



**Oak Wilt appearing in Lucas County**  
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### **Oak Wilt in Lucas County**

Recently we have received a lot of calls asking about oak trees dying off. What we are seeing is Oak Wilt, a devastating disease that spreads through the root system, much like Dutch Elm Disease. One recent call was from a resident in Sylvania Township who lost all of his oak trees because of this disease. Unfortunately, his trees had been trimmed by a landscape company that was not aware that oak trees should NOT be pruned between April 15<sup>th</sup> & October 1st. After pruning one tree, if the tools are not sanitized between trees, the disease will spread from one tree to another, rather quickly.

All oaks are susceptible. Those in the red-black oak group (black, blackjack, pin, northern and southern red, scarlet, shingle and shumard oak) are extremely susceptible and can die within a few weeks of infection. Oaks in the white group (bur, chinquapin, post, swamp white, and white oak) (Fig. 1B) are more tolerant of the disease and may survive infection for one or more years while displaying decline symptoms.

In order to properly manage oak wilt it is essential to understand its cycle. The pathogen spreads from diseased to healthy trees in two ways: overland and underground. Overland spread is mediated mainly by sap feeding (a.k.a. picnic) beetles (Coleoptera: Nitidulidae). However, there is some evidence that oak bark beetles (Coleoptera: Scolytidae) may also be involved.

While insect spread is an important medium to long-range dispersal mechanism for this fungus, it is estimated that 90% of new infections occur between neighboring trees through root grafts. In this case, the fungus grows down the trunk, into the roots of diseased trees, and then into healthy trees via the common root system. Once in the new tree the pathogen grows throughout the vascular system and spreads to other trees via the root system or the beetles. In this way, spread through root systems often results in disease centers that expand outward from the initially infected tree.

From the above, it follows that conditions favoring disease include the availability of susceptible oak species, trees growing close to each other, and the availability of fresh wounds for beetle-mediated infection. Pruning wounds are obvious culprits, but **any fresh wound** will

function as a potential infection gateway.

Spread can be hindered or interrupted by ensuring that trees are never wounded between April 15 and July 1. This is when most Nitidulid beetles fly to locate fresh sap and/or fungal mats. A more stringent approach is to avoid wounding the trees throughout the growing season April 15 – Oct. 1

Given the higher significance of underground spread, control of direct tree-to-tree transmission is much more important. Here, interruption of the disease cycle is accomplished by physically severing actual or potential root contacts between diseased and healthy trees. This is done by trenching or cutting through the soil with a trencher or vibratory plow. Trenching should be conducted by advice of specialists.

**Photos and further information at:**

[http://ohioline.osu.edu/hyg-fact/3000/pdf/HYG\\_3306\\_09.pdf](http://ohioline.osu.edu/hyg-fact/3000/pdf/HYG_3306_09.pdf)

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