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)

A hydroponics experiment was set up in the greenhouse

Proposal Title

Evaluation of the mechanism and long-term management potential of boron based suppression of HLB symptoms

Today's Date	Sponsoring Organization (drop-down)	Category (drop down)
9/13/10	Citrus Research and Development Foundation	Infection Consequences

REPORT UPDATE (500 words; summarize your accomplishments)

In the first quarter, a greenhouse hydroponics experiment was established to investigate the relationships between boron nutrition and HLB pathogen viability and / or disease expression in citrus. Many of the symptoms of HLB, especially the earlier symptoms have remarkable similarity to boron deficiency. The most notable similarity is that of vein corking, which is associated with rapid unorganized replication of phloem tissue that results from plugging and collapse of the original phloem sieve tubes. It is uncertain why the phloem is especially sensitive to boron deficiency. Boron deficiency also has root symptoms similar to HLB. In the early stages of boron deficiency, the roots stop developing and the tips become disorganized. After extended boron deficiency the roots begin to die back.

Determining the mechanism of this possible HLB symptom escape will provide important information about how Las causes disease and provide a possible strategy for HLB management by citrus growers.

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Organization CREC

Contract Number 329

Project Duration (years) 1 *Year of Project* 1

Total Funds (current year) $34,991.00

SUBMIT REPORT

CITRUS RESEARCH AND DEVELOPMENT FOUNDATION, INC.