

Problem: Bacterial Speck - *Pseudomonas syringae* pv. *tomato*



Host Plant: Tomato

Description: Bacterial speck and bacterial spot normally are not as prevalent as some of the other leaf spot diseases of tomatoes in Kansas, but they can cause serious damage during wet summers. Bacterial spot also may occur on pepper. On tomato, both diseases result in spot formation on the leaves and fruit. Heavy infection can cause defoliation, but the main effect of these diseases is the reduction of fruit quality.

Leaf symptoms of bacterial speck and bacterial spot are quite similar. Both diseases result in small (1/8-1/4 inch) black lesions on leaves. These spots usually are surrounded by a yellow halo. The lesions of bacterial spot tend to have a greasy appearance; those of bacterial speck do not.

The two diseases are more easily distinguished by symptoms on the fruit. Bacterial spot results in small, slightly raised, water-soaked spots. These spots may enlarge to 1/4 inch in diameter and become very rough and cracked. Bacterial speck lesions also are slightly raised but are typically much smaller (1/16 inch) than those of bacterial spot. Bacterial speck lesions do not crack or become scaly as in bacterial spot.

Both bacteria can survive on plant debris or on other weedy hosts. The bacteria also may be introduced into a field on contaminated seed or on infested or infected transplants. Driving rain and mechanical injury to plants caused by hail and high winds increase the severity of these diseases. The development of bacterial speck is favored by relatively cool (70 F), wet conditions, while bacterial spot becomes more severe during periods of warm temperatures (75-80 F), heavy rainfall, and a high relative humidity.

Recommendations: Control measures for the two diseases are similar. These diseases can be prevented or reduced in severity by removal of plant debris in the fall,

cultivation of weeds, rotation, and the use of clean (non-infested) seed and transplants.

Start with the cultural practices described above. There are several copper-based compounds available for homeowners, but chemical control of bacterial diseases is inconsistent. Bacteria have extremely fast reproductive times, and it is difficult to manage an epidemic once it is underway. If you use a chemical, read and follow all label instructions. Examples of copper-based compounds include Bonide Copper Fungicide and Monterey Liqui-Cop.

References:

1. [Tomato Leaf and Fruit Diseases and Disorders](#). K-State Research and Extension, Publication L-721.

Last Update: 1/11/2018

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