

Dear Reader,

As we indicated in last month's TOF Magazine, the short rains expected in October, November and December have been coming in low quantities.

However, as you adapt to the changing climatic conditions, we hope you have prepared well in order to get maximum yields even with the reduced rainfall. In this edition, we give you

tips on how to manage without using synthetic pesticides the snails and slugs that consume your crops. Find out how to conserve and tap into the available rainwater to keep your soil moist and crops watered during the dry season.

Have you been throwing away your ashes? Stop! Wood ash is beneficial on the farm, and we tell you the differ-

ent ways in which you can use it. Read about parasitoids and other insects that protect your farm from pests and discover how to create a conducive environment for their multiplication.

Finally, we tell you how one TOF Magazine reader is empowering hundreds of smallholder farmers in western Kenya to boost their farm yields and incomes.

## Use natural enemies to fight pests

**Naturally occurring enemies are beneficial organisms that help keep pests away from crops and some diseases under control**

By Dr Fathiya Khamis

Biological control is one of the ways organic farmers protect their fruit trees against pests. Here, a farmer uses naturally occurring enemies to keep pests away from crops. The natural enemies are beneficial organisms that help keep pests and some diseases under control. Examples of naturally occurring pest enemies include predators, parasitoids and pathogens.

Predators tend to keep the population (pest) of their prey in check. They catch and eat other insects and mites, including pest species. Parasitoids act by laying eggs in or on species of insects (called hosts) at the larval stage and kill the host by feeding on it. Other beneficial organisms are the pathogens, which are fatal diseases to arthropod pests and include fungi, nematodes, bacteria, viruses, and other microbes. Pathogens can be used as biopesticides because they are applied in similar ways to chemical interventions. To ensure that these naturally occurring enemies increase in your farm, avoid using synthetic pesti-



cides and adopt practices that conserve and provide a natural environment for their development.

### Parasitic wasps

Parasitic wasps are tiny wasps that attack and kill many kinds of insect pests. For mango growers, parasitoids/parasitic wasps are the most commonly used biological control agent. Adult parasitic wasps are free-living while the larvae develop on the pest or inside it, eventually killing it. Their survival and buildup depend on the presence of pests to feed on. The wasps lay eggs on or near eggs, in/on larvae or pupae of pests. Upon hatching, the parasitoid larvae feed on its host until it dies. Adult wasps feed purely on honeydew, nectar, and pollen. Ensure that your farm has enough

flowering crops and mini forests to encourage their growth. There are various species of parasitoids that feed on fruit pests such as fruit flies, seed and pulp weevils, scales, mealybugs, and thrips. Other insects fought by parasitic wasps are leafhoppers, beetles, midges, leaf miners, mites, fruit, shoot, stem borers, black flies, and whiteflies.

### Introducing parasitoids on the farm

Natural enemies such as ladybird beetles or parasitised aphids that contain young parasitoids can be introduced. Some enemies can be bred and released onto the crop. *Icipe*, in collaboration with research and development partners, has introduced two parasitoid spe-

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## Farm water conservation

Effective water collection is determined by available storage, method of irrigation, type of crops grown and the farm's terrain. *Pg. 2*



# Use natural enemies to fight pests on your farm

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cies, the egg parasitoid *Fopius arisanus* and the larval parasitoid *Diachasmimorphalongicaudata*, to control the mango fruit fly, *Bactrocera dorsalis*.



An augmentorium structure to keep rotten and affected fruits. It has holes that allow the parasitoids to escape back into the orchard but keeps the fruit flies in.

## How to encourage parasitoids to grow on your farm:

- Do not use synthetic-based pesticides on your fruit trees, as this will kill them.
- Do not bury mangoes and other fruits affected by the pests as this covers the parasitoids. Instead, use an augmentorium, a structure organic farmers construct to keep rotten and affected fruits, with holes that allow the parasitoids to escape back into the orchard but keeps the fruit flies in.
- Mulch your farm to provide refuge for ground-living farmers' friends such as predatory beetles
- Grow flowering plants to provide nectar and pollen for adult parasitoid wasps, ladybird beetles, and hover-flies.
- Plant living fences (hedges) around the crops.

