

State of Illinois
Rod R. Blagojevich, Governor

Department of Agriculture
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EAB NEWS



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STATE EXPANDS EAB QUARANTINE BOUNDARY

The Illinois Department of Agriculture has added all or part of four central Illinois counties to its emerald ash borer (EAB) quarantine to prevent the artificial spread of the destructive pest through the movement of infested wood and nursery stock.

The newly-quarantined areas include all of McLean and Woodford counties, eastern Marshall County and the portions of Livingston County not part of prior quarantine orders. The addition of these areas brings the number of impacted counties to 21 and became necessary after the beetle was discovered this summer outside the boundaries of the former quarantine.

“Purple traps set around the state to monitor for EAB detected two previously-unknown infestations in McLean County, one in Bloomington and another in Chenoa,” Warren Goetsch, IDOA bureau chief of Environmental Programs, said. “The quarantine essentially was expanded to include these sites, as well as counties to the north situated between the infestations and the previously quarantined area.”

The “purple trap” survey, which began last spring, involved placing 4,689 purple sticky traps in a 100-mile wide arc throughout central and northwestern Illinois and various high-risk sites in southern Illinois. The traps were removed in late summer and then analyzed for an adult life-stage of EAB.

Beetles were discovered in seven traps; three were located in LaSalle County, two in McLean and one in both Bureau and Lake. Except McLean, all counties with a positive find were already under quarantine.

The text of the full quarantine order follows:

ILLINOIS EAB QUARANTINE AREA

Effective November 5, 2008

1. The entire Counties of Boone, Cook, DeKalb, DuPage, Grundy, Kane, Kankakee, Kendall, Lake, LaSalle, Livingston, McHenry, McLean, Putnam, Will, Winnebago, and Woodford;

2. The eastern portion of Ogle County described as follows: bounded on the north by the northern Ogle County line from Meridian Road to the eastern Ogle County line; bounded on the east by the eastern Ogle County line; bounded on the south by the southern Ogle County line from the eastern Ogle County line to Meridian Road; and bounded on the west by Meridian Road or its northern projection from the southern Ogle County line to the northern Ogle County line;

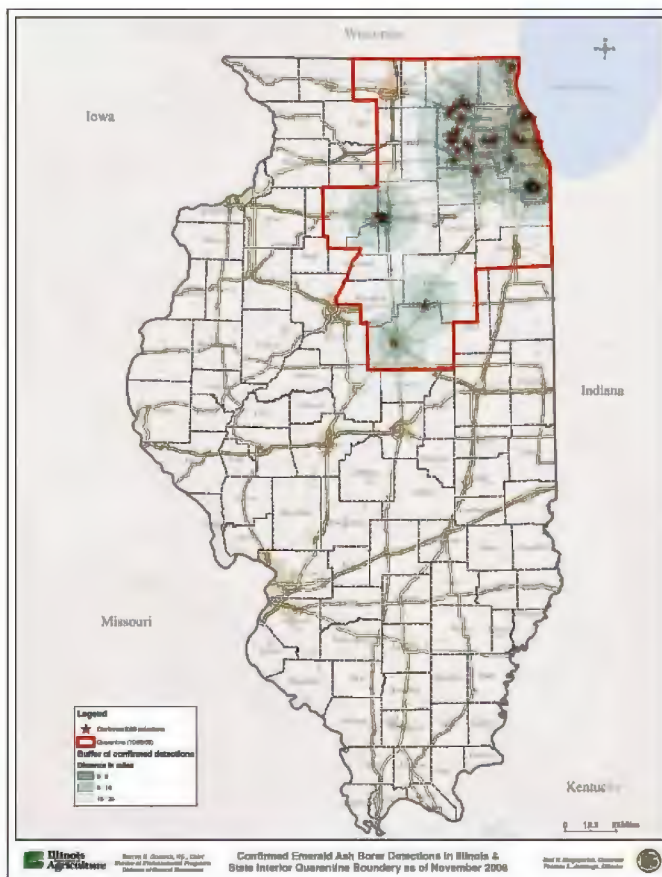
3. The eastern portion of Lee County described as follows: bounded on the north by the northern Lee County line from Meridian Road to the eastern Lee County line; bounded on the east by the eastern Lee County line; bounded on the south by the southern Lee County line from the eastern Lee County line to the southerly projection of Meridian Road; and bounded on the west by Meridian Road or its southerly projection from the

northern Lee County line to the southern Lee County line;

