

Controlling Oak Wilt in Goodhue County

Terry L. Yockey, MN Master Gardener

Unfortunately, Goodhue County is one of the oak wilt “hot spots” in Minnesota. What is oak wilt and what can you do to prevent it from spreading to your neighborhood oaks?

Oak wilt is caused by the fungus *Ceratocystis fagacearum* and it can be spread in two ways. The first is by root grafts and the second is by sap beetles. Root grafts occur when trees are growing close to one another and their roots become entangled and graft to the roots of the other trees nearby. When one tree becomes infected the grafts then spread the oak wilt fungus from one tree to the next. Usually root grafting only happens between oaks of the same species; however, occasionally it may occur between related species such as red and white oak. Oak trees growing in sandy soil have been known to form root grafts with other trees as far as 90 feet away.

Oak wilt can also be vectored (spread) by sap beetles. In April and late June they are attracted to trees already killed by wilt that have produced spore mats. The spore mats form beneath the bark of the dead tree and emit a fruity smell that attracts the sap beetle. The beetles crawl over the spore mats as they feed and the fungus spores stick to their bodies. The sap beetles then fly to the next tree to feed on the sap oozing from a recent wound and infect a healthy oak with the wilt spores.

Once infected the tree tries to defend itself by producing defense compounds. These compounds plug the water-conducting tissues which then causes wilting that starts in the upper canopy and works its way down to the base of the tree. Red and pin oaks usually die within a few weeks to a month; however, white and bur oaks are more resistant and may survive for over a year following infection.

Oak Wilt Control Measures

1. **Do not prune oaks from April until early July.** If a tree should become wounded immediately seal the fresh wound with either a water-based paint or shellac to stop infection from sap beetles. There is still a chance for infection during July, August, September and October, so the optimum time to prune your oaks would be when they are dormant in the winter.
2. **Avoid unnecessary wounds.** If possible do not start any construction near oaks during the critical period of spring to early summer. Some studies have shown that the occurrence of oak wilt is four times as likely within 160 feet of a construction site.
3. **Dig a root graft barrier.** Should you have an oak die of oak wilt, stop the spread of the fungus to other trees by severing all root grafts between the infected tree and other surrounding trees using a vibratory plow with a five foot blade. Before digging the barrier, or anytime you plan to dig, be sure to call the Gopher State

One-Call at 1-800-252-1166 or 651-454-0002. They will send someone to mark your utilities within two working days. Once you have severed the root grafts, immediately remove and destroy the infected tree or completely cover it with heavy plastic making a tight seal and burying the ends of the plastic with soil.

4. **Hire a Certified Arborist to inject Alamo™.** The systemic fungicide Alamo™ has shown some promise as a preventative treatment for red oaks and as a curative treatment for white and bur oaks.

For a list of ISA Certified Arborists in our area as well as complete information on identifying symptoms of oak wilt, please see the University of MN Extension webpage at <http://www.extension.umn.edu/projects/yardandgarden/OWonestop.html>.