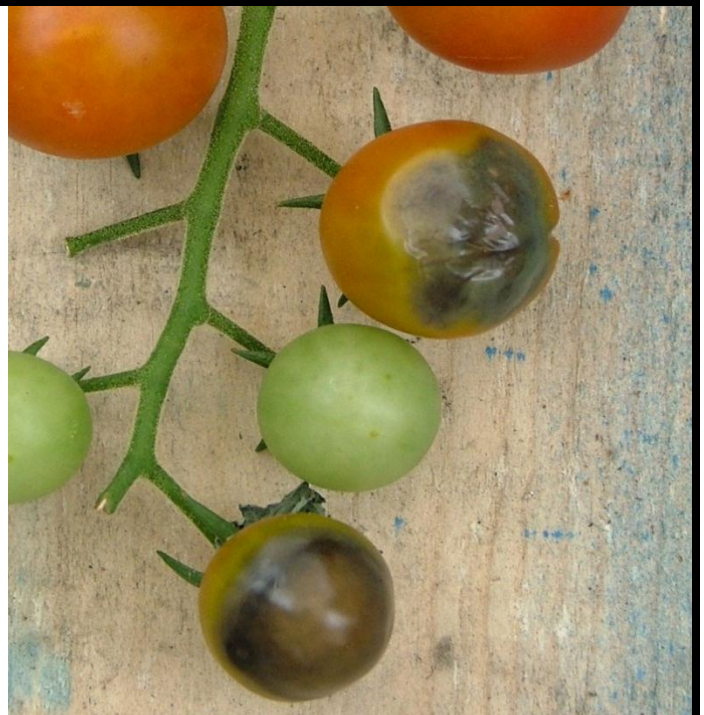




Erwinia stem rot BACTERIA – *Erwinia carotovora*

© Photo: Phil Morley Tomato growers association

- The basal part of the stems turned black and sloughed off easily. The pith disintegrated and stems appears hollow.



Blossom end rot NUTRIENT DEFICIENCY - Calcium

© Photo: Martin McPherson Stockbridge technology centre

- Nutritional disorder.
- No foliar symptoms
- Especially common when fruit is growing quickly



Cutting away outer surface reveals browning within

Fusarium Wilt FUNGUS - *Fusarium oxysporum*

© Photo: Martin McPherson Stockbridge technology centre

- Fusarium wilt often one sided wilt associated with browning of stems in later stages. Internal staining



Leaf Mould FUNGUS - *Cladosporium fulvum*

© Photo: Martin McPherson Stockbridge technology centre

- Usually on lower leaves, yellow blotches appear on the upper surface, greyish/brown mould appears on lower surface. Leaves turn brown but do not fall.



David B. Langston, University of Georgia



Paul Bachi, University of Kentucky Bugwood.org



Tomato spotted wilt virus VIRUS

© George Kelley, University of Kentucky, Bugwood.org

- Tiny irregular brown spots, steaks and ringspots usually on the youngest leaves. Stunting and wilt common. Transmitted by thrips.

Late blight FUNGUS - *Phytophthora infestans*

- Rapidly spreading lesions with brown centres and light green margins on leaves petioles and fruit. Whitish bloom on underside of leaf.



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Grey mould FUNGUS - *Botrytis cinerea*

Paul Bachi, University of Kentucky Research and Education Center, Bugwood.org

- Common on older tissue, often associated with damage. Infection runs up leaf stalk and a tan coloured spot with concentric rings develops on stem



Bacterial spot BACTERIA *Xanthomonas campestris*

Clemson University - USDA Cooperative Extension Slide Series, Bugwood.org

- Water-soaked, spots about 3mm in diameter appear on infected leaflets. Lesions often surrounded by yellow halos and the centres dry out and frequently tear. Lesions may coalesce to form large, irregular dead spots