Dairy goat feeding and housing

Poor management and negligence in feeding and housing are responsible low milk production in dairy goats. They require balanced diet, clean feed, water and space to move around. The picture shows a bad example of a dairy goat shed, where does (female) and bucks (male) are kept together.

Can farmers’ groups work together?

A farmers’ group in Central had a promising opportunity to supply the market in Nairobi with organically produced eggs. After an excellent start, they earned Ksh 360’000 monthly. Three years later, the group collapsed. Why is it so difficult for many small-scale farmers to cooperate as a group, even if they know that they have more to gain by working together than individually? Page 4 & 5

The type of chickens matters in egg production

In poultry keeping, the difference between producing eggs on free range, organic or from indigenous chickens is largely on the choice of bird, not the method of production. Page 4

Dear farmers,

On page four of this issue, we write about a farmers’ group which began a very promising project of organic egg production, raised quite a good income for all members – but failed after three years. Of course, selfishness played an important role. But it would be too simple to blame this as the main reason for the collapse of the group. Similar failures are reported to us every week. In 95% of the cases, financial issues are the root cause of the problems.

Farmers’ groups may work together quite well for some years. But as soon as money comes in, the problems start. Why?

1. Farmers’ groups very often lack clear legal structures and a binding description of their goals and how to attain them.
2. At times, members who are very vocal or successful assume leadership, using their eloquence and financial might. Rarely do members question the capability of such leaders, neither do members probe the past behaviour or willingness of such leaders to work for the common good of the group.
3. The duties and competencies of the committee members are not clearly defined. At times, these are high-handed members and consider their positions as a personal power base.
4. Many farmers’ groups or CBOs lack mechanisms to control the work and to remove errant leaders if they do not serve the interest of the whole group.

Lack of clear administrative structures, transparency, fairness and workable control mechanisms usually lead to problems, aggravated by human factors such as jealousy and selfishness.

All these situations are quite regrettable! Right now, there are numerous opportunities available to small-scale farmers working harmoniously as groups, such as access to loans, support for common projects, not to mention the possibility to market their produce together to raise required volumes.

We can blame a lot of factors for the poverty ravaging many small-scale farmers, such as small land sizes, lack of inputs, lack of credit for investment or even weather conditions. Many of these disadvantages could be easily overcome if only farmers would be able to work together.

TOF P.O. Box 14352, Nairobi 00800, Tel: 020 44 50 398, 0717 551 129, 0738 390 715, Email: info@organickenya.org
Quality seeds the starting point in agroforestry

Farmer need to select seeds carefully for proper growth of the planted trees.

The Organic Farmer

After starting the series “our trees – our future” we got quite a lot of calls from farmers asking us for places where to get seeds and seedlings. Even if we are aware that one can find a nursery in nearly all regions of the country, we publish below some addresses where farmers can go to.

However, farmers can build up their own nursery. It is advantageous if they plant trees that do well in their area. When collecting seedlings, pick equal number of seeds from each tree, this avoids inbreeding in future generations. Collect seeds only when the tree is at the peak of seed production; store them in a cool, well-ventilated room.

Pre-treatment of seeds

Before planting your seeds, find the best way to prepare each seed type. Some seed in nature will only germinate if they get seeds and seedlings. Even if we get them from woody branches which are at least a year old; they do better than soft, freshly grown branches. Cut them in the rainy season and plant them quickly to avoid drying out. Do not forget to label them!

(There is a good Book for reference: GROWING TREE AND GARDENS FOR LIFE published by the World Agroforestry Centre P.O. Box 30677,00100, Tel. 020 722 4000)

Where to buy tree seeds and seedlings

Good quality tree seeds and seedlings are not easy to get. In our series on trees, we have found it necessary to provide information to farmers on where they can buy tree seeds:

Kenya Forestry Research Institute
Kenya Forestry Seed Centre P.O. Box 20412-00200, 0724 259 781, 2
Email: kefri.seedcentre@yahoo.com
website: www.keafr.org

Coast Regional Research Centre
Gede, P.O. Box 1078 80200, Tel. 042 320 22, 225,863, 358 Email: cdgedc@kefri.org

Londiani Regional Centre, P.O. Box 382, 20203, Londiani Tel 052 64028

Maseno Regional Research Centre, P.O. Box 25199 4080, Ontonglo, Kisumu
Tel. 573 51164, 0713 687 975

