



## Is there a future for low-volume application for psyllid control?

*Low-volume applicators like this one may be used in the future for control of Asian citrus psyllid.*

**By Ryan Atwood and  
Lukasz Stelinski**

**G**reening has presented a new challenge to Florida's citrus growers, but perseverance is in their blood. Psyllid control has become important in the fight against greening and growers have been experimenting with new equipment to control this pest. Conventional spraying of a grove is not cheap. Just loading and unloading equipment can be expensive, particularly when working on smaller acreages. A few growers have experimented with something new for psyllid control — low-volume applicators.

Many of these units mount in the back of a pickup truck and travel at speeds between five to 10 miles per hour. Low-volume applicators create small particle sizes, which require calm conditions to apply. This is why such applications are made at night. Typically, practitioners of ULV applications begin around 10 p.m. and run until dawn. Some applicators drive down and spray every row middle, while others spray every other middle. Some applicators have reported covering up to 250 acres in one night with a single machine under perfect weather conditions. The cost of application is approximately one sixth to one seventh of the more traditional air-blast sprayer.

### Grower trials, tribulations and observations

The combination of low application cost and the ability to quickly cover large acreages using a low-volume application is attractive for psyllid control. Also, the ability to ride down the road and conduct psyllid control without loading and unloading equipment is beneficial, particularly for small acreage operations.

Currently, the main obstacle facing low-volume application technology is the general lack of effective products that are appropriately labeled for this technology for psyllid control in citrus. Most pesticide labels were written without low-volume application as a consideration. Most effective products for psyllid control have labels with a certain minimum gallons of water-per-acre requirement. Since low-volume equipment may put out as little as two gallons of water per acre, they do not meet these minimum gallons of water-per-acre requirements. If low-volume use is not on the label, it is not legal.

Due to its low cost, growers using low-volume application equipment have been able to spray more frequently

than with traditional equipment. These growers have reported good psyllid control. University researchers have been and are currently conducting experiments to evaluate low-volume applicators and their effectiveness for psyllid control. Initial results have been positive. Low-volume applicators have been found to be as effective as airblast sprayers for psyllid control. Researchers are still evaluating different pesticide modes of action and their effectiveness with low-volume applicators. These scientists are also determining timing of applications and rotation of materials that will lead to the best psyllid control program using this technology. Although low-volume applications are fast, allowing for more frequent application than air-blast, the decision to apply a pesticide for psyllid control should be need-based and include appropriate rotation of modes of action to avoid development of resistance.

In order for low-volume application to become a viable new tool for effective psyllid control in Florida, appropriate label changes are needed for pesticides that are highly effective against the psyllid with this technology. There is a group of industry leaders working on the growers' behalf seeking label changes to include low-volume application. A USDA program called IR-4 is designed to help specialty crops (citrus is considered a specialty crop in the United States) in developing data to

support and expedite pesticide label changes. The IR-4 project provides field trial and laboratory residual data necessary for the EPA clearance of minor crop tolerances, and approval of new uses for pesticide labels. The citrus industry was represented at the IR-4 regional meeting in

Virginia this past August.

The process for label changes has begun and field data using low-volume applicators is being gathered continuously by IFAS researchers. When label changes to the minimum gallons of water per acre have been modified for the use of low-volume

equipment, the citrus industry will be in a good position to utilize this technology for psyllid control.

*Ryan Atwood is a multi-county extension agent; Lukasz Stelinski is an entomologist at University of Florida-IFAS Citrus Research and Education Center in Lake Alfred.*