

## Maple Wilt

Maples are one of the most loved shade trees by many homeowners. Unfortunately, the maple is not free of problems. Maple wilt, also called Verticillium wilt, is a common and serious disease of maples. The destructive soil-borne fungus, *Verticillium dahliae*, kills many maples each year throughout Delaware.

Norway maples seem especially sensitive to infection by the soilborne fungus *Verticillium*. Silver, red, sugar, sycamore and Japanese maples are also susceptible. The fungus usually enters a tree by way of its roots and spreads from there through the sapwood into the upper branches. When this happens, one or more large limbs or even the entire crown may begin to die back. Infected limbs will sometimes produce sparse, sickly looking leaves which may later wilt suddenly and die usually in July. Sometimes leaves will have marginal browning or scorch symptoms.

A diseased tree can die within one season, but usually lingers, dying slowly over several years. Survival time depends on the size and vigor of the tree, as well as general weather conditions. Healthy vigorous trees can limit the damage by producing new water conducting vessels free of the fungus. Symptoms can be chronic as well, resulting in reduced growth of trunk, branches, and leaves. Branch dieback can occur as well as premature fall coloration and winter dieback.

Olive-green streaks sometimes can be seen in the sapwood of wilt-infected maples. Usually they will be some distance below the place where the leaves are wilted or scorched. If you cut into the bark at intervals back to where the wilted branch joins the main stem and you do not see any stain, *Verticillium* is most likely not the cause. If streaking is found, branch samples 4-8 inches long with stain can be collected and submitted to the county extension office for laboratory confirmation.

Once the disease becomes established, it's hard to control. For this reason, it's best to cut down and destroy seriously infected trees. In some cases, though, it may be worth trying to save one, if by pruning out the infected branches, the value of the tree as a landscape plant is not destroyed.

Rescue efforts involve removing dead and dying branches and watering during dry periods. This will sometimes stop the spread of the disease. Feed in the early spring at bud swell with a 10-6-4, 10-10-10 or other high-nitrogen fertilizer. Slow release forms of nitrogen for trees are preferred.

Be sure to keep the tree well watered during dry periods. This is very critical and may be more important than fertilizing in helping the tree to recover.

As with so many plant diseases, it's better to prevent maple wilt than to try to cure it. So keep your maples in healthy, vigorous condition with good annual care. This involves proper feeding, watering, and pruning. Cared for properly, a tree is less likely to become diseased and should thrive for many years.

If Verticillium wilt is diagnosed it is prudent to replant with a plant that is resistant to this disease. A few common examples of plants typically free of this disease include: crabapple, mountain ash, beech, birch, boxwood, dogwood, sweet gum, hawthorn, holly, katsuratree, honeylocust, oak, pear, London planetree and sycamore, rhododendron, willow, and zelkova. The red maple cultivars Armstrong, Autumn Flame, Bowhall, October Glory, Red Sunset, Scarlet and Schlessinger have also been reported as resistant.

**Caution:** The information and recommendations in these fact sheets were developed for Delaware conditions and may not apply in other areas.