CITRUS ADVANCED TECHNOLOGY PROGRAM

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

SELECT PERIOD June 2016

(●) *Quarterly Report* ( ) *Final*

Proposal Title

Asexual inoculum production of Guignardia citricarpa, the causal agent of citrus black spot

Today's Date	Sponsoring Organization (drop-down)	Category (drop down)
11/27/2016	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.)

June 2016
The objectives of this proposal are 1) To determine the temperature and relative humidity optima for Guignardia citricarpa pycnidiospore infection and production on citrus twigs, leaf litter, and fruit; 2) To determine the relative potential of Guignardia citricarpa to form pycnidiospores on citrus twigs, leaf litter, and fruit; 3) To determine whether Guignardia citricarpa can survive and reproduce on citrus debris on grove equipment.

Experiments to confirm initial relative humidity findings continue. After the inconclusive results of the second experiment, we started a third experiment. We used fresh cultures to ensure better pycnidia performance. The results were gathered at 5 weeks post-inoculation but again the results were inconclusive because a mistake was made in the incubation conditions by a new employee.

A site has been found to conduct field experiments of inoculum potential and preliminary work is continuing. We have improved our method of collection of conidia from twigs. Collection continues at two week intervals. Methods to improve sampling for DNA extraction with the quantity of twigs are being examined.

Experiments were started to look at the effect of temperature on the level of sporulation of P. citricarpa. It can be quite difficult to get consistent sporulation even under controlled conditions. The temperatures that are being tested 15, 20, 24, 28, 32, and 36C. Data has not been collected yet.

Work on the effect of FDACS recommended disinfectants (200 ppm bleach or 2000 ppm quaternary ammonium) on conidia germination was conducted. Effective concentrations to inhibit either 50% or 90% of conidia germination for 2 quat products, Canker Solve and C-Quat, and bleach. were found to be well below 5 ppm for all products. Bleach was about ten times more effective but is not as stable as quat. New experiments are being planned to look at the effect of plant debris on the efficacy of these products to have a more 'real' world test of these products.

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Organization CREC - UF

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

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