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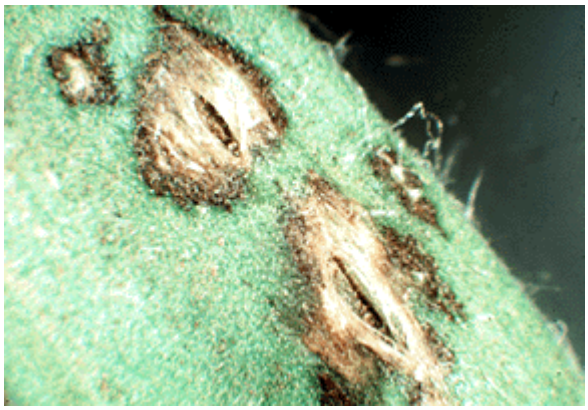
Problem: Bacterial Canker of Tomato - *Clavibacter michiganensis*



Host Plant: Tomato

Description:

Bacterial canker has become a serious problem in commercial and small garden plantings of tomato. This disease can cause lesions or cankers on any portion of the plant, including the fruit, or may result in a general wilt or decline of the plant.

Diseased tomatoes first exhibit a yellowing and wilting of leaves on a portion of the plant. The leaves eventually become brittle and dry, and drop from the plant. Yellowish streaks may develop on leaf petioles, stems, and also internally in the water-conducting tissue of the main stem. In addition, small circular depressed areas called cankers may form on the stem.

The most diagnostic feature of bacterial canker is the formation of fruit spots. These spots may be confused with those caused by bacterial speck or spot. However, fruit lesions caused by bacterial canker are bordered by a distinct white halo. These white halos may disappear as the fruit ripens.

The bacterium can be introduced into fields on contaminated seed or on infected transplants. The bacterium also may survive in soil on infested plant material for at least one year. During the growing season, the small bacteria are dispersed by water (irrigation, rain) and infect plants through wounds or natural openings. Once inside the plant, the organism can invade the water-conducting tissue and be carried systemically throughout the plant. Disease development is favored by moderately high temperatures (80 F) and wet, humid conditions.

Recommendations:

The most important means of controlling bacterial canker is using clean seed from a reputable firm and transplanting into disease-free soil. Do not replant tomatoes in soil where bacterial canker occurred the previous year. Applications of copper-containing fungicides have not been effective in controlling it.

References:

1. Tomato Leaf and Fruit Diseases and Disorders, K-State Research & Extension, Plant Pathology, L-721

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Kansas State University Agricultural Experiment Station and Cooperative Extension Service