

Tracking Plant Breeding Efforts

By Rick Dantzer, CRDF chief operating officer



For several months, CRDF committees have been in discussions with John Chater, University of Florida Institute of Food and Agricultural Sciences (UF/IFAS), and Matt Mattia, U.S. Department of Agriculture Agricultural Research Service (USDA-ARS), regarding a three-year plan for the traditional plant breeding programs of those institutions. Gone are the days when CRDF funds plant breeding programs without specific work plans on what it will be paying for or what it expects to receive in return. In its place is a requirement for validation of new creations by comparing their performance to other new creations and industry-standard rootstocks and scions.

Some breeders have done this validation routinely, and they have had little trouble being funded by CRDF. Others, however, under pressure to release new germplasm more tolerant to HLB, have generated little data to back up their recommendations about what to plant. This reliance on the intuition and observation of the breeder has worn thin with growers and, consequently, CRDF. For that reason, CRDF committees and board are seeking specificity with the three-year work plan being discussed with UF/IFAS and USDA-ARS breeders as the parties strive to start a new chapter in traditional plant breeding.

Related is a project with The Coca Cola Company (TCCC) that CRDF funded in which more than 500 accessions created by UF/IFAS and USDA-ARS breeders were evaluated by criteria most important to growers and processors. From this list, the top 55 were selected and will be put in Stage 2 field trials. Weston Johnson of TCCC presented a specific workplan with dates and benchmarks for this scope of work, which CRDF quickly funded because it was tight and specific. Johnson recently updated CRDF on the work going forward, and it is fantastic.

Regarding plant breeding using gene editing, the Crop Transformation Center in Gainesville received \$500,000 in funding from CRDF last fiscal year and will receive another \$500,000 this fiscal year. The center came about because of a request from growers and CRDF to UF/IFAS for a greater emphasis on this type of plant breeding, and the university responded. The industry is grateful for the speedy and robust action.

The leaders of the center recently held a workshop to kick off the work. Attending were scientists, students, administrators and growers, as well as folks who have worked in industry for decades in bringing gene-edited products to the marketplace. There was a lot of discussion about ways that various labs could work together without sacrificing the creativity of each, as well as the need for a “quarterback” to oversee the overall effort of advancing a gene-edited solution to HLB across the finish line. In a sidebar conversation with a scientist who is on the cutting edge of this work, I was told that the most helpful thing CRDF could do was assist with the regulatory process, a task which I have run up the flagpole with university officials and industry leaders. This has become a high priority.



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