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Protecting Evergreens for Winter

Many rhododendrons show signs of winter injury each spring. Symptoms range from browning or "burning" of the leaf margins or midrib to desiccation of the smaller twigs, or even death of the entire plant. Injury is most noticeable on branches that were not buried under the snow, on plants growing in exposed locations, and on mature specimens.

Why does this happen? During the winter months, rhododendrons are faced with a situation in which more water can be lost from the leaves than the roots can replace. When the ground is frozen, water is unavailable to the roots, but moisture will still be pulled from the foliage on sunny, windy days. Winter water loss from leaves of all evergreens is greatest during periods of strong winds, and also during periods of warm, sunny weather.

The result of excessive water loss is brown, dead areas along the tips, edges or midribs of leaves. Such symptoms are accentuated when cold temperatures dip near to or below the hardiness limit of the plant; when plants haven't hardened off properly during the fall months; or when the naturally shallow root system has been damaged by incorrect planting, inadequate protection, or by disease or insect problems.

Rhododendrons do have a built-in mechanism to reduce winter moisture loss. When the temperature falls to the low twenties, the top edges of leaves curl inward towards the bottom midrib, and the leaves hang down. This reduces moisture loss. When damage shows along leaf edges it tends to indicate that most of the damage occurred from water loss rather than from cold temperatures.

The best way to protect plants susceptible to injury from sun and wind is to plant them in protected locations. These include the southeast, east, or northern side of a wall, fence, or similar windbreak. Also, planting broad leaved evergreens in the spring will allow a full growing season for the re-establishment of roots. A 2 to 3 inch mulch layer applied just before the ground freezes will prolong the period before the penetration of frost stops root growth and water absorption.

When plants are already growing on the sunny south or southwest side of a building they can be protected by either a burlap, plastic mesh, or wood-slatted snow fence or a barrier encircling each plant. A cover can be made from evergreen boughs by forcing their cut ends into the ground near the base of the plants and gathering the tops with twine. Plastic should never be used since all you're doing is creating a mini-greenhouse which will cook your plants. Shades and screens should remain in place through early

spring until the soil temperature has warmed sufficiently to allow for water uptake by the roots.

Anti-desiccant sprays can also be used. These are helpful in slowing down the rate of transpiration by coating the foliage with a layer of plastic or waxy material. However, one application of an anti-desiccant is not enough. Anti-desiccants are most effective when applied two to three times: in late fall or early winter, again during a January thaw, and if possible, a third time in late winter.

To repair damage in the spring, remove only those branches that are broken or so brown that they are obviously dead. Do not remove branches if scraping the outer bark reveals a green layer underneath. The extent of winter damage can best be determined after new growth starts in May and June. Evergreens showing leaf damage will often produce new leaves by the end of June, then you can prune back to within one-quarter of an inch above a live bud, or flush with nearest live branch.

A spring application of an acidic fertilizer (at half strength) to the soil around winter-damaged plants, accompanied by adequate watering, will often induce new growth to compensate for winter Injury.