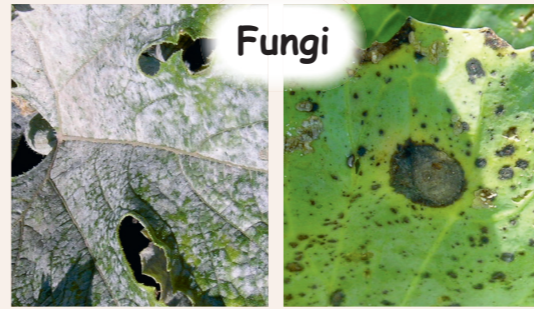


# How to manage vegetable diseases the organic way



Do you know the diseases that affect your crops? Knowing them helps me to minimise disease damage naturally while protecting our health and environment

## Disease causing pathogens and how they affect plants



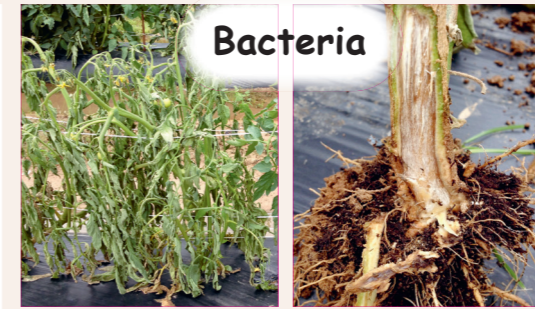
Fungi

### Symptoms

- Spotting, cankering, blighting
- Wilting, scabbing and rotting on different plant parts
- Withering and dying of plants

### Spreading through

- Rain, wind, tools, humans and animals
- Infected planting material such as seeds, seedlings and cuttings



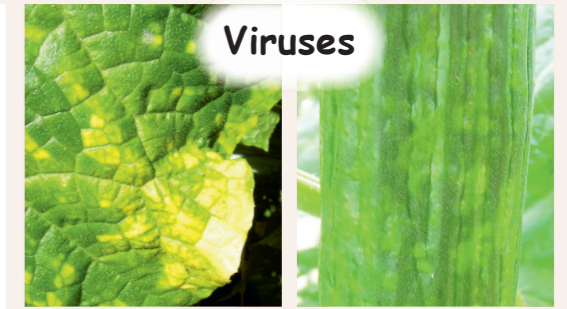
Bacteria

### Symptoms

- Individual wilting and rotting plants
- Discoloration of lower stem and internal discoloration of stem
- Formation of plant tumours

### Spreading through

- Rain, wind, tools, humans and animals
- Infected plants and / or plant parts



Viruses

### Symptoms

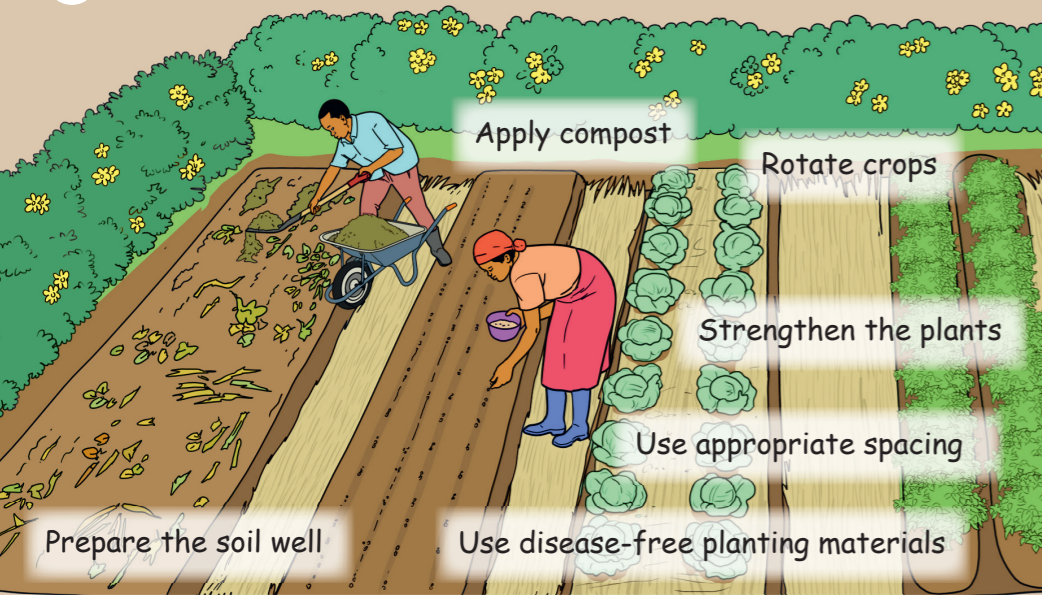
- Light green/yellow patches on leaves
- Stunted growth

### Spreading through

- Infected planting material such as seeds, seedlings and cuttings
- Insect vectors

