CITRUS ADVANCED TECHNOLOGY PROGRAM

QUARTERLY & FINAL REPORTS: Control of Citrus Greening, Canker & Emerging Diseases of Citrus

▶ INSTRUCTIONS

(●) *Quarterly Report* ( ) *Annual Report* ( ) *Final*

Required: What is the "headline" for this report (e.g. a one-sentence "newspaper headline" describing what you accomplished)

Low volume applications for ACP and CLM management

Proposal Title

Ultra low-volume and Aerial Application of Insecticides and Horticultural Mineral to Control Asian Citrus Psyllid in Commercial Orchards.

Today's Date	Sponsoring Organization (drop-down)	Category (drop down)
1/15/12	Citrus Research and Development Foundation	Vector Management

REPORT UPDATE (500 words; summarize your accomplishments)

Low volume (LV) aerial and ground sprays have become an important method of application in Florida citrus. We continue our evaluations of LV application of 435 horticultural mineral oil (HMO) which has shown promising results the last 3 years. This report documents updated results from the fifth trial begun on February 2011 in a 10.9 acre plot of 'Valencia' orange in Lee County. The efficacy of low volume spray spray of 435 horticultural spray oil (HMO) with the Grower Standard and an Untreated control are being compared. This trial is the first with sufficiently high ACP populations to assess the ability of LV oil sprays to provide suppression. Three sprays of 435 oil (12, 20 Oct @ 2gal/ac; 3 Nov @ 2gal/ac) have been completed since the last report. No insecticide sprays have been applied to the Grower Standard plots since the last report. All plots will receive a dormant spray this month of Danital on 9 Jan in conformance with IFAS recommendations. Mean adult psyllid populations over the last 3 months were 0.11 +/- 0.023, 0.07+/- 0.023 and 0.203+/-0.023 for the Grower Standard, Oil, and Untreated Check respectively. The Grower Standard ($p = 0.005$) and Oil treatments ($p < 0.0001$) had significantly fewer psyllids than the Untreated Check. Thus, the low volume oil treatments are suppressing ACP as effectively as the Grower Standard. Resets were sampled in Oct for percent HLB (n= 40, Grower Standard; n = 34, Oil; n = 39 Untreated). Results showed no significant differences between treatments and incidence of infection was low (<3%). There was also no difference in Ct titer with values ranging from 35 for Untreated to 37 for Oil treatments.

Citrus leafminer damage assessments for Oct were unobtainable due to low density of flush. There were two peak flights since the last report (13 Oct and 15 Nov). Moth flight in the Oil treated plots was significantly ($p < 0.05$) lower than the Grower Standard and Untreated plots for the sixth generation (10 Nov) in spite of higher flush density. This result indicates that oil is contributing to CLM egg and larvae mortality. Monitoring of traps is continuing over winter to follow moth phenology and determine the effect of treatments on CLM populations.

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Contract Number 00078150

Project Duration (years) 2 *Year of Project* 3

Total Funds (current year) $52,844.00

SUBMIT REPORT

CITRUS RESEARCH AND DEVELOPMENT FOUNDATION, INC.