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)

Regional HLB management sustains the yield increasing

Proposal Title

Reduction of bacterial inoculum and vector control as strategies to manage citrus huanglongbing (greening)

Today's Date	Sponsoring Organization (drop-down)	Category (drop down)
10/15/10	Citrus Research and Development Foundation	Epidemiology and Cultural Control

REPORT UPDATE (500 words; summarize your accomplishments)

The results so far indicate that with regional management of HLB:
- The disease epidemics starts later (299 days) and is slower (disease progress rate reduced in 75%);
- Increases the efficiency of local control measures because reduces the migrant psyllid population (ACP population is decreased year after year even in plots without insecticide application), reduces the regional inoculum sources, and finally reduces the migrant infective psyllid population that reach the local plots.
- Reduces the control costs because with less intensive vector control program (insecticide sprays every 28 days, or even no insecticide sprays) it is possible to be more efficient than a high intensive vector control program (insecticide sprays every 14 days) applied locally within a region without regional management.
- Allows resets and solid block replanting with the guarantee of yield. In plots of E2 without and with vector control the yield still increasing (2 ton/ha in the first, 16 ton/ha in the second and 38 ton/ha in the third harvest) while in plots of E1 the yield decreased year after year (2 ton/ha in the first, 9 ton/ha in the second and 10 ton/ha in the third harvest for plots with insecticide application, and 2 ton/ha in the first, 4 ton/ha in the second and 3 ton/ha in the third harvest for plots without insecticide application).

Now we are interpreting the outcome results from spatial analysis of annual maps of HLB-symptomatic trees to verify the effects of each treatment on primary and secondary spread of HLB.
Experiment 1 (E1) under high external inoculum pressure was finished at the end of November 2010 with 76.7% of infected trees in plots without vector control and 53.0% in plots with vector control.
Experiment 2 (E2) under low external inoculum pressure is with 4-6% of eradicated trees and will be assessed for more time for better understand about the temporal longevity of a grove under regional management of HLB.
These preliminary results will be presented in the 2nd International Research Conference on Huanglongbing in Orlando – January/11.
A paper with the temporal analysis of both experiments is on preparation and would be submitted for publication until April/11.
The results of this project are also being presented to growers to help the establishment of growers' groups for regional management of HLB in other countries.

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Organization Fundecitrus

Contract Number 8

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

Total Funds (current year) $48,800.00

SUBMIT REPORT

CITRUS RESEARCH AND DEVELOPMENT FOUNDATION, INC.