



# Series 6, Episode 10

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*This leaflet contains information on: bacterial wilt,  
planting trees, mango pests, mangoes for health*

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

## Bacterial Wilt in greenhouses

Bacterial Wilt is a common disease in greenhouses. It affects tomatoes, capsicums, eggplants and chillies.



*Bacterial wilt on a tomato plant*

The young leaves wilt at the end of the branches during the hottest part of the day. The leaves stay green and do not turn yellow until the disease has got very bad. If you do not treat Bacterial Wilt, the plant will die.

The bacteria that cause Bacterial Wilt live in the soil.

Stop Bacterial Wilt with **Enrich BM**. Works best if applied before planting.

Mix 1 tsp **Enrich BM** with 20L water in a knapsack. Drench planting hole before planting.

After planting, use Enrich BM as a foliar spray once a month.



## Stop pests and diseases in your greenhouse

- **Rotate crops.** After your tomato crop is finished, do not plant tomatoes or capsicums for 2 years. Plant a crop from a different family, like onions.
- **Plant only certified seeds.**
- **Plant seeds resistant to diseases.**
- **Use the correct fertilisers.** A healthy crop can fight pests and diseases. A soil test will tell you which fertilisers to add and how much.
- **Check your crop every morning for signs of pests and diseases.** Treat problems early.
- **Check your crop every day for signs of deficiencies.** Strong and healthy plants are better at fighting diseases.
- **Keep your greenhouse clean.** Take out all weeds from inside the greenhouse and outside. Weeds hide pests and diseases.



*Buy certified and resistant seed from  
Royal Seed Company and agrovets.*

**When using chemicals always follow  
the instructions on the label.**

# Plant trees with Conservation Agriculture

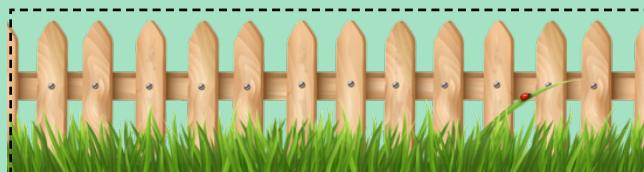
Conservation agriculture is a type of farming where farmers look after their soil by:

1. **Disturbing soil as little as possible**, such as by minimal ploughing and weeding.
2. **Keeping soil covered**, even when there are no crops.
3. **Rotating and intercropping** legumes (like beans) and grains (like maize).

Trees are very good for all farms, even if you do not do Conservation Agriculture.

Trees:

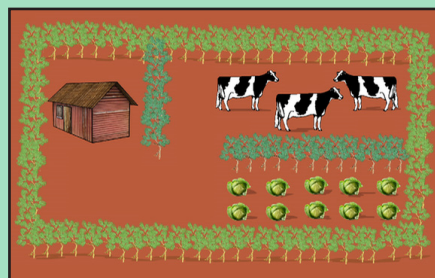
- hold the soil together and stop erosion
- help make soil fertile
- give your crops shade
- give timber for construction
- give firewood
- some give animal feed (fodder)
- some give fruits that can be eaten at home or sold.



**Put up a fence to keep animals away from your crops.**

By eating crop residues, animals leave the soil open to sun and rain.

Animals also compact the soil so less water can get through.



*Grow fodder trees around your shamba to feed your cows.*



*Grow Calliandra for firewood and fodder. It adds nitrogen into the soil.*



*Grow Tamarind for export.*

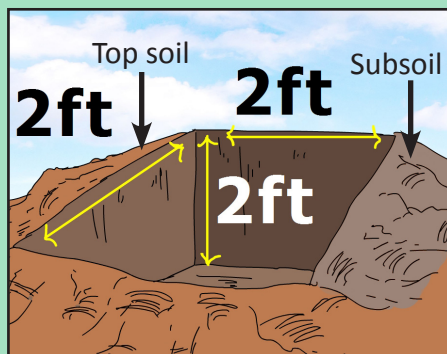


*Grow Leucaena for firewood and fodder. It adds nitrogen to the soil.*



*Moringa can be used for medicine.*

## How to plant a tree



1. Dig the hole 2ft by 2ft by 2ft. Put the top soil to one side.

2. Mix the subsoil with manure, then put back in the hole.



3. Put water in the hole.

4. Plant the seedling in wet soil. Use seedlings 30cm tall.

5. Put the top soil around the seedling.



6. Mulch the seedling to protect from the sun.

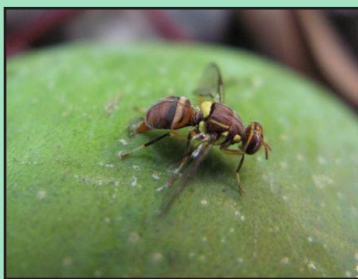
7. If there is not much rain, water the seedling every 2 days.



## Mango Pests

To get a good price, your mangoes must be of a good size and colour. There must be no signs of pests or diseases. The main pests are **fruit fly** and **mango seed weevils**.

If you grow mangoes for export you cannot use chemicals. Kill fruit flies and mango seed weevils without chemicals with an **ADD kit** from **Real IPM**.



