Emerald Ash Borer Management Options

The emerald ash borer (EAB) is an exotic insect that is destructive to ash trees (*Fraxinus* species). The adult stage causes minor feeding damage to ash foliage. The larval stage feeds beneath the bark and disrupts water and nutrient flow within the tree, which leads to tree death.

The insecticide products listed in this publication work best as **preventive** treatments for **healthy** ash trees planted along streets or in yard settings. Healthy trees have full crowns, elongating branches, and bark held tightly to the trunk/branches. It is not practical or cost effective to treat woodlot trees with insecticides.

Several factors must be considered before using an insecticide.

Tree identity and evaluation

- Identify the target tree as ash. See ***www.extension.iastate.edu/pages/tree/*** for an online tree identification aid.
- Evaluate tree health and landscape value. If the tree is declining, storm damaged, and/or cost of treatment will exceed the landscape value, replace the tree with an alternate species. See ***www.extension.iastate.edu/pme/EmeraldAshBorer.html.***

Insecticide effectiveness

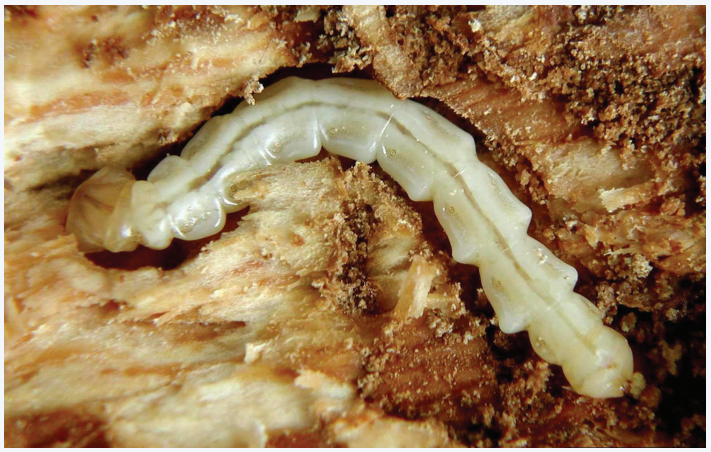
- Most insecticide control measures against EAB must be used **each** year for the life of the tree.
- Insecticide treatments may not be effective in controlling EAB in your ash tree. Storm damage, other injuries to the tree, age of the tree, soil moisture, soil compaction, and other site and environmental factors influence the effectiveness of these products. The only certain method to control EAB is to remove the infested tree.
- Treatments are most effective as prevention, before EAB finds the tree. If your tree has an early EAB infestation – less than 40 percent dieback of crown – treatments **may** stop the infestation.
- Treatments are suggested only if you live within 15 miles of a confirmed EAB infestation. Treatment outside this risk zone is not prudent. Known infestations are given at ***www.emeraldashborer.info/.***
- A tree in an eradication area is subject to removal by government agencies even if preventive treatments were applied and/or signs of EAB infestation are absent.

IOWA STATE UNIVERSITY
University Extension

Iowa State University (ISU) Extension recommends the following insecticides for control of EAB.

Products for Homeowners	
Type of application	Soil drench
Active Ingredient	Imidacloprid (1.47%)
Tree Parameters	25"circumference or smaller
Time of Application	mid-April to mid-May

To mix and apply a soil drench, homeowners should carefully follow product label directions. The amount of insecticide required depends on the tree's circumference in inches. Before applying the drench, pull back any mulch or dead leaves 12 inches from the base of the tree. After the mixture has been absorbed into the soil, you can replace any mulch over the treated area. For ash trees with a circumference larger than 25 inches, ISU Extension recommends enlisting the services of a commercial pesticide applicator.



Products for Commercial Pesticide Applicators			
Type of Application	**Active Ingredient**	**Tree Parameters**	**Time of Application**
Soil drench	Imidacloprid	Small trees (Under 8" diameter)	mid-April to mid-May
Soil injection	Imidacloprid	< 16" diameter	mid-April
		16" or greater diameter	mid-April, September
Trunk spray	Dinotefuran with Pentrabark	All healthy ash trees	mid-May to mid-June
Trunk injection*	Imidacloprid	All healthy ash trees	mid-May to mid-June
Trunk injection**	Bidrin	All healthy ash trees	mid-May to mid-June
Trunk injection***	Emamectin benzoate	All healthy ash trees; may last 3 years	mid-April to mid-May

* Common delivery methods: Arborjet, Mauget, Wedgle
** Mauget delivery method
*** Arborjet delivery method

Trunk injections have the advantage of being absorbed and distributed throughout the tree more quickly (2 to 4 weeks) than soil applications (4 to 8 weeks), and are useful where soil treatments are not practical (excessively wet soils, compacted sites, or restricted surface areas). One disadvantage of trunk injections is the potential for injury to the tree, especially if treatments are applied every year. Soil injections should be made within 18 inches of the trunk, and the solution placed 2 to 4 inches beneath the soil surface. Canopy sprays are not recommended because of limited effectiveness, the need for special equipment, spray drift, and possible adverse effects to nontarget organisms.

For more information:

Contact your local ISU Extension office or see the following Web sites for additional information.

ISU Pest Management & Environment

http://www.extension.iastate.edu/pme/EmeraldAshBorer.html

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