faced by the spouses are highly heart rending
- The spouses suffered even to feed their family.
- They complained lack of amount to meet consumptional needs.
- Majority number of spouses complained of insufficient amounts to invest in agriculture to maintain the livelihood.
- They also stated pressure from money lenders is unbearable.
- Some of them faced pressure to clear the dowry payment.

## **Recommendations:**

The present study in entirety acknowledges all valid suggestions and recommendations proposed by the eminent personalities with vast and unparalleled experience and indepth knowledge on agrarian issues that are revolving around the crisis ridden farm suicides. In addition and coinciding with them, the study also proposes certain suggestive measures atleast to reduce the farmers suicides and make it ultimate history in agrarian studies. The proposed recommendation are useful at national and state level with particular reference to Andhra Pradesh.

- At the outset, the mindset of political parties should change from extracting mileage out of the “Great Crisis” of contemporary history of Indian agriculture.
- They should sit together, shed political game to evolve a common agenda and put it in action to stop the farmers suicides.
- The ruling and opposition parties coming on to common platform has to guide the bureaucracy to come up with best solutions to the problem by entering into the actual arena of the crisis.
- Present policies of the central and state governments are just forging existing policies, with additional ‘sugar coat’ and make up. Such policies may serve short term relief but not the final answer to the crisis.
- The central and state governments have to recognise the basic causes behind the crisis with a view from farmers’ side.

- What the farmers actually in need and what demanding has to be understood with humanface in broader context of human rights of the farmers as citizens of this great country.
- Compensation and relief packages can address the post-suicide situation, but may not address the root causes of the crisis.
- As prevention is better than cure, the policies should cover both short-term and long term solutions.
- The government machinery has to understand and digest the reality that thousands of crores of rupees in the form of compensation and relief measures are not going to stop until long lasting policy perspectives which are already given by various committees and commissions are implemented with open mind.
- Pouring crores of credit into the agriculture is also not the end point to the problem, unless conducive infrastructural environment for 'healthy agriculture' is not provided to the farmers. Other wise it may increase the debt burden.
- Basically, the farm sector is plagued by declining public investment and its resultant decrease in GFC but not the individual credit. It has to increase both short and long term investments in agriculture to strengthen very basic foundations of the agriculture.
- For example, in dry land cultivation (which constitutes more than 60 per cent of cultivated land) individual farmer is highly indebted by spending huge borrowed amounts on bore-wells. The recurrent



failure of bore-wells is causing the catastrophe both in the form of suicides of farmers and environmental threats.

- In such cases community irrigation network should be developed. In southern states and more particularly in Telangana and Rayalaseema regions of Andhra Pradesh number of studies based on views of farmers at grass roots exposed the gross negligence of state in development and maintenance of existing historical 'Tank networks'. Even in the midst of large scale suicides, the government hasn't come up with a comprehensive workable policy to strengthen the tank irrigation. It needs most urgent attention of government to deepen, strengthen and maintain the tanks.
- What happening in the 'country side' is a wide gap between problem and policies. It should be bridged with immediate attention. The government has take it as its obligatory duty to protect the interest of the farmers by playing an anchor role in providing basic inputs like water, seeds, fertilizers, pesticides and credit.
- Where (though few) the 'Community Grain Banks' are in existence the farmers are selling their produce with 10 to 15 per cent additional profit. This mechanism has to spread to all the affected villages.
- As envisaged by Dr. M.S. Swaminathan 'Village Knowledge Centre' should be established with well-trained technical persons with agricultural background to guide and work along with the farmers.

- As Sainath proposed the parliament and concerned state assemblies have to convene special session to discuss the causes, remedies and policy perspectives in the context of farmers suicides without any prejudice.
- The State Government has to formulate exclusive 'Budget for Agriculture Sector' to boost the financial resources.
- Every bore-well is to be insured with state budgetary support.
- Irrigation Development Corporation is to be revived and strengthened to complete all existing irrigational projects within specific time frame.
- "Agriculture Distress Fund" should be created with NABARD support to provide adequate financial resources to highly affected areas.
- Each and every cultivator should be assigned with land entitlement.
- "Small and Marginal Farmers Associations" should be formed with an aim to focus on collective farming on cooperative lines.
- To eliminate mediatories in input and output markets and in credit structure a comprehensive 'Agriculture Marketing Development Corporation" (AMDC) should be established in the state with involvement of experts dedicated to cause of agriculture.
- The government should assure guaranteed irrigational water at least to one crop by overhauling the entire irrigation policy. The priority should be given to small and marginal farmers with tiny holdings.

