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*	Management	6/30/09

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

Evaluation of chemicals and their risk of resistance for control citrus canker in grapefruit and Hamlin is well underway

TITLE and CONTACT INFORMATION

Proposal Title Canker management in Florida citrus groves: chemical control on highly susceptible grapefruit and early orange varieties

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Phone 863-956-1151	*Project Duration (years)* 3 *Year of Project* 1
Organization UF, Citrus Research and Education Center	*Total Direct Funds (current year)* $129,021

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

Under Objective 1 (define rates and formulations of copper sprays for more effective control) one trial with Red grapefruit has been set up in Ft. Pierce, FL and one trial with Hamlin orange in Hardee County, each with 20 treatments of formulations, rates and combinations with other chemical treatments of interest. Trials have low to moderate disease epidemics this season as a result of a dry spring, moderately wet summer and an absence of tropical storm events. Under Objective 2 (establish the period of fruit susceptibility for grapefruit and oranges), companion trials have been set up looking at whether longer duration of a copper spray program is necessary for control of crop loss. Fruit drop has been quantified in the Hamlin orange plots. Under Objective 3 (evaluate the use of streptomycin [Firewall] and a polymer delivery system [PDS] to lower the rate and frequency of copper application) three trials (two non-bearing and one bearing) in grapefruit have been initiated to evaluate streptomycin for canker control, and two trials in bearing grapefruit have been initiated to evaluate PDS and the interaction with copper and timing of copper burn. Under Objective 4 (To define risk for development of bacterial resistance to copper [Cu] and streptomycin [Sm] in FL citrus groves) the copper resistance gene has been identified from a resistant Xcc strain from Argentina as CopL, the same resistance in X. vesicatoria the cause of bacterial spot in tomato. Primers constructed based on the gene sequence have been used to screen the remainder of copper resistant strains of Xcc from Argentina and the copper resistant strains of X. alfalfae. pv citrumelonis from Florida citrus nurseries with citrus bacterial spot. All strains screened thus far contain the CopL resistance gene. Under Objective 5 (rapid transfer improved canker management technology to the Florida citrus industry), the 2009-10 canker management recommendations have been published in the Florida Citrus Pest Management Guide and Citrus Industry Magazine. Oral presentations have been delivered to the Florida Citrus Production Managers and at county extension the copper meetings.