

Pathway to a Sustainable Industry



By Rick Dantzler, CRDF chief operating officer

The last month of what has been a tough year is a good time to look at where we are and prepare for 2022.

The Citrus Research and Education Foundation (CRDF) has been taking stock of where we are in the fight against HLB. Do we have a plan or are we simply chasing the latest shiny thing?

I assure you we have a strategy, so we put it on paper. It is still being massaged by research leaders from industry and academia, but a pathway to achieve a sustainable Florida citrus industry is in place.

It has been a long and difficult road, but many of the building blocks are up and running. The projects CRDF and other entities have funded — and continue to fund — have brought us to this point. However, additional funding will be required to finish the task. Research successes tend to be sequential in nature, meaning that one advancement sets up the next project until the goal is achieved. But we believe we are nearing the point where industry sustainability and growth will be achieved.

Assuming this pathway is correct, the work remaining has been identified. It is not the kind of exploration that has marked much of the work over the last 12 years, work that was necessary since so little was known about the disease when we started. It is, instead, work that is focused on specific advancements, discoveries and solutions.

Bridge work will carry us to the point of eradicating HLB or making it functionally irrelevant, probably with a resistant or sufficiently tolerant tree. The necessary technologies for these breakthroughs have been built. CRDF will accelerate the work required to see that these projects get into the field as quickly as possible.

There are potential pitfalls that must be acknowledged. First, necessary regulatory approvals might not be forthcoming. Second, the citrus industry must make a collective decision to accept what is proposed, something that has not yet been done. Third, it is unclear if the genes that allow HLB to do its damage have been successfully identified. Fourth, plants have the genes they have because they need them. So, if the genes that allow HLB to express itself are silenced, there could be negative effects on the trees. These potential obstacles should be able to be overcome.

The approaches outlined revolve around the advancement of eight categories of products, production practices, technologies or trees: peptides, citrus tristeza virus, tree injection, production practice improvements, rootstock and scion testing, transgenics, clustered regularly interspaced short palindromic repeats (known as CRISPR), and other methods of plant breeding. The first categories are designed to work in combinations to reduce disease enough to allow the industry to survive until the more effective longer-term solutions are developed and amplified for widespread commercial use. These longer-term approaches will need continued funding for this period.

A strategy is in place. We know what needs to be done. We are going to get there.



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