

## Maintaining Healthy Rhododendrons and Azaleas in the Landscape

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Rhododendrons and azaleas, which are closely related, are among the most popular flowering shrubs in Ohio. In many urban landscapes, these shrubs thrive and have relatively few serious health problems once they are established. However, they do have some “special requirements” that must be met to insure good health. These special conditions match those in areas where rhododendrons and azaleas are native. Rhododendrons and azaleas grow on forest floors in many parts of the world, in shaded habitats, with acidic soils rich in organic matter. Soils are often covered with a surface layer of decaying leaf litter.

Matching these conditions where native rhododendrons and azaleas thrive is the key to their good health in the landscape. Plant in areas with good soil drainage, acid pH and partial shade that are sheltered from direct afternoon sun and winter winds. Some of the more common problems that can occur on rhododendrons and azaleas in Ohio include: iron deficiency, winter injury (burn), black vine weevil, and *Phytophthora* root rot.

### Iron Deficiency

Figure 1 shows the yellowing of rhododendron leaves typical of iron deficiency. The yellowing is between the veins and more severe on younger leaves. This problem generally results from plants growing in soils of improper pH. Rhododendrons must be



Figure 1. Yellowing of rhododendron leaves, due to iron deficiency (iron chlorosis).

grown in acidic soil that is high in organic matter. If the pH is above 6.0, soil amendments such as sulfur, iron sulfate or ammonium sulfate must be incorporated into the root area to lower pH. It will be difficult to overcome the deficiency problem in soils high in lime or calcium, even with soil amendments. In such cases, mulch the plant heavily with a good grade of sphagnum peat. Bark mulch



Figures 2A and 2B. Symptoms of winter burn on azalea (left) and rhododendron (right).



Figure 3. C-shaped notching in leaf margin caused by Black Vine Weevil.



Figure 4. This plant is wilting because it is infected with a fungal root and crown rot.

mixed with the peat provides a mulch with good aeration and drainage. It also suppresses root rotting organisms. If kept moist, plants will root into this mulch. Use a complete, acid fertilizer that contains iron.

### Winter Burn

Leaf drying and browning can occur on rhododendron leaves as a result of winter exposure (Figures 2A and 2B). The leaves, even though they may be “rolled up” at times, are subject to drying out in dry winter air. The solution is to protect the plant from the drying wind. Plant rhododendrons behind buildings or other plants that can serve as wind shields. Put wind shields in place around the plants during the winter months. Mulching as described above is critical to preventing winter injury.

### Black Vine Weevil

The adult weevils feed on rhododendron leaves producing a C-shaped notching in the leaf margin (Figure 3). These insects can be quite damaging. Most of the damage comes from weevil larvae feeding on the roots. Affected plants lose vigor, and may die eventually. The insecticide Orthene is registered for use on rhododendrons, and it will control black vine weevil adults. The key to control, of course, is to kill the adults early in the season before they lay too many eggs. Begin spraying in late May, followed by two more sprays two weeks apart. Follow instructions on the Orthene label. Refer to OSU Extension Fact Sheet HYG-2016, “Black Vine Weevil,” for more detailed information.



Figure 5. Brown discoloration at the crown in rhododendron caused by fungal crown rot.

### Phytophthora Root Rot (Rhododendron Wilt)

This disease is caused by a soil-borne fungus (*Phytophthora* spp.). Generally, it is a problem where wet (saturated) soil conditions occur frequently. Early symptoms of the disease consist of retarded growth, drooping of foliage (perhaps on one or two branches only) and yellowing of leaves (Figure 4). Infected roots appear dark and “mushy.” As the disease progresses, a browning discoloration of the wood may extend upward from the base on affected branches (Figure 5). Plants in poorly drained soils are very subject to waterlogging which makes them highly susceptible to this disease. If this occurs, plants may die quickly.

Whereas infected plants cannot be cured, root rot may be tolerated by the plant if improvements in soil drainage and aeration are made as soon as possible. Young plants can be lifted and replanted. Before replanting, improve the drainage and aeration of the soil. Use tile drainage or add porous materials in a layer beneath the root zone. Plant in a raised bed and do not mound the soil up around the crown. Mulching with tree bark provides biological control. The mulch must be applied to a depth of two inches and reapplied as it decomposes.

If plants cannot be lifted and replanted, try to improve drainage and lessen the occurrence of over watering by redirecting rain runoff, placement of drain tiles, and changes in irrigation programs. If the plants die from root rot, it would be unwise to replant another rhododendron in the site without considerable improvement in the soil conditions. Caroline and English Roseum are rhododendron cultivars with some resistance to this disease.

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