

The Quest for Solutions to HLB: Reflections on 2014

By Harold Browning



2014 was a significant period in the evolution of research and the advancement of efforts to deliver solutions to HLB in Florida. It also was a significant year from a national perspective, as federal funds were committed and programs established to respond to the concerns over this disease in all citrus states.

CRDF made significant strides in developing and delivering the results of research into field trials and grower demonstrations, focusing more effort on the near-term need to provide tools to growers. The strength of the CRDF research portfolio and significant progress from many projects allowed CRDF to transform many topics into delivery projects, greatly increasing the work flow and momentum of the Commercial Product Delivery Committee. CRDF added new capacity to design and manage field trials, and reinforced the need to evaluate chemical therapy of *Candidatus Liberibacter asiaticus* (CLAs) in infected plants. Many candidate bactericidal chemicals were evaluated in assays and have been advanced for participation in field trials. Significant resources have been committed to field evaluations of several materials. CRDF project managers have reached out to commercial partners to access their knowledge and experience, and have established working relationships that have moved testing along.

During 2014, a number of field trials were initiated, placing potential tools in grower/cooperator situations. Among the tools being evaluated are: plant growth regulators to retain fruit on HLB-infected trees; commercial microbial products and programs which are reported to enhance citrus tree ability to withstand infection; combinations of nutrients, soil amendments and other cultural practices targeted to maintain health and productivity in infected trees; integration of tools to protect and promote new plantings; and bactericidal treatments for both HLB and citrus canker. During 2014, plans and plant propagation advanced to enable spring 2015 commercial-scale plantings of candidate tolerant rootstocks from the UF and USDA citrus breeding programs. In addition, field days were sponsored to demonstrate the emergence of thermal therapy as an immediate tool for reducing bacterial infection in small trees infected with CLAs. Scale-up efforts were begun to expand on the proven use of solar heat enclosures placed over trees, and supplemental heat (steam) was tested for the first time in spring 2014.

The recognition that efforts to discover and deliver solutions could be accelerated with additional funding and other support led to the approval of state legislative funding and two significant federal programs that have begun to support the HLB effort nationwide. The USDA, Animal and Plant Inspection Service, Multi-Agency Cooperation (MAC) Group was formed to implement \$21 million dedicated to advance delivery of "shovel-ready" projects across the citrus states. A majority of these resources have been committed to projects as the year ends, with additional plans in place for 2015. Similarly, the USDA, National Institute of Food and Agriculture (NIFA), Specialty Crop Research Initiative (SCRI) established a competitive grant program to support citrus disease research and Extension efforts. The outcome of this first year of a five-year, \$25 million-per-year program will be announced early in 2015. This program will provide much-needed funding for understanding and responding to the continued challenges of HLB.

While the goals to overcome this disease remain in front of us, 2014 has been a pivotal year in the organization, funding and coordination of a monumental effort to deliver solutions to HLB. We expect 2015 to provide more results of this considerable investment.

We wish you all the best for a wonderful holiday season and Happy and Prosperous 2015.

Harold Browning is Chief Operations Officer of CRDF. The foundation is charged with funding citrus research and getting the results of that research to use in the grove.

