

# Grower trials

By Steve Futch

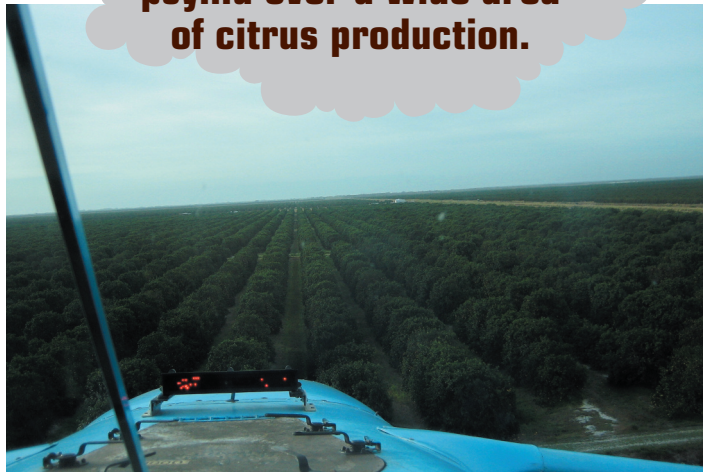
The management and control of the Asian citrus psyllid (*Diap-horina citri*) has increased in importance in the past two years due to the increasing presence of greening in Florida and the ability of the psyllid to vector the disease. The psyllid was first reported in 1998 in South Florida and along the east coast and rapidly spread throughout the entire state in a few short years. Greening was detected much later in South Florida in the fall of 2005 and is now found in 28 counties in south and central Florida. Controlling the psyllid is a major component of greening management strategies and may help slow the spread of greening over time when coupled with removal of greening infected trees.

In an effort to control the psyllid, a group of progressive citrus growers in eastern DeSoto County collectively developed a plan to spray and suppress psyllid using fixed-wing aircraft over a large geographical area. These collective efforts were spearheaded by Jerry Newlin at Orange Co of Florida and led to approximately 25,000 acres of citrus owned by a number of growers being sprayed beginning in early October and taking approximately 4 1/2 weeks to complete. The initial estimate suggested that the acreage could be sprayed in a period of two to three weeks; however delays, mainly due to weather and equipment issues, resulted in extra time needed to complete this undertaking.

This daunting task of spraying such a large area would have been almost impossible with currently available conventional tractor-drawn spray equipment in such a short period of time. The intended outcome of spraying all citrus groves (25,000 acres) within the area was to reduce psyllid populations on a large scale, thus increasing the time required for psyllids to re-infest groves within the treated area.

The use of fixed-wing aircraft freed up existing grove equipment for other production tasks and spraying by air allowed for quick pesticide disbursement over large areas. In addition to being able to spray acreage rapidly, the cost

**Growers collectively use fixed-wing aircraft to spray Asian citrus psyllid over a wide area of citrus production.**



The pilot's seat view of a grove that is to be sprayed. The light bar with red lights is used with the aircraft's GPS guidance system to allow consistent and accurate spray application.

was very favorable at \$16 per acre, including both application and materials.

Dimethoate was chosen as the pesticide to use as it had been reported to provide successful psyllid control in a number of grower trials in recent months. Dimethoate was applied at 2 pints per acre in a spray volume of 10 gallons per acre along with Kinetic, a silicone surfactant. The aircraft swath width was 56 feet and sprayed at approximately 120 to 140 miles per hour. Helena Chemical Co. worked with area growers to develop the spray schedule and contracted with Sunniland Aircraft of Okeechobee to perform the application. In areas where citrus blocks were isolated or where power lines limited aerial application, the groves were sprayed with standard ground sprayers applying Dimethoate 4E at a rate of 2 pints in 50 gallons of water per acre and traveling at 3 miles per hour. The use of aerial application also reduced potential worker exposure to the pesticide as the product requires extra personal protective equipment for ground application as compared to other commonly used pesticides.

In conjunction with Dimethoate, a few areas were sprayed with Sevin XLR by air at 4 pints per acre in a spray volume in 10 gallons per acre as a comparison. Both aerial treatments,

the ground applications of Dimethoate and several blocks left untreated for comparison purposes, are currently under evaluation by entomologist Michael Rogers at the Citrus Research and Education Center to monitor the effectiveness of these applications for reducing psyllid populations over time. Ongoing evaluations of this trial to date (Dec. 17, 2007) have shown that all pesticide applications have equally reduced psyllid populations when compared to untreated blocks of citrus. Evaluation of these applications will continue into early this year to determine how long psyllid populations will remain low in the treated areas.

Area-wide spraying for psyllids appears to be a potentially useful component of a comprehensive management strategy for psyllid suppression as well as reducing the spread of greening. In addition to psyllid suppression, removal of trees showing visual symptoms of greening should be practiced to aid in disease suppression and reduce or slow the spread of greening.

When citrus growers collectively work together, greater pest management strategies and programs can be developed and conducted as compared to individual efforts. These collective, innovative and proactive pest control efforts are essential for a strong citrus industry.

This publication series documenting results of grower trials will appear as a monthly column developed by the citrus Extension agents. If you have conducted successful trials for the management of psyllids, greening or canker and would be willing to share those experiences, contact your citrus Extension agent to allow the results to be shared with fellow citrus growers.

The use of brand names does not indicate specific endorsement or exclusion of products or services. When using any pesticide, you must read and follow the pesticide label completely, as the label is the law.

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