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ask Sam

question

Dear Sam,

What causes a blue spruce tree to start dying from the top of the tree?

– Peggy, Douglas

Dear Peggy,

I frequently get questions about top dieback or browning of needles on spruce trees. There are many factors that could cause this. The diagnosis depends on the age of the spruce, how many are showing dieback at the top, and the severity of the dieback. On younger spruce trees (those planted less than 10 years or so), top dieback is most often from lack of water reaching the upper branches. Drought-stressed spruce trees often don't receive sufficient moisture to move the water from the roots to the very top of the tree. Root systems on spruce trees are much shallower than those of pine trees and are therefore more prone to drought stress. Branch or top dieback can also occur on spruce of all ages if injury was caused to the roots. Wind or even birds breaking off the succulent, new shoots can sometimes cause minor tip dieback on spruce.

While insects such as spruce ips beetles sometimes cause dying of the tops of mature spruce, other spruce in the area would typically have similar symptoms if beetles were the cause. Any insect or disease problems are usually secondary and occur in spruce stressed by lack of water. If you can, provide supplemental water to a depth of at least 10 inches and add a 3-inch layer of wood chip or bark mulch. Your spruce tree should recover and develop a new central leader over time.

– Sam



A young spruce tree with tip and branch dieback caused by lack of water and grass competition.

answer