

The Organic Farmer

The newspaper for sustainable agriculture in Kenya



Nr. 12 April, 2006



It is difficult to replace top soil once swept away by run-off water.

(TOF)

Prevent soil erosion now

Soil erosion takes away the topsoil which contains organic matter and other nutrients essential for plant growth.

The Organic Farmer

"A nation that destroys its soil destroys itself". This statement from former US President Franklin D. Roosevelt in 1937 is still relevant to Kenyan farmers today. Every year millions of tonnes of highly productive soils are washed away by rains and even wind. Poor soil management by farmers can lead to poor crop yields. Research shows that erosion on a slope can carry away up to 10 tonnes of soil per acre of slope in a year. Right now, many farmers have already ploughed their land in readiness for planting, but one area they may not have paid attention to

is prevention of soil erosion. Erosion takes away the topsoil; this is the most fertile soil that is suitable for agriculture because it contains organic matter and the essential nutrients that help to promote plant growth. When the topsoil is washed away, the land becomes less productive and the ability of the remaining soil to retain water is also reduced.

Take conservation measures

Most farmers do not use any soil conservation measures in their farms.

The Organic Farmer launches an initiative to assist farmers' groups in certification and marketing. see insert

This is one of the factors that has contributed to the declining productivity of land in many parts of the country. Soil erosion is the most serious threat to soil fertility in all farming areas. Soil erosion actually starts during the dry season. This is a time when most of the land is left bare after the vegetation dries out. Strong winds then take away much of the topsoil. Farmers should therefore ensure that the land is always covered after harvesting to stop soil loss through wind erosion. After ploughing the land also, the top soil is loose, which makes it vulnerable to erosion (see page 4).

Dear farmers,

One year ago, in April 2005, we started The Organic Farmer newspaper. When we consider the feedback from the farmers, mainly through letters, SMS, e-mails, and field visits, we can confidently say that the newspaper is playing an important role in the Kenyan agricultural sector and in organic production in particular.

The production of a newspaper of this nature is a demanding task. However we are happy to note that the interest of the thousands of farmers who rely on the newspaper for information is what motivates us to apply ourselves and work even harder in its production. It also gives us the inspiration to research for more relevant information that addresses the problems facing Kenyan farmers. In other words, we can say that the newspaper is "farmerdriven".

In our May issue, we are going to give you an insight into the achievements of the newspaper and the way farmers want it to appear in future. This will be done after going through the questionnaires which most of you have already sent back to us.

Like any other serious publication, The Organic Farmer has the responsibility of addressing the problems that face its readers and finding ways to solve them. From the time we started the newspaper, farmers have complained that they are not able to sell their organic produce. After research, we discovered that what the farmers lack is certification to show that their produce meets all the conditions that are required to qualify as "organic". With support from BioVision, the Swiss Foundation, that supports this newspaper, we have decided as a kind of birthday gift, to help farmers in this important area: we will assist selected groups to become certified as organic producers in order to help them market their organic produce.

Moreover, the newspaper has found a number of reliable buyers of your organic products. In the inside pages of this issue, you will find the details of The Organic Farmer Support Programme.

We thank all our readers for their trust in the newspaper and are looking forward to the success of the new initiative to help Kenya's organic farmers.

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MY OPINION

By Richard Koech

Many of us are preparing to plant now. A bit of planning can help save us a lot of time and money. A clever farmer should by now have decided the best crop to grow for the season considering the size of his land, weather conditions and the market. He also keeps proper farming records showing how much he spent to buy inputs last year and what he got in return. Apart from meeting our food requirements, what we grow should also earn us some additional income to meet our other financial commitments. If it does not, we should be able to look for other crops that meet these needs.

Richard Koech, farmer in Nakuru

The Organic Farmer

The Organic Farmer is an independent newspaper for the Kenyan farming community. It promotes organic farming and supports discussions on all aspects of sustainable development. *The Organic Farmer* is published monthly by ICIPE and distributed free to farmers. The reports of *The Organic Farmer* do not necessarily reflect the views of ICIPE.



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**Publisher**

International Centre of Insect Physiology and Ecology (ICIPE)
P.O.Box 30772, 00100 Nairobi
KENYA
Tel. +254 20 863 2000
e-mail: icipe@icipe.org
homepage: <http://www.icipe.org>

Editors

Peter Kamau, Peter Baumgartner

Secretariat

Lucy W. Macharia

Advisory Board

Dr. Bernhard Löhr, ICIPE
Dr. Nguya Maniania, ICIPE
Dr. Fritz Schulthess, ICIPE

Address

The Organic Farmer
P.O.Box 14352, 00800 Nairobi
KENYA
Tel. +254 020 445 03 98
e-mail : info@organickenya.com

Layout

In-A-Vision Systems(k)

The best banana planting method

Farmers should ensure they use disease-free planting material such as tissue culture varieties.

