



Department of
Environmental
Conservation

PROTECTING AGAINST OAK WILT

Tips for Tree Care Professionals



The Issue

Oak wilt is a deadly oak tree disease caused by the fungus *Bretziella fagacearum*. The fungus clogs up the xylem tissue, blocking the flow of water and nutrients from the roots to the crown, which causes the leaves to wilt and die. Red group oaks (scarlet, pin, red, etc.) can die within a few weeks to six months while white group oaks (bur, swamp white, white, etc.) often take years to die. Infections spread in two ways: belowground through grafted roots or aboveground by beetles.

Symptoms

Oak wilt symptoms usually start to show in mid-summer and are often very noticeable in red group oaks. White group oaks usually only have one or two symptomatic branches per year.



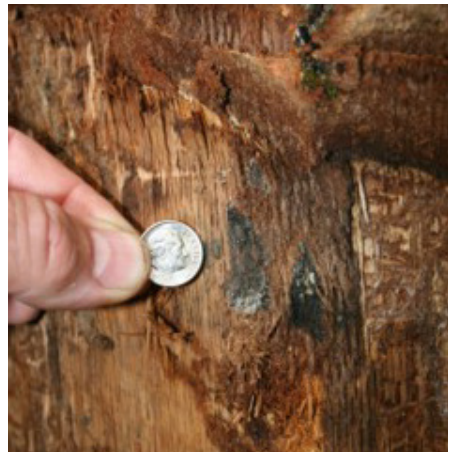
- Brown coloration develops on leaves starting at the outer edge and progressing inward toward the mid-vein of the leaf. This discoloration is uniform, not interveinal, spotty, or patchy.



- Leaves suddenly wilt in the spring and summer and fall while there is still green on them. In red group oaks, heavy defoliation (>50% of the canopy) can occur in as little as a few weeks.



- Branch dieback may be visible starting at the top of the tree's canopy and progressing downward.



- Fungal spore mats may develop under the bark of infected red group oaks.

Oak Wilt Look-alikes



- Interveinal discoloration on leaves is a symptom of other diseases such as anthracnose.



- Diseases like Tubakia leaf spot can cause a spotty or patchy discoloration on the leaf.



- Discoloration caused by bacterial leaf scorch may have a yellow halo between the browned and green tissue, but it is often hard to see, so testing is recommended to rule out oak wilt.



- Groups of leaves falling while still attached to the twig is most often caused by animals such as squirrels or twig pruning beetle.



Containing the Disease

As of September 2020, oak wilt has been found in Suffolk, Kings, Schenectady, Ontario, and Yates counties. To help stop the spread of the disease, quarantine districts have been established that prohibit the movement of oak wood and firewood out of these areas.

- Firewood is defined as wood pieces of any species that are less than 29 inches long.
- Oak wood and firewood may only be transported out of a quarantine district from August 1 to March 31, with a limited transportation permit.
- Chipped wood is not restricted.
- Visit <https://www.dec.ny.gov/lands/46919.html> and click on each of the emergency orders for the most up-to-date information on quarantined locations.

Report Oak Wilt

The first step in managing oak wilt is knowing where it is. Finding infection sites early increases the chances of eradicating the disease or at least keeping it contained.

WHEN IN DOUBT, CHECK IT OUT.

- Take pictures of oaks that are potentially infected, including a picture of the entire tree and close-ups of the leaves, trunk, and base, and email them to DEC's Forest Health Program, foresthealth@dec.ny.gov. Include the location, oak species (if known), when the symptoms began, and your contact information.
- If you do not have email, call the Forest Health Information Line at 1-866-640-0652.
- The Forest Health staff will contact you to discuss the possible causes of the symptoms or to schedule a time to collect a sample for oak wilt testing.

The Case Against Using the Fungicide Propiconazole

In other states where oak wilt is much more prevalent, propiconazole has been used to try to save infected oaks. Although the fungicide has been shown to be effective in some cases, it does not stop the fungus from continuing to spread through the roots. Propiconazole can also mask symptoms, making the disease harder to detect. Since oak wilt is not yet widespread in New York, DEC's goal is to prevent the disease from spreading through the rest of the state by eradicating or containing known infection sites. The use of propiconazole would be counterproductive to those objectives.



Best Management Practices



CONDUCT ANY NECESSARY PRUNING IN THE WINTER

When fungal spore mats form just under the bark of infected red group oaks, they emit a sweet odor that attracts sap-feeding beetles. These beetles are also highly attracted to fresh tree wounds, such as those caused by pruning. When beetles pick up fungal spores from a spore mat and then fly to a freshly pruned tree, they can transport the disease. The risk of the disease spreading in this way is present throughout the growing season, but it is especially high from April 1 to July 31, when spore mats are forming and beetles are most active. Pruning in winter when these beetles are not active is the best way to avoid this mode of spread.



AVOID USING SPIKES TO CLIMB TREES

Spikes create wounds through which oak wilt, as well as any other disease, can enter a tree. Using other methods to reach the canopy, including bucket trucks and rope climbing, will protect the health, as well as the aesthetics, of the tree.





APPLY WOUND DRESSINGS TO INJURED OAKS

Wound dressings have fallen out of use since covering a wound has been shown to interfere with healing and trap in moisture, which leads to decay. However, in cases such as oak wilt, preventing the disease from entering the wound is the bigger concern. During the growing season, a pruned or otherwise injured oak can attract beetles within 10 minutes and remains vulnerable to infection for approximately 72 hours, so wounds should be covered as soon as possible. There are specific products available for pruning wounds, but in a pinch, latex paint will do.



KEEP WOOD SCRAPS AND FIREWOOD LOCAL

It has been repeatedly shown that tree pests and diseases can travel on firewood, and oak wilt is no different. Infected firewood can harbor the fungus, as well as the beetles that spread it, so keeping wood local prevents them from hitchhiking to new places. When doing tree work in a quarantine district, chip woody debris if it must be disposed of outside of the quarantined area.



Oak Wilt or Not, the Division of Lands and Forests' Forest Health Diagnostic Lab is Here to Help!

Tree care professionals are ideal partners in finding invasive pests and diseases since the damaged or dead trees they encounter could be indications of a larger problem. When a tree's cause of death or decline is unknown, consider submitting a report to the Diagnostic Lab to help "root" out the problem. You can submit photos of damage, insects, or fungi via email to foresthealth@dec.ny.gov, or bring or mail a specimen to the lab:

**NYSDEC Forest Health
Diagnostic Laboratory
108 Game Farm Road
Delmar, NY 12054**

When submitting a specimen, please provide the following:

- Your name, address, phone number, and email address;
- The address where you found the specimen, if not at your property;
- Details on where/how you found it (e.g., an insect on the side of the house or on a maple tree, a plant in a ditch, or orange spots on leaves); and
- A description of the damage caused by the insect or disease (pictures with something next to the subject for scale work best).

The more information you can provide, the easier the pest or disease will be to identify.



For more information, visit <https://www.dec.ny.gov/lands/79716.html>

New York Department of Environmental Conservation
Division of Lands and Forests
Bureau of Invasive Species and Ecosystem Health
625 Broadway Albany, NY 12233
518-402-9425 | foresthealth@dec.ny.gov



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