Parasitic wasps have great potential as biological control agents in the organic production of mangoes. Overall, the use of parasitic wasps should be integrated with other organically acceptable control methods to provide adequate manage-

<https://infonet-biovision.org/PlantHealth/Natural-enemies>



## How to conserve water on the farm

By James Kamau

With the weather forecasts indicating less than normal rains expected this season, farmers must conserve enough water to cater for the whole season. Effective water collection is determined by available storage, method of irrigation, type of crops grown and the farm's terrain.

Most farms rely on surface water sources such as rivers and lakes, ground water such as springs and aquifers or municipal water, which is stored in tanks or dams. Some farmers have built their own ponds to collect excess runoff or floods from surface water bodies. When conserving water consider the following factors:

1. Never allow water to flow in and out of your farm: When it is raining the most important task of the farmer is to stop, sink and spread water slowly. Do not allow water to flow in and out of your farm.
2. Ensure it gets ample time to sink into the soil. Add compost to your soil to enable it to hold more water for longer periods. Also, use techniques such as

retention ditches, furrows and dams to trap your runoff water (TOF E75).

3. Protect your natural sources of water: Natural sources such as rivers, lakes, springs, soaks and waterholes need to be protected from pollution, salinisation and evaporation and careless human activities.
4. Chemical waste from factories, effluence from sewerage or other human activities can make the water common sources unfit for humans, plants and animals.
5. Water sources should be protected from contamination. A poorly managed water source will have poor quality water and poor habitat with little or no vegetation and lots of algae.
6. They are usually exposed to direct access by animals. A well-managed water body will have good water quality. To do this the following can be done:
  - a) Restrict animal access to your water source. Instead, pump or feed to external troughs through gravity for redistribution to where it is needed on the farm;
  - b) Create low impact fencing. Fence off the source of water using chain-link to control movement to and from the water source;
  - c) Plant indigenous shrubs and trees and ensure minimal area of water





is exposed;

- d) Soil bunding (mounding) will divert contaminated runoff that may make its way to your water body. Also, frequently monitor water quality and levels.
7. Recharging groundwater: This happens when it rains and to a smaller extent through surface water (rivers and lakes) and by planting trees to increase water saturation into groundwater and reduce water runoff.
8. You can also artificially recharge your ground water by redirecting water across land surface, through canals, swales, infiltration basins or ponds, adding irrigation furrows or using sprinkler systems.
9. These methods reduce surface water flow allowing it to sink into the ground. Groundwater recharge replenishes ground water levels, keeping your land moist long after the rains have subsided. It also reduces its salinity by removing excess salts accumulated in the root zone to deeper soil layers.
10. Re-use water from your household (grey water): Grey water is water from our baths, sinks and laundry. One of the ways to make water last longer is by recycling and re-using grey water. Grey water is not toxic immediately after discharge. However, if it is collected in a tank, it will consume oxygen very quickly and become anaerobic.
11. Once it reaches the septic state, it forms

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## Benefits of ash on the farm

**When applied to soil, ash provides important nutrients such as carbon, potassium and lime**

**By James Kamau**

Most people will throw away the messy remnants from burning firewood, including the ash. It is because they do not know that what they consider as waste can be beneficial in their farms. Ash, especially for an organic farmer, is a very important asset. There are many types of ashes but the ash from wood and plant matter is the best for use in gardens compared to that obtained from coal, briquettes or fake logs. When applied to soil, ash provides important nutrients such as carbon, potassium and lime.

It also controls pests in the garden and on animals and trace elements like phosphorus, calcium, and boron. Potassium contained in wood ash regulates water balance, keeping plant tissues firm and juicy. Lack of potassium causes plants to become vulnerable to frost, dry climate, pests, and diseases. Keep your ash as potassium is very soluble and if your ash is rained on, it will be lost through leaching. Potassium helps in transporting nutrients and creating starches and sugars in plants. Use ash around the roots of crops such as potatoes or carrots, peas, and beans as well as soft fruit bushes like plums, pears, cherries, strawberries, and blackcurrants. Apply it sparingly since excess alkalinity can negatively affect plants that prefer acidic conditions. Too much alkalinity can also hinder the functions of some organisms in the soil or compost.

