

The Organic Farmer

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The magazine for sustainable agriculture in Kenya



Nr. 37 June 2008

Take care of that calf

Of all the domestic animals, newly-born calves are the most neglected by most farmers. They are not only poorly fed but most farmers do not house them properly. This neglect is to blame for the poor health of calves and even increased incidence of deaths due to disease and poor nutrition. New research now shows that taking care of calves and feeding



them well enables them grow into healthy dairy cows whose milk production is higher than the average dairy cow. It is a common belief among farmers that a calf can only be fed on milk. On the contrary, research shows that when solids such as high

quality forage are introduced at an early stage, the development of the calf's stomach is better than when it is fed on milk alone. Calves can even be weaned at 10 weeks of age without compromising their health. (TOF)

Page 5: Calves need more than milk

Farmers and pastoralist misusing Furadan

The increase in use of the poison Furadan by Kenyan farmers and pastoralists poses a great threat to the country's wildlife. This action will have severe consequences to the ecosystem in the long term, wildlife conservationists have warned that farmers and pastoralists are also causing a great damage to the country's most lucrative source of income: wildlife-tourism.

The two groups use Furadan to kill lions, guinea fowl, rats and other pests that pose threats to their crops and animals. According to a study conducted by the National Museums

of Kenya on the impact of the use of Furadan on birds and other wildlife in Kenya, the practice is rampant especially in the country's major national parks where there is a constant human-wildlife conflict.

In these parks pastoralists, long used to killing lions with spears, have found an easier way to contain the beasts by baiting carcasses of domestic animals with Furadan. Apart from killing the lions, all other animals in the food chain such as hyenas, wild dogs, vultures and other birds of prey which come into contact with the poisoned carcasses also die. (TOF)

Hard work pays for Meru farmers

For many small-scale organic farmers in Kenya, it appears very difficult to sell their produce locally, let alone in the export market. Although the potential exists, many do not know where to start. However, a group of farmers from Meru has shown the way. Meru Herbs has managed to

produce and process a variety of products including herbs, spices, jam and fruits, much of which they sell in the export market. Meru Herbs has shown that everything is possible. In this way they have contributed a lot to rural development. See page 4



Dear farmers,

Many of our small-scale farmers now find themselves in a very difficult situation. Previously they could not afford to buy fertilizer during the planting season in March and April this year because of the high cost of this item. They either planted their maize without fertilizer or used very little quantities that might not have been able to meet the nutritional requirements of their crops. Many more opted to use farmyard manure or compost in place of fertilizer although they could not get enough quantities.

The results of inadequate nourishment is now evident in various crops. Many of them are not as healthy as they should be. Unless measures are taken to correct the nutritional deficiencies, the yield from these crops is expected to be very poor at the end of the year. But all is not lost. At least, to some extent, farmers can address the problem of nutritional deficiency by top dressing (foliar feeds) using plants such as tithonia or comfrey, among others. These plants contain important nutrients which can boost growth and provide nutrients that the plants badly need at this time. Plant teas and liquid manures are easy to prepare, cheap and work efficiently: Plants can take in nutrients 20 times faster through the leaves than through the soil.

This problem has shown the consequences of the fertilizer dependency – and emphasizes the need for farmers to build soil fertility through compost, green manure (legumes) and crop rotation. These long-term perspectives are in fact the starting points in organic agriculture. Farmers, especially small-scale farmers, need to rethink over their traditional reliance on chemical fertilizers. We do not believe that fertilizer prizes will come down soon – at least not to the same level as it was in 2007.

Farming is becoming more and more challenging. Food prices are rising. Some farmers may benefit from increased prices; but a large majority of small scale farmers is not able to produce enough food to feed their families. They have to buy it. We know that this is a difficult situation. We would encourage small-scale farmers to become a bit more creative in order to increase production. By adopting sustainable agricultural methods, they will at least spend less in buying inputs and still get good yields.

Your crops need the right nutrients

Farmers should be able to identify missing nutrients in their crops and to correct these deficiencies.

The Organic Farmer

Even for the most careful farmer, it is sometimes very difficult to know if their crops suffer from mineral deficiencies or from diseases. The signs for these two may be confusing. However, through proper observation a farmer can tell whether a plant is either lacking a particular nutrient or is attacked by a disease.

A lot of problems could be avoided if our plants would grow in a healthy soil rich in organic matter. Organic matter is provided by dead or living plants and animal residues. It is a major source of plant nutrients such as nitrogen, phosphorus and sulphur. Organic matter protects the soil from erosion and therefore loss of essential nutrients, it holds the soil together while allowing free air and water movement. The major source of organic material are crop residues, weeds and animal manures. Any soil with organic matter of between 3.5 and 7 percent is good for plant growth.

