

# The Organic Farmer

The magazine for sustainable agriculture in Kenya



Nr. 47 April 2009



## Turkeys need proper care

Turkeys are difficult to rear. Many farmers who have tried to bring up young chicks have ended up being frustrated after the chicks died. This is one reason why it is rare to find a farmer who is rearing them. Turkeys

require good management. They eat more than chicken, mainly to maintain their big body size. Before rearing them, farmers should explore potential markets because maintaining them after maturity is costly. Page 5

## How you can reach *The Organic Farmer*

In order to improve our services, we have introduced a few changes in the way we receive feedback from farmers. From now on, farmers should use the following contacts when sending their messages:

### SMS

All SMS should be sent to Tel. 0716 618 189

### Calls

All calls should be directed to Tel. 0721 541 590 or 0738 390 715

Our landline number Tel. 020 445 03 98 remains unchanged.

### E-mail

E-mails are welcome, they should be addressed to: [info@organickenya.org](mailto:info@organickenya.org)

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Dozens of farmers have called us asking for more information

## Top-dressing works faster on plants

After planting, the big challenge that follows for the farmer is how to maintain their crop healthy and growing normally. For farmers

who did not use enough fertilizer at planting time, it is always wise to add foliar feed after 3 to 4 weeks. Instead of buying expensive foliar feeds, farmers can prepare their own using various plants that contain essential nutrients. Liquid manures and other foliar feeds are absorbed by plants 20 times faster than granular fertilizers and even well done compost. Page 3



## Dear farmers,

When we started the publication of *The Organic Farmer* magazine in April 2005, we were aware of the many challenges we would face, like producing well-researched articles every month or how to distribute TOF to the farmers. One of our major worries was whether the information we gave was relevant to farmers. As we commemorate four years of publication, we can say, the magazine has become one of the major sources of information for farmers in the country. It is also a major reference material for agricultural institutions, extension personnel and even schools.

Going by the hundreds of SMSs, calls and even e-mails we receive every month, it is easy to tell that farmers heavily rely on the magazine to improve their knowledge on farming and especially organic farming. The end result of this has been the transformation of the farming community in the country into one that is familiar with ecologically sound crop and livestock production methods, as well as the environment. Farming as it is being practised at the moment in Africa and elsewhere in the world, has led to the depletion of our soils and even biodiversity; it is also partly to blame for climate change. Farmers can reverse this by adopting sustainable farming methods that help us to eat healthy food and protect the environment.

In the last 4 years, we have increased the number of TOF copies from 10,000 to 18,000 that are now being distributed in Kenya and even in the neighbouring countries. The TOF radio programme has enabled us to reach the rural population, many of whom cannot read and write. Apart from KBC, we are now using vernacular FM radio stations in the country to ensure the message reaches as many farmers as possible. Our new Internet Information platform and the infonet-biovision CD, enable farmers across the world to access the magazine.

All these achievements would not have been possible without the input of scientists and experts in various fields in agriculture who have availed their research findings and are ready to share their experience with farmers. Our special thanks go to the Swiss Foundation BioVision, which has continued to fund the production of the magazine since its inception in April 2005. We look forward to BioVision's continued support.

# Charles Munyari, a tireless TOF distributor

Even after four years of distributing TOF on foot, Mzee Charles Munyari still likes his job

**Felix Mbitu Murimi**

"At the second week of every month, streams of farmers knock at my door seeking to get a copy of The Organic Farmer (TOF) magazine," says Mr. Charles Munyari. What might look like a complain is quickly translated into a note of achievement and pride when Mr. Munyari talks about his experiences as TOF-distributor – with a lot of satisfaction.

## Pushing groups ahead

Since the inception of TOF in 2005, Charles Munyari, an organic farmer in Subukia Valley, has been a successful distributor of TOF in his area. His mode of distribution for the magazine is his legs or route 11 as it is popularly known. The energetic and focused man (66) has defied limitations of his age, rough terrain and severe weather conditions that are characteristic of this part of the Great Rift Valley to distribute TOF to so many farmers' groups and schools. "I feel happy when the magazines reach the targeted people," quips Mr. Munyari. "Furthermore, it is quite gratifying to see farmers discussing TOF articles, supporting each

*The Organic Farmer* is an independent magazine 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 of charge to farmers. The reports in the *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](http://www.biovision.ch)

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Charles Munyari, TOF distributor in Subukia valley, works on his compost. (Photo TOF)

other and eventually adopting organic farming," boasts the distributor.