- By strengthening tanks, insuring bore-wells in dry land cultivation dominated Telangana and Rayalaseema (Ananthapur) and upgrading the drainage system in Coastal Andhra impact of drought can be driven out of the state.
- The government should accept in true sense that technology doesn't mean hi-tech technology. The indigenous techniques of production which are of low-cost and eco-friendly from seed to harvesting should be encouraged and subsidised.
- The nomenclature of the Ministry of Agriculture has to be changed as Ministry of Agriculture and Farmer Welfare (as proposed by Dr. Swaminathan). It can give a farmer-friendly stance and farmers may get psychological strength out of it.
- The farm policies should be designed and implemented in such a way to discourage excess usage of fertilizers and pesticides. The success stories of model villages adopting low-cost technologies, organic farming, bio-pesticides should widely be publicised to take more villages into this fold.
- In a cluster of 5 to 10 villages, the government should establish 'Agriculture Technology Centres' to promote safer and low-cost technologies by involving farmers with rich experience in agriculture. There should be a special drive to conduct soil test for every three years or if needed in case of sudden abnormal drop in production to advise suitable crop and other inputs.

- In these clusters the government should establish ‘Agriculture Knowledge Parks’ by assigning responsibility to agricultural scientists to provide updated information on all agricultural activities and especially on selection of crop seed, and other input and on healthy agricultural practices.
- The proposed ‘AMDC’ should be assigned with the duty to organise ‘Agricultural Trade Fair’ regularly in various clusters. These trade fairs can give ample of opportunities to farmers to expose their skills. They also can sell his agricultural products and purchase the inputs. This will increase the competitiveness among the farmers.
- The establishment of the above mentioned centres provide large scale employment to educated youth.
- The rural youth with basic education and little skills can be trained in these centres and employed in their villages to serve their own people with dedication.
- As P. Sainath rightly commented, when the government is giving duty exemption on gold and diamonds to the worth of five lakh crores and 80,000 crore tax exemption to corporate sector annually, why not the agriculture sector and farmers who are backbone of the country be provided ample subsidies and monetary protection in times of inflation led decline in purchasing capacity.
- Women are the worst sufferer in the context of crisis driven suicides. They should provide with all such governmental support that the male cultivators are receiving.

- The government should design collaborative programmes by involving concerned university and college teachers and students in agricultural extension and research activities to promote interaction between farmers and the society.
- Above all, the psychological mind set of the rural farm households, particularly of small marginal households should be tuned to regulate their expenditures according to their income generating capacity. For this awareness programmes should be organised.

Dr. Swaminathan aptly remarked that the well fed individuals in government ‘bhavans’ should not view agriculture as a mere food producing machine but should recognise it as the back bone of livelihood security system for 70 per cent of our population. The farmer should be treated with dignity and humanity.

Our policies should not ‘add fuel to the fire’ by designing them to satisfy ‘the others’, and neglecting the back bone of the country. Present position of the farming community is between ‘the devil and the deep blue sea’. They do not leave the agriculture, they die with agriculture. The farm families are not willing to accept ‘Eye Wash’ measures and words or to convince with ‘pie in the sky’ in the form of ‘vote game’ promises. The agricultural fields are waiting for a well-conceived farmer friendly policies to uphold the pride and prestige of farmers. For this active involvement of farmers, their organisations, scholars working on farm issues, NGOs and other civil society organisation is highly needed constitution of committees should not be think of ‘end’, but it is a ‘mean’ to get the solution. Implementation of such recommendations with participatory approach with utmost transparency is the need of the hour. It should be endeavour of all of us to strive for cheerful farmers and cheerful fields.