The Organic Farmer

Banana is an important horticultural crop, providing food and income to Kenya's small-scale farmers. It does well in most of the agricultural areas in Kenya with a rainfall of at least 1000 mm per year and temperatures of 28° c the plants require sunlight. Shaded areas should be avoided. Banana plants should be planted on sites that are sheltered from the wind because heavy banana bunches are easily knocked down by the wind. The plants require deep, fertile and well-drained soils. The soil should contain organic matter as well as nitrogen, potassium and magnesium.

Planting site

Land that has been left fallow for at least a year is ideal. The ground should have a gentle slope. Steep slopes, rocky areas and waterlogged sites should be avoided. In windy areas, agro-forestry and fruit trees should be used as windbreaks to reduce plant breakage.

Land preparation

The bush should be cleared and debris removed from the field and composted. Compost is a source of organic manure for banana plants. Since the banana roots are soft, soil depth should be approximately 60 cm (2 ft). The preparation should be done during the dry season.

Hole preparation

The spacing between plants and rows depends on the type of bananas being planted. For medium size bananas, spacing of 3 by 3 metres is recommended. Short varieties such as the dwarf Cavendish require 3 by 2 metre spacing. In level fields, planting holes should be dug in rows along straight lines while on sloppy land; holes can be dug along the contour lines.

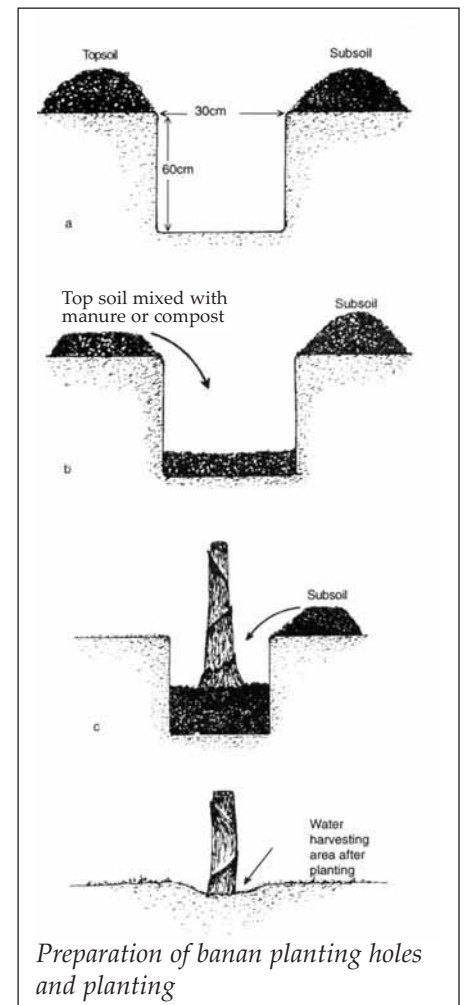
Planting holes should be 2 feet long and 2 feet wide, with a depth of 2 feet. The topsoil should be heaped on one side of the hole and subsoil on other side. Mix the topsoil with 2 debses of well-decomposed organic manure. The manure should be thoroughly mixed with the topsoil. Plant the banana plant in the topsoil-manure mixture around the roots. The subsoil, which is not as nutri-

tious, should be spread as the top layer to make a basin around the plant.

Use good suckers

Banana plants should be planted at the beginning or during the long rains. In the prepared hole, dig a central hole about 2 feet deep. Firm the soil around the plant by pressing with the feet. The young plants have to be watered regularly as bananas need plenty of water for proper growth.

Farmers are advised to use tissue culture bananas obtained from established nurseries (see next page). However, sword suckers from existing plantations that are disease-free can still be used. The suckers should be 1 to 1.5 meters tall. The leaves and roots should be cut off, especially in dry weather. A thin layer of the corm (lower stem) can be peeled off to get rid of weevils or nematodes. Farmers can split the banana lower stem and plant the slices. These should be covered with loose soil.



Preparation of banan planting holes and planting

Source: *A guide to planting bananas in the East African Highlands*, by ICIPE

Tissue culture bananas are productive

This method has produced disease resistant varieties which are high yielding and take a shorter period to mature.

