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## Fall and winter watering

James R. Feucht<sup>1</sup>

### Quick Facts

- Trees, shrubs and lawns need watering during prolonged, dry fall and winter periods to prevent root damage that affects the health of the entire plant.
- Water only when air and soil temperatures are above freezing.
- A soil needle attachment for a garden hose is efficient in getting water to root systems of newly planted trees and all shrubs.
- Established large trees have a root spread equal to or exceeding the height of the tree; lawn sprinklers, rather than soil needles are therefore needed to ensure that the entire root system has been watered.

Dry air and low soil moisture are fall and winter characteristics in many areas of Colorado. During extended periods, particularly October through February when there may be little or no snow cover, trees, shrubs and lawn grasses can be damaged if they do not receive supplemental water.

The result of long, dry periods during fall and winter is injury or death of plant root systems. The plants affected may appear perfectly normal and resume growth in the spring using stored food energy, only to weaken or die in late spring or early summer when stored energy runs out. Weakened plants also may be subject to insect and disease problems later on.

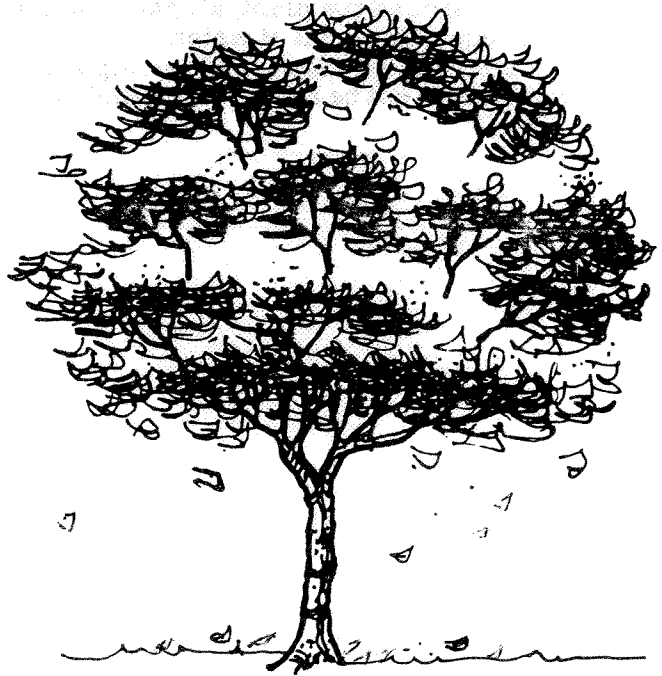
### Plants Requiring Late-Season Watering

Most woody plants with shallow root systems require supplemental watering during extended dry fall and winter periods. Included in this group

are shade trees such as European white birch, Norway and soft (or silver) maples and lindens (basswood). Also included are evergreen trees such as Colorado Blue spruce.

*Evergreen shrubs*, particularly those growing near a house, may suffer root system damage during dry spells. Included are Pfitzer and "Tammy" junipers, Manhattan euonymus and Oregon grape-holly.

*Lawn grasses* also are prone to winter damage. Newly established lawns, whether seed or sod, are especially susceptible to damage in dry fall and winter weather. Susceptibility also increases with lawns having south or west exposures.



### Watering Guidelines

Watering should be performed only when air temperatures are above freezing and the soil is

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not frozen. Apply water early in the day so that it will have time to soak in before possible freezing occurs during the night. If water freezes around the base of a tree or shrub, it can cause mechanical damage to the bark. Heavy coatings of ice on turf-grasses also can cause suffocation or result in matting of the grass.

In most years, one or two waterings in late fall and early winter may be enough to keep plants from suffering damage. The most important time for supplemental water is in fall prior to subzero weather.

A soil needle (root feeder) attachment for the garden hose is recommended for applying water to newly-planted trees and all shrubs. The attachments are available in garden supply stores.

In using a soil needle, the depth at which the water is applied will depend on the type of plant concerned. For most junipers, about 24 inches is sufficient. On shallow-rooted trees such as linden, maple and birch, 12 to 18 inches is the correct watering depth. If a portion of the root system of a plant is beneath a sidewalk or other obstruction, the soil needle should be slanted to apply water beneath these surfaces.

If the water is applied with a soil needle in a zigzag pattern around the plant, all parts should receive an adequate amount of water.

If soils are a heavy, clay type it is important that the soil needle not be left in the ground more

than a minute or so in any one spot. The needle should be moved frequently, from 6 to 8 inches apart and the procedure repeated, slant the needle slightly away from the plant.

This procedure will help avoid over-watering and also improve aeration of the roots. In sandy, well-drained soils, the needle should not be left in the soil for long periods of time because water will be wasted and valuable minerals will be leached below the root zone.

### **Newly Planted vs. Established Trees**

In watering recently planted trees and shrubs, the most important area to water is the distance from a point halfway between the plant and the outer stretch of the branches to approximately 1 foot beyond the "drip line" or branch extremities. The majority of absorbing roots are in this area.

Trees that are established (two or more years) should be watered with a lawn sprinkler to ensure coverage of all the root area. Roots will extend radially at least as far as the tree is tall.

For shallow-rooted trees, such as birch, a sufficient amount of water may be applied with sprinklers. Lawn areas also will benefit at the same time.