



REPORT

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CRDF Board Approves \$19 million FY 2013-14 Budget

At its June 13 meeting, the CRDF Board of Directors approved the Annual Budget for FY 2013-14. July 1 begins the new fiscal year, and CRDF will bring forward 140 approved research projects that will continue into the new year. The ongoing cost of these continuing projects is estimated at \$12.3 million. During the 2013-14 fiscal year, additional research projects will be solicited and approved projects will begin in April-May, 2014 per the normal timeline. In this manner, CRDF is able to annually update the portfolio and build on the latest research results. Approval of the State Legislative Initiative for HLB research funding will provide additional resources to CRDF for support of short-term research efforts as well as enhancement of existing research projects that can be accelerated during the next 12 months. The amount budgeted for expansion of short-term research projects is approximately \$1.6 million, in addition to \$3.9 million committed to the current costs of near-term projects.

Another important budget element is the delivery of research results to growers, which is accomplished through the Commercial Product Delivery Committee. This committee oversees research transition to final field evaluation and, as needed, regulatory and commercialization steps. Currently there are a number of projects under way in this area with projected FY 2013-14 costs of \$880,000. Plans for accelerating the delivery of short-term solutions to HLB are being advanced through the CPDC, with additional budget allocations of approximately \$1.9 million in this area to cover a number of priority areas that are detailed elsewhere in this newsletter.

The approved FY 2013-14 Budget contains costs associated with the administration of CRDF research programs supporting in-house operating expenses of \$422,000. This budget covers staff salaries, travel, office supplies and equipment, and financial expenses, audits, etc. Operating Expenses comprise 2.2% of the overall budget. Similarly, the budget includes \$547,000 to cover research and commercial product delivery management, comprising 2.8% of the total budget. These costs include program management contracts, expenses associated with the research project peer review process, research and delivery workshops, and the administration of the 5-year USDA, NIFA, Specialty Crop Research Initiative grant project which was awarded to CRDF in 2012. Communication and education expenses associated with CRDF's mission also are included in this management expense.

In total, the approved budget projects \$19,316,284 for the period July 1, 2013 through June 30, 2014. This new budget compares to the approved budget of \$16,519,588 for FY 2012-13.

Revenues to support the CRDF for FY 2013-14 come from several sources, including:

- The Citrus Production Research Box Tax, projected to generate \$5.2 million in 2013-14

UPCOMING MEETINGS

JULY, 2013

23	Board of Directors Meeting	CREC, Lake Alfred	9:30 am
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- State Legislative Appropriation for short-term HLB research, budgeted at \$8 million
- Florida Citrus Marketing and Promotion Tax, projected to contribute \$2.5 million
- Grants and other external support, proposed to generate \$2.3 million
- The balance (approximately \$1.3 million) will come from CRDF reserves

Final details of the commitment of state legislative support to enhancement of HLB solutions are being worked out and will be presented for approval at July Committee and Board meetings.

WHAT ARE SOME AREAS OF EMPHASIS FOR THE SHORT-TERM PROGRAM ENHANCEMENT?

CRDF Research Management and Commercial Product Delivery Committees have been prioritizing areas of research and delivery that will be the focus for expansion and acceleration during the next 12 months, fueled by the additional funding from the State Legislature. Some of these projects are highlighted here to illustrate the breadth of efforts to put useful tools in growers' hands. An outline of the project areas is presented, with additional details for each area to follow.

- **Citrus Health Management Areas and Asian citrus psyllid vector management**
- **Therapy for infected trees to reduce titer of HLB-causing bacteria**
 - Anti-microbial chemicals
 - Heat therapy of infected trees
- **Plant growth regulators to enhance phloem growth and reduce fruit drop**
- **HLB tolerance and citrus breeding**
 - Tolerant rootstocks
 - Tolerant scions
 - HLB escapes
- **Enhanced nutrition and integrated management**

Citrus Health Management Areas (CHMAs)

An outstanding partnership between USDA/APHIS, Florida Department of Agriculture, the University of Florida, IFAS and citrus growers has led to continuing improvement in the ability to monitor and treat ACP populations across area-wide grove situations. Growers largely run this program, while treatment recommendations are provided by UF, IFAS, and ACP monitoring is maintained and reported by the state and federal Citrus Health Response Program (CHRP).

