

9.23 Thresholds for Vector Control in Young Citrus Treated for Symptoms of HLB with a Nutrient/SAR Package

Monzó, C., Arevalo, H.A, Stansly, P.A. UF-IFAS Southwest Florida Research and Education Center, Immokalee, FL, USA

Control of *Diaphorina citri* management is one of the basic components of HLB management, even for infected trees (Arevalo and Stansly, unpubl.). Foliar applications of micronutrients are a complementary strategy being used by many Florida growers to extend the productive life of infected trees. Therefore, establishment of economic thresholds for psyllid control, under different price scenarios, could optimize returns on investment when a nutrient/SAR package is being applied, even if HLB incidence is high. To accomplish this objective, two 3-year field experiments are being conducted in commercial orange blocks with high incidence of symptomatic trees. Experimental design is RCB with four replicates and four treatments: (1) No insecticide, (2) calendar applications, (3) nominal threshold of 0.2 psyllids/stem tap, and (4) nominal threshold of 0.7 psyllids/stem tap. Psyllid populations are being monitored biweekly by tap sampling and flushing observations. Impacts of insecticides on natural enemies are being evaluated by tap samples, flush observations, and suction samples. Economic thresholds will be calculated using the following parameters: treatment costs, fruit price, insecticide efficacy, and yield loss. Yield loss will be co-related with the cumulative number of ACP/tap obtained in each of the treatments, as well as the incidence of HLB and the average bacterial titer as estimated by Q-PCR. Differences in cumulative ACP/tap among treatments have become evident 4 months after initiating experiments, with more psyllids in treatments (1) and (4) (294.3 ± 100.3 and 633.8 ± 331.3 cumulative ACP/tap, respectively) than in treatments (2) and (3) (58.6 ± 33.6 and 212.5 ± 97.6 cumulative ACP/tap, respectively).