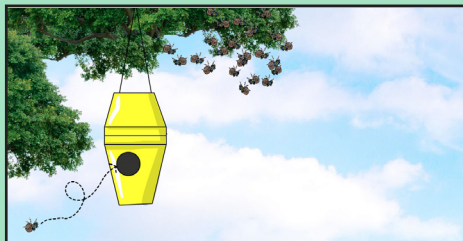
Fruit Fly



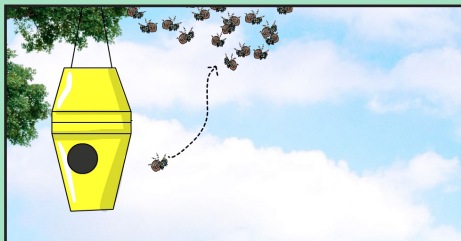
Mango seed weevil

## How an ADD trap works

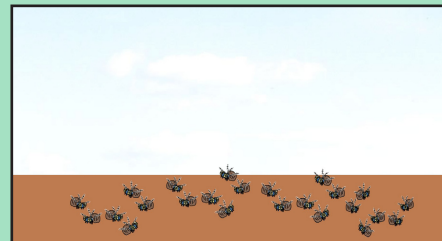
An ADD trap hangs from a tree. It has bait to attract fruit flies, and a killing agent to kill the fruit flies.



1. Fly goes into ADD trap and picks up killing agent.



2. Fly flies out and gives killing agent to other flies.



3. Flies die.

## ADD kit for ½ acre:



4 ADDs

Killing agent

4 packs Campaign soil drench

Food bait to attract flies

Fruit fly lure

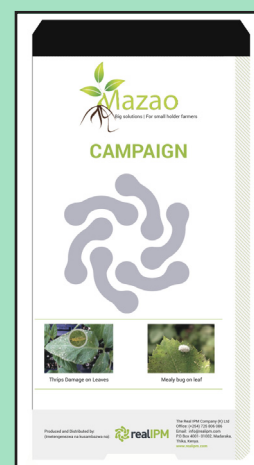
Instructions on how to set up the ADDs

## Kill Fruit Fly eggs and Mango Seed Weevils with Campaign soil drench

Mix 20ml **Campaign** with 20 litres of water in a knapsack.

Drench 1: when you see flowers  
Drench 2: when you see fruits

Use this drench as a **foliar spray** to help kill adult fruit flies.



## Make more money from mangoes

**Form a group** with other mango farmers and sell mangoes together. You will get a better price.

**Sell mangoes for export.** You will get a much better price than with the local market.

You cannot use chemicals if you sell for export. Use products from Real IPM like **Regain** for Powdery Mildew, and **Sustain** for Anthracnose.

Recharge ADD traps every 6 weeks. Use ADD traps with other crops like melons, courgettes and butternuts.

By the ½ acre ADD kit from agrovets or call Real IPM on 0725-806086. Real IPM also does training for farmers

# Mangoes

Mangoes are very healthy for all the family. They have lots of vitamins.

**Vitamin A:** for vision and your immune system. A good immune system means you will not get sick often.

**Vitamin C:** for your immune system, especially in children.

**Vitamin B6:** for energy. It is also good for pregnant women and children.

## Planting Mangoes

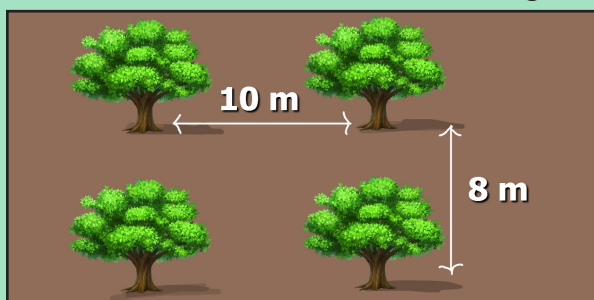
There are different varieties of mangoes:

**Early maturing:** Tommy Atkins, Apple, Alphonse

**Mid maturing:** Ngowe, Van Dyke

**Late maturing:** Kate, Kent

Always use **grafted** mango trees. They fruit earlier and grow better. Buy grafted trees from **KARI/KALRO**. Remember to mulch the seedlings.



Plant small mango varieties like Ngowe and Van Dyke 10m by 8m apart. Plant in holes 3ft wide and 3ft deep.

## Which mango has more Vitamin A?

The more orange a mango looks when you cut it open, the more **Vitamin A** it has. Apple mangoes have more Vitamin A than Ngowe mangoes.



Ngowe mango

Apple mango

## Harvesting mangoes

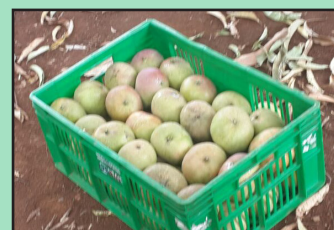
Harvest in the morning when it is cool. Pick when they begin to change from green-white to yellow or orange.

Keep a small stem on the mangoes when you pick them. Be careful with the mangoes. Do not drop them.



Put on palettes in the shade to let the sap dry.

Sort, grade and wash the mangoes. Pack into crates if selling.



Transport in the evening when it is cool.

If you are keeping the mangoes, store them in a cool dark place. They can keep for 1-2 weeks.

Produced by Mediae



Watch us on Citizen TV on:  
Saturday 1.30pm (English)  
Sunday 1.30pm (Kiswahili)

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