The Organic Farmer is an independent magazine for the Kenya 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.

The Organic Farmer is sponsored by BioVision, a Swiss-based foundation for the promotion of sustainable development.

www.biovision.ch

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Nitrogen helps to promote the growth of plant leaves and shoots. It is the most important nutrient for plant growth and it forms part of the many



essential compounds such as proteins and chlorophyll; chlorophyll gives plants their green colour and plays an essential role in manufacturing food for the plant from sunlight and carbon dioxide.

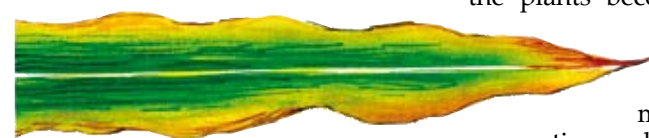
Nitrogen deficiency symptoms: A low supply results in yellowing of

Phosphorus is the second most important nutrient that is mainly required for the



growth and development of the plant's shoots and roots, especially in early stages of growth. Young plants absorb phosphorus rapidly and a crop like maize has peak demand for phosphorus at

Potassium is the third most important nutrient in plant growth. It helps manufacture plant food that



promotes the growth of shoots and roots. It also facilitates the movement of manufactured plant food from the leaves to the other parts of the plant. Potassium strengthens the plant to resist diseases. It is particularly important in regulat-

Trace elements include a number of heavy metals like iron, zinc, copper, molybdenum and two non-metals, boron and chlorine. These are called trace elements because they are needed in very small quantities. For example a maize crop yielding 6.3 tonnes of total dry matter per hectare removes only 70 grams of copper from the soil. However they are important because plants lacking one of these elements may show yellowing of the

leaves but the green colour of the leaves darkens once the nitrogen supply is increased.

Prevention: Build up organic matter levels in the soil. Grow nitrogen fixing green manures (legumes) or use nitrogen-rich organic fertilizers. – Excessive nitrogen on the other hand results in large leaves that are very soft and which are prone to insect attacks, fungal infections and other disease-causing agents. Excessive nitrogen supply increases the growing period of cereals and delays maturity. In root crops, too much nitrogen results in large leaves and small tubers.

just three weeks of growth. Lack of phosphorus at this stage may cause problems that are difficult to correct later in the season.

Phosphorus deficiency symptoms: Plants without adequate phosphorus show stunted root systems, stunted leaves and stem, a dull greyish-green leaf colour and purple colouration especially of the cereal leaves.

Prevention: Apply mijingu rock phosphate or plant teas from tithonia.

ing water in the plants.

Potassium deficiency symptoms: When potassium is in short supply, the plants become stunted; develop small leaves which are pale in colour.

The leaves dry prematurely, first at the tips and then along the outer edges. The fruits and seeds become small in size and less in weight.

Prevention: Improve soil structure. Use plant-based potash e.g. comfrey leaves or comfrey liquid. Add wood ash to compost heap and apply to the soil.

leaves, death of growing points and even a change in the growing patterns of the plant.

Field observation

Yield can often be reduced 10-30% by deficiencies of major nutrients before any clear symptoms of deficiency are observed in the field. That is why farmers have to be sharp observers. Field observations, calculations and soil analysis can indicate nutrient deficiencies. ■

Liquid manures are helpful and effective

As we have noted in the Editorial on page 1, farmers have varied ways of improving the growth of their crops with liquid feeds. Although organic agriculture promotes the principle of feeding the soil, there are times when a liquid feed can be necessary in an organic shamba. Suitable liquid feeds are made from manures, plants, animal wastes and rock minerals. These are basically the same materials that are used in feeding the soil, but in a different form. Plants can absorb nutrients about 20 times faster

through the leaves than if they are applied through the soil. However, it is important to note that organic liquid feeds should never be used as an alternative to good soil care and management.

We should not forget: These foliar feeds or top dressings do not act like a chemical hammer! You have to spray 2 to 3 times a week. The best practice is to spray early in the morning or late in the afternoon, when the good guys, the predators of the pests, are not yet around.

Comfrey is a wonderful plant. It sends down long tap roots, enabling it to accumulate minerals in its leaves. It can be used as mulch or compost activator. Comfrey leaves decay rapidly, releasing the goodness they contain, enriching the soil in the process, and all these elements are made available to other plants. Since comfrey leaves are rich in plant food, they are ideal for making plant teas. The liquid is high in minerals such as potassium, calcium, magnesium, iron and phosphorus along with several vitamins. The leaves contain a lot of protein. In general, it is an excellent fertilizer for many plants, especially for tomato, pepper, cucumber and potato plants.