Despite ensuring that the magazine reaches farmers, over the years, Charles Munyari has helped in the formation of farmers' groups in his area. Through these groups, members have been able to educate themselves on various aspects of organic farming, sustainable agriculture and environmental management. "I have learnt to make compost, shifted from conventional to organic farming, and I will never go back!" declares the organic farmer with a distant look at his farm that is an exhibit of his success in organic farming. Taking a walk around the farms in this area, it is evident that Charles Munyari is not the only one practicing organic farming but quite a number of farmers are.

## Some challenges

At times, the activities of the organic farmers in Subukia Valley suffer from some setbacks. Firstly, the Agricultural Extension Officers in the area, who visit farmers on their farms, tend to emphasize on conventional methods of farming as opposed to the organic ones. This trend, regrets Charles Munyari, might water down the efforts of farmers' groups because such government officers are always seen as having much authority and knowledge. The only contradiction in this situation is that the same Agricultural Officers often ask for copies of TOF and use them as reference material on farming.

Unavailability of most of the organic farm inputs usually proposed by TOF is yet another hurdle that farmers in this area have to overcome. Finally, just as in any other area, farmers in Subukia Valley would wish that they have enough copies for each one of them every month.

All these hurdles aside, Charles

Munyari is convinced that the future is bright for organic farmers in his area. His wish is summarised in a proposal for a meeting of all organic farmers in the country. This forum, he argues, would offer farmers a chance of sharing ideas and expertise on organic farming, ecological balance and environmental protection. More to that, farmers would have a chance to interact with their counterparts in looking for solutions to some of the challenges they face in organic farming.

The answer to our question, on whether he will continue with the distribution of TOF comes very fast: "Of course!" He shouts amidst some laughter. "For me it is a good way of meeting farmers and sharing with them," he explains. "I hope I can do this for many years to come." ■



## TOF celebrates fourth birthday

In April 2004, we launched your magazine, *The Organic Farmer*. In view of the commemoration of this event in April, we published a short series on farmers' groups in Subukia valley as an example of all the farmers' groups we are dealing with. How has TOF influenced their farming methods and their social life? And what is the experience of Charles Munyari, a TOF distributor since the inception of the magazine?

In this third and last article on this page, we feature the work of Charles Munyari, TOF distributor and organic farmer from Subukia valley.

# Turkeys bring profit – and challenges

*Before rearing turkeys farmers should do correct timing to ensure there is a ready market when the birds mature.*

## The Organic Farmer

Several farmers have requested us to show them how to rear turkeys. Most of them who are beginners often fail to bring up young turkeys to maturity because of lack of proper management. It is important to note that turkeys are the most delicate birds one can rear. Young chicks are especially susceptible to cold weather conditions. They should therefore be kept in warm housing and be properly fed. Most farmers lose all chicks within a few weeks after hatching. Feeding is especially a challenge to farmers. Because of their body size, turkeys need more feed than chickens; therefore the farmer should be able to provide them with adequate feed and water to maintain their health and normal growth. It is important to ensure that young chicks are kept separately from their mother; if kept together, the mother often tramples on the young chicks and kills them in the process. To bring up turkeys successfully, it is important to observe the following management practices.

### Breeding

Turkeys breed when they are about 1 year old and can lay about 20 eggs before going broody (wanting to sit on their eggs). A hen makes its own nest but a farmer can make a nest in a well-protected area. Turkeys only need one



John Mbutia feeding his turkeys. The birds require extra care. (Photo TOF)

mating for the entire egg laying period. The eggs hatch within 25-28 days.

### Housing

Immediately after hatching, young turkeys (also called poults) should be separated from their mother and put in a brooder (house for chicks), preferably where the temperature is controlled. Farmers who have access to electricity can use an electric heater to keep the brooder warm. In rural areas where there is no electricity, farmers can line the walls of the brooder with blankets or even sisal gunny bags to keep the chicks warm. They should stay in the brooder for up to two weeks and pro-

vided with adequate feed and water. Adult turkeys should be kept separately from other birds since they tend to bully them and keep them away from the feeders. Separating them also stops cross-infection by diseases. Adult turkeys should be kept in a fenced off area but a portion of the housing should be thatched to protect them from rain. In a homestead without trees, perches should be provided to ensure the birds stay in their natural surrounding.

