

# Cherry Leaf Spot Blumeriella jaapii (Rehm) Arx

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Cherry leaf spot is a fungal disease caused by *Blumeriella jaapii* (Rehm) Arx, formally known as *Coccomyces hiemali*. It attacks the leaves, leaf stems, fruit and fruit stems.

### Cherry Leaf Spot

**Symptoms** 

In severe cases, the pathogen will cause early defoliation (Figure 1). Early leaf drop interferes with fruit ripening and color development, resulting in poor tasting, small, offcolor fruit. Severely affected trees have poor reserves of stored carbohydrates and are ill-prepared for winter, making them prone to winter injury and dieback. Tart and sweet cherry varieties differ greatly in their susceptibility to cherry leaf spot.

Leaf spot, as the name suggests, is mainly a problem on the leaves. Lesions first appear on the upper surface of the leaves as small red to purple spots (Figure 2). Sometimes these



Figure 1. Leaf loss due to cherry leaf spot. (Photo credit: M. Danilovich)

spots dry out and turn brown, and the necrotic circular lesions drop out leaving the holes behind and giving the leaf a "shot hole" appearance. Under heavy pressure, lesions may appear on the fruit stems (Figure 3). Rain and high humidity will induce white to pink sporulation on the underside of the leaf, underneath the upper surface lesions (Figure 4).

## Disease cycle

The fungus overwinters in the lesions on the fallen leaves. In the spring, around bloom time, the sexual spores (ascospores) are mature and are discharged in the air during, or shortly after, rain, eventually landing on susceptible green leaves and stems. The optimum temperature for disease development is between 63 and 68 degrees Fahrenheit. At those temperatures, it takes only five hours of wetting or high humidity for infection to occur. The infection takes place through the stomates (air pores) on the underside of the leaves. In 10 to 15 days from the initial infection, conidia (asexual spores) mature and are spread around to infect new leaves by rain.

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#### Control

The first line of defense is good sanitation in the fall. Rake or chop the leaves with a mower or mulcher, and spread a low rate of nitrogen to facilitate faster leaf decomposition. Apply urea (45:0:0) at a rate of 5 pounds per acre. This helps with disease management, but it is useless without chemical control.

At petal fall when the first leaves start to unfold, use Daconil (chlorothalonil) until shuck split on a 7- to 10-day interval. After the shuck split, use Captan or Immunox (mycobutanil), or a half rate of Captan in combination with full rate of Immunox. This is for resistance management. Fungicide applications should continue through the middle of summer.

Preventive treatment is key – once the disease is established on leaves, it is difficult to control in rainy seasons. Spray treatments are needed throughout the season until harvest. Watch for preharvest intervals, and read the label for proper spray use. After the harvest, one application of Daconil will help suppress fall infection and reduce the inoculum presence.

Sweet cherry varieties are generally less susceptible to cherry leaf spot than tart cherries but still need some fungicide protection post bloom in wet years. Montmorency tart cherry is very susceptible. Tart cherry varieties with better leaf spot resistance include Northstar and Meteor.



Figure 2. Cherry leaf spot lesions on the leaf surface. (Photo credit: W. Shan, Michigan State University Extension)



Figure 3. Cherry leaf lesion on a fruit stem. (Photo credit: M. Danilovich)



Figure 4. Cherry leaf spot lesions with visible mycelia on the leaf underside. (Photo credit: W. Shan, Michigan State University Extension)

# For more information

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