4. The eastern portion of Bureau County described as follows: bounded on the north by the northern Bureau County line from Illinois Route 40 to the eastern Bureau County line; bounded on the east by the eastern Bureau County line; bounded on the south by the southern Bureau County line from the eastern Bureau County line to Illinois Route 40; and bounded on the west by Illinois Route 40;

5. The eastern portion of Marshall County described as follows: bounded on the north by the northern Marshall County line from the Illinois River to the eastern Marshall County line; bounded on the east by the eastern Marshall County line; bounded on the south by the southern Marshall County line from the eastern Marshall County line to the Illinois River; and bounded on the west by the Illinois River; and

6. Any other area within the State of Illinois where the presence of the Emerald Ash Borer (*Agrilus planipennis* Fairmaire) is confirmed in the future.



The science behind identifying attractants for the Emerald Ash Borer

This year, Illinois saw the deployment of a new tool in the detection of the highly evasive and invasive Emerald Ash Borer (EAB); purple sticky traps baited with a natural oil that attracts adult EAB. The attractant is the essential oil from a native New Zealand tree called Manuka. Scientists at the United States Departments of Agriculture – Animal and Plant Health Inspection Services (USDA APHIS) and the Agricultural Research Service (USDA ARS) developed this lure by studying the odor emitted by green ash trees and comparing the odor of the ash trees with those of commercially available natural oils.

Similar insect attractant research is conducted at the Natural Center for Agricultural Utilization Research (NCAUR), a USDA ARS laboratory located in Peoria, Illinois. For the last three years entomologist Dr. Allard Cossé and his colleagues have been investigating the attraction of adult EAB to ash trees with the aim of identifying chemical compounds that can be used in the early detection of EAB infestations.



Collecting the odor from logs, bark, and leaves of ash trees showed an abundance of different chemical compounds. Some of these compounds might be used by adult EAB to locate ash trees. However, identifying the exact chemical identity of all these different compounds would take a considerable amount of time, and time is currently in short supply if the spread of the EAB population is to be slowed down. Luckily this is where the “nose” or antenna of the EAB can help out. Insects “smell” with their antennae, and when a particular compound gets recognized by the antenna a small electrical signal travels from the antenna down to the brain of the insect telling it where this particular compound is coming from. Using

this signaling information, insects can find their mates by following the scent of highly species-specific compounds called pheromones or locate the source of a food plant or the location of specific sites for the deposition of their eggs. At NCAUR Cossé uses the EAB antenna to identify exactly which chemicals in the odor of the ash tree are recognized. The technique is called electroantennographic detection, in which Cossé suspends an EAB antenna between tiny electrodes and record the electrical signals coming from the antenna when stimulated with individual ash odor compounds. The recordings look a bit similar to electrocardiogram recordings from the beating heart, be it that every blip tells him that the antenna has detected a compound that it recognizes. This way they have discovered that EAB detect just three of many compounds emanating from the bark of the white ash tree. Unfortunately, these three compounds belong to a group of chemicals (sesquiterpenes) that are rather difficult to make and the cost of large scale production for EAB survey purposes would be prohibitive high. This brings Cossé back to essential oils. The oils distilled from herbs and many tropical trees and nuts are relatively rich in these sesquiterpenes and many of these exotic oils are used in the fragrances and flavor industry or in aromatherapy. The Manuka oil used in the EAB survey program contains only small quantities of some of the compounds that the research group is looking for, but the recent trapping results of EAB in Bloomington and Chenoa have demonstrated that this oil can attract adult EAB. So the search is on for even better oils that have all the compounds needed for optimal EAB attraction, preferably in high quantity and obtainable at reasonable cost.