### Hygiene and disease control

Turkeys require a very clean environment. Their house should be cleaned daily and all droppings removed; the birds can eat their own waste which exposes them to diseases. Feeders and water troughs should be constantly cleaned to keep them free from diseases. Young chicks are especially prone to diseases such as pneumonia and stomach infections.

Turkey farmers are advised to use only treated water. Vaccination against diseases is also important since turkeys are also affected by the same diseases that attack chickens such as New Castle disease. Without adequate water turkeys are prone to choking and also suffer from hard stools which make bowel movement difficult.

### Feeding

Turkeys take the same type of feed as chickens. Feed for young turkeys should contain more proteins, preferably a protein content of 27 percent from birth to six weeks, this can be reduced to 18 percent as they grow older. If farmers use chick mash for feed, they should add a high protein source such as fishmeal. Turkeys reared in free range reduce feed cost. ■

## Turkey farmer tried it and succeeded

Although he had no previous experience, John Mbutia, a turkey farmer near Njoro town, had a burning ambition to rear turkeys. So in the year 1992, he started with a male and female turkeys on a trial basis, "I did not even know how to feed or even house them, but I would observe their behaviour and soon discovered a lot about them", he says. His first observation was that the young chicks were very vulnerable to changes in weather. "I realised that to keep them alive, I had to isolate and put them in a brooder where it was warmer", he adds. Mbutia's turkeys multiplied fast; he bought more hens, and within the next two years the number had increased to 120 turkeys.

In a short while, he was a major supplier of turkeys to many parts of the country. His buyers included farmers, local and tourist hotels, expatriate families in Nakuru, Naivasha, Nairobi and even Mombasa. They made orders for Christmas and Thanksgiving days.

"An adult turkey would go for upto Ksh 1,500, sometimes I could sell more than 100 at a go, in a year I could make upto Ksh 500,000", he says. "To meet the increasing demand, I was forced to contract other farmers to rear turkeys and I would buy from them whenever I got an order." However, demand for turkeys declined in 1998 following the terrorist attack on the American embassy when the number of tourists coming to the country declined. He now rears a few turkeys for sale to some of his regular customers and also buys from fellow turkey breeders.

Mbutia advises farmers who wish to go into turkey rearing to identify potential markets first. One reason for this is that turkeys are heavy feeders and should be disposed off, when they have attained the age of 4 to 6 months. If kept longer, feeding costs will be very high which is a loss to the farmer. For more advice, contact Mbutia, Tel. 0723 340 475. **TOF**

# Urea can be used to improve fodder

*A lot of fodder goes to waste because it is very hard for the animals to chew urea can soften it.*

## The Organic Farmer

Crop residues on the farm that are given as fodder for livestock especially during the dry season are often wasted. One of the reasons for this wastage is that the animals find it unpalatable, because the fibre in the residue is hard to chew. Some farmers, in an attempt to make the fodder soft, often apply or immerse it in water. But a better solution is to apply urea (the one that farmers use as fertilizer). Urea especially combined with mollasses helps to soften fodder, making it easy for the animals to chew and to digest. In this article we feature various methods farmers can use to improve the quality of their fodder by adding urea.