Gatukagwe offs Group, Gatundu North
Contact person: Samson, 0727 674 059

Mataara Forest Friends, Gatundu North
Contact person: Moses Migwi, 0722 823 085

Kangungi Environmental Network, Contact person: Salesio Kinyua, 0711 130 369, Embu

Kagaari Munyange Self Help Group, Contact person: Earnest Nyjje 0729 922 657, Embu

Save Mount Kenya Forest from Extinc-
tion Group, Meru South
Paul Murithi, 0721 461 484
Email: danielmuoria@yahoo.com

Nyeri
Pamoja Community Development Forum
Contact person: Jesse kiokia 0722535987
Email kiokia@yahoo.com

Moi’s Bridge,
Ben Saina, 0724 971 350

Nakuru
David Mugi, 0723 688 960- Ngorika,

Kitengela Arboretum, P.O. Box 23058,
0713 564 768, 0723 706 680 (desert tree seedlings, eucalyptus, Acacia seedlings)

Fruit tree seedlings

Lugano Horticultural Enterprises
P.O. Box 323, 30200, Kitale, 0733 990 574, 0733 391 907

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

Publisher African Insect Science for Food and Health (icipe), P.O. Box 30772, 00100 Nairobi, KENYA, Tel: +254 20 663 2000, icipe@icipe.org, www.icipe.org

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www.organicfarmermagazine.org
Take more care of your dairy goats

Feeding, housing and general management is still a big problem among dairy goat owners.

Peter Kamau

Poor management of dairy goats is one of the main problems facing the dairy goat sub-sector in Kenya. Although farmers spend a lot of money buying dairy goats, it is a pity when one visits their homesteads and sees the condition of the goats, including the goat sheds. Selective breeding is important, but farmers should know that breeding alone cannot give a good quality dairy goat.

To explain it in an easier way: Breeding accounts for only 33 per cent of a goat’s productiveness. Nutrition and management accounts for 66 per cent, while a farmer’s entrepreneurship accounts for only 10 per cent. This clearly shows that proper feeding and general care of a dairy goat are the most important areas in dairy goat production. That is why it is important that farmers know how to feed a goat and the best way to house it.

Feeding a dairy goat

To produce adequate milk, a dairy goat requires a well-balanced diet for both self-maintenance and production of milk. A dairy goat is very selective in what it eats. To encourage it to eat, farmers need to provide it with very high quality fodder. If the fodder is of low quality, the goat will refuse to eat it leading to wastage. A female goat that is being milked requires at least 1.25 kg of good quality dried grass or Lucerne in a day.

Need for balanced diet

Goats tend to eat more if they are zero-grazed than when on free range. The farmer should chop the green fodder such as Napier grass to make it easier for the goat to chew; this reduces wastage. If more than one type of forage is available, goats tend to eat more. The fodder may include potato vines, maize stalks, sorghum or waste vegetables. Legumes such as Lucerne, green beans, purple vetch, acacia, leucaena, cotton seed cake, sunflower cake, soybean cake are a good source of proteins. Salt licks are needed to provide minerals.

It is important to know how a dairy goat’s digestion works. The main difference between a goat and a cow or a sheep is that the goat has a much bigger stomach in comparison to its body size compared to the other two animals. The stomach of the goat can be as much as 1.5 times the total body volume. This makes the goat a very efficient converter of rough feeds or browse, but the process uses up a lot of energy and there is also a need for minerals especially phosphorous. One reason goats prefer browse bushes and trees is that these plants are deep-rooted and bring up many more essential minerals from deep inside the soil that the goat needs.

A large proportion of the feed it eats is converted into milk. A goat can convert more dry roughage into milk compared to a dairy cow, but the forage must be clean and dry all the time. The amount of feed a goat eats depends on its body size and also on the quantity of the feed. From the different types of feed given, a farmer can tell which type of feed it likes most. Remove waste feed at least twice a day. If there is a lot of waste, this should tell you the goat is either being given too much feed than it can eat or it does not like type of feed. A 45 kg goat that is being milked should be consuming up to 7 per cent of her body weight (about 3 kg) of dry matter and can drink 4 to 5 litres of clean water daily.

