



RHODODENDRONS

Azaleas and rhododendrons are members of the plant family Ericaceae. They are both classified in the genus *Rhododendron*, however, there are several differences between these two groups. Azaleas tend to be deciduous whereas rhododendrons are usually evergreen with a larger growth habit. The structure of azalea and rhododendron flowers is similar but there are differences in the number of stamens: azalea blossoms usually have only 5 stamens; rhododendron flowers usually have 10 or more. Azaleas can tolerate more sun and tend to be more drought tolerant than rhododendrons and are therefore easier to grow for most gardeners.

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Buying:

The Eastern Washington gardener who wishes to grow rhododendrons will need to buy varieties that are cold hardy to at least -20 degrees Fahrenheit. Purchase plants with healthy green foliage, avoiding plants with chlorosis (yellowing between the veins of the leaves). If the plants are in a container, check to see that the roots are not crowded or circling. If you bring home a plant that turns out to have solid roots shaped like the container it was grown in, it will be necessary to loosen the roots and spread them out. Remove any circling roots. If the roots are so crowded together that you cannot work them loose with your fingers, you can slice off ½ to 1” from the sides and bottom of the root mass. This action will stimulate new root formation.

Site Selection:

Proper site selection is extremely important. Rhododendrons perform best in protected sites with light shade. Some sun is needed however, as dense shade will result in spindly plants that will rarely bloom. South, southwest, and west locations should be avoided, especially if adjacent buildings are present to reflect sunlight on the plant.

Dappled sun in the summer, and little or no early morning sun in the winter is best. Early morning sun in the winter can heat the leaves and buds allowing water to transpire (evaporate) while the roots are in frozen soil and cannot supply water to the leaves. This will cause browning of the leaves and death of the flower buds. Avoid windy, exposed sites. The north or east sides of a building are the best locations for rhododendrons.

Do not plant too near shallow rooted trees such as locust, maples, elms, willows, or firs. The tree roots will compete with the rhododendron for water and nutrients. Sites littered with building debris, particularly mortar, should be avoided, as this will raise the soil's pH. Planting too close to a driveway or sidewalk can have the same effect.

Soil Preparation:

It is wise to have a soil test performed before preparing the soil. The test will give you an accurate reading of your soil's pH and organic matter. Test results may include recommendations to modify soil pH, organic matter content and fertility.

Soil at the site should be moist, but well drained, and aerated, with an abundance of organic material worked into it. These plants do not tolerate an alkaline soil, and prefer a pH of 4.5 - 5.5. The soil pH in eastern Washington generally falls between 6.5 - 7.2. You can acidify your soil by incorporating elemental sulfur or sulfate salts.

Most soils in eastern Washington are highly mineral with low organic matter, but these plants prefer soils rich in organic matter. For this reason, amending the soil may be necessary. Organic matter should make up 25% - 50% of the soil amendments. It is best to prepare the entire planting bed in this manner, rather than just amending the soil in the hole that you will be planting in.

Planting:

In Eastern Washington, planting in early spring is best. Should you plant in late spring or summer, the plant will likely require extra watering.

Whether the plant is in a container or balled-and-burlapped, be sure to thoroughly moisten the root ball prior to planting. If the root ball is dry, water may run down the outside of it rather than infiltrating into it. Soaking the plant in a tub of water prior to planting will prevent a dry root ball.

Dig a wide, shallow hole. The hole should be 3 - 4 times wider than the root ball, and the depth should be approximately 1 inch less than the root ball height. Remove burlap, twine, and any other container. It is important to plant the rhododendron so that the rootball is ½" to 1" above the soil line. Planting rhododendrons too deeply is a major cause of plant failure. Do not use your foot to tamp down the soil, do this gently with your hands. Water plants well after planting. Mulch with 2 - 5 inches of leaves (oak are best), pine needles, or bark. Keep mulch 2-4" away from the stems to prevent the bark from rotting.

Weeding:

Use mulch to help control weeds, and hand pull any that grow. Rhododendrons have very shallow roots. Cultivating with a hoe can easily damage their roots.

Watering:

Rhododendrons can be damaged by waterlogged soil, and yet, being shallow rooted, they can dry out quickly in the summer. Newly planted rhododendrons will require extra watering for the first year or two until their roots are established. At least 1" of water per week will be needed. The first sign of water deficiency is a slight twisting or curling of the leaves. When you see this, it is time to water. If you are not sure if your plant needs water, simply feel the soil with your fingers. If the top inch of soil feels dry, it is time to water. A good covering of mulch will conserve water and reduce the need to water as frequently during the summer months.

Be sure to water the plants well in the fall. A thorough soaking just prior to the first hard freeze will help prepare your plants for the winter.

Fertilizing:

Before applying fertilizer, a soil test is recommended so that you know what nutrient deficiencies exist, if any. The fertilizer of choice is one that is specifically formulated for acid loving plants. Your local nursery can help you choose this type of fertilizer. Follow recommendations for amount of fertilizer carefully. Rhododendrons and azaleas are not tolerant of excessive fertilizer. More of these plants die from being over-fertilized than from being unfertilized. Fertilize in a ring just outside (not on top of) the root ball.

