

The Organic Farmer

The magazine for sustainable agriculture in Kenya



Nr. 29 October 2007



A Sahiwal herd: well-fed and properly managed cows produce more milk (Photo TOF)

Feed and keep animals well

When it comes to feeding, many farmers focus their attention on the quantity and not the quality of feed.

The Organic Farmer

Kenya's dairy industry is growing at a fast pace, especially with the current higher milk prices together with increased demand for milk products in the international market. Kenyan farmers have been unable to supply enough milk to meet the demand, however, due to the poor quality of their animals. There are 14 million cattle in the country; of these, only 3.5 million are dairy cattle that the country depends on to produce milk both for domestic consumption and commercial purposes.

The per capita milk consumption in rural areas stands at 35 litres per year, while people in urban areas consume an average of 70 litres annually. Milk consumption, especially in rural areas,

is very low when compared with other countries such as Egypt, which has a rural per capita milk consumption of 62 litres. The main reason for this disparity is Kenya's rural poverty and management of dairy cattle by farmers, who are lucky to own a single dairy cow.

Although many farmers in Kenya have good dairy cows, they neglect them, and farmers are therefore to blame for decreased milk production. Proper feeding, care and disease control contributes to more than 70 percent of a dairy cow's milk production. Feed experts at KARI advise farmers to buy feeds from established manufacturers to avoid poor quality feeds that have flooded the market.

See pages 4 & 5

TOF on air!

On Thursday 18th October, 2007, you can hear *The Organic Farmer* on the Kiswahili Service of KBC from 8.30 pm to 8.45 pm. Tune in your radio!



New internet service for farmers



Beginning this month, organic farmers in Kenya and East Africa can get information on all aspects of organic farming on the Internet. The Swiss foundation BioVision, which is also the sponsor of *The Organic Farmer* magazine, has launched a new website - the Infonet. It is an information platform where farmers can do research on ecological methods for the prevention and control of pests

and diseases. They have only to go to the following address: www.infonet-biovision.org. BioVision, together with *The Organic Farmer*, will also produce a CD for use by farmers who do not have access to the Internet but know someone who has a computer which has a CD drive. The CD contains all the information in the Infonet and also all the issues of *The Organic Farmer* with an index, where you can find the various articles. The Infonet is sponsored by LED, the Development Service of the European state of Liechtenstein. See page 2

Dear farmers,

Whenever we talk to experts on dairy farming, they all hold the same view that Kenya's farmers can produce a lot more milk and improve their income through dairy farming. However, the way in which farmers manage their livestock is a major impediment to increased production. The *Organic Farmer* has given very useful tips over the past two years on how farmers can increase milk production through proper feeding, good breeding practices, disease control and the general care of a dairy cow. When we visit most of the farmers, however, we are really disappointed to see that they do not take this advice seriously. This tendency to do things the way they have always done is not only evident among dairy farmers, but also among those in other sub-sectors such as tea or coffee.

At the moment there are numerous institutions such as KARI and ILRI that are working with farmers to ensure they improve production in order to alleviate hunger and poverty in the rural areas. These institutions produce and disseminate very useful information that is meant to help farmers adopt new and sustainable methods of farming that can change their lives for the better. The problem could be that either farmers do not know where to get the information, or if they do, they do not care to utilise it.

The Swiss foundation BioVision, which funds the publication of *The Organic Farmer*, has launched an Internet-information service called Infonet with a great deal of information for farmers (www.infonet-biovision.org). When farmers in Kilifi were shown how to access information from the Infonet last month, they were elated. "This service will reduce our dependence on extension officers, who in most cases are unavailable to solve our problems", said one of the farmers. Right now, the Government is trying to make information and communication technology (ICT) available in all rural areas.

The main objective of our magazine is to provide you with the most important knowledge on organic farming and farming in general. We know that having the right information is the first step in solving a problem. The new Internet service Infonet is meant to serve this purpose: All the information farmers need is readily available at all times. The challenge now is on you, the farmers, to use this information to improve your farming skills and your livelihoods.

Farmers, do you need help? Go to Infonet!

Infonet opens for farmers a new opportunity to access information.

