Kentucky Nursery LISTSERV Bulletin

University of Kentucky Nursery Crops Team

End of January 2017

Long Range Outlook Information

Though precipitation rates are expected to be above normal for first week of February, the longer range forecasts show an "Equal Chance" of above/below/ normal precipitation and temperature across February as well as through April. It is too early to characterize the coming transition from Winter to Spring.

See **UKAg Weather's Long Range Outlooks** for a variety of forecasts of temperature and precipitation probabilities.

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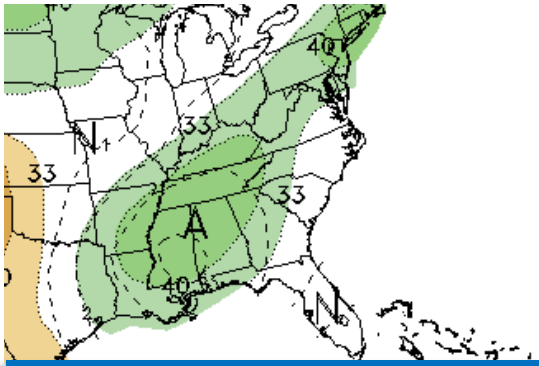

6-10 Day Outlook
Precipitation Probability
Image: NOAA.gov—Jan 29, 2017

How to Build a Trap for Ambrosia Beetles

Zenaida Viloria, Extension Associate, Nursery Crops
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Invasive ambrosia beetles such as granulate ambrosia beetle, camphor shot borer and black stem borer are among the most destructive pests to nursery and urban landscape plants, orchards and forests. These beetles live most of their lives in nests they build in the sapwood where they farm their symbiotic fungus, breed and overwinter. In early spring, when temperatures reach 68-70° F for a couple of days, beetles begin to emerge to colonize new trees. This is the best time to control them. Monitoring using ethanol baited traps is recommended to detect active populations and for timing of insecticide applications. There are different types for ambrosia beetle traps, here we describe an easy and practical double bottle trap.


Granulate Ambrosia Beetle


Black Stem Borer


Camphor Shot Borer

Materials for an Ambrosia Beetle Trap

Quantity	Item	Description
1	Bottle	2-L Clear soda bottle
1	Bottle	500 mL Water bottle
1	Eye bolt	¼”x3”
2	Washer	¼”
1	Locknut	¼”
1	Nut	¼”
1	Hose to hose connector	¾”x¾”
1	Ethanol container	100 mL plastic container with lid and wick
1	Rubber band	

An eye bolt is screwed to a nut and a washer before attaching it to a plastic plant saucer. A hole at the center of the plastic saucer is made previously with a knife. The saucer protects the catching bottle from rain.

A 2 liter soda bottle is perforated with three rectangular holes (~60x100mm) on the periphery and a small hole at the center of the bottom. The upper part of the bottle becomes a funnel when the bottle is inverted, that conveys the insects to the catching bottle.

A washer and a locknut are screwed to fasten the soda bottle to the saucer.

A double female hose connector is attached to 500 mL bottle. This small bottle contains the catching solution. About 100 mL of soapy water or commercial antifreeze solution can be poured into the small bottle to kill and preserved captured insects.

The soda bottle is connected to the catching bottle. The two bottles must be tightly attached through the connector to avoid the catching bottle loosening and dropping on the ground spilling its contents.

Ethanol (65-95%) is used as a lure to attract ambrosia beetles. Alcohol can be poured in a container that is released through a wick. Close supervision is needed to refill alcohol as it evaporates quickly, and to assure lure availability at all times. Alternatively, ultra High Release (UHR) ethanol is commercially available, which lasts longer.

The trap is hug at 1-1.5 m (3.3-4.9’) above the ground, close to nursery stocks or at the edge of woods. The ethanol container or UHR ethanol pouch can be attached to the soda bottle using a rubber band. After a week or two, the catching bottle is replaced with a fresh one. The collected bottle must be identified with location and date to keep track of ambrosia beetle population and distribution. Samples can be taken to the extension County Cooperative Extension Agent for further identification.

