Citrus health management areas

Figure 1. *Aerial applications for psyllid control are a cost-effective and rapid method of treating large citrus acreage.*

By Michael E. Rogers

Since the discovery of HLB in Florida in 2005, our knowledge of psyllid biology and how to control this HLB vector has increased tremendously. We now have a very good understanding of how and when to use the limited number of tools we have in our "pesticide toolbox" to get the most "bang for the buck."

One thing that has become apparent in recent years is that regardless of how many well-timed sprays a grower makes, it is still possible for psyllid populations to "explode" in a well-maintained grove, seemingly almost overnight. In such a situation, particularly where a pesticide may have been applied just a week or so earlier, the first thought might be to blame the pesticide application; either the product didn't work, or perhaps the equipment malfunctioned. We've all seen instances where this was later determined to indeed be the case. However, in some instances, perceived control failures may have more to do with what's going on around your grove than what you are doing in your grove.

Despite their small size, psyllids are much more mobile than one might first imagine. In ongoing research being conducted by entomologist Lukasz Stelinski (UF-IFAS-CREC), psyllids have been found to move on almost a daily basis between adjacent citrus groves. Looking beyond the adjacent groves, Stelinski's work has also been able to track individual psyllids to surrounding groves slightly more than one mile away from their original starting point. Given the frequency of movement and potential for rather long-distance dispersal, coupled with the relatively short residual activity of most foliar-applied insecticides when it comes to maintaining low psyllid populations, the psyllid control program of surrounding groves is just as important as what is being done in your own grove.

As many growers have already learned from their own experiences, working together to control psyllids makes the most sense. By controlling psyllids across a large area, the collective efforts of multiple growers can reduce the psyllid population below levels of detection throughout an area. As a result, it will take a longer period of time for psyllid populations to increase to levels where they can again be detected in those groves. On the other hand, if psyllids are not controlled uniformly across an area, then psyllids from groves on a different schedule of pesticide applications (not yet treated) can move into recently treated areas where pesticide residues have declined and are no longer providing control of psyllids. Thus, growers might be faced with the decision to respray sooner than planned.

CHMAs RECOMMENDED BY EXPERTS

In 2010, a group of scientists from the National Academies, commissioned by the Florida Department of Citrus, released a report outlining the short- and long-term priorities for survival of the Florida citrus industry in the presence of HLB. Perhaps the most important, short-term recommendation was to establish citrus health management areas (CHMAs, commonly pronounced "chee-mahs"). One of the primary goals of forming CHMAs is to coordinate the timing of psyllid sprays to enhance psyllid control beyond what one or a few growers can achieve on their own. The report also recommended that growers use the same pesticide mode of action for these coordinated sprays to reduce the likelihood of pesticide resistance development that could result in psyllid control failures in the future.

Over the past several years, there have been a number of instances throughout Florida where growers have joined together to coordinate their psyllid control sprays. Based on the success from many of these efforts, fueled by the report released by the National Academies, grower interest in forming and participating in CHMAs has increased dramatically. However, the main impediment to establishing effective CHMAs is the massive amount of coordination required for such a collective effort. In response to requests from Florida citrus growers, University of Florida-IFAS (UF-IFAS) and the Florida Department of Agriculture and Consumer Services (FDACS) have teamed up to establish a statewide CHMA program to provide assistance to growers in the formation of CHMAs. The role of UF-IFAS and FDACS in the CHMA program is to provide information needed to make decisions and facilitate coordination and communication of planned CHMA activities.

The key component of the CHMA program is grower participation! Given the fact that the CHMA program is

voluntary (there are no mandates for growers to participate), the level of success obtained by each CHMA will be largely determined by how many growers in an area choose to participate. Thus, the framework established for the CHMA program is designed to meet two goals: 1) enhance the psyllid control efforts of growers participating in a CHMA and 2) provide data to demonstrate the benefit of the program in order to convince more growers to participate. The following is a brief description of how the CHMA program functions to meet these goals.

Because growers are the driving force behind this voluntary program, the first step in establishing a CHMA (as part of this formal program) is for growers to request assistance from UF-IFAS. Requests may come from groups of growers where efforts are already under way to coordinate applications (and may benefit from additional assistance) or from growers in areas where no coordinated efforts have yet been attempted, but there is interest in doing so. These grower-initiated requests should be directed to the local UF-IFAS citrus Extension agent (http://citrusagents.ifas.ufl.edu/locate/).

Upon receiving a request for assistance in establishing a CHMA, the citrus Extension agent will work with local grower leaders and other IFAS specialists to arrange CHMA planning meetings. All growers in the area will be encouraged to attend. The purpose of the initial meeting(s) is to identify the CHMA area (based on the grouping of groves in that region) and develop a plan of action for the coming year. Specifically, growers will decide how many coordinated sprays they are willing to commit to, the timing of these applications and the pesticide mode of action to be used for each coordinated spray. As needed, IFAS Extension specialists will be available to provide information to help the group develop a plan of action that best fits its particular production situation.