The Organic Farmer

Isaac Maina is an organic farmer in Subukia. Many farmers know him, since he is representing and distributing our magazine, *The Organic Farmer*, on field days. Isaac has a problem with his beans. In the last issue of TOF he read the article about Infonet (see also page 1). Infonet is an information platform. It presents a lot of information on scientifically proven ecologi-

The Organic Farmer

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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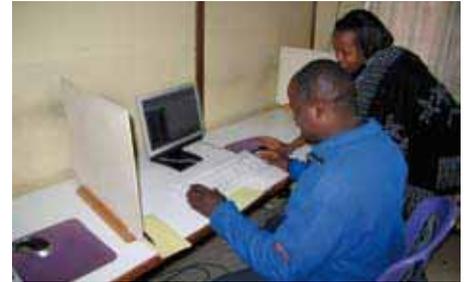
Layout

In-A-Vision Systems (k)

cal methods for the prevention and control of pests and parasite infestations of plants, humans and animals.

1. This is the first time in his life that Isaac is sitting at a computer. Chantal, the officer in charge, explains to Isaac in five minutes how to use the computer. In a cybercafe, he is connected with the whole world through a telephone line. Isaac only needs to know how to click on the different pictures and words.

Isaac went to a cybercafe in Hurlingham/Nairobi, where we joined him. 5. Two minutes later he holds 13



2. Now Isaac is alone at the computer. He types in the address: www.infonet-biovision.org. Isaac finds it very strange. He checks to make sure he has not made any mistake, then he clicks "enter". This is the command to tell the computer "go ahead"!



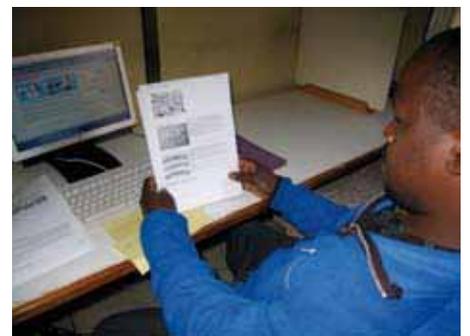
3. One minute later, Infonet appears at the screen. Isaac chooses 'vegetables', and then he clicks on the word 'beans'. Now all possible information with pictures appears on the screen. Isaac finds the disease his beans are suffering from: It is the black spot disease. Infonet gives him a lot of advice to fight the disease, for instance with EM (effective microorganisms). Isaac writes down the advice.



4. Isaac is a curious man, so he reads what is written about other diseases and tips on beans. He thinks: "This information is of high value", so he clicks the bottom 'print'.



pages with all possible diseases and pests on beans and all the possible cures against them. And he learned a lot about beans in general. He pays for 30 minutes of using the computer and for the printing of the 13 pages. It cost him KSh 195/=. "Hey, this is a very good thing", Isaac says when leaving the cybercafe. "I can do my own research with www.infonet-biovision.org and it is so easy"!



No telephone line for getting Infonet? Use a CD!

From December 2007/January 2008 onwards, you will not even need a telephone line to access Infonet. You only need to know someone who has a computer. In most farmers' groups these days, there is someone who has

a computer that can read a CD. You simply order a CD with all the information on it from *The Organic Farmer*. We will inform you in the December issue how to order this CD. Good luck, farmers!

Information centre enlightens community

Farmers need information. A rural information centre in Lugari district has shown the way.

Peter Kamau, Lugari

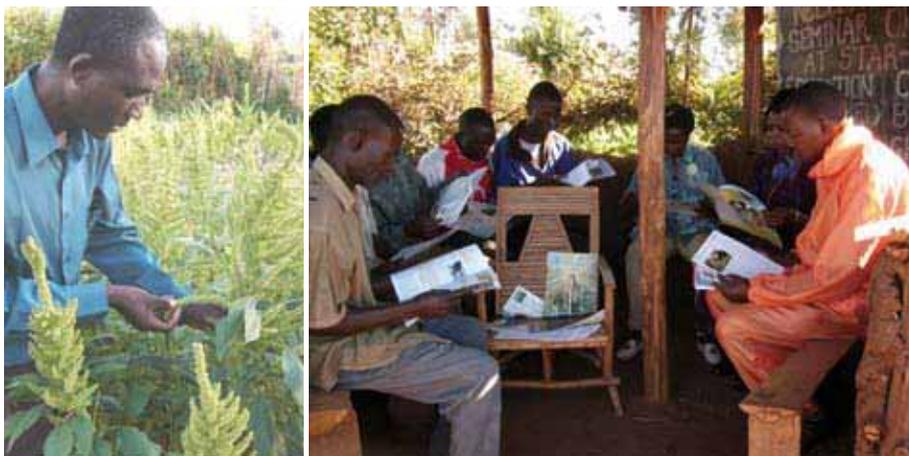
Star Rays Education Centre is an institution with a difference. Here, children attending normal classes mingle with adults who have come for a different form of education. For the last seven years, the Centre has served as a formal school, a learning centre for farmers interested in improving their knowledge in farming, and as a church on Sundays.

