

SuPerspective

Emerald Ash Borer Control Project Mendakota Country Club

By **BOB MCKINNEY, CGCS**
Mendakota Country Club

Bob McKinney, CGCS of Mendakota Country Club has been employed by the club for 35 years. He was hired by Harold Stodola in 1974 and has been Superintendent for the past 19 years.

Mendakota Country Club is a private club in Mendota Heights, Minn. The course is on 130 acres. We've been averaging approximately 22,500 rounds per year the last six years.

What is known as Mendakota Country Club began its golf history in 1926 when Louis Fischer laid out five holes in his pasture land using empty tin cans for cups. By the end of the first year they had nine holes. By 1929 "the course" was expanded to 18 holes. Eighteen grass greens were constructed in 1933 allowing the course to be awarded the 1934 State Publinx Championship. Somewhere along the way the course was named Riverview Country Club, a name that stuck until 1942 when it was changed to Twin City Country Club. In 1956 the club was sold to a corporation made up of members and in 1957 the name was changed to Mendakota Country Club.

What Prompted You To Consider 'In-House' Tree Injection?

As reports of Emerald Ash Borer (EAB) discoveries got closer to the Minnesota border, I became much more interested in learning more about this pest and methods to control it. I took an inventory of Mendakota's ash trees to determine not only how many we have, but also what effect it could have on our golf course if we lost all of these trees. Unfortunately for us, I found we have over 350 ash trees on the course and most of them play a very important role either strategically or aesthetically to our course. Many of our golf holes would be devastated without them. Also, our ash trees are large, averaging 20



inches in diameter.

I have to give my friend, Kevin Manley, who works for JRK Seed, a lot of credit for helping me understand this pest and the various control methods being used for control. I attended two seminars put on by JRK Seed and Arborjet and researched all I could find on the internet about EAB. The research being done by professors Smittley and McCullough at Michigan State University is extremely useful. Everything I learned steered me towards injecting our trees "in house" using Arborjet equipment and the insecticide Tree-äge. There are a number of reasons why I chose Arborjet and Tree-äge but basically this method has proven to be the most effective and environmentally safe product to date for controlling EAB.

I reported my thoughts and plan of attack to my committee and Board of Directors. The plan was to inject 300 of our 350+ ash trees at a cost of \$70 per tree. At this cost, I could treat our trees for 25 years compared to the cost of removal and replacement. We all agreed that this golf course could not afford to lose these trees. Mendakota assessed each of its golf members \$100 to cover the cost of injection. I would say that our members welcomed this assessment.

I would say the injection method is very simple and easy to use. A bit of a

learning curve at first but after six trees or so it really goes smoothly. The process is basically measure, drill, plug, and inject. First the tree diameter is measured at breast height (DBH). I use a special tape measure made for measuring tree diameter. I then look at a "use rate table" that will tell me the number of injection sites per DBH as well as volume of Tree-äge to be injected. For example, a 20" DBH tree will require 8 injection sites and 110 ML of Tree-äge. Using a cordless drill with a 3/8" bit, 8 holes are drilled approximately 1-5/8" deep and as evenly

spaced as possible around the tree.

Typically the holes are drilled about 6" up from ground level and away from damaged areas of the tree or compressed bark areas. Root flares are excellent locations for injection sites. Arborplugs are then tapped into these holes. An arborplug is a plastic "plug" with an internal septum which keeps the injection site leak proof. Two I.V. bottles with four delivery tubes each are used to deliver the product. I've been using one part water and one part Tree-äge for my mix whereby I'll add 55 ML of each to each bottle for a total of 110 ML for this tree. Using the Arborjet hand pump, each bottle will be pressurized to 60 psi. There is a blow-off valve on each bottle that limits the pressure to 60 psi. The delivery tubes which each have a needle and valve at their ends are then purged of air before being inserted into the arbor plug. The valves are then opened and the mix flows into the tree. I would say that it takes about 15 minutes for this entire process.

The best time for injection is when the trees are fully leafed out in the spring and actively transpiring. Typically, it takes more time for drilling and set up then it takes for the product to move into the tree. I've had it take from seconds to hours for the bottles to empty.

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Is the Process Economical?

I purchased the Arborjet Tree I.V. two pack kit for \$599 which gives you everything you need to get started except for the cordless drill. I added two more Tree I.V. units at \$199 each to help speed up my program. I first scoffed at the price of this equipment but after a season of use I feel that the Arborjet equipment is worth every penny, very durable and easy to use.

Also, keep in mind that this same equipment can be used to inject nutrients or fungicides into your trees. We injected a chlorotic oak with iron and a chlorotic maple with manganese this past season. I began injecting trees mid-summer and stopped in late September. Each tree that has been injected has also been tagged with a number. I keep a log with date of injection, size, location, volume of Tree-äge injected, and current appearance. I've injected 256 ash trees to date and will treat another 35-40 next season.

Any Special Licenses?

A pesticide license, an Arborjet kit, and Tree-äge is all you need to get started. Keep in mind that this pest is relatively new and that control measure research keeps coming in. All of the data that I've come across tells me that I've chosen the best possible method to combat this pest. The research tells me that my trees are going to be protected for at least two years and I wouldn't doubt that by this time next year I'll find that this single treatment will be good for three years.

Some Math:

Tree-Age case price = 53¢/ML

20" ash = 110 ML - 110 x .53 = \$58.30

Arborplugs @ 59¢ ea - 8 x .59 = \$4.72

\$58.30 + \$4.72 = \$63.02/20" tree for two years or \$31.51/year

300 x \$63.02 = \$18,906 (good for at least two years)

Versus:

300 trees x \$250 removed = \$75,000

300 trees x \$50 stumped = \$15,000

300 x \$500 tree replacement = \$150,000

\$240,000 could treat our ash trees for 25 years minimum.

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Tree Injection Hillcrest Golf Club of St. Paul

By THOMAS SCHMIDT

Superintendent, Hillcrest Golf Club of St. Paul

I am the Superintendent at Hillcrest Golf Club of St. Paul and have been a Superintendent 10 years.

Hillcrest is a private golf club with 12,000 to 15,000 rounds per year.

Hillcrest was a public golf course that opened in 1921. Hillcrest was established as a country club in 1945.

I have been injecting my trees at Hillcrest for six to seven years, I started out treating the elm trees and have since moved on to injecting insecticides for the Japanese beetle. After injecting, we would see the beetles on the ground around the tree. The numbers of dead beetles were in the thousands which helps my cause because they are not laying their eggs in my turf. This helped reduce my beetle count tremendously and I have seen a huge reduction in damaged turf and trees.

My tree injecting budget was \$4,000 a year just for the elm trees. I spend 1/3 of that now and am treating more trees. I have saved my club approximately \$17,000 over the period of six years with the Arborjet tree injection system.



Superintendent Tom Schmidt injects a tree at Hillcrest Golf Club of St. Paul.

This system, I found at the National show year's ago, has paid for itself many times over, it is easy to use, fast and very user-friendly.

With the ash borer approaching I will

be treating 40 key ash trees over the next couple of years and will hopefully save our club trees and our pocket books.

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