

Dear Reader,

It is during this month, that the world celebrates, the World Food Safety Day. With increasing incidence of non-communicable diseases due to consumption and ingestion of toxic substances used in food production, organic farming is the way to go. In the previous edition we featured success stories of farmers attesting that farming organically is possible, beneficial, and profitable, and there is no reason why farmers should shy away from embracing ecologically sustainable farming approaches.

This edition provides a step-by-step guide to making organic extracts that will help you manage common pests in the farm including stem borers, aphids, fall army worm and mealy bugs. Also read on to find out how to turn raw farm produce such as cabbages, carrots, cucumbers, and dairy milk into value added drinks that nourish the body and boost its immunity.

To further help you manage your organic farm, we feature a guide on how to access safe farm inputs, from various suppliers around the country. We also offer a guide on protecting beneficial insects in the farm such as pollinators which play a vital role in food production.



Gilgil farmer prepares plant extracts to manage pests in his vegetable garden

How to control common pests that attack plants

By Esther Mwoloi

In the previous publication we had identified some of the problems that farmers are likely to encounter in the farm during the rainy season. Farmers growing common crops such as maize, beans and green grams are likely to battle with fall army worm, stem borers and aphids. Ms Njeri Kinuthia, a seasoned extension officer, who has worked with farmers in various parts of the country for over 30 years, provides ecologically sustainable solutions by giving a step by step guide to making plant extracts that manage these stubborn pests.

Stem borers

Stem borers are insects which burrow in the stem of maize or sorghum. They can also be found in maize cobs of young plants. This burrowing and eating of the inside of the plant severely reduces the yield of maize and sorghum.

Aphids

They are small sucking insects and members of the Aphidoidea family. Aphids are among the most destructive insect pests on cultivated plants in temperate regions. In addition to weakening the plant by sucking sap, they act as vectors for plant viruses and disfigure ornamental plants with deposits of honeydew and the subsequent growth of sooty moulds.

Fall armyworm

Fall armyworm is a species in the order Lepidoptera and is the larval life stage of a fall armyworm moth. It attacks lots of crop varieties but damages the maize crop to a larger extent and at all stages. In maize seedlings, it causes damage by feeding within the whorl. Larger larvae can cut the base of the plant while mature plants suffer attack on reproductive structures. Fall armyworm can be physically identified by spotting its egg masses, larvae, pupae or moths, or it can be identified by the damage caused by the larvae.

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How to make a concoction to control stem borers, fall armyworm and aphids

Ingredients

- 4kg's of Mexican Marigold
- 4kg's of Tithonia leaves
- 4kg's of black jack leaves
- 4kg's of stinging nettle leaves
- 4kg's of any legume leaves
- 5 cloves of garlic
- 1 liter of Effective Microorganism (microbes) (EM1)
- 1 liter of molasses
- 1kg of chilies

Procedure

- Mix EM 1 in a container and mix well.
- Then add 20 litres of water and gradually all the other ingredients one at a time.
- Let the mixture stand for 7-14 days in a dark room.
- Keep on stirring the mixture once per day
- Sieve the mixture to remove residues.

When applying dilute 1 litre mixture to: 2 liters of water and spray to young maize plant funnels immediately after germination.

You can alternatively use wood ash and sprinkle it into the maize funnel. This method makes the stem borer to suffocate due to the lack of oxygen and wearing out of the worm's skin due to ash effects.



Tithonia

Stinging nettle leaves



How to prepare microbes

Ingredients.

- 1kg of bean flour
- 1kg of fresh cow dung
- 1 liter of fresh cow urine
- 6 overripe bananas or 1kg of sugar
- 1kg of Neem, Tithonia or Lantana Camara leaves
- 10 litres of water

Procedure

- Add each ingredient gradually to 10 litres of water and stir both clockwise and anti clockwise for the mixture to get well mixed.
- Stirring should be done once for the rest of 10 days (clockwise and anticlockwise)
- Cover the mixture in an air tight container for 10days.
- Mix the mixture into a ratio of 20ml of the concoction to 20litres of water.
- Soak the seedling into the concoction before planting for 30min.
- When planting seeds coat them with the concoction and let them stay under the shade for 30 minutes before planting.
- You can also drench the concoction into the soil to kill harmful microorganisms.

The mixture can only last for a period of 6 months.

"Farmers should avoid using synthetic pesticides because they destroy the ecosystem by killing some beneficial pollinators like bees and other insects such as the lady bird and birds," says Kinuthia.