Give concentrates

As in the case of dairy cows, the roughage part of the ration is rarely good enough to provide maintenance for the animal, let alone milk production. It is important to add the concentrate to the ration. Avoid giving barley as it can cause bloat or poisoning if fed in large quantities.

The more the amount of milk a goat produces, the more the amount of concentrate it should be given (table below). A small quantity of concentrate should be fed even when the goat is not being milked in order to help it in body maintenance and also in the development of her unborn kid when pregnant. A goat will normally go through a daily process of eat-rest-ruminate-eat-repeat, compared to a dairy cow, but the forage must be clean and dry all the time. The age part of the ration is rarely good enough to provide maintenance for the animal, let alone milk production. It is important to add the concentrate to the ration.

Dairy meal rations for a dairy goat

<table>
<thead>
<tr>
<th>Quantity</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dry female</td>
<td>0.5 kg</td>
</tr>
<tr>
<td>Female milking 1 litre</td>
<td>1.0 kg</td>
</tr>
<tr>
<td>Female milking 2 litres</td>
<td>1.5 kg</td>
</tr>
<tr>
<td>Female milking 3 litres</td>
<td>2.0 kg</td>
</tr>
<tr>
<td>Female milking 4 litres</td>
<td>2.5 kg</td>
</tr>
<tr>
<td>Female milking 5 litres</td>
<td>3.0 kg</td>
</tr>
</tbody>
</table>

Hygiene and housing of dairy goats

Maintaining hygiene and keeping goats in proper housing is still a big problem with most dairy goat farmers. Unlike other domestic animals, a dairy goat prefers to live in a dry and clean place. A simple way to do this is to build a house with a raised floor. A floor made of timber pieces with spaces between (slatted floor) allows the urine and droppings to pass through the spaces and leaves the floor clean and dry. The water and feeding trough should be placed outside the house (sketch). Goats should be protected from windy conditions especially during the cold season when they easily contract pneumonia.

Most farmers keep their goats indoors throughout the day. Most of the time, the goats can hardly move due to the small size of the house. All animals should be allowed to go outside into open space where they can graze, exercise and get adequate light. Organic farming standards stipulate that all animals should be allowed free movement to reduce stress and allow them to express normal behaviour.
Infighting destroyed a group of organic egg producers

This is the story of a farmers’ group which started a promising organic egg production project – and failed.

Su Kalumvu

I hope that this real life scenario will allow us to learn from others’ mistakes. Bear in mind that there are no lessons learned without mistakes!

The farmers’ group was formed in 2007 and consisted of 11 farmers located in Central Province, 130 km outside of Nsamba. Six members purchased each 100 day-old chicks with the intention of starting an organic egg production for a period of 6 months.

Good beginning

When the layers matured and started producing eggs, the group organized the logistics of transporting the eggs to Nairobi by the most cost-effective public means, by matatus. The eggs were packed ready for market in punnets of 6 eggs each and fetched a price of Ksh 700 per punnet. The group delivered 100 punnets to Nairobi twice a week for the first few weeks, thus earning Ksh 12,000 weekly.

Due to their good quality, market demand began to increase, and the group increased supplies to twice a week. According to the market requirements, they even sought and were granted organic certification after a lengthy conversion period.

Ksh 300/000 monthly

Two years later, the group was at its peak delivering 500 punnets 3 times a week, earning a weekly income of Ksh 15,000 translating into Ksh 300,000 monthly.

One group member saw the opportunity of investing a vehicle to cater for the transportation of the eggs to Nairobi. The group claims its gains from organic egg production were:

- Improved and economical status and allowing them to better living standard.
- Enable better education for their children.
- Enable to increase their flock sizes.
- Better farm management.
- Built relationship: their bank (cooperative) members obtained income due to their cash flow hence enabling them easy access to loans.

The honeymoon is over

Today, three years after starting this successful and promising project, the group consists of two members only. The demand to meet the market requirements – only able to deliver 200 punnets into the market, and even this in an insufficient supply. The market demand for free organic eggs meanwhile has sky-nooked to more than 1000 punnets a week.

What went wrong?

There are a couple of reasons for this failure:

- a) The group dynamics began to change with an increase in income, resulting in members choosing to leave the group and others to take the load.
- b) As time went by the remaining group members did not make timely investments in renewing their flock.
- c) One group member left his elderly flock under supervision of a friend as he went about other businesses which resulted in cessation of operation due to poor feeding and management.
- d) Group members who left the group failed to notify the remaining members to market their eggs.

