

# Leaf Spot Diseases of Ornamentals, Shade Trees, Vegetables

By Pat Dickey, Fairfax Master Gardener

Our plants can become victims of leaf spot diseases during periods of wet weather or humidity. Fortunately, for the most part, they will only affect the cosmetic or aesthetic appearance of our plants.

Leaf spots vary, depending on the plant that has the disease and the organism that transmitted it. They can have a black, tan, purple or red color, and black concentric rings or margins around them. Fungal black dots may appear in the spots, in rings or in a cluster. Over time, these may enlarge and combine to form blotches. Some of the infected plant's leaves may turn yellow and drop.



*Cercospora on hydrangea*

photo: University of Florida, IFAS Extension

## Environmental and Cultural Factors

Fungal pathogens for leaf spot disease are in the air and soil. They continue to live in infected leaves and twigs that have fallen to the ground. When it rains and the humidity is high, the water causes the spores in the infected leaves to grow into a fungus. These fungal spores then scatter in the wind and settle on new, emerging plant growth. The spores germinate there and infect the tender leaves.

Close spacing of plants can result in leaf spot diseases. Moisture builds up and leaves will stay wet, with air unable to circulate. Overhead irrigation, especially late in the day and at night, also contributes to these diseases, since the wet leaves do not have an opportunity to dry out, and fungal leaf spot can take hold, especially on vegetables.

## Shrubs and Shade Trees



*Fungal leaf spot on Leucothoe*

Several shrubs are prone to leaf spotting, including Aucuba, Mountain Laurel (*Kalmia latifolia*), Photinia, Roses, Pyracantha, Leucothoe, and Rhododendron. Cercospora leaf spot is particularly evident on Hydrangeas, flowering cherry trees (*Prunus*) and honeylocust trees (*Gleditsia*). Tan spots with reddish-brown halos develop on the leaves. Dogwood (*Cornus*) is prone to Septoria leaf spot. It is prevalent in the wet, summer months. Spots are angular or irregularly-shaped and brownish-purple in color, later developing brown or gray centers with dark borders.

Repeated spraying of fungicides on shrubs and shade trees will not cure leaf spot disease and is not

recommended. Fungicides are designed to be protective and must be applied before the fungus is on the plant's surface. It is also impractical to spray fungicides on mature shade trees because of their size and the cost involved. Many older trees develop leaf diseases from the stresses of old age. Be concerned only if the tree defoliates repeatedly over many years and does not recover. Most shrubs and shade trees are tolerant of possible defoliation from leaf spot because it usually occurs at the end of the season.

photo: Home Garden Information Center, University of Maryland Extension

If established shrubs show signs of leaf spot disease, prune and rake up any infected leaves and dead twigs in the dry, summer months and bag them in your trash. This will help keep the disease from spreading. Also prune to thin your shrubs, allowing air to better circulate. Avoid any overfertilization and water your plants at the roots, not from overhead. Use just 2 inches of shredded bark for mulching around your shrubs and trees. If you decide to replace your shrubs, ask your nursery about selecting resistant varieties.

## Vegetables

Your vegetables are also susceptible to *Cercospora* and *Septoria* fungal leaf spot. *Cercospora* affects peppers, beans, spinach, lettuce, Swiss chard, beets and members of the squash family (Cucurbit). It has a similar spot and concentric area appearance as leaf spot on shrubs and trees. Sometimes the center of the spot will drop out and leave a hole. Tomatoes can become infected with *Septoria* leaf spot and early blight. Small brown circular leaf spots form on the lower leaves and progress up the tomato plants. Eventually, the leaves will turn completely brown and wilt.

Bacterial leaf spot (*Xanthomonas*), which infects peppers and occasionally tomatoes, can affect the entire plant as well as the leaves. It can be brought into your garden from infested seeds and diseased transplants. Small pimple-like lesions will appear on the lower side of older leaves. The upper side of the leaves will have small water-soaked spots that develop gray to tan centers with dark borders. These lesions will become larger in warm, humid and wet weather and may also form on stems. Fruits may also have small raised, rough spots, and plants may completely defoliate.



Early blight *Septoria* on tomatoes

photo: Home Garden Information Center,  
University of Maryland Extension



Bacterial leaf spot on pepper

To prevent the spread of these diseases, remove the lower leaves when fruits begin to form to increase air circulation. Use a dense organic mulch such as straw to prevent rain from splashing onto the lower part of your plants. Irrigate them near the roots and not from overhead. When planting your tomatoes, space them far enough apart to allow for proper air circulation and stake them to keep them off the ground. Rake and remove plant debris at the end of the season. Weeds and crop debris that are not removed from the garden can also harbor disease. Rotate crops yearly if possible to prevent contamination in future years. Check the VA Pest Management Guide, Table 2.4, Vegetable Disease Management, for the appropriate spraying of copper and other fungicides if needed.

## References

*Leaf Spot Diseases of Shade Trees and Ornamentals*, Missouri Botanical Garden  
*Fungal Leaf Spots - Shrubs*, Home and Garden Information Center, University of Maryland Extension  
*Leaf Spots*, Center for Urban Agriculture, University of Georgia Extension  
*Cercospora Leaf Spot - Vegetables*, University of Maryland Extension  
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