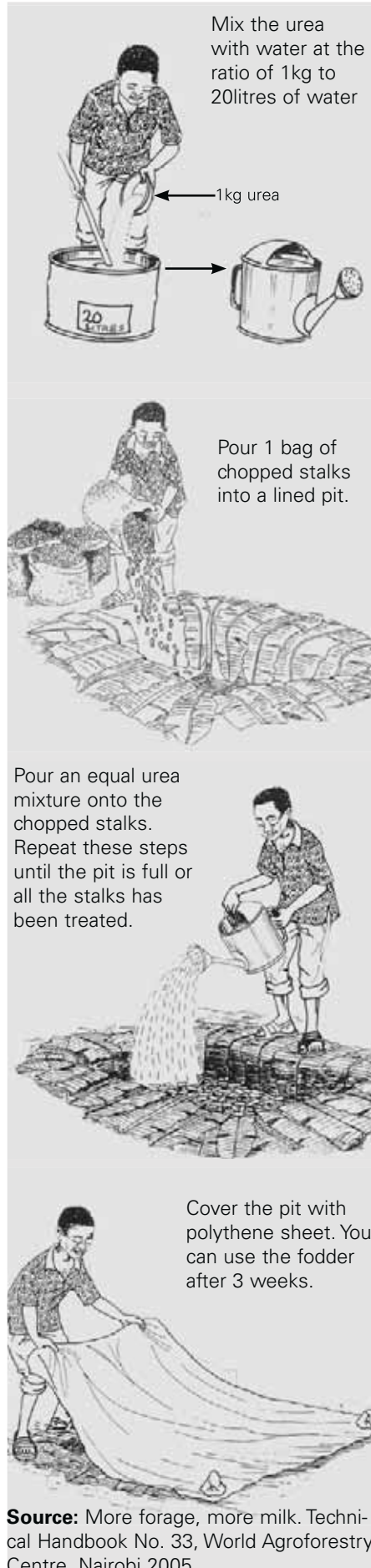
### Softening stovers

Chop up dry old maize stalks or other low quality straw, for instance old grass. Dig a pit and line it with plastic or use the silage bags, then fill in the chopped material. The recommended ratio for treating the residue is 60 grams of urea for every 1 kg of dry fodder. The water should be in the same ratio as the fodder being treated; for example if you have 400 kg of maize stalks, use 400 litres of water and add 24 kg of urea (see the illustration on this page). After 3 weeks the chopped and treated material will be much more palatable to cows, goats, and all other animals. In milking cows, it has been proved to boost milk production. There is no danger of poisoning in this method, as the urea will have been absorbed by the maize stalks and the straw, which are now more accessible to the animals as well as giving them energy.

### It can be used on feeds too

Urea can also be mixed with other animal feeds. But this should be done carefully so as not to overdose the animal. The farmer has to make sure that not too much urea is used. The recommendation is that urea should not be given in excess of 30% of digestible crude protein.

Let us take as an example a cow of 500 kg bodyweight. The cow feeding recommendations list requires 290g of DCP (digestible crude protein) per day. Not more than 30 percent of this amount can be fed in form of urea, in our example this 30 percent are 87 grams. But urea contains high concentrated DCP: 1 kg urea equals 2.81 kg crude protein. This means that in order to supply your cow with 87g/day in the form of urea, you can not just use 87g



**Source:** More forage, more milk. Technical Handbook No. 33, World Agroforestry Centre, Nairobi 2005

### “Urea technology in fodder works”

*Julius Kang'ee is a farmers in Sagana. Sometime ago he wrote us a letter giving his experience on the use of urea:*

You mentioned the use of Urea in your last issue of TOF. This can assist our farmers during times of drought. Our cows will survive the drought, continue producing milk and be of good health. I have used it since 2000 to date without any poisoning as many farmers fear. I am in an area where the dry spells are longer than the wet ones. Fodder does not grow well without irrigation. I have been forced to use maize stalks and rice straws to feed my Holstein Friesian cows and Kenyan Alpine dairy goats. Both species are doing quite well. I have excellent literature on the use of Urea.

I recommend that farmers in similar environments adopt the use of urea for their livestock. Urea not only breaks the lignin in the maize stalks and straws but also adds protein to the low quality dry agricultural by-products. Breaking lignin eases digestion hence boosting production and good health. Interested farmers may contact me through the address given below:

*Julius Kang'ee P.O. Box 209, Sagana, Cell, 0722 893 428 or 0736 111 801*

of urea. Instead, you have to count as follows: 2.81 kg divided by 87 is equal to 31g urea per cow.

You can see how easy it is to overdose with such a small amount of urea. One tablespoon contains about 15g,



so we are speaking of 2 tablespoons for every cow mixed with grains and supplemented by molasses in order to keep the rumen pH below 6. Cows can gradually get used to a slightly higher proportion of protein being fed in the form of urea, but if a farmer values their cows it should be done very slowly. The antidote for urea poisoning is vinegar.

**NOTE:** All farmers should know that if wrongly used, urea can actually kill a cow, so it is essential that farmers be very careful when adding urea to the feeds. ■

# Your crops do well with organic dressings

Liquid manure are cheap; their nutrients can be absorbed faster than those of other fertilizers.

## The Organic Farmer

One of the problems farmers are going to face after planting are nutrient deficiencies in the soils which is a problem to the crops. Nutrient deficiency is the lack of essential nutrients that plants need for healthy growth. Soils may lack important nutrients due to a number of factors. One of these factors is sustained mono-cropping. This happens when the same crop is grown on the same piece of land year after year as is the case with maize, in this way depleting particular nutrients from the soil, reducing its fertility.

