Brown Evergreens Are Not a Pretty Sight

by Marilyn Loser

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I'm enjoying the warm, sunny days. I'm not enjoying the reddish-brown evergreens around town. Most of the brown needles in Alamosa are probably due to "winter burn" or "winter desiccation". 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 often most severe on the side of the tree facing the wind or sun. In Alamosa this is typically on the southwest side of the tree.

What causes winter burn? During the winter months photosynthetic processes are slowed, but evergreens (mostly conifers in our area) continue to lose water at a higher rate than deciduous trees, through their needles and to a lesser extent from exposed bark, twigs and buds.

According to Maine's Department of Agriculture website, "Warm, sunny days or windy conditions increase the amount of water lost from the needles. If the soil is frozen or soil moisture is low due to dry conditions, plant roots are unable to pick up enough water to meet its needs. Needles dry out and die, but they may hold their green color until warmer temperatures arrive in spring, thus delaying the onset of browning symptoms." Sounds like Alamosa.

So what can you do? When I asked Colorado State Forester Vince Urbina, he said, "Don't give up yet. Wait and see what happens when trees bud out." If you're a frequent reader of this column you'll recall that conifers only produce buds once a year, in the spring.

"Evergreen trees with a small amount of needle loss may still have live buds within the damaged branch sections. These buds will send out new growth and eventually fill in the damaged section in a few years," states the Maine website.

On warm days I've been surface watering the trees in my yard from the trunk to a few feet past the drip line. I had a call from a friend who was trying to water her trees, but was concerned that the ground was still frozen six to ten inches down. I don't know of anything you can do to the frozen ground, but watering the top ten inches will impact a lot of little roots. Conifers tend to have shallow roots. The tricky part is that the tree needs to absorb and process the water before temperatures drop rapidly below freezing. If too much water is caught in a tree cell and the water freezes, the cell will burst and die. However, if the plant can shift water to areas between cells before the water freezes, damage is less likely. This works much better in April than in December and January in the San Luis Valley.

For more information on winter watering, please refer to the two-part 2009 column "How trees survive winter and how you can help" under the Newspaper tab at www.alamosatrees.net.

Can you prevent winter burn in Alamosa? I believe it's pretty hard. You can lightly wrap small trees in burlap or try to protect them with a wind-break fence. When you plant a conifer, you can plant it in a location protected from the wind and from afternoon winter sun. I don't have such a place in my yard.

The Austrian Pine I planted 15 years ago hasn't had winter burn in the past, but it has a lot of brown on the south side this year. It's too big to wrap in burlap without the help of artist Christo. Austrian Pines tend to keep their needles for three years according to the High Plains Journal. Once needles drop, new needles will not grow back to replace them.

The Morton Arboretum says, "applying an anti-transpirant, also called antidesiccant, helps reduce transpiration and minimizes damage to the foliage." Other sites point out that there is no scientific evidence that this works.

"Conifers, the cone-bearing pine and cedar, cypress, fir, spruce, and redwood, which make the world green, are ancient inhabitants of the earth, precisely the same today as they were in the primordial forest two hundred millions years ago. How perceptive are those American Indian tribes who call the conifer grandmother, the aged one. Ever green, changeless from season to season, lofty and sombre, the grandmother seems to live eternally, symbol of the earth's constant energy." Meinrad Craighead