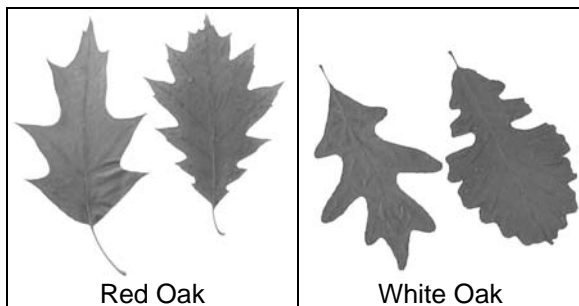# OAK WILT

This information is provided by Michigan State University Extension and the Michigan Department of Natural Resources

Oak wilt is a disease that infects and kills ornamental and forest oak trees. In recent years, oak wilt has expanded dramatically and is found throughout Michigan.

It is easier to prevent oak wilt than to eliminate it once it becomes established. In Michigan, foresters, firewood cutters, landscapers, utility and road commission crews and others who work around trees need to be familiar with oak wilt and how to prevent it from spreading.

What is Oak Wilt?

Oak wilt is a tree disease caused by a fungus that plugs the water-conducting system of oak trees. To block the spread of the fungus, trees produce gums and resins which also plug the system, causing infected trees to die quickly.

| Red Oak | White Oak |

Oak wilt is mainly a problem of red oak trees.

This group includes northern red oak, black oak and pin oak. Red oaks will die within a few weeks after becoming infected. White oaks are more resistant and the disease progresses more slowly.

How Does Oak Wilt Spread?

Diseased trees pass the fungus to adjacent healthy trees through root grafts. In addition, the fungus can be carried to new areas by sap-feeding beetles, which move spores from infected trees to freshly-wounded healthy trees.

Oak wilt, like gypsy moth and other exotic forest pests, can also be moved in firewood. Infected firewood can form spore-producing pads under the bark which attract sap-feeding beetles. Beetles feed on these pads and transfer oak wilt spores to healthy trees, sometimes several miles away. Healthy trees become infected when the spores enter through fresh wounds in the bark.

Preventing Oak Wilt

Wounding a red oak tree between April 15th and July 15th can lead to oak wilt. Wounding may be accidental (e.g. lawnmowers), intentional (e.g. pruning live branches) or weather-related (e.g. wind storms). While fresh sap is only attractive to sap-feeding insects for several hours after a wound occurs, the beetles are numerous and widespread during this period and the risk of oak wilt being transferred is high.

Fortunately, prevention is easy - do not injure or prune oak trees between mid-April and mid-July. Remember, once a tree becomes infected, the fungus will spread to nearby oak trees through interconnected (grafted) root systems. Root grafts between oak trees of the same species are very common and can occur between trees more than 50 feet apart.

Prevention is critical. It is much easier, cheaper and more effective to practice prevention then to try to stop the disease once it is established.

Controlling Oak Wilt

Controlling the spread of the oak wilt fungus between healthy and infected trees is simple in theory but difficult and expensive in practice. The key is to stop the movement of the fungus by severing root grafts between healthy and infected trees. Removing infected trees without severing root grafts first is not effective because the fungus stays alive in the root system and can still move into healthy trees. Removing an infected tree BEFORE the root grafts have been severed can actually speed the movement of the fungus into surrounding trees.

Vibratory plows (also called cable plows) or trenchers with five-foot blades or booms are the most effective way to break interconnected root systems. The placement of these barriers is extremely important. Barriers must be placed far enough out from infected trees to ensure that the disease has been isolated in the root systems within the barrier circle. This will include trees that may not yet be infected, but are close enough to infected trees to be grafted. Trees inside the barrier circle should be removed, cut and covered with a tarp for one year to prevent beetles from reaching the spore pads.

Fungicides containing the active ingredient propiconazole (e.g. Alamo®) may be effective, but they are expensive, must be applied by a licensed applicator using special equipment, and must be used before or shortly after infection takes place.

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