

Bacterial wilt management in tomatoes

Recognize the problem

Bacterial wilt ("Mnyauko bakteria" in Swahili) is a disease that can appear on all growth stages. It is first recognised by wilting of leaves at the ends of branches. Two to three days later, the entire plant rapidly wilts without any prior yellowing of leaves. The infected base of a stem can become discoloured brown. When the infected stem is cut and placed into a glass of water it produces a milky substance from the cut end after few minutes. The milky substance is the bacteria coming out of the stem.

Entire plants can rapidly wilt because of this bacterial wilt disease. (Photo by A. Massawe)



Background

The bacterial wilt disease lives in the soil and enters through the roots or stem. It also enters where the plant has been injured by cultivation, or by nematodes. It can also live in other solanaceous plants, such as egg plants, Irish potatoes, red pepper. It also spreads with water and seeds. It is easier to prevent this disease than to control it.

Management

To prevent the problem:

- Use varieties with some resistance (Fortune Maker, Kentom, Taiwan F1).
- Avoid planting in lowlands, wet areas or fields with history of bacterial wilt.
- Stop tomato growing for 5 seasons with non-solanaceous crops like cereals, beans, sugarcane, cabbage, (but not red pepper, Irish potatoes, eggplants).
- Avoid movement of tools/equipment/water from contaminated soils to non-contaminated soils.
- Disinfect pruning knives, e.g. with bleach, before working on next plant. Wear gloves when disinfecting or immediately wash hands with water afterwards, because bleach is toxic.
- Avoid furrow irrigation because this soil borne disease would grow (if furrow irrigation is needed then flow water from new to old fields to minimise spread of diseases).

Brown base of stem due to bacterial wilt disease. (Photo by UGA)

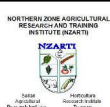


If a single infected plant is found then actions must be taken:

- Pull out plants with roots and surrounding soil and burn everything. But do not openly carry materials through your field, because this will spread the disease. Do not re-plant tomatoes into the same spot.
- Chemical sprays are of little to no help because this disease is soil borne.

Scientific name(s) > *Ralstonia solanacearum*

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



Authors: Adeltruda Massawe, Mansuet Tilya, Martin Kimani, Richard Musebe, Livin K Mahoo, Irene Kessy
Horti Tengeru, Tanzania

Edited by Plantwise.