### Uses of ash:

1. Ash raises the pH of acidic soil. Sprinkle it lightly onto the soil and mix. However, test your soil pH before application and avoid adding it onto soil with high pH. Do not add ash onto crops that thrive in acidic conditions such as sweet potatoes;
2. Apply lightly between the layers of compost materials to reduce acidity.
3. It fights frost and fungi and stops the reproduction of fungi spores, reducing their spread.
4. When sprinkled around vulnerable



plants, its rough texture irritates the soft bellies of snails and slugs and repels them.

5. Pouring ash where there are ants repels them.
6. Sprinkling your poultry houses with ash keeps them dry, wards off pests like mites and keeps bad smells at bay. Make a dust bath for your chickens by mixing sand and ash. The mixture controls fleas and mites on their bodies as they wash themselves in the bath.
7. When sprinkled on ponds it controls growth of algae by encouraging growth of good aquatic plants. Since wood ash contains micronutrients that plants need to thrive, it strengthens aquatic plants. In turn, the boosted aquatic plants are able to compete with algae and slow its growth.
8. It reduces calcium deficiency in tomatoes. Add about 1/4 cupful of ash to the planting hole and mix it thoroughly with the soil. Transplant your tomatoes and cover with the mixture. You can also make ash tea to apply on tomatoes during their flowering stage for extra potassium for better fruit formation. Put 100-200 grams of ash in a cloth bag or an old pillowcase and tie. Place the bag in a garbage bin or bucket filled with 10 litres of water. Allow it to sit in the water for several days. Once the ash tea has brewed, pour about a cup around your potassium-deficient plants once a week until the pH balances out. Too much will cause nitrogen deficiency and can affect the ability of your crops to ingest other important nutrients.

In summary, ash plays a multifunctional role in plants and soil health, which is an important aspect in organic farming.



## TOF Magazine supporter transforming lives in western Kenya

Through initiatives by a TOF magazine reader, Ms Brigitte Frey, families in western Kenya are now farming smart, yielding more produce and eating nutritious meals

By Caroline Mwendwa

The threat of food insecurity, malnutrition and poverty can be linked to conditions such as lack of access to clean water and knowledge of good farming practices. Absence of these conditions adversely affect farmers' yields. The Sustainable Organic Farming and Development (SOFDI) initiative, is an organisation that was founded by Ms Brigitte Frey, that recognised the need to start protection and farmer initiatives in western Kenya, targeting pregnant women and nursing mothers; as well as school-going youth. In an interview with the SOFDI team, they spoke about the organisation's history, engagements and how they use the magazine to boost their initiatives.

**Question: How did the SOFDI begin and how did you learn about TOF Magazine?**

**Answer:** Ms Frey, who is from Switzerland, first visited Kenya in 1968. Slightly over 15 years ago, she founded SOFDI with a vision to support and empower farmers in western Kenya, through nutrition-sensitive and sustainable climate-smart agriculture training. SOFDI focussed on initiatives that improve access to safe and clean water, through protecting community springs and helping farmers to restore soil health and diversify their farming with more nutritious crops. Over the years, the organisation has reinforced its training using articles featured in the TOF Magazine. Ms Frey learnt of TOF magazine through the Biovision Foundation, which is also based in Switzerland. Excited about its resourcefulness in improving the livelihoods of smallholders, she began supporting its production through monthly donations. She has since subscribed for copies of the magazine and distributed it to SOFDI farmers across western Kenya. SOFDI receives 1,100 copies of each TOF issue to share within its network.