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https://infonet-biovision.org/plant_pests

How to make yoghurt at home

By Mary Mutisya

As a dairy farmer, have you thought of sparing some milk for value addition either to sell at a higher profit, or for home consumption? Various products can be made from fresh milk, including sour milk (*mala*) or yoghurt to consume or sell as value added products. Yoghurt is a tangy, semi-solid fermented milk product with many health benefits. These are:

- Being a dairy product, yoghurt is rich in protein and calcium thus helping in the formation of strong bones and teeth.
- The probiotics in yoghurt help strengthen immunity.
- It is loaded with vitamins and minerals particularly vitamin B2(riboflavin), vitamin B12, phosphorus and magnesium.
- It can help with weight management.
- It can also help protect one from osteoporosis (a condition whereby bones become brittle and fragile from loss of tissue).
- It helps maintain a healthy gut.

Although yoghurt may appear to many as a very sophisticated product, the good news is that it is extremely easy to make and can be made at the comfort of one's home. Compared to commercial yoghurts, home-made yoghurts provide a high number of probiotics, give one control on the use of unnecessary ingredients such as sugar, fat, sweeteners, artificial colorants, flavoring, and stabilizers. It also has a fresh and clean taste with controllable sourness and sweetness; and helps save money. For those aiming at selling, the profits acquired from selling yoghurt are higher compared to selling fresh milk as yoghurt retails as a value-added product.



What is needed

1. A starter culture

To make yoghurt, the right starter culture containing specific lactic acid bacteria of the *Streptococcus thermophilus* and *Lactobacillus bulgaricus* species must be used. These cultures can either be bought in the commercial pure form-freeze dried (for those who intend to make large amounts) or purchase plain yoghurt from shops/supermarkets. It is important to note that the yoghurt should not be flavored or have any fruits as this may contain undesirable yeast and bacteria. For better results, yoghurt with live cultures is highly recommended.

2. Milk

One can use either whole, reduced or non-fat pasteurized fresh milk or UHT milk.

The milk used should be of good quality and not adulterated with water, powder or fats.

3. Equipment needed

- A heavy cooking pot/sufuria
- A wooden cooking stick
- A clean container with a lid
- An incubator/ heavy blankets/piece of cloth
- Storage jars

Steps to follow

1. Heating/Boiling

Pour the milk into the clean cooking pot/sufuria and heat it to about 85°C for 30 minutes or to 95°C for 10-20 minutes. As the milk heats, stir continuously using the wooden cooking stick to prevent the milk from sticking onto the base of the cooking pot as this could give the yoghurt an off taste.

This stage is very critical, and its importance is to help kill pathogens and vegetative spores of spoilage micro-organisms ensuring quality and safety of the product. The heat also denatures milk proteins enhancing protein-water binding capacity. This promotes the formation of a gel-like product which improves the firmness of the product.

It is important to note that without this step the yoghurt obtained will have a soft texture.

2. Cooling

Let the heated milk cool to around 41-43°C for fermentation of the lactic acid bacteria to occur.

3. Inoculation

Once the milk has cooled take a clean container and put several scoops of the starter culture (the plain yoghurt). Add a bit of the cooled milk to it. Mix it well and then pour the mixture into the rest of the milk and stir well to ensure the contents mix uniformly.

For those using the commercial freeze-dried starter cultures, pour the contents in the sachet and add a bit of the cooled milk and mix. Pour the mixture into the rest of the milk and mix well. For most companies, one sachet makes about 1 litre of yoghurt.

Care should be taken during this step to ensure that the milk is at the right temperature. High temperature can denature/kill the bacteria while low temperature could inactivate the bacteria and affect the product.

4. Incubation

For farmers who have an oven, the cooled milk can be kept in the oven set at 41-43°C for between 6-12 hours (optimum 8 hours). For farmers without an oven, the container (plastic encouraged to reduce heat loss) with the yoghurt can be covered with clean blankets or a heavy piece of cloth and kept in an enclosed place to reduce heat loss. Also, one can improvise the same by lining a non-heated cooker with towels and placing the milk container in it for 6-12 hours.

5. Cooling and sweetening

After the incubation period, transfer the milk into clean storage containers and store in the fridge for future use. A freshly made batch can be kept for at least a week under refrigeration. At this stage, a farmer can choose to sweeten the yoghurt by adding honey, sugar, vanilla or strawberry essence. Alternatively, the farmer can choose to add fresh fruits during consumption.

