

## Warm Weather Effects

By: Kelly Feehan, Extension Educator

Release: Week of March 4, 2024

Record setting warm winter temperatures are enjoyable for humans but lead to plant problems. Some are harmful to plants and others are not as harmful in the long run.

One of the most harmful is desiccation, especially in evergreen plants like Arborvitae and boxwood. When conditions are warm and windy, green leafy tissue like needles lose more moisture through transpiration. If soils are dry or cold, roots are not taking up moisture and tissues dry out.

While correct summer and fall watering is most important, winter watering can be done to ensure moisture is available once roots begin taking up moisture in spring. If soils are dry and not frozen, and air temperatures above 45 degrees F, provide an 8 to 12-inch deep watering from near the trunk to six to ten feet beyond the plants drip line. Roots grow outward, not down, and a wide watering is more beneficial.

If a tree is not mulched, add a ring of mulch from near the trunk out to the tree or shrubs drip line, which is the outer tips of branches. Use a three to four-inch deep layer of organic mulch, like shredded wood. Stone and rubber mulch increases temperatures around plants to increase transpiration and heat stress.

A good portion of northeast Nebraska remains in severe drought. While many trees appear fine, the effects of drought linger even after there is good moisture. Stressed trees are more likely to be attacked by opportunistic pests like wilt diseases and insect borers. Symptoms often appear as much as 5 years later.

To further help trees, avoid heavy pruning to reduce loss of stored food and avoid creating wounds a tree has fewer resources to deal with. This spring, avoid fertilizing trees with nitrogen, especially those growing in fertilized lawns. Nitrogen can force succulent growth in stressed plants which uses more resources and increases pest susceptibility. Most soils in Nebraska are fertile enough for trees.

If a tree is growing in a lawn, turf fertilization benefits trees as well and is often more than a tree needs. Keep in mind turfgrass requires more nitrogen because it is mowed and forced to grow continuously. In contrast, trees have one growth spurt in spring. Avoid adding insult to injury by not fertilizing trees in lawns in addition to turf fertilizer.

Another concern with warm weather is plants breaking dormancy early. Dormancy is what protects plants from cold temperatures. A fully dormant plant that can tolerate minus 10 to 20 degrees may not be able to tolerate 15 to 20 degrees once dormancy is broken.

There may be no visible signs of a plant having broken dormancy. One sign is leaf and flower buds showing color. Even if it's only a hint of green or petal color, these buds are much more likely to be damaged by cold temperatures.

While concerning, healthy trees and shrubs are rarely killed when this happens. Deciduous trees and shrubs, those that drop leaves in fall, develop a second set of leaf buds. While this takes extra energy, and stored food is used, it is not a major issue for healthy trees and shrubs. Leafing is delayed, but does occur.

If flower buds are killed, the plant will not develop a second set for this growing season. For this year, blooming will be reduced. On fruiting plants, fruit yields may be prevented or reduced for this year. In the case of a tree like silver maple, this can be a welcome consequence. For fruit trees, this year's yields would be prevented or reduced.

If a plant shows dieback or evergreens begin to develop brown needles in late winter through spring, we recommend waiting until June 1 to prune out dead branches or remove woody plants. This allows the plant time to develop secondary buds and show signs of growth.