**Question: How is SOFDI solving the challenges faced by farmers in western Kenya?**

**Answer:** SOFDI takes farmers through a comprehensive training, which helps them to restore their soil health, diversify their crops and implement practices to improve farm productivity and food security. To address the long-term depletion of soil fertility due to the use of non-decomposing manure and over-reliance on synthetic fertilisers, which lead to increased soil acidity and decreased crop productivity, SOFDI trains and sensitises farmers on:

- The use of quality organic manure and making compost;
- Soil testing, where farmers gain knowledge on their soil status, how soil fertility is measured and how to make improvements;
- Crop rotation and intercropping with leguminous, nitrogen-fixing crops such as soya;
- Conservation agriculture, minimum soil disturbance to help prevent soil erosion;
- Soil and water conservation technologies such as terrace making



**TOP:** One of the pupils who learnt about bag gardening in the 4K Club as trained by SOFDI, and took the idea home. Her mother followed the step by step guide featured on TOF Magazine Issue 179 and set up the vegetable garden.

**ABOVE:** Ms Brigitte Frey founder SOFDI receives Tekeleza Prize funded by UKAID and the Kenyan Government for climate information innovation which SOFDI delivers to farmers via a text-message based weather information service





and agroforestry to prevent soil and nutrient erosion.

To tackle climate change vulnerability, SOFDI offers the following interventions:

- *Crop diversification: By encouraging farmers to move away from mono-cropping and adopt a more diversified cropping system, incorporating climate-resilient crops such as sorghum, Orange Fleshed Sweet Potato, millet, tissue-culture bananas, cassava and other indigenous vegetables and fruit trees;*
- *Promoting climate-resilient farming practices and crop-production technologies such as conservation agriculture, kitchen and mandala gardening; agroforestry and weather and climate information services;*
- *Training farmers on integrated pest management and interventions to deal with potentially catastrophic pests and diseases like the Fall armyworm.*

The organisation also engages youth in agriculture and agribusiness. Despite a shortage of jobs in other sectors, young people have neglected farming, claiming that it is for old people. They do not see it as a business opportunity or a means to improve livelihoods. SOFDI is changing this and making sure that children and young adults know that there is a future in farming. They do this through:

- *Outreach programmes in over 60 schools, where they establish demo plots and tree nurseries with 4K club members. The members practise hands-on, and support the school-home technology transfer; Mothers' programmes, where they reach many young adults (including the spouses of mothers' group members), who are finding a new sense of direction and source of income in farming. These households are also trained in poultry*

*rearing and benefit from opportunities that come with it. Many groups are trained on how to establish themselves as savings and loan associations to further empower one another and their agribusinesses.*

- *Instead of simply distributing or administering vitamins and certain micronutrients, SOFDI also supports good health and nutrition in early childhood by teaching young parents and caregivers how to grow nutritional crops at home.*

**Question: How has The Organic Farmer (TOF) magazine helped SOFDI achieve its mandate?**

**Answer:** We have been distributing The TOF magazine to schools and farmers' groups. The frequency of publication and variety of topics covered is valuable to our farmers. It reminds farmers of the things that we have covered in our initial sustainable farming training and encourages an uptake of the methods and technologies taught, when they see it in the magazine. The TOF also fills extension gaps and addresses pressing pest or farm management issues. It highlights key business opportunities and success stories across value-chains. This motivates farmers to focus on their efforts and engage in agribusiness, according to what best suits their skills, land, and resources. There are additional crops and livestock varieties that TOF is able to provide insights on. We, for example, do not cover subjects such as cattle management, mango cultivation, fish farming, and beekeeping. Having a full collection of the monthly TOF publications provides an incredible hard-copy resource farmers can refer to as needed.

**Question: What is your advice to farmers who are reluctant to adopt sustainable approaches?**

**Answer:** The fruits of sustainable farming are evident. There are many success stories of such farmers. Sharing success stories and photos of outcomes through TOF magazine is impactful. In our case, having demo sites for each of our new groups and over 60 schools, has raised awareness and inspired the surrounding farming community. Recently, our staff reported about a parent of a 4K club student who was introduced to these crops and practices by the youngster who gleaned the ideas from the magazine. After receiving training on bag farming by SOFDI and reading a TOF article, the pupil and parent have implemented the technique at home with excellent results. This shows that once trained, farmers read about the technologies in the magazine and implement them.

