Nursery and Ornamental Survey
2025 Annual Report
Cooperative Agreement Number: AP25PPQFO000C198

Year:	2025
State:	California
Cooperative Agreement Name:	Nursery and Ornamental Commodity Survey
Cooperative Agreement Number:	AP25PPQFO000C198
Project Funding Period:	July 1, 2025 – June 30, 2026
Project Report:	**Survey Report**
Project Document Date:	July 1, 2025 – June 30, 2026
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A. Background

In accordance with the Food and Agricultural Code, Sections 24.5, 403, 5006, 5301, 5322, and 5721, the California Department of Food and Agriculture (CDFA) is legislatively mandated to "protect California from the damage caused by the introduction or spread of harmful plant pests." Because of California's varied environment and landscapes, the State is likely suitable for the establishment of numerous invasive plant pathogens and insect pests. It is likely they will establish a permanent presence in the State if new infestations are not eradicated.

The California nursery industry is a $3.07 billion industry, which was ranked 4th in value for agricultural commodities in the state in 2024. The California nursery and flower industry also comprises 31% of the US export market in this sector and was valued at $142 million in 2024. Preventing the introduction and establishment of invasive pests in California nurseries is becoming increasingly difficult as globalization increases the movement of goods, materials and people into the State. Between July 2023 to June 2024, under the CDFA High Risk Program, 4,981 pests were intercepted. A total of 407 Notices of Rejection were issued on nursery stock due to the discovery of invasive pests or non-compliance of entry requirements on current federal and state quarantine regulations, and 575 actionable pests were identified on nursery stock. These findings demonstrate that nursery stock imported into California is an important pathway for the introduction of invasive plant pests. Additionally, it is critical that California is able to demonstrate to its trading partners that California nursery stock and ornamentals are free from key pests.

Cotton seed bug (CSB), *Oxycarenus hyalinipennis* (Hemiptera: Oxycarenidae) was first found in Los Angeles County in 2019 and prior to the start of the survey, the pest had been found in some residential areas in Orange, Riverside, San Diego, Santa Barbara, Santa Clara, and Ventura counties. These finds emphasize the importance of this survey for maintaining trade with state and international trading partners. This survey was focused on production nurseries in counties with officially confirmed or citizen scientist reports of CSB as well as other nurseries deemed high-risk which had boxwood and/or malvaceous host plants. These counties were Los Angeles, Orange, Riverside, San Diego, Santa Barbara, Santa Clara, and Ventura. The CDFA conducted a commodity-based survey of Nursery and Ornamental commodities for the following key pests: CSB, box tree moth (BTM) *Cydalima perspectalis* (Lepidoptera: Crambidae) and pink hibiscus mealybug (PHM), *Maconellicoccus hirsutus* (Hemiptera: Pseudococcidae) (Table 1).

B. Activities

1. Monthly activities:

July 2025 – Conducted survey site selection, made initial contacts to arrange for survey activities, trained permanent personnel, obtained supplies needed for field activities,

solicited and evaluated prospective seasonal employees, hired and provided training to seasonal personnel, trained county staff, created and executed county agreements.

July-October 2025 – Conducted trapping activities for BTM and PHM, conducted visual survey for CSB, and provided support to counties as needed. Conducted trace-forward and trace-back work due to positive CSB finds and mitigated CSB infestations in nurseries as needed.

November 2025-June 2026 – Conducted trapping and visual survey activities in Ventura County and PHM trap screening. Conducted trace-forward and trace-back work due to positive CSB finds and mitigated CSB infestations in nurseries as needed. Finished processing of samples and curation of specimens, completed identifications, prepared semi-annual report. Cleaned and repaired equipment. Furloughed seasonal personnel.

C. Benefits and results of survey

In 2025, 83 PHM and 83 BTM traps were placed at 83 nursery locations across seven counties (Table 2). A total of 84 nurseries were surveyed for CSB. The nurseries chosen for this survey were selected based on the likelihood that Malvaceous plants were present.

