

Oak Wilt

Disease threatens oaks in the Eastern United States

U.S. Department of Agriculture
Forest Service
Northeastern Area State and Private Forestry



Description: Oak wilt is the most important disease of oaks in the Eastern United States, where it occurs in both residential and forested areas. Several species of insects known as “picnic” or “sap” beetles carry a fungus (*Ceratocystis fagacearum*) that enters oak trees through open wounds, such as those caused by storms and pruning. Oak wilt can also spread when the roots of an infected tree contact those of a healthy tree. Oak wilt has killed millions of trees from Pennsylvania to Minnesota and south to Texas and South Carolina since the 1950s. The disease is gaining in importance as people move into oak-dominated woodlands and as high-value forests become infected.

Key Issues:

- Diagnosis can be difficult since many agents, including oak decline, bacterial leaf scorch, anthracnose, and bur oak blight, can also kill oaks.
- Many infection centers span multiple ownerships across large areas.
- Preventing new oak wilt disease centers and controlling the spread of existing centers require a coordinated effort among key partners and landowners.
- Oak wilt priorities are to eradicate outlier infections and control the disease in high-value recreation areas.

Accomplishments:

- Developed a nested protocol to aid in diagnosis.
- Implemented relatively new control techniques (stump extraction) to complement root graft disruption using the vibratory plow.
- Reduced the incidence of disease in high-value red oak forests on the Chequamegon/Nicolet and Huron/Manistee National Forests.
- Continued control activities on private and State lands in Michigan and western Pennsylvania.
- Discovered a lone infected sentinel tree left standing in the eradication zone in New York.

Budget History:

Oak Wilt Control FY 2013				
(\$, thousands)				
	National Forest System	Michigan DNR	Michigan Tech University	Bureau of Indian Affairs
Suppression Totals	\$39.5	\$50	\$50	\$19.5

Future Direction:

- Validate a newly developed tool for diagnosing oak wilt.
- Develop a database to track oak wilt incidence and spread.
- Improve early detection of outlier infection centers to facilitate eradication.

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