The Organic Farmer

Banana production in the country has been declining in the past two decades following the spread of fungal and bacterial diseases in most parts of the country. The two most common diseases responsible for the decline are the Fusarium wilt or the "Panama disease", and the black and yellow sigatoka leaf spot disease. Sharing of planting material between farmers is responsible for the rapid spread of these diseases.

To counter this problem, researchers at the Kenya Agricultural Research Institute (KARI) have now developed superior varieties which are more productive and are resistant to diseases using the tissue culture method. The method involves selection of healthy shoot tips from the existing banana varieties which are then cleaned and split into small pieces.



Tissue culture bananas give better yields than conventional varieties. (Photo TOF)

These are then grown in special jars in a disease-free laboratory environment. Hormones and nutrients required for plant growth are then fed to the young plants to make them reproduce. The plants are then split further, and put in more jars for large scale multiplication of planting mate-

rial. One plant can produce up to 1000 seedlings using this propagation method.

Tolerant to diseases

Susan Muli, a researcher at the KARI station in Thika, says that any variety can be propagated and multiplied within a short period. The transfer of diseases is not possible because any contamination of planting material is destroyed in the laboratory propagation process. Some of the new varieties that have been introduced recently are tolerant to the Fusarium wilt. Tissue culture bananas give better yields than conventional bananas. One bunch can produce up to 13 hands weighing between 35 to 40 kg. Conventional banana bunches weigh between 15 to 20 kg. Tissue culture bananas have also a shorter growing period of 9 months while the conventional varieties take 18 months or so to mature.

Varieties of tissue culture bananas

The common varieties being produced under the tissue culture method are the Giant Cavendish, Chinese Cavendish, Dwarf Cavendish, Williams, Kampala, Valery, Grand Nain and Apple, which are ideal for desserts. Other varieties include the Uganda green, Ngombe and Grade which are good for cooking purposes.

Climate and soil requirements

Bananas prefer a warm climate with an optimum temperature of 27 degrees centigrade. Rainfall should be at least 1000 mm and evenly distributed throughout the year. They require deep, well drained loam soils with high fertility and organic matter content (see page 2).

Farmer now grows new banana variety

Many farmers who have started tissue culture banana production have reaped great benefits from this new technology. Charles Kimani, a farmer from Kibichiku sub-location in Lower Kabete in Nairobi is one of them. Two years ago, he and 42 other members of the Murimi Mugunda Self-Help Group were concerned with the declining production on their small-scale farms. They approached a number of agricultural institutions to train their members on modern production methods. One of the NGOs they approached is Africa-Harvest's Chura Tissue Culture Banana Project, which is trying to promote commercial production of tissue culture bananas among small-scale farmers in the country.

"They immediately set up a demonstration plot in one of our member's farms and taught us how to dig holes, plant and manage tissue culture bananas. The training made a big difference to the way we used to tend our bananas. I removed Napier grass from a portion of my land and put it under tissue culture bananas."

Today Charles Kimani is one of the most successful tissue culture banana farmers in his village. He owns a beau-

tiful orchard with more than 150 healthy banana mats. At his first harvest in January this year, he got 35 bunches weighing a total of 850 kg which he sold at the price of Ksh 15 per kg, earning him a total of Ksh 12,750. He was voted the best farmer for getting the highest yield while using purely organic production methods, during the first harvest celebrations organized by the Africa Harvest project early this year.

To help farmers get good prices for their bananas, the NGO has helped farmers set up a marketing company called the Teecee Bell Company Ltd., which has brought together 200 farmer's groups in Kiambu and outlying districts in Central Province. The company was able to sell more 2.5 tonnes of bananas during the harvest season last January. They attend field days and agricultural shows where they sensitise farmers on banana production.

Farmers interested in buying tissue culture bananas can write to the following address:

Africa Harvest, P.O.Box 642 -00621, Village Market, Nairobi, Tel.020-7124083/1/6/5/2

Identify and prevent soil erosion

Farmers should try to avoid soil erosion since heavy rains can take away their valuable soil.

The Organic Farmer

A farmer should be able to know when they are losing their top soil on their land through soil erosion. At first, erosion appears in the form of small channels or lines made by running water when it rains on freshly ploughed land. The accumulation of fine soil material in trenches and depressions is another clear evidence of soil erosion. The brown colour of run-off water or small streams during and after the rains is a good indicator that soil erosion is taking place. Sometimes tree roots are exposed, indicating that a considerable amount of topsoil has already been washed away. It is not only the steep slopes that are affected by erosion - even the level plain fields can be severely affected.

