

**CALIFORNIA CITRUS PEST AND DISEASE PREVENTION PROGRAM
OPERATIONS SUBCOMMITTEE MEETING**

Meeting Minutes
Wednesday, February 6, 2019

Opening:

The regular meeting of the Operations Subcommittee was called to order at 9:00 a.m. on February 6, 2019 in Visalia, California by Chairman Keith Watkins.

Committee Members Present:

John Gless* Zac Green Keith Watkins

Committee Members Absent:

Jim Gorden Ted Grether Kevin Severns Roger Smith

CDFR Staff:

Tina Galindo* Sara Khalid Dr. David Morgan*
Victoria Hornbaker Luci Kumagai* Lea Pereira
Gavin Iacono* Magally Luque-Williams* Nawal Sharma*

CRB Staff:

Rick Dunn Dr. Melinda Klein* Holly Deniston-Sheets

Guests:

Price Adams* Link Leavens* Jason Schwartz* Judy Zaninovich
Bob Atkins Jessica Leslie* Cressida Silvers*
Ameer Atrash* Curtis Pate* Jack Williams*
Erin Betts Sylvie Robillard Sandra Zwaal*

*** Participated via Webinar**

Opening Comments:

Keith Watkins welcomed the Committee, staff, and members of the public participating in person and online. He stated that there was not a quorum for the meeting.

STRATEGIC PRIORITY 1 – Find and Eradicate Huanglongbing (HLB)

Laboratory Update

Luci Kumagai stated that 6,246 plant samples and 3,843 Asian citrus psyllid (ACP) samples were analyzed in January for the bacteria that causes HLB. She noted that the lab is still testing some samples, mostly in new delimitation areas such as Monterey. To date, 1,079 HLB-positive trees have been detected, 776 from Orange County, 300 from Los Angeles County, and three in Riverside.

Risk-based Survey and Orange County Delimitation/Treatment Update

Magally Luque-Williams stated that Cycle 1 of the 2018 HLB risk-based survey was 99 percent complete and will be completed by next week. She explained that in Cycle 2 of 2018 there are 28

counties to visit, and four are completed. 334 square miles were surveyed with 15,388 properties visited, 3,730 sites with ACP samples and 3,171 sites with plant samples taken. She stated that there were 269 HLB-positive trees and delimitation survey is 49 percent complete in Anaheim. There are 31 HLB-positive trees, and delimitation survey is 93 percent complete in the City of Orange, 363 HLB-positive trees and delimitation survey is 17 percent complete in Garden Grove, 15 HLB-positive trees and delimitation survey is 18 percent complete in Westminster, 36 HLB-positive trees and delimitation survey is 56 percent complete in Santa Ana, and one HLB-positive tree and delimitation survey is 12 percent complete in Huntington Beach. She added that there is a total of 799 properties with HLB detections, 1089 HLB-positive trees and 213 HLB-positive ACP. She explained that there were 698 quadrant samples done in Orange County in January 2019.

Los Angeles Area Delimitation

Tina Galindo explained that delimitation work is ongoing with expansions in Whittier, Lakewood, Temple City and a 400-meter re-survey in San Gabriel. Whittier is 93 percent complete, Lakewood is 67 percent complete and Temple City is 13 percent complete. She stated that intensive sampling continued on 428 remaining find site trees and 482 trees on adjacent properties. She stated that HLB treatments were complete in Lakewood, Anaheim, Santa Ana, Tustin and Orange. She noted that there are more meetings for recent finds in Santa Ana and Garden Grove scheduled for next week. The team performed area-wide treatments in San Diego groves around San Pasqual. Work in the Pauma rea and the Imperial and San Diego borders require a meeting. She noted that Ventura area-wide treatments begin this week. She explained that per Dr. Beth Grafton-Cardwell's recommendation, no treatments would be taking place past March 1, 2019. She listed pending HLB retreatment areas: Riverside, Anaheim, Norwalk, Pico Rivera, Whittier, San Bernardino, Garden Grove, Fullerton, Rosemead, Westminster, Santa Ana, Orange and Tustin.

Victoria Hornbaker added that the original treatment area in Soledad was now 80 percent complete, but that area has since expanded to the south. She noted that there were two ACP detections in San Mateo which will receive 50-meter responses. On the San Francisco Marina detection site, the owner had professionally removed the trees before the California Department of Food and Agriculture (CDFA) contacted them.

STRATEGIC PRIORITY 2 - Control ACP Movement and Enforce Regulations

Nawal Sharma explained that the pilot projects for alternative ACP mitigation are in progress. He stated that the program received a request from San Diego County to begin a similar pilot project for shipping mandarins to Kern County. That pilot device utilized a very steep slope made of piping to roll mandarins into the bin, dislodging leaves. It was noted that there was nothing in the pilot device to remove leaves still attached to stems. Nawal stated that San Diego performed two shipments, shipping 45 and 44 bins to Kern with 100 percent inspection by the Kern Agricultural Commissioner's staff. Of the total 89 bins, only one leaf was found.

He explained that Monterey, Ventura and Kern County performed 22 shipments, with 1055 bins received and 192 bins inspected randomly, a 25 percent inspection rate. He stated that bins averaged one to four leaves. Victoria recommended that Nawal additionally note inspection at origin and method of inspection at destination. Nawal stated that the pilot programs will continue shipments through February and more data points will be available at the next meeting in March.

