

PINE AND SPRUCE LOSING NEEDLES

During the fall it is always alarming to see numerous yellow and brown needles in pine trees. Many people fear for the health of the tree and the concern is understandable- seeing that the trees can look quite ill. Spruce trees also seem to be thinning out, so what is happening with these trees?

Pine trees

Each fall pine trees go through a process called natural needle drop. This is simply a process where 2 to 4 year old interior needles turn yellow, and then brown, and eventually drop off the tree.

This natural process occurs yearly and does not mean the tree is in danger. However, it is important to check and see that only the older needles are affected. The needles on the interior of the tree are the only ones that will show the effects of this process. As expected, in times of drought, needle browning may be particularly more noticeable since more needles are shed in response to environmental stress. Many pines entered needle drop even earlier than normal this year due to extremely stressful conditions.

As you investigate pine trees look for extensive spotting or banding on needles. This may indicate that further actions are needed. Sphaeropsis tip blight is a common and serious disease of pines in Kansas and results in dieback of new shoots during the spring. Any shoots that have been affected by tip blight will be stunted and often appear resin soaked.

Many Austrian pines have been also been damaged by a needle disease called Dothistroma needle blight. This fungus causes premature defoliation but not a shoot dieback. Look for excessive needle drop on the lower one-third of the tree canopy. Affected needles will be dotted with small (1/8 inch) brown spots bordered by a yellow halo or will show a "half-leaf" symptom in which the outer half of the needle turns brown while the inner half (nearest the branch connection) remains green.

These two common fungus diseases of pines are treated in spring so there is nothing to be done for them at this time. Timing is specific for each disease, so they must be sprayed on time to interrupt the disease cycle.

Spruce

Spruce trees, unlike pines, drop needles more gradually over time and so it is usually not common to see large amounts of natural needle drop all at once. This year has been very difficult on spruce and I suspect that many of these trees are suffering from accumulated environmental stress. Blue spruce tends to be shallow rooted and is very sensitive to drought and winter drying. Extended periods of hot, dry weather can damage the tree and result in a gradual or sometimes quick decline. Purpling of inner needles, needle drop, and branch dieback leading to tree death have been becoming more common problems on spruce trees.

If you have a spruce showing any symptoms, proper watering and mulching are the two best recommendations. Mulch to a depth of 3 to 4 inches around the tree in a radius of at least 3 to 4 feet. Trees should also be watered regularly throughout the growing season (deeply at least twice a month) and occasionally during dry, winter months. It is also a good idea to avoid applying chemicals around a spruce. The shallow root system can easily absorb herbicides which may lead to tree damage over time.