Cost of ingredients

1 Packet of freeze-dried starter culture (containing 10 sachets) costs between Ksh3,000-Ksh3,200.

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Learn more about related topics such juice and jam making, premises for food value addition, prepacking fruits and vegetables, labels and Barcodes and where to get machinery and utensils for value addition here; https://infonet-biovision.org/processing_and_value_addition



Let us protect the bees

By Beritah Mutune

Introduction

On May 20, 2021, the world was celebrating The World Bee Day, to acknowledge the role played by bees in food production and life sustenance. One out of every three bites of food including many fruits and vegetables exists because of pollinators. Healthy ecosystems also depend on pollinators. Pollinators include: all bees, butterflies and some wasps, moths, birds, flies, beetles, and small mammals, such as bats. They feed on nectar (sugars) and pollen (protein) from flowers.

As they carry pollen from the male part of the flower to the female part of the same or another flower, fertilization occurs producing fruits, seeds, and young plants. Pollen sticks on their bodies while they are feeding on nectar in the flower and is transported from one flower to another as they move in search of food, shelter, nest-building materials, and sometimes even mates.

Well-pollinated crops can be of noticeably better quality (seed and fruit) and consumers and markets are sensitive to quality consideration, appearance, health benefits and genetic diversity all by 'good' pollination.

Human activities are gradually wiping away bees and other natural pollinators that play a great role in food production. This has led some farmers to resort to the desperation of manually pollinating flowers to increase food production. For example, in farming crops of the cucurbits family, including cucumbers, pumpkins, squash, and watermelons. Some farmers are resorting to hand pollinating by manually transferring pollen from male flowers to female flowers, due to reduced production. This is because, cucurbits have separate male and female flowers, and they require a pollinator, such as honeybees, to transfer pollen from male to female flowers. Wind is not enough to do pollination. Pollen of cucurbits is heavy and sticky and needs to be transported by insects as it cannot be blown by the wind.



In the years past, pollinators were not a problem, because the environment provided a conducive environment for them to thrive. Honeybees (*Apis mellifera*) are the main pollinators of most crops and increased use of harmful chemicals is slowly decimating them.

Why are pollinators in trouble?

Populations of bees and other pollinators are declining around the world for several reasons:

- Agriculture, mining, and human development contribute to loss of pollinator habitat. Also, the replacement of indigenous plants which provide a suitable pollinator habitat with non-native plants has contributed to their loss.
- Parasites and diseases affect both pollinators and the plants on which they depend.
- Insecticides kill pollinators and may hamper the ability of pollinators to navigate or forage while herbicides kill important host plants.
- Climate change is modifying the distribution of pollinators and their host plant bloom dates, which affects the availability of food sources.

How to protect your honeybees

- Bees can be kept at a distance safe from areas where pesticides are being applied. This must be at least 2 - 3 kilometers.
- Spraying can be done late in the afternoon or early in the evening when bees are not flying as pesticides settle at night ensuring that bees are not exposed to high pesticide concentrations.
- Providing a habitat for many types of pollinators by planting native flowers of different shapes, sizes and colours.
- One can also: (a) use non-lethal methods such as Integrated Pest Management (IPM) to control pests, (b) provide nesting sites for bees in living and dead trees, bush, and bare ground.

Farmers need to practice integrated farming, by ensuring crop diversity in the farm, and keeping bees. Keeping bees in your farm ensures continued pollination and gives the benefit of harvesting honey made from nectar which is of immense health benefits to the body. If you consider bee keeping below are the steps to follow:

Selecting an appropriate site for your apiary:

Choosing a good site for the apiary is paramount in ensuring that the bees live in harmony with people and domestic animals. The apiary must be away from areas frequented by people, and away from livestock.

Ensure to choose a site with a good balance between light and shade.

If the place is a hot area, ensure there is enough shade and it may also be necessary to apply water to the apiary to



keep the colony sufficiently cool during the day. Overheating of a colony of bees may lead to rapid death.

In a cool area such as the highlands, only minimal shade is required otherwise the apiary will be damp, and make the bees less active.

There should be forage around the apiary where the bees harvest nectar without travelling long distances.

Making the hives

There are various types of hives but The Kenya Top Bar Hive (KTBH) is the easiest to make. The KTBH has three basic components, i.e. the body, top bars and the roof.

The top bars are the only part of the beehive that has to be accurately measured. The bars need to be exactly 3.2cm wide which is the proven distance apart that bees like to make their comb. This includes a small gap that the bees leave which helps them to pass between combs to both deposit wax and feed the brood. You may find it worth the investment to get these thin strips of top bars cut with an industrial saw machine. If you don't manage to cut the top bars exactly to 3.2cm the bees tend to lay down their wax combs over the join of the top bars. This isn't a disaster; it just means that you'll find it harder to harvest honey as several top bars will get 'stuck together'.