As we enter the Centre, located in Likuyani division of Lugari district along the Kitale–Eldoret highway, we find a group of men and women sitting in the waiting shed in deep concentration, reading newspapers, newsletters and various other publications such as our magazine *The Organic Farmer*, while the normal classes go on in the main building. Inside the school office more adults are busy reading; these are not teachers but more farmers who have come to read, exchange ideas or to get market information. During the holidays, farmers benefit from training programmes offered by the Government, local NGOs and agricultural institutions.

Every aspect of farming, from compost-making to beekeeping and marketing of farm produce, is taught at the Centre. Last April more than 200 farmers drawn from Lugari, Uasin Gishu, Trans-Nzoia, Bungoma and Kakamega districts benefited from training. The farmers have an opportunity to learn through video shows and also to get practical lessons in the Centre's demonstration plot and from successful farmers in the neighbourhood. Participants are charged Ksh 30 to discourage idlers.

Rural farmers lack information

The rapid growth of the Centre is one thing that surprised even the founder-director, William Makechi, a livestock extension officer with the Ministry of Livestock and Fisheries Development. "For many years, farmers came to me whenever they had problems. There is nowhere a farmer can get information on agriculture here, so I decided to set up the Centre to fill this gap", he says. And why operate a formal school on what is supposed to be a farmers' training institution? Makechi says that the idea of the school came about when he realized



William Makechi (left) at the Centre's demo plot. Farmers catch up with news from the various publications available at the Centre's library. Photo TOF

that the farmers could not pay for the services provided. "I realised the best way to utilise the facility was to start a school where parents would pay a nominal fee for their children and at the same time farmers could be trained in this region."

We have learned a lot

"At first we thought it was a personal business. I attended the April seminar and it has really changed the way I practise farming. I had left a huge pile of farmyard manure behind my house, but now you can see what I have done with it", says Morris Wanyonyi, a local farmer. His garden holds a lush crop of bananas, potatoes, passion fruit, indigenous vegetables, maize and beans. He uses only compost in his farm. Makechi says that the biggest challenge facing the Centre is lack of resource material for use by farmers. To overcome this problem, he has tried to collect any information or publication he comes across, especially handouts given during workshops and seminars which he has attended. He also subscribes to several local and international agriculture journals. In the office are many files with newspaper cuttings on every subject in agriculture.

Important source of information

When William Makechi came across *The Organic Farmer* magazine, which was given to him by an official from the VI Agroforestry Project in Kitale last year, Makechi immediately subscribed. The magazine has now become an important source of information for training local farmers. "We had no knowledge of organic farming before, but *TOF* has really

changed the way we do farming", says Kizito Wanyama. He says in the past, farmers did not want to share information with others, but the Centre has changed all that.

Every month, Wanyama and members of the farmers' groups receive copies of *TOF* and discuss the ideas and tips given in the articles, which they then try to practise in their respective farms. "Instead of buying expensive fertilizers and pest control chemicals, we have learnt in *The Organic Farmer* magazine about simple methods of preparing plant extracts with various nutrients and pest control properties. I have known about the *Lantana camara* plant since I was a young man, but I never knew it could control pests", he adds.

Learn appropriate technology

Lugari settlement scheme is a densely populated farming area, comprised of mainly internally displaced families. They originally came from Turbo, parts of Uasin Gishu and Bungoma districts following tribal clashes in those areas back in 1992. This has led to subdivision of land, with many of the farmers owning an average of one acre. Makechi says one of the objectives of the Centre is to train the farmers to improve and diversify their farming methods for food security, health and income generation. If funds allow, he plans to start training on appropriate technology.

Solar energy

Makechi says he will introduce simple tools such as coolers for perishable farm produce, water filtration, use of animal power, energy-saving jikos and ways of harnessing solar energy to the community. ■

Management is key to good milk production

Feeding, care and disease control accounts for more than 70 percent of a dairy cow's milk production.

