

Citrus Health Management Areas

Foundations, practices and resources

By Brandon Page
and Greg Carlton

The Florida Citrus Industry has persevered through numerous threats — the freezes of the 1980s, root weevils and citrus canker. Today our industry faces its greatest threat — citrus greening. In order to combat the spread of citrus greening, a new management strategy needed to be developed and implemented. Due to the efforts of researchers and growers, a new program was developed and is referred to as Citrus Health Management Areas (CHMAs).

The CHMA program provides the foundation for managing the vector of citrus greening, the Asian citrus psyllid (ACP). There are 38 individual CHMAs throughout Florida. Each of the 38 CHMAs has been designed to group commercial citrus groves that are in close proximity. The citrus groves contained within the boundaries of the CHMA program extend as far north as Volusia County and south to Collier County. Even though the CHMA program extends over a large

portion of the state, the foundations of an effective CHMA remain the same for each CHMA.

COORDINATING AN ACP CONTROL APPLICATION

Coordinating a CHMA ACP control application is a multifaceted operation. The selection of the correct mode of action, application timing, and the planning leading up to the spray application are all critical to the overall success of a CHMA spray. The application timing and selection of the pesticide mode of action are decisions intertwined with each other. The pesticide mode of action must be rotated with each coordinated spray in order to prevent insecticide resistance from developing in the ACP population. The application timing must be taken into consideration when choosing the mode of action. All insecticides used for ACP control have varying re-entry intervals (REI) and pre-harvest intervals (PHI). These intervals must always be observed; therefore the selection of an ACP insecticide must also coincide with future planned activities

in the grove. This is most prevalent during the two coordinated sprays during the dormant season.

DORMANT SPRAY

Dormant sprays have been shown to provide the best control of ACP populations, although conducting only the two dormant sprays will not provide yearlong suppression of ACP. The first dormant spray of the season starts in the November-December time frame and the second dormant spray is in either January or February. These spray dates coincide with the beginning of the harvesting season and continue through the peak harvesting period for Florida citrus. To overcome the issue created between REI, PHI and harvesting, it is important for the CHMA to select an ACP insecticide that will allow for harvesting activities to begin in a shorter amount of time following the coordinated spray.



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Left, a group of growers gather to discuss aerial maps of several CHMAs at a meeting of Orange and Lake county citrus growers. Above, Asian citrus psyllid tap sampling is being conducted by Florida Department of Agriculture and Consumer Services personnel.

POST-BLOOM SPRAY

Following the two dormant sprays, a post-bloom coordinated spray should be planned. Following the dormant sprays, any surviving ACP will attack the new spring flush which developed during the bloom period. These surviving ACP will use the new spring flush to deposit eggs on, leading to a rapidly increasing ACP population. Coordinated CHMA sprays after this point should be conducted when sampling data warrants such action. Typically, a CHMA will conduct between four and

six coordinated sprays per year.

COMMUNICATION IS KEY

While the timing and mode of action selection are very important to conducting a successful CHMA spray, success cannot be realized without communication between neighboring growers. The common aspect between all 38 CHMAs is growers working together toward a common goal — ACP suppression.

It is important to understand the CHMA program is completely voluntary. There are no mandates,

legislation or regulations stating a grower must participate in the CHMA program. For that reason, it is critical for everyone involved with the CHMA program to speak with and encourage non-participating growers to join the effort. The fact is, the more acreage participating in a coordinated CHMA spray, the better the results will be. The initial reduction in ACP population will be greater and the rate of re-infestation will be reduced when growers work together. These two factors will keep ACP populations at a low level for an extended period, providing a lengthened period between spray applications.

CHMA WEBSITE

To assist growers in monitoring the events within each CHMA, a website was created specifically for the CHMA program. The website www.fchma.org was established in 2010 and has become the leading source of information for the CHMA program. Each individual CHMA has its own webpage, containing detailed maps of the CHMA, a latest news section, planned pesticide application schedules and ACP scouting reports.

The ACP scouting reports link on the CHMA webpage will provide access to scouting data provided by the United States Department of Agriculture (USDA) and the Florida Department of Agriculture and Consumer Services (FDACS).

There are more than 486,000 acres of commercial citrus within the CHMA program. Of that total acreage, the USDA and FDACS actively sample approximately 105,000 acres of grove for ACP. ACP sampling is conducted in approximately 6,000 blocks on a three-week cycle. Growers who participate in the ACP sampling program can access the results of the scout-

