

This column features questions from landowners submitted via the Web site. To submit a question to Small Acre Sam, visit [BarnyardsandBackyards.com](http://BarnyardsandBackyards.com). If your question is featured, you will receive a free one-year subscription to *Barnyards and Backyards!*



# ask Sam

## question

**Sam,**

We had an extremely cold and windy January (2007), and some of my spruce trees have branches with needles that turned orange – particularly those exposed to the prevailing wind. What is this, and what can I do?

– *Cris, Buford*

**Cris,**

Your spruce probably experienced extreme desiccation, a phenomenon also called “winterkill.” January 2007 was one of the coldest and windiest in recent memory in the Laramie Basin, and we have had many calls from landowners in your area with the same problem. A clue to identify winterkill is the timing (after a very hard winter) and location (on parts of a tree most exposed to the wind, typically the west side).

Frozen soils keep conifer trees from replenishing moisture to branches and needles. Extreme wind and cold temperatures remove water from or desiccate plant tissues and can kill individual needles, sections of the tree, or the whole tree.

Trees not severely affected by winterkill can and do recover with new growth. If needles still show some green, keep the tree watered and regrowth should occur. Some trees that had only a mild red hue after last January have recovered and look much better after our relatively wet summer.

Winterkill can be reduced by deep watering in the fall and giving a good soaking once a month through winter if temperature allows. That is, during dry, warmer periods. Be sure to water to the drip edge of the tree (to the perimeter of the tree branches). Adding 2 to 4 inches of mulch around the base also helps the tree retain water. For smaller trees and seedlings, try and break the wind with rocks, pallets, or hurricane fence. Spraying smaller trees and seedlings with waxy anti-desiccants like Trans-Film™ or Wilt Pruf™ in the early winter season will also help needles retain moisture and slow desiccation. More information on tree care is in the University of Wyoming Cooperative Extension Service bulletin, B-1090, *Landscaping: Recommended Trees for Wyoming* at [Barnyardsandbackyards.com](http://Barnyardsandbackyards.com) by clicking Resources and then Landscaping.

– *Sam*



*Characteristic color of spruce needles affected by winterkill.*



*Partially discolored needles of spruce that survived winterkill.*



*Dead needles hang amidst regrowth 10 months after this spruce tree was hit hard with winterkill.*



*Summer regrowth looks good on a spruce tree that experienced mild winterkill.*

## answer