

Current Research Objectives

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Research topic: Citrus Horticultural Management

Primary Research Objective(s): Evaluation of the effect of Homobrassinolides on HLB in Citrus

Research Goal: Reduce the HLB incidence in Citrus trees grown in Florida with brassinosteroids, a treatment that has shown promise in other citrus HLB affected areas.

Outcomes to date: The Project is in its first 9 months. For this reason, it is early to see a clear effect of the treatments. We saw a mild effect in diminishing bacteria population (measured as Ct values) in the first month after application that was lost with time, and plants are still positive. From a horticultural perspective, we have seen an acceleration of fruit maturation in trees treated with the brassinosteroids and better fruit retention resulting in a 20% increase in yield (measured as total fruit weight) this season. In addition, we have found an advance in the time of flushing and flowering and some increase in chlorophyll content and photosynthesis. Since this project is in its first year, we have not developed any recommendations for grower use of this product yet. However, there is a great interest in this new treatment, as it has been proven useful against HLB in Cuba. We anticipate that some of the horticultural effects that we have been able to measure (such as better fruit retention, and acceleration of maturation, flushing and blooming) will allow to adopt new managing techniques to fine tune synchronization of flushing and blooming. In the current situation of low returns, this is a critical need for growers, because it will increase fruit quality and yield (blooming and fruit maturation management) and will allow better psyllid management (flushing control)

Funding source for this objective(s): State Legislative funding for the UF/IFAS Citrus Initiative