Prevent erosion before it happens

A farmer should stop soil erosion before it takes away the valuable soil. Farmers can do this by employing soil conservation measures. One way is to ensure that the soil is always covered with vegetation or by mulching. This improves the infiltration (sinking in) of rain water into the soil.

The other measure is to ensure that the speed of rain water flowing down the slope is reduced through the con-



Planting Napier grass across the slope prevents soil erosion. (Photo TOF)

struction of bunds or other barriers such as gabions.

Any plant which covers the soil and helps build soil fertility is called a "cover crop". Examples of good cover crops include the *Crotalaria* species, *Mucuna*, *Desmodium*, purple vetch, velvet bean or jack bean.

Conserve soil by what you plant

Planting of different types of crops should be designed in such a way that the soil is permanently covered with plants. Careful timing of sowing and planting can help avoid uncovered soil being washed away during the rainy season. After the main crops are harvested, a green manure crop may be planted. When planting, crops should always be grown in lines across not up and down, the slope.

Controlling soil erosion

Cultivated slopes are extremely prone to soil erosion. In order to

reduce the speed of water flowing down during the rains, construction of barriers along the contour lines are useful. Contours are imaginative horizontal lines across a slope. The construction along contour lines is aimed at reducing the slope and speed of the surface water. The lines help catch and hold the soil eroded above the slope. The constructions made along contour lines to prevent soil erosion include wooden barriers, stone walls, terraces, trenches and living barriers like Napier grass and trees.

Wooden barriers or stone walls

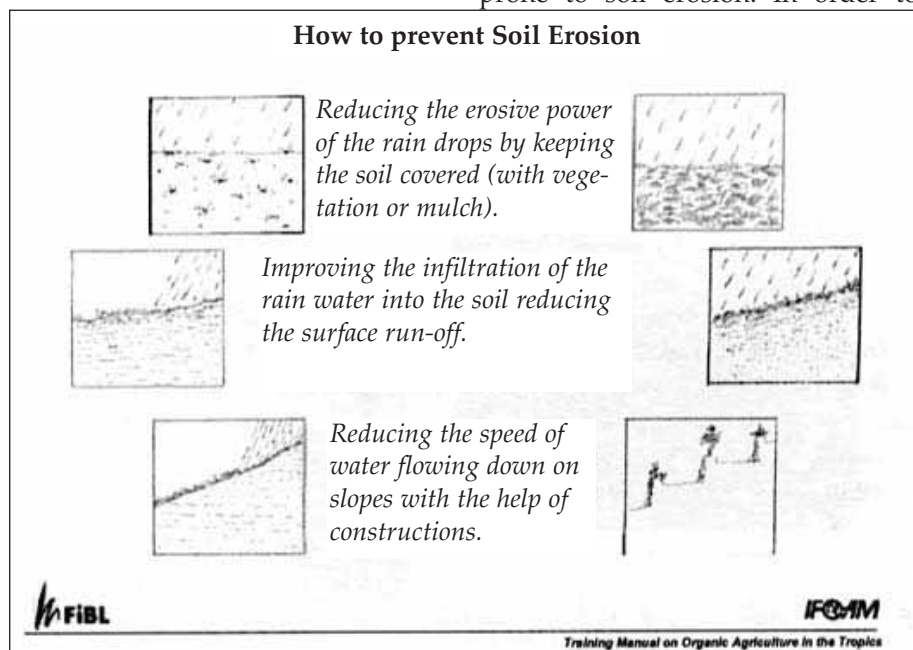
These are simple barriers constructed using tree trunks and branches. They accumulate eroded soil behind them, preventing it from being washed away. Construction of stone walls need more time but lasts longer and needs less maintenance. Apart from barriers, a farmer can just leave a strip of unploughed land across the slope.

Bunds and trenches

Bunds are earth or mud barriers made along contour lines to stop erosion. They are easy to build but need more work to maintain. When digging a trench, the soil should be deposited on the upper side of the slope (fanya juu method). A farmer can add fodder grass, hedges, pineapples or even fruit trees. They hold back eroded soil, reinforce the walls and help increase water infiltration.

Bench terraces

Bench terraces are efficient in erosion control and help build up soil fertility. When digging terraces it is important that the fertile topsoil is kept aside and later spread on the finished terrace. Various plants can then be planted to hold the soil.



The three general strategies for preventing soil erosion

(Source: IFOAM)

Natural fertilizers are rich in nutrients

Natural fertilizers not only feed the plants. They also help make the soil healthy for farming.

