

Questions and Answers: USDA's 2012 Emerald Ash Borer Survey

Q. What is the 2012 Emerald Ash Borer Survey?

A. Similar to surveys done in past years, the U.S. Department of Agriculture's (USDA) 2012 Emerald Ash Borer (EAB) Survey will employ the manufactured detection tool, or "trap," to monitor known EAB infestations and locate other unknown beetle populations. Using grid-based and risk-based survey strategies, approximately 50,000 traps will be deployed in 47 States; (Alaska, Hawaii, and Ohio will not survey for EAB).

This year, the survey strategy will use a computer-generated sample design, along with historical program data and regulatory knowledge, to monitor the leading edge of EAB infestations and determine the presence of undetected pockets of infestation.

Q. What does the EAB detection trap look like?

A. The EAB trap is a three-dimensional triangle or prism. It's made out of thin, corrugated purple plastic that has been coated with non-toxic purple glue on all three sides. The purple prisms are about 24 inches long and hang vertically in ash trees. To enhance the attractiveness of the traps to EAB, they are baited with two lures.

Q. Who is involved in the 2012 EAB Survey?

A. The EAB survey initiative is a collaborative effort between USDA's Animal and Plant Health Inspection Service (APHIS) and the department's Forest Service (FS), State departments of agriculture or natural resources, and Tribal cooperators. Forty-seven States will survey for EAB; however, not all States will employ the same trap density. States encircling the known EAB-infested areas will survey within a 100-mile buffer at the higher density. The remaining States, outside the 100-mile buffer, will survey at a lower density.

High-density survey to monitor known EAB infestations will take place in areas of the following States: Alabama, Arkansas, Connecticut, Delaware,

Georgia, Illinois, Indiana, Iowa, Kentucky, Maine, Maryland, Massachusetts, Michigan, Minnesota, Missouri, New Hampshire, New Jersey, New York, North Carolina, Pennsylvania, Rhode Island, South Carolina, Tennessee, Vermont, Virginia, West Virginia, and Wisconsin.

The remaining State and Tribal locations will survey sites at risk for the introduction and establishment of EAB to identify undetected pockets of infestation. See the 2012 Emerald Ash Borer Survey Guidelines (link provided on last page of this factsheet) for additional information about these surveys.

Q. Who is paying for the cost of surveying in my State?

A. The EAB survey is funded by USDA. Each participating cooperator submits a work plan to determine the resources necessary for successful survey completion and signs a cooperative agreement with USDA.

Q. Why do you call these detection tools "purple traps?" Do they really trap EAB?

A. We refer to these detection tools as "purple traps" out of convenience. The detection tools are purple, and beetles that land on the sticky panels do become trapped, but they do not trap EAB in the sense of catching the beetle to reduce/deplete populations. The purple trap is currently the best tool we have for EAB detection; however, through our ongoing research, we are working to make an even more effective detection tool available in the future.

Q. Why is the color purple significant, and what is the lure?

A. In the insect world, color frequently plays an important role, and the EAB is no exception. In 2003, researchers began investigating EAB responses to different stimuli in an effort to develop an effective detection tool. Scientists from Tennessee State University (TSU) found that, in general, buprestids (the insect family to which EAB belongs) are more attracted to red and purple hues compared to other colors. Therefore, researchers initiated a study using a variety of red and purple traps to determine which trap attracted the most beetles; the purple trap achieved the best results. To enhance their attraction to EAB, the traps are baited with two chemical cues emitted by ash trees. Research has shown that EAB is attracted to these compounds.

Q. How does the purple trap work?

A. In their adult stage, EAB beetles fly around ash trees, nibbling on leaves and looking for a mate. If an EAB lands on a purple trap, it will get stuck in the glue. In mid-summer, survey crews will return to the trapping sites to refresh the lures and collect any insects stuck on the traps. In the fall, the crews will return to the trap sites a second time to collect samples and remove traps.

Q. Why are the purple traps placed only in ash trees?

A. Ash trees are the only host species for EAB. The lifecycle of EAB is dependent upon the ash tree; the adults feed on the leaves and lay eggs in its bark crevices, and the larvae develop under its bark. As a result, the EAB are drawn to ash trees. All 16 native species of ash, including green, white, and black ash, are EAB hosts.

Q. How long will the survey take to complete?

A. The purple traps will be placed in ash trees this spring and summer before EAB adults emerge. The traps will be monitored and remain in place throughout the summer during the beetles' flight season. This fall, all traps will be removed.

Q. Are the purple traps safe?

A. The purple traps pose no risk to people, pets, or wildlife; however, the non-toxic glue can be extremely sticky and messy if touched. The traps will be in ash trees throughout the summer—please do not disturb them. If you see one on the ground, call 1-866-322-4512 to report it. If you call outside of regular business hours, leave your name, telephone number, and the State and location of the fallen trap.

Q. What can I do to support the 2012 EAB Survey program?

A. Please talk to your family and friends about the EAB survey to raise awareness. Also, if you see one of the purple traps on the ground or damaged, contact your State department of agriculture or natural resources to report your concerns. You may also call the toll-free USDA EAB hotline at 1-866-322-4512. In addition, please become familiar with the signs and symptoms of an EAB infestation and inspect your own trees for them. Lastly, don't move firewood—burn it where you buy it.

