



KALRO/NAVCDP/ Tomato Factsheet No. 037/2024

Control of Bacterial Wilt in Tomatoes

Description

Tomato bacterial wilt is caused by the bacterium *Ralstonia solanacearum*, formerly known as *Pseudomonas solanacearum*. This bacterium, which is soil-borne, spreads fast through the roots of a plant and up its stem, blocking the flow of nutrients and water to the leaves, ultimately leading to the death of the plant.

Disease cycle

Bacterial wilt in tomato begins with terminal leaves wilting, becoming permanent after 2 to 3 days due to active development. The plant wilts and dies suddenly, usually when temperatures reach 32°C and above.

The pathogen enters susceptible host plants through microscopic wounds, often caused by insects, cultivation, or transplanting, under favorable disease conditions. Slow development causes stunting and large adventitious roots on the stem.

Diagnosis can be done by cutting a stem 2 to 3 cm long, suspending it in clear water, and holding it vertically; if the wilting is caused by the bacterium (*Ralstonia solanacearum*) a milky ooze can be seen streaming from the cut stem segment.

Symptoms

- Rapid wilting and plant death without developing leaf spots or yellowing.

- A cross section of a wilting plant's pith appears darker and water-soaked.
- Squeezing the stem of a wilting plant releases a sticky, grey substance.



Tomato plants displaying bacterial wilt symptoms in the greenhouse on a tomato crop (Source: Dr. Lusike Wasilwa).

How to control bacterial wilt

- Rotate your crops, using crops like cereals.
- Clear the field of wilting plants and the plant residue and destroy by burying.
- Solarize planting beds to kill the bacterial in the soil.
- Apply spot treatment with lime/ash or sodium hypochlorite diluted to 10% (Jik).
- Sanitize pruning implements.
- Use Metam sodium (Metham Sodium 51 Liquid soluble®) or Bronopol (ENRICH BMWettable Powder®)

If the problem persists, seek immediate technical support from KALRO Centre nearest you.

Other quick sources of help

1. Plant clinic nearest you
2. County agriculture office nearest you
3. Write to: info@kalro.org.



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