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Showcasing research results

Overnight success comes after years of hard work. In science, that means the “eureka” moment isn’t a moment at all. It comes after years of research that can cost millions of dollars.

That’s a level of resources that the federal government helps deliver. We’re fortunate that the U.S. Department of Agriculture’s National Institute of Food and Agriculture (NIFA) sees Florida citrus as a national priority and invests in it accordingly.

It was a good sign when Dionne Toombs, the acting director of NIFA, contacted me and asked if I could show her some of the results of this investment. Toombs brought a 10-member NIFA delegation to the Citrus Research and Education Center (CREC) in Lake Alfred in December.

WHAT WAS SHARED

The most difficult part of preparing for the visit was figuring out what *not* to show them. NIFA funds so many different University of Florida Institute of Food and Agricultural Sciences (UF/IFAS) citrus research projects that it would have taken days to tour the labs, groves and greenhouses that contain them.

Here’s a little of what the NIFA team did see:

- A lab aglow in fluorescence that bathed thousands of tiny citrus plants. In each, Nian Wang has edited the genome to see if a slight change to a piece of DNA makes it better stand up to HLB. With NIFA support, Wang previously used this approach against canker. NIFA has funded a great deal of Wang’s continuing work on HLB.



A 10-person delegation from the National Institute of Food and Agriculture sampled the latest products from the University of Florida Institute of Food and Agricultural Sciences citrus breeding program.

- Kirsten Pelz-Stelinski had a graduate student looking through a microscope to find the mouth of a psyllid and injecting bacteria down its throat. She’s testing a theory that injecting “good” bacteria can fight the HLB-causing bacteria that’s already in their guts.
- Jude Grosser’s juice bar gave the visiting delegation a taste of NIFA-funded science. They sipped the latest products of his breeding program, many of which are being developed with the dual goal of great taste and HLB tolerance.

We even dusted off a life-size cardboard cutout of the old Florida Department of Citrus mascot. Gimicky, sure. But NIFA acting associate director Brent Elrod cheerfully asked

us to take a photo of him with Captain Citrus.

And the group laughed in delight as Tripti Vashisth displayed her hack to save on the \$10,000 to \$15,000 cost of a single tree canopy analyzer: A smartphone on a selfie stick. NIFA’s funding for the work she and Amit Levy are doing gave them the space to innovate not only for effectiveness but for savings.

This high-level delegation had an alphabet soup of letters behind their names signifying their scientific training. But by definition, they have to parachute into visits like this —citrus in Florida today, corn in Nebraska tomorrow. They have limited time to absorb information fast. We saturated them.

CREC Director Michael Rogers and citrus communicator Ruth Borger have skillfully compiled summaries of



Brent Elrod, acting associate director of the National Institute of Food and Agriculture, posed with Captain Citrus during a recent tour of the Citrus Research and Education Center.

the dozens of NIFA-funded citrus projects to deliver the results in bite-sized chunks the NIFA leaders could readily wash down with Jude's juice.

A LASTING IMPRESSION

These visitors were more than bureaucrats. They're friends of mine. In full disclosure, I led NIFA for two years. When I went on these visits, memorable presentations kept me thinking about the work long after the visits. In fact, UF/IFAS impressed me so much on one of these visits that I left NIFA to come here.

During the December visit, we sent our NIFA guests the message that science can save an iconic industry in distress, but that a challenge of this scope has to be a *national* priority. We're grateful that NIFA recognizes this, and we demonstrated that gratitude with scientific breakthroughs that are the payoff from their investment.

Like our relationship with you, our relationship with government is an essential component of the land-grant mission. It bodes well for Florida citrus that NIFA finds this relationship worth the time and travel of these 10 leaders. 🍊

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