

Citrus Research and Development Foundation, Inc.



CRDF Research Activity Update

April 3rd, 2018



CRDF Research Goals- HLB

- NAS recommendations for HLB research (2010)
 - Communicate impact of HLB
 - Near term solutions – Commercial Product Delivery
 - Intermediate solutions
 - Long-term solutions- Research projects



CRDF Research Topical Areas

- Bactericides
- ACP Vector intervention technologies
- Citrus plant improvement
- Horticultural solutions
- Other Citrus Diseases



Bactericide Projects – 40

- Bactericide Identification and Screening
 - Petri plate, small plant and field tree assay for screening
- Bactericide Field Testing
 - Testing botanical oils, antimicrobial microbes, OTC and streptomycin, other bactericidal chemicals
- Bactericide Delivery
 - Evaluation of new adjuvants or formulation modifications
 - New delivery methods
 - Uptake and movement in the plant



ACP Vector Intervention Projects– 87

- ACP Biology and Behavior
 - Development and movement
 - Acquisition and transmission of CLas
- ACP Conventional Management Tools
 - Increase available tools
 - CHMAs
 - Insecticide resistance and monitoring
- ACP Management- novel approaches
 - Target discovery, RNAi
 - Insecticidal proteins, incompetent ACP



Citrus Plant Improvement Projects- 73

- Citrus genome characterization
 - Genome mapping
 - Gene expression response to ACP and HLB
- Phenotypic and molecular characterization
 - HLB tolerant citrus relatives
 - Commercial cultivars

- HLB Resistance – Conventional breeding
 - Development of new varieties- HLB
 - Field trial establishment and data collection
 - Develop propagation methods
- HLB Resistance: Engineered
 - Identify disease resistance -HLB, Canker and Diaprepes
 - Genetic transformation and characterization
 - Tools for rapid deployment
 - Support facilities- Lab and field



Horticultural Projects – 76 Projects

- Disease detection methods
- Host response to infection
 - Symptoms, Gas movement, phloem plugging
- Nutrition
 - Enhanced nutrition programs
 - Improving tree performance- reflective mulch
- Soil microbial amendments
- Plant growth regulators
- Thermotherapy



2018 CRDF Request for Proposals Activities

- Current portfolio maturation
 - Portfolio review
 - NAS review – Report published April 2018
- Determine priorities for RFP
 - Grower meetings
 - Research community
 - CRDF Committees and Board meetings
- RFP Targets
 - Near term HLB solutions – Product Development
 - Longer-term HLB solutions – Research hypothesis



- CRDF Funding Prioritization
 - Commercial Product Delivery Committee meetings
 - Research Management Committee meetings
 - Board meeting – Decisions list of priorities for RFP
 - RFP call posted on website, April 2018

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Thank you!

CRDF is proud to provide support to the Florida citrus industry