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

Meeting Minutes
October 6, 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:

Kiana Dao	Anmol Joshi	Nilan Watmore
Paul Figueroa	Heather Martin	Jennifer Willems
David Gutierrez	Keith Okasaki	

Other Attendees:

Dr. Jim Adaskaveg	Jessica Leslie	Dr. Georgios Vidalakis
Dr. Bodil Cass	Dr. Peggy Mauk	Judy Zaninovich
Dr. Dhiraj Gautam	Margaret O'Neill	Sandra Zwaal
Dr. Saurabh Gautam		

All attendees participated via webinar

Opening Comments
Mark McBroom called the CPDPC Science and Technology Subcommittee meeting to order at 2:03 p.m. on Tuesday, October 6, 2026. Keith Okasaki welcomed Subcommittee members, guests, and staff. There were no public comments.

Asian Citrus Psyllid (ACP) Treatment Working Group Update
Keith Okasaki gave an update from the ACP Treatment Working Group (WG) that met at the beginning of September. The WG discussed various ACP pesticide treatment options for citrus growers including general management, spray and harvest, and Huanglongbing (HLB) response. The WG identified pesticide products, including organic products, targeted for field trials, as well as potentially less effective products that could be removed from the current spray and harvest list. Pesticide products to be evaluated by the WG included Sequoia, Movento, Exirel, Zivalgo, and Beleaf; organic pesticide products included Pyganic, Entrust, and Venerate. Dr. Ivan Milosavljevic added that he has HLB Multi-Agency Coordination (MAC) Group funds to conduct field trials of new products and is inquiring about the ability to subcontract funds to the University of California, Riverside (UCR) so Dr. Bodil Cass and her technician may conduct field trials of the products.

Action Item(s):

1. Dr. Milosavljevic and Dr. Cass will submit a request to UCR to use the Ag/Ops facility for ACP pesticide product field trials.
2. The WG will define Standard Operating Procedures for adding future products to the spray and move list.
3. The WG will define an updated list of pesticide products, including organic products, that they are targeting for field trials.
4. CDFA to provide a summary of current status and products being evaluated to the CPDPC Executive Committee.

Citrus Yellow Vein Clearing Virus (CYVCV) Impacts
Keith Okasaki discussed the impacts of CYVCV and its current distribution. To date there have been over 70 detections of CYVCV in the Lodi area of San Joaquin County, approximately 600 detections in the city of Tulare and 2 detections in the city of Visalia in Tulare County, and 1 detection in the Hacienda Heights area of Los Angeles County. Dr. Georgios Vidalakis continued by summarizing a few studies on the impacts of CYVCV, including a new study from China where they conducted a trial on mandarins infected with CYVCV and citrus tristeza virus (CTV). The trial showed that the mixed infection between the two viruses had a negative impact on fruit yield. Additional literature reports that CYVCV has a negative impact on vegetative growth and fruit yield on lemon trees. Dr. Vidalakis continued by stating that no clear answer on the impacts of CYVCV in California would be available until trials under local conditions with local vectors are conducted. Dr. Subhas Hajeri added that Dr. Ray Yokomi has conducted a few studies in greenhouses analyzing the girth of the main stem and height of 18-month-old seedlings infected with CYVCV, with inconclusive results. Dr. Yokomi has

also conducted trials of mechanical transmission using clippings infected with CYVCV, which showed that only 1-percent of clippings transmitted the virus. Dr. Melinda Klein added that Dr. Yokomi is also conducting studies for the Citrus Research Board (CRB) on vector transmissions of CYVCV using different aphid species, citrus mealybug, and citrus whiteflies. One out of 93 citrus whiteflies observed successfully transmitted CYVCV, while none of the other vectors studied demonstrated transmission. CRB recently funded a project to study the ability of ACP to transmit CYVCV.