Su Kahumbu

Without resorting to the use of harmful chemical fertilizers, there are a number of ways an organic farmer can use to provide the nutrients that are needed for plants to grow through the natural recycling process. The use of plant and animal materials not only feeds the plants, but also makes the soil healthy. The following are some of the methods that can make farming more sustainable by adding nutrients to the soils:

Green manures

Green manures are plants grown to improve the soil. These plants may fix nitrogen, protect soil from drying, improve soil structure via roots, and suppress weeds by fast growth. They control pests by harbouring predators. They may be ploughed back into the ground, or cut and left to use as a top mulch, or they may be cut and used in the compost pile.

Examples of plants for green manure include amaranthus and beans or any other weeds that farmers often throw away. These weeds take nutrients from the soil; by ploughing them back the farmer will be replenishing the soil with these essential nutrients. Excess green manure can also feed animals.

Animal manures

These manures must be well rotted or composted before use. They are best mixed with the bedding of the animals (e.g. straw, grass), as this will also contain most of the nitrogen that is in the animal urine. The bedding will also provide bulk which will improve the soil structure. If the bedding is wood shavings, a longer composting time is required, especially with higher nitrogen manure

like chicken manure. Both nitrogen (N) and potassium (P) are easily washed away by rain, so manures should be covered. Animal manures are best used after composting, for vegetables however, they are not suitable for root crops such as carrots.

Compost

All garden vegetative waste can be composted. Make sure to add fibre into the compost too, so that the resulting mixture is crumbly and sweet smelling, not sludgy and smelly. Animal bedding, cereal straw, maize stalks and other crop residues are all good. Comfrey leaves and Tithonia added to compost act as a compost activator as well as adding micronutrients. EM (Effective Microorganisms) can also help speed up your composting time by adding a ready source of microorganisms for the composting/decomposition process.

Compost must be turned to aerate and mix the materials at least three times over a period of 6 weeks. High temperatures in your compost heap will help to kill pathogens (disease organisms) and weed seeds. After the third week, your compost will progressively cool down over time until it is completely cool and ready to use.

Earthworm compost

Worms cannot process large quantities of organic material at a time, therefore they are ideal for composting kitchen and vegetable waste in limited quantities. They will not compost rotten, smelly waste, which may in fact kill them. Both the worm compost and a worm compost tea can be used from these friendly decomposers. Be careful not to kill them in the process of removing the compost.

Leaf mould

Throwing leaves into the rubbish or setting them alight is a waste of a very valuable resource. Collect leaves in an

Permitted organic fertilizers

Organic fertilizers are products of plant, animal or mineral origin that generally release nutrients slowly over time. Some are compound mixtures, such as mixtures of bone meal, seaweed meal and fish meal, supplying a range of plant nutrients. As they are natural, they often contain some trace elements too.

Bone meal: Contains phosphorus (P), promotes strong root growth. Used as a base dressing before planting shrubs, fruit trees and other perennials.

Fish meal: Contains nitrogen (N) and phosphorus (P). Promotes root and leaf growth. Used as a general fertilizer.

Rock phosphate: Used to correct phosphate deficiency. Best incorporated into the compost pile. Available in Kenya from Mijingu.

Seaweed meal: Nitrogen (N) and potassium (K) helps build up humus levels in soil. Good for fruiting plants.

Dolomitic limestone: Calcium magnesium carbonate. Use to increase the soil pH, making it less acidic.

Gypsum: Contains calcium sulphate. Supplies calcium without altering soil pH. Use a gypsum/dolomitic limestone mix (80:20) to help lighten heavy clay soils.

Potash: Contains potassium (K). Good for fruits and vegetables. Best incorporate it as wood ash (potash) into compost piles.

These organic fertilizers (available at agro-vet-shops) are normally used where there is a nutrient deficiency in your crop. One must therefore learn to identify the deficiencies and strive to correct the cause of the problem.

empty sack or container, moisten and leave to decompose. You may add EM or earthworms, although you will find they will make their way into the leaf mould without invitation. Leaf mould may take up to 5 months or more to fully decompose, therefore as with compost, try to have a few containers going at the same time. The final dark, rich soil - like leaf mould can be used in seed beds, potted plants or as mulch for delicate seedlings.

All of the above soil improvers may be used as "teas" after they are ready, simply by putting them into a sack and soaking in water for a few hours. On removal, the resulting "tea" can be diluted 1:4 and poured onto your soil as a top dressing.



The right way to prepare plant extracts

Zacharia Mwarari from Kilgoris in Trans Mara district asks how long it takes for plant extracts to be effective once they are applied to crops. In particular, he wants to know more about foliar feeds prepared from stinging nettles, comfrey and Tithonia. He asks: "How can we prepare them to be effective against pests"?