Another reason may be the problem of increased rains. They wash away the fertilizer that is used at the time of planting. Leaching is another challenge, which occurs when the fertilizer is driven deeper into the soil following increased rains. This makes it difficult for plant roots to reach it. Due to the recent increase in fertilizer prices and the present economic hardships, most farmers are not able to buy enough fertilizer. What most farmers do is to use very little fertilizer during planting or none at all. The result is that the farmers will end up with very poor yields unless they take measures to correct nutrient deficiencies early enough.

Apart from the nutrient deficiencies, another major problem are pests which attack the crop at this stage in their growth. The pest pressure increases normally in warm and wet weather conditions.

Farmers can overcome these problems. There are many plants available on the farm which can be used to prepare plant extracts that contain both nutrients and insecticidal properties. To get the desired results, they should select particular plants, some containing essential nutrients, others having

## Useful plants for plant extracts



Tomato leaves



African marigold



Stinging nettle

To make Fermented Plant Extracts (FPE) requires some effort, but they are easy to produce, are cheap, and have a big impact.

**Ingredients:** 1 litre of molasses, 1 litre of EM1  
Get 4 kg of different plants which contain various nutritional and insecticidal properties e.g. stinging nettles, neem, African marigold, Adams apple, tithonia, comfrey, onions, moringa, blackjack, chilli, pyrethrum, lantana, garlic, tomato leaves or any other plant in your area which can improve plant health.

**Preparation:** Mix the mollasses with EM1 (you can buy mollasses and EM1 in any agrovet shop) and add 5 litres of water. Chop up the plants into small pieces and add to the jerry can. Fill the jerry can to the brim with water and close completely to stop air from escaping (airtight). Let it remain in this state for up to 14 days.

Filter the solution after 14 days. Dilute it at a ratio of 1 litre FPE to 100 litres of water (1:100) and use as a spray. When using a knapsack sprayer it is important to filter the solutions through a piece of cloth to ensure tiny particles from the plants do not block the nozzles of the sprayer.

**Attention!** Fermented plant extracts do not work in the same way as chemicals. To get the desired results, the farmer has to spray the crop more frequently, say, 2 to 3 times a week depending on the state of the crop including pest pressure. This ensures that the crop has adequate nutrients and is protected from pests and diseases.



Neem



Lantana



Comfrey

the ability to control pests. Mix them well for spraying on the desired crop. This can be done by making Fermented Plant Extracts (FPE) as outlined below.

### Liquid fertilizers

Liquid manures are a good source of foliar feed for top-dressing. They are prepared by soaking various manures, suitable plants or a mixture of the two in a drum of water for 10 to 15 days. The nutrients are dissolved in the water.

The fresh plants or manure should be collected in a sack and tied securely. The sack is then suspended from a stick into the water in the drum (see sketch). The quantity should be 30 to 50 kg of manure to 200 litres of water. Move the stick up and down every 5 days to stir the mixture and quicken the release of nutrients. The solution has a strong smell because the excess nitrogen turns to ammonia; therefore it is important to cover the drum. Once the smell is gone, the liquid is ready for use. The water also turns brown to show the mixture is ready for use. The mixture is in concentrated form, it has

to be diluted before use.

### Advantages of foliar feeds

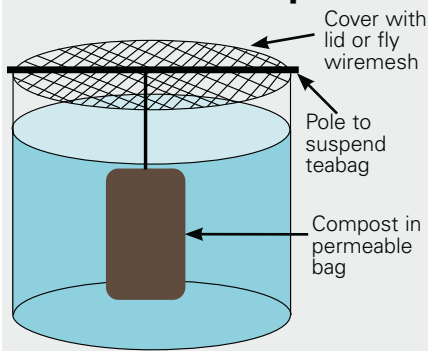
- Liquid manures are in a more concentrated form than compost, so less in volume and high in nutrients.
- In liquid form, nutrients are less likely to burn roots or foliage (leaves).
- Any manure (goat, cow or poultry) can be used to prepare liquid manure.
- If there is no manure, various plants rich in nutrients can be used (see box "How to prepare 20 litres of FPE").
- Nutrients in plants become available after the plant has decomposed; with liquid manure you do not have to wait because the nutrients are readily available.

