

What Will It Take to Defeat HLB?

By Harold Browning



Impacts that huanglongbing (HLB) brought to Florida continue to mount, and growers and allied members of the industry are asking reasonable questions about what it will take to bring relief to this complex disease situation. Researchers also are struggling against the need and pressure to deliver solutions in a short time against a difficult adversary. That this disease is among the worst imaginable for citrus across the world is no longer debatable. So we return to the central question: What will it take to solve the challenge? The following points are offered for consideration:

- The foundations of how this disease moves into citrus trees, spreads to critical roots, stems and leaves, and how the resulting infection leads to chronic decline remain largely unknown. How cultural operations alter HLB also remains elusive. Some puzzle pieces have emerged from ongoing research in Florida (root infection, timing of onset of symptoms, etc.), but this remains a black box. Only through continued diligence will we unravel elements of this puzzle that will lead to novel interventions.
- Traditional approaches to apply post-infection treatments do not have much precedence in agriculture when it comes to systemic diseases, especially on perennial plants; so we are blazing new trails. Translation of existing solutions often offers the best short-term remedies to disease, but we have learned that there are few models from which to borrow established solutions.
- Known strategies for long-term management of vectored pathogens include plant resistance and adjustment of cultural practices to favor the host over the pathogen. While these have been targets for research since early in the fight, they are, as the name indicates, long-term.
- Steady research over eight to 10 years in Florida has bridged all of these approaches, and growers have experienced the endpoints of many of these efforts — the field-testing of preliminary leads.
- It is in the grove where proof lies. The Citrus Research and Development Foundation (CRDF) is focused more and more on adapting preliminary information and results to management tools. Keeping trees healthy beyond the normal disease course is a main goal, as is reducing the risk of replanting.
- Researchers and growers each have a role to play in this field testing, and it could be noted that the Florida citrus industry is more attuned to the need for field evidence than ever, from well-designed experiments conducted by researchers and innovative growers who are willing to try new ideas.

It is logical to place emphasis on this last step, since it is closest to delivery of solutions — those tools that growers most desperately need. This is what growers want from the research community. However, we must all keep in mind that there are gaps from the top to the bottom of the list above, and balanced efforts on all levels are most likely to deliver solutions we so badly need. The industry is fortunate to be joined by state and federal funding partners to support what growers started. This will allow CRDF and the Florida industry to focus more on the short term, without forsaking long-term prospects.

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.

