

# A SURVIVAL GUIDE TO OAK WILT TREATMENT

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As foresters with the Texas Forest Service (TFS), we are available to assist communities and provide guidance in dealing with the dreaded oak wilt disease. We continuously consult (console) heartbroken individuals who are losing or have lost their precious live oaks or red oaks - trees that added substantial value and charm to their property. One of the objectives of the Oak Wilt Suppression Project is to educate the public on how to properly identify and control oak wilt.

This article is directed to concerned homeowners in the Ridglea Country Club Estates area who have been misinformed on the proper treatment of oak wilt. The concern about misguided information is legitimate. Misdiagnosis of the disease or erroneous practices can be costly to homeowners and not save their trees. The following problems - and recommendations for solution - cover those situations most commonly encountered among area residents.

**Misdiagnosis:** Just because an oak tree dies or looks sick does not mean it has oak wilt. The problem could be herbicide damage, hypoxylon (another fungal pathogen of oaks), drought stress, insects, construction damage (compaction, fill dirt), etc. Alternatively, a genuine oak wilt case can be misdiagnosed as one of the above. The most diagnostic symptom of oak wilt in live oaks is a symmetrical brown discoloration along the midrib and lateral veins (veinal necrosis) of leaves from infected trees. Before making a costly commitment to treat your trees, be certain your trees are dying from oak wilt. Call a reputable arborist or TFS forester.

**Pruning cuts:** If possible, only prune your trees during the coldest days of winter, the least likely time for a new oak wilt infection. The recommended period to avoid pruning oaks near infection centers is February 1 – June 1. However, keep in mind that this is just a rule of thumb and the conditions you are really trying to avoid are mild, moist weather. Since this disease only effects oaks these recommendations do not apply to other species of trees. Also, contrary to the usual pruning recommendations, you should paint all oak pruning wounds immediately. When an oak branch is pruned without immediately dressing the wound with pruning sealer, the stage may be set for a new oak wilt center to be started. Paint all wounds and pruning cuts on all oak species immediately. Do not wait until the next day. The cut is most attractive to the beetles that spread the oak wilt fungus during the first 24 to 36 hours after it is made. If the cut is more than 72 hours old painting the wounds will do no good. The pruning paint acts as a physical barrier to keep the insects out.

**Prophylactic treatments:** A homeowner should take into account the risk factor of a tree becoming infected with oak wilt. How close are your trees to a known oak wilt center? Given that oak wilt spreads an average of 75-100 ft. per year, you should not treat your trees now if the nearest oak wilt front is more than 300 ft. away. By the time the oak wilt fungus reaches your trees, the fungicide may not be active or in the proper tissues. The trees would probably require retreatment at high cost. Furthermore, those trees may or may not become infected, depending on whether or not the root systems are connected.

**Treating symptomatic trees:** Symptomatic trees (those exhibiting oak wilt symptoms) may be injected with Alamo<sup>tm</sup>, but their chances of survival are lower. The *best* candidates for Alamo<sup>tm</sup> treatment are those apparently healthy oaks situated within 150 feet of symptomatic trees. A common practice in rural areas is that expanding oak wilt centers are first surrounded with a 4-foot deep trench installed at least 100 feet beyond trees with current oak wilt symptoms. High value, healthy oaks between the trench and symptomatic trees are then treated with Alamo<sup>tm</sup>. However this is seldom an option in urban areas.

**Illegal or improper Alamo<sup>tm</sup> injection methods:** Injection of fungicide into oak tree roots is the only scientifically proven method for prevention and treatment of oak wilt in individual trees. Foliar sprays, soil treatments, mixture of fertilizers with fungicides and other methods are ineffective or even illegal. Currently the most common chemical used to treat infected oaks is Alamo<sup>tm</sup>, manufactured by Ciba Geigy. This fungicide is injected into oak flare roots by one of two methods: the tried-and-true flare root injection technique, or the newly marketed microinjection technique.

**Flare root injection** involves removing two to four inches of topsoil from the base of the tree and injecting Alamo™ diluted with large quantities of water, into the exposed flare roots. Injection of the flare roots provides good distribution of the fungicide throughout the tree. Injection of the lower trunk, which takes less time and labor, is quite common but less effective. Injection holes must not be more than 3-6 inches apart. Chemical application rates are printed on the Alamo™ label. If the tree's root system is accessible, do not accept any other form of fungicide treatment. This method is labor intensive, but effective. Resist using the vendor who tries to sell you a shortcut treatment. Shortcut treatments will reduce the chances of tree survival.

**Microinjection** of undiluted fungicide into live oaks is being offered by some tree care practitioners. This method uses full-strength chemical in small containers attached to the trunk of a tree. A hole is drilled into the trunk to accommodate the injection device. Usually, a limited number of injectors are attached to the tree, providing too few injection sites for adequate chemical distribution. While microinjection has been successfully used to inject other pesticides and tree nutrients, the Alamo Micro Injection System has only been on the market since August 1994. The method is legal, but there has been little research to confirm its effectiveness.

**Overpricing and unscrupulous vendors:** Charges for tree care services and oak wilt treatments vary greatly. In the tree care industry, as in any industry, there are those that attempt to take advantage of others by overcharging and/or doing shoddy work. This gives all of us in the industry a bad name. Always get more than one bid, ask for references, and ask about insurance or whether the company is bonded. Other questions might be about professional affiliations such as the International Society of Arboriculture or others. To charge for applying pesticides the vendor must have a Commercial Pesticide Applicators license. Alamo™ is not cheap and some arborists have been known to use one of the cheaper brands of fungicide while charging Alamo™ prices. You might even ask to see the unopened and sealed Alamo™ bottles.

**Transporting unseasoned firewood:** Landowners that transport green oak firewood (particularly Texas and blackjack oak) seldom realize that many new oak wilt infection centers have been started this way. The Midland and Lubbock oak wilt problems were probably started when infected firewood was brought in from the Hill Country. Insects and fungal mats on unseasoned firewood can be the source of inoculum for new oak wilt centers. Do not transport oak firewood to uninfected locations unless the wood has been thoroughly seasoned. It is a preferred practice on Central Texas ranches to burn in-place any Texas or blackjack oak that is suspected to have died of oak wilt.