Recipe

- Dip 3 kg of comfrey leaves in 45 litres of water.
- Cover with a lid and let it stand.
- Use undiluted after 4 weeks.

Nettles

Nettles make a good general liquid feed. Nettles are a little low on phosphate, but supply magnesium, sulphur, and iron. Young nettles contain the highest levels of major nutrients.

Recipe

- Put 1 kg of leaves in 10 litres of water.
- Cover with a lid and let it stand.
- Use after two weeks, diluted 1 part nettle liquid in 10 parts water.
- Add EM1 to improve it.



Tithonia has a huge potential

Most farmers know Tithonia with its yellow flowers. But many farmers see the plant as a weed and as a menace and would clear it from their farms before the planting season. They are unaware of Tithonia's potential as an organic fertilizer to enhance soil fertility. Tithonia can change the lives of many farmers: It contains 80 percent more phosphorus than legumes, it has enough nitrogen and potassium to promote crop growth. It adds nutrients and routinely doubles maize yield as at rates used by farmers without the addition of fertilizer.



Tithonia's ability to decompose quickly makes it an excellent means

Liquid manure has many advantages

In liquid manure, the dissolved nutrients are usually in a more concentrated form than in a similar volume of composted materials. Any manure is suitable for use. If manure is scarce, one can use various plants (see on this page). To prepare liquid manure is the most efficient way of applying nutrients and especially of manure, if the quantities available are limited.

Recipe

1. Put well ripe compost (a mixture of manure and organic matter) in a strong sack (10 kg of compost for one drum of 100 litres).
2. Tie the bag, fix it on a pole and suspend it in a drum with 100 litres of clean water (see illustration).
3. Leave the bag in the water for 15 days, cover the drum.
4. After three days and every other day thereafter, stir the drum by lifting the bag several times using the pole.
5. After 15 days, when the water has turned blackish, remove the bag, sieve

to replenish soil fertility, whereby the concentration of nutrients in tithonia is highest in young plants and before the plant flowers. Slashed young plants can be incorporated into the soil, they can be added to the compost or they can be used as a high value tea fertilizer for top-dressing crops.

Recipe

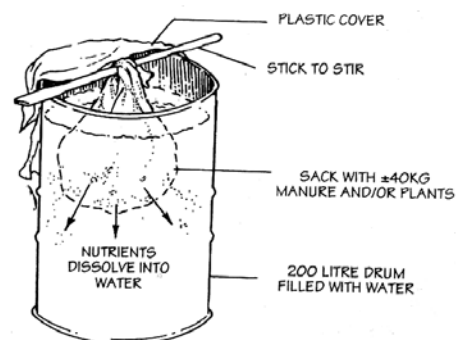
- Chop tithonia leaves, stems and flowers
- Add water at a ratio of 1 part in four parts of water.
- Let it stand in a tightly covered container for at least 7 days.
- Use it within 5 days, diluting it with equal amounts of water
- Test the dilution at one plant and wait a day. If the plant shows signs of scorching, add some more water.

the liquid manure. It should have the colour of weak tea.

6. Try it out first on one plant. If you see that in the following day that it has burned the leaves, it then needs to be diluted to the ratio of 1:2 (to 1 part of liquid manure add 2 parts of clean water).

7. Spray the crop on the stem and at the leaves.

8. Spray early in the morning or in the late afternoon! Spray twice a week.



Even small herbs generate good income

Meru Herbs Company has made a name for itself. It is a good example of rural development.

Felix Mbitu Murimi

Meru, a little town on the North-Eastern edge of Mount Kenya is very well known in many European countries and also in Japan through the products of Meru Herbs Company. The company is in fact a farmers' association with 430 members, which manufactures various types of herbal teas from carcade, lemon grass, chamomille, some varieties of fruit jams and a very tasty sugo for cooking spaghetti. All the herbs and fruits from these products are grown organically, supplying an economically valuable niche market abroad. Meru Herbs operates through Fair Trade distribution channels and generates 95 percent



Workers at a tea-bag filling machine

of its business through exports.

The starting point for this successful enterprise was the setting up of the Ng'uuru Gakirwe Water Project in the late 1980's in Tharaka district, a two-hour drive from Meru town. It was financed by the Italian government through the Catholic Diocese of Meru at a cost of Ksh 45 million and designed by local engineers. The irrigation scheme, which covers 60 km², started with about 500 farming families, which have now increased to 1000 families.