Lessons learnt

1) Firstly, that of group dynamics. Strong groups have very clear advantages as this group showed in the early stages. Funds are better operated in groups, it is important that the group’s organizational structure is well defined and understood by all members. The finances of the group must be transparent and acceptable by all members in order to avoid conflict in the group.

2) It is imperative that the productivity cycle of poultry is well understood. The group member was always at a loss after they start. From day old, layers will start to produce eggs from 5 months of age. They should have about 12 months before they may go through a molting stage. The molting stage is when chickens prepare themselves for the next laying season and can be as long as 20 weeks. During this

How many chickens do you need?

Calculation: A sure way of calculating the number of eggs you require is based on how many eggs you need. If you would like to sell 100 eggs a week, the calculation would be 300/7 = 43birds x 30% = 56 birds. To avoid any extra cost, price after 13 chickens will not lay so we will not consider them. 43+1 = 44 birds.

Implementation: Daughters can be bred from the father but not to sons to mother. Introduce new bloodline to flock every 2 years by introducing new roosters

Storage: Eggs can be kept for up to 2 weeks at 10 C before you hatch incubate them thus you can accumulate enough eggs over this period of time.

Seasons: Layers do not like cold conditions and reduce laying when temps are down as they spend their energy on trying to stay warm. In order to continue to satisfy the market, one can plan for a second flock to be at its optimum egg production stage at the time of the first flock molting.

3) The final lesson is in the figures: There is an unfilled market for organic eggs in Kenya. Every week, the demand is about 1000 punnets a week!

How to produce organic eggs with hybrid chickens

The difference in egg production using organic or free-range methods depends on the type of chickens.

Su Kalumvu

It is possible to produce a free-range layer from hybrid layer stock as opposed to a pure-bred strain. The difference being the hybrid chicken will produce more eggs. She is less likely to go broody after she has laid and will continue to produce eggs over a longer period of time. From a commercial point of view this is a more viable, less risky and more controllable option when trying to produce a large number of free-range or organic eggs for a defined market.

K哪怕是 hybrid

The differences in rearing hybrid layers to the ‘conventional’ way compared to the free range or ‘organic’ is largely based on how the birds are reared from day old chicks as shown below.

Conventional Organic

Barn raised or raised indoors Barn raised or raised outdoors but sheltered at night or during bad weather

No access to outdoors Raised outdoors but sheltered at night or during bad weather

Fed commercially mix Fed commercially mixes plus forage outdoor

Fed forage outdoors and organically produced grain mixes

Medicated often as a preventative measure Medicated only when necessary and preferably homeopathically

Force molting after first laying session

Some selection of wrong maize varieties or false seeds can cause farmers great losses.

The Organic Farmer

Every year, our magazine gives tips on seed selection. Unfortunately, many farmers refuse to hear of farmers who choose the wrong variety. So we repeat it again: Farmers have not been helped by new investments in the selection of the right seed variety.

Late maturing varieties

Late maturing varieties cannot be planted in areas with less rain as they may not grow to maturity. Such varieties do well in high altitudes (above 2300 metres above sea-level) with well distributed rainfall of 1500 mm and late maturing varieties yield more yields than medium altitude varieties. Suitable late maturing varieties are H164D, H260, H265, H269, H2610, H2613, and H4001 from Kenya Seed Company and WH99 from Western Seed Company.

Medium maturing varieties

Medium maturing varieties are more suitable for most farmers, which have two rainy seasons; therefore they can be grown two times in a year. If medium maturity seed varieties include H535, H536 and H537 from Kenya Seed Company and WH140, WH152, WH161 and WH156 from Western Seed Company.

Early maturing varieties

Early maturing varieties are much more suitable in high and lower potential areas, rainfall is very unreliable, diminishing gradually towards the end of the week. In areas with limited rainfall, early maturing varieties should be grown. Sometimes, depending on the rainfall pattern, farmers have two crops a year. Early maturing varieties comprise D101, H141, Karamia, Kyangiti, D103, D104. Western Seed Company has WS103, WS909 and WS202.

Controlling diseases

In mid-altitude areas most of the maize varieties are prone to diseases such as Maize Strik Virus (MSV) - This virus has resulted in 80 per cent maize loss. In these areas farmers are advised to go for varieties that are tolerant to MSV. Western Seed Company has released varieties that are tolerant to MSV: WH403, WH502, WH104 and WH935.

