

Advancement of Bactericides for Possible Special Local Use Needs in Citrus

By Harold Browning



Investment by the Citrus Research and Development Foundation (CRDF) in identifying and evaluating candidate bactericides for therapy of HLB-infected trees continues, and this column provides an update on the processes and progress.

CRDF's Commercial Product Delivery Committee has had bactericides on its priority list for several years now, as there are few interventions that can target the *Liberibacter* pathogen within citrus phloem where infection resides. Chemical therapy, along with the use of heat therapy, has as a goal the reduction in bacterial population levels within infected trees, thereby providing trees an opportunity to resume growth and perhaps postpone the expansion of disease. While efforts in other countries using chemical therapy for huanglongbing (HLB) have not been highly successful, this is one of few interventions that can be directed to current inventories of citrus trees infected with HLB bacteria.

CRDF has established a well-organized process to support the full range of bactericide evaluation, from conducting a series of assays to determine the relative effectiveness of a wide range of candidates, to progressively advancing the most promising candidates to field trials. Biological evaluation is at the heart of this project, but simultaneous development of commercialization and regulatory approval support and information also are being considered. This topic is being managed through commitment of a full-time CRDF bactericide project manager, Dr. Stephanie Slinski.

Field trials conducted over two years are providing evidence for the effectiveness of two traditional bactericides, streptomycin and oxy-tetracycline, that are registered for use in agricultural crops other than citrus. CRDF, working directly with commercial registrants of these materials, has supported the necessary studies to determine efficacy against HLB with standard field-use methods, rates and timing, as well as the evaluation of product residues following field application. These areas are fundamental to making sound decisions to go forward with further testing and, ultimately, to seek registration for use in Florida citrus for these materials.

Well into the second year of testing, CRDF is working closely with parties who have a role in moving research from promise to utility, whether through full registration or through emergency use requests for special local needs. Florida Fruit and Vegetable Association (FFVA) regularly works with Florida agricultural industries on labeling of pest and disease management tools, providing for the assembly of information and data necessary to petition for special-use consideration. FFVA has been fully engaged with CRDF on evaluation of the readiness of bactericidal products for use in Florida citrus against HLB. Equally important to this effort are the pesticide registrants who have registration of these products with the U.S. Environmental Protection Agency (EPA) for other crops, and the Florida Department of Agriculture and Consumer Services' Pesticide Registration Division, which oversees consideration for use of pesticides in Florida and special local needs situations. Ultimately, EPA is the authority for pesticide registrations.

Over the next two months, CRDF will be working with these parties to compile the portfolios of support data and needs assessment necessary to make a case for emergency registration of one or more of these materials. Our goal is a decision that would allow rapid advancement of the best candidates to consideration for special registration for use in the 2016 citrus season.

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.



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