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CHMAs are making a difference in managing ACP! Further improvement can be expected with feedback from ACP counts, broader participation and the incorporation of additional tools to manage psyllid populations and to protect new plantings. The CHMA principles encourage highest use of available tools, particularly those associated with vector management at present. With 38 CHMAs in the state, real-time mapping is available to document current and previous ACP counts within CHMAs, and to summarize changes over time in ACP counts within count blocks and across each CHMA. The CHMA website (www.flchma.org) provides extensive information to provide guidance and feedback on ACP management. Growers who are not familiar with the outstanding support in managing HLB via the CHMAs are encouraged to become engaged and participate in relevant CHMAs.

While CHMAS are providing useful support to ACP management in Florida, they also are extremely well-suited for implementation of additional tools as they emerge from the research. CRDF will utilize CHMAs when possible to deliver solutions – growers should too!

Neonicotinoids & other insecticides for Asian citrus psyllids

- **CRDF background investment:** Considerable investment has been made in ACP projects since initiation of the HLB response. Products, rates, timing, and ACP response have been targeted. CRDF also is supporting research on issues of importance to registrants and EPA such as timing and methods of application in relation to foraging of honeybees.
- CRDF is working with registrants, FDACS and EPA to consider expanded use of basal trunk applications of ACP-active systemic insecticides.
- New products/active ingredients are moving forward to complement existing tools.
- There is an opportunity to add new tools, including those that protect from overuse, such as resistance management.

Anti-microbial therapy

- **CRDF background investment:** CRDF-funded development of anti-microbial screens has enabled comparative data development on a long list of candidate materials, and this work continues. Recent research also has focused on development of methods to evaluate soil microbial materials for their effects on HLB/citrus roots.
- Expansion of graft-based chemotherapy lab capacity is proposed to evaluate additional candidate materials.
- Consideration of field trials for selective candidates is underway.
- 3rd party assistance is being sought for regulatory environment and roadmaps and candidate commercial partners are being identified to assist with delivery of anti-microbial materials.

Thermal therapy field tests

- **CRDF background investment:** A current project is focused on evaluating thermal conditions that may lower CLas titer in infected field-planted trees. Similarly, a two-year Specialty Crop Block Grant Project also is investigating this potential at USDA, ARS.
- Continuing research needs are to refine heat requirements (temperature and time).
- Field trials with low-tech solutions are being considered for immediate implementation.
- In addition, research will address more technical heat treatment options.

Plant growth regulators and fruit drop

- **CRDF background investment:** A recently approved project will evaluate the role of PGRs on growth of phloem in HLB-infected trees, and possible implications for fruit drop. Other ongoing funded research has provided methods to evaluate and quantify phloem dynamics.
- Additional Enhancements for FY 2013-14 include a field trial with PGRs.
- Possible new research on fruit drop may be suggested by examination of current PGR labels.
- Based on research results, it may be necessary first to evaluate, then to launch label change efforts so that PGRs may be used as warranted.

Rootstocks for new plantings

- **CRDF background investment:** Significant investment in UF and USDA citrus breeding programs (over \$1 million per year) has set the stage for statewide field evaluation of rootstock genotypes under severe HLB pressure.
- UF, IFAS and USDA, ARS already have made arrangements with growers for additional field trials.
- Near-term expansion possibilities for the “Rootstocks for New Plantings” initiative include facilitation of propagation of promising candidates for near-term large scale grower field trials, which could scale up over time. In addition, consideration is being given to overcoming barriers to availability of rootstock propagation materials of promising candidates in the near future as testing advances.
- Other new planting initiatives are being considered to enhance replanting efforts.

HLB escapes: Observation of survival of rootstocks or scions under sustained HLB field pressure

- **CRDF background investment:** Projects have been supported to investigate potential surviving genotypes of citrus in areas of China and India, and the current project focuses on investigating occurrence of HLB escapes in Florida.
- Support is provided, as required, to assist researchers and citrus extension agents in overcoming barriers to successful implementation of escape trees process. The CHRP program also is involved in following up on escapes.
- Soil microbial testing capacity is being expanded to consider soil factors that may lead to survival of trees.
- A mechanism is now in place – Contact your Extension Agent to report an interesting “Survivor” observation.

Enhanced Nutritional Programs

- **CRDF background investment:** Current investment to date on nutrition in relation to HLB includes 14 projects with an investment of over \$1.5 million.
- A project nearing completion sought to capture grower trial observations and results, and to determine how to find the most valuable components of ENPs that influence tree health. Limited grower response has restricted the interpretation of ENP performance in grower trials.
- Additional efforts to evaluate the role of nutrition in health of HLB-infected trees are being considered.

These represent just a few of the projects that are being considered to provide short-term tools to incorporate into HLB management. Additional information will be forthcoming as project plans and budgets are detailed.