## Three steps to manage diseases organically

### 1 Ensure good growing conditions



Apply compost

Rotate crops

Strengthen the plants

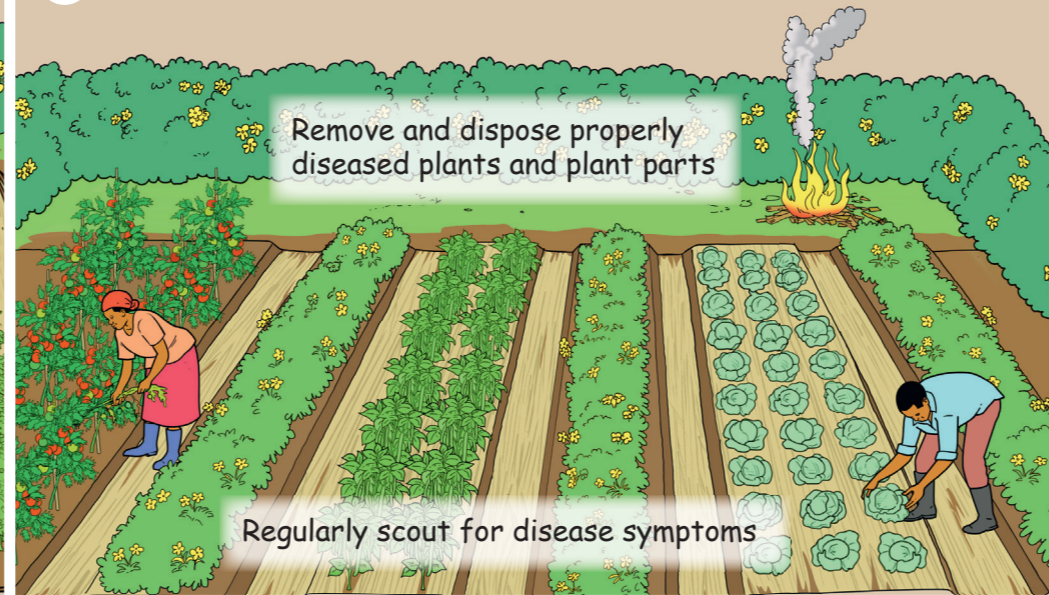
Use appropriate spacing

Use disease-free planting materials

Prepare the soil well

- A planned crop rotation is essential to control soil-borne diseases
- A fertile soil provides the foundation for strong plants
- Disease resistant or tolerant varieties offer the best protection
- Plant strengthening preparations or products can increase plant vigour or improve disease resistance

### 2 Scout for diseases and maintain good crop hygiene

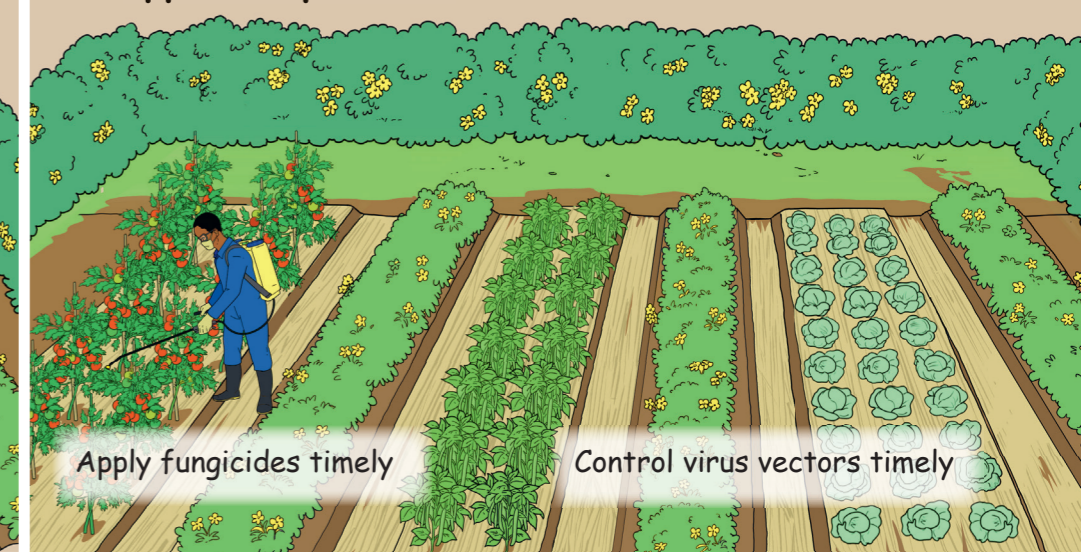


Remove and dispose properly diseased plants and plant parts

Regularly scout for disease symptoms

- Maintaining a good hygiene in the field limits spreading of diseases
- The identification of plant diseases requires a good knowledge of the symptoms of infection
- The sooner a disease is detected, the better the healthy plant parts and plants can be protected

### 3 Control the diseases and disease vectors with approved products



Apply fungicides timely

Control virus vectors timely

- Viruses can only be controlled through preventive measures (steps 1 and 2) and control of their vectors (e.g. aphids)
- Bacterial diseases are limited through crop hygiene mainly; treatments with copper can be effective
- Fungicides protect healthy plants only, they do not cure diseased plants