



Funded Projects to Aid Growers in the HLB Battle

**CRDF Board of Directors
May 26, 2015**

Harold Browning, Chief Operations Officer

Approaches to Battle HLB

- Preventing spread (new plantings and resets)
- Reducing Disease in Infected Trees
- Sustaining/Improving Tree Health
- Fruit Drop and Fruit Quality
- Reducing Impacts of other Diseases and Stresses

Approaches to Battle HLB

PREVENTING SPREAD	Research		Delivery	
	CRDF	NIFA	CRDF	MAC
ACP Movement	814,674		211,681	
ACP Management & CHMAs	4,100,103	4,500,000	1,426,265	2,998,000
New Plantings Systems			936,705	615,000
Tolerance in Rootstocks and Scions	1,424,649		4,916,042	1,000,003

Approaches to Battle HLB

REDUCING DISEASE IN TREES	Research		Delivery	
	CRDF	NIFA	CRDF	MAC
Bactericides	1,155,142	6,700,000	1,753,245	1,326,000
Thermal Therapy		3,500,000	927,455	1,266,000
Inoculum Removal				1,000,000

Approaches to Battle HLB

SUSTAINING TREE HEALTH	Research		Delivery	
	CRDF	NIFA	CRDF	MAC
Nutrition Schumann			407,500	
Soil/Water Conditions & Treatments	477,576		385,193	173,000
Compost, Microbe Products Morgan	187,296		782,078	216,000
Integrating Approaches to Health				1,543,000

Approaches to Battle HLB

FRUIT DROP AND FRUIT QUALITY	Research		Delivery	
	CRDF	NIFA	CRDF	MAC
Influence of PGRs on Infected Trees	470,849		814,144	
Impact of HLB on Fruit Quality			110,000	

Approaches to Battle HLB

REDUCE IMPACT OF OTHER DISEASES	Research		Delivery	
	CRDF	NIFA	CRDF	MAC
Citrus Canker Graham	3,043,544		834,133	
Citrus Black Spot			909,302	
Phytophthora	336,714			
Diaprepes Root Weevil	80,000		134,500	
Citrus Blight	400,000			

Project Profile by Topics – CRDF Research

CRDF Research Category	Projects Ending < 7/01/15		Projects Continuing > 7/01/15	
	# Projects	Total Budget	# Projects	Total Budget
1. Consequences of HLB infection	0		1	\$ 237,500
2. CLAs culture, genomics, molecular	7	\$ 1,952,070	4	\$ 1,680,137
3. Citrus response to infection	4	\$ 304,090	2	\$ 496,182
4. HLB pathogen/disease detection	3	\$ 583,581	0	
5. HLB epidemiology and mitigation	11	\$ 2,459,788	8	\$ 2,504,017
6. ACP monitoring and behavior	4	\$ 628,470	1	\$ 577,703
7. ACP chemical, biological mgmt	7	\$ 1,719,149	4	\$ 1,127,681
8. ACP trapping and repelling plants	0		0	
9. Citrus genomics and transcriptomics	1	\$ 458,000	1	\$ 240,000
10. Conventional citrus resistance breeding	7	\$ 2,317,621	4	\$ 2,052,136
11. Transgenic/ vector mediated resistance	11	\$ 2,832,556	6	\$ 3,026,921
12. Model systems, inc. screening	2	\$ 296,384	3	\$ 1,318,803
Non HLB Pest and Disease Research	7	\$ 1,356,198	9	\$ 3,162,545
Total Research Projects	64	\$ 14,907,907	43	\$ 16,423,625

Project Profile by Topics – CRDF Delivery

CRDF Commercial Product Delivery	Projects Ending < 7/01/15		Projects Continuing > 7/01/15	
Program Topic	# Projects	Total Budget	# Projects	Total Budget
Antimicrobial therapy	9	\$ 2,567,858	4	\$ 506,587
Naturally Occurring Microbes	0		4	\$ 468,386
Thermal Therapy	2	\$ 467,177	1	\$ 105,782
Plant Growth Regulators	5	\$ 175,717	1	\$ 132,660
ACP Management	3	\$ 269,720	0	
Tolerant Rootstock Plantings	3	\$ 548,088	1	\$ 333,774
Psyllid Shield (RNAi)	1	\$ 487,383	1	\$ 113,523
HLB Escapes	1	\$ 176,000	0	
Non-HLB Pests and Diseases	1	\$ 803,126	3	\$ 213,333
Total CPD Projects	25	\$ 5,495,069	15	\$ 1,874,045