Controlling Striga

Some areas such as in Western province and South Nyanza are prone to the stubborn striga weed. Farmers in these areas who are not practicing push-pull agriculture are at a disadvantage. Resistant varieties such as WH402 from Western Seed Company or KSTP from KARI which have shown some tolerance to striga (under medium to low weed pressure). Alternately farmers can use Luvonga to post, which can kill germinating weeds including striga, leaving to make the straw great.

Seed selection service

To assist farmers in seed selection, some seed companies and government regulatory agencies such as the Kenya Plant Health Inspectorate Service (KPHIS) have launched an information service.

KPHIS Seed Company Services

Go to message – Write the word MAIZE * Your Destination = Send to 3000. You will get a reply on varieties suitable for your destination, their qualities and how long they take to mature. Farmers can also call the company on Tel numbers 0716 647 693 or 0733 854 713.

KPHIS Information Service

Write the message: maize frame of your DM, SMS to 2644 using your safaricom number, then you will get a reply on how to get the information you need, you can call KPHIS personnel on 0722 516 221 or 0733 874 274.

Do not be cheated on seeds

To get quality seeds, farmers should:

- be advisable to buy seeds in a small packet to avoid being cheated in your area. If you want to try a new variety, plant it in a small part of your farm and after every stage of growth, check the quality of grain at harvest and the total yield before permanent adoption.
- yDownload seeds from licensed stockists. Confirm that the seed shop has a license from KPHIS.
- WWhen you buy any pack of seeds, check to ensure it has a tag or label from KPHIS indicating that it has been approved for the area and variety. The pack should also have some some data as to the percentage of maize loss. In these areas farmers are advised to go for varieties that are tolerant to MSV. Western Seed Company has released varieties that are tolerant to MSV: WH403, WH502, WH104 and WH935.
- yBuy seeds early before the planting season starts. Popular seed varieties are always in short supply due to the huge demand from farmers. Farmers are therefore advised to order seeds early and try to get in touch with the market when unscrupulous businessmen rush to cash in on the shortage.
- AAvoiding your seeds from hawkers who move from place to place to sell maize seeds. Hawkers are in the planting season claiming they have genuine seeds. The hawker claims that they have made up a new batch of seeds from producers. Such seed is not genuine and can cause farmers great losses.
i-TOF centres expand their reach

Following the increasing demand from farmers for our training and information services, we would like to inform farmers that we have expanded our i-TOF services in the following regions: Our extension officer in Gatuto is now covering Muranga, Kirinyaga, Nyeri and Nanyuki. From, Kangundo, we are now offering training in Mwala, Makutano and Myondoni.

In Western Province, our extension officer, Alfred Amusibwa, has moved from Buyangu in Vihiga district. He will now be based at Kamukuywa in Kimilili region. From the new station, he will be able to serve farmers in the outlying areas of Mt Elgon, Kiminini, Trans-Nzoia, Turbo, Lugari district, Moi’s Bridge, Molben in addition to the areas he has been serving in the larger Kakamega region. We would like to inform farmers in the new regions to make use of this training service in order to learn more about sustainable agriculture and organic farming. Interested farmers’ groups in the new areas can now book for training in the desired topics.

i-TOF Centre Western Province
Location: Kamukuywa (near Kimilili)
Extensionist: Alfred Amusibwa
Contact: 0724 331 456
Email: ito2@organickenya.org

i-TOF Central Province
Location: Gatuto/Kagio
Extensionist: Peter Murage
Contact: 0724 331 375
Email: itof2@organickenya.org

i-TOF Eastern Province
Location: Kangundo town
Extensionist: Victoria Mutinda
Contact: 0724 331 405
Email: ito1f@organickenya.org

You want TOF in 2011?

Dear Farmers,
Do you wish to remain on our mailing list and continue to get TOF every month? If you have not returned to us the filled questionnaire, we sent to you with November TOF issue, here is another chance for you to mail it back to us.

Take a piece of paper and answer each of the following questions. Send the paper back to:

The Organic Farmer, P.O.Box 14352, 00800 Nairobi.

Farmers’ groups and institutions, which will not have given us a response by 15th March 2011, will be removed from our mailing list without any further notice.

