CITRUS ADVANCED TECHNOLOGY PROGRAM

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

▶ INSTRUCTIONS

(●) *Quarterly Report* ( ) *Annual Report* ( ) *Final*

Required: What is the "headline" for this report (e.g. a one-sentence "newspaper headline" describing what you accomplished)

Stem tap and vacuum sampling for ACP adults

Proposal Title

Sampling Plans to Guide Decision Making for Control of Asian Citrus Psyllid (ACP)

Today's Date	Sponsoring Organization (drop-down)	Category (drop down)
1/10/12	Citrus Research and Development Foundation	Vector Monitoring, Behavior, Cultivation

REPORT UPDATE (500 words; summarize your accomplishments)

We continue to work on the objectives of 1) refinement of sampling methods, 2) testing the influence of adult density and shoot infestation on precision of estimated means and distribution of population within blocks, and 3) evaluation and integration of methods for assessing psyllid density, shoot density, and infestation rates into a user friendly system accessible to consultants and managers.

The stem tap and vacuum sampling methods were compared for estimating ACP adults in two experimental blocks of two conventional groves in Hendry county, one a 35 acre block of 'Early Gold' and the other a 16 acre block of 'Valencia'. A 'tap sample' count consisted of adult psyllids falling on a white clipboard placed under randomly chosen branches which were then struck 3 times with a length of PVC pipe. The vacuum sampler is made from a leaf blower and collects psyllids even at low populations. A single sample consists of 10, 1 second strikes on the canopy of a single tree. The number of ACP adults captured in suction sample were compared with average number of ACP adults detected in two tap samples conducted before and after the suction sample. Regression analysis indicated a strong positive linear relationship between the two methods on numbers of adults detected in both blocks. In the 'Earlygold' block, the relationship was best explained by the equation $y = 9.816x + 1.522$ ($r2 = 0.61$) where y = the suction sample and x = the tap sample. In other words, about 10 ACP via suction for each tap. Out of 109 samples conducted using each method, psyllids were observed in 29% (n=32) of the tap samples and 53% (n=58) of the suction samples. Psyllids averaged 1 ± 0.3 and 10 ± 4 per tap and vacuum sample, respectively. In "Valencia" block the relationship was best explained by the equation $y = 14.79x + 0.044$ ($r2 = 0.74$). Out of 96 samples conducted using each method, psyllids were observed in 34% (n=33) tap samples and 55% (n=53) vacuum samples. Psyllids averaged 0.7 ± 0.2 and 11 ± 4 per tap and vacuum sample, respectively. A pest scouting workshop in collaboration with Hendry county extension is planned for this spring to promote the use of proper sampling methods for effective pest management particularly ACP. Methods to monitor psyllids using tap sampling method and flush examination along with data sheets to record data have been posted at our website: swfrec.ifas.ufl.edu/entlab. Growers are using the sampling kits provided through SWFREC and IFAS extension and suggested data collected methods. Detailed comparisons of different sampling methods are provided in the EDIS document listed below.

Arevalo, A. H, J. A. Qureshi and P. A. Stansly. 2011. Sampling Asian citrus psyllid (ACP) in Florida citrus groves. EDIS, http://edis.ifas.ufl.edu/in867.

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SUBMIT REPORT

CITRUS RESEARCH AND DEVELOPMENT FOUNDATION, INC.