

So, here's what happened. You were out working in the yard two weeks ago. The lawn is greening up, the trees are starting to shoot leaves, and it is 75 degrees outside. Everything looks great. A few days later, we have some really cold weather. It gets down to 8 degrees. You check around and see that some of the leaves are now dying off the trees. The lawn still looks good. With a side glance, you notice your spruce tree! It looks like it is dead or dying. What happened?

This scenario played out all over Teton County over the past week or two. The cause of such a rapid onset of symptoms was usually winterburn. Evergreens remain minimally active in winter and continually lose some water through the needles. When the needles lose more water than the roots can replenish, needles turn brown. Usually, damage is most severe on the sunny, southwest-facing branches or on the windward side. Spruce survive best when protected on the windward or sunny side by several rows of deciduous trees or shrubs. If temperatures become mild for several days, followed by subzero temperatures, you can expect some winter damage symptoms come spring.

Winterburn is caused by rapid changes in weather, severe cold *and* wind. Unfortunately, we have plenty of these along the Front. Each of these elements drains moisture from the needles. It is nearly impossible to tell when the damage occurred. It could have been this past cold snap, or much earlier in the winter. I have seen that it affects the young and small trees, where often the large 20 year old tree next to it is undamaged. Most trees in town were protected by landscape, buildings, and sheer density. This slowed the wind enough to spare most trees. Unfortunately, there is no "cure" for winterburn. It is a symptom of living in Montana.

The big question is, "Will my plants die if they are showing these symptoms?" Unfortunately, we have to adopt a wait and see attitude. For now, feel the needles. If they are brittle and break easily in your hand on an entire branch, it's likely they are dead and at least that branch probably won't survive. However, if they're brown but flexible, they just may green back up in the next two months and survive. The tree, however, will be stressed. The discoloration that is showing up now is from damage that occurred some time this past winter.

Even though it's tempting, do not cut out limbs you're not sure are dead until about the 4th of July. If individual branches are brittle and break when you try to bend them, chances are they are dead. But if branches are still flexible, they may not be dead, and may take longer to green up due to the stress they've been under. Be sure to water your plants well in spring and summer, and next fall, remember to water deeply prior to the ground freezing. A deep watering would mean 6-8 hours within the drip line of the tree. Such a deep watering once a week will get much needed moisture to the roots. Remember also to water conifers any time during winter when the ground is free of snow and not frozen.

I must thank Cheryl Moore-Gough, MSU Extension Horticulturist for her contributions to this article. If you have any questions about your trees, or if you think that something other than winterburn is happening to them, please call me at the Extension Office at 466-2491.