

IETIC Systemic Insecticide Study Update
May 10, 2007

Photo 1 – Sample trees at the Cherry Lane Seed Orchard with adequate cone crops were identified for the study. Thanks to Potlatch Forest Holdings for allowing us to use their orchard.



Photo 2 – The tree injection system was supplied to us by ArborJet. The system includes a syringe-like device connected to a bottle of insecticide. The “syringe” can be set to meter out up to 5 ml of solution.

Photo 3 – Using a 3/8 inch drill bit, a hole was drilled approximately 2.5 inches into the sapwood. Depending on tree size, 3 to 6 holes were drilled/tree.



Photo 4 – A small plug, called an ArborPlug, was inserted into the hole and tapped into the tree. The ArborPlug contains a one-way septum that allows the needle of the injector to be inserted without leaking insecticide once it is withdrawn.



Photo 5 – The needle of the injector is inserted into the septum of the ArborPlug.



Photo 6 – Once the needle is fully inserted, the plunger is depressed and the insecticide is injected into the tree. Our study contains 5 treatments of three chemicals: Emamectin Benzoate (at 2 dosages), Azadirachtin, and Imidacloprid. The fifth treatment is a control.

Photo 7 – A close-up of the injection system.



Photo 8 – While the injection system worked very well, in a few cases we experienced some leakage from the ArborPlugs. The key is to apply firm pressure on the plunger while injecting the insecticide, but not to try to inject it too rapidly. This is especially true of the higher volume treatments that we applied (6 ml per hole). It is possible that we didn't insert the ArborPlugs as far into the tree as we should have. We plan to check with ArborJet to determine if this is the case.