"When the water started flowing to their shambas, many farmers could not afford to pay the annual Ksh 200 water fee charged per year for maintenance of the water system", says Andrew Botta, the coordinator of the project. "As they had no money, they would pay with fruits or a chicken or vegetables, which had to be sold to raise money for the fee" says Botta. "This brought to us the idea of buying products from the farmers, process them and sell. This way, they would get some income, improve their food security and contribute to the development of the project". Today, the farmers can afford to contribute Ksh 2,000 per year for the maintenance of the water system.

Niche market abroad

When Meru Herbs was started in 1991, the project's management team made an important decision which ensured its success as an income generating enterprise: They realised that selling fresh produce was out of the question since the road network was in poor condition and Nairobi, which was the main market, was very far.



Woman sorting carcade, used for preparation of herbal tea (Photos MH)

They therefore decided that all their produce would be processed and packed locally to create jobs for the local population.

90 tonnes of carcade per year

That's why they decided to concentrate on the production of high value herbs and fruits, which can be processed using a simple processing system that enabled the local people to handle the factory production by themselves. Today, about 2,300 families in this semi-arid zone are involved in the activities of Meru Herbs. Their great advantage is the availability of water throughout the year and the support from the sponsor, the Catholic Diocese, which facilitates the marketing and export of the products.

They began with carcade (*Hibiscus sabdariflra*), a popular herbal tea in West Africa, then they went into chamomille and lemon grass production and processing. In 2007, Meru Herbs bought 90 tonnes of carcade, 6.5 tonnes of chamomille and 8 tonnes of lemon grass from the farmers, and transformed these mountains of herbs into herbal teas; in the same period, nearly 100,000 jars were filled with fruit jam. Meru Herbs has 43 permanent employees. During the harvesting and processing, they hire more than 50 casual labourers. The shelling, drying and selection of the plants is done by hand; apart from the mills and one grinder, two tea-bags filling machines are used to prepare various sizes of herbal teas. It is by far the

Continued on page 6

Taxation is a big burden to Meru Herbs

Companies such as Meru Herbs do not get any support from the Government, even though it is a farmers' association whose main aim is to uplift a wide section of the population from grinding poverty. They also contribute a lot to rural development. To the contrary, they are treated like any other company by the government.

The company is heavily taxed. They have to pay high taxes for the imported packaging materials. In January 2008 Meru Herbs bought a container of glass Jars for Jam,

which are not produced in Kenya. The glass containers, including transport from Italy to Nairobi, cost Ksh 770,105, for payment of duty and the clearing fees cost Ksh 459,648. For 500 kg filter paper for tea bags Meru Herbs paid Ksh 678,101, and the clearing fee plus taxes were Ksh 345,969. "These taxes are a big burden to us", says Andrew Botta. "Without these taxes we would have a higher profit and could pay higher salaries and even pay more to the farmers for their produce."

In 2006, Meru Herbs had

to undergo the required inspection by the Kenya Environmental Management Authority (NEMA). For the inspection, Meru Herb had to pay Ksh 398,135. One year later they were told to pay a further Ksh 30,000 to finance the printing of the inspection report. But the big shocker is yet to come: If the regional water board makes good their threat to start charging for the use of the water for irrigation, the Ng'uuru Gakirwe Water Project will have to pay KSh 10,000 to the water board – not per year, but daily! (TOF)

A healthy calf needs more than just milk

The common belief that calves can only be fed with milk is wrong. Calves also need nutritious forage.

The Organic farmer,

Immediately a dairy cow produces a calf, farmers tend to pay more attention to the cow, forgetting the calf. This is very wrong because the calf is the future dairy cow. Due to the high demand for milk, both for domestic consumption and for sale, most farmers find it difficult to provide their newly-born calves with adequate milk for healthy growth. Resultant of poor feeding, the calves are malnourished, weak and prone to diseases.

Research now shows that apart from providing adequate milk for calf-feeding, farmers should maintain the health of their newly-born calves through appropriate supplementary feeding. The common belief that calves can only be fed with milk is being challenged by new research findings. They show that calves fed with well-balanced and nutritious supplements such as sweet potato vines and even feed concentrates, grow healthy and have a well-developed rumen (first stomach of a cow). These calves are better of than those that are fed on milk only. A heifer with a well-developed rumen will grow into a healthy dairy cow whose milk production is certainly higher than other dairy cows which were not taken well care of when young.