Most plant extracts become effective immediately they are applied to the crops. Their effects vary in intensity, however. Extracts used as pesticides will act in different ways, when they act as deterrents.. It is important to note that when one sprays with deterrents for example African marigold, garlic, and chilli, it is not necessary to actually spray the insect. One sprays the crop and the resulting repulsive smell or oily feel will deter (repel) the insects.

Spray carefully

It is important when spraying contact sprays to actually spray onto the insects. Millions of litres of spray are wasted and pollute our environment by folk who do not understand the correct way to apply the active ingredients in the agro-sprays. Spraying devices such as Knapsack sprayers aim to saturate our crops and fields with these dangerous poisons. The resulting toxic overload in the environment and poisoning of the soil, animals and humans seem of little con-



Tithonia can be used to make foliar feed.

sequence to some of the companies who produce these toxins.

Learn to be patient and to use spot spraying instead of blanket spraying, as this will ensure you do not kill off all the beneficial insects. It is also important to control the insects once sprayed.

Choose the right pesticides

If the extract is too dilute, the effect will be minimized. Note that it is advisable to change pesticides, as many insects easily build up a resistance to one product or extract if used frequently. It is advisable to spray in the early morning and late evening to avoid killing the "good guys" as they will have headed home to the hedges.

Neem affects the reproductive cycle of the insect and therefore although it begins to act on the insect immediately its effects will not be seen physically for 2 weeks. Pyrethrum-based products will act immediately - causing death, as the pyrethrin affects the nervous system of the insects. Pyrethrum, however, breaks down rapidly on exposure to the sun, thus it needs to be used more frequently than some of the other plant extracts (botanicals). Others affect the digestive system, causing the insect to slowly die of starvation, whilst oil based products cause suffocation of the pest.

Useful foliar feeds

Extracts used as foliar feeds are effective straight away although their effects may not be immediately visible to the eye. Foliar feeds can be sprayed weekly for heavy feeders like tomatoes, broccoli, strawberries, sukuma and others, and less frequently for light feeders, such as spinach.

Stinging nettles included in the foliar feed will help protect the plant against fungal problems due to the sulphur present in the extract. If you have a problem with downy mildew or powdery mildew, then nettle tea is very good. The problem must be caught and treated in its early stages, otherwise it will be difficult to contain.

One can add crushed garlic, chillies or African marigold to any of the plant foliar feeds to help protect against insect damage. However, you will risk killing all the beneficial insects as well or you may have very pungent and chilli-flavoured vegetables, for example if you are spraying sukuma! I recommend dealing with the insect problem when it occurs, and keeping the foliar feeds separate to avoid the abovementioned problems. In organic production, we must be vigilant and observant. We must seek to remedy the problem, not to treat the symptoms. It's all in the soil. If we can keep our soils healthy, all life depending on it will also be healthy.

There is no organic herbicide

Mwarari also wants to know if there are other natural methods for preparation of herbicides and seed dressers. "Please give us the recipes for their preparation in order to help us cut costs and stop use of chemical substitutes."

I do not know of an organic herbicide. Herbicides kill unwanted vegetation, for example weeds. In organic farming, weeds are useful for animal feeds, mulching, compost making, ground cover, insect repellents, and also vegetables for human consumption.

Seed dressings are products put on seeds to protect them from damage once planted or to encourage good root growth. Unfortunately I do not know of any organic seed dressings. One can, however, prepare your seed bed mixing pymac into the soil. Pymac is the pyrethrum cake left over after the extraction of the pyrethrin from the pyrethrum flowers. This will protect the seedlings from nematodes and cutworm. Generally, by creating a healthy soil, you will eliminate the chances of putting your seed into a hostile environment. It is important to use healthy fresh seed from a reputable source. It is also very important to rotate your seed in seed beds to avert thin, weak transplanting material.

Su Kahumbu answers your questions



Write to

The Organic Farmer

P.O. Box 14352

00800 Nairobi Kenya

Tel: 020 445 03 98, 0721 541 590

e-mail: info@organickenya.com



Letters to the editor

Can we get certification?

Congratulations to the editorial team of The Organic Farmer. Your magazine has come at the right time when life is endangered by use of so many chemicals. Our group as the name suggests wants to deal with horticulture. We have already started growing grafted avocados through the assistance of our agricultural extension officer. We would like to have a certificate to make sure that our fruits and other crops will get into the market especially exporting without problems. How do we get the people concerned here in Eldoret? I am very much interested in the Organic Farming and long live *The Organic Farmer*.