TIMING IS CRITICAL

When developing a plan of action, the most critical factor is the timing of the pesticide application. In most situations, it is recommended that a coordinated spray be completed within a two-week window, the minimum time required for a psyllid to complete one generation (egg to adult). In some instances, such as the winter months when psyllids are less likely to be reproducing, extending the application window beyond two weeks could still

FDOC Trends Report Predicts Industry Viability Over The Next Decade

By Ken Keck

The Florida Department of Citrus (FDOC) Economic and Market Research Department performs a unique role by providing citrus growers with crucial information to make informed business decisions. One forecasting tool is the Florida Citrus Production Trends report prepared by Dr. Mark Brown, FDOC research economist, and issued annually. The recently released 2012-13 through 2020-21 trends report indicates Florida citrus production may be relatively stable to moderately declining over the next 10 years.

Despite the grim outlook that prevailed in 2008 due to widespread greening, the Florida citrus industry has made tremendous progress in controlling the disease through collaborative efforts.

Current industry estimates suggest that greening impacts approximately 18 percent of Florida citrus. Growers have been able to manage greening by joining together to form Citrus Health Management Areas (CHMAs) and implementing large spray programs which have proven to be effective in suppressing psyllid populations.

Through the Citrus Research and Development Foundation, extensive research continues to explore solutions to citrus diseases. The ultimate goal is to develop disease-resistant trees; however, the industry expects that it will take more than a decade to attain this goal, so research is also focused on practices that make groves disease-tolerant in the short and medium terms.

The FDOC trends report is based on Florida Agricultural Statistics Service data. Future citrus acreage is estimated based on assumed loss rates and assumed planting rates. Production estimates are then obtained by applying average yields to the projected acreage. The report includes crop projections for low, middle and high tree loss and planting rate assumptions.

An increase in the likelihood of more moderate tree loss rates and higher planting rates suggests production in upcoming years could be relatively stable.

The relatively low loss scenarios indicate that citrus production levels may be somewhat flat to moderately declining over the next 10 years. This suggests that Florida citrus production can be maintained at a viable level and continue to be one of the state's largest agricultural commodities. Currently, the citrus industry has a $9 billion annual impact on the Florida economy and employs nearly 76,000 people. You can view the full trends report at http://www.fdocgrower.com/emr/trends.php.

In addition to production, the value of the Florida citrus industry and its impact on the state's economy is dependent on demand, with citrus prices determined by the interaction of supply and demand.

FDOC's strategically targeted marketing programs will help to protect the market for Florida citrus by continuing to enhance U.S. retail demand in a challenging economic environment.

As our industry continues to balance the need for critical disease research funding with maintaining consumer demand through marketing activities, we can positively impact production trends and help to ensure a sustainable future for Florida citrus.

The mission of the Florida Department of Citrus is to grow the market for the Florida citrus industry to enhance the economic well-being of the Florida citrus grower, citrus industry and the state of Florida. Ken Keck, Executive Director, can be reached at 863-537-3999. For more information, visit www.FDOCGrower.com

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Figure 2. *Growers attend a CHMA planning meeting coordinated by UF-IFAS citrus Extension agent Ryan Atwood in Volusia County.*

provide effective control. However, unexpected additional delays due to weather, harvesting or equipment breakdowns could result in a longer-than-desired application window resulting in greatly reduced effectiveness. Nonetheless, the goal is to get the coordinated spray completed in as short a time as possible.

One common misconception regarding coordinated sprays that has discouraged some growers from participating is that these applications must be made using aerial applications. While there are certainly cases where use of aerial application makes the most sense, growers may choose any number of pesticide application methods to treat their groves; these include aerial, low-volume or traditional airblast sprayers. However, some products may not provide effective control when applied aerially or using low-volume applications. For more information on recommended application methods for a given product, see the document titled "Developing a psyllid management plan" which can be found on the following Web page (http://www.crec.ifas.ufl.edu/extension/chmas/chma_toolkit.shtml).

Following the initial CHMA establishment meeting(s), a Web page will be created for each CHMA on the UF/IFAS-hosted CHMA Web site (http://www.flchma.org). The Web page for each CHMA can be found by clicking on the "Active CHMA Websites" link on the CHMA main page. Each CHMA Web page will contain a map (created by FDACS) showing the location of the commercial citrus groves within that CHMA, the schedule of planned coordinated psyllid sprays, contact information for the grower representatives for that CHMA and a latest news section that will serve to remind growers of upcoming CHMA planning meetings and planned sprays.

