# Grower trials

## Temik applications to reset trees

### Grower trials, tribulations and observations

***EDITOR'S NOTE: Our new "Grower trials" articles initiated earlier this year have focused on grower practices that have been proven and accepted by the University of Florida-IFAS. In the scientific community, trials are considered carefully controlled experiments that test the quality or usefulness of a practice, and are usually repeated to ensure validity.***

***Some growers have told us they'd like for Citrus Industry to share less scientific grower observations about practices used against greening and canker. Recently, Lee Jones of Gardinier Florida Citrus submitted one such observation, and we're publishing it here. We plan to continue to publish such observations, as long as the practices employed are in accord with labeled product use and otherwise legal.***

***We encourage growers, managers and production managers to share practices that seem to be working against greening or canker with us, and we'll share them with readers. The primary criterion for publication is that the practices be legal. You can email your proposed grower observations, tribulations or letters to the editor for consideration to editor Ernie Neff (ernie@southeastagnet.com)***

***Additionally, the Web site-based "Grower trials" section at www.AgNetOnline.com remains active. Those wishing to submit items for consideration for use on the Web site or in Citrus Industry can email us at growertrials @southeastagnet.com***

**By Steve Futch**

In the battle with the Asian citrus psyllid (*Diaphorina citri* Kuwayama), two soil-applied insecticides are available to provide effective control of psyllids on young nonbearing citrus trees. The psyllid is a primary pest and a major concern to citrus growers due to its ability to acquire the greening bacterium from infected trees and then transmit the disease to healthy trees. The reason to control psyllids is to minimize the spread of greening within a given grove or area.

Temik (aldicarb) and Admire Pro (imidacloprid) are both currently registered for use in Florida for the control of the psyllid on citrus trees. For young citrus trees, the products are soil applied and adsorbed by the plant's root system. Temik is mechanically applied as a granular product and must be soil incorporated. Admire is applied as a soil drench in 8- to 10-ounce formulated solution at the base of each tree for trees less than 4 to 6 feet in height. The placement of the product over the tree's root system is very important to maximize uptake and translocation into the tree and therefore provide maximum pest control.

Both products must be applied two to three weeks prior to the initiation of the new growth to allow for the product to be absorbed and subsequently transported to the leaves where the psyllids will be feeding. Remember that when Temik is applied, it must be applied between Nov. 15 and April 30, incorporated into the soil and follow setback requirements from wells.

The control period of psyllids with either product varies from eight to 12 weeks depending on application rate and environmental conditions.

Over the years, Florida citrus growers have been applying Temik around citrus trees in both young solid set and bearing trees in groves for the control of various citrus pests. However, the ability to apply Temik close enough to root systems of young reset trees in mature groves has been difficult and leads to less than optimum control of citrus pests in mixed-age blocks.

In an effort to improve the application of Temik to resets in mature citrus groves or in solid plantings of young groves, individuals have adapted, modified or developed equipment that has the ability to individually treat resets in mature groves. These manually operated application devices have the ability to adjust the application rate and/or target site by incorporating the product into the soil at one or two locations around the young reset. It is assumed that multiple application sites will improve product delivery and uptake by the tree's root system.

*A worker applies Temik to a young tree.*

In an effort to assess the effectiveness of this new application method, University of Florida entomologist Michael Rogers and growers are conducting trials to look at both application rates (1 or 2 ounces of product) and soil injection frequency (1 or 2 injection sites) around young trees to improve pest control. For the rate component, Temik is being applied at 1 or 2 ounces of product per tree. For the one-ounce rate, the product is applied on one side of the tree or at a one-half ounce rate on each side of the tree. For the two-ounce rate, the product is also applied on one side or both sides of the trees. In this study, Temik will be compared to Admire Pro at 0.025 or 0.05 fluid ounce per tree as a soil drench.

All treatments will be evaluated on a weekly basis when new flush is available by counting adult psyllids on each tree. Sampling of each treatment will continue until it appears that the control has failed and when those treatments should receive a foliar insecticide. Data from the 2008 trials will be available prior to the application in the spring of 2009.

Several custom applicators around the state are applying Temik using the newly developed applicators. These applicators are adapted from other agricultural crop operations or fabricated locally. EKC Citrus Growers and Florida Citrus Services are currently applying Temik using the new applicators. Application cost varies with the number of trees per acre as well as application methods.

To apply Temik using hand-held applicators, the rate per acre varies from $5.50 per acre for one to five trees, $8.25 per acre for six to 10 trees, $11.00 per acre for 11 to 20 trees, and $17.50 for 20 to 50 trees. These rates do not include the material, which costs approximately $0.20 per ounce.

## Grower observations

**By Lee Jones, general manager of Gardinier Florida Citrus**

*Lee Jones*

**We've been battling the psyllid for 2 1/2 years now and HLB for who knows how long. The 5,500 acres that I manage include groves in all three growing regions (Martin, Hendry, Hardee and Manatee counties). This disease has multiplied rapidly in parts of our groves. I've noticed some interesting things about this disease, and I believe my most recent findings will help us keep this disease at manageable levels.**

**When we first started finding HLB at our grove in Indiantown, I noticed it was more heavily concentrated around the ditch banks. Researchers told us the psyllid was attracted to the color yellow. When our ditches were dug at Indiantown, shell rock was layered on top of the beds and this high pH soil induces interveinal chlorosis, causing yellow areas between the veins, thereby being more attractive to psyllids.**

**Soon thereafter, I started noticing HLB around the borders of blocks with good soil and no interveinal chlorosis. My thoughts then were that the hurricanes really pounded these outside trees and weakened them to a more susceptible state.**

**Recently, however, I was riding in a neighbor's grove. He had one block that was half grapefruit and half Valencia. The grapefruit was pushed out after the hurricanes. The Valencia north-south border that was protected from any hurricane winds was infected heavily with HLB. This I consider a variety change border.**

**It seems that a uniformly flushing block will have the highest disease pressure on the border. At the GFC groves, we plan on hedging the outside row heavily in some areas to induce continual flushes. It will be a smorgasbord so to speak for the psyllid. Then we will use extra control measures on the borders — preferably systemic insecticides. We also plan on planting a psyllid preferred plant in some areas as a trial. These trap crops could equate to a wall of defense against the psyllid. It could also mean potentially less insecticides on our fruit.**

**James 1:5 says, "If any of you lack wisdom, let him ask of God, that giveth to all men liberally, and upbraideth not; and it shall be given him." Our industry is in dire need of God's wisdom. The old has passed away. To be profitable, we have no choice but to explore new techniques and technologies. I believe a trap crop around our borders is one of these techniques.**