Questions for farmers’ groups
1. Name of the farmers’ group?
2. Place of registration? Year of registration?
3. Location?
4. Postal address?
5. Number of members? Male ... Female ...
6. How many copies do you get every month? And, since when did you start receiving (year)?
7. How many people share the copies?
8. Name, position and telephone numbers of the committee members?
9. Name of members including their mobile phone numbers?
10. Signature of the contact person.

Questions for institutions (NGOs, schools & colleges)
1. Name of the institution
2. Date of registration?
3. Location
4. Postal address
5. How many copies do you receive monthly? Since when did you start receiving TOF (year)?
6. Who are the readers of the TOF copies you receive?
7. How many people share each of the TOF copies?
8. Name, position and telephone number of the contact person?
9. Signature of the contact person.

You can also send us the questions with SMS via 0715 916 136 or by e-mail: info@organickenya.org

Rabbits: Stress affects fertility

What causes infertility in Rabbits? Virginia Mugure, farmer in Gaturi, 0724 126 710

This is a tricky issue. Bucks sometimes have underdeveloped sex organs, please check to ensure that your buck has both testis. Bucks can also be infertile due to injuries when fighting each other, they aim at the testis of each other and this could lead to extensive injuries that can lead to infertility. Does are spontaneous ovulators i.e they are ready to mate when introduced to the buck. Some does are uncomfortable with this arrangement and resist at first, you should withdraw and try again some time later. Infertility might also be caused by infections to the reproductive system, this might not be easy to detect, but inspection of the rabbit might reveal swelling or blood in urine etc. The last reason is stress and fat, if the does is overfed then she will not respond well to mating. Ensure that the does are on a balanced diet and if stressed use a multi-vitamin before serving her.

The litter was too big

My rabbit kindled ten kits which are one month old. Three of them died instantly within a period of three days without showing any signs. Please advise. Alice Wambui Mwangi, Kiganjo, 0727 486 241.

A fryer can survive for 3 days without feeding from the mother, but beyond this, if the litter box is not warm enough they will die. Young rabbits are called fryers not kits. This behaviour is not normal. A rabbit can potentially take care of 12 or even 10 in a litter. They might not be very strong but they have a chance to survive, the main reason is that if the doe is not having sufficient feed (concentrate + hay + water) then her body will not produce enough milk for the entire litter. Does undergo a stressful moment when delivering, it’s important that you ensure that they are well fed and that you replenish their feed with supplement salts (Phosphorous, calcium, iron and other trace minerals).

Take care of the doe

My doe has developed a habit of eating the litter, please advise. Jacob Mwangi, Kiganjo, 0712 031 217.

Rabbits like many wild animals clean their new born with their tongues. The taste of blood encourages cannibalism, which leads a doe to bite and eventually eat the new borns. This is mainly due to lack of minerals in the food, always ensure that you have mineral supplement salts in your farm and introduce them into the feed regularly and not excessively; a good programme would be to do it once a week but not more than twice.
Weak plants more affected by Botrytis

Some crops are attacked by pests during dry season. When it rains, the crops turn the colour of leaves into ash like substances and dust particles droplets like observed; what could be the problem, is it pest caused or lack of nutrients? (Buyangu)

If I understand you right, you noticed that after rain, the leaves of some crops start to be covered by a whitish dust. This would be a very good description of the typical signs of some fungal diseases. Fungi can grow very small structures that contain very small particles. This is the whitish stuff that can be seen on affected plant parts, and it develops especially under humid conditions. Winds can carry the small particles. This is the whitish stuff that can be seen on affected plant parts, and it develops especially under humid conditions. Winds can carry the small particles, which are similar to tiny seeds, very far. They may germinate on unaffected plants, infecting them with the disease, too. An example of this type of disease is gray mould (Botrytis) which can grow on many crops such as tomatoes, peppers, potatoes, beans, peas, cabbages, lettuces, melons, and others. Also on blight-affected crops such as tomatoes, a similar whitish dust develops. It is important to understand that once you notice the whitish growth, it is almost too late to do much because the fungus has already established itself inside the plant.

Where fungal diseases are a continuous problem, you may have to consider your management. Plants that are weak, e.g. from lack of nutrients, lack of water, over-watering, or insect-infested plants are attacked more easily by fungi and other diseases. Ensure good drainage of the soil, give the plants enough space and air, and be careful with watering. Remove damaged plant material as soon as you notice it. You may protect your plants by applying fungicides whenever the weather is very wet. Copper fungicides, neem oil, or potassium bicarbonate may be helpful.

