

**Citrus Pest and Disease Prevention Committee (CPDPC)
Science and Technology Subcommittee Meeting**

**Meeting Minutes
March 3, 2026**

There was a quorum of the Science Subcommittee, and the following were in attendance:

Science Subcommittee Members:

Brad Carmen	Dr. Melinda Klein	Dr. Etienne Rabe
Aaron Dillon	Mark McBroom	Jeff Steen
Dr. Subhas Hajeri	Dr. Ivan Milosavljevic	Dr. Ram Uckoo

California Department of Food and Agriculture (CDFA) Staff:

David Gutierrez	Dahmoon Maesomy	Keith Okasaki
Anmol Joshi	Raymond Niem	Claudia Vazquez

Other Attendees:

Dr. Bodil Cass	Dr. Ruth Henderson	Dr. Raju Pandey
Dr. Rob Clark	Jessica Leslie	Dr. Paul Rugman-Jones
Dr. Matt Daugherty	Marcy Martin	Dr. Greg Simmons
Dr. Jedeliza Ferrater	Mia Neunzig	Judy Zaninovich
Dr. Jenni Garcia Quiceno	Margaret O'Neill	Sandra Zwaal

All attendees participated via webinar

Opening Comments

Chair, Dr. Etienne Rabe called the CPDPC Science and Technology Subcommittee meeting to order at 10:03 a.m. on Tuesday, March 3, 2026. Keith Okasaki welcomed Subcommittee members, guests, and staff. There were no public comments.

Areawide Releases of Three Asian Citrus Psyllid (ACP) Predators on Residential Citrus

Dr. Bodil Cass presented on the ongoing study of the use of ACP predators in residential buffer zones in the Hemet area. The three predator species used were *Diomus pumilio* (longblack ladybird), *Rhyzobius lophanthae* (scale-eating ladybird), and *Chrysoperia rifulabris* (lacewing). All three predators were observed to have minimal effect on ACP nymph populations. However, both ladybird releases were shown to decrease adult ACP populations, while the lacewing had little to no effect. Currently, both ladybirds display some signs of promise as an ACP biocontrol agent, whereas the lacewing does not. Historical studies report lacewing as effective at controlling ACP. The lack of supporting evidence in this study may be attributed to different species used (*C. rifulabris* vs *C. comanche*) and *C. comanche* will be used in future studies.

Mark McBroom stated that the Coachella and Imperial Pest Control Districts (PCD) both use lacewing and both PCDs believe lacewing to be very effective at controlling ACP population, with high rates of parasitism across all life stages seen in the field. Dr. Cass thinks the difference may be due to environmental factors in the area that make the lacewing more effective and will discuss it further with Mark.

Areawide Control of Argentine Ant and Impacts on ACP Populations in Residential Citrus

Dr. Greg Simmons presented the joint study between the Citrus Research Board (CRB), University of California, Riverside (UCR), and the United States Department of Agriculture (USDA) researchers regarding area-wide control of ACP. This specific study explored cost-effective options available to replace ACP pesticide treatments as well as reviewed *Tamarixia* releases within residential buffer areas in Hemet from 2019 to 2021. Two treatment options were tested, an ant control and ACP biocontrol, where several different species were tested. Both treatment options resulted in an ACP population reduction as high as 75-percent relative to the no-treatment control areas. From 2024 to 2025, the lab studied the effects of Argentine Ant control on ACP population using three different ant treatments, hydrogel bait, Antixx Plus, and a trail finding disruptor. The study showed the treatments used were significant in reducing ant populations in citrus over the two years, but it was difficult to see how that affects ACP populations due to already low ACP population size. The study will continue for another year and return with more data.

Effectiveness of ACP Management in Huanglongbing (HLB) Quarantine Zones in Residential Southern California

Dr. Matt Daugherty presented his study on the effectiveness of vector control activities in HLB quarantine zones using CDFA survey data from 2018-2022. Historically, in response to HLB, CDFA has removed HLB-positive trees, treated adjacent sites, and

released ACP biocontrol agents. The study focused on determining if the pesticide treatments were impactful and if treatment and biocontrol were compatible with each other. The study showed sites that were treated had significantly lower ACP counts compared to untreated sites. On the other hand, biocontrol releases only reduced ACP counts slightly to moderately. Dr. Daugherty hypothesized that the insecticide treatments reduced late-stage ACP nymphs, which are the primary host for *Tamarixia*, reducing biocontrol effectiveness but the cumulative approach was effective.

Development of the Sterile Insect Technique (SIT) for Control of ACP on Residential Citrus

Dr. Paul Rugman-Jones presented UCR's study of SIT to control ACP in California. SIT works by releasing sterilized insects, incapable of producing offspring, to mate with wild target pests and cause the wild population to diminish over time. One concern for using SIT on ACP is whether introducing sterilized ACP would increase the spread of HLB since ACP is a vector. Dr. Rugman-Jones argued that the sterilized ACP would be reared on clean, uninfected material and the lifecycle of a sterilized ACP would only be up to three weeks after sterilization, which would be too short for the HLB pathogen to multiply in their bodies. The study was conducted in field cages with curry leaf with the variables being radiation dosage used to sterilize the ACP and the amount of sterilized ACP released. Researchers saw that sterilizing ACP with a radiation dose of 320 Gy and releasing a ratio of 15 sterilized to 1 wild yielded the best results. The following study was repeated but instead of a single release of sterilized ACP, some cages would receive multiple releases. Again, the data showed the population decreased, with multiple releases being most effective. However, the control population was also low which skewed the data. So far, the study showed ACP can be mass reared and sterilized, and SIT can be effective. The next step would be to see if SIT is still effective in a more real-world setting.

Ethyl Formate Update

Dr. Etienne Rabe reported that the California Department of Pesticide Regulation requires further study on ethyl formate prior to approval. In addition, the label will need to be updated, which will require resubmission to the United States Environmental Protection Agency. It is now projected to take over a year for ethyl formate to be registered in California.

Other Item(s) and Adjournment

The meeting was adjourned at 11:52 a.m.