If it is needed, fertilize in the spring when the buds start to swell and get sticky; fertilize again after flowering is complete. Do not fertilize after July 1.

Be sure to follow the recommendations on the product label; fertilizer recommendations are usually based on the size of the plant. More is not always better and too much can damage or kill rhododendrons.

Deadheading:

Deadheading means removing the withered flower trusses. This improves appearance, and directs the plant's energy to producing flower buds for next year's blooming season.

Pruning:

Pruning rhododendrons and azaleas is often unnecessary in eastern Washington, except to remove dead, dying or diseased branches, which can be done at any time. If pruning for size reduction, the best time is just after blooming or when growth buds start to become active. Cut back to the next live branch or trunk that is at least ½ the diameter of the branch being removed.

Rhododendron and Azalea Problems:

Consult WSU publication EM091E "Identifying, Treating, and Avoiding Rhododendron and Azalea Problems" for more specific information on problems associated with these plants. Link: [Identifying, Treating, and Avoiding Azalea and Rhododendron Problems | WSU Extension Publications | Washington State University](#)

Environmental Issues

Leaf curling may be noticed during the winter months. If you see the leaves of your rhododendron rolled tightly into a cigar-like shape, this is not an indication of damage or disease. This phenomenon, which happens during hard freezes, is a normal reaction of the plant. Called thermonasty, it is a means by which a plant protects itself from damage by limiting the loss of water from its leaves.

Cold Injury:

Frost injury can happen in the spring as new leaves begin to emerge. Symptoms include leaves that are wrinkled or distorted and those with necrotic (dead) patches. Late spring frosts may cause this damage, or even kill new leaves on varieties which lack the appropriate cold hardiness. Those varieties which are known to begin their growth early in the season, such as 'Christmas Cheer' are also quite susceptible.

Winter injury can be caused by several factors including temperatures below the cold tolerance of the plant, and desiccation of leaves when soil water is frozen and can't be absorbed by the roots. Symptoms of winter injury include:

- Dark blotches on leaves, particularly the edges that may or may not revert to green in spring.
- Leaves turning brown or black along the tips and margins of leaves and drying out
- Leaf death (usually the most exposed leaves)
- Twig dieback
- Bark cracking
- Death of the entire plant.

Nutrient deficiency from alkaline soil appears as yellow leaves with green veins or leaves that turn completely yellow. This usually occurs on the newest growth. Have a soil test with a pH analysis to determine a course of action. The most frequent problem in eastern Washington is a lack of available iron due to high pH. If a soil test reveals a pH above 5.5, supplement soil with ferrous sulfate early in spring and again in September. Sprinkle over surface of the soil, not touching the stems of the plant.

Disease:

Root rot is often caused by the fungus *Phytophthora cinnamomi*. Planting high, providing well drained soil, and keeping the plant cool during hot weather by use of mulches are the keys to avoiding this disease.

Stem die back can occur when a canker develops and girdles the stem. Leaves and stems above the canker wilt and die, but the rest of the plant will look normal. Two fungi, *Phytophthora* and *Botryosphaeria* are common causes of this problem. Prune diseased stems well below the canker and clean pruning shears with a household disinfectant such as Pine-sol or Lysol, after each cut. Water-stressed plants are more vulnerable to this disease.

Leaf spots in brown, black or purple may appear. Wind burn, sunburn, drought, or winter damage may be the cause or these spots and they may disappear when warmer weather arrives. Leaf spots may also be caused by fungi such as *Botrytis*, *Phyllosticta*, or *Septoria*. For control recommendations, consult the WSU website [Hortsense](#).

Insect Pests:

Root weevils feed on roots as grubs and on foliage and stems as adults. Symptoms include notched leaves and minor to severe root and bark damage. The grubs are white and stay in the soil, feeding on roots. They can reduce plant vigor, or with a serious infestation can cause plant death.

Adult root weevils are black and climb up the stems to feed at night. The leaves will look as though someone took some pinking shears to them. For control recommendations, consult the WSU website [Hortsense](#).

Aphids are rarely damaging and can be treated by spraying plant with a strong blast of water from the hose. Consult [Hortsense](#) for additional methods of treatment.

Trouble Shooting Tips:

- Is soil saturated with water? Lift plant and provide drainage or move to a better site.
- Is soil heavy and tightly packed? Lift plant and work organic matter into planting bed, not just the planting hole.

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- Leaves appear burned or dried out:
 - Roots may be damaged and unable to take up water
 - During winter, roots cannot absorb (frozen) water from the soil, leading to dehydration of leaves. Provide extra water during warm winter days if feasible.
 - Sunlight reflecting off snow or light colored surfaces may cause leaf to transpire faster than it can bring moisture up from roots, so leaves dehydrate. May need to move plant to a more desirable location.
 - Too high salt content from applying more fertilizer than the plant can use. Give as much water as possible to wash fertilizer out of roots.
 - Curled and drooping leaves in very cold weather are normal. The leaves are protecting themselves from dehydration.
- To Prevent Winter Injury
 - Mulch after watering in late fall. Apply a thick layer, but keep it away from the trunk.
 - Move plants to a more desirable location if necessary.

References:

[American Rhododendron Society: *Rhododendron & Azalea Pages: Culture & Problems.*
Rhododendron and Azalea Care](#)

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