



CITRUS RESEARCH & DEVELOPMENT FOUNDATION GROWER RESEARCH REPORT

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See You at Next Week's Florida Citrus Industry Annual Conference

We hope to see you all at the Florida Citrus Industry Annual Conference, June 14-16 in Bonita Springs. This is a great post-season opportunity for growers and other sectors of the industry to share experiences and digest information provided through the grower education seminar and fellowship during the meeting. This week's Triangle offers a more complete overview of the meeting and the agenda for the seminar on June 15.

As was the case last year, this year's educational seminar will focus largely on grower experiences, with the opportunity for a group of your colleagues to share their approaches to managing citrus in the presence of HLB and the rationale behind their strategies. The focus for the panel of growers ranges from new plantings and nutrition to effects of bactericides to date. An outcome should be to discuss and share how we might collectively improve upon use of the available tools while research continues to develop solutions. Following brief presentations by each grower panelist, there will be time for discussion and questions.

To complement the grower panel, CRDF will provide a brief update on priority programs addressing topics of interest to growers. In addition, reports on results from multi-year field trials of bactericides in Florida will be presented by registrants of the products currently available for use under the Tree Health Section 18. This will provide a basis for what growers might expect in the second year of use, as the registrants have replicated field trials that have completed two years of bactericide use and will share what has emerged from data collection and analysis.

And finally, UF-IFAS will provide an update on the process of developing communication on strategies that can assist growers in managing citrus under the pressure of HLB. This project will share available information from evidence-based testing so that growers can incorporate tools into their production practices for which there is evidence of effect.

From the outset, it was clear that Florida citrus growers would need to rely heavily on research to provide knowledge and tools to combat HLB, just as has occurred with prior challenges of pests, diseases and other impediments to production. The intensity of research efforts has yielded significant information but we have yet to define a management system that will guarantee success in battling HLB. At the same time, growers have always played an important role in adaptation of new tools and information into their cultural operations and systems. This is where the varying conditions and practices can demonstrate the true value of potential research findings. This adaptive work is ongoing, perhaps at unprecedented levels.

Upcoming Board & Committee Meetings

Unless otherwise noted, the following meetings will be held at the Hyatt Regency Coconut Point in Bonita Springs, in conjunction with the 2017 Florida Citrus Industry Annual Conference.

06/12/2017	RMC Meeting, Field Evaluations for Scions (held at the CREC, Lake Alfred)	9:30 am
06/14/2017	Governance Committee	8:30 am
06/14/2017	Box Tax Committee	9:30 am
06/14/2017	Board of Directors Meeting	9:45 am

While this adaptive process is not designed to generate data or proof, the value of locational experience and field comparisons is a strong complement to evidence-based experimentation.

This year's educational session at the Annual Conference will again provide insight into both of these arenas, and through continuing communication, encourage more growers to remain aggressive in their quest for the tools and production practices that lead to success.

CRDF Initiates Grower Experience Forensics in the Field

The article above points to the value of grower trials of potential tools and combinations of treatments to address the challenges of HLB. Listening to growers relate what they are doing and why is informative on its own. However, since many growers are engaged in these efforts and are testing similar approaches, there is an opportunity to apply some level of analysis to practices being applied across the state, whether it is ACP management, nutrition, use of new rootstocks and scions, the use of bactericides, or a combination of all of these. CRDF has been engaging in different activities to assist growers in setting up their own evaluation of treatments or tools. Again, this approach varies from rigorous experimental research in that by design, grower evaluations may not contain the controls or replications required to critically analyze data and other results. Growers also are simultaneously looking at a range of variables, such as irrigation, macro- and micronutrients, application variables like timing and methods, and these evaluations may be overlaid on many other variables inherent in citrus groves, including various rootstocks and scions and soil types. The complexity of experimental design prevents this many variables from being easily incorporated into a true field experiment of the highest power.