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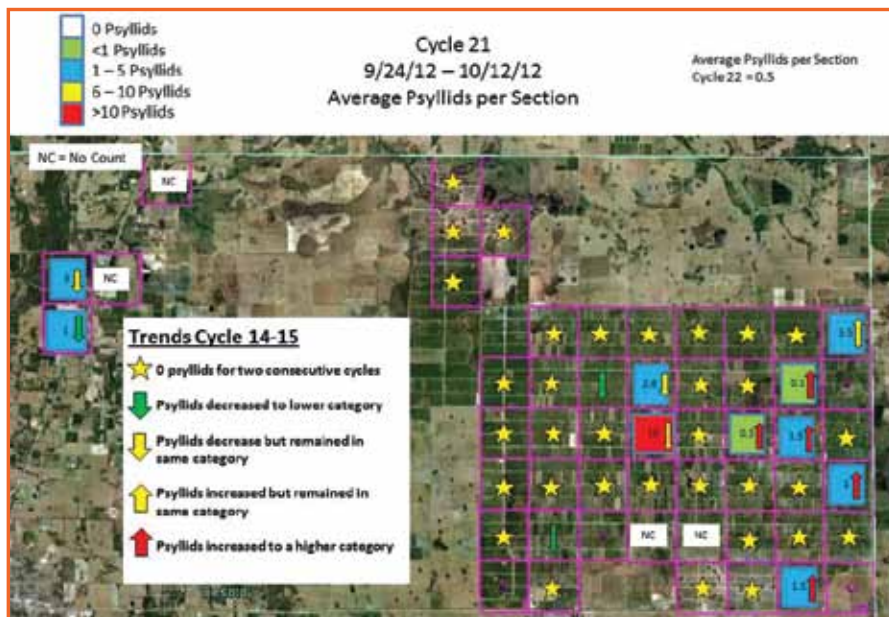
ing by visiting their CHMA webpage and clicking on the link “ACP Block Specific Spreadsheet.” Here, growers can reference their block identification numbers and see the sampling results from their groves.

The University of Florida has created new ways to present the scouting data. The first method is a line graph showing a trend from cycle 1 through the most current cycle. This graph is updated every three weeks as new scouting data is made available. The graphs plot the average ACP population per block within each CHMA. This is just an average; the ACP population in any one block in the CHMA might be higher or lower than the average represented on the graph. This graph is intended to show the result of ACP control strategies and the fluctuation of ACP populations throughout the year. This graph can be accessed by going to the CHMA webpage of interest and clicking on the link “CHMA wide ACP trend graph.”

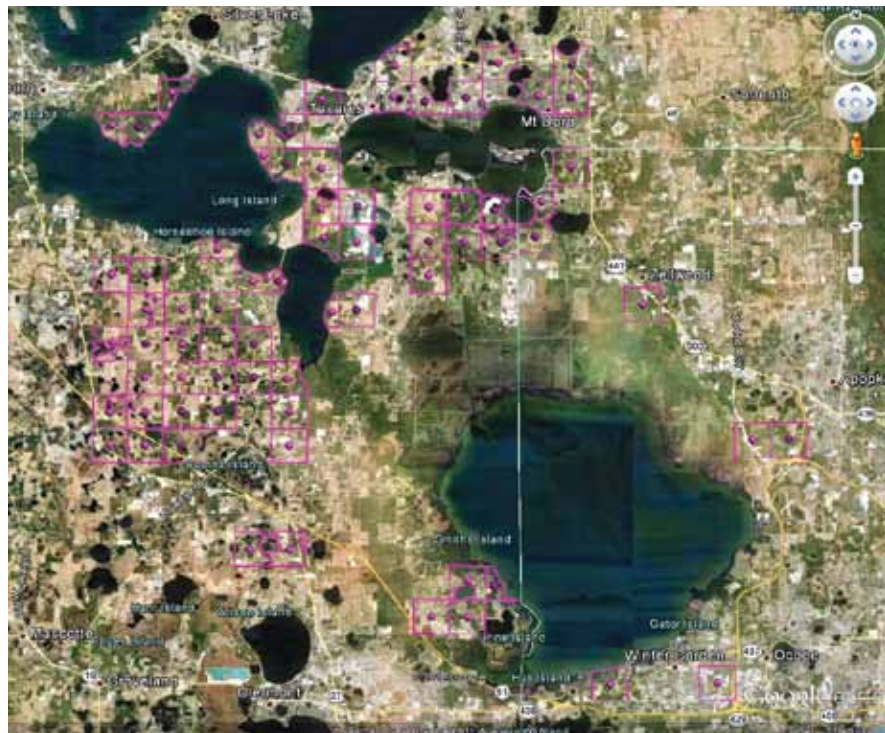
The second and newest method for presenting the scouting data is with a new computer program using aerial mapping along with the township, range and section (TRS) locations within a CHMA. The previously mentioned “block specific spreadsheet” lists the groves being scouted by block identification number and TRS. The new program plots the TRS locations of each block being sampled onto an aerial map. The program then displays a numeric value and color-coded scheme to each TRS. The numeric value is the average ACP count for that specific, one square mile TRS. For example, if one TRS has five groves within its boundaries that are being scouted and the samples returned results of 5, 0, 3, 25 and 4, the value displayed on the map for that TRS would be 7.4. The results of this program will be very detailed and allow growers to pinpoint ACP hotspots within each CHMA.

The key to a successful CHMA is communication between the growers. The design and function of each CHMA is determined by the growers who comprise it and its success hinges on how willing they are to work together toward the goal of ACP suppression. As of today, the CHMA program is the best option available for managing ACP populations and slowing the spread of citrus greening.

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A sample of the data presented by the new computer mapping program. Each data entry represents the average ACP count for the TRS which it is located in.



A preview of the new TRS interactive mapping program. Pictured is the North Orange/Central Lake CHMA.

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