CITRUS ADVANCED TECHNOLOGY PROGRAM

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

SELECT PERIOD December 2015

(●) *Quarterly Report* ( ) *Final*

Proposal Title

DETERMINATION OF CLAS SIGNAL AND TRANSMISSION PROPERTIES OF HLB IN CITRUS TREES

Today's Date	Sponsoring Organization (drop-down)	Category (drop down)
10/20/15	Citrus Research and Development Foundation	Infection Consequences

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

This proposal is aimed at following previous work in CRDF-710 and CRDF-818 with a series of precise experiments that will:

1. Elucidate the nature of the HLB signal(s)
2. Provide additional evidence on its transmission in terms of movement across tissues and between trees though underground organs.
3. Determine the progression of physical symptoms from its inception.
4. Examine the in-tree variation in CLas titer.

Research commenced addressing objective 4, due to natural timing of events. Fifteen trees were selected for having branches with at least 11 leaves. This number of leaves was needed for analysis of CLas transport in both directions. The middle leaf in all 15 trees was disc grafted with HLB material and placed in the greenhouse until the presence of HLB symptoms. Trees are currently under observation.

Experiments for objective 2 have been initiated. Two trees (one healthy and one HLB+) were root grafted in three different locations and placed in special pots large enough to accommodate the 2 trees. The trees have been placed in a greenhouse and are currently under observation.

Objective 3 is also underway. Five healthy Valencia trees were disc grafted with HLB material and sent to Gainesville for symptom progression using Narrow-band imaging under polarized illumination.

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Organization UF-CREC

Project Number 15-008

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

Total Funds (current year) $53,572.00

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

CITRUS RESEARCH AND DEVELOPMENT FOUNDATION, INC.