CITRUS ADVANCED TECHNOLOGY PROGRAM

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

SELECT PERIOD March 2016

(●) *Quarterly Report* ( ) *Final*

Proposal Title

Propagation of Rootstock Tree Production in Greenhouses by Seed, Stem Cuttings and Tissue Culture to Accelerate Budded Tree Production for Outplanting

Today's Date	Sponsoring Organization (drop-down)	Category (drop down)
4-20-16	Citrus Research and Development Foundation	Unclassified

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

Tissue cultivation

Tissue culture plants started on 12-14-2015 were subjected to the same 4 durations of relative humidity (RH; 2,3,4,5) as previously. This group also included 3 reps of each cultivar hardened-off on heated benches (80 F). On 1 Feb. these plants were harvested for root and shoot growth. Citrus cultivars consisted of C-35, C-54 and sour orange. The next set of tissue culture plants for hardening were started on 9 March 2016. These will be harvested in late April. This set also includes 3 replications on 80 F heated benches. This set includes Kuharske, Swingle, C-35, sour orange and US 812. For the most part, survival rates have remained high on most cultivars, with perhaps more growth under the shorter hardening-off periods.

Stem cuttings

Kurharske cuttings stuck in the propagation benches under mist produced using the same protocols as in the past produced no roots or shoots when stuck on 1-4-16, nor when stuck on 1-12-16. This was independent whether there was bottom heat or not. In contrast, cutting similarly stuck on 2-5-16 once again began to produce some roots over the 6 week rooting period that ended on 3-28-16. Continuing in the sequence, cuttings of Kurharske stuck on 2-23-16 produced roots when harvested on 3-29-16. Cuttings of both X639 and C-54 were also stuck with this group of Kurharske. They also produced roots. These plants were harvested, but dry weights have not been measured. The last set of cuttings were stuck on 3-18-16. These consisted of Kurharske, X639, C-35 and US812.

In late March, all available cuttings of the HLB resistant trees in Citra were taken and brought to the citrus propagation bay at MREC Apopka. These were treated with an auxin blend of 4000 ppm auxin and stuck in seedling trays.

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CITRUS RESEARCH AND DEVELOPMENT FOUNDATION, INC.