



What do I do now that those darned beetles have moved on?

Remove the trees? Replant? With what species?

By Dennis Hemmer

Many Wyoming windbreaks have been ravaged by the mountain pine beetle. Seeing trees landowners have cared for over the years killed by a tiny bug is heartbreaking. Once past the heartbreak, the question is, "What do I do now?"

Unfortunately, there is no single answer.

The best scenario is to cut the infested tree down and dispose of it. If the tree is already dead, that means the beetles have left and so there is no rush to remove it. Although unsightly, when needles and smaller branches remain, the trees are still somewhat functional in a windbreak.

When the needles and smaller branches have fallen, their function as a windbreak is minimal; however, at that point, larger trees still furnish perches for raptors and nesting sites for birds such as woodpeckers and flickers. If too heartbreaking and/or ugly to leave them, cut them down. If you raise small animals that may be prey for raptors, consider cutting them down. To an owl, a cat is fine dining, but then, so is the rabbit eating your garden.

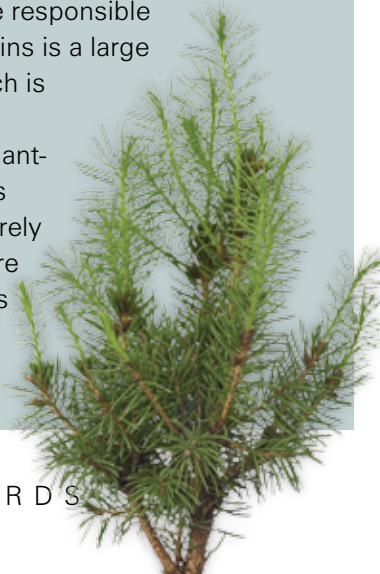
CAREFUL NOT TO DAMAGE EXISTING TREES

If replacing damaged trees, consider how much damage may be done to the remaining trees.

If sporadic trees are lost in the tree row and you decide to replace them using a tree spade, neighboring trees may be jeopardized. Trees have extensive root systems. When digging the hole for the replacement tree, roots of the neighboring trees could be seriously damaged. This can also be the case for large balled and burlap (B&B) trees.

Keep in mind the larger new tree you are planting has usually lost some roots when dug for sale. The larger the tree, the higher percentage of the original roots lost, especially those responsible for uptake of water and nutrients. What remains is a large tree with a greatly reduced root system, which is stressful to the tree.

More of the original roots will remain if planting a smaller tree. The most effective in costs and growth may be a smaller tree grown entirely in a container – you will get all the roots. There are many instances where a seedling tree has outgrown (after about 10 years) a larger B&B tree transplanted at the same time.



Replace or Not?

Decide next whether to replace the trees. Trees were planted close together in many older windbreaks. Even today, windbreaks are usually designed to be effective when the trees are 15 to 30 years old. By the time they are 30 years old, they are too close and their health will often be enhanced if thinned. If fortunate enough to just lose trees scattered throughout a windbreak, they may not need replacing. The adjacent trees may actually be healthier with those trees gone – there is less competition for light, water, and nutrients. To determine if this is so, do some research to find the usual maximum height and width of your tree species (realizing that many



Losing large trees that have taken many years to grow is heartbreaking.

trees do not reach their full potential in our challenging climate).

If significant areas have been lost, the question is whether the windbreak is still functional. Most windbreaks have multiple rows. If the main concern is snow control, then functionality may be preserved if one row is comprised of species not affected by bark beetles – for example, Rocky Mountain juniper or eastern red cedar, and if they are tall enough.

However, if the windbreak's primary function is wind control and/or the other rows aren't high enough, the trees may need replacing. The immediate reaction is, "I want to replace them with something the beetles

won't kill." While understandable, that may not be feasible. There are a limited number of trees suitable for windbreaks that the mountain pine beetle won't infest. We know they'll infest all pines. They've hit Colorado blue spruce pretty hard in southeast Wyoming. They've not been seen in firs, but the question is whether they won't attack a fir or that they just haven't yet.

Also, the number of evergreen species that will thrive in a Wyoming windbreak are limited. For many areas of the state, if pines are lost, replanting with one of the pine species is best.

Where to Plant New Trees?

Where to plant is best determined by individual situations. In most cases, simply move a few feet to the side of the tree cut down. If concerned the windbreak will look off kilter, don't worry. Once the trees have some height, the crowns will mesh and the offset is not noticeable.

If most of the row is lost and there is room, planting a new row between the older rows may be easier.

If 15-foot high trees are lost, the immediate desire is to replace the lost trees with tall ones. Remember, the cost of replacement trees rises exponentially with size. A 6-foot tree

may cost four or five times as much as a 3-foot tree.

As a footnote, if a yard tree is lost, think about species other than pines. While firs don't fare very well in the wind, they make great ornamental trees when given a little more protection and water. In addition to the visual benefit of their slightly different color and forms, they will give added diversity. Diversity can be a benefit no matter what type of epidemic (insect or disease) may strike next.

Other resources

For other considerations when establishing a windbreak or what species to use, go to barnyardsandbackyards.com, click Resources on the left-hand side, then Landscaping, then:

- "Clean up the air and help the environment! Plant a windbreak."
- "Developing a plan for windbreak has future payoff"
- "How to plan and plant a living snow fence"
- And this video, "Windbreaks for Wyoming" from the Wyoming State Forestry Division

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Taking out this single tree probably didn't affect the functionality of the windbreak. It may actually help adjacent trees.



The junipers are tall enough to take over the snow control functions lost by the death of these pines.



While dead, these trees still provide some wind and snow protection.