Wilson Kamau Maina, Umoja Horticultural Group, P.O Box 1027, Eldoret

Dear Mr. Maina,

Information on organic certification and marketing was covered in our January 2006 issue (No.9). We are now in the process of assisting selected farmers groups in getting certification. Read the insert for more details.

Give more on dairy goats

We are a group of about 25 who are venturing into dairy goat keeping as a way of fighting poverty. However we don't have enough information regarding the subject. We are informed that you had covered this same very well in your issue of organic farmer No. 6. We will be very grateful if you supply us with a few copies of that issue to help us gain more insight into the kind of project that we are venturing into. We as a group would be very grateful if you include us in your mailing list to help learn more concerning organic farming and sustainable agriculture. I hope you will address my request.

Jeremiah Nduyu,
P.O Box 112, 20107, Njoro, Nakuru

Paper is very helpful

Your magazine is extremely useful and helpful to anyone interested in becoming a skillful and productive farmer. Could you please include my name in the list of the recipients of this wonderful monthly magazine.

Eldad Kanyi Macharia, P.O Box 58
10306, Kagio

More on organic farming

I am a farmer in Nyamira District. When I read issue No.6, it impressed me so much that I wished I had read your back issues. Now I have formed two groups of farmers who are very much interested in more information on organic farming. Please send us through the above address so that we can be updated on new farming methods.

Daniel Misinga, P.O Box 333,
Nyamira

TOF has converted me

I am a farmer in Kiambu, after reading the September/October 2005, I was overwhelmed by the quality of information it contained. It encouraged me very much especially on goat production and pest control. I have decided to keep dairy goat from now henceforth and also practice organic farming. So if possible feed me with information on the two fields and also be supplying me with your monthly editions. You are inspiring and helpful people, excellent partners to the farmers. I will appreciate you response with a big heart.

Samwel K Mathore, Sakima Green Valley Farm, P.O Box 211 00222 Uplands

How can I get copies?

I work with farmers groups' and would like to be able to subscribe to your publication. What do I have to do? I would like between 10-20 copies preferably. Thank you.

Soren Green,

P.O Box 547, Kilifi, 0723 100809

We use it to help farmers

Thank you very much for keeping us informed and educated about organic farming. We are a Community Based Organisation in Rongo working in collaboration with other self help groups to improve soil-fertility by using local available resources to increase crop yields. We are kindly requesting you to send us more copies of your newspaper through the above address. We need your cooperation in this task.

Phillip Dande, Chairman FAARP Project, P.O Box 03- 40404, Rongo
philipdande@yahoo.com

Dear Farmers,

As part of our efforts to serve the organic farming community effectively, we would like to create a database of organic farmers in the country. We are interested in:

- Your names,
- Addresses, Location,
- Farm acreage,
- Are you an organic farmer?

To make it easy for you, we have a special telephone number: given above. All the farmers can provide these information through short messaging service (SMS). *Come on Farmers, Tuma jibu. Asante.*

SMS ONLY

We have learnt a lot

On behalf of Kamasakwa Intensive Farmers (KIF), I am impressed to say that since we started receiving copies of The Organic Farmer, we have been able to learn a lot on organic farming. For this reason I am hereby writing to request you to send the newspaper through our own address. I am a development worker and extension officer with the Catholic diocese of Homa Bay and mainly work with farmers. The newspaper would be of much help to me and my group. Let us work together.

George Otieno Okello, P.O Box 362,
Homa Bay

Farmers liked it

It was a great pleasure meeting you at Brackehurst farm. We thank you for being true to your word that you would send us copies of. I have distributed them to farmers here in Othaya and Ndaragua and farmers have received their first copy with a lot of enthusiasm. As a matter of fact they thought it was a copy of CTAS SPORE magazine and they are very happy to learn that they have a magazine so good and its locally published. They are asking why they never heard or saw it before. I have also distributed the questionnaires but since this the first copy they are at a loss to comprehensively fill it satisfactorily but they have assured me they will do their best to be as truthful as they can.

Stephen Waikwa, P.O Box 543,
Othaya



Fodder trees are important

Fodder trees are a benefit for each farm. Trees on the farm provide live-stock feed, enrich soils and help control soil erosion.

