A deadly fungus disease that has spread from the western states to the East poses a serious threat to Illinois’ black walnut trees. It now is moving into the Midwest, and Illinois owners of black walnuts must be vigilant to prevent its spread.

**Black Walnut: An Important Illinois Species**

Eastern black walnut (*Juglans nigra*) is a large tree, typically growing over 40 feet tall. It prefers well-drained, slightly elevated floodplain areas but also does well in urban areas. Black walnut is a native tree that grows throughout Illinois, where its nuts support a wide range of wildlife. It also is valuable for timber; Illinois ranks fourth among the states in production of black walnut timber, harvesting roughly 120,000 trees per year with a value of more than $18 million. Thousand cankers disease threatens this market as well as the black walnut’s value in landscapes and natural areas.

**What is Thousand Cankers Disease?**

Thousand cankers disease (TCD) is caused by the interaction of an insect (the walnut twig beetle) and a fungus (*Geosmithia morbida*). The beetle and the fungus are native to the southwestern United States, but were inadvertently transported to the East on walnut burls and logs. TCD has been found in several eastern states on the highly susceptible black walnut.

The fungus is carried by the beetle. It infects the bark along the insect’s entry hole and in its egg-laying and larval tunnels (galleries). The fungus causes a canker, a small, generally circular area of dead bark tissue. When multiple areas are infected they can merge, forming patches of canker large enough to girdle tree branches. Multiple dead branches, combined with insect attack and cankers on the main stem, can kill the tree in a few years.

**Identifying a Black Walnut**

Do you have a black walnut on your property? Check your tree for these characteristics:

- **Alternate branching:** Each branch or bud is set directly opposite the one on the other side of the twig or branch.
- **Compound leaves:** A single leaf is made up of 11 to 23 small leaflets.
- **Fruit:** The round lime-green fruit is roughly 3 to 4 inches in diameter.
- **Chambered pith:** If still in doubt, remove a small twig and split it to see the dark pith in the center. A black walnut’s pith consists of distinct chambers.
Symptoms to Look For
Symptoms of thousand cankers disease are:
- Yellowing of the leaves
- Wilting leaf appearance
- Thinning of the crown
- Death of large limbs

These symptoms are most evident during drought periods.

Susceptible Species
Eastern black walnut and butternut appear to be highly susceptible to TCD. Other species, such as English walnut, are moderately susceptible, while the native Arizona walnut appears to be resistant.

Illinois Quarantine Against Walnut Wood
To protect black walnuts, the state of Illinois has established a quarantine against walnut wood from the western states or from states in the East where thousand cankers disease has been detected. Walnut wood may only be brought into Illinois if it meets strict requirements. For details, see thousandcankers.com/state-info.php?state=Illinois.

No Treatment Available
There are currently no products produced or specifically labeled for TCD prevention or management on any walnut species. Research is underway to find a suitable chemical treatment for the beetle and/or the fungus.

Where walnut wood is desired for woodworking, stem and burl sections from infected or dead trees can be heat-treated to kill any beetles or fungus. The wood must be heated to 118 degrees for at least 40 minutes. All walnut tree sections cut for use should be completely debarked before wood is removed from the site. The removed bark should be burned or buried to prevent further transmission of the fungus or beetles.

California to Pennsylvania
Thousand cankers disease was confirmed on August 2, 2011, in Bucks County, Pennsylvania. It is believed that the walnut twig beetle and the fungus arrived in a shipment of logs from Chico, Calif., six to eight years before the infection was noticed. In the 2011 discovery, 10 of the 56 live walnut trees on the property were found to have both the beetle and the fungus. Although the infected trees were removed, the beetle had escaped and continues to be found in surveys.

Thousand Cankers Disease in Illinois
For up-to-date information on this disease in Illinois, visit the Illinois Department of Agriculture website at agr.state.il.us.