# EAB Treatment Guide for Brown County Residents

## Brown County Community Emerald Ash Borer Working Group

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Emerald ash borer (EAB), an exotic beetle from Asia, is threatening ash trees in North America. Since its find in Southeast Michigan in 2002, the killer beetle has destroyed more than 50 million ash trees in the Midwest region and has been detected in 15 states, including 12 counties in Wisconsin. In Brown County, EAB was first detected in Green Bay in June 2009 when a single adult was caught in a trap near WPS headquarters, but the established population was not found until recently when ash trees in the same vicinity showed significant tree decline. This is a major threat to all ash trees in Brown County. Because ash trees account for 20-25% of urban trees in Brown County, this crucial finding of EAB population will change the dynamics of our urban landscape in the next 5 to 10 years.


***Emerald ash borer***

Emerald ash borer is a small metallic green beetle that attacks true ash species only (green, blue, black, and white ash). To ensure proper identification of an ash tree, homeowners are encouraged to bring a live sample or photographic specimen of the tree leaves and its branches to the Brown County UW Extension Office. Note that mountain ash (*Sorbus* spp) and prickly ash (*Zanthoxylum americanum)* are not true ash and will not be susceptible to EAB. To learn more about the biology, signs, and symptoms of EAB attack, visit www.emeraldashborer.wi.gov

**What you can do?**

A) **Prevention & Diversification:**

1) To limit the spread of EAB, do not move any hardwood firewood, ash nursery stock, unprocessed wood waste from pruning, removal of storm damage, ash bark, and wood chip mulch that are more than 1" size out of Brown County.
2) Do not plant ash trees in the landscape. Diversify with alternatives to ash and maple. To learn more about ash alternatives, visit www.emeraldashborer.wi.gov

B) **Treatment Options:**

Homeowners living in Brown County or within a 15 mile radius from Green Bay can treat their high value ash trees using a systemic insecticide which is up taken by tree roots. However, several factors influence the effectiveness of the insecticide including the cost of the treatment and the pre-existing health condition of the tree. In general:

1) Insecticidal treatments are most effective as a preventive strategy on healthy ash trees that have a full crown and intact bark on its branches and trunk.
2) Ash trees that are already infected with EAB and exhibit less than 50% canopy dieback can still opt for insecticide treatment. Any signs of its recovery can be noticed in the second year after treatment. However, trees that have lost more than 50% canopy may not recover from its decline. Thus, insecticide treatments are not suggested.

***Crown dieback***

3) Most insecticidal products recommended for homeowners need annual application and are applied as a soil drench. The best timing for soil drench application depends on the size of the tree. To determine the amount of insecticide to apply, simply measure the circumference of the tree

using a tape at a chest height at 4.5’ above the ground to figure out the size of the tree. Trees less than 47” circumference are best treated in early spring (mid-April to mid-May) and larger trees (greater than 47” circumference) are best treated either in fall (September) or spring (mid-April to mid-May). Research findings suggest that spring insecticide treatments are favored over fall, however fall applications are acceptable.

***Soil drenching***

4) The following systemic insecticides containing imidacloprid as the active ingredient are effective as a soil drench in treating ash trees less than 47” circumference: Bayer Advanced Tree and Shrub Insect Control, Ferti-lome Systemic Tree and Shrub Drench, Optrol, Bonide Tree and Shrub Insect Control, Ortho Max Tree and Shrub Insect Killer, and Gordon’s Tree and Shrub Insect Killer.
5) Be sure to read the product label to determine the rate of application and safety protocols. Before drenching, rake up any mulch, leaf litter, or landscape cloth around the base of the tree trunk to about 18-24” to facilitate a direct contact of the insecticides with the soil. The soil needs to be in moist condition at the time of application. If the soil is very dry, irrigate around the base of the tree few hours prior to insecticide application or if the soil is too wet, allow it to dry out for a few days. Measure the volume of application needed as directed in the label and slowly pour the solution around the base of the tree trunk. Replace the mulch after the solution is completely absorbed in the soil. Click on the YouTube video link below for a detailed demonstration on soil drench application http://www.hort.uwex.edu/articles/protecting-your-tree-emerald-ash-borer
6) Trees larger than 47” circumference can still be drenched by the homeowner using Optrol (imidacloprid), or contact professionals for other treatments. You can find the list of certified arborists for hire at http://www.isa-arbor.com/faca/findArborist.aspx
7) Professionals have access to additional products with unique application techniques. A trunk injection technique with Treeäge (emamectin benzoate), a restricted use product (RUP) available only to certified and licensed applicators, has quicker uptake by the tree (irrespective of soil condition) and is effective for at least 2 years. However, trunk injection can create wounds on the tree and repeated applications can cause potential injury. Other products that can be applied via trunk injection method are IMA-jet (Imidacloprid), Imicide (Imidacloprid), Inject-A-Cide B ( Bidrin), Pointer (Wedgle). Soil injection is another method of treatment by professionals where the products (Merit, Xytect) are applied within 18” of the trunk and placed between 2” to 4” beneath the soil surface.
8) The treatments are typically cost prohibitive in woodlot areas or for large numbers of ash trees in communities.

**Signs to look for:**


***Adult beetle***


***Larva***


***D-shaped exit holes***


***Serpentine galler-***

**Note:** University of Wisconsin Extension does not endorse any one specific insecticidal product over other listed in this article. Insecticides discussed in the article have been evaluated in a variety of Michigan State University research tests on EAB.

Photo Credit: ForestryImages.org