Sweet potato vines are good

Judith Kiragu, an animal nutritionist at National Animal Husbandry Centre, Naivasha, says that in the early stages of the growth of a calf, a farmer should be able to feed the calf well. He should provide it with sufficient milk and supplementing this with

solids such as quality concentrates and forage. Sweet potato vines have proved to be the best forage for calves, as they are palatable and easy to digest. Sweet potato vines give a very high dry matter yield of up to 24.7 tonnes per hectare. Their crude protein content ranges from 18 to 30 percent while the crude fibre-content is 15 percent with a digestibility of 70 percent.

In a study she conducted at KARI Naivasha, Kiragu says 7 calf groups consisting of 5 female calves to determine growth performance and 2 male calves for study of rumen development were selected for an experiment. The scientists tried to find out the effects of Napier grass and sweet potatoes forages to the development of a calf. Apart from the milk which was fed at 10 percent of their body weight, some of the calves were fed with mixed Napier grass and sweet potato vines at various percentages over a period of ten weeks. Other calves were fed on either sweet potato vines or Napier grass alone.

A well developed rumen

At the end of the experiment it was found that although all the calves benefited from getting supplementation from these two forages. Sweet potato vines had a higher protein content than Napier grass. Dry matter intake for calves fed with sweet potato vines was relatively higher than those fed with Napier grass. Sweet potatoes were also easier to digest than Napier grass. Calves fed with sweet potatoes had more weight than those that were only fed with milk. But the most significant result of the study was that all the calves had well-developed rumen at 10 weeks which meant that they could be weaned (stopped from being fed with milk) and put on normal diet. The study shows that rumen development is very rapid when the calves start receiving solid feeds such as sweet potatoes.

Supplementary feeding

Prof. Jud Heinrich and Keith Lesmeister, two leading animal nutritionists from Penn state University (USA), support these findings in an article published in the *Farmers Weekly* mag-



azine, South Africa (January 5- 12 - 2007). They explain that changes in the physical size of the rumen are affected by the animal's diet. The rumen of a calf fed only on milk or milk replacement, they say, "remains small even if they are fed with increasing amounts of liquid feeds". While the abomasum (the animal's true stomach) will grow, the rumen remains proportionally small. They argue that as long as the calf is fed only with liquid feed, growth and development of the rumen wall and papillae (the towel-like lining of the rumen) will be underdeveloped. They note that calves fed with underdeveloped rumens struggle to digest grains and forages after weaning, and in the process delaying their growth for between 2 to 4 weeks.

Prof. David Beaver, another animal nutritionist, says in the same magazine that cows should last longer than two to three milking cycles before being replaced. "Good nutrition can increase the number of milking cycles per cow", says Beaver. A common problem he has found with cow nutrition is rumen acidosis; this occurs when the pH-level of the animals stomach is low (a high acid level in the stomach). A cow's rumen should have a pH of 6.0 to 6.8. .

The research above was conducted by Judith Kiragu as part of her PhD thesis which will be published soon. It will be titled "Effect of diet on growth rate and historical development of ruminant stomach of early and late weaned Friesian calves".

Tips for good management of calves

- Calves should be well-housed. They should not be exposed to muddy conditions, wind or too much cold.
- Ensure the calf do not suck milk through the nose. The milk can go to the lungs and cause foreign body pneumonia. Farmers are advised to use nipples for feeding.
- Like other animals, calves should be provided with adequate space for movement.
- Dairy cows fed on low-energy and high fibre ration have easier calving, fewer cases of retained placenta and low milk fever incidences.



Carcade plant



farmers forum

Farmers should act on fake feeds

Your article about faked feeds was really interesting. It seems that we have a culture of cheating in Kenya. It is all the same, in politics as in business. Why can't farmers' groups come together and send 2 or 3 samples of animal feeds to KARI Laboratories in Naivasha, and have them tested. They can easily tell if they are buying the right feeds? It would cost each farmer about Ksh 200, but this is money well spent. We farmers are not smart enough, that's why it is so easy to get cheated; it is the same with seeds or the chemicals we buy in agrovet shops. If we were more serious in farming, we would share our experience, and if we would act like self-confident people, it would not be easy to be conned by these fake manufacturers. Someone should take action.

John Kibet, Eldama Ravine



Quality control needed

According to your April-issue about feeds I asked myself: Do we not have the Kenya Bureau of Standards which should control all the products sold in our shops? If I steal Ksh1,000 Shilling from my neighbour, they will put me in the cells. But if a company is stealing the money from thousands of farmers by selling fake feeds, nothing happens. It is just business as usual.

