



OH, THE ONSET OF SPRING -

BLOOMS, BIRDS, BUGS AND...

OAK WILT



Rapid leaf drop during the summer can be an indicator of oak wilt. Note the variation in leaf discoloration due to oak wilt infection.



Does the spring sun shining through canopies of unfurling leaves make you smile? Do you enjoy walking wooded trails? Does shade of your local woodlot give you relief on summer days? Is the best picnic or parking spot the one under that tree? If you answered yes to any of these scenarios then beware of an invasive and lethal disease that is killing one of Michigan's most abundant tree species – Oaks. The disease is Oak Wilt (*Bretziella fagecaerum*).

New oak wilt infections are easily started during the spring and early summer when this pathogen produces an abundance of spores and the beetles feeding on those spores are active – this is known as the HIGH RISK Oak Wilt infection period. Any fresh wound on an oak tree makes it vulnerable to infection. The risk of new oak wilt infections continues mid-summer through fall but biological conditions make the risk somewhat lower than during spring-early summer. Red oaks infected by oak wilt will die quickly, often within 6-8 weeks despite the trees' size – a 200-year old red oak will succumb as quickly as a 10-year old red oak tree!

Oak wilt spreads in two ways. Overland infections occur when native nitidulid beetles (and a few other types) feed on oak wilt spores and then fly to wounds on oak trees, carrying the spores on their bodies. Once an oak tree is infected, the oak wilt disease moves through the tree into the root system and into all oak trees that it shares roots with. Roots are connected in a vast system of 'root highways,' allowing oak wilt to move and kill acres of trees until the disease runs out of oak roots to move through. This below ground activity across root grafts is responsible for the greatest number of oak wilt-killed trees. A trees' roots can grow twice the distance that a tree is tall. So, for example, a 50' oak tree can have roots 75-100' out from its base in all directions.

Prevention of new oak wilt infections is the key to managing this disease and limiting its devastation. Prevention actions include:

- not injuring oaks during the growing season (when leaves are on the trees);
- rapidly sealing wounds if they occur (beetles are strongly attracted to fresh oak wood and have been documented to arrive in 8-10 minutes!);
- do not move firewood;
- monitoring for the disease and prompt, positive identification of its presence.
- Positive diagnosis of oak wilt requires the presence of spores and/or the 'pressure pads' that grow under the bark of oak wilt-killed oak trees, or a positive lab analysis.

While enjoying the benefits of our native oak trees if you notice something unusual, particularly a change in leaf color, wilting and rapid leaf drop at the wrong time of year, contact a MI Oak Wilt Specialist to assist you with accurate diagnosis. Oaks endure a variety of pests which can be easily confused with oak wilt symptoms. If oak wilt is diagnosed, successful treatment requires technical expertise and a multi-faceted management approach.

Go to MichiganOakWilt.org to connect with trained Oak Wilt Specialists, learn about on-going oak wilt research in Michigan, find helpful management information, links to many references and a gallery of photographs.



A red oak canopy 6 weeks after being infected by oak wilt. The disease will now move from this infected host through connected roots killing additional oak trees.



The oak wilt disease reproduces under the bark of oak wilt-killed trees. This bark has been pulled away and reveals nitidulid beetles feeding on the sporulating fungal structure of the Oak wilt pathogen.



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