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Leaf and Needle Drop of Evergreen— A Normal Phenomenon

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In late summer and throughout the fall, many home owners observe a discoloration of the leaves or needles on their evergreens and fear that some insect or disease has affected the plants. They should not be alarmed; this is a natural condition.

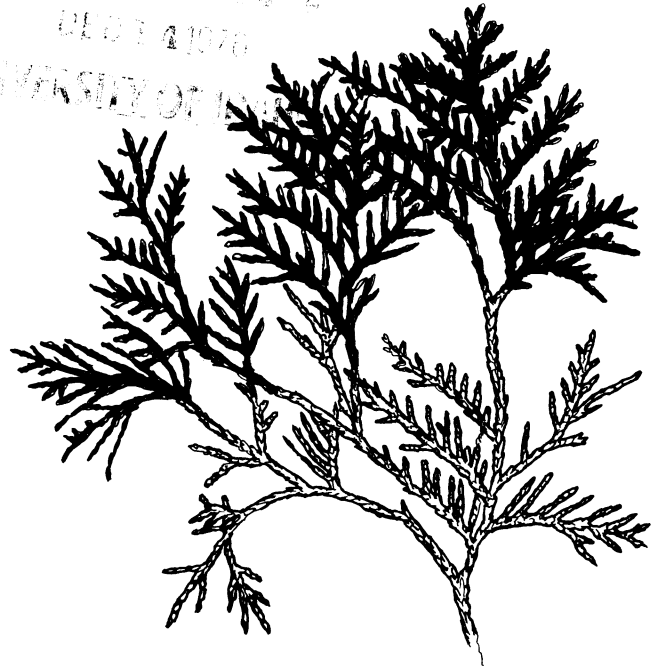
Evergreen shrubs and trees remain green throughout the year because they do not lose all of their foliage at one time. Usually, annual leaf or needle drop goes unnoticed because new leaves or needles conceal the old, inside foliage that has turned yellow and brown.

Sometimes the drop occurs slowly, but on other occasions, many leaves or needles discolor simultaneously.

Most evergreens drop their leaves or needles in the fall, but some evergreens shed their leaves or needles in the spring or early summer. Each species of evergreen is different. Evergreens that normally shed one-year-old leaves or needles are holly, laurel, arborvitae, and white pine.

White pines are the most dramatically affected. This species commonly bears three years' needles in the summer and two in the winter. In October or November of some years, this species may have only one year's needles still attached. Matured white pine needles turn yellow throughout the tree. The tree will appear unhealthy when the yellowed needles outnumber the green ones of the current season.

Austrian and Scotch pine usually retain their needles for three years. Spruce and fir trees retain their needles for several years. Needle drop may not be visible unless one looks for it on the inner branches. Few needles turn yellow and drop in late spring or early summer of their third year.



Causes

Any factor that decreases the vigor of evergreens stimulates premature leaf or needle drop. Among these factors are:

1. **Wet or poorly drained soils.** Evergreens planted in these soils will often show an abnormal amount of leaf yellowing on the inside branches.
2. **Drought.** If evergreens are not provided sufficient water during the dry part of the summer, leaf or needle drop may be earlier and more severe than normal.
3. **Planting care.** Most evergreens around the home are grown in sites far removed from their native habitat. Special care is often required at the time of transplanting. Break and loosen the ball of soil surrounding the roots to provide better aeration after transplanting. (See Idaho Current Information Series No. 320, How to Transplant Trees and Shrubs, for instructions on planting trees.)
4. **Nutrition.** A lack of nutrition often means short yearly growth and premature leaf or needle drop. In southern Idaho, yearly applications of phosphorus, nitrogen, and iron are essential to maintain healthy and vigorously growing shrubs and trees.
5. **Mites.** Mites frequently lead to non-seasonal needle drop. Generally, the needles of infected trees are off-color, becoming yellowish, or brown. A light webbing is associated with heavy infestations. If mites are suspected, hold a sheet of paper under a branch and sharply tap the branch. The mites will fall onto the paper where they will be more visible.

6. **Herbicides.** Some forms of herbicides applied to the lawn or in the vicinity of evergreens may cause sufficient injury to result in needle yellowing and non-seasonal drop.

7. **Winter damage.** Prevent winter injury or winter drought by following the instructions outlined in Idaho Current Information Series No. 326 Winter Injury or Winter Drought of Evergreens in Idaho.

Don't confuse natural seasonal drop of evergreens with various insect disease problems that can reduce the vitality and aesthetic value of shrubs and trees.

Normal needle drop is a seasonal occurrence, and the symptoms are distributed generally throughout the interior portion of the plant. If you have doubts about accurate diagnosis, examine the leaves and needles carefully. Needles that yellow and drop normally from age may have occasional spots and blemishes. Old needles sometimes show mottled brown coloration from invasion by nondisease-causing fungi. On the other hand, spots or blemishes on the current season's leaves or needles may be caused by insects or disease. An accurate diagnosis of the condition will determine whether chemical sprays are necessary to arrest the problem.

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