Paul Otieno, Kericho

More on beekeeping

I would like to get a copy of TOF magazine featuring fodder crops and also to be included in your mailing list. I also would like to be assisted with information on bee keeping. I started beekeeping last year; unfortunately those who helped me were displaced. I must thank you for this magazine. It is updating farmers with skills and knowledge on modern farming methods. Thank you
Doris A Nyanjong', P.O Box 549, Oyugis

It will reduce poverty

I happened to come across *The Organic Farmer* magazine and I found a lot of information which when put into practice, can help alleviate poverty among small-scale farmers across the country. I am very interested in improving the quality of my dairy cows as I have the problem of poor quality breeds. Please put me on your mailing list. I don't want to lose the opportunity to read it as it will improve my life and that of other farmers in our village. Joseph K Chepkwony, P.O Box 149, Longisa

Training farmers

We would like to be supplied with 17 copies of *The Organic Farmer*. We are carrying out training of farmers in Kabuyefwe location with emphasis on sustainable agriculture. Please consider including us in your mailing list. Thomas Khaemba, P.O Box 127, Naitiri

It has enlightened us

I came across this magazine through a friend. Our group has 30 members and has already been registered under Koiseget Dairy Farmers' Group. I found it necessary for it gives guidance on access to specialized breeders. Practising organic farming improves the soil, human and animals health. It also teaches the minimal use of artificial fertilizers thus reducing input cost. Peter Langat, Ainamoi Primary School, P.O Box 249, Olenguruone

More on rabbits

I have been a very keen reader of your good magazine titled *The Organic Farmer* from a friend. I would be interested in keeping rabbits in my small farm. Could you advise me on how to take care of them? I would be interested to know what they feed and their sicknesses so that I can organize myself. I will soon be able to communicate with you via e-mail. Hammerton Kahindi, P.O Box 715, Kilifi Tel. 0733 544770.

Dear Farmers,

If you have any questions or ideas for articles, or if you would like us to publish experiences about your shamba or within your farmers' group, please contact us. We shall get back to you!
SMS ONLY

Tuma maoni yako! Asante.



Meru Herbs

biggest employer in Meru and has a very positive impact on poverty alleviation in a famine-prone region.

The expenses for wages and production went up from Ksh 1.9 million in the year 2000 to KSh 7.1 million in 2007. Last year Meru Herbs had an income of Ksh 22.5 million and expenses amounting to Ksh 19.7 million. The net profit was Ksh 2.7 Million. All net profits are re-invested back into the two production facilities in Meru.

Success with organic farming

A forward-jump step for Meru Herbs was the decision to go organic. Organically grown products are highly valued and fetch a better price in Europe and Japan. The buyers appreciate the healthy character of these products and are willing to pay more for them. In 2002 Meru Herbs got certification from the UK-based Soil Association; it was quite expensive. Solely, the renewal of the certificate last year cost Ksh 243,492. In 2002, 43 farmers were certified as organic farmers, in 2005 196 and 268 this year.

The farmers are free to convert to organic or produce conventionally. But all products which are sold to Meru Herbs have to be organically produced. On the other parts of their shambas, farmers can produce conventionally – on condition that they do not mix the two farming systems and that they have some kind of buffer zone between the organic and the conventional part of the land.

The story of Meru Herbs is a real success story. According to Andrew Botta, there are various reasons for this success: The farmers were involved from the beginning; they were therefore highly motivated; they had a ready market for their products within the production area without having to seek for markets far way or relying on middlemen who would exploit them. Meru Herbs concentrated on a special product that benefited from the help of the Catholic Diocese in search of an export market for the product. "But without our hard working personnel", says Andrew Botta, "we would not have gone this far".

Onions are tricky to grow

I have been planting red onions but the yields are not so good. I have started doubting that may be using the wrong fertilizers, or I may be applying the fertilizers at the wrong time. In my

First I am very happy to hear that we have some young farmers. Student farmers! Many people have asked me how agriculture can survive in Kenya as most of the youth go to the cities leaving an ageing population to grow our country's food. This sadly is the problem in all developing countries. So I am very proud to know that this answer is directed to one of our youth. Congratulations and best of luck with your farming.

Onions are tricky. My first crop of onions was incredible, both white and red varieties. They were huge, and I still remember how shocked I was to see the bulbs sitting above the ground!

They do not like it cold

The subsequent crop we grew was abysmal. So I was asking myself the same questions as you are asking.

Onions do not like cold wet weather but they do need watering. Growing them through the rainy season should not be a problem unless you are in a very cold area. Watering onions at a late stage will delay the maturation process. Onions like healthy soils so make sure the soil has a lot of well rotted compost. They do not like hard or stony soil.