Action Item(s):

1. Dr. Hajeri will compile current research on CYVCV to present at the next meeting.

Sweet Orange Scab (SOS) Update

Dr. Jim Adaskaveg provided an update on SOS detection results from his lab, adding onto results from work his lab has been doing on SOS identification since 2022. Prior to 2026, Dr. Adaskaveg's lab, using five published PCR primers, identified 42 negative SOS samples from positive SOS samples collected by CDFA. In 2026, Dr. Adaskaveg's lab has received 39 more SOS positive fruit samples from CDFA and was only successful at culturing an *Elsinoë* species (the fungal infection that causes SOS) in one of those samples. Current United States Department of Agriculture (USDA) Animal and Plant Health Inspection Services (APHIS) and CDFA protocols rely only on the Internal Transcribed Spacer (ITS) PCR primer to identify SOS. Dr. Adaskaveg asserts that using only the ITS primer leads to false positive identification of SOS, evidenced by a paper published in 2007 that hypothesizes the ITS primer cannot differentiate between species of the *Elsinoë* genus. USDA-APHIS countered that the other *Elsinoë* species identified in the paper do not occur on citrus. Dr. Adaskaveg also referenced a 2026 paper published in Germany that hypothesizes closely related *Elsinoë* species that are not regulated can all occur on citrus, although related *Elsinoë* species have never been detected in California. Dr. Adaskaveg proposes that USDA-APHIS and CDFA use secondary verification with additional primers, and to develop species-specific primers, to confirm SOS detections. Keith Okasaki stated that CDFA also uses genome sequencing of positive SOS samples to confirm identification. Dr. Adaskaveg plans on performing genome sequencing at his lab using SOS positive reference cultures from Florida and from Dr. Madhurababu Kunta out of Texas A&M University to make comparisons with positive cultures from CDFA samples.

Action Item(s):

1. Dr. Adaskaveg will discuss with USDA APHIS and CDFA regarding whether SOS identification methods can be updated to include multiple PCR primers based on his research.
2. Keith Okasaki will specify what type of SOS genome sequencing occurs at the CDFA lab to confirm positive samples.

Citrus Multi-Pest Survey (MPS) Discussion

Dr. Etienne Rabe opened discussion concerning citrus MPS in California and why citrus is more intensively surveyed than other commodities. Keith Okasaki has contacted

USDA-APHIS regarding whether other commodities are surveyed like citrus commercial and residential MPS at the federal level. CDFA's State Primary Plant Pathologist, Dr. Heather Martin, confirmed that CDFA does grape and strawberry commodity surveys, as well as *Solanaceous* crop surveys on a much smaller scale than citrus MPS. Residentially, CDFA performs Plum Pox surveys on stone fruits. These surveys are dependent on funding and do not occur every year. Dr. Vidalakis pointed out that because all citrus in California comes from clean, tested sources, that citrus MPS is meant to protect California citrus by identifying invasive pests and diseases in new areas. As other commodities don't necessarily come from clean, tested sources, the starting point for surveying these other commodities is different because it is assumed those commodities are already infected.

Action Item(s):

1. Keith Okasaki will compile a summary of what crops other than citrus get surveyed and the scale of those surveys based on survey projects done by USDA-APHIS and CDFA.
2. Keith Okasaki will share a list of pathogens targeted by citrus MPS.
3. CDFA is requested to coordinate with the Alliance of Pest Control Districts (APCD) regarding commercial surveys as APCD is conducting additional, independent commercial citrus surveys.

ACP Predators Discussion

Dr. Cass gave an update regarding her field study on predatory insects of ACP. Of the three predators that Dr. Cass is releasing to predate ACP in Hemet, *Diomus* beetles appear to be most effective but only lacewings and *Rhyzobius* beetles are commercially available. CRB has a system for producing *Diomus* beetles that could be commercialized. Dr. Cass and her team will finish this second year of data collection from the field study of the three insects in Hemet in November. Dr. Cass plans to perform further field studies on different lacewing species and plans to perform some experiments with *Diomus* beetles looking at pest kill rate and biological parameters of the beetle. The goal of these studies is to identify an effective predator of ACP that is cheaper to produce than *Tamarixia radiata* that is currently being used by CDFA as a biocontrol agent.

Action Item(s):

1. Drs. Cass and Dr. Milosavljevic have been requested to provide information on the pros and cons of using each predatory insect, including *Tamarixia*.

Other Item(s) and Adjournment

The meeting was adjourned at 3:31 p.m.