



AVRDC - The World Vegetable Center

Fact Sheet

Pepper Diseases

Cercospora Leaf Spot

Cercospora capsici

Found worldwide. Most damaging in tropical and sub-tropical regions where warm, wet conditions prevail



Symptoms

Circular spots appear with a light gray center and a reddish-brown margin, growing up to 1 cm in diameter. Spots later become tan with a dark ring and a yellowish halo around the ring, resulting in a “frog-eye” appearance.

Under conditions of high humidity, and using a good high magnification hand lens, thin, needle-like spores may be seen in the center of the spots arising from small black fungal tissue. The affected centers of lesions dry and often drop out as they age. When numerous spots occur on the foliage, the leaves turn yellow and may drop or wilt. Defoliation is often serious, exposing fruits to sun scald.

Spots also develop on stems and petioles but they are oblong rather than circular. Fruit are not infected.

Conditions for Disease Development

The fungus survives in or on seed, and as tiny black fungal tissue known as stromata in old affected leaves in the soil. Spores will survive in infected debris for at least one season.

Foliar infection occurs by direct penetration of the leaf. The fungus spores require water for germination

How to Identify Cercospora Leaf Spot



Circular tan spots with dark rings and yellow halos. Centers of spots are light gray with black spores



Numerous spots create yellowing, defoliation



Infected lower leaves

and penetration of the host; however, heavy dew appears to be sufficient for infection. The disease is most severe during periods of warm temperatures; for example, 20–25°C during the day and excessive moisture (either from rain or overhead irrigation). Fungal growth is limited if the temperature is < 5°C or > 35°C. The fungus is spread by splashing water, wind-driven rain, wind, on implements, tools, workers, and by leaf-to-leaf contact. It is not known whether the fungus will infect solanaceous weeds.

Control

Use seed from disease-free areas. Treat seed with hot water at 52°C for 30 minutes. Alternatively, use a seed disinfectant if seed come from infected plants. Check seedbeds and young plants or transplants for any symptoms of the disease. Remove affected plants and one or two neighboring plants that may be infected already but do not yet show symptoms.

Space plants properly in the field to allow for good air circulation and to avoid extended periods of leaf wetness. After harvest, promptly destroy infected pepper tissues by burning or deep-plowing.

Rotate crops using a two-year rotation period. Control solanaceous weeds during the rotation period.

Check older plants carefully for the first incidence of the disease particularly after extended periods of leaf wetness and warm temperatures. If symptoms appear, apply a protectant fungicide as soon as possible. Resistant varieties are available. Check with your local extension agent for fungicides and varieties that may be used effectively in your region.

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