Tree Wounds — Invitations to Wood Decay Fungi

Kimberly Leonberger, Extension Associate
Nicole Ward Gauthier, Extension Plant Pathologist

Wood decay leads to loss of tree vigor and vitality, resulting in decline, dieback, and structural failure. Wounds play an important part in this process since they are the primary point of entry for wood decay pathogens. While other factors may also result in decline and dieback, the presence of wounds and/or outward signs of pathogens provides confirmation that wood decay is an underlying problem. Wounds and wood decay reduce the ability of trees to support themselves.

Figure 1. Lawn equipment damage to the base of a tree.

Photo: Cheryl Kaiser, University of Kentucky

Wounds may result from numerous sources such as lawn equipment (Figure 1), pruning, vehicles, herbicides, insects, wildlife, weather, or objects that girdle or embed in trunks or branches (Figure 2). Once stress or damage from wounds occurs, fungal decay pathogens may enter plants to cause further damage. During rainy seasons and moderate temperatures, many wood decay fungi produce visible reproductive structures, such as shelf-like fungal bodies (Figure 3) or mushrooms.

Figure 2. Wire from stakes and fences create wounds and can lead to girdling.

Photo: Nicole Ward Gauthier, University of Kentucky

For more information on tree wounds and related disease problems, including symptoms, causes, prevention, and treatment, review the publication *Tree Wounds – Invitations to Wood Decay Fungi* (PPFS-OR-W-01)

Figure 3. When weather conditions are favorable, the shelf-like fungal fruiting structures of some wood decay pathogens may be visible.

Photo: Joseph O'Brien, U.S. Forest Service, bugwood.org

Additional Information

*Tree Wounds – Invitations to Wood Decay Fungi (*PPFS-OR-W-01*)*
Plant Pathology Publications (Website)

Stress and Decline in Woody Plants

Kim Leonberger, Extension Associate, Plant Pathology
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Woody trees and shrubs may exhibit decline resulting from the stresses that may occur during their lives. Stress may be the result of improper plant or site selection, incorrect planting or maintenance practices, or poor soil conditions. Injury from physical practices, weather, or chemicals can also lead to stress and decline. In addition, biological stresses such as diseases, insects, and wildlife could result in stress and decline of woody ornamentals. Symptoms of stress and decline include dieback (Figure 1), leaf scorch, stunting, premature fall color or leaf drop, production of water sprouts or suckers (Figure 2), and signs of disease or insects.

Figure 1. Dieback is a common symptom of stress.

Photo: John Hartman, University of Kentucky

Typically, one or more primary stresses cause deterioration of plant health, followed by secondary pathogens and/or insects that further decline or destroy plants. Determining causes of decline requires careful examination of plants and growing sites, as well as knowledge of site history. Nevertheless, diagnoses may be difficult, as the original cause(s) of plant stress may be obscure or no longer present.

For more information on stress and decline in woody plants and related disease problems, including symptoms, causes, and prevention, review the publication *Stress and Decline in Woody Plants* (ID-50).

Figure 2. Water sprouts or suckers may result from severe stress.

Photo: Daniel Herms, The Ohio State University, bugwood,org

Additional Information

Stress and Decline in Woody Plants (ID-50)

Plant Pathology Publications (Website)

KNLA Spring Training

Carey Grable, Extension Associate, Nursery Crops

The 2017 Kentucky Nursery and Landscape Association's Spring Training was a great success this year with attendance numbers up. The KNLA board did a fantastic job of organizing a great meeting, with a great educational program and lots of fun giveaways.

This year, **Dr. Win Dunwell was inducted into the KNLA Hall of Fame**. This award goes to those who have made a significant impact on Kentucky's nursery industry.

The University of Kentucky's **Nursery Crop Extension Research Team** is based out of two locations across the bluegrass to better serve our producers.

The **University of Kentucky Research and Education Center (UKREC)** in **Princeton** serves western Kentucky producers while our facilities and personnel on main campus in **Lexington** serve central and eastern Kentucky producers.

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