

High Psyllid Populations and CRDF Actions

By Harold Browning



Asian citrus psyllid (ACP) populations have reasserted themselves during the 2016 production season to levels above what has been experienced in recent years. Higher ACP populations are applying pressure to intensively managed, commercially viable acreage throughout the state via ACP immigration from outside blocks that are minimally managed or unmanaged. Given the ubiquitous inoculum of *Candidatus Liberibacter asiaticus* (CLas), rising ACP populations can be directly related to higher infection pressure, and this is particularly harmful to new trees planted as resets or in solid plantings.

The causes of ACP population increase are multifaceted, but include the increased flush asynchrony of citrus trees as a result of chronic HLB disease. The extreme example of asynchronous flush is found in newly planted trees, where flushing patterns are inherently asynchronous with mature tree phenology, and application of more aggressive irrigation/fertilization fosters nearly continuous flush.

Since ACP adults are preferentially attracted to and reproduce only on new flush, the above situation predicts more favorable ACP environments, leading to higher population levels. Presence of flush year-around makes the challenge of vector suppression a 12-month problem, and research has shown that suppression of populations during fall and winter have impacts through the next season. This situation demands that growers integrate appropriate ACP management strategies into their production plans.

A combination of two tree populations that are influencing one another also exacerbate the ACP situation. On one hand, there is an increase in new plantings in Florida in recent years, a necessary step to survival in the industry as older trees decline in health and productivity. As growers gain confidence in their ability to manage HLB, and incentives are made available to encourage new plantings, we expect this number to rise.

On the other hand, while new plantings are being planted, more acreage is moved from intensively managed to minimally managed to unmanaged status. Economics dictate that many growers are reducing input costs as per-acre returns shrink, and this can result in economic abandonment. In most cases, when economic abandonment occurs, trees often are left standing, leading to untreated inoculum sources for CLas and ACP. State and federal programs are in place to demonstrate the value of removing unmanaged groves. This will assist, but at present, significant ACP populations coming from unmanaged citrus are invading commercial citrus, particularly young trees with constant flush.

The Citrus Research and Development Foundation (CRDF) is addressing the causes that contribute to the ACP scenario experience in 2016, with the goal of assisting growers in managing those contributing factors. Continued support for use of appropriate insecticides to meet ACP suppression needs, support for citrus health management areas and cooperative applications, and pesticide resistance monitoring are among the stewardship topics we are addressing. CRDF also is investing in alternative strategies that can complement current ACP suppression tactics, including the nuPsyllid project and future field testing of RNAi targeting ACP.

Harold Browning is Chief Operations Officer of CRDF. The foundation is charged with funding citrus research and getting the results of that research to use in the grove.

