CITRUS ADVANCED TECHNOLOGY PROGRAM

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

SELECT PERIOD March 2014

(●) *Quarterly Report* ( ) *Final*

Proposal Title

Developing a management plan for Asian citrus psyllid in retail nurseries: evaluating uptake and retention of systemic insecticides in containerized citrus

Today's Date	Sponsoring Organization (drop-down)	Category (drop down)
4/7/14	California Citrus Research Board	Vector Management

REPORT UPDATE (500 words-It is not necessary in this public report to disclose your institution's proprietary information or intellectual property.)

We have completed our first objective to evaluate the effects of nursery practices (watering, citrus variety, potting media) on imidacloprid uptake and retention. The trial was conducted at UCR Agricultural Operations . Two citrus varieties were selected for this trial - Parent Washington navel and Limoneira 8A lemon, both on Carrizo rootstock. The trees were budded in June 2012 and grown in 5" pots at LREC. Trees were transferred to UCR Agricultural Operations on June 13 2013 and transplanted on June 17 to no. 5 pots. Two potting media were chosen for the study that differed principally in the proportions of sand (10-30%) and redwood (40-60%). The evapotranspiration rate was determined for the two soil mixes and this data was used to select three watering levels for the study. The three levels were defined as "replacement watering" (100-120% ET), "overwatering (150-200% ET) and "severe overwatering" (300-400% ET).

For the trial, trees were placed in a 12 x 25 grid pattern and randomized according to variety, soil mix and watering level. When the trees had adapted to their new potting media environment, they were treated on July 11, 2013 with 0.33 mls Admire Pro per cu ft potting media. Monitoring for ACP on all trees was also conducted at monthly intervals for the duration of the trial, and imidacloprid residues were determined for all trees by ELISA for 28 weeks post-treatment.

There were very clear differences among citrus varieties and watering levels, but somewhat equivocal effects of soil type. Imidacloprid residues were not detectable at 16 weeks after application (especially in lemon at the high watering levels).

We are currently preparing to conduct the second objective which will investigate the uptake and persistence of additional neonicotinoid insecticides. The trees (Parent Washington navel on Carrizo rootstock) have already been budded at Lindcove Research and Extension Center.

PI First Name Frank

PI Last Name Byrne

Email frank.byrne@ucr.edu

Phone 951-827-7078

Organization University of California, Riverside

Project Number 5500-199

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

Total Funds (current year) $51,761.00

Form PR-12 Quarterly Reports **SUBMIT REPORT**

CITRUS RESEARCH AND DEVELOPMENT FOUNDATION, INC.