



Series 7, Episode 19

Michael and Pauline's Farm, Kiambu, KENYA

This leaflet contains information on: Kienyeji chickens, greenhouse tomato pests and diseases, bacterial wilt, mastitis

If undelivered, please return to The Mediae Company, PO Box 215-00502, Karen.

For more information, SMS "PESTS & DISEASES" to 30606

Greenhouse Tomato Pests and Diseases

Late Blight

Late Blight is a fungus which can destroy your crop. It spreads very fast. It can only be cured in its early stages. Signs of Late Blight are:



Leaves and fruit that look brown and burnt. Broken stems that look cut.

Prevent Late Blight

Mix 40g (4 table-spoons) of **Mistress** with 20L of water in a knapsack.



Spray your crop every 14 days.

Tuta absoluta (Tomato Leafminer)

Tuta absoluta is a moth. Its caterpillars live as miners in tomato leaves. The leaf turns brown. This means that the plant cannot make its own food.



Tuta absoluta also attacks the fruits. You cannot sell damaged fruits. Tuta absoluta can kill your whole crop.

Kill Tuta absoluta

Mix 10ml of **Vapcomic** and 100ml of **Nimbecidine** in 20L of water in a knapsack.

Spray your crop every 14 days.



White Flies

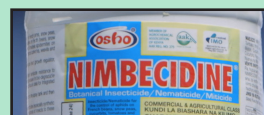


White Flies suck sap from the leaves of your tomato plants. White Flies can go from a few to many in just 2-3 days.



White Flies can also cause a black or brown mould to form on the leaves.

Kill White Flies



Nimbecidine is a natural product made from neem. It stops the White Flies from laying eggs.

Final Flight poisons the sap in the leaves that the White Flies suck. The White Flies die.

Mix 60 ml of **Nimbecidine** and 8 g (2 tablespoons) of **Final Flight** with 20L of water in a knapsack. Spray your crop every 14 days.

For more information, SMS “BACTERIAL WILT” to 30606

Bacterial Wilt in Tomatoes

Bacterial Wilt is a common disease in greenhouses. It is caused by bacteria that lives in the soil. The first sign is wilting of the leaves at the top of the plant during the hottest part of the day. The plant may look like it is okay at night when it is cooler, but it still has the disease. Bacterial Wilt can kill all of the plants in your greenhouse very fast.

Take action immediately if you think that you might have Bacterial Wilt. There is no cure.

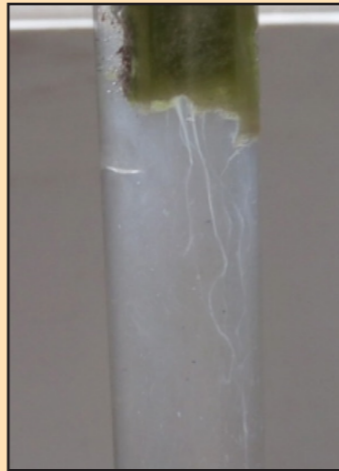
Protect your crop from Bacterial Wilt



- Make sure your planting soil is clean. A soil test with **CropNuts** will tell you if it has Bacterial Wilt or any other pests or diseases.
- Step in a footbath with disinfectant before entering your greenhouse. This stops you bringing pests and diseases in on your shoes. Wear different shoes inside the greenhouse.
- Wash your hands with antibacterial soap before you handle any plants.
- Do a crop walk every day. Look for plants showing signs of disease.
- Control who goes in and out of your greenhouse. Do not allow animals inside.
- Remove weeds both inside and outside of your greenhouse.
- If you take any cuttings, sterilise the clippers between plants.
- Rotate your crops. This helps to stop a build-up of Bacterial Wilt in the soil.

Testing for Bacterial Wilt

You can test for Bacterial Wilt by yourself on your farm. If you see a sick plant cut a part of the stem from the base of the plant and put it in a bag. Take the sample to a clean area away from the crop.



1. Cut the plant at the base.
2. Put water in a jar.
3. Using string, suspend the sample over the water.
4. Wait for 5 minutes. If there is bacteria, you will see a milky stream coming out of the base of the plant. If there is no bacteria, the water will stay clear.

Prevent pests and diseases in your crop

Space your plants

Plant your seedlings in a zig zag pattern. Plant seedlings 60cm apart along driplines 45cm apart.



Plant next to the holes in the drip-line.

Rotate crops

After tomatoes, plant a crop from another family, like onions.



This stops the build-up of pests and diseases in the soil.

Keep the greenhouse clean

Take out all weeds, both inside and outside your greenhouse. Weeds hide pests and diseases.



Check for weeds every week.

For more information, SMS “COW” to 30606

Mastitis

Mastitis is a disease which attacks the udder. It is caused by bacteria getting inside the udder. In bad cases of Mastitis, the cow can lose a teat. A cow with Mastitis will give less milk. You cannot sell or drink milk from a cow with Mastitis, and you will have to pay vet bills for treatment. The disease is bad for business.

