



CAES

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CHERRY LEAF SPOT

Cherry leaf spot, also called shothole, is a common fungal disease in landscapes and orchards. Under cool, wet spring weather conditions, the disease can cause yellowing of leaves and significant premature defoliation, which may significantly affect aesthetic appearance of ornamental trees, reduce yields and quality of fruits, and increase the risk of winter injury on the tree.

SYMPTOMS AND DIAGNOSTICS

The initial symptom of the disease appears as small reddish-purple spots on leaves, and then spots may expand and merge together to form larger brown patches (Figure 1). Under humid conditions, whitish- or creamy-colored conidia (asexual spores) are discharged from acervuli (asexual fungal fruiting bodies) on the lower surface of leaves



Figure 1. Reddish-purple spots on cherry leaves.

(Figure 2). As the disease develops, brown spots may separate from the adjacent green leaf tissues and drop out, which results in a “shothole” appearance (Figure 3). Different from insect or mechanical damage, the symptom of cherry leaf spot involves various stages of a dynamic process from brown spots to their separation from green tissues. A severe epidemic of the disease can cause yellowing of leaves and sudden defoliation in early summer (Figure 4). In orchards, the disease may result in uneven ripening, reduced fruit quality, and more vulnerable to winter injury.

DISEASE DEVELOPMENT

Cherry leaf spot is caused by the fungal pathogen, *Blumeriella jaapii*, which infects many species in the genus *Prunus* including cherry, plum, apricot, peach,



Figure 2. White creamy spore mass on the lower surface of a leaf.



Figure 3. Brown spots and shotholes on cherry leaves.



Figure 4. Early defoliation of infected leaves in the summer.

chokecherry, and cherry laurel. The pathogen overwinters in fallen leaves and forms apothecia (sexual reproduction structures) on dead leaves in the spring. After an extended period of humid and wet conditions, mature apothecia release ascospores (sexual spores) that initiate the primary infection of the season. On infected leaves, the fungus produces tremendous numbers of conidia causes repeated secondary infections and spread of the disease during the season. Overhead irrigation and rain splashes are responsible for the dispersal of fungal spores in landscapes, nurseries, and orchards. Germination of ascospores and conidia requires a period of wetness (>6 hours) on the leaf surface. The optimum temperature for infection and disease development is between 63° and 68°F. So, the disease is favored by cool, wet conditions during the spring and early summer

MANAGEMENT

Resistant cultivars: In orchards, sweet cherries are less susceptible to the disease compared to sour/tart cherries. In landscapes, Kuanzan cherry is considered moderately resistant to the disease.

Cultural practice: Select a location that has good air movement and is exposed to

direct sunlight. Remove and destroy fallen leaves at the end of growing season. In commercial orchard settings, chop fallen leaves with mower and apply a low rate of nitrogen fertilizers to speed up of leaf decomposition. Prune trees properly for good air circulation and fungicide coverage.

Fungicide treatment: Early (petals fall, or first leaves unfold) and repeated fungicide applications (at a 7- to 10-days interval) may delay the disease onset and reduce secondary infections, respectively. Common fungicides that are registered for homeowner use include chlorothalonil, myclobutanil, captan, and copper products. Fungicide treatment is preventative, but not curative.

READ THE LABEL BEFORE APPLYING ANY PESTICIDE!

We keep all archives of our fact sheets posted. While most practices for disease management do not change over time, please be aware that changes in pesticide regulations occur constantly. When applying pesticides, always consult the label to make sure the pesticide is approved for use on your plants.