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	1/15/10

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

Psyllid populations significantly lower in grapefruit compared to orange groves in Florida.

TITLE and CONTACT INFORMATION

Proposal Title Direct Grower Assistance: Development and Evaluation of Citrus Grower Psyllid Management Programs

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Organization UF/IFAS/CREC	*Total Direct Funds (current year)* 107,723

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

The following is a summary of Dr. Avery's activities since Ocotber 2009:
1) Packers of Indian River, Ltd. - Ft. Pierce: Monitored psyllids along the border using yellow sticky cards. Data collected was used to produce a distribution graphic for assessing the psyllid population dynamics throughout the year for the grower. Graph showed that the population peaked in March and August. 2) IMG Citrus – Fellsmere: Assessed and compared the abundance of psyllids in orange and grapefruit trees managed by the same chemical spray program in two 10 acre blocks (1 block for each fruit tree type) using the following techniques: monitored inside the block with yellow sticky traps, tap sampling, flush sampling, and assessing flush density. Overall, results indicated that there were more psyllids found on orange than grapefruit trees with similar flushing patterns; especially with the tapping samples. There was some fluctuation towards the later part of the year possibly due to aerial sprays conducted either near or on site. 3) Pine Ranch, Inc. – Lorida: Assessed the effectiveness of various chemical sprays for managing psyllids using yellow sticky traps, tap and flush sampling. Generally the population was low, but the numbers of psyllids may be influenced by the abandoned grove near the monitoring site. 4) River Country Citrus, Inc. – Okeechobee: 1.Assessed the effectiveness of various chemical sprays for managing psyllids using yellow sticky traps, tap and flush samples on young trees. Results indicated that very low numbers were present on young (2 yrs old) trees using Nuprid™. 2.Assessed and compared the abundance of psyllids in orange and grapefruit trees managed by the same oil spray program in two 10 acre blocks (1 block for each fruit tree type) using the following techniques: monitoring inside the block with yellow sticky traps, tap sampling, flush sampling, and assessing flush density. Overall, results indicated that there were more psyllids found on orange than grapefruit trees with similar flushing patterns. 5) Lindsey Groves – Vero Beach: Assessed and compared the abundance of psyllids in orange and grapefruit trees managed by the same organic approved program in two 10 acre blocks (1 block for each fruit tree type) using the following techniques: monitoring inside the block with yellow sticky traps, tap sampling, flush sampling, and assessing flush density. Overall, results indicated that more psyllids were found on oranges than grapefruit with similar flushing patterns.
6) Premier Citrus – Vero Beach: Assessed and compared the abundance of psyllids in orange and grapefruit trees managed by the same chemical spray program in two 10 acre blocks (1 block for each fruit tree type) using the following techniques: monitoring inside the block with yellow sticky traps, tap sampling, flush sampling, and assessing flush density. Overall, results indicated that there were no differences in psyllid abundance between orange and grapefruit trees with similar flushing patterns. 7) Laboratory and Field Research at IRREC: Assessed persistence and efficacy of PFR 97™ against the adult psyllid in the field on small trees; experiment was replicated 3 times. Overall, results showed fungal spores were viable and infectious against the adult psyllid up to 28 days post-spray. The effects of two formulations of Isaria fumosorosea Wize (blastospores and conidia) on feeding, honeydew deposits, and mortality of adult Diaphorina citri Kuwayama (Hemiptera: Psyllidae) was assessed in bioassay arenas. Psyllids infected by either formulation had reduced feeding as indicated by significantly fewer honeydew deposits [8 and 9 times less after 5 and 7 days, respectively] with mortality reaching 100% in fungal treatments compared to 0% in the controls after 7 days. Blastospores caused a significantly higher mortality than conidia in the first 3 days. The potential of auto dissemination of Pfr 97 by psyllids in the field is still being investigated.