You can plant onions from seed transplanting when they are 5 inches high and planting at 5 inch spacing in the bed that has been prepared with lots of well matured compost.

Use enriched compost

You did not mention what you used to feed your onions on, or at what stage. Onions feed best through their roots, as opposed to through their leaves. Too much nitrogen as a fertilizer will create a lot of leaf growth but that is all. Onions like phosphorus thus minjingu rock phosphate should be used as your organic equivalent and incorporated into your compost.

It is also very important that you use healthy fresh onion seed. If you are not sure, find out what seed a successful onion farmer in your area may be using, or if this is not possible and you can experiment with a few small packets of different varieties. You did not mention what area you are in, perhaps if you did, other farmers could write in and tell us which are

shamba I rely mainly on the December rainfall but I still do have small-scale irrigation. Please send me information. I am a student who mainly relies on farming for my school upkeep.



the most suitable seeds for the area.

Lastly, if you are planting beans in the same area as your onions this could be the problem. These two vegetables types do not like to grow together. We shall write more on companion planting in the future.

With this answer we also give some tips to Vincent Mbura, Box 39, Kericho Tel. 0724 501 790, who wanted to know more about bulb onion growing.

Su Kahumbu

Carrots also need well-composited manure

Why is it not advisable to go organic in carrot production? Tel. 0711 387 128

I am assuming that this question is asking why we do not use manure when planting carrots. Carrots do need feeding and the best way to do this is to put well rotted compost in the soil before you sow the seeds. If the previous crop before planting the carrots was beans, this is not necessary. Do not add manure to soil when planting carrots as manure is rich in nitrogen thus will produce a lot of leafy growth and hairy root growth. Adding a little wood ash to the soil when planting carrots will result in sweeter carrots due to the potassium. **Su Kahumbu**

Where is the CD you promised?

In your magazine you promised a CD that was to be in the market by December 2007. Can we know what happened? Willis, Rafiki Self Help Group Tel. 0727 555 541.

You are right, we promised that the CD will be out in December 2007. You may have a look at it at our site www.infonet-biovision.org

But it takes a lot of time to put together all the information about crops, pests and diseases. The outcome of this effort will be a wonderful source of information for farmers. We already have a test version of the CD and are happy to say that it contains a wealth of information it contains. A final edition will be ready soon and will be launched at a big event end of August this year. We kindly request your group to be patient until then. (TOF)

Questions?



Go to Infonet!

Tithonia does not cause bitter taste

If you incorporate tithonia intensely on a maize plot, the maize at maturity will taste bitter like tithonia. Is this true? I have not tried it myself. If it is so, how and why does it happen? Mildred Tel. 0735 380 442

Wild sunflower, as it is called, is rich in nutrients for plants (see page 3). It has a characteristic taste of bitterness, that's why farmers in Western Kenya are using Tithonia-tea together with the leaves of other trees in fighting termites. For it to release the nutrients, it has to decompose first. Tithonia should not be grown together with any crop for purposes of releasing its nutrients to the other plants. It is one of the most popular shrubs in the world and is used as an organic fertilizer for vegetable crops, either mixed with compost or farmyard manure. It can also be dug directly into the soil or used as a plant tea. We have enquired from so many people and specialists in organic farming, but none of them has heard other plants developing a bitter taste when sprayed with tithonia teas. To the contrary, all were full of praise for this plant. If any farmer has any other experiences about tithonia, please let us know. We would be grateful to write about it. (TOF)