**Ms Caroline Mwendwa is the Project Officer of The Organic Farmer Magazine**

## Of water conservation on the farm

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*sludge that either sinks or floats, depending on its gas content and density. Septic grey water smells bad and contains anaerobic bacteria, some of which could include human pathogens. Consequently, the key to successful grey water treatment is immediate processing and reuse before reaching the anaerobic state. The simplest, most appropriate treatment consists of directly introducing freshly generated grey water.*

**Reasons grey water may need to be treated:**

1. *To remove substances that may be harmful to human health;*
2. *To remove substances that may be harmful to plants and soil;*
3. *To remove substances that may be harmful to the environment;*
4. *To remove substances that may clog the irrigation system.*

Methods used to clean and collect grey water, include filtering it using a manmade wetland. Crops such as banana, lilies or reeds feed on the waste and pass it through sand, gravel, pebbles and stones as a natural sieve.

It is advised to avoid black water, which is water that may contain effluent, faecal matter or other damaging elements. It includes water from the toilet/sewerage or wastewater from a factory.

<https://infonet-biovision.org/EnvironmentalHealth/Community-management-water-sources>



# Dealing with farm slugs and snails without using synthetic chemicals

**Slugs and snails are cousins in the mollusk family of animals.**

**By James Kamau**

They live in damp habitats and crawl on the ground eating green vegetables. They enjoy the cool environment of dusk and dawn coming out early in the morning and late in the evening. These pests can be a nuisance on the farm when they invade in large numbers. They consume several times their body weight each day and often hide on the undersides of leafy greens.

Affected plants will have irregular holes and scars on the leaves and fruits. Seedlings and poorly covered seeds are more susceptible though older, bigger plants can withstand attacks without any significant yield loss. Plants closer to the ground are more prone to attacks.

**Below are ways to control the pests:**

## **Natural predators**

Make your garden friendly to predators such as frogs, lizards, chameleons and toads and encourage them to come naturally to the snails and slugs' habitat. They will feed on these pests and other insects and also add to the bio-diversity.

To attract lizards and geckos, make a 'lizard house', 'lizard lounge' or 'lizard habitat'. Select a quiet, warm, dry and sunny spot in your garden and plant indigenous plants - those that grow naturally in the area. These could include grasses, ferns and vines, which tangle up to form great hiding spaces.

Next, loosely stack stones, bricks, old concrete blocks or dead wood on top of each other allowing for cracks and holes. Lizards like to squeeze into these spaces to feel safe. Other insects such as beetles and spiders also like this atmosphere; hence, more food for the lizards and bio-diversity for your garden.

Toads and frogs are amphibians. However, toads spend more time on land and live in burrows while frogs spend most of their lives in or near water. These amphibians feed on pests such as bugs,

beetles, caterpillars, cutworms, grubs, slugs and snails.

Amphibians prefer damp shady areas and need protection from the sun's heat, which may cause dehydration and make them vulnerable to predators.

To attract them, construct a shelter for them by arranging stones loosely into a small cave or use a ceramic pot turned upside down. Use stones to prop it up and a small space to allow them slip inside. Provide water next to the shelter in a shallow basin, a small pond, or a shallow water hole because toads and frogs only drink by sitting in water, not through their mouth. Change the water every week. Avoid use of herbicides, pesticides or synthetic fertilisers in your garden. Toads and frogs breathe through their skin and such chemicals will poison them.

**Ducks are also a good bet.** They feed on the mollusks and not the plants, while giving the farmer eggs, meat and feathers. Ducks should be in a flock to operate efficiently. According to the Western Australian Agriculture and Food Division, two dozen ducks can service 50

acres. However, when the snail numbers have been reduced, the ducks may stop actively hunting for them.

## **Create rough environments**

Snails and slugs avoid gritty or rough environments since they get injured or killed as they move on them. Sand, ballast, coarse diatomaceous earth or crushed eggshells drive them away when sprinkled around plants. This method is effective, although not completely foolproof, as some of the slugs and snails might still get through.

## **Snail traps**

Setting snail traps is another effective method of controlling pests.