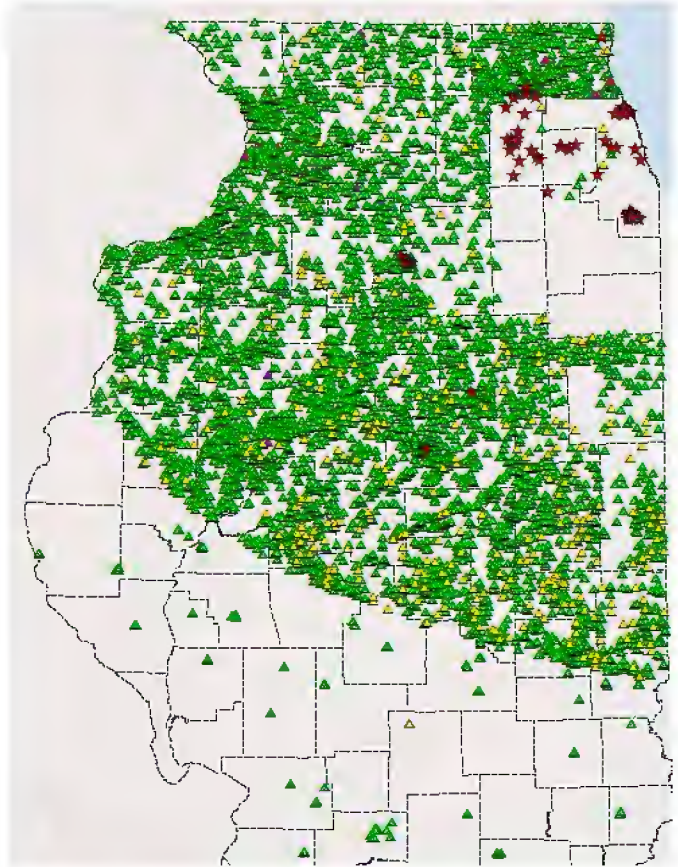
Next time you stand close to an empty purple EAB trap you may relax – no EAB yet – and as a bonus you might smell a soothing aroma.

P.S. If you know of any healthy Black ash trees (the ones that thrive in marshy areas) that are doomed for removal, please let Allard Cossé know, the odor of the logs might reveal some new EAB attractants.

EAB TRAPPING STATUS

The Illinois Department of Agriculture has completed the removal process of EAB traps which began August 4. The traps were removed starting along the southern portion of the trapping areas and continuing north. Collected traps were transported to the Department's DeKalb office where they were analyzed for the presence of adult EAB life stage. The resulting data has been finalized and submitted to the USDA-APHIS EAB headquarters where it will be combined with field trapping data from all other states. The final map of the Illinois data is provided at right.

IDA staff has now begun inspections and compliance assistance visits to various wood-handling facilities that have entered into EAB compliance agreements with the Department. Thus far, the Department has conducted 40 compliance inspections. All facilities were deemed compliant with the provisions of the EAB quarantine and associated compliance agreement.



- ▲ IDA placed traps;
 - ▲ USDA placed traps
 - ▲ Traps removed and analyzed
 - ▲ Traps missing
 - ★ Confirmed EAB locations
- Status as of 10/20/08.

<i>EAB Trap Placement Statistics</i>		
<i>Item</i>	<i>Illinois Dept. of Ag</i>	<i>U.S. Dept. of Ag</i>
<i>Total # of traps placed throughout the state</i>	3,874	738
<i>Total # of traps harvested & analyzed</i>	3,527	738
<i>Total # of traps lost or unable to be collected</i>	347	-
<i>Total # of traps deemed positive for the Emerald Ash Borer</i>	5 (3 detections in LaSalle Co., 1 in Bureau Co., & 1 in-McLean Co.)	2 (1 Lake County, 1 in McLean)

Rulemaking for Firewood Importers

The Department of Agriculture is continuing the development process for the adoptions of regulations implementing the Firewood Importation legislation that was signed into law in 2007. The Department's current proposal was submitted to the General Assembly's Joint Committee on Administrative Rules (JCAR) earlier this year and has recently completed the first notice period. The Department will shortly be submitting the second notice proposal to the committee and hopes that the final rule will be adopted and become effective sometime in December of this year.

As soon as the final rule is approved by JCAR and filed with the Illinois Secretary of State, it will be effective and require all firewood importers to apply for a certificate from the Depart-

ment for the 2009 calendar year. An application form for that purpose will be available on our website at www.IllinoisEAB.com or www.agr.state.il.us as soon as the regulation becomes effective.



www.IllinoisEAB.com

If you suspect EAB, please contact your city forester or local arborist or take digital photographs of the tree and the symptoms it is expressing and email them with contact info to: AGR.EAB@Illinois.gov



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