

CRDF Rootstock and Scion Trials

By Rick Dantzer, CRDF chief operating officer



In last month's column I discussed the Stage 3 (last stage) rootstock trials that the Citrus Research and Development Foundation (CRDF) was planning. The board, after considering the recommendations of the CRDF Select Committee on Plant Improvement, approved the plan at its Jan. 26 meeting. It contains 10 new rootstocks that will be compared to four industry standards: US-942, X-639, Kuharski and Swingle. (Swingle may be replaced with sour orange on the East Coast.) Two other rootstocks of interest — US-812 and C-54 — will also be tested. The scions for these trials will be Valencia, Vernia and Hamlin.

Over the course of our rootstock discussions, we heard from growers who said that, while rootstock testing is important, scion testing is equally important or maybe even more so. The industry desperately needs an early-maturing juice orange that performs better than Hamlin, as well as scions that are less affected by HLB in order to preserve the quality taste of Florida fruit.

We at CRDF heard these comments and are pursuing scion work on two fronts:

1. CRDF scion trials — We have asked plant breeders to nominate their newest creations for our consideration. Even though the nominations will probably not have replicated data for us to review, there will be legitimate reasons to believe they could help the industry. There is simply not time to wait for replicated data to be accumulated. It is time to engage in high-risk, high-reward testing of the most promising new scions. CRDF will lay out these trials in replicated, randomized fashion so that the data we get from them will be data you can count on.

2. National Institute of Food and Agriculture grant — CRDF has applied for a federal grant to phenotype the scions (approximately 200) in the Pantuso topworking trial in Zolfo Springs through a genome-wide association study, which is technology used to make smarter crossbreeding decisions by attaching character traits to specific genes. Thirty-two acres of new field trials will be established through the grant, as well as accelerated scion testing and genetic sequencing in California which will allow more breeding collaboration between California and Florida.

Applying for a grant of this nature is not a typical thing for CRDF. However, plant breeders and other industry partners asked us to do it, and it could have a synergistic relationship with the scion trials we are already planning. I can't say it isn't without a little anxiety that we take this on, but we can do it. It is also a way to shift the paradigm a bit and engage CRDF in the workings of the breeders as they go about the objectives of the project. Our intention is not to meddle but to bring greater grower involvement into the breeding programs that we are counting on so heavily for so much.