- *The beer pan: Fill a shallow margarine or yoghurt-size container with beer and bury it in the soil with the open end just above the surface. Slugs and snails are known to be attracted to beer. As they get into the beer, they drown and die. Replace the beer every few days for it to remain effective.*
- *Another trap is made using a flat object that can provide a dark, moist, cool location. Use a board, piece of old carpet, blanket, thick clothing or pot to create that environment. Water an area and then place the object over it. Pick the object up every morning and destroy the hiding snails or slugs. Repeat this regularly to control their population.*





## Barriers

This involves putting something in their path that they do not like. These materials include copper wire, Vaseline, mesh turned outwards or leftovers wool from a textile factory. Coffee grinds and wood ash are other natural barriers, although some snails may cross, it's still an effective, cheap and natural method.

## Biological Pest Control

Biological pest control also works quite well. Water your farm with a solution of nematodes (microscopic worms). These penetrate the slug, infect and kill it.

Small piles of wheat or corn bran kill the slugs and snails when they eat it. These are organic and wildlife can eat their corpses safely.

## Salt

A popular method used to get rid of snails is salting them. However, this is not recommended since over time it will salinise your soil.

## Keeping farm dry

Keep your farm as dry as possible to create an unwelcoming atmosphere for snails. Use of drip irrigation rather than overhead

sprinklers can deter them. In addition, water your plants early in the morning rather than late in the evening.

## Mulching

Snails will hide beneath the moist, warm mulch. When mulching, ensure the mulch does not touch the base of your plant.

## Trap crops

Slugs like soft leafy vegetables and you can plant them at the borders of your garden to keep them away from your main crop. Examples of crops that attract slugs are marigold, maize seedlings, cabbages, lettuces and the seedlings of most vegetables. When using trap crops, monitor the activity of the pest. You do not want to attract many slugs and have them move onto your main crop. Also, plant flowery crops to attract predators that will attack the snails.

Plant a bit earlier so that by the time the rains and wet conditions set in your crop will have grown past the stage where it is highly vulnerable. Maize is less affected by snails after it reaches the five-leaf stage.



They enjoy the cool environment of dusk and dawn coming out early in the morning and late in the evening. These pests can be a nuisance on the farm when they invade in large numbers. They consume several times their body weight each day and often hide on the undersides of leafy greens.

<https://infonet-biovision.org/PlantHealth/Pests/Snails-Giant-East-African-Snail>

## How to grow popular 'dhania' spice

# TOF Radio answers farmers' questions

By Njeri Kinuthia

*My name is Mr Auko from Trans Nzoia. I heard about the importance of coriander commonly known as dhania on the Kilimo Hai programme aired on Radio Masha on Thursday at 7.30 pm. Kindly advise me on how to grow the plant.*

Coriander, also known as dhania or Cilantro, is a multipurpose crop used in cooking in many Kenyan households. Coriander is majorly grown for leaves, but some farmers extend this to produce seeds. Dhania is used to make kachumbari, a popular accompaniment for Kenyan meals or can be chopped up and added to stews, vegetable salads, bread or as a garnish. The seeds have a slight lemony flavour and can be toasted and ground then used as a spice. Both leaves and stalks can be used for cooking.

**Nutritional value:** Coriander leaves are rich in vitamin A, C and K, with a moderate content of dietary minerals. Seeds generally have lower content of vitamins, and provide significant amounts of dietary fiber, calcium, selenium, iron, magnesium and manganese.

## How to grow Dhania

**Varieties:** Select high quality seeds for high yields. There are two kinds of seeds: seeds meant for seed production and a different variety for leaf production. A seed variety will produce seeds quicker than a leaf variety. Once the seeds have grown, the leaf production will stop. Coriander does well in temperatures of between 18 to 25 degrees Centigrade. It requires well-drained loam soil with a pH of 6-8.

