

## Emerald Ash Borer

### What is an Emerald Ash Borer? What is EAB?

Emerald Ash Borer, known to many simply as EAB, is a very small 1/2 inch long by 1/8 inch wide, shiny green beetle that is believed to have reached the United States sometime before 2002. Normally EAB is a native of Asia and found mostly in China and Korea but has been reported elsewhere such as Japan, Russia, Mongolia, and Taiwan. EAB is believed to have arrived in the United States stowed away inside wood packing crates. It is a flat headed borer and only affects Ash trees.



### Why should I be worried about EAB?

EAB has decimated ash trees planted in many states including Michigan, Ohio, Illinois, Indiana and others. As of early 2014 EAB infects all or some portion of twenty two US states and since 2002 millions of ash trees have been killed and removed because of EAB. EAB has had such an effect partially because there are no beneficial insects native to the US that are natural enemies of EAB as there are in Asia. Trees attacked by EAB also may not show full damage for up to two to four years making finding new infestations of EAB tougher and the odds of saving a tree with extensive damage extremely slim. Once an ash tree shows fuller decline and damage it typically is too late, even with treatment, for the tree to survive so preventative treatments are the best plan once EAB nears our area.

### What trees are susceptible? What does EAB eat?

EAB has been found to only live and eat species (and cultivars) of ash in the genus *Fraxinus*. Hosts include any species of ash grown in our area including green ash (e.g. 'Marshall Seedless', 'Patmore', and 'Summit'), white ash (e.g., Autumn Purple), and lesser known species such as black ash, blue ash, and pumpkin ash. Manchurian and Chinese Ash are the primary hosts in Asia and are also susceptible to EAB. Mountain ashes which are in the genus *Sorbus* are NOT hosts. Simply put, any species of ash in the *Fraxinus* genus is in danger from EAB. Adult beetles do eat some foliage but the real damage is caused by the larvae which hatch from eggs laid on the trunk which then burrow under the bark and tunnel horizontally back and forth causing tremendous damage to the tree's vascular system.

### Has EAB reached Nebraska?

As of early 2014 EAB has not yet been found in Nebraska but it has been found in the surrounding states of Iowa, Kansas, Missouri, and Colorado. While it is believed that EAB can only move a few miles a year on its own, EAB in larval or egg stages can be a perfect hitchhiker on ash wood moved by man for firewood or to be used to produce wood products. Eventually we expect EAB to be discovered in Nebraska but for now it has not been officially found here.

### Can EAB be treated or prevented?

Yes. There are a number of possible treatments suited for EAB treatment and prevention. For trees with trunk diameters approximately smaller than 15" homeowners can treat with soil trenches of products with the active ingredient of Imidacloprid. Trees can also be treated with products through trunk injections, either smaller or larger than 15" diameter

but those must be applied by a Nebraska Certified Pesticide Applicator with a company like Campbell's. And while these products are labeled to treat other insects that can damage ash, many state extension groups, governmental agencies, and green industry professionals recommend waiting to begin preventative treatments until EAB has been confirmed within 15-20 miles of your location. While it is important to begin treatments preventatively once EAB is found in Nebraska, at Campbell's, we have always believed that we should limit the amount of chemicals applied into the environment by focusing the use of any chemical to targeted applications. These applications should be based on specific situations such as when a pest or disease is present or when necessary as a preventative measure. Thus for now we are advocating waiting on preventative treatments for EAB until it is discovered closer to our area.

#### **Should we try to save every ash tree?**

While you could try to save every ash tree located on your property it may not be the best decision in every circumstance. We recommend considering all your options carefully before finalizing your decision. First, many homeowner applied products have limits on how often the chemical may be applied and limits on how much active ingredient (A.I.) in the treatment product can be applied per acre each year. These limits are backed by state and federal laws and anyone found exceeding the A.I. yearly limits would be breaking the law and could find themselves facing civil and/or criminal penalties. Secondly, just because we can treat a tree doesn't mean a tree may be worthy of saving. If the tree is of smaller size, already has health issues, or is not pleasing aesthetically it may be better to consider removing and replacing the tree. Thirdly, once treatments begin they will need to be applied usually on an annual basis for possibly ten to twenty years so a cost analysis should be considered to decide whether it is better to pay for annual treatments into the future or to remove the tree. In some cases removal and replacement may be less costly than the cost of treatments and removing the tree now would reduce the cost versus removal in the future. We can help you treat your ash and can work up a cost proposal upon request to help you make a decision on long term costs.

#### **If I treat my trees are they guaranteed to not become infected with EAB?**

At this time we will not make any guarantee that treatments will absolutely protect your tree from being affected by EAB. Certainly our options for treatment are much better now than ash owners in the early hit states had available. In many cases with proper care and preventative treatments many in the initial battleground states of MI, OH, IL, and IN are seeing their ash surviving in heavily infected areas where so many other ash have died.

#### **Where can I find further information about EAB?**

There are a number of websites available with more information about EAB. A website to begin with is one run by the USDA, Michigan State University, Ohio State University, and Purdue University located at <http://emeraldashborer.info>. To many this is the 'clearing house' of EAB information on the Internet.

Other sites you might consider include:

Nebraska Department of Agriculture EAB website - <http://www.nda.nebraska.gov/plant/eab.html>

Nebraska Forest Service EAB website - <http://nfs.unl.edu/eab>

USDA 'Stop the Beetle' - 'Don't Move Firewood' website - <http://stopthebeetle.info/>

#### **Help! I think I found an Emerald Ash Borer. What do I do?**

If you suspect you have found an EAB infestation in Nebraska, please contact the Nebraska Department of Agriculture at 402-471-2351 or the national EAB hotline at 866-322-4512.