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*	Psyllid	10/20/09

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

Texas ACP hit hard by Texas drought; progress made in recording from ACP antennae

TITLE and CONTACT INFORMATION

Proposal Title A push-pull strategy for control of the Asian citrus psyllid

Principal Investigator Stephen L. Lapointe	*PI Last Name* Lapointe
Email stephen.lapointe@ars.usda.gov	*FDACS Contract Number*
Phone 772-462-5914; 772-216-1242	*Project Duration (years)* 2 *Year of Project* 1
Organization USDA-ARS	*Total Direct Funds (current year)* $36,879.00

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

In Texas, our studies of the responses of free-flying ACP to host-plant odors was severely hampered by severe heat and drought followed by prolonged rains. The unfavorable weather conditions that existed from July until October precluded us from obtaining ACP that were suitable for behavioral tests.

We developed a greenhouse test to quantify the level of ACP movement between potted sour orange trees and traps scented with petitgrain oil.

We completed chemical analyses of the odor emitted by the flushing shoots of sour orange, Thai lime (Citrus hystrix), and Mexican lime. These compounds will be assayed by GC-EAD as this method comes on line.

A malfunctioning transfer line heater on our GC has been identified as the source of electrical interference that was hampering antennal recording from ACP. A replacement for the unit was loaned by U. of Florida. We are experimenting with different electrodes and methods of preparation. Cornell U. has provided tungsten electrodes and a sharpening system. Tungsten electrodes may allow us to record from individual chemosensory cells and avoid occluding receptor cells that may occur with microcapillary tubes. We are optimistic we will be able to reliably record from ACP antennae in the near future.