

Rhododendron leaf spot (several pathogens)

The fungus *Cercospora handelii*, *Colletotrichum azaleae*, and *Pestalotiopsis sydowiana* are fungi that can cause leaf spots on rhododendron and azalea (*Rhododendron*). In addition, winter desiccation causes marginal spot/blotch symptoms.



Host plants:

Several *Rhododendron* species are susceptible to *Cercospora* leaf spot and anthracnose (*Colletotrichum azaleae*), as well as *Pestalotiopsis* gray blight.

Description:

Small, lop-sided to round tan-brown spots with yellow margins appear throughout the year on leaves infected with *Cercospora handelii*. Heavily infected leaves drop prematurely. The lesions caused by *Colletotrichum azaleae* appear on azalea leaves. They are round brown areas visible on both the upper and lower surfaces of infected leaves.



Left: *Cercospora* leaf spot



Anthracnose on azalea leaves

Photos: (left) Gary Moorman, Penn State University, and (right) R. K. Jones, *Diseases of Woody Ornamentals and Trees*. APS Press.

Pestalotiopsis gray blight begins as brown lesions that coalesce causing large portions of the leaf to have a gray cast. Defoliation often follows extensive leaf discoloration. Leaf blotch and marginal browning symptoms caused by winter desiccation begin to appear in late winter, although the full extent of the damage is often not apparent until early April.

Disease cycle:

Knowledge of the life cycles of leaf spot fungi that commonly infect rhododendron and azalea foliage is incomplete. Infections by *Cercospora handelii* and *Colletotrichum azaleae* usually begin on immature foliage in the spring even though symptoms may not appear until the winter and spring on one-year-old leaves. During wet springs fruiting structures of *Cercospora* leaf spot form in the leaf spots on attached one-year old leaves, while the fruiting structures of azalea anthracnose form only on leaves that have fallen during the spring. Spores blow and splash onto nearby foliage. If the leaf is wet for several hours, the spores germinate and penetrate immature leaves. At least two months passes between infection and the appearance of leaf spot symptoms. On the other hand, *Pestalotiopsis sydowiana* causes gray blight, which infects the injured leaves and worsens damage beyond what would normally happen by these factors alone. Fruiting structures of the gray blight fungus develop under the surface of dead portions of infected leaves and release spores during cool, wet periods all through the growing season. Wind and rain spread spores to nearby foliage. *Pestalotiopsis sydowiana* spores invade wet leaves damaged by winter sunscald, dehydration damage, and physical wounds.

Management strategies:

Rhododendron leaf spots seldom cause significant damage to the health of infected plants unless they are young or weakened by other harmful agents. Maintain plant vitality with proper fertilization, irrigation during dry periods, mulching, and attention to soil pH levels is the best way to minimize these diseases. Prune plants to promote, sunlight penetration, air circulation and rapid drying of foliage. Also, minimize leaf wetness by irrigating before midday so the leaves dry rapidly in the afternoon. Removal of infected fallen leaves reduces the amount of the inoculum present for new infections. Rhododendron leaf spot diseases are usually more severe after wet springs, but they rarely warrant fungicide controls. Fungicide sprays protect the new green shoots and leaves. Begin sprays as the buds swell and reapply 2-3 more times at label intervals to maintain protection during vulnerable periods.

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Fall 2005