Peter Kamau

The management of dairy cows is one of the biggest challenges facing the Kenyan farmer today. Following our article about the problem of availability of dairy cows (TOF July 2007), our research reveals that management problems such as feeding, breeding, housing and disease management are to blame for the reduced milk production in Kenya. To keep their animals in good health, farmers need to maintain the highest level of management, which will then lead to increased milk production and higher incomes. Dairy farmers need to observe the following areas that are crucial to the health of a dairy cow:

Feeding: Feeding is one of the most important (and most neglected) areas in the management of a dairy cow. Every day, a dairy cow requires energy, proteins, minerals, vitamins and plenty of water. To get these nutrients, a cow must be fed with good quality fodder, crop residues (by-products), minerals and concentrates. (Concentrates are well balanced feeds with essential nutrients formulated by experts to meet the daily requirements of a cow.) A dairy cow's daily ration should contain 75 percent forage, 24 percent con-

centrates, 1 percent minerals and an unlimited supply of water. Although many farmers are satisfied to see their dairy cows with a full stomach, this does not mean that the cow is well fed.

Most farmers feed their cows on maize stalks and banana stems, but maize stalks contain only 4 percent crude protein, and a large portion of banana leaves is composed of water that does not add much to the animals' nutrient requirements. Hay made from grasses such as Boma Rhodes is a more preferable fodder because it has a higher percentage of crude protein (between 7 to 9 percent). Some farmers prefer feeding their cows with wheat straw, which again is not such a good feed as it has a crude protein content of less than 5 percent.

More than 70 percent of a dairy cow's feed should contain roughage (fodder with a lot of fibre). Roughage is important because all animals in the ruminant class depend on small microorganisms or microbes (protozoa, fungi, and bacteria) to assist them in feed digestion; roughage can only be found in good quality forage in pastures such as hay, Napier grass or lucerne. At least 30 percent of the daily feed should be comprised of feed concentrates (see table below for feed requirements).

Water: A dairy cow requires water to facilitate the digestion, absorption and

transportation of nutrients through the bloodstream to all parts of its body. The water must also be clean and adequate. Watering animals only at particular times, sometimes only twice in a day, is wrong. Water should always be available. The amount of water given to a dairy cow determines how much feed it can take in a day, and consequently the amount of milk it can produce. A cow requires an average of 40 litres of clean drinking water per day and an additional 4 litres for every litre of milk produced.

Disease control: A good dairy farmer should be able to take preventive measures to protect their animals, as diseases reduce milk production or even result in death. Tick-borne diseases such as East Coast Fever (ECF) and anaplasmosis should be controlled by regular dipping. Brushing the cows removes dung from the udder and skin that attracts flies that transmit diseases.

Housing: A properly made housing unit should have a rough concrete pavement slanted to allow the free off-flow of urine. The unit should have adequate walking, dunging and resting areas. It should also have bedding material to keep the animals comfortable. Dirty housing is to blame for diseases such as foot rot and diarrhoea.

Breeding: Good breeding of dairy cows starts with fertility management. Farmers need to have adequate knowledge on how to detect the heat of their dairy cows. Many farmers often get confused when they see two cows mounting each other. A knowledgeable farmer should be able to tell which of the two is on heat. The only telltale sign is that the cow on heat discharges a clear mucus, and the sides of the vulva appear swollen. A cow that is not on heat will not accept being mounted. Once identification has been done, the cow should be served within 18 hours for conception to be successful. Farmers should also maintain all Artificial Insemination (AI) records to stop inbreeding. (Read more about this topic on page 5, or read our previous TOF issue of March 2007).

Record keeping: A good farmer keeps all records of their animals, for example daily milk records, AI service records, and cost of feeds to determine if they have made any profit or loss in the farming business. ■

Calves need special care!



Calves are especially delicate and require careful handling, as they are very susceptible to diseases. When fed on too much milk, calves can get diarrhoea. Farmers can control this by adding some water to the milk. Diarrhoea in calves can also be caused by poor housing where they are exposed to muddy conditions that cause infec-

tion. Calves can also get foreign body pneumonia when fed poorly and if the milk goes through the nose to their lungs. (Farmers are advised to use calf nipples to avoid this.) Calf pneumonia can also be caused by exposure to wind, especially in cold areas. Proper housing can prevent this.

Improving dairy cow breeds

Lack of proper record keeping and poor management is to blame for inbreeding and low quality of dairy cattle in the country.

Peter Kamau

"The main problem facing the Kenyan dairy industry is lack of good quality dairy cows." This is the opinion of William Ayako, a livestock expert at KARI, Naivasha. "One reason for this situation is the fact that the majority of farmers do not understand the benefits of breeding; this has led to deterioration in quality." Although most farmers have access to Artificial Insemination (AI) services, many of them still rely on bulls with an unknown pedigree, that sire dairy cows that produce less milk.