tips and bits

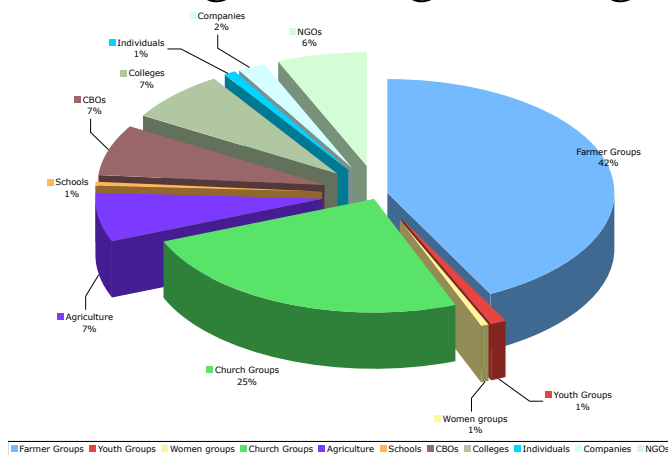
from farmers for farmers

Our magazine is growing strong

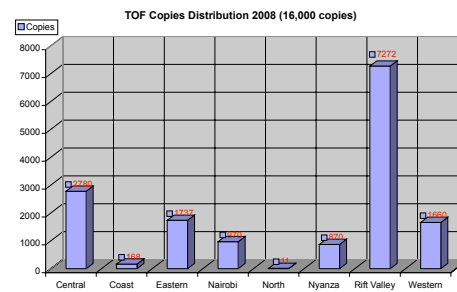
The *Organic Farmer* magazine which is published by ICIPE, is now three years old. We started in April 2005 with a print run of 10,000 copies, then increased the number to 12,000 copies a few months later. By January this year we had to print 16,000 TOFs to meet the increasing demand for the magazine by Kenyan farmers. We will raise the circulation to 18,000 copies in August.

Every month, we get around 25 applications from Kenyan farmers' groups. On average, we can say, each issue of *TOF* is read by around 100'000 people. Who are the readers? Where do they work? And where do they live? That is the reason why we have done some analytical work on the distribution of the magazine in the country (see graphics on the right). Apart from helping us in future planning, this information is also interesting for our readers. By the way: Since one can read *The Organic Farmer* in the Internet (www.organicfarmermagazine.org), we are getting more and more applications from Uganda, Tanzania, Ghana, Nigeria, Zambia, we also have contacts in Australia, Bangladesh, Mexico and even Guatemala.

We are still convinced that the free distribution of *TOF* within the farming



TOF mainly targets farmer groups, each copy is read by about 7 farmers



community is important, a benefit to the small-scale farmers and a boost to sustainable agriculture in Kenya and beyond. To subsidize on the ever rising costs of production and especially distribution, we have just launched an advertising section in the magazine. *TOF* is a medium and a forum for people who want to sell products and services; they will find a large scope of clients: The farmers.

Investing in agriculture

The latest World Development Report advocates for more investment in agriculture in developing countries. The report warns that the sector must be placed at the center of the development agenda if the goals of halving extreme poverty and hunger by 2015 are to be realised.

Titled 'Agriculture for Development', the report states that the agricultural and rural sectors have suffered from neglect and under-investment over the past 20 years. While 75 percent of the world's poor live in rural areas, a mere 4 percent of official development assistance goes to agriculture in developing countries. In Sub-Saharan Africa, a region heavily reliant on agriculture for overall growth, public spending for agricultural activities is only 4 percent of total government spending, and the sector is still taxed at relatively high rates. The World Bank Group is advocating a new 'agriculture for development' agenda. The bank argues: the growth of the Gross Domestic Product (GDP) originating in agriculture is about four times more effective in reducing poverty than GDP growth originating outside the sector. (AP)

Small-scale farmers to get low-interest loans

The rising food prices have not only alarmed the media worldwide. It is also a wake-up call to all African countries. They have discovered that they should do more for the farmers to improve the continent's food security. In Kenya it is the Alliance for a Green Revolution in Africa (AGRA) which has taken the initiative to improve agriculture. The AGRA has entered into a broad-based partnership with one Kenya's fastest growing micro-finance institution- the Equity Bank to work with the International Fund for Agriculture Development and the Kenyan Ministry of Agriculture to help farmers with farm inputs.

The initiative is aimed at boosting agriculture through credit to small-scale farmers. The loan facility from Equity Bank, amounting to Ksh 3

billion will provide credit to 2.5 million small-scale farmers (those with as little as 1 acre of land) and 15,000 members in the agricultural value chain such as rural agricultural input shops, Agrovets shops, wholesalers and importers of agricultural inputs, grain traders and food processors. The objective of this initiative is important and simple: It will boost agricultural productivity, create employment through the involvement of the small agricultural business players and improve the whole of Kenya's agricultural sector.

Conditions

The lending condition will be very friendly to farmers: At 10 percent interest rate per year. Equity Bank will give out the loans with a cash guarantee fund of Ksh 30 million from AGRA and the International Fund for

Agricultural Development to insure it against the risks of lending such as crop failure or defaulting by farmers.

Credit for farm inputs

The loans to farmers will include farm inputs; organic farmers can use the loan facility to buy organic fertilizer such as Mijingu rock phosphate, EM, Neem-products or diatomite for use to control pests and diseases, alternatively, they can invest the money to buy more efficient low-technology farm implements.

The loans can also be used as cash advances that will enable farmers to meet urgent financial needs (school fees or medical bills). For the small agricultural businesses, these loans are a welcome boost to traders as it allows them increase their working capital. (TOF)