CITRUS ADVANCED TECHNOLOGY PROGRAM

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

SELECT PERIOD September 2015

(●) *Quarterly Report* ( ) *Final*

Proposal Title

Development of Supersour and Other Promising Rootstocks for Florida

Today's Date	Sponsoring Organization (drop-down)	Category (drop down)
12/15/15	Citrus Research and Development Foundation	Conventional Citrus Breeding

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

Good progress was made in continuing the development of new hybrid rootstocks that support early and high fruit yield and fruit quality in the scion, have good soil adaptability, and are resistant to important diseases, especially HLB. This work was begun previously under CRDF project 508. As requested by CRDF, this new project 15-002 will place highest priority on hybrid rootstocks already created in the USDA program and being considered for release to growers over the next six years. This will include about 400 Supersour-type rootstocks that have been previously created and selected to include in field trials and other specialized testing.

During this quarter, a new support scientist was hired under the grant to replace a support scientist, previously on staff, that was leaving to accept a permanent job at a University. Other personnel working on the project remained in place to continue tree care, experiment establishment, and data collection.

During this quarter, tree care continued in established rootstock field trials, and tree size measurements were taken from selected trials. Trees in field trials were scored for health, HLB symptoms, and samples were collected from some groups for PCR detection of Las infection. Analysis was completed on data from several established trials to assess relative rootstock performance, rootstock effects on yield, fruit quality, tree size, and HLB symptom development. Nursery experiments were conducted with promising new rootstocks to determine nursery-related traits important for commercial use. Greenhouse experiments continued to assess rootstock tolerance to CTV and high pH.

Analysis was completed on data from one cooperative field trial with 17 rootstocks that became 100% infected with Las and was determined to be a good comparison of rootstock performance with severe HLB challenge. The two best rootstocks in the trial were US-942 and US-1516. Based on this and other data, US-1516 rootstock was submitted by Bowman and McCollum for unrestricted commercial release by USDA. US-1516 is available as clean budwood from DPI, and some seed is available from Bowman. Outstanding performance by US-942 in that cooperative trial reinforced previous observations that US-942 provides better tree health and productivity than most other rootstocks when trees become infected with Las. A manuscript was prepared for publication to provide thorough documentation of the results from the cooperative trial. A manuscript was prepared for publication to provide documentation of US-1516 rootstock.

During this quarter, cooperative work continued with UF researchers to propagate trees in a commercial nursery to use in multiple rootstock field trials sponsored by the HLB MAC program. Trees from the commercial nursery are scheduled to be planted into six cooperative field trials in 2016. Trees in the USDA nursery on a large number of advanced rootstock selections, especially Supersour-type, were continued in propagation for field trials to be planted in 2015 and 2016.

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Organization USDA, ARS, USHRL

Project Number 15-002

Project Duration (years) 3 *Year of Project* 1

Total Funds (current year) $314,570.00

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

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