CITRUS ADVANCED TECHNOLOGY PROGRAM

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

SELECT PERIOD June 2015

(●) *Quarterly Report* ( ) *Final*

Proposal Title

An integrated approach for establishment of new citrus plantings faced with the HLB threat

Today's Date	Sponsoring Organization (drop-down)	Category (drop down)
7/9/15	Citrus Research and Development Foundation	Epidemiology and Cultural Control

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

This overall 3 year project was focused on determining the optimum combination of chemotherapy, thermotherapy, and nutrient therapy that can be registered for use in field citrus and control HLB. In this quarter (April 2015 to June 2015), we continue to evaluate 1) the effect of Pen and SD on control of HLB disease by gravity bag infusion in the field; 2) the efficiency of effective chemical compounds (Pen, SDX, Pcy and Carv) against HLB disease by gravity bag infusion; 3) the effectiveness of a combination of chemotherapy, thermotherapy and nutrient therapy against HLB in field trials. The preliminary results showed that Pen and SD reduced the disease index of citrus HLB, but Las bacterium still could be detected in the citrus.

The HLB disease index and Las bacterium titer in citrus treated with Pen was decreased significantly. However, the citrus treated with SDX, Pcy and Carv displayed HLB disease indexes and Las bacterial titers not significantly different than controls.

The HLB-affected citrus trees at the USDA Farm were treated by combination of thermotherapy, chemotherapy and nutrient treatment in this quarter. The citrus trees were treated by steam at 125~128 °F for 120 seconds or 180 seconds, respectively. Some foliar drop was observed with both heat treatments. Two weeks after the heat treatment, a lot of new flush appeared. The chemical compounds (Pen and EBI-602) and additional nutrients were applied to the heat-treated citrus by foliar spray, using our optimized nano-delivery system.

In the next quarter, we will continue to monitor the HLB disease index and Las bacterium titers in the citrus treated with Pen, SD, SDX, Pcy and Carv by gravity infusion, and investigate field performance of these treatments. And the data on therapeutic efficiency and agronomic traits of the citrus treated by combination of thermotherapy, chemotherapy, nutrient therapy will also be collected.

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Organization IRREC-IFAS, UF

Project Number 910

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

Total Funds (current year)

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

CITRUS RESEARCH AND DEVELOPMENT FOUNDATION, INC.