Langstroth bee hives are an option which serve the same purpose with the KTBH. You can purchase an already made langstroth hive.

Setting up the hives

(i) Hanging hives

- Use two strong and heavy posts, each about 2.5 to 3 meters long.
- Dig two holes about 3/4 of a meter deep and 2 meters apart (or take two strides).

- Pack soil and stones around the posts. Make sure the posts are very firm. Think ahead to when the hive will be heavy with honey - if they are not firm they will fall over later.
- Now that the holes are dug and the posts are in position, use wires to hang the hive between the two posts.
- Remember: put the wire around the back of the posts.
- Hang the hive at waist height (for ease of working and not to strain your back) and keep it level.

You can also hang hives between two trees or a post and a tree. Just follow the same instructions but remember to use heavy strong nails.

(If your hives are made of heavy material such as trunk/mud, do not hang, place them on stands.)

(ii) Placing hives

- The stand should be sturdy and high enough for the hive to be at waist height.
- Put the legs of the stand in cans of used engine oil to prevent pests getting into the hive.
- Hives on stands are more prone to attack by the honey badger.

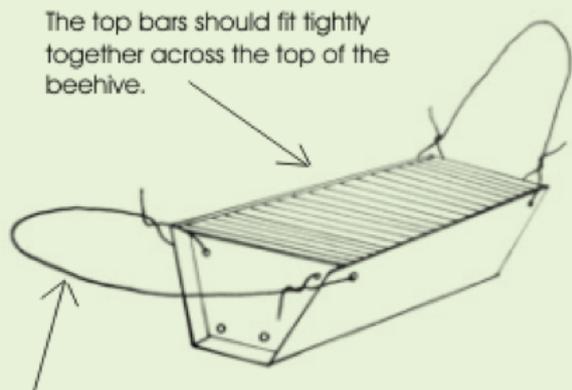
Keep a limit of not more than 20 hives per apiary depending on the availability of bee forage. Bees forage in a radius of 3km from the apiary so if you want to keep more than 20 hives find another apiary site 3 or more kms away from the existing apiary. To purchase langstroth hives contact: 0727 525 468.

For more information on apiary management, see TOF Issue 180 page 3& 4.

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Learn more about bee keeping here;

<https://infont-biovision.org/AnimalHealth/Beekeeping>



The top bars should fit tightly together across the top of the beehive.

Strong wire should be looped through previously drilled holes ready for hanging.



Langstroth hives

Drink your juice as medicine

By Tabitha Areba

Covid-19 has taught the world that health is wealth. The virus has changed the popular myth that ability to afford good healthcare is a passport to long life. The rich and the poor alike have been rendered helpless while seeking the right management for Covid-19. There are those that have pulled through in a strong way after testing positive. Some have not been lucky, as their health has deteriorated with every passing day.

In my assessment of the difference between survival and death as a result of many ailments, including Covid-19, many factors come into play. There are people with pre-existing medical conditions whose immunity is already compromised. This coupled with an individual's age, gender, race and environmental conditions determine in a great way their ability to recover from illnesses. However, ultimately, the people who purpose to embrace a healthy lifestyle give their body's immunity a boost. Embracing a healthy lifestyle in many ways strengthens your body to fight off diseases.

In recent years, increased awareness on healthy living has led to a change in dietary habits. Indeed, food is the most powerful in prevention, and even treatment of almost all ailments, when combined with healthy lifestyle habits such as adequate exercise, taking lots of water and getting adequate sleep. A number of people have embraced the regular intake of fresh juices from fruits and vegetables, and this has become a way of life for most women, few men and to some extent children. Fresh juice blends are a rich source of antioxidants and play a key role in preventing diseases such as obesity, blood pressure, cancer, Alzheimer's and heart diseases among others. This article features the nutritional value of juices that can be extracted from common vegetables including cabbage, carrots, and cucumbers.

Cabbage juice

Cabbage if eaten raw, has numerous health benefits. Cabbage juice is high in antioxidants and vitamin C. Some of the anti-oxidants in cabbage juice are good in preventing cancer. It has been proven that cabbage juice in-



duces death of human breast cancer cells. Also, anthocyanins found in red cabbage reduce the risk of heart disease. I have also proven through my own child, that cabbage juice treats and prevents stomach ulcers. A number of studies that have been carried out with rats, have shown that cabbage juice heals stomach ulcers, and inhibits the formation of ulcers.