Eric Lumosi Asilingwa

Planting fodder trees and shrubs on the homestead brings major benefits for the farmer. They provide dairy farmers with readily available, high quality, low-cost fodder for their dairy cows and goats. With most small-scale farmers having limited resources, especially land and capital, they can only afford to keep a few dairy animals that are usually fed with inadequate and poor quality fodder. This kind of feed does not meet the animal's daily requirements for growth and milk production. The main source of high-quality feed for dairy cows in eastern Africa is Napier grass. This is supplemented during the dry season with crop residues such as maize and bean stalks or hay, banana leaves and banana stems and indigenous fodder trees.

Characteristics of fodder trees and shrubs Well-managed and healthy fodder trees should have the following qualities:

- Provide large amounts of quality fodder.
- Grow relatively fast, with benefits realized within the first year after planting.
- Tolerate frequent cutting and continue providing benefits for more than 5 years.
- Grow together with field crops without competing with them.
- Easy to conserve, either by cutting and preserving them as leaf meal, or by allowing them to persist long in the field and remain green during the dry season.
- Provide the farmer with additional benefits (besides fodder) (are multipurpose)
- Be non-toxic and easily digestible

for animals

Benefits of fodder trees and shrubs.

Fodder trees and shrubs provide fodder for on-farm dairy animals. Other benefits of fodder trees and shrubs are to help control soil erosion, improve the fertility of the soil, and provide bee forage, fuelwood, stakes and poles, fencing, shade and mulch. Some of them serve as ornaments and windbreaks, while others like mulberry provide fruits. In addition, the leaves of mulberry are used for feeding silkworms and sesbania leaves are used as soap. Fodder trees and shrubs that have been left to grow to maturity with the objective of producing seed, firewood or stakes, can also provide forage (nectar) for bees, which results in the additional benefits from honey production on farms. Honey is nutritious and also fetches good prices in the local market.

Seeds and seedlings of different varieties of fodder-trees can be prepared by use of crosspollination to prevent inbreeding. These can be sold for income generation.

Improved soil fertility

The deep root systems of fodder trees help collect nutrients from the soil that are too deep for crops to reach, drawing the nutrients to the soil surface where they can be used by crops. Some nutrients are leached below the crop root zone. The deep tree roots help recover these nutrients that are recycled into the system. When leaves from these trees fall to the ground and decompose, they add nutrients to the soil. Furthermore, animals fed with tree forage produce high quality manure. These two cycles greatly improve soil fertility. Leguminous trees and shrubs also have the ability to fix nitrogen from the air and transfer it to the soil, making it available to plants.

In the May-issue, we bring you more on how to plant fodder trees.

Market place



Seedlings: On page 4 of our March 2006 issue, we wrote about Benjamin Lugano, the farmer who produces certified fruit tree seedlings in Cherangani, Kitale. However, we gave the wrong telephone number for his contact. Lugano is offering for sale certified Fuerte and Hass varieties of avocado fruits. Apple, Tommy and Harden varieties of Mango fruits, pawpaw and tree tomato seedlings. His correct address:

Lugano Horticultural Enterprises, P.O. 323, 30200 Kitale. Tel.0733 99 05 74, 0733 39 19 07

Pawpaw: I would like to buy passion and pawpaw seedlings for planting. My contact address:

Peter Chalo, P.O. BOX 1401, 90115, Kangundo. Tel.0724 997 398

Asparagus: I am looking for market for asparagus and spinach seeds which I grow organically in Gilgil, Nakuru district. If interested, please call Tel. 0723 504 018. Ask for Chege.

Eucalyptus: I am interested in buying hybrid eucalyptus tree seedlings (South African Variety). If any farmer has the seedlings they can get in touch with me through the following address:

Jackline Kidambi, P.O Box 596, 30200 Kitale. Tel. 0735 57 84 16

Cutting: I am offering for sale an electric chaff cutter. It is fast, efficient, secure and economical. Call 0720 884549

Seeds: We have a project on indigenous vegetables in our Rural Outreach Program which is a mother project. We have the following species; spider plant, slack nightshade, amaranthus, corcorus, cowpeas, clotolaria, Ethiopian kales, amaranth spp. and pumpkin. We sell their seeds in seed banks in Butere, Mumias District and we have an information centre in Nairobi at Kenyatta Market stall No.274. If you are interested, please get in touch with us:

Thomas Wakala Mutuli, Rural Outreach Programme, P.O.Box 29086, 00625 Nairobi. Tel. 0735 56 88 24
Email: thomasmutuli@yahoo.com

Purple vetch: This legume and cover crop gives good fodder for livestock. Interested? Contact: Ikinyukia Self Help Group, P.O Box 125, 20319, South Kinangop. Tel. 0724 492 456



Trees have many uses on the farm.