Florida Citrus Advanced Technology Program

QUARTERLY & FINAL REPORTS: Control of Citrus Greening, Canker & Emerging Diseases of Citrus

Instructions Complete the fields based on your project specs. When finished, save the form to your local disk using a unique name. Then, go to **http://research.fcprac.com**, and log in with your user name and password using Researcher Login in the lower left. Find this project title and click on **Submit a Report**. Update your profile information if needed, then upload this report as directed.

2009-2010 REPORT	CATEGORY (drop-down)	TODAY'S DATE (m/d/yr)
◉ *Quarterly Report* ○ *Annual Report* ○ *Final*	HLB Pathology	

WHAT IS THE "HEADLINE" FOR THIS REPORT (e.g. a one-sentence "newspaper headline" describing what you accomplished)

New host for HLB

TITLE and CONTACT INFORMATION

Proposal Title Alternative Hosts of HLB to Assist in Disease Management

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Phone 863956-1151	*Project Duration (years)* 3 *Year of Project* 2
Organization University of Florida, CREC	*Total Direct Funds (current year)* $204,325

REPORT UPDATE (650 words; provide details about your headline)

We continued the work this grant focusing on the infection of various citrus and other rutaceous plants that might be alternative hosts for both the psyllid and the bacterium Candidatus Liberibacter species associated with HLB. One of the new hosts for the psyllid that we reported in the last quarter, Choisya ternata, was grafted with PCR positive budsticks of HLB infected citrus. The grafts were not successful and died in the plants. Plant materials were sent to both the USDA, ARS, Molecular Plant Pathology Lab, Beltsville Exotic Citrus Pathogen Collection and to the USDA, ARS Foreign Disease and Weed Science Research Lab, Frederick, MD for grafting and psyllid transmission of the Ca. Liberibacter americanus and the Ca. Liberibacter. africanus strains. Infectivity assays are pending. In psyllid inoculation tests with Ca. Las we were able to infect four of six Choisya ternata plants in 3 months.

In field surveys for alternative hosts we sampled a group of 18 sour orange trees that were growing in a pine planting close to commercial citrus plantings. Of the 18 trees sampled one was found to be PCR positive for Ca. Liberibacter asiaticus. In other field work we sampled a swamp area close to where the initial infections of a grove were discovered. Of 35 plants samlee no infected plants were found including a number sweet orange and grapefruit seedlings. Additional sampling is planned to look for alternative hosts for HLB that could be reservoirs for infections.

We continue to propagate and inoculate seedlings and grafted plants of IAPAR 73. As reported previously we were unable to infect some seedlings with HLB material. We presented these results at the Florida State Horticultural Society meeting in June and have submitted a manuscript to the proceedings.

Publications: Damsteegt, V. D. E. N. Postnikova, A. L. Stone, M. Kuhlmann, A. Sechler, N. W. Schaad, R. H. Brlansky, and W. L. Schneider. 2010. The relevance of Murraya paniculata and related species as potential hosts and inoculum reservoirs of 'Candidatus Liberibacter asiaticus', the suspected causal agent of Huanglongbing. Plant Disease 94:528-533. (Editor's paper of the month of May).