Why juice and not raw cabbage, you may ask. Well, while raw cabbage is also beneficial to our bodies, you can only take so much in this form. It is easier to consume a lot of cabbage in juice form, compared with eating it raw. Juices are also simple to carry while on safari.

Carrot juice

Carrots are popularly used as a spice in food. A number of women use car-



rots in the place of tomatoes when prices of tomatoes go high. Carrots are more nutritious when taken raw, and even better when in juice form. The association of carrot intake with better eyesight is not a myth. Carrot juice contains high amounts of nutrients that benefit your eyes, decreases the risk of blindness and age-related eye diseases such as macular degeneration (*a medical condition which may result in blurred or no vision*). Besides, your skin, and immunity will receive a major boost with regular intake of carrot juice.

Cucumber water

One of the reasons most people keep adding weight even when they know very well that it is going to kill them is their love for sugary drinks. Sports drinks, sodas and other processed juices do lots of injustices to our immunity. The magic is in replacing the intake of these drinks with cucumber water. Cucumber water is rich in antioxidants and may prevent cancer, lowers blood pressure, supports healthy skin and boosts bone health.

A number of fruit and vegetable juices are rich in antioxidants and have anti-inflammatory properties, which are key in cleansing the body and strengthening the immune system.

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The availability of organic farm inputs in the Kenyan market

Charei Munene

Organic agriculture is an interesting option for smallholder farmers in Kenya because it offers a unique combination of low inputs, environmental conservation and it provides access to premium price markets. However, commercial organic agriculture is still relatively new in Kenya. Many new entrants are faced with the challenge of sourcing organic inputs since organic systems do not use synthetic fertilizers and chemical pesticides at any point. This article will help the organic farmer identify sources of the much needed inputs.

With local, European Union and other export markets demand for safe and healthy foods rising, many farmers are now switching to organic agriculture. There is an increase in local organic farmer markets as well as designated organic sections within super markets. Total land area under organic management in Kenya is still low though gradually increasing.

Many agricultural input stores are now stocking a sizeable amount of organic inputs. While not many stores are exclusively organic, the following organisations are actively assisting farmers to get access to organic inputs.

KOAN (Kenya Organic Agriculture Network (KOAN) has developed a database to provide farmers, extension officers, companies and other stakeholders with information on alternatives to toxic chemicals. The approach is to transition farmers from reliance on harmful agrochemicals towards use of Good Agricultural Practices (GAP), homemade organic solutions, bio-control and biopesticide products which are safer and sustainable in the long run.

The database has listed organic solutions for common pests, diseases, weeds in most cropping systems. The database also provides a list of the organic active ingredients of the products. Products include homemade solutions made on the farm using plants, soaps, spices etc to manage pests. Others are off shelf organic products manufactured for pest control and meet set organic standards definition of organic inputs. The products are normally low on toxicity and have short or no pre-harvest interval since they do not leave residues on harvest crops.

To reach KOAN Call, 0728 772 805 | 0731 772 805 write to info@koan.co.ke.

Check their website <https://saferinputs.koan.co.ke/home>.

KOFAR – Kenya Organic Finest Aromas Ltd – is a social marketing and distribution

company launched in 2010 to promote organic farming among smallholder farmers in Kenya. The farmers are contracted by the initiative and receive organic farm inputs as well as training on how to apply organic farming techniques to recover soil fertility and improve yields. The marketing and distribution of organic farm products take place through the initiative's network, targeting local and regional customers. The initiative seeks to address food insecurity and poverty among small-scale farmers in Kenya by providing them with certified organic farm inputs, training in organic farming techniques and marketing-related services to increase their profit margins and market access.

To reach KOFAR call 0727-690370 / 0722-912903 or write to info@kofarLtd.com/ kofarLtd@gmail.com. Check their website <https://kofarLtd.com/>

Some of the organic inputs suppliers in Kenya include:

1. ABI Organic Agriculture Kenya Ltd. Address: Old Airport North Rd. Zip/Postal code: 30327-00100 Nairobi. Telephone: 0711714852.

The company distributes certified organic inputs such as fertilisers, pest control products, soil regenerators and bio-stimulants.

2. Afri Ventures (Kenya) Limited. Address: Suite No. 303A, Medi Plaza P.O. Box No. 66333 – 00800 Nairobi. Telephone: 0729094151.

The company is involved in manufacturing, distribution & marketing of organic inputs.

