

LEAF DISEASES OF MOUNTAIN-LAUREL

Mountain-laurel (*Kalmia latifolia*) is prized as an ornamental shrub not only for its exquisitely beautiful flowers but also for its attractive evergreen foliage, which adds color to the landscape year-around.

The foliage of mountain-laurel can be infected by at least 14 different species of fungi and suffers from an assortment of environmentally caused leaf disorders. This report describes two of the most common fungal leaf diseases and two environmentally caused leaf disorders.

LEAF SPOT

Leaf spot, caused by the fungus *Mycosphaerella colorata* (*Phyllosticta kalmicola*), is characterized by round to irregular, greyish white to silvery spots, 1/8 to 1/2 inch in diameter, with reddish to purple borders (Figure 1a). Black specks, the fruiting bodies (pycnidia) of the fungus, form in the centers of older spots. Leaf spot is most severe under crowded, shaded, and excessively moist conditions.



Leaf diseases of mountain-laurel. Top figure (1a): Leaf spot. Bottom figure (1b): Leaf blight.

LEAF BLIGHT

Leaf blight, caused by the fungus *Diaporthe kalmiae* (*Phomopsis kalmiae*), can be distinguished from leaf spot by the larger, circular, brown lesions that often develop a zonate pattern (Figure 1b). The lesions frequently first appear near the margin or tip of the leaf, gradually enlarge, merge with other lesions, and result in the death of the entire leaf blade. The fungus may also spread from the leaf through the petiole into the twig, causing twig blight.

LEAF BROWNING AND DEATH

These symptoms are due to drought or winter injury. They differ from those of leaf blight in that individual lesions and a zonate pattern are not apparent (Figure 1a).

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IRON CHLOROSIS

Iron chlorosis, caused by a lack of sufficient iron in the plant, is typified by a mottling of the younger leaves; these leaves later turn pale green to yellow except for the veins, which remain green (Figure 2b). Iron chlorosis is caused by a lack of iron in the soil, or by a soil reaction above pH 6.0 that interferes with the uptake of iron by the roots.

Control

1. Maintaining vigorous, healthy shrubs is of utmost importance. Soil that is acid (pH 4.2 to 5.2), high in organic matter, and well drained but moist is ideal for mountain-laurel. If the soil reaction is alkaline, slightly acid, or neutral (above pH 5.5), addition of sulfate as iron sulfate or ammonium sulfate to the soil will lower the pH. Aluminum sulfate is not recommended. If the soil reaction is proper and symptoms of iron chlorosis appear, add iron to the soil either as iron sulfate or chelate. Follow directions on the package label.
2. Watering during dry periods in summer and fall and applying an organic mulch will help prevent drought and winter injury. Recommendations for reducing winter injury include protecting bushes exposed to winter sun and wind by erecting burlap windbreaks, or growing bushes in a more protected location.
3. Dead or diseased leaves should be removed from the bushes and soil surfaces and destroyed by composting or burning. If only a light infection of leaf spot or leaf blight is detected, removal and destruction of diseased leaves is often sufficient.
4. Heavy or recurrent infections of leaf spot and leaf blight can be controlled by applying the fungicide benomyl (Benlate) 50 percent wettable powder, at the rate of $\frac{1}{2}$ pound of product per 100 gallons of water (2 teaspoons per gallon). Because of the waxy coating on the leaves, a spreader-sticker should be added. A teaspoonful of good-quality liquid detergent per gallon of spray mix is often useful in reducing surface tension and improving foliage coverage. If leaf spot or blight was serious last year, spray when new growth starts, and repeat applications at approximately two-week intervals throughout the spring growing season. If the weather is very humid or rainy, shorten the spray interval to 7 or 10 days.



Figure 2a: winter injury. Figure 2b: Iron chlorosis. (Connecticut Ag. Exp. Station, New Haven photos)