Establishing Healthy Citrus Plantings in the Face of Persistent Huanglongbing Pressure

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Take Home Message:

- IPCs are the most promising tool for keeping young trees protected from HLB.
- Pests, such as greasy spot and mealybugs, need to be managed inside IPCs.
- These tools can be adapted to support residential citrus plantings.

Effort Statement: Additional years of monitoring for pests to support initial data continues along with the incorporation of larger (8-foot) IPCs and their challenges. A residential complimentary program was added to the commercial research project.

Summary: The use of metallized reflective mulch, individual protective covers (IPC), red-dyed kaolin, and a grower standard (monthly insecticide applications) have been compared since the spring of 2020. Our goal was to determine the effectiveness of each for insect and disease pest challenges, above and below ground growth parameters, and differences in water and nutritional requirements. In 2022, many trees had outgrown the 5-foot IPCs, so these were replaced with 8-foot IPCs, which provided new and unanticipated challenges for keeping the bags in place during even mild winds. In the first 2 years, no Asian citrus psyllids (ACP) or citrus leafminer were found in trees with IPCs, however this changed when moving to the larger IPCs, which often came open at the bottoms and several ACP have been found in IPCs since. Despite this, trees within IPCs remain the healthiest in terms of HLB prevention. Trees still require regular management for other pests including mealybugs and greasy spot. Fruit quality will be assessed in the 2024 harvest. In 2022, we launched a residential compliment to this commercial project working with Master Gardeners to evaluate similar tools in garden settings. This program has been well received and we will begin year 2 of this work in June 2023.