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Annual CRDF Processes Providing Solutions to Florida Citrus Growers

CRDF is near the end of the current fiscal year and therefore, is engaged in planning and projections associated with its research and delivery programs. In addition, the process of evaluating citrus research priorities is under way, with participation from all sectors of the industry. This newsletter summarizes some of these activities and the drivers that will affect CRDF programs over the next year.

The annual CRDF Budget process has been the focus of Finance and Audit Committee discussion, and the draft FY 2014-15 annual operating budget was presented for discussion at the May Board and approved at the June 12th Board meeting. Revenue sources to support HLB and other disease research, and to move forward solutions are significantly less than in previous years, with reduced revenue expected from the Research Box Tax Program and similar support from the Florida Department of Citrus. Funding support from the Florida Legislature was approved by the Governor, and is reduced from eight million dollars for FY 2014-15. The result will be a reduction in the overall budget available to CRDF to support HLB research efforts, particularly new projects.

At the same time, two sources of federal funding will provide significant support to HLB research and development efforts at the national level. The first is a Congressional Appropriation to support delivery of "shovel-ready" tools to citrus growers in each of the citrus states and will provide twenty-one million dollars over two years, complementing current commitments to these kinds of projects within CRDF. As this program unfolds, it is expected that CRDF will be directly involved in development of and/or management of some of these projects. Under Secretary of Agriculture Ed Avalos announced at the June 12 Florida Citrus Grower Annual Meeting in Bonita Springs that over six million dollars of the appropriated funding will be made available to address testing of solutions in Florida in the short-term. Projects that may take advantage of these funds are being organized and implemented through the Multi-Agency Coordination (MAC) group, composed of USDA representatives and stakeholders. Additional opportunities for funding will emerge as the first projects are put into place and an announcement of new ideas for solutions is released.

Among the topics that are being developed for use of the Federal MAC funds are:

UPCOMING MEETINGS				
July 2014				
1	Commercial Product Delivery Committee	CREC, Lake Alfred	9:30 a.m.	
22	Board of Directors Meeting	CREC, Lake Alfred	TBD	

- Applied biological control of Asian citrus psyllid
- Delivering antimicrobial strategies
- Scale-up of thermal therapy treatments to reduce bacterial infection with *CLas*
- Integration of tools and strategies for HLB into new plantings, combined with inoculum removal

The other federal funding to support HLB research was approved in the Farm Bill, and allows for twenty-five million dollars per year to be allocated to citrus disease research and extension efforts. This program will be administered via the USDA, National Institute of Food and Agriculture (NIFA), Specialty Crop Research Initiative (SCRI). Announcement of this particular SCRI program area was made last week, and the announcement and details for application can be found at http://www.nifa.usda.gov/funding/rfas/cdre.html. This funding will be dedicated to priority areas of the HLB/Asian citrus psyllid disease system, building on research that has been accelerated in recent years through efforts of the Florida Citrus Industry through the CRDF. When fully implemented, this program will complement the current CRDF research portfolio, and has the potential to accelerate areas of greatest interest.

This program will allow CRDF and the Florida industry to focus resources more closely on the research results that can be translated into solutions in the near-term. As Florida citrus groves accumulate the impacts of chronic infection, growers are in need of therapies that can slow or stall the further decline of infected trees and can restore tree productivity. At the same time, tools for protection of new citrus trees from HLB infection and disease are premier among grower priorities.

The graphic on page 2 illustrates how the two federal funding initiatives, the SCRI and the MAC funding, will dove-tail CRDF program goals and complement current funding dedicated to HLB solutions. The diagram also shows how the Citrus Health Response Program (CHRP) aligns with these new initiatives and assists in delivering HLB solutions and other disease information to Florida growers and citrus growers in other states. The CHRP program arose during the citrus canker response in Florida, and provides a strong federal/

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Federal Funding Programs - HLB



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state regulatory partnership to the issues facing Florida citrus growers.

CRDF Program Management

The management of CRDF research programs and the Commercial Product Delivery program have become increasingly complex as more research results are approaching utilization in the field. With five years of concentrated research behind us, it is time to look closely at how we can integrate the knowledge of HLB and how it affects citrus tree health with the discovery and evaluation of a wide array of tools targeted at the vector insect (ACP), the pathogen (CLas) and the citrus plant. With this increasing complexity, CRDF has committed additional resources to ensure that all possible avenues for shortterm solutions are receiving full attention.

CRDF committees and the board directed an expanded plan for project management of research as well as delivery projects, and as a result, work plans and budgets have been developed to address the expanding needs. Additional experts will be recruited to provide leadership for CRDF programs so that all solutions can move quickly to the field.

Field Trials

Among the tools that are increasing in importance are therapies, treatments, or production strategies that need to be tested under real-world commercial citrus production. Early success in lab or greenhouse is important, but the real measure of impact comes when these tools are applied under commercial conditions which vary widely. Multiple-year evaluations are often necessary to characterize the full impact of new treatments, as trees are slow to respond and tools that may affect production may only show results after one or more years of application.

CRDF has a range of new field trials in place, being completed, or staged for installation. The purpose of these trials includes the following:

- Evaluation of antimicrobial strategies to reduce bacterial infection in HLB-infected trees
- Testing of materials commercially available in Florida to determine their role in HLB management and tree health
- Scale-up of thermal therapy to reduce *CLas* titer in infected trees
- Application of plant growth regulators to reduce preharvest fruit drop and to enhance phloem health
- Implementation of commercial scale evaluation of candidate HLB-tolerant rootstocks
- Testing of improvements to ACP suppression tools

These projects are managed through the Commercial Product Delivery Committee (CPDC) and reports are provided quarterly at regularly scheduled meetings. These trials are important in that they also engage commercial cooperators who can provide their own independent assessment of the impacts of treatments or tools applied on their grove properties.

Industry Research Coordinating Committee (IRCC) process for updating research priorities and Gaps Analysis

While plans for research and CPD activities are moving forward, the Industry Research Coordinating Committee is revisiting the needs of the industry and comparing those needs to direction of research and funding resources. Periodically the IRCC, a committee composed of representatives of the various sectors of the industry (nurseries, growers, harvesters, processors, and packers) is evaluating citrus-wide priorities and accumulating the inventory of research being conducted on citrus nation-wide. A gaps analysis then is conducted to identify gaps between what appear to be priorities and the depth of ongoing investment in each of the priorities. The committee is in the midst of this activity and will be reporting to the Board at earliest opportunity. This is the only effort that looks beyond the current need focus on HLB research to identify other needs that are affecting segments of the Florida industry.

LINK	TITLE	RESEARCHER
	Soft Nanoparticles for uptake of Potential HLB Bactericide in citrus trees	Moudgil
	Improving the innate immune response of citrus to HLB	Dandekar

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