### Tithonia, full of nitrogen

Tithonia is a common shrub that grows wildly in most parts of the country. But very few people know that it is one of the most valuable plants on the farm. Farmers will always uproot it when found growing on the farm. Tithonia is one of the most important shrubs that could change farming in the country because it is rich in minerals that can

continued on page 6

### How to make liquid fertilizer or compost tea





>>> from page 5: Top dressing

improve soil fertility and improve crop yields drastically. Tithonia contains 80 percent more phosphorus than beans or any other legume. It also has enough nitrogen and potassium to provide plants with adequate amounts of these nutrients. Tithonia can therefore be used to replace chemical fertilizers and give the same crop yield. Five tonnes



of green tithonia foliage put into one hectare of land is equal to 159 kg of nitrogen, 10 kg of phosphorus, 161 kg of potassium, 18 kg of calcium and 22 kg of magnesium. When making compost, farmers can mix freshly cut tithonia leaves with dry plant material to produce very high quality organic fertilizer. They can also cut and work it into the soil.

#### How to make tithonia foliar feed

Chop tithonia leaves and branches into small pieces and soak in water at a ratio of 1 part in 4 parts water. Let it stand in a tightly covered container for 7 days. Apply within 5 days, diluting it with equal amounts of water and spread at the root base of the target crops.

#### Advantages of tithonia

- Tithonia is rich in nutrients.
- It grows fast to supply quality material throughout the season.
- It has ability to regrow after cutting which ensures continuous supply of vegetation. It grows wildly, so farmers do not have to tend it like other trees and shrubs.
- It decomposes very fast because of its succulent tissue.
- It is easy to handle and cut.
- It grows vegetatively (through stem cuttings) which makes its establishment easier.
- Goats like it as fodder.
- Tithonia attracts beneficial insects such as bees and wasps, which assist in cross-pollination.
- When fully grown, it can form a thick hedge. Tithonia allows other plants near the hedge to grow without interference.
- It contributes to beauty in your garden with its nice flowers. ■

#### I have discovered TOF

Habari zenu, I have just discovered through a friend about your magazine, *The Organic Farmer*. I have read it and it is very impressive. I am wondering if I can get all the past issues and also to be in your monthly mailing list. I do small-scale free range dairy keeping and wish to convert to zero-grazing in the near future. I have been specifically impressed by the topic "Feeding and housing a dairy cow."

John Kipkorir Koech, P.O.Box 806, 20406, Sotik, Tel. 0722897098

#### I want to go organic

We are a small growing group by name Mwimenyi Nutrition Self-Help Group in Mutira location, Kirinyaga district doing nature agriculture on our coffee farms under Mt. Kenya Nature Agriculture. I came across one of your issues and it was very informative and I am interested in becoming an organic farmer, may you kindly send us *The Organic Farmer* magazines.

Daniel Munene Karubiu, P.O Box 81, Kerugoya

#### We need full addresses

*We receive many questions from farmers every month. Many farmers may not be aware that we have featured some of the issues they want us to answer. To assist such farmers in a better way, we would request them to give us their full address including telephone numbers. If we have their contact details, it is easier to send you copies of the magazine which will give the relevant information. For those farmers with access to a computer, a good source of information is the new infonet-biovision CD, it contains comprehensive information on human, plant and animal health and even the environment. Most of the problems that face farmers are addressed in the new CD.*

#### Order your CD



New CD is ready

Farmers, would you like to share the experience of more than 200 agronomists and 480 books on agriculture? This is what you will get if you buy the new Infonet-Biovision CD that has just been released. The updated version now has all information on animal and plant health, disease and pest control as well as human and environmental health. It is easy to open and read from any computer with a CD-ROM drive (NOT with a VCD or ordinary video CD player). Interested farmers can send airtime worth Ksh. 200, either through our Safaricom line - 0721 541 590 or Zain 0738 390 715 and SMS us your full postal address. We will send the CD by registered post. All the farmers who bought the earlier version will receive the new CD free of charge.

#### TOF will improve farming methods

I am a student from Baraka college now out for my attachment, your monthly magazine about organic farming has really helped me as far as the course I am taking is concerned. The few copies I got have been taken by the farmers in my area where by they are asking for more. The farmers told me that the magazine had helped them a lot.

