

Pine Wilt – Breaking the Disease Cycle

One of the more devastating tree issues I've seen over the years has to be pine wilt. As it's name implies, the disease attacks pine trees – Scots pine in particular – ultimately resulting in death of the tree. For landowners that have planted pine trees over the years, it's been tough to see many of those windbreaks that so much time was spent planting, die in such a short time.

Often thought of as a disease, pine wilt is actually caused by the pinewood nematode, a microscopic worm. The nematode isn't very mobile, but is readily spread by an insect called the pine sawyer beetle. The beetle transports the nematode, which then feeds on pine trees, multiplying in the tree's resin canals, resulting in wilting and death in anywhere from several weeks to several months. After both the nematode and beetle overwinter in infected trees, they will start to emerge in early May, carrying nematodes to new trees and continuing the cycle of infection. Eastern Kansas has been a hotbed of activity for almost two decades now.

Infections are most visible from August to December. At first, you'll notice needles that turn grey or green, then yellow and brown. Sometimes, the discoloration occurs branch by branch. Other times, the tree will turn brown all at once. Resin production is greatly reduced so wounds on infected trees won't tend to ooze much if injured with branches becoming dry or brittle. The entire tree eventually succumbs to the disease within a few months to a year.

Pine wilt can be confused with other diseases. Pine tip blight is one, but it will tend to be confined to branch ends and generally results in death of only part of the tree. Pine wilt infected trees will result in death of the entire tree. If you want to compare pine wilt symptomology to other diseases, check out *Pine Disease in Kansas* by K-State Research & Extension Plant Pathologist Dr. Megan Kennelly. It has descriptions of our common pine diseases along with color images to help with identification. It is available upon request from any District Office or found online at: <http://www.ksre.ksu.edu/bookstore/pubs/l722.pdf> .

Infected trees should be cut down and removed by April first to allow time to destroy infected wood by May first when the beetles start to emerge. Cut the tree to the ground level (no stumps). Chip or burn the wood immediately to destroy the beetles and nematodes. Do *not* keep pine wood around for firewood.

Need help identifying the disease you may be dealing with? Contact a District Office for assistance or e-mail me at dhallaue@ksu.edu .

