

After two decades, the fight continues to suppress Oak Wilt

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National experts are gathering in Austin on June 4-7 to discuss strategies for fighting oak wilt, a fungal disease that has wiped out more than a million trees in Central Texas as it continues its aggressive march through the area.

The second National Oak Wilt Symposium will feature speakers, research presentations and brainstorming from some of the people who are relentless in their efforts to stem the tree disease.

"Oak wilt doesn't know the boundaries between houses, like we do when we edge our yard or mow it," says Damon Waitt, a senior botanist at the Lady Bird Johnson Wildflower Center. "You almost have to come together as a community. It's not usually one house; it's the entire community that's impacted."

Oak wilt is one of the most destructive tree diseases in the United States. The culprit is *Ceratocystis fagacearum*, a fungus that invades and clogs the tree's water conducting system, causing the tree to rapidly die. The disease is spread from one tree to another through the trees' root systems and also can be spread by nitidulid beetles that are attracted to freshly cut wood. As the beetles come into contact with fresh wounds — from pruning or storm damage for instance — they pass the oak wilt fungus from tree to tree.

Oak wilt can spread as much as 200 feet per year, but many experts give a more conservative estimate of 75 to 100 feet per year. Still, it wreaks devastation on homeowners and neighborhood residents who watch tree after tree die.

"We have about 250 of what we refer to as oak wilt mortality areas within the city limits," says Chris Dolan, arborist with the City of Austin's Oak Wilt Suppression Program.

Travis Heights in South Austin has been a hotbed since the 1980s.

Like an unwanted visitor, oak wilt is going door to door on several blocks east of South Congress Avenue bounded by Academy Drive, Newning Avenue and Park Lane.

Because oak wilt spreads through roots, one of the extreme ways to battle the disease is by digging deep trenches around an infected area to keep the roots

from sharing the fungus with healthier trees. In some cases, this is effective, but by no means foolproof.

"The good news is that the most recent big trench in Travis Heights appears to be holding, so that's good news when you spend somewhere in the neighborhood of \$150,000 for that Travis Heights trench," Dolan says. "You are keeping your fingers crossed that it won't breach."

Travis Heights is not alone.

Forester Carrie Jean Burns is in charge of patrolling oak wilt infestations in Lakeway, on the shores of Lake Travis west of Austin. She is managing 20 oak wilt centers that have been identified since the late 1980s. An oak wilt center is an area where oak wilt initially infects one oak, then moves through the roots to surrounding oaks, creating a continually expanding area of dead and dying trees.

Burns says she's been getting on average one new oak wilt center a year. Luckily, the latest oak wilt center consists of only a few infected oaks on one property. A bit more harrowing is the largest oak wilt center, identified in 1988, which now includes 17 acres.

Battling oak wilt on a day-to-day basis, Burns says the casualties and anticipation of more trees becoming infected are distressing.

"Many of the homeowners are keeping their oaks alive with expensive fungicide treatments that are usually repeated every two to three years," Burns says. "Those who can't afford to treat their oaks with fungicide often end up having to pay thousands of dollars to cut down the dead trees later. It's heartbreaking for anyone who loves their oaks, but it's particularly hard on retirees living on fixed incomes."

In 2001, the Texas Forest Service, which surveys oak wilt's damage and is constantly seeking proactive measures, awarded some cities an Oak Wilt Partnership Grant to hire a full-time forester to deal with the problem. Lakeway's Burns has been overseeing many trenching projects for five years.

"We've been following the guidelines laid out by the Texas Forest Service, but despite all of the effort and expense, the results have been disheartening," Burn says. "We have an unusually high rate of breakouts (where oak wilt crosses the trench lines) and some neighborhoods have been trenched three or four times without stopping the oak wilt."

Trenching can be a tricky strategy. In addition to dealing with many factors, such as the depth needed to sever all roots, the Forest Service requires a minimum of 100 feet of distance from an infected tree.

Twenty-four oak wilt suppression trenches, costing \$627,000, have been installed in Lakeway since 1989 and all were paid for by the city with assistance from the Texas Forest Service.