AI services not properly used

The reason farmers do this is to reduce expenses: AI costs Ksh 600 to serve one cow. Another problem, apart from the costs, is that farmers who regularly use the AI services do not keep any records. In this way, they risk the danger of serving the daughter of a particular cow with semen from its own father, since all semen comes from the same bulls based at the Central Artificial Insemination Service (CAIS) at Kabete in Nairobi. This causes inbreeding. Ayako says that of the 3.5 million dairy cattle that the country depends on to produce milk both for domestic consumption and commercial purposes, only 5 percent are registered with the Kenya Stud Book (KSB). The KSB-secretariat keeps records of all animals with known pedigrees in the country. "Without proper dairy farm records, it is very difficult for the country to have a breeding plan", says Ayako.

Dairy farming in the country started facing problems with the collapse of the Kenya Cooperative Creameries and the liberalisation of the sector in the 1990s. This led to low milk prices that forced most farmers to sell their dairy cattle. Ayako advises farmers who would like to restock to buy animals from established livestock breeders' organisations or from individual farmers with good-quality animals that are registered with the KSB.

Farmers can now get credit

James Karanja, a director of the Kenya Dairy Board and breeder, says dairy



A Sahiwal breed for Kenyan dairy farmers

As the quality of dairy cattle in the country continues to deteriorate due to poor management and inbreeding, one institution has struggled to maintain standards. It is the KARI-National Animal Husbandry Research Centre in Naivasha. Aware that more than 80 percent of the country is arid or semi-arid, the Centre has a breeding programme that breeds dairy and beef cattle suitable for both high potential and arid areas of the country. The Sahiwal breed was imported from the semi-arid and arid region of Pakistan and India in the 1930s, after attempts to improve the local Zebu breed showed little genetic progress. Due to its excellent performance, KARI Naivasha established the National Sahiwal Stud (breeding farm). Its two main objectives are (i) to produce pure-bred Sahiwal cattle for use in the arid and semi-arid areas, and (ii) the cross breeding of Sahiwals with exotic breeds such as Friesians to produce a breed that is suitable for milk production in both high- and low-potential areas.

The Sahiwal-Friesian cow can produce up to 20 litres of milk in a day, yet it does not eat as much as the



A Friesian-Sahiwal crossbreed cow and calf

exotic Friesian breed. The breed is also resistant to most of the common cattle diseases. The Naivasha-KARI Farm has an average of 1400 Sahiwal and Friesian-Sahiwal crosses. Requests for this breed are so high that the Centre is not able to meet the demand from farmers. Ayako says that this year alone the Centre has sold 64 bulls and 23 cows to farmers from Narok, Trans-Mara and Kajiado. Semen collected from bulls bred at the Centre is processed and sold in the local and international markets. An in-calf heifer at the Centre goes for Ksh 40,000 while a bull costs Ksh 55,000. Farmers can place orders through the following address:

Centre Director, KARI National Animal Husbandry Research Centre, P.O.Box 25, Naivasha Tel. 0722 336 589.

farmers in the country can improve the quality of their dairy cows by having them inspected and upgraded (See TOF March 2007 issue). He is of the view that farmers should not wait for the government to restock them, since the dairy farming sector has been liberalised. "The role of the government now is to provide an enabling environment and formulate policies that

will help the dairy industry to grow", he says. He is also concerned that local breeders are selling their high-yielding dairy cows to other countries faster than they can replace them. "It is important that we maintain the national herd. If you have 12 cows, you can sell 4 and remain with 8. This way the country will not lose all its good dairy cows", he says.

continued on page 7



Garlic likes it hot

Please give some advice on garlic production and uses. Mwongela 0720 143 977

Garlic is grown from garlic cloves that are separated from the garlic bulbs. The plants like a well-drained soil high in organic matter, and a warm to hot climate.

Cloves should be planted 2 inches in the soil at 4 inches spacing between cloves. The larger the cloves, the larger the new bulbs will turn out.

Garlic does not like competing with weeds; therefore weed regularly and mulch well. Feed the plants at least once during their growing season and make sure not to over irrigate. Check bulbs beneath the soil after about 4 months. If they are bulging out of their outer cover they are almost ready. Lift from the soil before the green growing leaves are dried up and cure as in an aerated area. This can be done by hanging the bunches together. Do not cure in the sun as this lowers the quality of the bulbs. When the bulbs are dry, cut off the now-dried leaves and your crop of well cured garlic should keep for up to six months.