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CRDF has been organizing and is now implementing a team approach to conduct site-specific discussions with growers who are incorporating tools into a management system that appears to show improvement in tree health and productivity. Under leadership from a CRDF Board member, a team of technical specialists is visiting identified sites to determine the practices being used, the rationale for the use, and to access any evidence of impact of the programs such as block productivity over time, degree of disease evident, or other factors. While a single visit might shed light on tools that are being used there and the circumstances at that site, comparing multiple site visits could offer the ability to look for common denominators that contribute to the results observed.

While this is short of true evidence-based research, it is a way to learn from grower experience and hopefully take it to the next level of understanding. As this approach progresses, CRDF will communicate more on how it is going.

CRDF Board Members Approach “Graduation” from Positions

Rules governing CRDF leadership and participation call for term limits of Board Directors appointed by the industry through Florida Citrus Mutual and the Florida Citrus Commission. As we begin the 7th year of the Foundation, many board members are approaching the end of their terms. In fact, by the end of 2019, 8 of 10 grower appointees to the board will have completed their terms, requiring appointment of new members. Initial staggering of terms when CRDF was founded assisted with early continuity, but we are now seeing graduation dates approaching.

Board member turnover is a healthy aspect of group governance, but many on the current board carry considerable institutional memory and have been deeply engaged in the funding, prioritization, review of research projects, and the advancement of research results to products through the Commercial Product Delivery Committee. Those not directly involved in CRDF have little understanding of the commitment made by these volunteers.

As Mutual and the Commission consider potential candidates for appointment to CRDF's Board, we should pause to acknowledge the hard work on behalf of the industry that has been given by current board and committee members. They, like you, have the best interests of the industry in mind, and diligently contribute to the forward momentum that has occurred in CRDF. At the same time, emerging leaders of the industry should be encouraged to become engaged in directing CRDF from this point forward. While the pathway to date has been difficult and unpredictable, one can expect it to be equally challenging going forward.

We look forward to new ideas, new leadership and new enthusi-

asm to keep citrus healthy in the presence of HLB moving forward on a broad front. If you are interested in learning more about CRDF, please attend CRDF meetings, which are public, and visit our website to learn more about our programs. We also invite you to discuss what CRDF is doing with a board member.

Maximizing Learning from Plant Improvement Field Trials

Considerable investment and activity surrounds the development and testing of new rootstocks and scions that will enable Florida citrus plantings to withstand infection from CLAs and to provide profitable fruit production over time. We all know the time investment to make this happen and the longevity of the testing before all of the traits of new germplasm are known.

CRDF continues to believe that the evaluation of new plant materials must be part of the portfolio, and has focused on the evaluation of existing field trials as a way to learn as much as we can as fast as we can, particularly in an environment where growers want alternative rootstocks and scions now.

The Research Management Committee met on May 30 at Lake Alfred to hear details of ongoing field trials of rootstocks targeting HLB resistance, allowing USDA, ARS and UF, IFAS scientists to share overviews of these efforts. On Monday, June 12 at 9:30, the Committee will meet again to hear similar overviews from the two institutions on scion field evaluation trials. Please join us if you are able.

Plant improvement also is an important aspect of the ongoing deep evaluation of all work to date by CRDF in developing and delivering solutions to HLB. The National Research Council Panel, which is taking an independent look at CRDF progress, conducted a forum in May, inviting those funded by CRDF to produce HLB resistance through conventional and/or biotechnology methods to share progress and to identify obstacles to success. This meeting was one of several that will occur in this third party evaluation, but importantly, will provide guidance to CRDF on how we can best use resources to achieve our goals.

Also in April, CRDF met with the Executive Committee of the FNGLA Citrus Nursery Division to discuss how to communicate what information on new rootstocks and scions, and their HLB performance. Like growers, nursery growers are being asked by growers for recommendations for planting new trees. Their input will be included as CRDF plans forward for investment in plant improvement.