



Focused on finding solutions

By Michael Rogers

As we approach a new citrus-growing season, the University of Florida Institute of Food and Agricultural Sciences (UF/IFAS) researchers and Extension agents working throughout the state renew their focus on finding solutions that growers can use in the short term to sustain their operations. While we value our longer-term research projects, efforts that provide tangible applications that can be implemented immediately are a priority for our programs.

So, it is worthwhile to revisit questions that I often am asked when visiting with citrus growers: “How does UF/IFAS decide on what research projects to fund? What are the priorities that drive the decision-making process?”

PRIORITY AREAS

Overarchingly, UF/IFAS citrus research projects focus on finding viable solutions for dealing with significant citrus diseases, grove management techniques and situations that cause economic stress for growers. The main priority is HLB (citrus greening), but we also address critical diseases like citrus black spot, canker and more. We listen to what

growers are telling us and work to design research and outreach projects that respond appropriately.

Current research strategies are driven by direct feedback from local growers. In 2019, growers, funders and researchers from across Florida as well as representatives from Texas and California identified four major priority areas for creating new knowledge and solutions. They are, in no particular order:

- 1) Understanding citrus phloem biology
- 2) Testing potential therapeutics and delivery strategies
- 3) How to maintain HLB-infected trees
- 4) Citrus nutrition and delivery methods

UF/IFAS currently has over 50 research projects that focus on one of these four priorities. There are an additional 43 HLB-related projects that focus on short- and long-term topics including new varieties, genetic improvement (including gene editing projects) and psyllid management.

RESEARCH RESULTS

Some results from these projects include the following:

- Tripti Vashisth has shared in numerous presentations her work on the use of gibberellic acid and its positive impact on deterring fruit drop when applied in a systemic and frequent manner that is driven by the tree’s fruit-production cycle.
- Lukasz Stelinski has provided valuable evidence on how managing the timing of pesticide sprays to the timing of the tree’s flush can decrease the number of sprays needed to control the Asian citrus psyllid and save growers money.
- Lauren Diepenbrock’s response to the emerging presence of lebbeck mealybug in Florida

groves provides growers real-time information that can control the spread of this invasive pest.

- UF/IFAS plant breeders and plant pathologists are making rapid progress in identifying the genes that are susceptible to citrus canker and successfully breeding varieties that will be tolerant and eventually resistant to this disease, which is especially damaging to Florida's grapefruit crop.
- Ute Albrecht and Lorenzo Rossi both have significant projects dealing with identifying citrus rootstocks that perform the best under HLB conditions.
- Christopher Vincent has made progress on assessing the impact of shade, kaolin clay and reflective mulch on maintaining HLB-infected trees.
- Davie Kadyampakeni and Kelly Morgan will be actively involved in establishing new best management practices for the citrus industry as part of the state of Florida's investment in reviewing and updating these practices for an HLB-endemic environment. This funding is critical to UF/IFAS for providing thorough and in-depth guidance to the industry in an expedited timeframe.

These are just some of the many projects — and impacts — that UF/IFAS is providing for Florida's citrus growers.

One thing is consistent with all of these projects: They focus on a promising outlook for near term and/or future use by Florida's citrus growers.

We are updating a booklet that summarizes the broad spectrum of research projects that will be first available at the Aug. 17–18 Citrus & Specialty Crop Expo in North Fort Myers. After that, growers will be able to read the summaries online at

the citrusresearch.ifas.ufl.edu website. Click on Resources, select Other Resources and then scroll down to Research Summaries. You can also request a booklet from your local citrus Extension agent after the Citrus & Specialty Crop Expo.

GROWER FOCUSED

One thing is consistent with all of these projects: They focus on a promising outlook for near term and/or future use by Florida's citrus growers. We appreciate, respect and value the

investment that growers have made in scientific research through the state and national funding and grower-supported funding through the Citrus Research and Development Foundation.

While we have a full research agenda, we still need and value feedback and input from growers. Your input and ideas are essential for our collective efforts to be successful. 🍊

Michael Rogers is the director of the UF/IFAS Citrus Research and Education Center in Lake Alfred.



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