

Current Research Objectives

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Research topic: HLB-affected Citrus Root Biology

Primary Research Objective(s):

- Determine optimal nutrient concentrations for multiple citrus varieties and rootstocks under HLB-endemic conditions to improve root health and increase tree productivity.
- Develop new tools and approaches to characterize citrus root-system structure, architecture, and function in greenhouse and field trials.
- Define the extent to which progression of HLB may involve changes in the relationship between the plant and the soil microbial community.

Research Goal:

- Establish the role of the root system architecture in conferring HLB-tolerance properties to different rootstocks
- Enhance nutrient concentrations in HLB-damaged roots
- Release guidelines for optimal root nutrient concentrations and nutrient delivery mechanisms
- Uncover HLB influences on the structure and functions of citrus rhizosphere microbiome

Outcomes thus far to advance the science: Dr. Rossi began work as a UF/IFAS faculty member in January 2018. Work on the above objectives are now underway.

Funding source for this objective(s): proposals have been submitted to USDA-NIFA, USDA-APHIS-MAC, and CRDF