

## Fungal Leaf Spot Diseases

By Susan Camp

Have you ever flipped through the pages of a glossy gardening magazine and marveled at the perfection of every blossom, every leaf in every photo? Not one torn petal, not a single yellow or spotty leaf. How do they do it? I don't know, but just looking at the pictures frustrates me because I know that no matter what I do, a fungal disease can turn up.

In last week's "Gardening Corner," I wrote about powdery and downy mildews, two fungal diseases that affect garden perennials, but many other fungi also cause diseases. About 85% of plant diseases are caused by fungi.

Three fungal leaf spot diseases of specific garden perennials and shrubs aggravate gardeners every summer, and the sad fact is that once your plants fall prey to one of these diseases, it becomes difficult to eradicate because the spores overwinter on old leaves and plant debris and re-infect the plants in the spring.

Iris leaf spot is caused by *Cladosporium iridis*. Bearded iris (*Iris germanica*) is most commonly affected, while Siberian iris (*Iris siberica*) appears to have good resistance. After blooming, small tan-colored spots with water-soaked margins appear on the leaf tips of infected iris leaves. As the spots enlarge, the margins may turn reddish-brown with yellow haloes. The lesions coalesce, and the infection moves down the leaves, eventually killing them. Iris rhizomes and bulbs are not affected directly, but the loss of leaves may weaken the plant.

Unfortunately, several generations of iris leaf spot spores are produced in one season and spread by rain or overhead irrigation to uninfected plants. Spores overwinter in plant debris and become active in the spring.

Cercospora leaf spot of hydrangea is caused by the fungus *Cercospora hydrangea*. *Cercospora* affects bigleaf, oakleaf, smooth, and panicle hydrangeas. Unlike some other leaf spot diseases, *Cercospora* leaf spot occurs from July to October at the zenith of summer heat and humidity.

Infection starts at the bottom of the plant and moves upward to the top. Bigleaf and panicle lesions are 1/8 to 1/4 spots with light centers and brown to purple margins. Oakleaf hydrangea spots are angular and purple or dark brown. Affected leaves turn yellowish-green. Although a hydrangea shrub rarely dies from *Cercospora* infection, the shrub may not set buds and total defoliation can occur. Again, rain and overhead irrigation are significant spreaders of disease.

The third fungal disease is black spot of roses, which strikes terror into the hearts of rose growers everywhere. Black spot, caused by *Diplocarpon rosae* is the most significant disease of roses and is found worldwide. Young leaves and canes are most susceptible to the fungus. Blurry, circular black spots first appear on lower leaves, which turn yellow, and drop. An entire shrub can be defoliated, and canes can become infected. Cane lesions are dark spots that eventually blister. The spores overwinter in debris in cold climates, but remain active all year in milder climates.

Cultural management of these and other fungal diseases is similar. If available, select species or cultivars that are disease-resistant. Space plants far enough apart to provide for good air circulation.

Once again, avoid overhead irrigation and don't water on cloudy, humid days. Remove affected leaves at the first sign of infection. Bag affected leaves, stems and other plant debris and dispose of them with your trash.

Chemical fungicides are available for these diseases. Always follow package directions for application. If you have questions about the use of a fungicide or other chemical product, you can contact a Gloucester Master Gardener through the Gloucester Extension Office at (804) 693-2602. A Master Gardener can work with you to solve your plant problem, or recommend that you submit a specimen and the Plant Disease Diagnostic Form (Publication 450-097) to Virginia Tech.

VCE Publication 450-600 "Iris Leaf Spot"; Louisiana State University Agricultural Center article "Cercospora Leaf Spot on Hydrangea"; and University of Maryland Extension publication "Black Spot Disease of Roses" provide specific information on the three fungal diseases.

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