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	1/12/10

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

Experiments 1 and 3 are waiting for HLB symptoms and experiment 2 is ready to begin

TITLE and CONTACT INFORMATION

Proposal Title Comparative epidemiology of citrus huanglongbing (greening) caused by Candidatus Liberibacter asiaticus and Ca. Liberibacter americanus

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Organization Fundecitrus	*Total Direct Funds (current year)* $83,825.00

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

Experiment 1 - Since the last report, no new symptomatic plant were observed in any compartment. Leaf samples of all the plants were collected with the objective to detect the presence and to identify the bacterial species in each plant in November/09 (total of 1268 samples collected since the beginning of the experiment in April/08). Psyllids were collected in November and December/09 to evaluate their infectivity. The samples were submitted to conventional PCR and real-time PCR. These analyses are in progress. In December/09 we stopped to release new ACP and killed all psyllids present in the compartments. All plants were moved to other insect-proof screenhouse and will be there for symptoms observation and leaf sampling for PCR analysis. New inoculum source Citrus and Murraya plants are being prepared to repeat this experiment after March/10. At this time we want to include sources of M. paniculata infected with CLas.

Experiment 2 - The delay to start this experiment was caused because took so long to obtain inoculum source plants for CLam, but this problem was already solved. During January/10, ACP will be reared on symptomatic inoculum sources for CLam and CLas. The emerging adults from nymphs reared on such inoculum sources will be used for inoculation in February/10. After the inoculation, adults of ACP free of liberibacters will be periodically feed on these inoculated plants to detect the moment when they can acquire the bacteria from inoculated plants.

Experiment 3 - Nine insect-proof screenhouses were built in a commercial citrus farm to protect Hamlin, Pera and Valencia sweet oranges with three different age. Plants from Hamlin and Valencia were already inoculated at the beginning of July/09 with infected adults of ACP and plants from Pera will be inoculated in January/10. Monthly assessments for symptom severity have been done, but no HLB-symptoms were observed yet. Also, leaf samples have been collected to detect the presence of Liberibacter species on inoculated shoot. PCR analyses are in progress, no result yet.