AVRDC - The World Vegetable Center

Fact Sheet

Tomato Diseases

Target Spot

Corynespora cassiicola

Found in the tropics and subtropics

Symptoms

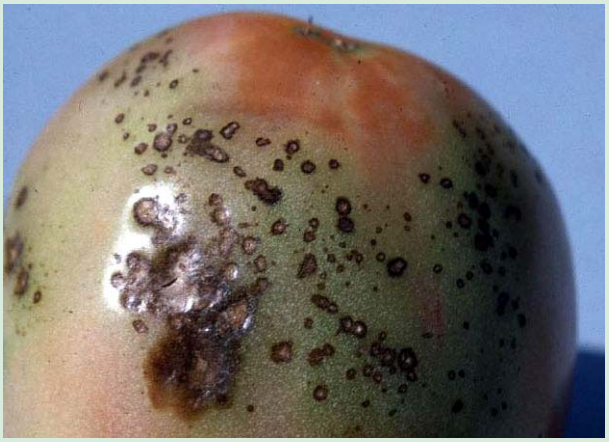
Symptoms appear on all aboveground parts of the plant. Foliar lesions begin as small, pinpoint, water-soaked spots on the upper surface. Gradually these increase in size (up to 2 cm diameter), becoming circular, frequently ringed, and pale brown with conspicuous yellow halos. The lesions will coalesce leading to blighting of foliage. The subsequent premature defoliation affects fruit quality and yield.

The lesions on stems and petioles are brown and oblong. These increase in size and may girdle petioles and stems leading to collapse of the leaflets.

On young fruit, the lesions are small, light-brown freckles with darker margins, and centers that are slightly sunken and somewhat dry. Fruit lesions enlarge and coalesce resulting in large areas of sunken, necrotic tissue. On ripe fruit, large circular lesions develop with brown centers that crack. Severe fruit infection and subsequent damage can cause significant yield loss.

In the early stages of disease development, symptoms of target spot may be confused with those of bacterial spot (*Xanthomonas campestris* pv. *vesicatoria*) and early blight (*Alternaria solani*).

How to Identify Target Spot



Foliar lesions are brown, circular, frequently ringed, with yellow halos (left photo).On young fruit, the lesions are small, light-brown with darker margins, and centers that are slightly sunken and dry (right photo). On ripening fruit, large circular lesions develop with brown centers that crack (top photo).

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Conditions for Disease Development

The fungus attacks many hosts such as tomato, pepper, tobacco, soybean, cowpea, snap beans, and cucurbits; certain strains only affect certain hosts. Disease development is favored by warm temperatures and extended periods of leaf wetness. The optimal temperature range for disease development is 20–28 °C with 16 hr or more of leaf wetness.

The fungus sporulates abundantly on rain-moistened crop debris or from target spot lesions on dead tomato leaves. The fungus can colonize weeds or other crop plants. It remains viable for up to two years.

The spores are readily dispersed by wind or windblown rain. Splashing soil or windblown soil particles create wounds in the fruit for the spores to enter.

The fungus has been shown to be seed-borne in soybean, but seed-borne survival in vegetable crops is not known at this time.

Control

Spray with protectant fungicides after first symptoms appear. Consult with your local extension agent for fungicides available in your region.

Remove affected debris to prevent carryover into the next crop. Use an adequate period of crop rotation. Genetic resistance to this fungus has been documented in tomato and soybean but commercial varieties are not yet available.

For more information on the production of tomato and other vegetables, go to <www.avrdc.org>.

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