

Scientific Name

Several soil-borne species of *Pseudomonas* cause tomato pith necrosis: *Pseudomonas corrugata*, *Pseudomonas cichorri*, *Pseudomonas viridiflava*, *Pseudomonas mediterranea* and *Pseudomonas marginalis*. *Pectobacterium carotovorum* can also cause tomato pith necrosis.

Host Crops

Tomato (open field, high tunnels, greenhouse)

Identification

Infections on plants:

- Yellowing of young leaves and leaflets
- Wilting of shoots on the upper portion of the plant (top wilting)
- Split or collapsed stems that are associated with dry brownish-gray lesions
- Stems are often hollow, black in color or have a ladder appearance when they are split open length wise
- Stems can appear swollen and contain large numbers of adventitious roots
- Fruit symptoms are rare.
 - Greasy water-soaked blackened region on the blossom end of the fruit.

Favorable Environmental Conditions

Optimal conditions for pith necrosis are cool night temperatures, high humidity, prolonged periods of cloud cover and excessive soil nitrogen levels.

Often Confused With

Bacterial canker

Scouting Notes

The disease occurs randomly within a field or high tunnel and is generally limited to a few plants. It is not uncommon to see one or two dead plants without having observed any prior symptoms. Foliar symptoms of pith necrosis are similar to early bacterial canker disease symptoms and should not be used to confirm the disease. Symptomatic plants should be sampled immediately and submitted for plant disease diagnosis to rule out bacterial canker. Pith necrosis disease progression is slowed during warm and sunny periods and plant will often recover from the disease once fertility conditions are corrected.

Thresholds

No thresholds have been established for this disease.

Management Notes

Start with clean seed and transplants- Although pith necrosis has not been shown to be seed-borne, starting with certified, disease-free seed or transplants is recommended to manage other bacterial diseases that are seed-borne.

Start with a clean field- The pathogens that cause pith necrosis can be introduced into a field on contaminated crop debris. Avoid planting in a field with existing crop debris or that has been used to hold cull piles.

Avoid early plantings- Delay planting in springs that are cool and wet as these environmental conditions favor the pith necrosis pathogens.

Use best cultural practices- Use management strategies that maintain reduced-stress growing conditions. Avoid excessive nitrogen rates, especially in the spring when vegetative growth is rapid.

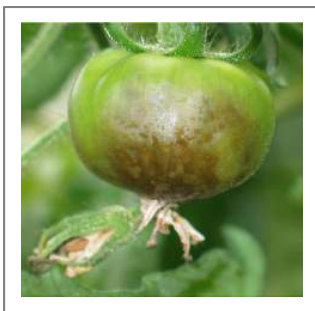


Photo of fruit symptoms courtesy of Margaret McGrath, Cornell University.