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## **Insecticide Treatment of Ash Trees in New York for Emerald Ash Borer**

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Insecticide treatment is an option for protecting high-value ash trees from attack by the Emerald Ash Borer (EAB). However, there are a number of issues that should be considered by homeowners and communities to minimize costs and the environmental impacts associated with pesticide use. First of all, the best way to save money is to NOT treat your trees if you don't need to. Most of the EAB discoveries in New York State are still small and quite localized (as of November, 2011), as in South Buffalo (Erie County), Rochester (Monroe County), Caledonia (Livingston County), Pembroke (Genesee County), and West Point (Orange County). For the purposes of this discussion these small infestations will be referred to as Tier I infestations as set forth in the NYS Department of Environmental Conservation (DEC) EAB Response Plan ([www.dec.ny.gov/docs/lands\\_forests\\_pdf/eabresponseplan.pdf](http://www.dec.ny.gov/docs/lands_forests_pdf/eabresponseplan.pdf)). EAB has likely spread from these locations but not very far, and when populations are small it can be years before additional trees in the area begin showing symptoms. Homeowners and municipalities that choose to protect high value ash trees living within 1 mile of the "core" of these small Tier I infestations should consider treating their trees soon. Trees with a healthy crown will respond well to treatment and EAB larvae in the tree will be killed by the insecticide. Treatment of trees farther away would be premature - at this time.

As EAB populations build in a given area, the recommended distance from the leading edge of the infestation for treatment action increases. For instance, the Chili (Monroe County), Lancaster (Erie County), Bath (Steuben County), and Randolph (Cattaraugus County) infestations currently involve a few thousand infested trees and have spread about 2 miles from the original infestation center. These infestations are considered Tier II infestations. EAB populations have been building at these sites, trees are dying more rapidly, and dispersal rates are increasing. In Tier II infestations the recommendation would be for homeowners and municipalities within 10 miles of the infestation "core" consider treating their trees, with urgency increasing the closer to the "core" you are. Once again, even if your trees do have low numbers of EAB in them, if they still have a healthy crown they will respond to treatment. Once crown dieback becomes greater than 50%, the likelihood of tree recovery is poor and removal is recommended.

At the height of large, spreading populations, Tier III infestations, the recommended distance for treatment action increases to 15 miles away. The current EAB infestation in the Kingston/Saugerties area (Ulster and Greene Counties) is the only Tier III infestation currently in New York State. In Tier III infestations immediate action would be required to protect trees within and near the "core" delimited area because EAB populations are at high levels, trees are dying at a faster rate, and dispersal is accelerated. Again, it is important that landowners pay close attention to local EAB detection efforts as well as the health of their trees; treatment may still be effective with the onset of early symptoms up to 50% canopy decline.

It will take several years for Tier I and Tier II infestations to develop into Tier III infestations, especially if management efforts by the DEC are effective at slowing the spread through implementation of the SLAM (Slow Ash Mortality) program. While planning your treatment activities, it is important to follow recent developments in your area. It is also important to locate reputable licensed pesticide applicators who are familiar with EAB biology and treatments. Demand for the services of pesticide applicators in your area might present difficulties for the timely treatment of your trees. If the demand for the services of your chosen pesticide applicator is high then you might want to treat your trees with a multi-year insecticide ahead of the current recommended treatment range.

Another issue is your choice of pesticide. Scientists working on EAB in the Midwest have recently compiled the results of their work with insecticide treatments. This guide provides the most current recommendations and guidance on insecticide options for protecting ash trees from EAB.

[http://www.emeraldashborer.info/files/Multistate\\_EAB\\_Insecticide\\_Fact\\_Sheet.pdf](http://www.emeraldashborer.info/files/Multistate_EAB_Insecticide_Fact_Sheet.pdf)

CAUTION: New York State residents can only use products labeled for use in NYS and have to work with certified pesticide applicators to apply restricted use pesticides. A table of all insecticides registered to control EAB in New York can be found at:

<http://www.nyis.info/pdf/EAB%20Chemical%20Treatment%20Summary.pdf>

One of the important concepts to consider is that when there are few EAB around, as in Tier I infestations at this time, just about any product will keep your trees looking green for one year. EAB can take years to kill trees in Tier I infestations. However, when EAB populations build to Tier II & III, tree death is more rapid and only the most efficacious insecticides are effective.

Another issue to consider is that some products currently registered in NY need to be applied every year and others every two or three years. Products registered for homeowner use need to be applied once a year to protect your tree from EAB. In the Midwest, EAB remains active in an area for 10 years or more. We don't know how long EAB will be lurking in NY forests, but assuming it will be similar to the Midwest, the costs of insecticide application add up over time. All research at this time indicates the need to regularly treat trees as long as EAB is in the area and if you neglect to treat your tree when it needs a booster, your whole investment may be in jeopardy.

Maps of current infestations in NYS and many educational materials for are available on the Cornell Cooperative Extension website:

<http://nyis.info/eab>

Current infestation maps and many other resources are also available at the DEC website:

<http://www.dec.ny.gov/animals/7253.html>