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	

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

TITLE and CONTACT INFORMATION

Proposal Title Coupling citrus flush management and dormant chemical spray as a strategy to control populations of ACP

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Phone 956-447-3370	*Project Duration (years)* 2 *Year of Project* 1
Organization Texas A&M University Citrus Center	*Total Direct Funds (current year)* $56,794

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

During this period of the project, we continued evaluating the effects of hedging date and nitrogen fertilization on D. citri populations in a sweet orange grove. Densities of adults found feeding on flush shoots were independent of either hedging treatment or nitrogen application to citrus trees. In contrast, populations of immatures, eggs and nymphs significantly varied with hedging and the interaction between nitrogen and hedging. Late hedging (done between April and May) dramatically increased population of D. citri immatures because of the abundant flush shoot production following the pruning of trees coincides with high flight activity of D. citri. Although early hedging initially increased D. citri densities in spring, a rapid decline in the psyllid numbers was observed in this treatment from late summer to fall. One possible explanation of this late season decline may be the lower densities of new flush shoots produced later in the season when trees are pruned before spring in February. Early pruned trees may have utilize most of their resources in producing profuse flush in spring, thus only producing fewer flush shoots in summer and fall. Based on these data, early pruning can be recommended to grower as a major cultural practice to naturally reduce psyllid populations in citrus groves.

Several phytohormones were also tested to evaluate their effects on suppressing citrus flush shoot production. Both greenhouse and field tests were conducted. In the greenhouse, potted Mexican lime trees (ca. 1 year-old) were pruned and each phytohormone was immediately sprayed following the label recommended rate. A group of 10 pots was used for each treatment including the untreated control that received tap water treatment. Three phytohormones namely Apogee (0.7g/L), Sumagic PGR (100mL/L), and NAA-1-Naphthaleneacetic acid (0.5µL/L), significantly reduced the number of new flush shoots produced by lime trees. A minimum of 50% reduction in flush shoot production was recorded with these growth regulators relative to the untreated control. In addition to reducing the number of new flush shoots produced, Apogee and Sumagic PGR also significantly delayed their growth. Field tests are ongoing to evaluate the effects of these phytohormones on flush production and D. citri populations.