

Homeowner Guide to Emerald Ash Borer Treatments

Kim Rebek and David Smitley,
Michigan State University, Department of Entomology
April 12, 2005

Several insecticide products are available to homeowners for control of emerald ash borer (EAB). Treatments are needed every year in order to protect ash trees from EAB. Treatments are recommended only for homeowners in the quarantined area; it is not necessary to treat ash trees outside of this area. At this time the quarantined area includes all of Monroe, Wayne, Macomb, St. Clair, Lenawee, Washtenaw, Oakland, Lapeer, Hillsdale, Jackson, Livingston, Genesee, Ingham, Shiawassee, Saginaw, Branch, Calhoun, Eaton, Clinton and Gratiot counties. Research tests have shown that we can protect healthy trees from emerald ash borer with insecticides, but we may not be able to save severely compromised trees. By the time you see dead branches, thinning of the canopy, and woodpecker activity, the tree is already severely damaged, and it may be too late to save it with insecticides.

Insecticide products available for home use include Bayer Advanced Garden™ Tree and Shrub Insect Control, Bonide® Systemic Insecticide Bullets and ACECAP® 97 Systemic Insecticide Tree Implants. *Caution:* read all label instructions before using any pesticide, avoid skin contact and store pesticides where children cannot reach them.

Bayer Advanced Garden™ Tree and Shrub Insect Control is a systemic insecticide applied as a soil drench around the base of trees. Since there are several Bayer Advanced Garden™ products, be sure to purchase the one with “Tree and Shrub” in large print on the label and imidacloprid as the active ingredient. Label instructions say to use 1 ounce of the insecticide for every inch of distance around the tree trunk (circumference). For example, a 20-year-old ash tree may have a trunk diameter of 10 inches and a circumference of 31 inches. For this tree you will need 31 ounces of insecticide. Pour 31 ounces of Tree and Shrub Insect Control into a bucket, fill it $\frac{3}{4}$ -full with water, then pour the solution around the base of your ash tree. Applications should be made in April or early May.

Bonide® Systemic Insecticide Bullets and ACECAP® 97 Systemic Insecticide Tree Implants are similar products, both containing acephate as the active ingredient. The insecticide is delivered through small cartridges implanted in the trunk. Implants should be placed at 4-inch intervals around the trunk base. To determine the number of implants required, measure the trunk circumference (distance around the tree trunk) in inches at 4 ft. above the ground, then divide the circumference by 4. Using a tape measure, drill $\frac{3}{8}$ -inch diameter holes at 4-inch intervals starting approximately 6 inches above the soil surface and spiraling up and around the trunk base. Holes should be drilled in a slight upward spiral pattern, so that each hole is 1 - 2 inches above and 4" across from the previous hole. Drill holes through the bark into the tree, and continue drilling $1\frac{1}{4}$ inches deep under the bark. This is important because the bark is much thicker on older trees. Press implants into drilled holes as far as possible, then use a hammer and a flat-end punch or dowel rod to drive implants gently into the tree. This should place the capsules slightly beneath the cambium surface. A good way to find the cambium layer is to insert a screw driver as far as you can into the drilled hole. Push the tip firmly against one side of the hole as you slowly pull the screw driver out. The cambium layer is

soft, so you will feel the tip of the screw driver dip into the wall as you scrape over it. The capsules should be tapped-in until the top of the capsule is just beneath the cambium. Both products should be applied in early May, during the period of maximum upward flow of tree sap.

Since we have had better success treating small trees, homeowners with trees with a trunk diameter of 6 inches or less (approx. 19 inches circumference) can use the Bayer Tree and Shrub Insect Control product or the ACECAP/Bonide Bullets product (Note: ACECAP/Bonide Bullets are not to be used on trees less than 3" in diameter). For trees larger than 6 inches in diameter (approx. 19 inches circumference), the Bayer Tree and Shrub Insect Control should be used in combination with the ACECAP® 97 or Bonide® Bullets for the first year or two of treatment, after which only one of the products will be needed. At this time we don't recommend trunk injections for more than 3 consecutive years due to injury from drilling the injection holes. Treatments may be more effective if overall tree stress symptoms are reduced, therefore it is recommended that trees are fertilized in the fall or spring, watered regularly, and lightly mulched around the base to retain moisture.

More information about these products and where they can be purchased can be found on the following Web sites:

ACECAP® 97 – www.acecap-medacap.com

Bayer Advanced Tree and Shrub Insect Control – www.bayeradvanced.com/gardenproducts

Bonide Systemic Insecticide Bullets – www.bonide.com

For more information, visit the Website: www.emeraldashborer.info

Note: This information is for educational purposes only. Reference to commercial products or trade names does not imply endorsement by MSU Extension or bias against those not mentioned.

© 2005 Michigan State University