STRATEGIC PRIORITY 3 - ACP Control/Suppression

Biocontrol Monitoring Updates

Dr. David Morgan stated that the Biocontrol program California releases have increased in 2018 to just under 4,000,000 releases, in addition to Biocontrol agents sent to Arizona. Biocontrol agents are provided primarily by Citrus Research Board (CRB) the Mount Rubidoux and Cal Poly Pomona Rearing Facilities. He explained that the University of California, Riverside also provides insects to the Biocontrol program, which are used for breeding rather than release. When asked, he specified that private insect producers charged approximately 75 cents an insect, three times the cost of in-house production. He stated that 80 percent of Biocontrol agents were released around HLB find sites, with the remainder released along trade routes and in grid pattern releases in Ventura, Santa Barbara and Kern County residential areas and around commercial groves. He explained that 226,800 agents have been released in 2019, approximately double the amount as last year. He noted that agents currently cannot be released due to the wet and cold. During this time the agents will remain in the labs in temperatures of 17 degrees centigrade and can keep for a month or more.

David explained that the Biocontrol program monitored 26 to 29 sites across Southern California and found that the flush rate has declined after 2015, seeing a similar decline in the number of ACP. It is theorized that this was due to the 2016 drought, although the flush rate pattern has held in 2017 and 2018 despite drought conditions improving. He explained that the presence of nymphs has declined approximately 70 percent since 2015, resulting in a similar decline in parasitized ACP through a process called density dependence. He stated that 4-5th instar nymphs which are most impacted by parasitoids have seen the most decline. He noted that these numbers were urban and not affected by pesticides, and monitoring sites are in the same area as Biocontrol agents but have no releases on those sites. He stated that ACP numbers are noted to decline in sites within one kilometer of Biocontrol agent releases. He noted that there were sites where 8,000 agents were released the previous month where no ACP were detected.

David intends to analyze and publish monitoring data in 2019. He explained the program will optimize the Biocontrol agent release schedule based on Mark Hoddle's Los Angeles County Degree Day model. He stated releases will increase in the north where chemical treatments are more expensive. Victoria explained that Biocontrol is a tool in the IPM program, working in conjunction with more active insecticide treatments

Regional ACP Update

Bob Atkins stated that most grower liaisons have contracts good through June 30, 2019 and are in process of renewing or bidding on those contracts. Winter area-wide treatments have been mostly concluded. He stated that grower liaisons are organizing grower meetings in Kern and Tulare. He explained that work on neglected and abandoned orchards continues. He stated that the EDT Taskforce met with the Vectored Diseases Research Committee and Research Development and Implementation Committee on California 1a and 1b and Florida 1.

STRATEGIC PRIORITY 4 – Improve Data Technology, Analysis and Sharing

DATOC Update

Holly Deniston-Sheets stated that four new members have joined the Data Analysis Tactical Operations Center (DATOC): Dr. Bruce Babcock, Dr. Mamoudou Setamou, Dr. Tania Brenes-

Arguedas and Monique Rivera. She noted that recruitment focused on filling membership needs in DATOC or with research that is directly applicable to DATOC's needs. She explained that DATOC has recently completed studies on transovarial transmission of CLAs to discover if an infected nymph was infected by the tree or its parent. Victoria stated that sent a legal referral to CDFA legal asking if a CLAs positive ACP nymph could indicate that the tree it was found on was exposed to CLAs. CDFA Legal asked for more detail, so Victoria asked DATOC to perform an in-depth literature search on the subject. Holly stated that DATOC completed a project studying HLB exposure in residential areas and will begin looking at recommendations for commercial areas. She stated that DATOC is working on a summary of epidemiological study on HLB, and the scale of the "edge effect." Dr. Mamodou Setamou has data from Texas and Dr. Beth Grafton-Cardwell has ACP data which DATOC intends to incorporate into the "edge effect" study, along with grove size and shape data.

Holly stated that the DATOC feels the Committee must respond to emerging data trends and change operational aspects of the program if the data warrants. The DATOC stated that operations should change if HLB detections reach a period of exponential growth. She stated that a segmented model fits the available data better than an exponential model, with a sharp change in directionality when the numbers began to significantly increase. DATOC is now working on incorporating other factors such as inspecting numbers, sampling intensity or quadrant sampling. DATOC created a graph mapping the cumulative number of HLB cases and sampling intensity and are working on fitting models to the result and subtracting the trend of upward sampling from upward cases found. When asked, she explained that the outward spread of HLB would be a different analysis and that more studies need to be done to understand if the density of the infected vector affects the spread. Victoria suggested that find sites should be considered spatially, with the majority being original find sites or adjacent properties. Holly stated that looking at groves by city will reveal different patterns. Victoria noted that different genotypes may indicate separate introductions or indicate different levels of transmissibility.

Data Management Report

Rick Dunn explained that CRB revised the Citrus Layer for San Luis Obispo County and is in progress of revising Kern County. He stated that CRB created maps for the Biocontrol Task Force showing the history of ACP detections and treatment areas, glassy-winged sharpshooter treatment areas, and psyllid management area boundaries.

CLOSING COMMENTS & ADJOURNMENT

The meeting was adjourned at 11:14 a.m. The next Operations meeting will be held in Visalia, California on March 6, 2019 at 9:00 a.m.