

Tomato bacterial wilt (146)

Summary

- Worldwide distribution. In tropics and sub-tropics. On more than 200 hosts in more than 30 plant families. Several races. Race 1 infects eggplant, capsicum, chilli, potato, tomato and tobacco, and other families. An important disease.
- High temperature and rain favours disease. Bacteria block the water-conducting tubes causing a wilt.
- Place cut stem in water to see 'streaming'.
- Cultural control: avoid infested land; use 4-year rotation, with maize, soybean, brassicas, rice; plant on ridges/raised beds to improve drainage; remove wilted plants immediately; remove soil from shoes, machinery, and tools; graft tomato onto relatively bacterial wilt-resistant eggplant; use resistant varieties.
- Chemical control: none recommended.

Common Name

Bacterial wilt, bacterial wilt of potato, bacterial wilt of Solanaceous crops

Scientific Name

Ralstonia solanacearum. There are a number of races.



Photo 1. Capsicum with bacterial wilt, *Ralstonia solanacearum*, showing wilt, leaf fall and dieback, rather than a sudden wilt.



Photo 2. Tomato with bacterial wilt, *Ralstonia solanacearum*, showing sudden wilt of leaves over entire plant.



Photo 4. Eggplant with bacterial wilt, *Ralstonia solanacearum*, showing sudden wilt of the leaves.



Photo 3. Potato with bacterial wilt, *Ralstonia solanacearum*, showing sudden wilt of leaves.



Photo 5. Cut end of tomato stem placed in water to show bacterial streaming of *Ralstonia solanacearum*.

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Information (and Photo 1) from Gerlach WWP (1988) *Plant diseases of Western Samoa*. Samoan German Crop Protection Project, Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ) GmbH, Germany, and (with Photo 5) *Diseases of vegetable crops in Australia* (2010) Editors, Denis Persley, et al. CSIRO Publishing. Photo 3 Anare Caucau, Research Division, Ministry of Agriculture, Fiji. Photo 4 Mike Furlong, University of Queensland, Brisbane.

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