CITRUS ADVANCED TECHNOLOGY PROGRAM

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

▶**PROJECT QUARTER END** January 2024 ◉ *Quarterly Report* ○ *Final*

Proposal Title

Reducing fruit drop by altering hormonal responses within the tree through nutritional and hormonal therapies: a mechanistic affordable approach

Today's Date	Sponsoring Organization (drop-down)	Category (drop down)
02/15/2024	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:

Specific objectives are:

1) To determine the right timing for Zn and K treatments to minimize fruit drop.
Harvest in Hamlin was done in early January. As a reminder, just like last year we performed treatments at three different dates: on early June 2023, a second set of treatments by the end of July, 2023, and a third set by early September 2023.Yields from plots treated with Zn and Zn+K in September were significantly higher than non-treated controls. Our yield numbers were 165 boxes/ acre in nontreatted controls, 224 boxes/ acre in Zn-treated trees, and 275 boxes/ acre in Zn+K treated trees. These differences were statistically significant at $p<0.05$.

2) To determine effects of GA3 and 2,4D applications on fruit retention when applied at different times during fruit development.
This quarter we harvested the Hamlin block, unfortunately we did not see any significant differences, although GA and 2,4 D both had about 20 lb/tree more fruit (equivalent to 300 boxes per acre versus 265 boxes per acre in control), showing a positive increase trend. The block was harvested on November 20 by the grower, which we believe is exceptionally early. Therefore, any benefits that GA and 2,4 D may have on fruit drop reduction were not observed as the grower picked the fruit before fruit drop accelerates.
Currently, we continue to monitor Valencia trial, we anticipate harvesting it in March 2024.

3) To develop a strong and proactive outreach program.
- **Alferez F**. Terapias nutricionales para incrementar la producción de citricos cultivados en condiciones endémicas de HLB (nutritional therapies to increase citrus fruit yield under endemic HLB). **International IST (Consultoria y Capacitacion, University of Tamaulipas, Mexico, On Zoom).** November 10, 2023.

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

Harvesting of Valencia will be performed in March for both objectives

3. Please state budget status (underspend or overspend, and why):

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Organization UF/IFAS
Sponsor Project Number 21-007
Project Duration (years) 3 *Year of Project* 2
% Completion of Objectives (FDACS requirement) 60.00%

CITRUS RESEARCH AND DEVELOPMENT FOUNDATION, INC.