

CRDF leads submission of multi-state research grant application to USDA



By Harold Browning

In an effort to expand the range of options to manage Asian citrus psyllid (ACP), CRDF submitted a multi-state proposal at the end of January to the USDA, National Institute of Food and Agriculture (NIFA), Specialty Crop Research Initiative (SCRI). This proposal encompasses a 5-year plan to develop and deliver an intermediate-term solution to HLB by reducing the ability of ACP to transmit the bacterium that causes HLB.

Efforts to aggressively manage ACP have advanced considerably with the implementation of Citrus Health Management Areas (CHMAs), which represent coordinated psyllid control actions of growers in a local area, as well as improvements in application methods, timing and selection of suppression materials. These gains on ACP control have emerged from research conducted by UF, IFAS and USDA and from grower willingness to plan and implement ACP management over broader areas. While progress has been made, the spread of HLB continues in Florida groves, potentially limiting growers' ability to successfully grow resets in mature groves and to establish replacement plantings.

Ultimately the goal of pesticidal suppression is to reduce psyllid ability to transmit the disease in the field, and this also is the goal of the research proposed to USDA. A team of more than 40 scientists from citrus states and non-citrus states collaborated in developing a research and implementation plan that reduces psyllid transmission of the bacterium. The project management team includes CRDF, California Citrus Research Board (CRB) and UF, IFAS.

Using observations from psyllid research currently in place, and building on the expanded understanding of ACP/HLB transmission biology, the team proposes to pursue several approaches that could result in a novel method of biological control that is compatible with other disease management approaches — the controlled release of psyllids that are essentially incapable of transmitting the HLB pathogen. The plans call for coordination between lead scientists in USDA and universities in Florida, California, Arizona and Texas to develop, evaluate and ultimately to field-test this concept.

The basis for optimism about this approach is drawn from progress being made in understanding how ACP, the HLB pathogen and citrus trees interact, and the fact that scientists can perhaps select for aspects of the psyllid biology that make them incapable of serving as a vector. This approach is feasible in large part due to recent progress made by scientists funded through CRDF.

The National Research Council report to the citrus industry in 2010 made two recommendations that highlight the need for this kind of research. Their findings encouraged the Florida industry to: "Support research aimed at developing alternative ACP management strategies"; and to "Support demonstration of RNA interference (RNAi) effects for possible suppression of ACP". The latter priority has been part of the research being supported by CRDF in recent years, and progress in this research is incorporated into the USDA proposal.

Review and final decision by USDA, NIFA on this proposal will occur over the next several months, and the project, if approved, would begin in September 2012. Success in approval of all or portions of the requested \$2million per year budget would greatly enhance ongoing efforts to address HLB through limiting the vector. In addition, it would significantly contribute to the portfolio of research being supported largely with Florida citrus industry funds.

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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