

**Emamectin benzoate:** Tree-age is the name of an insecticide that can be used to protect *valuable* ash trees from EAB in Illinois.

The product is sold as TREE-äge® (pronounced "triage") and is available now.

It can be purchased and applied only by trained Certified Arborists; in Illinois they must be an *Illinois Pesticide Applicator. Certified by the Illinois Department of Agriculture*

The product is applied as a trunk injection at the base of an ash tree. It is not sprayed on the tree nor applied to the soil.

Like any systemic insecticide, this product must be transported through the trunk and into the canopy. Therefore, it will usually be more effective in a tree that is reasonably healthy than in a tree that has already been severely injured by EAB larvae.

**Research by Michigan State University on this product:**

Dr. Deborah McCullough, MSU Professor of Forest Entomology was a lead scientist on this study. Dr. Therese Poland (US Forest Service & adjunct MSU faculty) and Phillip Lewis (USDA APHIS) were also involved in the work. Trees in three sites were treated emamectin benzoate on 22 May 2007. EAB was present at all sites but trees appeared healthy. No tree had more than 10-30% dieback.

**Results from the first year of the study were dramatic:**

Three bioassays were conducted in the summer to assess survival of EAB beetles caged for 4 days with leaves from treated and untreated leaves. In all three bioassays, 100% of the beetles that fed on leaves from emamectin benzoate-treated ash trees died. When beetles were caged with leaves from trees treated with other products, beetle mortality ranged from roughly 40-80%. Only 20-30% of beetles caged with leaves from untreated trees died. In September, 7 trees treated with emamectin benzoate or another insecticide were felled and debarked. The number of EAB larvae on the treated trees and untreated control trees was determined. Trees treated with emamectin benzoate had 99% fewer larvae on them than the untreated trees. Specifically, there were on average, 68 to 132 EAB larvae per square meter in untreated control trees, and 14 to 62 larvae in ash trees treated with other insecticide products. In contrast, the emamectin benzoate trees had an average of 0.2 larvae per square meter.

Keep in mind – this data is from only one year of study. Research is continuing, and updated information will be provided as it becomes available.

**Safety issues:**

Emamectin benzoate is injected into a tree's vascular system. It is not sprayed on the bark or leaves. Animals (e.g. birds, chipmunks) and other insects (e.g. butterflies) that simply land on a treated tree but do not feed on the tree will not be affected by the insecticide.

For more information about Tree-age, visit the TREE-äge website. For more information about treating ash trees, go to <http://www.emeraldashborer.info/treatment.cfm> or call our office to speak to a Certified Arborist to see if your Ash tree is a good candidate for treatment.