quickly to the field trials once winners are identified.

UF/IFAS has established a new 10-acre field site approved by the Animal and Plant Health Inspection Service for testing both gene-edited and transgenic plants. We’ve included transgensics as part of our evaluations because many of the created transgenic citrus lines that are part of the CRISPR research look promising. These lines could potentially be available to growers sooner than other non-transgenic varieties still in development.

While UF/IFAS is making a considerable investment in the infrastructure needed to expand the CRISPR research program, there are still shortfalls in funding for scientists and technicians as well as supplies to get the breadth of the work accomplished in a timely manner. Potential funding for those needs in the CRISPR research could come from the Citrus Research and Development Foundation, as it has recently indicated strong support for continuing the work on citrus gene editing.

**ACTIONS TO TAKE NOW**

CRISPR is a promising tool for developing new disease-resistant citrus varieties for the future of the industry. With nearly two decades of HLB research in Florida accomplished, we’ve learned a lot about this disease and have many additional tools that can be used now. We have a number of new citrus rootstock and scion varieties released by UF/IFAS that not only hold up well against HLB, but also have improved fruit/juice quality.

There are also management practices (nutrient and hormone applications) that can be used in the field now to reduce the severity of HLB disease symptoms. These applications can have beneficial effects on the very same pathways that influence plant defense and stress responses that are also the targets of CRISPR research!

UF/IFAS researchers will be talking more about each of these areas where action should be taken now at the upcoming Citrus & Specialty Crop Expo at the Tampa State Fairgrounds on Aug. 16-17. See you there! 🍊

*Michael E. Rogers is the director of the UF/IFAS CREC in Lake Alfred.*

---

**Dog Days To-Do List**

*By Rick Dantzler, CRDF chief operating officer*

The “dog days of summer” are from July 3 to August 11, a time of particularly hot and humid weather. This period coincides with the early morning rising of Sirius, known as the “Dog Star,” the brightest star in the night sky. Sirius’ early rising was believed by many in ancient Greece, Egypt and Rome to contribute to the extreme weather of the season.

This period is also a slower time of the year. But for citrus growers, there is still a lot to do. Water removal systems — from pump maintenance to canal cleaning — in the flatwoods and Indian River areas need to be ready to handle excess water from heavy summer rains or hurricanes.

Soil and leaf samples have just been collected or are in the process of being collected to aid in planning next year’s nutritional programs. Mapping out the nutritional program is likely underway for the fall fertilizer program that would begin in mid or late September, depending on weather conditions.

Growers with fresh fruit will be watching for citrus canker.

Irrigation systems and pumps will be serviced to make sure they are operational before heading into the fall period when soil conditions can become dry.

Processors will surely be estimating this year’s crop to help determine fruit contracts.

And this year, growers will be monitoring tree health and crop development after injecting oxytetracycline this past spring. The good news is that most growers are seeing a positive response in trees from this treatment. The proof will be in the pudding this season when the harvest comes in. However, the full benefit of this therapy will likely take several seasons to realize.

Growers are possibly considering the use of 2,4-D products to reduce pre-harvest fruit drop because there is data showing a positive effect. The Citrus Research and Development Foundation’s (CRDF) Brandon Page recently compiled data from an enlightening CRDF-funded trial. It can be found on the CRDF website (citrusrdf.org).

This same report includes data on gibberellic acid testing. It, too, showed improvements compared to the standards, although not as universal or as significant as 2,4-D. Please realize these results are from just one trial. Tripti Vashisth, University of Florida Institute of Food and Agricultural Sciences (UF/IFAS) associate professor, is the expert and has much more data on these therapies.

Fernando Alferez, UF/IFAS assistant professor, has studies showing brassinosteroid use increased Brix levels by more than a point approximately 30 days after application. If calibrated with harvesting schedules, this could be huge.

CRDF has additional projects underway to test other antimicrobials and products that hold just as much promise. Watch this space for the latest news.

Of course, these therapies — those current and those to come — cost money, and growers can’t do it all. So, the dog days are a good time to plan caretaking budgets. And when you need a break, think of cooler weather and football season, both of which are right around the corner.

---

*Column sponsored by the Citrus Research and Development Foundation*