

REPORT



CRDF Implementing HLB Management Plan

The Citrus Research and Development Foundation (CRDF) has set up a subcommittee to explore the feasibility of creating Citrus Health Management Areas to impede the spread of the Asian citrus psyllid and HLB.

The move follows the number one recommendation by the National Academy of Sciences' National Research Council (NRC) for managing HLB. In March, the NRC issued a full list of 23 recommendations. The CRDF Board of Directors endorsed the NRC's plan at its April meeting after reporting that many of the recommendations are already being implemented by the Florida citrus industry.

In approving the recommendations, the CRDF Board said it recognizes the NRC strategy will help preserve significant citrus acreage, slow the spread of HLB and potentially help facilitate adoption of new technologies. A complete list of those recommendations can be found at http://www.nap.edu/catalog.php?record_id=12880.

The CRDF's sub-committee will work to encourage growers to voluntarily form citrus health management areas. The CRDF recognizes that the creation of the citrus health management areas should be initiated by interested growers and that they cannot be mandated.

The next step for the sub-committee is to establish a team of experts that can assist growers who want to set up a citrus health management area. The team, in conjunction with regional grower associations and extension agents, will provide growers with tools and information to help them delineate the geography, decide which materials to use and coordinate management practices.

The CRDF sub-committee includes: Jerry Newlin, Chairman, Tom Jerkins, Bobby Barben, Ben McLean III, and Wayne Simmons. The sub-committee will hold an organizational meeting on May 25th in Lake Alfred.

Foundation Hires Browning to Uncover Outside Research Funding

The Citrus Research and Development Foundation (CRDF) has hired Dr. Harold Browning as a grant writer to help unearth private funding sources for the industry's research efforts.

Browning is the former director of the IFAS Citrus Research and Education Center in Lake Alfred. He left the position in early 2009.

"Dr. Harold Browning has extensive experience in soliciting and managing funds for research from public and private sources, and has worked closely with the industry over the past decade," said Dr. Dan Gunter the CRDF's chief operating officer. "His experience in Florida citrus should provide insight into potential sponsor and matching program support partnerships. We could not find a more suitable person for this work."

Non-governmental organizations (NGOs) such as the Bill and Melinda Gates Foundation often support programs or projects aimed at assisting the general public. Clearly, a healthy and sustainable Florida citrus industry has numerous elements of "public good" including significant contributions to human nutrition, natural resource management and employment.

Browning's responsibilities will include:

- Provide a contact point for approaching such sponsors to brainstorm potential partnerships of interest
- Draft required grant or contract documents on behalf of CRDF and engage in negotiating sponsorship details
- Report progress and results to CRDF Board as appropriate.

(Please see Browning continued on page 2.)

HLB Disease Research Making Significant Progress

It's been a whirlwind two years with a high level of uncertainty among growers but the CRDF wants to let you know that we do have lots of encouraging news. First and foremost, the Florida citrus industry's massive research effort is staying in lockstep with the recommendations of the National Academy of Sciences (NAS).

If you will recall in June 2008, the NAS' National Research Council (NRC) created a set of research priorities in response to Florida's HLB crisis. Basically we were starting from Ground Zero and needed some direction on how to scale the mountain.

Knowing the urgency of the situation, we asked the NRC not to create an ideal wish list. Instead they should focus on the question, "What would you do given limited choices and funding?"

The resulting 36 areas became the research community's "to do" list. Consequently, through the strong commitment of the Florida citrus grower, their dollars support all but 4 of the 36 topics.

Two research topics from the top third of this list are substantially completed. The pathogen's genome was sequenced using DNA isolated from psyllids and citrus phloem. Taken together these results essentially eliminate any doubt about the involvement of the bacterial pathogen "CLas" in causing infection and provide a rich set of targets for future research.

Seven more of the priorities are substantially finished but work still needs to be done. For example, important psyllid repellents have been discovered and characterized from guava plants. The research

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CRDF Sponsors January HLB Conference in Orlando

The CRDF Board of Directors has agreed to a \$100,000 sponsorship of the International Research Conference on HLB scheduled for January 2011 in Orlando.

