

The Path Forward for HLB Antimicrobial Treatments



By Harold Browning

CRDF has responded to the urgent need for treatments that will reduce the bacterial infection level in trees suffering from huanglongbing (HLB) by ramping up projects, engaging regulatory agencies and adding capability at CRDF to manage the increasing flow of activities. Here is a brief update on the efforts to bring antimicrobial treatments to Florida citrus growers.

Field trials of promising candidates emerging from ongoing research are in place and data are being collected from this season's applications. There are two goals built into these field trials. The first is to reduce the bacterial levels of *Candidatus Liberibacter asiaticus* (CLAs) through direct contact of the antimicrobial material with CLAs in infected citrus phloem. Treatments include a number of different candidate chemicals, different formulations and application methods, and varying timing and numbers of treatments. Through these variables, we hope to simultaneously determine the best-performing materials under field use and the best time and methods to apply them.

The second goal is to design field trials appropriately to collect data meaningful to regulatory considerations, such as how the applied materials move within trees and how quickly they break down. While the performance goal is important in these field trials, we also intend to gain as much information as possible that will contribute toward regulatory approvals. Combining these two goals into ongoing field trial research will shorten the time to availability of new antimicrobial tools.

During the past several months, the Commercial Product Delivery Committee of CRDF has focused heavily on understanding and communicating the situation with HLB in Florida to state and federal regulatory agencies to assist them in understanding the need for the therapies described above. In addition, we have asked for guidance from the regulatory agencies so that regulatory processes can be anticipated, planned into field research, and expedited as results emerge.

An important meeting was held in conjunction with the September 2014 IR-4 Southern Regional Workshop which focused on the challenges of registration of antimicrobial materials in specialty crops, particularly citrus. Presentations by the U.S. Environmental Protection Agency, Food and Drug Administration and Centers for Disease Control provided strong indication of the regulatory requirements and data needs, and also conveyed the willingness of these agencies to work through the difficult issues surrounding use of antimicrobial chemicals in agriculture. A presentation by CRDF highlighted the industry's need for bacterial treatment, and detailed the many activities underway to identify and test different classes of materials in the field. A more complete report of this meeting can be found on the CRDF website citrusrdf.org.

Finally, CRDF has implemented plans for a full-time Florida-based project manager to provide daily operational oversight and management of the antimicrobial strategies and projects in support of HLB treatments. Dr. Stephanie Slinski joined CRDF as a contract project manager in September and will provide the primary lead for antimicrobial research, formulation, field trials, and coordination of communication in this important topical area. Dr. Slinski has a strong background in plant disease and has assisted CRDF over recent years in the research funding program. Additional information on Dr. Slinski and her new role can be found on the CRDF website.

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.

