California Citrus Pest and Disease Prevention
Risk Based Survey Working Group Meeting

Meeting Minutes
May 3, 2023

Interested Parties

Karina Chu*	Dr. Melinda Klein*	David Phong*
John C. Gless*	Dr. Daniel Lee*	Cressida Silvers*
Jim Gorden*	Dr. Weiqi Luo*	Leigh Sitler*
Dr. Subhas Hajeri*	Keith Okasaki*	Dr. Ram Uckoo
Sara Khalid*		

*Participated via Webinar

Call to Order, Roll Call, Introductions

The Risk Based Survey Working Group Meeting was called to order by Dr. Ram Uckoo at 9:00 a.m. Keith Okasaki welcomed the Risk-Based Survey (RBS) Working Group members and members of the public participating online. The charge of the RBS Working Group is to evaluate splitting the RBS model to shift survey activities in southern California towards residential properties near commercial groves while maintaining survey in residential areas in northern and central California.

Discuss Weight Factors

Dr. Weiqi Luo presented the current and possible new RBS factors included in the risk model. Current factors include census travel, Asian citrus psyllid (ACP) density, huanglongbing (HLB) detections, citrus transportation roads, nurseries, big box stores, packinghouses, farmers markets, military installations, Native American land, and organic citrus. The working group will review and adjust the weight factors and discuss new factors including vector and pathogen genetic diversity, and citrus worker movement, equipment, and housing.

This RBS model is continuously refined by analyzing HLB detections with standardized risk over the years and in each county for each factor. The model was also compared with a random survey from 2012-2022. Risk factors were assessed, as well as changes in background datasets, like roads and packinghouses.

The weight of an individual risk factor is increased if surveys showed new HLB detections were associated with the risk factor. Scientific evidence and expert consultations are also used to determine the weighting of these risk factors.

Dr. Luo continued to explain how each factor was analyzed. Census travel was shown to be very powerful in predicting the first few HLB detections for each county, except San

Diego County. For ACP density, general ACP population dynamics can help predict HLB detections. The presence of ACP generally leads to the detection of HLB. HLB detections are typically clustered and are a strong indicator of risk for follow up detections in all areas. There are mixed results when evaluating plant nurseries and big box stores. There were no major citrus roads for Los Angeles and Orange Counties; however, there is strong evidence of transportation dispersal in Riverside and San Diego Counties. Transportation networks are currently being studied for San Bernardino County. The impact of citrus packinghouses has not been consistent throughout the years. Farmers markets continue to serve as a potential source of introduction of ACP and HLB in all counties. The weighting of each risk factor will continue to be changed/refined throughout the HLB epidemic. Genotyping and worker/equipment will be analyzed later this year.

David Phong presented topics regarding short-term and long-term goals in refining the RBS model. Short-term goals include splitting southern commercial and central/northern residential RBS, proposing new RBS model weightings, identifying urban residential versus grove buffer workload split for southern California, and establishing distance from groves for southern California residential RBS.

Goals to achieve within four-to-twelve-months include adding nymph detection data to the model, updating background datasets, and evaluating existing algorithms for calculating model weightings. Long-term goals beyond twelve months include introducing vector and pathology diversity, citrus worker movement, equipment, and worker housing in the model.

Other Items and Adjournment:
The meeting was adjourned at 10:28 am. The next RBS Working Group meeting will be held on May 25, 2023.