Patita M. Shunkur, Box 81, Ololulunga

### SUBSCRIPTION FORM

Return this completed form to TOF, PO Box 14352 00800 Nairobi or [info@organickenya.com](mailto:info@organickenya.com)

Name: \_\_\_\_\_  
 Postal Address: \_\_\_\_\_ Code: \_\_\_\_\_  
 Town: \_\_\_\_\_ District \_\_\_\_\_  
 Province: \_\_\_\_\_  
 Registration No.: \_\_\_\_\_  
 Number of active Members: \_\_\_\_\_  
 Chairpersons Name: \_\_\_\_\_  
 Chairpersons Tel.: \_\_\_\_\_  
 Areas of interest: \_\_\_\_\_

Registration type:

- Individual farmer
- Farmer Group
- Women Group
- Youth Group
- College
- School
- Church Group
- Extension Officer
- NGO
- CBO
- Other

# Pumpkins are an important crop

I am a farmer in Lutacho. What can I do to get high pumpkin yields? I also want to know if there is any mushroom training centre in Western Kenya. Benard Khaemba Kakai.



A pumpkin can stay for up to 6 months if stored in a cool dry place.

## Mushroom production

Regarding your second question, training on mushroom production is very technical and would require people who have extensive experience. Many farmers who have tried to do mushroom production without proper training have ended up failing. We would advise you to get proper training from a competent institution. The Jomo Kenyatta University of Agriculture and Technology (JKUAT) has an outreach training programme for farmers. The institution charges a minimal fee if farmers are trained as a group. The trainers will visit and train you in your village.

Mobilise other interested farmers in your area and contact the institution on Tel. 067 52420, 0721 167 244.

Pumpkins belong to a family of plants called cucurbits. They are one of the most important crops in this family because they can be stored for several months and can withstand transportation hustles without getting damaged. To get good yields, the land on which they are to be planted should be prepared early in the season preferably around January and hills made. Plant 2 seeds on the hill at a spacing of 2.4-3 m between the rows and 1.2-18 cm between the plants. Add 1 debe of well-composted manure per planting hill together with any other organic fertilizer such as rock phosphate during the planting time. Cover the seeds with 3 cm of soil. Weeding should be done from the time the plants sprout until the vines spread and cover the soil. Organic plant teas such as tithonia together with other plant extracts (see page 3) should be applied regularly to the crop to maintain a healthy growth. The farmer should add more soil to the hills as the plants grow to ensure roots are well covered by the soil. Pumpkins are usually ready in 3½ to 4 months after sowing. Harvest the fruits when they are fully mature and have changed colour to orange or yellow and the skin has become hard. At this stage the fruit sounds hollow when slapped by hand. Leave about 2.5 cm of leaf on the fruit for handling.

# How can I get good quality seeds?

I do not know the right type of seeds small-scale farmers can buy as we await the onset of the rains. Fake seeds have led to crop failure among many farmers because we rush to buy without seeking for advice. Tel 0722 066 250.

Selection of the right seeds is a major weakness among farmers. Every hybrid seed developed is suitable for a particular climatic region in the country. Farmers are advised to seek for advice from agricultural extension officers in their regions before buying maize seeds. The Kenya Plant Health Inspectorate Service (KEPHIS)



has launched an information service for farmers who want to know the right varieties for their regions. Just write an SMS in the following format: maize/ name of your division then send the SMS to 2964 through your safaricom, Zain or Telkom lines. If the response shows that your division is not in their data base, you can call or SMS KEPHIS personnel and give them your details. You can contact them on the following numbers-Tel 0722 516 221 or 0733 874 274. Also read TOF Nrs.45 and 33 of March 2009 and February 2008 respectively). The two issues have a lot of information on maize varieties and areas where they can do well. **TOF**

## ...answers in brief

### Ornamental fish

I would like to get more information on rearing ornamental fish.

William Kiama is an experienced ornamental fish farmer in Sagana who can give you more information on this area. Call him on Tel. 0722 899 904.

### Cow for sale

I have a dairy cow for quick sale. Interested farmers can call me on Tel.0724 210 474

### Rabbits in Nyandarua ...

I am a farmer in Southern Nyandarua. Where can I get hybrid rabbits for breeding? Tel. 0724 210 474

To get hybrid rabbits please call Godfrey Gichuhi, Karatina (Tel.0720 406 195), he will assist you. You can also read our articles on rabbit keeping (TOF Nr. 26 July 2007 and Nr. 42 November 2008)



### ... and rabbits in Kitui

I want to start rabbit keeping. Where can I get them in Kitui? I want the New Zealand White. Gabriel, Tel. 0727 237 502

Just talk to your Divisional Livestock Extension Officer to identify any farmer near you, who could be rearing rabbits. You can also call Godfrey Gichuhi on the contact given above. He may be of assistance to you.

