

UI Extension Forestry Information Series

Helping Your Drought Stressed Trees and Shrubs Through the Winter

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The high temperatures and low rainfall we usually experience each summer can put our trees and shrubs under incredible stress. There are a few things you can do to help your landscape, ornamental and/or Christmas tree plantings survive the winter.

In times of drought, all trees and shrubs benefit from deep watering. It is very important that trees and shrubs receive enough water before the soil freezes. Pay particular attention to conifers, as these species retain their green needles throughout the winter and continue to lose water through transpiration. Most of a tree's roots are located in the top two feet of soil. When watering, you want to soak the soil to a depth of at least 12 inches. Short, frequent watering usually does not penetrate much beyond the sod and organic matter layer of the soil profile.

There are several methods of deep watering your trees. The easiest way is to lay a garden hose at the base of a small tree or at a point along the drip line of a larger tree. Let the hose run slowly for at least four hours. Move the hose around the entire drip line of larger trees to ensure that all of the roots receive water. A drip irrigation system set up around the tree will also work well with this method.

To aid deep watering on sloping sites, and aerate for roots, consider the method shown in Figure 1. Drill three or four holes approximately 18 inches deep and 2-3 inches in diameter at an angle pointing outward from near the base of the tree. Insert perforated plastic pipe and fill with medium-sized gravel. This method will insure that the water you put on the ground will penetrate the minimum 12 inches necessary for good root zone moisture content.

Mulch is another way to conserve moisture near your trees and shrubs. Mulch is any material placed on the soil to cover and protect it. Common mulches are bark, wood chips, ornamental gravel, and landscape matting. Mulching will also help with weed and grass control and protect the lower portions of your trees and shrubs from mechanical injuries.

When all else fails, and you lose a tree or shrub to drought stress, take the time to replace the planting with a more suitably drought tolerant species. If you lost a birch to drought stress, do not replace it with another birch! Drought tolerant species include bur oak, Gamble oak, blue oak, black and honey locust, Rocky Mountain juniper, Austrian pine and ponderosa pine. Drought intolerant species include birches, cottonwoods, poplars, spruces, and firs.

Remember the old adage "an ounce of prevention is worth a pound of cure"? In the case of deep watering your trees and shrubs before winter it proves only too true.

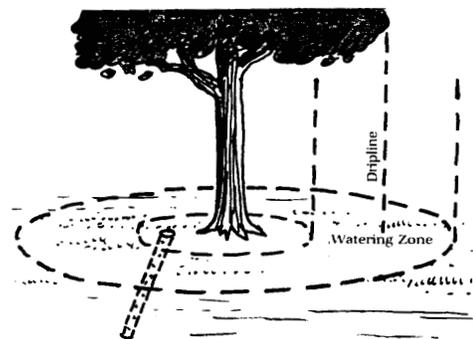


Figure 1

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