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*	Canker Pathology	7/20/10

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

Plots in Brazil to examine canker control strategies and studies in FL ongoing on bacterial survival.

TITLE and CONTACT INFORMATION

Proposal Title Efficacy of citrus canker control strategies, leafminer interactions, and bacterial survival.

Principal Investigator Tim R. Gottwald	*PI Last Name* Gottwald
Email tim.gottwald@ars.usda.gov	*FDACS Contract Number*
Phone 772-462-5883	*Project Duration (years)* 3 *Year of Project* 1
Organization USDA, ARS	*Total Direct Funds (current year)*

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

The intent of this study is to examine the effect of windbreaks, copper sprays to reduce infection, and leafminer treatments to determine there individual and combined effects on control of citrus canker in Brazilian commercial citrus and the applicability of this strategy to the US commercial citrus industry.

Via a USDA/ARS specific cooperative agreement with the University of Sao Paulo, and the Brazilian cooperator, funds were transferred for collaboration, plot maintainence and experimental conduct. Permission was obtained to use an IAPAR farm, in Xambrê, Parana state, located 350 km west from Londrina and 250 km west from Maringá where replicated field plots were established. The cultivar used is Pêra on Rangpur lime, two years of age at the beginning of the experiment. Windbreaks were completed and plants were be established in Mid April 2010.

The experiment has now been initiated and the following treatments are being applied: 1) no sprays (control), 2) Cu++ sprays to reduce citrus canker incidence, and 3) insecticide sprays to inhibit infestations of Asian leafminer (secondary effects). Main effects are windbreak versus no windbreaks. Citrus canker incidence is being estimated on multiple branches on each tree treated as the number of leaves per branch infected. Data collection is currently underway. We anticipate running these plots for 2-3 more years.

The development of the Programmable leaf wetness controller (PLWC) software was written, debugged, is complete, and the control program is working well. New leaf wetness sensors were designed and constructed and are in the final stages of calibration. In fact, a whole new design of leaf wetness controller was developed for the project which has much greater sensitivity and provides better environmental control. A circuit to control the leaf wetness sensor and another to control fans that facilitate wind generation in ambient environments have been completed, tested and calibrated. Initial trials have been designed to examine the survival characteristics of bacterial pathogens under field conditions and have been initiated.