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	10/2/09

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

Research in progress to develop new specialized citrus psyllid trap

TITLE and CONTACT INFORMATION

Proposal Title An effective trap for Asian citrus psyllid that can be used to monitor groves and plants for sale

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Organization NFREC-Quincy, University of Florida	*Total Direct Funds (current year)* 100000

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

We have made good research progress this quarter.

Need for trap in regulatory efforts to reduce spread of greening bacteria - 2009 samples. Of all samples from citrus or kumquat about 19% were positive for citrus greening with 21% of discount garden centers and 16 % from miscellaneous retailers. If both nymphs and adults were collected, about 2/3 of the time, nymphs were positive, suggesting infected plants.

Field testing of traps: We conducted two field tests of about 25 different trap configurations as prototypes in a replicated experiment in two field locations in southern Florida: Immokalee and Fort Pierce. Results from these two tests helped us to focus further experiments on prototypes with configurations that trap adult psyllids with some degree of efficacy. These results also enabled us to better focus some laboratory experiments to gain a better understanding of psyllid behavior.

Laboratory testing of traps: We have conducted several and continue to conduct other laboratory bioassays to determine the behaviors used by psyllids during approach, landing and post landing on key parts of traps. We are characterizing the physical properties of traps relative to their impact on psyllid walking, jumping and flight behavior. These experiments will enable us to optimize trap configurations and to develop an estimate of the importance and the relative trade-offs in efficacy among trap components. Once we have a better understanding of how psyllids respond to individual trap physical properties, we can change the configuration of various components in a focused effort to improve overall capture efficacy.

We expect to develop an improved trap for Asian citrus psyllids that can be used both in groves and for regulatory purposes in places where citrus plants are sold. This trap would collect the insects and preserve them using methodology that will enable testing for the presence of HLB pathogens at some later date.