Pointer Insecticide Controls Hemlock Woolly Adelgids In Virginia Tech University Study

The following information is excerpted from a 2005 research report written by Jeffrey Fidgen, Research Associate, and Dr. Scott Salom, Associate Professor, Department of Entomology, Virginia Tech (Virginia Polytechnic Institute and State University), Blacksburg, Virginia. Reprinted with author's permission.

SUMMARY

Pointer™ Insecticide offers a significant opportunity to control Hemlock Woolly Adelgids. Not only does this chemical provide sufficient control of this devastating pest, but the Wedgle™ Direct-Inject™ application system allows large numbers of trees to be treated quickly making it a desirable treatment option.

The Hemlock Woolly Adelgid (HWA), Adelges tsugae (Annand), is a non-native, sap-sucking insect that is killing Eastern hemlock (*Fig. 1*) in the eastern United States. The adelgid was

Fig. 1 – Hemlock killed by HWA

discovered in the 1950s in Richmond, Virginia. Since then it has spread quickly and now covers 40% of the native range of Eastern hemlock, Tsuga canadensis (*Fig. 2*), in the U.S.

If not controlled, the adelgid could wipe out Eastern hemlock from many areas of the eastern U.S. Feeding by the HWA causes premature needle loss and shoot dieback. Over a period of one to three years, crowns of infested trees thin noticeably. Some trees die in as little as four years.

Currently, researchers are focusing on the screening and release of exotic natural enemies from Japan and China because few native natural nemies exist for this pest. However, these programs are in their early stages of development. Presently, chemical control is the only solution for keeping infested trees alive until natural enemy populations are established. Moreover, chemical control might be the only option for homeowners who have hemlocks on their properties.

In an ArborSystems, Inc. sponsored project with Virginia Tech, two chemical formulations were tested to evaluate their control of HWA. The first was an experimental formulation of cyfluthrin, the second a commercially available formulation of Pointer™ Insecticide. Both products were injected into Eastern hemlock in late spring 2004 with the Wedgle™Direct-Inject™ trunk injection system. A year later, adelgid populations on the cyfluthrin-treated trees were 64% lower than untreated trees, and 88% lower on the Pointer-treated trees. (*Fig. 3*)

Effect of ArborSystem's Pointer and Pyrethroid IV on Infestations of the Hemlock Woolly Adelgid

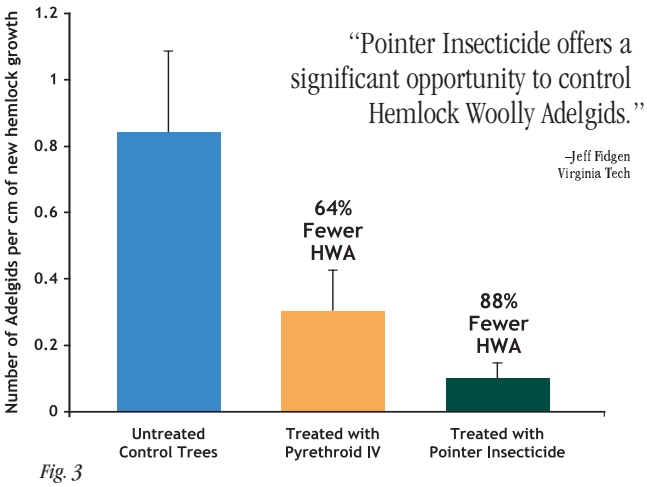

Fig. 3

The difference between Pointer-treated trees and untreated trees is shown in Fig. 4a and 4b. Virginia Tech plans to evaluate the length of time these products remain effective at controlling HWA.

Fig. 2

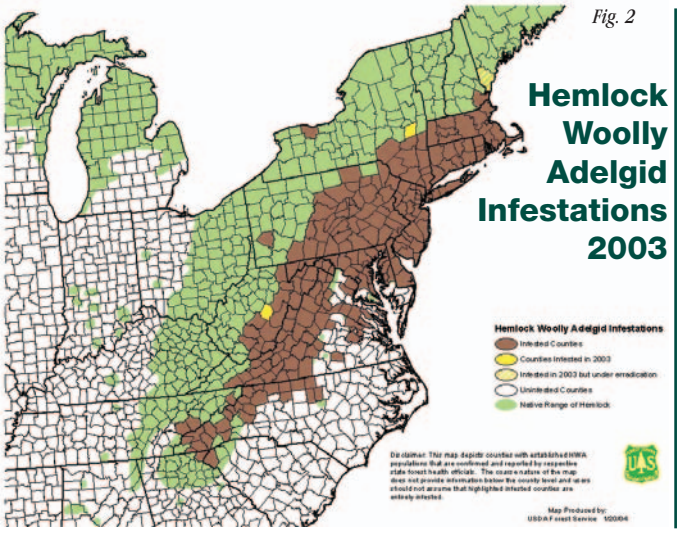

Photo by Mr. Tom McAvoy

Virginia Tech 1872

ENTOMOLOGY ponder the possibilities

Fig. 4a – Untreated tree with HWA damage.

Fig. 4b – Pointer-treated tree is protected from damage.