Current Research Objectives

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Research topic: Weed management in HLB affected citrus

Primary Research Objective(s): Understanding the effects of the widely used herbicide glyphosate on the health and yield in HLB affected citrus.

Research Goal: Establishing crop safe glyphosate application for HLB affected citrus groves under 'glyphosate-reliant' weed management programs.

Outcomes to date: From the preliminary observations, we have learned that fruit detachment force (FDF), the force necessary to produce fruit abscission in trees is affected by glyphosate in a dose-dependent manner. The observed reduction in the FDF suggests an increased chance for fruit drop in HLB infected trees when high rates of glyphosate (e.g., >3.5 lbs. acid equivalent of glyphosate per treated acre) were used for under-tree weed management during the periods of near fruit maturity.
The project is in its early stage. With confirmation from repeated trial data, the information on crop and yield safe glyphosate dosages may provide useful information to growers. Also, the long-term goal is to help growers in adopting alternate strategies (e.g., utilizing pre-emergent herbicides) for longer-term weed management beyond traditional glyphosate-reliant programs for assuring good yield from HLB affected citrus by preventing unnatural fruit drop of young fruits.

Funding source for this objective(s): IFAS new faculty startup funds