3. Afrisol Energy Ltd. Address: 444- 00206 Kiserian. Telephone: 0722562793.

Afrisol makes organic fertilizer from bio slurry generated from biogas digesters in combination with other forms of organic materials. Their products are available both in solid and liquid form.

4. Africom International Limited. Address: P.O. Box 13892-20100, Nakuru. Telephone: 0722367219.

5. Biosoil Enhancers Africa. Address 360-00100 ACK Garden House Community, Nairobi. Telephone: 0725653275.

6. The Real IPM Co.(Kenya) Ltd, based in Madaraka, Thika. Telephone: 0725806086.

7. Rue Organics, Sagana, Karatina Road. Telephone: 0725 600 710.

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Learn more about how organic farming works here; <https://infonet-biovision.org/EnvironmentalHealth/What-Organic-Agriculture>

Dealing with mealy bugs

By Grace Kinyanjui

Mr. Franklin Kinyua is a farmer of citrus and sugar-apple fruits (*Annona squamosa*) in Embu County. However, he has not eaten any fruit from his farm due to infestation by insect pests. "I was hopeful that I would harvest enough fruits for my family. However, one day I noticed that the sugar-apple fruits were white in colour. Since then, I have bought several chemical pesticides from agro vets to solve this problem. The whitish colour soon disappears after application of pesticides but then appears again after some few days. At present, I don't know what else to apply and I am about to give up on my fruit farming" Mr. Kinyua explains.



The white colour observed on sugar-apples is a sign of a serious infestation by mealy bugs. Most farmers, just like Mr. Kinyua often detect infestation by mealy bugs at very late stages, when the crop damage is already severe. Mealy bugs are insect pests that attack a wide variety of crops including vegetables and fruits. They suck plant juices from their hosts and remove all the nutrients required for plant's growth. The affected leaves turn yellow in colour and the plants become stunted. Also, as mealy bugs feed, they excrete honeydew, which favours the growth of black sooty mould fungi. The presence of mealybugs and black sooty mould fungi on vegetables and fruits reduce both their aesthetic appeal and marketability.

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Tuko Mbele Pamoja!



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What farmers should do to control mealy bugs:

- Avoid over-reliance on chemical pesticides; instead, embrace other available pest control alternatives such as cultural and biological controls.
- Routine monitoring: Most crops, especially fruits are highly susceptible to mealy bug infestation. Therefore, farmers should have a monitoring plan, where they regularly check for crawling pests on the underside of leaves, shoot tips, stems, flowers and fruits. Routine monitoring should start as early as when the fruit seedlings are planted and this helps in early detection of pests. Routine monitoring also enables farmers to take immediate action before the crop damage is severe.
- At the initial stages of mealy bugs infestation, farmers should remove and destroy the infested plant parts. This will prevent infestations from spreading to other parts of the plants.
- Apply biopesticides, which can either be bought from the agro vets or made at home. The most common commercial biopesticide against mealy bugs is Campaign® from Real IPM, which is based on an insect pathogenic fungus, *Metarhizium anisopliae*. Biopesticides based on neem (*Azadirachta indica*) such as Nimbecidine and Neemazal 1.2 EC are also available in the agro vets and are toxic to mealy bugs.
- Home-made biopesticides include insecticidal soaps and extracts of essential oils. Insecticidal soaps are made from soapy solutions and vegetable oils. The recommended soaps are the liquid soaps. Bar soaps can also be used; whereby small pieces of soap are placed in water for some time so as to form a soapy solution. Vegetable oils are added to the soapy solutions to help them stick to the applied plant parts and increase their effectiveness. Insecticidal

soaps are also effective in the removal of honeydew and black sooty mould fungi.

- Extracts of garlic, ginger, lemon and mint are toxic to mealy bugs. Thus, they can be sprayed on the affected plants to control further infestation. However, most home-made biopesticides have unknown concentrations. Therefore, it is important to first test on a small area to see the reaction before doing a mass spraying on the crops. Spot spraying of only the affected parts is highly recommended.
- Use of biopesticides also encourages biological control. This is because biopesticides do not harm the natural enemies, which also play a great role in controlling the populations of mealy bugs. The natural enemies of mealy bugs include parasitoids, predators and pathogenic fungi.

Grace Kinyanjui is a crop protection expert pursuing a PHD in Applied Entomology, Department of Biological Sciences, University of Embu, Kenya.

Learn more about natural methods of controlling pests here; https://infonet-biovision.org/natural_pest_control



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Call **0715 422 460** for a link to contacts listed above.

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