

Thousand Cankers Disease of Black Walnut

USDA Forest Service
Northeastern Area
State and Private Forestry



Tree disease discovered in the Eastern United States

Description: In 2010, declining and dead eastern black walnut trees (*Juglans nigra*) were discovered in four counties around Knoxville, TN. The cause was the walnut twig beetle (*Pityophthorus juglandis*) and the canker-causing fungus (*Geosmithia morbida*), believed to be native to the Southwestern United States. The disease was previously found killing eastern black walnut in the Western United States in the 1990s. The Tennessee finding was the first in the Eastern United States. Repeated attacks over 8 to 10 years produces numerous cankers that begin to merge, suggesting the common name, thousand cankers disease (TCD).

Key Issues:

- Eastern black walnut may be eliminated from its native range.
- Eastern black walnut is among the highest value species for veneer, lumber, specialty woodworking, and nuts. Individual trees often sell for tens of thousands of dollars on the stump.
- Many mills with hundreds of employees depend on high value walnut logs.
- Export of quality logs to China helps to offset the U.S. trade deficit.
- Individuals and companies have invested in walnut plantations and managed walnut woodlands.
- Study of the pest's behavior in native walnut woodlands and plantations is needed to develop more effective treatments.
- Landowners and managers need information and education about the disease.
- A standardized survey protocol for early detection needs to be developed.

Accomplishments:

- Assisted in hosting the first national symposium on TCD in St. Louis in 2009, alerting eastern State plant health regulators and forest managers to the disease. Since the meeting and the subsequent discovery of TCD in Tennessee, most States have enacted or are considering State quarantines.
- Produced the first national Pest Alert, which facilitated discovery of TCD in Knoxville; updated and reprinted a Pest Alert upon the discovery of TCD in the Eastern United States.
- Developed key talking points and management recommendations for TCD and shared the information with State forestry, agriculture, university, and other partners.

Budget History: The budget for FY 2011 is to be determined.

Thousand cankers disease (Dollars, thousands)			
Product	FY 2009	FY 2010	FY 2011
Symposium	\$6.0	—	
Pest Alert (25,000 copies)	—	\$1.3	
Reprint (110,000 copies)	—	\$2.9	
Totals	\$6.0	\$4.2	

Future Direction:

- Conduct multi-State early detection surveys to determine the footprint of TCD in the Eastern United States.
- Promote management of walnut to reduce stand vulnerability.
- Evaluate various management alternatives, such as prevention, treatment, sanitation, and disposal.

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