Garlic has antibacterial, antifungal and even antiviral properties. It is thus used in alternative medicine to treat or help in these conditions. In the organic shamba, it is used crushed and soaked in water, or as an oil against fungi, as well as being used as an insect repellent when combined in solution with African marigold and chillies.

Su Kahumbu answers your questions

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Marigold plant has many uses

What is the difference between African marigold and Mexican marigold? 0734 418288

The marigolds are members of the *Tagetes* family, of which we have Mexican, African and even French marigold species. African marigold is known as *Tagetes erecta* and is the tallest of the family, while Mexican marigold is known as *Tagetes minuta* (small).

The Mexican marigolds also have large flowers in comparison to the African marigold, which have the smallest flowers. In Kenya we have both types, with the Mexican species being more exotic and mostly available as seed or seedlings in the roadside flower nurseries. African marigold is fairly widespread all over the country and is commonly treated as a weed. It is the tall, rather smelly, fast-growing weed seen in most shambas. It is sometimes mistaken for a cannabis plant when young, as it has a similar leaf structure.

Organic farmers use the *Tagetes* family as an insecticide, fungicide, nematicide and also to harbour beneficial insects. To make an insecticide, crush leaves and roots of the marigolds and soak in water for 5 – 7 days until the material has decayed. Sieve the mixture and use the resulting liquid diluted 1:1 with soapy water as a spray. This mixture repels most insects and can also help plants resist fungal diseases such as blight in potatoes and tomatoes.

Be careful with greenhouses

What can you grow in a greenhouse? Wekesa Kibuka, 0724 834 801

Greenhouses are expensive to construct, and create an unnatural environment. Farmers using greenhouses do so in order to control the growing environment. This does seem to go against the logic of organic production, which centres on working with the natural environment, however there are many organic producers using greenhouses.

Greenhouses naturally raise temperatures and thus are used for the production of hot-weather, high-value crops such as tomatoes, peppers, cucumbers, courgettes, chillies, butternuts, melons, etc. My experience with greenhouse production ended with the deconstruction of the entire structure. Due to the controlled envi-



The African Marigold *Tagetes erecta* (above) is taller and has small flowers. While the Mexican Marigold *Tagetes minuta* (below) is small in size and has large flowers. (Photos TOF)

In areas where there are problems with nematodes, leave the marigold to grow for a season as a lush weed-like cover and plough it back into the soil before it goes to seed. This is one of the most effective plants against nematodes, as the roots of the African marigold give off a substance that kills nematodes. One can also use the plant as a rotation crop on rested soils.

As the flowers of the *Tagetes* attract beneficial insects, they can be useful when interspersed with your crops or around the crop bed borders. They are also very attractive to look at and brighten up your field. For pets, bedding made up of sacks filled with dried marigolds helps deter fleas and ticks. ■

ronment, I had continuous problems with pests and diseases. If I was not fighting off mites, I was battling with fungus. The entire struggle was not worth any gains.

My advice to farmers preparing to produce organically using greenhouses is to start with one house first and build up the experience you will need before investing in a large operation. As the build-up of pests and diseases in greenhouses can be quite swift, one really does need a solution with a fast reaction, time in order to avert risk of crop failure. Our organic solutions to pests and diseases are not as quick in bearing results as conventional chemical solutions. I believe the success of organic greenhouse production depends largely on the experience of the farmer. ■



Letters to the editor

Happy to come across magazine

We are a group practising organic farming. One day we came across *The Organic Farmer* and we were very happy with the information it carried. We liked the articles so much that we would like you to send us any edition containing more about poultry and dairy keeping. We will be very happy if you address our problem.

Edwin Kavulu Kathuo, Organic Farmers, P.O Box 247, Tulia Kitui, Tel. 0726 385694

We need current and past issues of the magazine

I kindly request for monthly copies of *The Organic Farmer*. I learned about this wonderful magazine through a friend who had the August 2006 issue. Personally, I am a graduate of sustainable agriculture and rural development from Baraka College. In my community in Lugari district, I am promoting sustainable agriculture and I work with Self-Help Groups, youth groups, women's groups and church-based organizations. I am a secretary of two registered groups of 21 and 17 members respectively. It is on this basis that I feel your magazine will be very relevant to me and

my community members. I therefore request to be supplied with enough copies to help me spread the gospel of organic farming. Organic farming is the only sure way of ensuring a healthy nation. Long live *The Organic Farmer* magazine. I also kindly request to be sent single copies of the previous issues of this informative magazine. I thank you in advance for considering my request.

