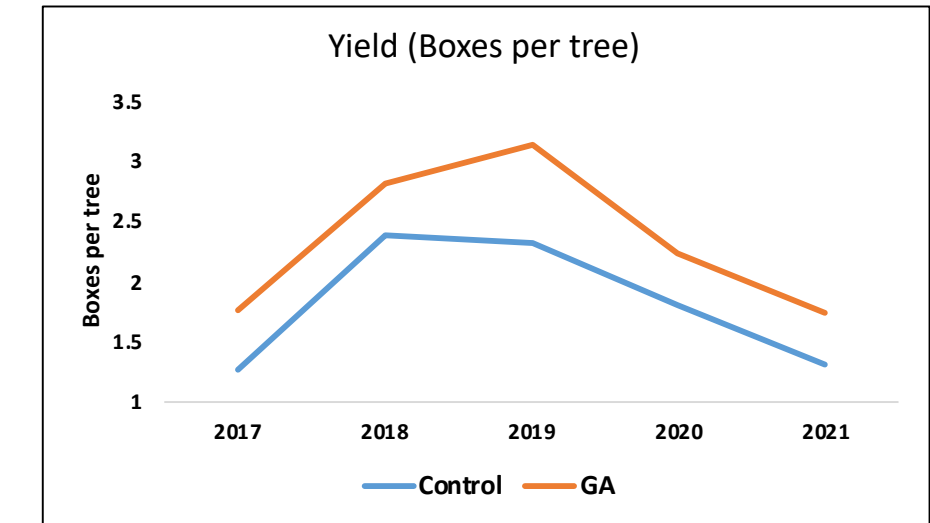


The Use of Gibberellic Acid to Improve Tree Productivity in the HLB-era

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HLB-induced preharvest fruit drop and small lopsided fruit have plagued Florida's citrus industry since the onset of HLB in 2005. Past research of the use of gibberellic acid (GA) has shown the potential to improve yield, promote vegetative flush, and delay fruit maturity and color break for longer on-tree storage of fruit; however, much of this research was done prior to HLB. We wanted to see if GA applications could delay maturity of HLB-affected fruit and therefore prolong on-tree storage and reduce preharvest fruit drop.



Yield (boxes per acre) in GA treatment (20 g ai/monthly application Sep to January) and not treated control.

We sprayed commercially grown 'Valencia' trees with GA at 20g active ingredient per acre monthly from September to January starting in 2016 and ending in January 2021 and compared them to non-treated control trees. The GA treated trees produced more fruit and dropped less than the non-treated trees. The fruit of the GA treated trees were larger and we also saw that the canopy density of the GA treated trees were retained while the non-treated trees lost significant canopy density which could have

negative implications for the production and retaining of fruit. We also found that GA was able to alleviate the starch build up in the leaf which could lead to better canopy production by improving photosynthesis. The proper use of GA in a production program has the potential to increase yields, fruit size, and canopy production. This research will be used for the fine tuning of application timing of GA to maximize yield and improve canopy management.

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