Characteristics of Botrytis are the grey spores

Green manure works like compost

Can I make a balanced organic fertilizer without composting? If yes, what are the materials? 0713 725 034

If you take a close look at the way in which wild plants can grow in a natural environment, you will notice that there is a constant recycling of materials and nutrients. Old plant material dies and falls to the ground. Small organisms and micro-organisms break it down, and the nutrients inside it are released into the soil and taken up by plant roots to create new growth. To put it very simply: to grow leaves, a plant will need such nutrients as are contained in leaves. Besides this, a plant needs only water, air and light. This is the organic way. Organic agriculture tries to include these natural processes and to make use of them.

A very effective organic way of providing balanced nutrients in large quantities to crops without composting is green manuring or mulching. For this method, crop residues or a green cover crop grown especially for the purpose of fertilization are slashed and worked into the topsoil or left as mulch before planting a main crop like maize. Mulch can also be provided from hedges (e.g. Tithonia), trees etc. The material will decay organically and provide nutrients to the growing crop.

If you are thinking of preparing a mixture of organic materials that provide nutrients in a very concentrated form in the same way as synthetic fertilizers, this will be more difficult to realize. Organic materials are usually bulky, because the nutrients inside it are bound to organic matter. They have to go through a decaying process called mineralization before they can be taken up by plant roots. This process depends on the activity of soil micro-organisms, on moisture and on temperature. Nutrient content of organic fertilizers and nutrient release to plants can therefore not be predicted easily.

The first step should always be to optimize the nutrient management on your own farm. Livestock manures and crop residues should be regarded as very valuable and balanced nutrient resources. They should never be wasted! Remove fresh manure daily and store it in a place where it is protected from sun and rain until you use it. Residues should be given back to the soil as mulch or green manure rather than entirely be fed to animals. These resources also provide organic matter which is central for soil fertility.

Some materials that could be used in making of fertilizer:

- Nitrogen rich materials:
  - Blood meal, feather meal, horn meal (12-15% N)
  - Bone meal (12-25% P)
  - Poultry manure (1-3% P)
  - Phosphorus rich materials:
  - Rock phosphate (20-33% P)
  - Bone meal (12-25% P)
  - Poultry manure (1-3% P)
  - Potassium rich materials:
  - Rock Powders (obtain information for available specific rock materials)
  - Wood ash (3-7% K)
  - Livestock manures (1% K)

As you may see now, the availability of suitable materials can be a problem. Try to find out what kind of materials can be provided in your region. There are also some organic amendments and additives on the market which can help to optimize your nutrient management. Please inform yourself which of them may be useful to you.
Rabbit keepers need a keen eye

James Wathuge*

Most farmers who have contacted me as a rabbit breeder have the impression that rabbit farming will make them rich very fast. This is an unrealistic thought. Of course, rabbits multiply fast, but they also die very fast. Rabbits keeping need a keen eye, since they can contract diseases or get injured or even die before you refill the next pail of water. Many farmers also ignore my advice to begin their rabbit venture with a few rabbits; this would enable them to learn and understand their behaviour and needs.

Core values

Dairy farming and cattle breeding are two very distinct areas of specialisation. The art of breeding is deeper than just feeding animals; it is a combination of passion and great interest to have better and improved animals for the future. Likewise, rabbit breeding is as well different from rabbit farming or rearing. My main interest as a rabbit breeder is to develop a fast growing rabbit with three qualities:

• The rabbits should gain weight fast (food to meat conversion).
• They should produce as little waste as possible (meat to waste ratio, normally 50% waste and 50% meat, in most rabbits except the Dutch-Brown Grey).
• They should have large surface areas (for the skin market).

To realise these targets, one needs to know quite a lot about the behaviour of the various types of rabbits. My initiative has brought me success in the right way to feed rabbits bringing fast growth only after 3 years. Currently I am at the 9th generation of rabbits from my farm and still going. I specialise in cross-breeds.

No doubt, there is need for better breeds. Farmers in Kenya have embraced rabbit farming with a great zeal and the Government has followed suit, this should be sustained. But no one is asking the big question: “If we invest so much money, where shall we sell our products?”

