

Early blight management in tomatoes

Recognize the problem

Early blight ("Bakajani tangulia" in Swahili) is a fungal disease. It causes 0.5-3 cm (0.2-1.2") brown irregular spots with sunken rings on leaves and on fruits near fruit stems. Leaves become yellow around the spots and can dry up and drop off. The disease starts from the lower, older leaves and moves upwards in the plant.

Irregular lesions on leaves due to early blight. (Photo by M. Rutherford, CABI)



Background

The fungus spreads quickly during warm weather. It can also be spread with water, humans, and machinery. It can survive on seeds, tomato debris, and on other cultivated or wild plants in the same family e.g. Irish potato, eggplant, black nightshade, okra. It is a major problem in the dryer seasons in the tropics, whereas the late blight disease is a problem in the rainy seasons. It is easier to prevent this disease than to control it.

Management

To prevent the problem:

- Use tolerant varieties (e.g. Rio Grande, Kiboko, Meru, Duluti & Tengeru)
- Use non-infected seeds from healthy tomatoes, or certified seeds.
- Select nursery sites away from tomato fields, and do not place nursery site at the same place from season to season.
- Transplant only disease free seedlings.
- Remove and destroy plant residues and debris.
- Do not work in the field during wet conditions because of disease spread via water, humans, or machinery.
- Ensure aeration (keep > 10 cm seedling space, > 60 cm plant space).
- Disinfect pruning knives, gloves or hands with bleach before working on next plant. Immediately wash hands with water, because bleach is toxic.
- Avoid unnecessary irrigation. If needed, only irrigate early in the day to allow rapid drying of the leaves.
- Orient plant rows in direction of main winds to increase aeration.
- During dry season, preventively spray fresh cow milk (1/2 litre + 10 litre water) several times (this is not working in wet season).

Dark sunken, irregular lesions with rings due to early blight = pressed thumb symptom. (Photo by avrdc.org)



When first plants with symptoms are detected, action should be taken.

- Remove and destroy diseased plants or plant parts. But do not openly carry materials through your field, because this will carry the disease.
- Prevent spread by spraying products with chlorothalonil or mancozeb (WHO toxicity class U unlikely hazardous, 14 days pre-harvest interval, field entry interval 3 days). Spray max 2x per season. You may combine with milk.
- Prevent spread by spraying products containing mancozeb combined with copper oxychloride, copper hydroxide or metalaxyl. These are toxic to farmers and consumers (toxicity class II hazardous; 14 days pre-harvest interval, restricted field entry interval 3 days). Spray max 2 x per season.

When using a pesticide, always wear protective clothing and follow the instructions on the product label, such as dosage, timing of application, and pre-harvest interval.

Scientific name(s) > *Alternaria solani*

The recommendations in this factsheet are relevant to: Ghana, Kenya, Tanzania



Authors: Adeltruda Massawe, Mansuet Tilya, Agatha Aloyce, Caroline J Kimaryo, Jubilant Mwangi, Caroline Swai, Horti Tengeru, Tanzania

Edited by Plantwise.