



ASPEN, COTTONWOODS PRONE TO PROBLEMS

Fungal, bacterial diseases often strike these common Wyoming trees

By Chris Hilgert

By far the two most common tree questions I receive are, "What is wrong with my aspen?" and "What is wrong with my cottonwood?"

There are two good reasons why these top the list of common tree problems in Wyoming. First, cottonwoods and aspens are very common throughout the state. Second, aspens and cottonwoods, both *Populus spp.*, are susceptible to several fungal and bacterial diseases, and both are prone to suffer from environmental stress due to alkaline soils.

Bacterial blight is a serious disease problem for all *Populus* species. The blight causes leaf spots and branch dieback. Leaf spots may be the first sign of the infection, but cankers with longitudinal cracks can develop on the trunk and branches causing dieback in the adjacent tissue. To my knowledge, there are no chemical treatments for this disease. Pruning to remove branches with cankers can help prevent further spread through the tree. A tree with a canker on the trunk will most likely die from the infection. The best management

strategy to prevent infection is adequate plant spacing allowing good air circulation.

Cytospora canker is probably the most common disease in cottonwoods and aspens. It starts by infecting young twigs that develop brownish, sunken, roughly circular areas in the bark. The fungus may spread down the twig into larger branches and the trunk. Infected bark discolors to orange or orange-brown and eventually darkens to black. Beyond the orange-brown discolored area you may notice blackened

dimples. These are the reproductive structures of the fungus. Spores released from this area allow the fungus to spread throughout the infected tree as well as nearby trees. Again, there are no chemical treatments for this disease. The best recommendation is to keep trees healthy and only prune when necessary to avoid injuring the tree. Pruning to remove branches with cankers will help prevent further spread within an infected tree and to nearby trees.

Marssonina leaf spot is caused by a fungus and infects aspens, cottonwoods, and other poplars. Leaves develop brown spots that later turn black. The leaf spots give the infected tree an unsightly appearance, stunts the tree's growth, and causes early leaf drop in late summer or early fall. Rarely, the fungus can also infect branches causing dieback. The disease survives on fallen leaves



This stately cottonwood provides lots of shade but is susceptible to fungal and bacterial diseases.

and can re-infect the tree year after year. Make sure to rake and destroy infected leaves each year, and do not let your sprinklers wet the leaves on aspens and cottonwoods. There are fungicides to treat this disease as either a foliar spray or a soil drench. Fungicide treatments can be expensive – especially for large trees.

Iron chlorosis is a common problem with aspens and cottonwoods and can be found on many other plants. The symptom of this problem is yellow leaves with green veins. Iron is an essential plant nutrient, but its availability to plants is related to the soil pH. As pH increases, iron availability decreases. Wyoming is known to have soils with high pH (alkaline), which leads to iron deficiency in some plants. One short-term solution is to apply iron chelate to the foliage or as a soil drench. Applied to the soil in the right amounts, iron chelate may

help the tree “green-up” for two to four years. Foliar applications will go directly into the leaf tissue and turn leaves green during the growing season. Both methods will require repeat applications over time as iron levels decrease and leaves begin yellowing. The long-term solution is lowering the soil pH with sulfur. For best results, sulfur needs to be tilled into the soil rather than applied over the surface. Lowering soil pH is a process that can take years to accomplish.

For good reason, aspens and cottonwoods are popular trees for Wyoming. They are native to the Rocky Mountain region and thrive under the right conditions. Unfortunately, one or more of these issues is likely to affect these trees during their lifetimes. While healthy trees can live for hundreds of years, these problems often shorten the lifespan of aspens and poplars.



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