

Oak Wilt

Oak wilt is a disease that is devastating populations of Live Oaks and red oaks (Spanish Oak) in central Texas. Maybe you have seen the groves of dead oak trees dotting the countryside along the highways or roads you typically travel.

What is Oak Wilt?

Oak wilt is caused by a fungus. The fungus originates on red oaks such as Spanish (Texas) Oak. On some infected Spanish Oaks, a fungal mat will grow underneath the bark. The mat will push the bark out and ooze a sweet, sticky substance that attracts beetles. Once the beetles walk on the fungal mat and get spores on their body and feet, they can transport the fungus to a fresh open wound (cut, break) on another oak up to one mile away (in extreme cases). Tree wounds can result from pruning - or any damage caused by wind, hail, vehicles, construction activity, squirrels, or birds. Spread of the disease by beetles is probably limited to November through June, with safer periods being during the heat of the summer and cold of the winter.

A critical period of vulnerability to infection is the first 3 days after a wound is made to an oak – the amount of time it takes oaks to naturally create a protective layer over the exposed area. Once an oak is infected through an open wound, the fungus gets into and clogs the vascular channels of the tree, disrupting the circulation of water supply and nutrients, and causing the tree to sicken and eventually die. Spanish Oaks will die rather quickly – within a couple of months. Live Oaks may (but not always) take longer to die – up to a year or so.

After an oak initially becomes infected, the fungus will spread to nearby oaks through the root system. In fact, most oak wilt mortality is a result of infection spread this way. Roots from an infected tree interconnect or graft with other oaks' roots and pass the fungus on; oak trees within 100' – 150' radius may become infected. Average spread rates are 50' to 100' per year from an infection center. Roads do not create a barrier to the spread of oak wilt in this manner.

One of the easiest times to spot oak wilt is in the spring/early summer after temperatures start hitting 90 – 95 degrees, and the trees are pushing sap up into the leaves. Infected, symptomatic Live Oaks have a telltale sign – a yellowing of the leaf along the veins - because sap is being prevented from reaching the leaves due to clogged vascular channels. Spanish Oak leaves will become brown at the tips of the leaf lobes. (See www.TexasOakWilt.org for illustrations.) May through July is the best time to walk your property and study the health of your oaks – tree leaves should be dark green and glossy. If you find leaves with telltale signs of oak wilt, on the trees or on the ground below the trees, contact an arborist or tree service specializing in oak wilt.

Drought and Tree Death

A complication to identifying the death of a tree due to oak wilt is the recent year-long drought which has caused the demise of many trees, in particular the Spanish Oak. If you had a Spanish Oak die last summer, more than likely it died from the drought, so don't panic.

However, many of the drought killed trees have a couple of branches or low sprouts holding green leaves and this means they still have living tissues in their trunks. Whenever an oak is removed, the stump should be painted to prevent infection from oak wilt fungal spores carried by beetles.

If the tree is completely dry with bark flaking off then the wood can be utilized safely as a fuel source, either on site or off. The oak wilt fungus can continue to live on cut Spanish Oak for a while, so if there is any question, and you keep the oak for your fireplace, cover it with plastic to keep the beetles off.

If multiple trees have died in close proximity, healthy Live Oaks and Spanish Oaks within 50 feet should be monitored closely for at least two growing seasons.

Minimizing the Spread of Oak Wilt from an Infection Center

Oak wilt spreading through the roots can be prevented by digging a trench at least 4.5 feet deep and 100 feet beyond the perimeter of the infection centers. The trench breaks up the root connections.

Susceptible, high value oaks in proximity to infected oaks can be injected with a fungicide.

What You Can Do

- Walk your property every May or June and examine the tree leaves for telltale signs of oak wilt. Leaves should be dark green and glossy and not show telltale signs of oak wilt: see www.TexasOakWilt.org for illustrations.
- Only prune your trees in the coldest or the hottest part of the year (periods of low insect activity), if possible. (December/January, July/August)
- No matter what time of year you prune, IMMEDIATELY paint the wound with spray or latex paint, or wound dressing. Cut, and then paint the wound prior to cutting the next limb.
- When removing dead or dying oaks, paint the stumps. They might not be completely dead and oak wilt can still spread through the roots.
- Clean all pruning tools with 10% bleach solution or Lysol between sites and/or trees.
- Immediately chip, burn or bury debris from diseased red oaks.
- Plant a diversity of tree species, and only oaks that have a low susceptibility to oak wilt such as: bur, lacey, monterrey, chinquapin, post, shin, vasey.
- Check out the helpful information at www.TexasOakWilt.org