Jesse Luchetu Shivachi, PO Box 41 50108, Lugari, Tel 0721 664131

We need it in Ghana

We write to request for copies and subsequent subscriptions of your magazine *The Organic Farmer*, which we realize will help our educational and entrepreneurial programmes. Thank you.

Joseph M. Agbeko, Executive Director Fair River International - (FARIAD), P.O. BOX OS 2369, OSU ACCRA GHANA. (West Africa) Telephone: +233 217012472 Direct: +233 24 3107106 Fax: +233 217012472 e-mail: info@fairriver.org Website: www.fairriver.org

Organic farming is cheap

Wakulima Bora is a registered self-help group which has a total membership of 16 people and membership is still open to any farmer who is interested. One of our key objectives is to encourage organic farming, which is more cost effective and is also good for sustainable agriculture. We are small-scale farmers involved in the production of potatoes, maize and wheat. We also keep dairy cows. Some of members are now venturing into mushroom farming while others have gone into poultry farming. We request you to be sending us copies of your magazine.

Gichuru Ikiara, Wakulima Bora Group, P.O Box 1992 60200, Meru 0720 437220

Dairy cow breeds...

Continued from Page 5

Our research has shown that a number of local banks and financial institutions in the country have already initiated credit facilities for farmers who would like to restock. It is easy for farmers to access credit. All a farmer needs is to open an account with the bank and show records of their milk deliveries, which will be the security for being considered for a loan.

Total mixed rations for a dairy cow (See page 4)

Milk yield target (Kg)	Live body weight (Kg)	Maize Silage (Kg)	Lucerne hay (Kg)	Napier Fresh (Kg)	Rhodes Grass (Kg)	Concentrates (Kg)	Total Dairy Meal Intake (Kg)	Forage Concentrate Ratio	Cost per kg of milk
30-35	600	14	3	3	2	15.2	21.3	1:1.5	8
20-25	550	14	3	3	2	10.4	16.8	1:1.1	15.9
10-15	550	16	-	4	6	6	15.6	1:1.5	15.9

- For 5 kg milk produced above the target, add 0.5 of each individual ingredient.
- Production system is semi-intensive. (Source: KARI, Naivasha)



Plants can solve farmers' problems

All African farmers know about the damaging effects of insect pests. They are responsible for 20-30 percent of crop losses. And, more often, farmers know that certain natural products can be used to control and prevent insect pests. But they often lack the knowledge and skills to use them effectively. In most cases, the natural products are not available in their communities. There are many safe, natural and simple methods of pest control. OK, the following pages on grey pages will guide you on how to use them effectively.

For the best results, farmers should always use natural products in the evening or at the afternoon, when the pests are more active. This is the best time to maintain the pest population under control. Farmers should be encouraged to express their interest in growing up their own crops. Some types of natural products can be used as a repellent. They have to be used in the evening or at the afternoon, when the pests are more active. This is the best time to maintain the pest population under control.



The Plant Extracts Special which appeared in Sept/Oct 2006 issue is now available in English. Interested farmers can order it.

Suitable for farmer training

I am a field extension staff, working with the ministry of agriculture, Mumbere division. I received a copy of your TOF magazine from a friend who works in Baraka college. I have practically demonstrated on compost making, using EM1 solution, in three field days and the response has been very good. Your magazine contains very rich, honest and useful information for the farmer. Please consider me in your mailing list, plus five copies for the groups that I train. Samwel K Rotich, P.O Box 36, Timboroa smlrotich@yahoo.com

I want to go organic

I am a farmer in Kakamega district who is specialized in horticultural farming. I want to practice organic farming, as inorganic farming is expensive and has low yield. Accept my request of *The Organic Farmer* magazine. Shadrack Nyikuli, P.O Box 84 50105, Bukura

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.

tips and bits

from farmers for farmers

Rabbit farmer swamped by orders

Godfrey Gichuhi, the rabbit farmer from Ruthagati village in Karatina, whose story we featured in the July 2007 issue, must be smiling all the way to the bank. Since *The Organic Farmer* wrote about rabbit keeping as an easy way of income generation, farmers from all over the country have been calling Gichuhi with orders for rabbits. He says he has been swamped with telephone calls from farmers eager to start rabbit keeping since they read the article. "Farmers are calling from as far as Budalangi, Kisumu, Kitale, Kisii and Kericho and many other parts of the country. Every day I receive an average of 10 calls from farmers who want to buy rabbits. So far I have sold 250 rabbits within a few weeks", he says. He organizes delivery to any part of the country.

