

What's Creeping You Out No

Ideas In Pest Management

Next On The Tee: EAB

By Brandon M. Gallagher Watson of Rainbow Treecare Scientific Advancements

The arrival of emerald ash borer (EAB) to Minnesota has created challenges for municipalities and homeowners, but they are certainly not the only groups that need to make some serious decisions over the next few years. Many golf courses in the Midwest, similar to many municipalities in the Midwest, have a ton of ash trees, and having a plan in place will be crucial for the next couple of years.

EAB populations tend to start slow in a new location, as is the case here in the Twin Cities, with just a few trees found infested in the first few years. They will then increase exponentially and we will have thousands of trees dying each year for several years until the ash population is so reduced that the number of dying trees goes back down. Golf course managers will have unique challenges with EAB as the golf course management objectives differ widely from the objectives of a city

forester. Concerns of members and patrons about how it will affect the appearance and the playability of the course, along with the concerns from the club's ownership about costs will all have to be addressed.

EAB: Not as Hard as You Think

Although the media coverage makes EAB out to be the worst problem in the history of trees, it is actually one of the easiest pests to treat, with numerous proven treatments. The short story of EAB comes down to two options: either treat the trees or cut them down. There are a million different ways to write management plans, different treatment options, different ways to apply treatments, but it really comes down to the two realities: treat or remove. Another way to look at it is one way or another: EAB will cost you money for every ash tree on your course. Now, how much money it will cost, and when that payment will be due is dependent on many different factors. With an understanding of the options, a proactive



Death is eminent if your ash trees are left untreated. The Emerald Ash Borer is an indiscriminant and wholesale killer of trees. phot courtesy of the UDSA FS

management plan will help guide your actions for the next several years.

Start Planning Now

So what does a proactive management plan look like? Most start with an inventory. You may already know how many ash trees you have and where they are but, if not, now is the time to find out. Mapping the locations can be your guide for a management plan. Trees that grow along strategic lines for the game of play, trees shading tee boxes, trees in prominent locations such as near the

clubhouse or along key sightlines, will have a different approach than those in wooded areas. Once you have map and inventory of your ash trees you can start deciding what management strategies make sense.

One plan that has not proved successful is the 'do nothing until EAB kills them, then cut them down' strategy. This can be an acceptable plan for some of the trees on a course, like those in woodlots or natural areas. However, for trees along the course of play, waiting for trees to get infested, then removing, presents its own set of obstacles.



A row of ash trees being injected with insecticide using the Tree IV system provided by Arborject.

Getting bucket trucks on golf courses is many times not an option so even deciding which trees should be slated for removal based on access by removal crews should be a consideration. Ash trees that are infested with EAB are notoriously brittle, many national tree care companies have policies where they will not put a climber into an EAB infested tree due to safety concerns. If you cannot get a bucket truck out to remove a tree along the course, and getting a climber into the tree safely is also a challenge, it becomes easy to see why having a proactive management plan is far better than a reaction plan.

To Treat or To Remove

Removals will absolutely be part

of every EAB management plan and treatments should part of them as well. Even if the long term plan is to remove all the ash trees, the realities of having a compressed timeframe to do so in has led many managers to see treatments as a way to bid time for a staged removal plan so they are not stuck dealing with 1,000 dead trees on a course. Treatments can be performed by contract applicators, many local tree care companies offer full EAB management services, or treatments can be done by properly trained in-house grounds crews.

Three Ways to Protect Trees

There are three main active ingredients (A.I.) and three different application methods recommended by

universities to manage EAB. A proactive EAB management plan may feature just one A.I. and application method, or it may incorporate a full toolbox of treatment options. Each method and A.I. has benefits and drawbacks, which is why there is not a ‘one size fits all’ approach to EAB management.

Tree injection using the A.I. emmectin benzoate (TREE-age) is a popular method for EAB management. This treatment has the advantage of protecting trees for 2 seasons and is the only treatment recommended if you are trying to save an infested tree. The



EAB can be treated with the soil injection of an insecticide called dinotefuron. photo courtesy of RTSA

drawbacks of this method include a relatively higher cost of treatment and longer application time per tree. This means a crew can protect a few number of trees in a given time period, but none the less, this treatment makes sense for many trees in many situations.

The second method is a soil application at the base of the tree using imidacloprid (Merit, Xytect, others). This can be applied by either a simple soil drench method or by soil injection. The upsides of these treatments are the low cost

of the product and fast application per tree. However, these soil treatments cannot be performed in areas of high water tables and have not been very effective on infested trees. The treatments are only effective for one season so they will need to be applied annually. While imidacloprid treatments are no stranger to the golf course manager, effective treatments for EAB require a higher dosage than many turf treatments. For this reason, be sure you are choosing an imidacloprid with highest label rate allowed as not all the products on the market will protect ash trees over fifteen inches in diameter.

A relatively new option for EAB management comes from a cousin to imidacloprid: dinotefuran (Transtect, Safari). Dinotefuran can be applied to the base of the tree just the same as imidacloprid, but has the advantage of working several times faster. This protects trees in a week or two rather than waiting 2-3 months for imidacloprid, a useful feature if applications of imidacloprid were not done in the spring.

A second application method, systemic

bark spray, has been gaining interest from golf courses lately. The product is mixed with water and sprayed on the lower trunk of the tree. It then enters the vascular system and moves throughout the tree. This method has lower product cost than the soil application methods and it takes just a minute or two to protect the whole tree for a year. This would allow an entire fairway lined with ash to be protected single applicator with a backpack sprayer in under an hour.

As said earlier – EAB is not a difficult pest to control so once you have decided which trees will get which management approach you can start implementing the plan. Keeping in mind that one way or another, EAB will have a cost for every ash tree in your care can help put all the options in perspective. Do I spend money to remove this tree or spend money to keep this tree? Golf courses that have ash trees – which is seemingly every golf course in the state – will have to make their management decisions in the next few years whether they are ready or not. Are you ready?

About the author

Brandon Gallagher Watson is a Communications Director and Tree Health Care Specialist for Rainbow Treecare Scientific Advancements (RTSA). He obtained his education from the University of Minnesota – College of Natural Resources for Urban and Community Forestry and was one of the first participants in RTSA's summer internship program. An ISA Certified Arborist, Brandon holds a variety of tree industry memberships, including ISA, Arboriculture Research and Education Academy, Minnesota Society of Arboriculture, and California Arborists Association.



Tree in the foreground treated with Xytech in 2009 and 2011 the others untreated. *photo RTSA*

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