DEMONSTRATING VALUE

Another important aspect of the CHMA program is to demonstrate that there is value for the grower in participating in the coordinated psyllid spray program. Beginning in the late spring or early summer, personnel from the five FDACS regional offices will initiate a biweekly psyllid scouting program for a selected number of CHMAs. The purpose of this scouting program is to compare (within a CHMA) the psyllid populations in participating and non-participating

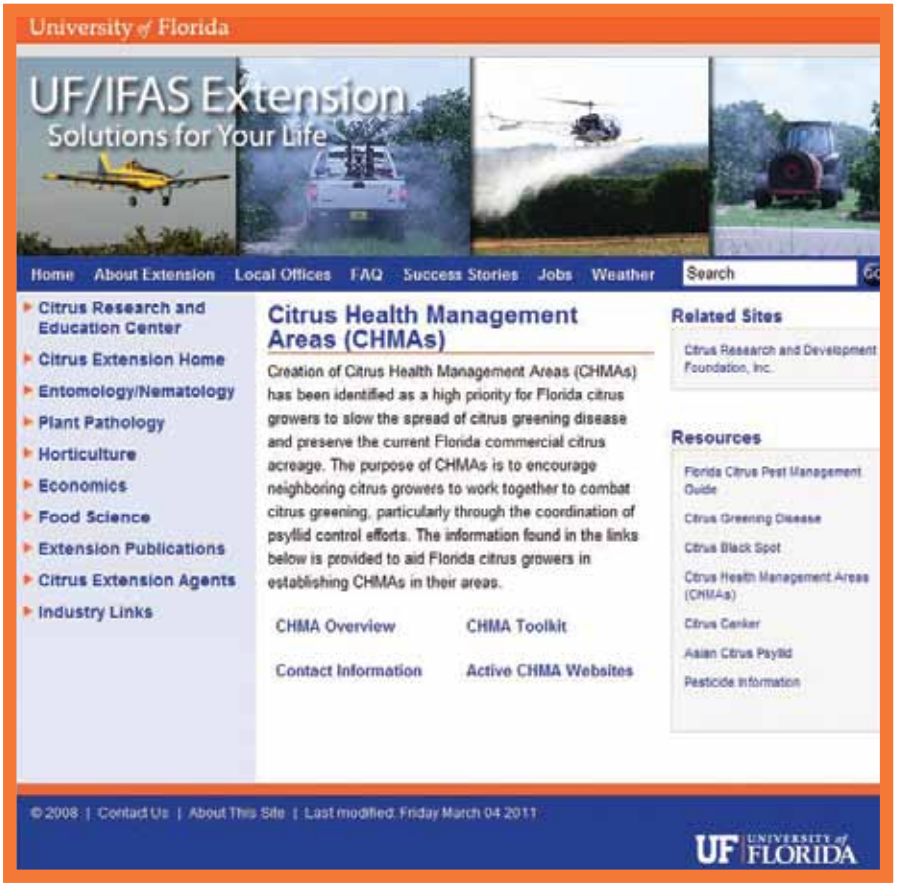

Figure 3. *Information on CHMAs can be found at the UF-IFAS hosted CHMA Web site at http://www.flchma.org*

groves. The psyllid scouting reports will be posted on the Web page for the CHMAs scouted within 72 hours of the psyllid scouting being completed. These reports will not only provide real-time data on psyllid populations in the area, which may be used to guide ongoing psyllid management decisions, but will also serve the larger goal of convincing additional growers that there is value in participating in the program. Based on the success of the psyllid scouting conducted during the first year of this program, additional sources of funding could be pursued to expand the scouting program to more CHMAs in the following year.

While the CHMA program is still in the early stages of establishment, the program is growing at a rapid pace. As a result of the numerous CHMA planning meetings conducted by UF-IFAS citrus Extension agents throughout the state, to date, 24 CHMAs are in the process of or have been formally identified on the CHMA Web site. If you are currently not participating in a CHMA and are interested in doing so, check the CHMA Web site to see if there is already one established where your grove(s) is located. If not, contact your local UF-IFAS citrus Extension agent for assistance in establishing a CHMA in your area.

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WHAT'S SHAKIN'

The annual Citrus Mechanical Harvesting and Abscission Program field day will be conducted April 20. This year's program is titled "Getting Ready for Mechanical Harvesting with Abscission." The field day will take place at the Southwest Florida Research and Education Center in Immokalee from 7:30 a.m. to 2 p.m., starting with a visit to its model grove to observe several demonstrations. A sponsored lunch will be provided.

Please RSVP to help accurately order lunch. See http://citrusmh.ifas.ufl.edu. for the field day agenda.

For more information and lunch reservations, call Barbara Hyman at (239) 658-3461.