CITRUS ADVANCED TECHNOLOGY PROGRAM

QUARTERLY & FINAL PROGRESS REPORT FORM: Control of Citrus Greening, Canker & Emerging Diseases of Citrus

▶PROJECT QUARTER END March 2025 ● *Quarterly Report* ○ *Final*

Proposal Title

OTC Directed Research Solicitation: Use of CRDF Rootstock Trial Locations for Testing Bactericides Inserted into Trees Through Systemic Delivery Devices

Today's Date	Sponsoring Organization (drop-down)	Category (drop down)
04/21/2025	Citrus Research and Development Foundation	Horticultural & Management

ABSTRACT (Executive Summary-public report-do not disclose proprietary information or intellectual property)

1. Please state project objectives and what work was done this quarter to address them:

Main objective: To determine the large-scale efficacy of trunk injection of OTC on citrus tree health, fruit quality, and yield in existing rootstock trials in three different commercial growing environments. Sub-objectives: a) test the efficacy of OTC injection in the rootstock trunk compared to injection into the scion, and b) determine whether OTC injection increases/restores root densities and if there are interactions with the rootstock.

Harvests and fruit quality analyses were completed for the remaining two field trials (Babson Park and Venus). In both locations we measured significant yield increases in response to OTC injections and production was overall much improved compared with the previous year.

Babson Park was affected by hurricane Milton, with fruit drop estimated as 30% in the week after the hurricane. Despite the fruit loss, overall productivity increased by more than 50% compared to last year. Non-injected trees produced 123 boxes/acre on average, while injected trees produced 221 boxes/acre (a 79% increase), with no significant difference between scion and rootstock injection.The best performer in terms of yield was US-942, followed by US-897, Carrizo, and US-812.The total soluble solids (TSS) were improved by 22% on average; the best performer was US-897 and the worst US-942 and UFR-4. Also increased in response to the injections were the weight per fruit and the juice color.

At Venus, overall productivity more than doubled compared to the previous year, with trees on sour orange more than tripling in productivity. Across all rootstocks, non-injected trees produced 92 boxes/acre on average, while injected trees produced 155 boxes/acre on average (a 68% increase), with no significant difference between scion and rootstock injection.US-812, US-942, and sour orange were the best producers, performing equally well. The total soulble solids (TSS) were improved by 11% on average - the best performers were US-812, UFR-2, and sour orange, which performed equally well. Also increased in response to the injections were the weight per fruit and the juice color.

Results were included in several grower presentations, including a SWFREC virtual seminar (available on the SWFREC website), the FL Citrus Show, and the Citrus Institute.

We continued our lab analyses (CLas titers).

2. Please state what work is anticipated for next quarter:

We will be preparing for year-3 injections.

3. Please state budget status (underspend or overspend, and why):
The budget is mostly as expected.

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Organization UF/IFAS SWFREC

Sponsor Project Number 23-005

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

% Completion of Objectives (FDACS requirement) 60.00%

CITRUS RESEARCH AND DEVELOPMENT FOUNDATION, INC.