The sponsorship is the result of a request by Florida Citrus Mutual, a main coordinator of the event along with IFAS and USDA-ARS.

“This type of gathering is right along the lines of the recommendations we received from the National Academy of Sciences,” said Dr. Dan Gunter, the CRDF’s chief operating officer. “They suggested we get all of the top HLB scientists from across the globe together to network and exchange ideas. This Conference does exactly that.”

The research-driven Conference will feature sessions on HLB status and crop losses; survey, detection and diagnosis; pathogen sequencing and culturing; host pathogen interaction; psyllid biology and management; host resistance, and more. Set for January 10-14, 2011 at the Caribe Royale in Orlando, Florida, registrations are now being taken at www.irchlb.org.

The first HLB research conference was held in January 2008 with almost 400 scientists in attendance.

The sponsorship funds would cover various costs associated with organizing a meeting of this size, including meeting rooms, audio visual equipment rental, signage, keynote speaker travel, coffee breaks, etc. Total expenses to the organizers for the 2008 conference were in excess of \$200,000.

(Research continued from page 1.)

continues, however, because the plant extracts and other sources may contain additional components to manipulate psyllid behavior.

Significant progress has been made in five other areas as well. Small protein antibiotics were found to control HLB in laboratory tests. The corresponding genes could be suitable for introduction into citrus to provide long term genetic resistance. This process is a formidable challenge but we are encouraged.

We also understand a great deal about the acquisition and transmission of the disease by psyllids, information we did not have a few years ago. This detailed and painstaking description of fundamental biology is necessary for the design and implementation of coordinated near term control strategies.

Research is well under way on the remaining half of the topics on the to-do list. However, there is an amazing breadth of work to be done.

In order to slow the spread of disease there is research emphasis on psyllid control. This includes everything from improved monitoring and diagnostics to the discovery and use

Original 2008 NRC Priority Research Topics

Substantially completed	2
Substantially completed, cont.,	7
Significant progress	5
In progress	18
Not currently funded by CRDF	4
Total	36

of novel compounds that might be either sprayed or delivered genetically.

Genetic resistance, either discovered or engineered, could help build confidence in replanting in a time of uncertainty. Broad screens of germplasm collections for resistance traits or accelerating modern breeding techniques through the citrus genome sequence may lead us to a solution on this front.

In addition, changes in horticulture practices - whether it be flush management or high density plantings - are still under investigation. Economics will be the driver of ultimate adoption by growers.

Finally there is significant effort on optimizing citrus health to more accurately predict the yield decline to be expected in HLB infected groves and the consequences on juice quality.

The CRDF understands the frustration that we do not have anything yet “on the back of the pickup truck” to definitively control the psyllid and HLB. However, the industry started with very little basic knowledge of the psyllid and the disease. Growers’ early investment has added more hands at the bench and in the field creating an enormous increase to our knowledge base.

We have a strong foundation at our main collaborating institutions in Ft. Pierce and Lake Alfred as well as over a dozen other research partners around the world. As we have seen already, new products and practices follow this leadership in innovation. The challenges for the future are to sustain this investment and coordinate practices among both researchers and the grower community to optimize success.

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- Investigate potential sponsors through searches, contacts and communication to develop a “hit list” of potential sponsors and programs.
- Focus on top prospects with follow-up communication and potentially arrange face-to-face visits with appropriate CRDF contacts as necessary
- Communicate results of proposals to CRDF in writing or in person at CRDF meetings

Browning’s contract runs from May 1, 2010 thru October 31, 2010 with an option to renew. The compensation is \$1,000 per day (4 days a month) not to exceed \$25,000 total.

Upcoming CRDF Meetings

May 25, 2010

Research Management
Committee Meeting

Followed by subcommittee meeting
to explore the feasibility of creating
Citrus Health Mgmt. Areas
9:00 a.m.

June 10, 2010

Board of Directors Meeting*
2:00 p.m.

July 27, 2010

Board of Directors Meeting
9:00 a.m.

**All meetings are held at the CREC, Lake Alfred in the Ben Hill Griffin Hall, Room 3, with the exception of the June 10 meeting which will be held at the Florida Citrus Industry Annual Conference in Bonita Springs.*