Mastitis can easily spread between cows, especially in areas of poor hygiene. Make sure you use a different towel for each cow to clean the udder at milking to stop the disease from spreading.

Dirt and bacteria cause infection in your cow. Keep your cow shed clean and practice good milking hygiene. You will have a healthier cow that gives more milk.

Keep your cow shed clean



Remove all cow dung every day.



Saw dust in the sleeping area gives the cow a clean, dry place to rest.



Clean the cow shed with clean water. Then spray the area with 25ml of **Kupacide** in 10 litres of water. Spray weekly.

Practise good milking hygiene

1. Before milking, clean the udder well with clean, warm water.
2. Then wash the udder with **Mastrite**. Use 1 bottle top of **Mastrite** in 4.5L of water.
3. After washing the teats, apply **Milking Salve** to the teats to keep them smooth. This stops them from cracking.
4. Milk the cow well. Squeeze the teats, do not pull on them. It should take at least 8 minutes to drain the milk from the udder.
5. After milking, dip the teats in 1 part **Mastrite** to 2 parts water. This closes the teats and stops bacteria from going inside the teats. It will protect the teats for up to 12 hours.
6. It will take at least 10 minutes for the teats to close after milking. Feed your cow to keep it standing up. If it lies down, bacteria can get into the teats.



1 TBS : 4.5 L Water



Mastrite 1 : Water 2

Keep away flies

Flies carry bacteria that cause Mastitis. Mix 20ml **Grenade** with 20L of water in a knapsack. Spray the cows, resting area, and milking parlour.

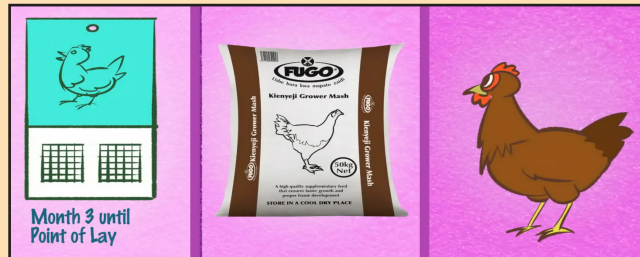


Kienyeji Eggs

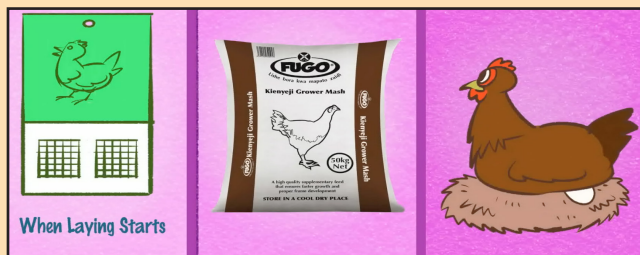
Feeding

The correct feed will give you heavier chickens and more eggs.

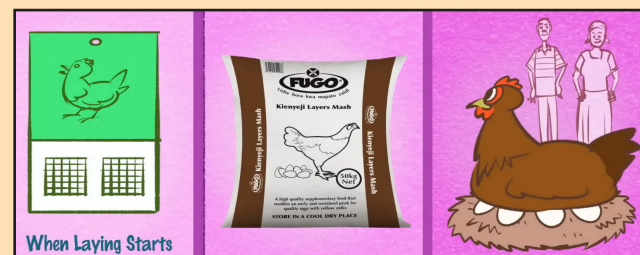
1. Fugo Kienyeji Chick Mash builds a good body frame. 1 chick will eat 2 kg of mash over 8 weeks.



2. Fugo Kienyeji Growers Mash helps birds to gain weight and lay early. 1 bird will eat 7 kg of Growers Mash in total.



3. Fugo Kienyeji Layers Mash increases the number and quality of eggs laid. Each bird will eat 140 g of Layers Mash per day.



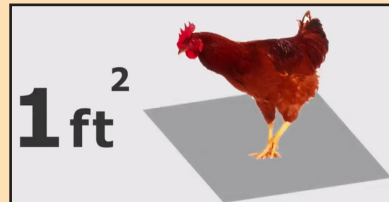
For more information, SMS "CHICKEN" to 30606

Housing

Good, clean housing will give you healthier chickens, and therefore more profit.

How big must your chicken house be?

Each kienyeji chicken needs 1 square foot of space.



If you want to keep 200 chickens, you will need a chicken house of 200 square feet. This could be 20 feet long by 10 feet wide.



You need 3 separate areas in your chicken house for Chicks, Growers and Layers. This is so they eat the correct feed.

Keep your chicken house clean

- Put wood shavings on the floor of the house.
- Spray the house with disinfectant before the chickens move in. This helps stop pests and diseases.
- A footbath with disinfectant at the door will stop you bringing diseases to your chickens on your shoes.



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Thursday 1.30pm (English)
Sunday 1.30pm (Kiswahili)

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