Rabbits’ urine

I was advised by a friend that rabbits urine can be used as organic round-up as it contain high acidic level and can easily eliminate couch grass when applied without being diluted, is it true? (Timothy Mbugua, Sabasaba, 0722 811 160)

This is true, but this is not really an organic solution. It has happened by chance that certain people noticed that rabbit urine was making their lawns turn yellow and eventually the grass would not survive. But yes it works against all grasses, not only couch grass.

A Dutch brown grey with her young ones get the quality and improved breeds to sustain the industry? I have invested in feeds, drugs, housing and management to realize my goals, apparently I have also made some serious mistakes that almost cleared all my rabbits, but I did not give up.

Market for rabbit products

It is common knowledge that the best dairy farmer is the one who drinks milk. Likewise, the best rabbit farmer is one who supplies meat to his family. Kenya is a potential market for rabbit products as well. The Government should stop telling farmers that they will secure overseas markets for their meat. It would make more sense to launch an awareness campaign in two directions:

• First: An information campaign for proper feeding, housing and management of rabbits.
• Second: A rabbit meat promotion for the local market.

Rabbit meat is known for its low cholesterol; the government should encourage its institutions to buy rabbits from farmers within their neighbourhood.

Value addition

Recently a rabbit farmers day in Thika town claimed farmers that the government had secured a 4- tonne rabbit pelt export market order from China; a nice order for sure, but does it help Kenya? Training institutions such as the Animal Health and Industrial Training Institute (AHITI) should start training people on how to process rabbit leather into finished products so that we can export shoes and jackets to Europe and the US. This will create jobs for our youth. After all, what will the Chinese do with the rabbit skins?

* James Wathuge is a rabbit breeder, based in Kangemi, Nairobi. He has been breeding rabbits for the last 3 years. His contact is 0733 893 300, jawathuge@yahoo.com

In the next TOF issue, he will write about the challenges of rabbit management.

We need your opinion

In these weeks of February, around one thousand farmers and readers of our magazine will get a phone call from the “Voice of the Farmer”. This is a research method that collects feedback from farmers by asking them some few questions related to their farming activities and to their use of The Organic Farmer magazine. Farmers, your support in answering these questions will help us to know if TOF is meeting your needs.

selling & buying

Tree seedlings: The German development agency GTZ is selling the following tree seedlings at the South Coast: 630 Jatropha Curcas, 250 Croton, 360 Moringa Oleifera, 720 Acacia Spectabilis, 810 Acacia Polyacantha, 130 Rough Lemons Seedlings, 180 Passion Fruits, 24 Un-Grafted Mangoes and 150 Paw-Paws.

Contact information: Eng. Gunter Ullrich: gunter@gtwu.de , Mobile: 0725 946 033

Dorper sheep: I am interested in buying dorper sheep. Anyone with this breed of sheep can contact me. Simon 0722 960 038.

Indigenous chickens: We sell 2-week-old chicks of indigenous chickens breed at very good rates. Call Markirak Farms Ltd Makindu, 0714 636 614.

Incubators: I need good incubators with a capacity of 500 eggs or more call 0731 643 241 or 0723 619 238.

Paraffin incubator: I would like to buy a paraffin incubator but do not know where to get one. Anyone with information can get in touch with me, gaomondi@yahoo.com.

Organic inputs for sale: I have organic farm inputs such as EM, fungicides, follic sprays, etc for sale to farmers. Call 0726 763 100.

Turkey eggs: I need fertilized turkey and duck eggs. Email: zackmatere@gmail.com.

Amaranth seeds for sale: I have 90 kg of white amaranth seeds for sale. Contact Matunda Jua Kazi Organisation, Agricultural office, Likuyani 0721 223 104.

Dairy Cattle Training Manual: Self-Help Africa (SHA), an NGO working with farmers in Nakuru County published an informative training manual for dairy farmers, unfortunately this manual is sold out although many farmers want it. We would advise farmers who want the manual and have access to internet to send an email to the organization (email: kenya@selfhelpafrica.org). Alternatively, we will photocopy the manual for farmers and send them the copies at production cost (photocopy and postage). Farmers interested can send us Ksh 250 in airtime to our numbers 0717 444 405 or 0715 916 136 and an SMS indicating “dairy cattle manual” including their full contact address.