Q. What should I do if I see a purple trap on the ground?

A. If you see a purple trap on the ground, please contact your State department of agriculture or natural resources. You can also call USDA's toll-free number

(1-866-322-4512). After regular business hours, please leave your name, telephone number, and the State from which you're calling, and someone will return your call on the next business day.

Q. If EAB is not known to be in my State, will the purple trap attract EAB and draw the beetles to my State?

A. No. Purple traps do not attract or pull beetles into an area. The traps are a detection tool to help find EAB if it is present in the area.

Q. What happens when an EAB is found on a purple trap?

A. The insect samples collected from the traps are cleaned and sent to a USDA identifier for verification. Any verifications of EAB are then communicated to the appropriate State officials.

Q. If a purple trap is in my area, does that mean EAB is there?

A. No. Purple traps only help detect EAB. A trap located in your community does not mean EAB is present—it just means we are looking for the beetle. The goal of the 2012 EAB Survey is to define the outer boundaries of infested areas and locate new EAB infestations.

Q. What resulted from the 2011 EAB Survey?

A. The 2011 survey resulted in the detection of EAB in 62 new counties. These new county detections occurred in Illinois, Indiana, Kentucky, Maryland, Michigan, Minnesota, New York, Ohio, Pennsylvania, Tennessee, Virginia, Wisconsin, West Virginia, and Washington, DC. Of these 62 detections, 41 (66 percent) were captured in a purple trap. The other 21 (33 percent) new county detections were the result of an alert public reporting symptoms or State partners performing destructive sampling. (*Note: The purple traps also resulted in other EAB detections in areas already quarantined for the pest.*)

The 2011 survey activities continued to elevate public awareness about the EAB program. Survey personnel setting and monitoring the traps in cities and towns created opportunities for discussions. The highly visible purple traps also piqued public interest and garnered media attention. As a result of the new detections, Federal and State EAB quarantines were expanded or established. These quarantines prevent human-assisted spread of EAB by regulating the conditions under which various articles—including all hardwood firewood and any ash tree material—can be transported out of the quarantined areas.

In addition, the 2011 EAB survey results provided data to support biocontrol management. Survey activities also allowed the EAB program to monitor the outer boundaries of infested areas. This information helped to assist in the placement of traps for the EAB survey in 2012.

Q. Why has the USDA adopted a new survey sampling design?

A. Since 2002, when EAB was first detected in North America, the USDA has relied on the best available science to help direct and manage program activities. Over the years, scientific research has improved understanding of the EAB, refined detection tools, and increased the number of available control methods. The new survey sampling design is an example of science enhancing EAB survey methodology. The survey design is a computer-generated product that combines a scientific model of the likelihood for detecting EAB with historical program data and regulatory knowledge.

Q. What are the benefits of the new survey sampling design?

A. The survey sampling design is an objective, transparent, science-based survey. It preselects geographic locations (cells) to deploy EAB traps where there is the highest likelihood of detecting EAB. The expected benefit of the 2012 EAB survey is threefold:

- Increase the number of successful EAB detections
- Improve land managers' capabilities to detect EAB close to the date of a new attack
- Find locations that are best suited to implement controls

Q. Will traps be set in areas independent of what the model prescribes?

A. Yes. There will be some extra traps available for staff to survey in additional locations.

Q. What determines where a trap is set?

A. The 2012 EAB sampling survey uses a computer-generated design to identify the optimal locations to survey for EAB. This design was developed as a collaborative effort between APHIS' EAB Program and the USDA Forest Service's Forest Health Technology Enterprise Team. At its foundation is a collection of environmental variables (e.g., soil moisture, land elevation, terrain) and EAB program variables (e.g., historical EAB survey data, targeted high-risk areas, pest pathways, scientific literature). The end product is a grid "map" that identifies locations (cells) where the likelihood of detecting EAB is most favorable, as well as locations where we can gain the most information to improve the model for future sampling.

Additional information is available in the 2012 EAB Survey Guidelines, available online at www.aphis.usda.gov/plant_health/plant_pest_info/emerald_ash_b/downloads/survey_guidelines.pdf.

Q. The EAB has been detected in 15 States. Why isn't USDA surveying in unregulated counties in those States?

A. Since EAB was first detected in 2002, USDA has acquired a great deal of knowledge about the biology and behavior of this pest, as well as survey and regulatory data. This information helps direct survey strategies to maximize efforts and resources; accordingly, there is a finite number of locations where survey traps will be set. However, State cooperators will have access to extra traps, which will enable survey in any area not currently quarantined for EAB.

Q. Why is USDA surveying in quarantined States such as Indiana, Illinois, and West Virginia?

A. The 2012 survey will monitor known EAB infestations and locate other unknown beetle populations. Survey results in those quarantined States will validate the presence of EAB to support the release of stingless wasps for EAB biocontrol.

APHIS, FS, and USDA's Agricultural Research Service are working together to develop and evaluate biological control of EAB as a long-term management strategy. As rearing methods improve and production increases, the goal is to provide natural enemies for releases in EAB-infested States.

Q. Can a property owner purchase a purple trap and survey for EAB independently of USDA's EAB program?

A. We are not aware of any retail sources where the public can purchase individual purple traps. To support the national EAB survey, USDA contracts with multiple manufacturers to order and deliver the trap components (corrugated purple plastic, metal spreaders, limb hooks and lures) to program survey cooperators.

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