Tradition left behind in fight vs. elm disease

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the chances that Dutch elm disease will gain a foothold are greatly reduced. Not everyone agrees, however.

"We're getting away from the traditional concept of spraying for bark beetles," said Dr. Doug Houseworth, manager of technical support at Ciba.

Tradition left behind

Doug Caldwell of Davy Tree Expert Co. Caldwell said the high concentrations of insecticide prescribed for large trees like elms pose potential exposure problems for workers, and could lead to liability due to drift. What's more, said Caldwell, elimination of bark beetles appears to be unnecessary as long as the fungus is attacked directly with the application of trunk-injected fungicides.

The most widely used fungicide is Arbotect, manufactured by Merck. Another fungicide, Lignasan, has been discontinued by DuPont, but its active ingredient is now available from ERI under the name Elm Fungicide.

Both fungicides are applied via macro-injection, whereby a large hole is drilled in the base of the tree, a tank is fastened with a harness, and dilute fungicide is fed into the tree either by gravity or by low-pressure injection.

Alamo, a newer fungicide from Ciba Turf and Ornamental Products, is available in both macro- and micro-injection formulas. The new micro-injection system consists of individual, self-contained units that are inserted in small holes drilled in a tree's flare roots.

After a light tap from a hammer, the units are pressurized and the fungicide (about 10 milliliters compared to the 10 gallons used in macro systems) is injected into the tree.

Once applied, "You can basically walk away from it," said Dr. Doug Houseworth, manager of technical support at Ciba, "whereas with the macro system you've got to baby-sit it." Company officials estimate the micro-injection units save six to seven hours of labor per tree over macro-injection methods.

All three fungicides are most effective when used as a preventive treatment.

In nationwide tests on more than 8,000 healthy trees treated with Elm Fungicide, according to ERI, less than two percent were lost to Dutch elm disease. Studies on Alamo conducted by Dr. R. Jay Stipes of Virginia Polytechnic Institute yielded similar results.

The fungicides can also be used to treat infected trees, provided the disease is caught early, typically when trees show 20 percent or less crown symptoms. Under these circumstances, ERI reports a success rate of 54 percent for Elm Fungicide.