Table 1: Trapping Method by Targeted Pest

Scientific Name	Common Name	Abbreviation	Method
Oxycarenus hyalinipennis	Cotton Seed Bug	CSB	Visual
Cydalima perspectalis	Box Tree Moth	BTM	Plastic Bucket Trap
Maconellicoccus hirsutus	Pink Hibiscus Mealybug	PHM	Paper Delta Trap

Table 2: Nursery Survey Results

County	Pests Surveyed	# Sites	# Traps Placed	# Samples Submitted ID	# Positive Samples	Months Surveyed
Los Angeles	PHM	10	10	0	0	August
	BTM	10	10	0	0	August
	CSB	10	N/A	0	0	August
Santa Barbara	PHM	15	15	0	0	July-September
	BTM	15	15	0	0	July-September
	CSB	15	N/A	21	21	July-September
San Diego	PHM	15	15	0	0	July-September
	BTM	15	15	0	0	July-September
	CSB	15	N/A	126	42	July-September
Riverside	PHM	9	9	0	0	July-August
	BTM	9	9	0	0	July-August

	CSB	12	N/A	3	3	July-October
Orange	PHM	9	9	0	0	August
	BTM	9	9	0	0	August
	CSB	9	N/A	37	37	August
Ventura	PHM	15	15	0	0	July-November
	BTM	15	15	0	0	July-November
	CSB	15	N/A	3	3	July-November
Santa Clara	PHM	10	10	1	0	August
	BTM	10	10	0	0	August
	CSB	8	N/A	0	0	August
Total	**PHM**	**83**	**83**	**1**	**0**	
	BTM	**83**	**83**	**0**	**0**	
	CSB	**84**	**0**	**190**	**106**	

On July 11, 2025, six CSB were found in a commercial nursery in San Diego County. Following additional surveys, including regulatory trace-back and trace-forward surveys, a total of 190 suspect CSB samples were submitted for identification, of which, 106 samples were confirmed positive from nurseries in Orange, Riverside, San Diego, Santa Barbara, and Ventura counties (Table 3). CDFA worked in coordination with county staff to mitigate the infestations and provided information to external stakeholders regarding the positive finds as needed. One sample was submitted for PHM identification from Santa Clara County, and it was confirmed as a non-target.

Table 3: Positive CSB Detections

County	# Positive Nurseries	# Adult	# Nymph
Orange	4	29	8
Riverside	1	3	0
San Diego	7	42	0
Santa Barbara	1	16	5
Ventura	2	3	0
Total	**15**	**93**	**13**

The State Survey Coordinator gave a presentation covering the Nursery and Ornamental Survey project activities at the ACASA (Assistant Commissioners and Sealers Association) Conference on October 9, 2025.

D. Training

Staff were trained how to select nursery sites, trapping protocols, how to conduct a CSB visual survey, PHM specimen screening and pest identification.

E. Database submissions

A total of 190 CSB and 1 PHM suspect specimens were submitted to the CDFA's PPDC for identification (Table 2). Of the 190 CSB suspect specimens, 106 were confirmed to be CSB adult and nymphs. The PHM suspect specimen was confirmed to be non-target. (Table 3). All positive and negative data will be entered into the National Agricultural Pest Information System prior to the submission of the final report by October 28, 2026.

Approved and signed by:

Victoria Hornbaker Digitally signed by Victoria Hornbaker Date: 2026.10.20 20:38:14 -07'00'

Victoria Hornbaker, ROAR Date
California Department of Food & Agriculture
Plant Health & Pest Prevention Services

BETH STONE SMITH Digitally signed by BETH STONE SMITH Date: 2026.10.21 14:55:32 -07'00'

Beth Stone-Smith, ADODR Date
United States Department of Agriculture
AHPIS, Plant Protection & Quarantine