Emerald ash borer:
the dangers and costs of infested trees

How does emerald ash borer kill ash trees?

Emerald ash borer (EAB) kills ash trees by cutting off the flow of water and nutrients as worm-like larvae create feeding galleries in the tissue beneath the bark. Signs of infestation include distinctive canopy thinning, branch decline and death, limb sprouting from the lower trunk, bark splitting above larval galleries and D-shaped exit holes created by emerging adults.

How quickly does EAB kill the tree?

EAB will kill nearly all of Wisconsin's ash trees that are more than an inch in diameter. The length of time it takes to see tree damage and mortality depends on a variety of factors, including EAB population levels and tree health. When populations are high, even trees that appear healthy can die within 3-4 years of infestation.

What should I do if I have healthy ash trees?

The first step is to decide if an ash tree in your yard is worth saving. If so, the only way to keep it alive long-term is to regularly treat the tree with insecticides. Several products are commercially available, although some can only be applied by a professional. Application methods and treatment frequency will vary for each product. Trees that are heavily infested are unlikely to be saved by insecticide application. For more information on chemical controls for EAB, explore the resources available at ***www.emeraldashborer.info***.

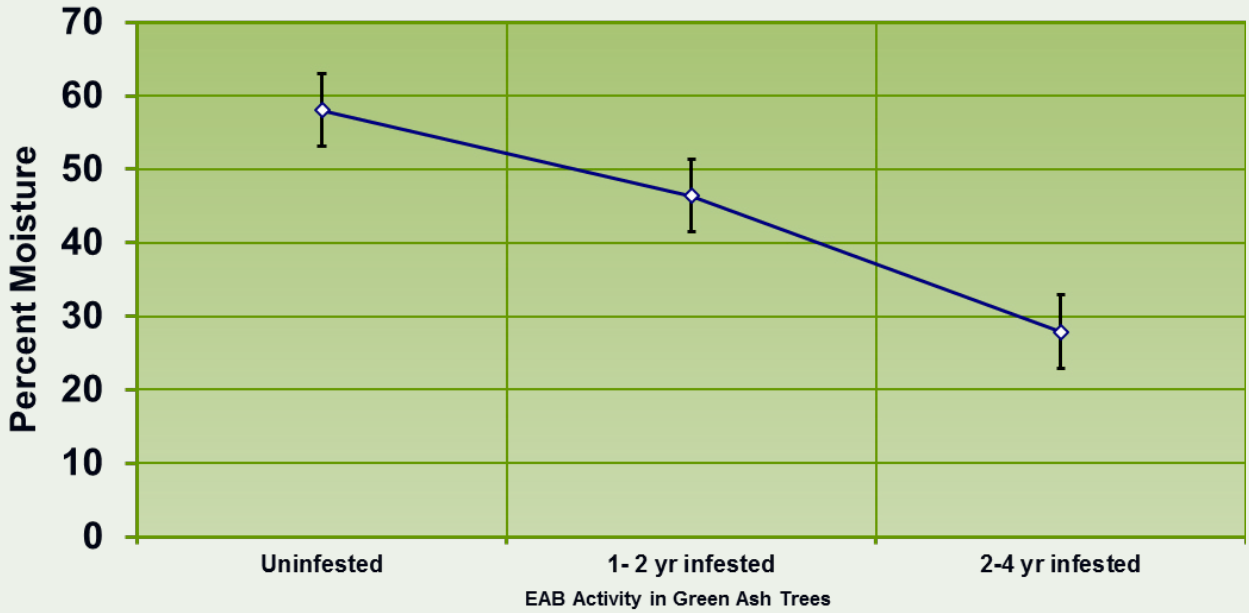
Photo by Matthew Karst

If you decide to remove your ash trees, it is typically safer and less expensive to do so before they become infested. Early signs and symptoms of infestation may appear minor, but don't be fooled. Infested trees are prone to breakage, which only increases the longer they are left standing. Many professional tree services won't let their arborists climb trees that show even 20% decline from EAB, so removing them often requires the use of expensive equipment.

Researchers and tree care experts agree that removing an infested tree may cost twice as much as removing a healthy tree, and removing a dead tree may cost three times as much. Making a decision early is important to avoid rising costs and safety hazards that come with infested and dead ash trees.

What makes infested trees so dangerous?

The structural integrity, or strength, of ash branches and tree trunks begins to decline as soon as the tree becomes infested and the wood begins to dry (see chart below). Lower moisture content increases the risk of branch and trunk breakage, and the timing of breakage is usually unpredictable. Breakage is more likely in places where bark has split and at branch junctions where a smaller branch connects to a larger one. Infested trees may also have total trunk failure soon after death, further increasing the chance of dangerous impacts to people and property.



Percent wood moisture of branches from three groups of ash trees with varying EAB chronology/length of activity in a static loading evaluation in Perrysburg, OH in 2009.

Photo by John Hieftje

What should I do now?

Don't delay in making a decision about ash trees in your yard. Treatment costs will be greater if you wait and safety hazards will only get worse. Your local extension office can help connect you with resources to identify the trees in your yard and learn more about treatment and removal options if any of your trees are ash. Explore the identification information at ***http://labs.russell.wisc.edu/eab/*** or find contact information at ***http://extension.wisc.edu/.***

FR-766

Information for this document comes from the Wisconsin DNR and Dr. Anand Persad with Davey Tree Experts.

The Wisconsin Department of Natural Resources provides equal opportunity in its employment, programs, services, and functions under an Affirmative Action Plan. If you have any questions, please write to Equal Opportunity Office, Department of Interior, Washington, D.C. 20240. This publication is available in alternative format (large print, Braille, audio tape. etc.) upon request. Please call (608)843-6248 for more information.