



## Fall Watering Improves Landscape Health

It's been hot! And windy. In unwatered portions of the landscape you may be seeing cracked soil - a good indication conditions are dry. In fall, warm dry days with cool nights usually lead to great fall leaf coloration, but dry fall conditions have a downside, too. Fall is a time for plants to replace the moisture reserves lost during our hot dry summer periods. But if these same conditions continue in fall little recovery is possible.

Drought stressed trees are more susceptible to secondary attack by insect pests and disease problems, such as borers and cankers, which can cause tree death. One common symptom of drought stress is leaf scorching, a uniform yellowing or browning of the edges of leaves on broadleaf plants or the tips of evergreen needles. However, even trees that don't exhibit leaf scorch can be experiencing periodic drought stress. Healthy trees, receiving adequate water, are much more resistant to pest problems.

Trees and shrubs not fully hydrated going into winter are also prone to winter desiccation, a common type of winter injury that occurs when the amount of water lost by plants exceeds the amount picked up by the roots. Symptoms seen in spring include brown foliage on evergreens, particularly arborvitae, boxwood and holly, but sometimes also pine, spruce, fir, juniper and yew. The extent of the symptoms can vary from brown needle tips on one side of the plant, to one or two branches, to the whole tree. Injury is found on the outer portion of the branches and is often most severe on the side of the tree facing the wind or a source of radiated heat, such as a south or west-facing brick wall or street.

Landscape ornamentals also suffer during dry conditions, which may reduce plant vigor or kill them if dry conditions are severe enough. Newly planted or transplanted perennials are particularly prone to damage or death from dry fall conditions.

However, plant damage or death is preventable. Deep-watering plants in fall during dry periods may mean the difference between healthy vigorous trees, shrubs and ornamentals or stressed struggling plants next spring.

### Managing Dry Fall Conditions

Begin by applying a 3-6 foot diameter ring of mulch around the base of trees and shrubs, with 3-4 inches of an organic material, like coarse wood chips, to help conserve soil moisture. Make sure it's a flat layer of mulch, not piled up like a volcano against the plant's bark. Keep it far enough away that it doesn't touch the tree's trunk.

During fall, plants should receive one inch of water per week, either through irrigation or rain. For mature established trees, deep soaking every 2 weeks is usually adequate. Apply water deeply, moistening the soil to a depth of about 12-18 inches, until the ground freezes. Use a long-bladed screwdriver or piece of rebar to check the depth of water penetration. Once you've reach dry soil, it will be much harder to push the probe into the ground. Water the entire area underneath the tree's drip-line if possible.

If using a sprinkler, let it run in a low pattern in one area until the top 12-18 inches of soil is moistened then move it as needed to water the entire area underneath the tree's canopy or over a shrub's root zone. Or coil a soaker hose several times around the tree from the trunk to the dripline, and let it run until the soil is moistened.

### **Care of New Plants**

Trees, shrubs and ornamentals recently planted or transplanted need extra attention. Make sure new plants are mulched as described above. Research has shown a 2-3 inch application of wood chip mulch nearly doubles plant growth in the first few years after planting by eliminating competition from weeds or grass and conserving soil moisture.

Tree roots, especially the small, water-absorbing roots, are easily damaged during transplanting. For sufficient water uptake to occur, the root ball of a newly planted tree must be kept moist, but not saturated. Monitor the moisture in the root ball daily, and water as needed so it doesn't dry out. The best way to do this is by sticking your finger into the soil of the root ball to feel for moisture level. When watering, be sure to moisten the area outside the root ball too, this encourages root growth into surrounding soil.

A watering basin two to three inches deep and three to four feet in diameter, created around the base of young trees will hold water until it can percolate into the soil.

### **Final Tips**

Here are a few final things to keep in mind to make your landscape plants as healthy as possible this fall.

Don't fertilize now. Trees and shrubs need to become hardened off before going into winter. The succulent, new growth that results from fertilization is much more susceptible to winter burn.

Don't do any pruning of woody plants until they are dormant. Pruning is an invigorating process which stimulates new growth. Whenever pruning is done during the growing season, new growth will quickly follow. Late summer/early fall pruning of evergreens, such as yew or boxwood, and spring or summer-flowering shrubs leads to the development of new growth. It takes time for this new growth to harden off and develop full cold hardiness, making the new growth very prone to damage from freezing temperatures in October/November or winter injury. If pruning needs to be done before winter, wait until plants are dormant. The EXCEPTION to this rule is removal of dead, diseased or damaged branches; this can be done at any time.

### **Your Suggestions are Welcome!**

Is there a lawn and gardening topic you would like to learn more about? Sarah Browning is an Extension Educator with Nebraska Extension and can be contacted by phone at (402) 441-7180: by mail at 444 Cherrycreek Road, Lincoln, NE 68528: or by e-mail at [sbrowning2@unl.edu](mailto:sbrowning2@unl.edu).

Image credit - Sarah Browning. Caption - even mature trees like this spruce benefit from watering during dry summer and fall conditions.

Image 2 - Sarah Browning. Caption - Desiccation symptoms on white pine needles.



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