## Land preparation for planting dhania

- Choose a flat area where coriander or other crops of this family have not been planted for 3 to 6 months.
- Dig out all perennial plant roots and till the land to a fine tilth.
- Prepare raised beds of 1.5m width and any preferred length.
- Mix soil with well decomposed manure and level the bed using a rake.
- Avoid seedbeds as transplanted dhania tends to seed earlier. Instead sow seeds directly in the beds 0.6 to 1.2 cm deep, 20cm between seeds and 20cm between rows.
- Cover lightly with soil and mulch using dry grass.
- Water lightly after planting and regularly there-

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Location	Frequency
Nairobi	102.7
Kakamega	91.5
Bungoma	
Busia	
Malindi	106.3
Location	Frequency
Webuye	95.9
Garissa	88.7

Location	Frequency
Taita	107.4
Narok	102.3
Nyeri	105.7
Machakos	93.8
Makueni	
Kitui	
Meru	105.1
Marsabit	88.3

Location	Frequency
Nakuru	104.5
Gilgil	
Kisii	91.3
Kisumu	105.3
Mombasa	105.1
Kericho	90.5
Eldoret	91.1

Tune to Radio Maisha every **Thursday at 7.30 PM** through any of these Frequencies nearest to you to receive Kilimo Hai, TOF Radio Swahili farmer programs. TOF Radio and Radio Maisha partner to bring you these educational programs.

## TOF Radio answers farmers' questions

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after. Coriander enjoys moderate sun but also needs some shade during the hottest part of the day.

- Plants stressed by hot weather will seed quickly, so try water twice each day.
- Germination takes one to two weeks. Thin young plants to 20cm apart in order to get the full-leafy plants that most consumers prefer.
- It is not necessary to use fertiliser on coriander if the soil is well nourished. However, if the plants start turning yellow, the organic foliar fertiliser should be applied.
- Plant every three weeks to ensure that you have a continuous supply.

### Diseases and pests

Coriander is sometimes attacked by pests like thrips, aphids and whiteflies. Diseases that may affect it are fusarium wilt, powdery mildew, stem rot, damping off and soft rot.

### Harvesting

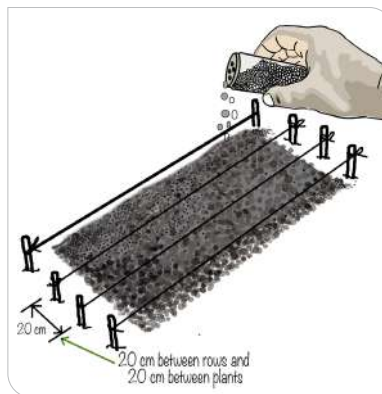
- Coriander matures in four to six weeks.
- Most farmers uproot the mature plant and clean it for the market.
- Harvest the leaves when the plant is big and robust.
- If coriander is grown for seed, the farmer



Mix your soil with manure



Use a rake to level your planting beds



Sow seeds 0.6 to 1.2 cm deep, 20cm btw seeds and 20cm between rows

should wait until all plants have formed seeds and flowers are fully dry.

- Cut the stems and place the heads of coriander in a tapeline to dry well under controlled temperatures. You can also tie the stems into bunches and hang them upside down in a cool dry place. Wait for three weeks then shake to get the seeds. The dry seeds are ready for sale or replanting. Keep them in a clean and dry place.

## Farmer's Forum

Ripe bananas, butternut and apple mangoes for sale. Call Nicholas Njau Mwangi - 0721 754650

Virginia Wanjiru 0723 594141 from Kagio, Kirinyaga is selling bananas.

Silors Mokuno - 0754 015649 from Lugari is looking for a cross breed of Holstein, Fresian and Fleckvieh (a heifer)

Grace Ombima from Mumias is selling arrowroots. To buy call. 0714672170

Grace N. Mwaura from Isinya, Kajiado is looking for a dairy goat. If selling you can reach her through 0721 835724

Nahashon Gitau is selling gooseberries - 0720 723901

Simiyu Wekesa, Bungoma is selling chicken - 0725 232512

Mwasiya Mbithoka, Makueni is selling chicken - 0716 665650

### Partner organizations



To contact us on the "tusemezane" platform or ask a question, kindly call or sms +254 715422460

### TOF partners on the web:

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