### Writing for TOF

How can I submit an article for publication in your magazine?

Just write the article and send to: The Editor, *The Organic Farmer Magazine*, P.O.Box 14352, 00800. You can also e-mail the article to us at info@organickenya.org.

### Seedlings for planting

Where can I get seedlings and seeds for the following: Moringa, Tissue culture bamboo and *muiiri* indigenous trees?

The Kenya Forestry Research Institute (KEFRI) Muguga and their outstations produce various tree seed varieties for sale to farmers and other interested institutions. Call William Muccheke on Tel. 0722 801 539, he will assist you.

## tips and bits

from farmers for farmers

# Huge interest for biogas units

Our article on biogas (TOF Nr.45 February 2009) has attracted a lot of interest from farmers. We have received dozens of calls, SMS and even e-mails from farmers who want to put their own units in their farms. Erastus Kiruiro, the KARI scientist who is training farmers on the new biogas technology, was also overwhelmed by calls from interested farmers across the country (Erastus allowed us to give his phone contact to farmers in our article). The response shows that farmers are eager to embrace appropriate technology especially if it addresses critical areas that affect them such as energy, and if this technology is affordable. A group of farmers in Kakamega even went ahead and put up their own units following the instructions we gave them in the article. Any farmer group willing to put up their



own units can get in touch with Kiruiro (Tel 0722 30 38 81). He is willing to offer advice but the farmers should be able to meet his transport costs and cost of materials to be used for the units.

# Good opportunities for organic farming

Organic farming offers Africa the best chance of breaking the cycle of poverty and malnutrition it has been locked in for decades, according to a major study from the United Nations. The head of the UN's Environment Programme, Achim Steiner, said the report "indicates that the potential contribution of organic farming to feeding the world maybe far higher than many had supposed".

The research conducted by the UN Environment Programme suggests that organic, small-scale farming can deliver the increased yields which were thought to be the preserve of industrial farming, without the environmental and social damage which this form of agriculture brings with it.

An analysis of 114 projects in 24 African countries found that yields had more than doubled where organic, or near-organic practices had been used. That increase in yield jumped to 128 per cent in East Africa.

The study found that organic practices outperformed traditional methods and chemical-intensive conventional farming. It also found strong environmental benefits such as improved soil fertility, better retention of water and resistance to drought. And the research highlighted the role that learning organic practices could have in improving local education. Promoters of GM foods insist that a technological fix is needed to feed the world. But this form of agriculture requires cash to buy the patented seeds and herbicides – both at record high prices currently – needed to grow GM crops.

Regional farming experts have long called for "good farming", rather than exclusively GM or organic. Better seeds, crop rotation, irrigation and access to markets all help farmers. Organic certification in developed countries still presents a high barrier to most African exporters, the report points out. It calls for greater access to markets so farmers from developing countries can get the best prices for their products. **TOF**

## Trap the condensed water in the gas pipe

According to the feedback from farmers, we have noted another problem with farmers who are making their own biogas units. Biogas carries with it some vapour that condenses inside the gas pipe during cold times (especially at night or during cold weather). If this water is not trapped in a container, it will block the gas from flowing to the kitchen, hence the gas is blocked by the water from reaching the kitchen. To solve this problem, farmers can fix a bottle at the lowest part of the pipe. All they need is a T-junction for the pipe and a transparent water bottle, as the sketches shown in this page illustrate.

The water trap should preferably be a transparent plastic bottle (3 or 5 litre jerry can) so that one can see the level of the water. If the lowest point of the gas pipe is near the kitchen (sketch 1), this is the point to fix the water bottle. On the other hand, if the lowest point is near the digester, then the bottle should be installed about a metre away from the digester (sketch 2). A T-junction should be fitted at the point where you decide to install the bottle. At the same time, a 12 cm long pipe, fixed into the T-junction, should lead into the bottle that is half-filled with water (sketch 3). The end of this pipe has always to be in the water. This stops the gas from escaping. If the condensed water fills the bottle, it will overflow – and the pipe will always allow the gas to flow uninterrupted from the digester to the kitchen.