Gichuhi has been forced to buy rabbits from members of his farmers' group. Increased demand has forced him to start more farmers' groups in his area to breed more rabbits.



Farmers' groups in Budalangi and Bungoma have also invited him to train them. Gichuhi plans to write a book on rabbit keeping. Farmers interested in rabbits can get in touch with him at the following address: Godfrey Gichuhi P.O. Box 137, Karatina, Tel. 0720 406 195. The overwhelming response to the article on rabbits and the others we have done before (as on mushrooms, for instance, or dairy goats), is a confirmation that farmers really appreciate and use the information we give every month in *The Organic Farmer* magazine to improve their farming methods and livelihoods. (TOF)

The benefits of a kitchen garden

Currently nearly every farmer owns a kitchen garden for vegetable growing which produces organic products. The Integrated Pests and Disease Management (IPM) system is highly practised in the gardens. The first step is to re-establish the natural order and reinstate the fertility of the soil by minimizing soil disturbance and maximizing soil organic matter. The second stage is to re-introduce plant diversity. This is the most effective way of maintaining pest control and ensuring continued soil fertility. The law of plant diversity says that there should be a wide variety of different plants on the land at any one time. Here is a recipe for pest control:

Neem tree extract

Add 1 kg finely shredded neem leaves to 1 litre of water, shake vigorously, filter, then add 4 litres of water. Add 2 teaspoonfuls of paraffin and a little soap.

Target pests: aphids, bugs, cutworm and nematodes.

Austin Mumo, Development worker, P.O Box 102, Sultan Hamud Tel.0727 554529 / 0735 591678

The watering plant

I am almost making a breakthrough in discovering a system whereby plants are used in irrigating other plants naturally. The plant to be used in irrigating other plants has the capability of absorbing moisture from the air at night and releasing the moisture through the stem. This system wets the ground, enabling it and other plants nearby to grow with little or no rainfall. Through observations in the last 10 years, I have no doubt that the plant is useful for this purpose. During drought spells you will find that the base of the stem around it is always wet. The tap root is relatively long with very short root hairs, which shows that the plant does not necessarily require watering, as it is able to get water on its own.

I have not done further research because the plant has no seeds, as it propagates through spores. I am therefore asking anybody who can help in reproducing this plant to get in touch with me for us to do carry out further research. If successful, the plant could be intercropped with others, such as millet, to provide them with water during drought periods. I hope to have the discovery patented after further

Market Place



Training: The Kenya Organic Agriculture and Environmental Technologies Institute offers a range of courses to farmers in the following areas:

- i) Extension services for individuals and farmers groups
- ii) Certificate in organic agriculture and environmental science
- iii) Diploma in organic agriculture and environmental science

The courses start in January 2008. For enquiries farmers can contact: The Training Manager, KOAETEC Institute, P.O.Box 32 60125 Kubu-Kubu Embu. Tel.0725301195 Fax 06841074

Organic fertilizer: EM Bokashi is an organic fertilizer containing a high concentration of essential nutrients required for plant growth, manufactured under licence from EMRO Japan. The nutrients are made using Effective Microorganisms (EM). Farmers interested in buying EM Bokashi can get in touch with the manufacturers at the following address: EM Technologies Ltd, P.O Box 1365,60100 Embu, Kenya Tel.254 068 41074/ 072640174 email: embu@emtechkenya.com.

Organic produce needed: The Organic Shop would like to buy the following organic farm produce from certified organic growers: All types of fruits such as raspberry, sugar, corn oil, sunflower oil, garlic, strawberry, green peppers, eggplant, organic tea, and coffee, grains such as wheat, barley and oats, beef, lamb, duck. Farmers can get in touch with the shop at the following address: contact Zak Tel. 0722 572717 or Su Kahumbu Tel. 0721 100001, email: info@organic.co.ke

Petition: Last month we sent out fliers on a petition against the ban on air freight of organic produce to European markets. Farmers were supposed to fill in the petition form and send it to the Kenya Organic Agriculture Network (KOAN) in Nairobi or send an SMS to show solidarity with those opposed to the ban. Farmers who have not done so are requested to send their forms as soon as possible.

research. David Osiako, Umoja Forest Conservation Group, P.O.Box 49, Kesogon Tel. 0735 578 416.