"It's very difficult and expensive to trench across streets, between houses and through people's yards, but that's where the oak wilt is concentrated — in older residential neighborhoods with big trees," Burns explains, adding that Lakeway is at a turning point in its efforts.

"We're just having too many trench failures," she says. "In the near future I'll be meeting with the City Council to discuss whether we should continue our city-funded trenching program."

Burns says that even if the city continues trenching, Lakeway should concentrate on planting as many different tree species as possible now. Dealing with the aftermath of oak wilt is an important phase of dealing with the overall problem, she says.

Other areas are not immune. Cedar Park is dealing with nine known oak wilt centers within the city limits and three other areas in extraterritorial jurisdictions. Trees in the red oak group, including Spanish oak, Shumard oak and blackjack oak, are extremely susceptible, too.

"Most of the areas have kept the oak wilt in check by trenching and/or injection (fungicide treatments). The homeowners association will typically raise the funds for suppression with whatever cost-share programs are available from the Texas Forest Service," says Curt Randa, director of the Cedar Park Parks and Recreation Department.

Randa is warning Cedar Park residents to trim at appropriate times — spring is an especially bad time to prune because the beetles are active — and with correct methods, but he also believes in pushing for tree diversification.

"We also plant a wide variety of species in our parks to limit susceptibility to oak wilt," Randa says.

Waitt agrees. "I would say to people to think ahead in terms of 100 years," he says. "Let's start to diversify our oaks in Central Texas now because this disease is not just going to disappear overnight. It's going to be an ongoing battle, so let's start diversifying now."

There are challenges even with proactive measures Central Texans are taking. Some believe that oak wilt is an ecological act of Mother Nature.

"There's definitely a relationship between disease spread and host density," Waitt says. "Some say that this is Mother Nature taking her normal course of action."

Dolan is looking for proactive approaches. He hopes to nip things in the bud by encouraging new developments to trench around the oak wilt mortality areas before they build.

"I am able to get a heads up on where oak wilt is on raw land that is being developed; either it is already in the city or it's about to be annexed," Dolan says.

"I contact developers and get them to basically spring for this trenching because if you wait until the neighborhoods developed, it would cost \$40,000 (to) \$150,000 (or more) and would be a nightmare to get it done" after the development's infrastructure is in place."

If you divide Austin into quadrants, Dolan says that Southwest Austin by far has the worst case of oak wilt. He says Oak Hill is dealing with substantial outbreaks and Circle C Ranch has oak wilt within the property.

"There's a lot of oak wilt along Brodie Lane, headed toward Hays County," Dolan notes.

Neighborhoods are becoming very involved in educating one another. And communities are responding. In Lakeway, there's zero tolerance for tree trimming ignorance. A daily, steep fine is assessed if a homeowner doesn't paint the wounds of a freshly trimmed oak. Also, building and development ordinances prohibit the planting of any oak susceptible to oak wilt.

City municipalities, residents and neighborhood associations are warning shady and careless tree trimmers to back away from the city's cherished oaks from February through June when the beetles are running rampant. Web sites and blogs are in place to discuss problem areas for oak wilt, first-hand accounts and schedules for meetings.

Dolan, with a PowerPoint slideshow in tow, recently spoke to a packed house of 400 Northwest Hills folks. Austin citizens want to be educated and share vital information about oak wilt. Dolan says that Northwest Hills is the No. 1 example of a unified community action group trying to fight oak wilt.

"The Travis Heights neighborhood (South River City Citizens association, www.saveaustinoaks.org) did just a phenomenal job at recognizing the problem, and then systematically addressing the issues one at a time while leveraging and getting ownership from multiple partners including the City of Austin, Texas Forest Service, Texas Gas company, Milkshake Media, the Austin music community and the many, many, concerned, ambitious, educated, and talented residents of this neighborhood," says Jim Rooni, chief regional forester with the Texas Forest Service/Central Texas Region. "The result is over a mile of suppression trench while also educating citizens on oak wilt awareness (prevention, treatment options and replanting of resistant species)."

Oak wilt will likely never be eradicated, but the intelligent search and exploration are on to reduce the casualties.

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