

**CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE**  
**COTTON PEST CONTROL PROGRAM – COTTON SEED BUG FINAL REPORT**  
55 YEARS OF SERVICE TO COTTON GROWERS

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**Statewide Cotton Seed Bug Survey:**

A statewide survey for the cotton pest *Oxycarenus hyalinipennis*, also known as the cotton seed bug (CSB), has been completed. Ten percent of cotton acreage and okra acreage was sampled in each county throughout the state. All field sites were sampled in pairs of two personnel with one personnel being an Environmental Scientist.

The survey of cotton fields included a visual inspection of the field site and a sampling of cotton bolls from plants on each side of the field site (north, south, east, and west). Visual inspection included walking the perimeter of the field site. Sampling of bolls included the sampling of cotton bolls from plants on each side of the field site (north, south, east, and west). For each cotton field sample site, five cotton bolls were removed from up to 20 cotton plants depending on the acreage of the sample site. The amount of total cotton plants sampled per a sample site by field acreage was as follows:

- 4 plants were sampled from sample sites that had less than 30 acres,
- 8 plants were sampled from sample sites that had between 31 and 50 acres,
- 12 plants were sampled from sample sites that had between 51 and 70 acres,
- 16 plants were sampled from sample sites that had between 71 and 90 acres, and
- 20 plants were sampled from sample sites that had 91 or greater acres of cotton.

This methodology was a slight change from the previous year sampling rate of 4 plants per each 20 acres due to the addition of okra sites and labor shortages during the ideal sampling period. The cotton bolls were bagged according to sample site orientation for a total of four bags per field site. The cotton bolls in the sample bags were sprayed with ethanol, then sample bags were double bagged, labelled, and sent to be processed.

The survey of okra field sites included the visual inspection of 10 percent of okra acreage in each okra growing county in California. Visual inspection included walking the perimeter of the field site and collecting any found specimen. All specimens were placed in vials with ethanol and sent to be identified.

The CSB survey began on September 6, 2022 and was completed on October 19, 2022. Throughout the survey period, 231 field surveys were completed. The following counties were surveyed from: Colusa, Contra Costa, Fresno, Glenn, Imperial, Kern, Kings, Los Angeles, Madera, Merced, Napa, Placer, Riverside, Sacramento, San Bernardino, San Diego, San Joaquin, Stanislaus, Santa Clara, Sutter, Tulare, and Yolo. As shown in **Table 1**, 193 cotton fields and 38 okra fields were surveyed throughout the State.

Table 1.

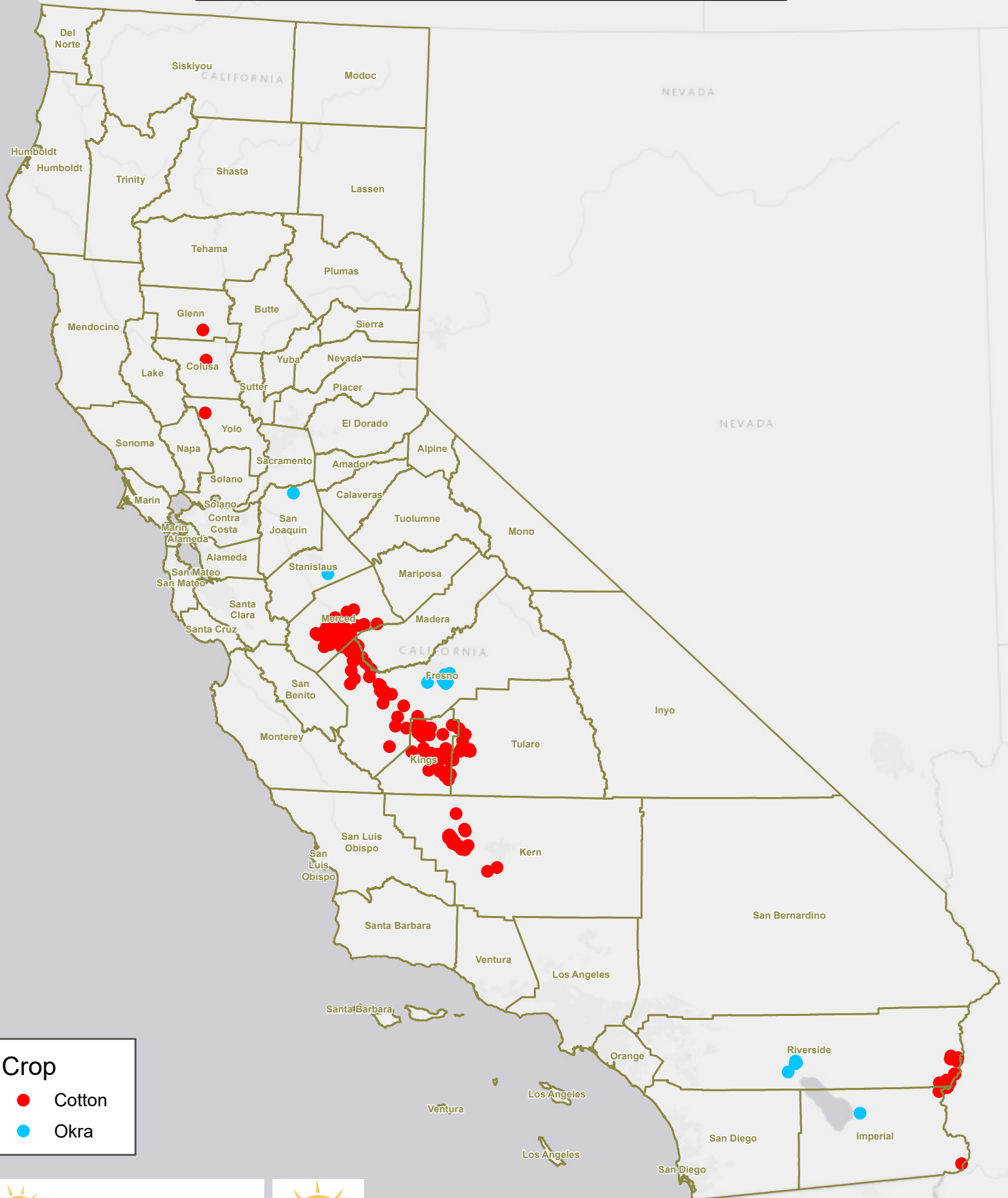
County	Cotton Fields Surveyed	Cotton Acreage Surveyed	Cotton Boll Samples Collected	Okra Fields Attempted for Survey*	Okra Acreage Surveyed*	Total Acreage (Cotton +Okra) Surveyed**
Colusa	1	73	16	2	0	73
Contra Costa	0	0	0	2	0	0
Fresno	51	3,579	604	13	24	3,603
Glenn	1	70	16	2	0	70
Imperial	5	293	52	5	43	336
Kern	22	974	200	2	0	974
Kings	28	4,700	460	0	0	4,700
Los Angeles	0	0	0	2	0	0
Madera	2	57	12	2	0	57
Merced	59	2,965	572	2	0	2,965
Napa	0	0	0	2	0	0
Placer	0	0	0	2	0	0
Riverside	11	580	120	12	130	710
Sacramento	0	0	0	2	0	0
San Bernardino	0	0	0	2	0	0
San Diego	0	0	0	2	0	0
San Joaquin	0	0	0	1	1	1
Santa Clara	0	0	0	2	0	0
Stanislaus	0	0	0	1	10	10
Sutter	0	0	0	2	0	0
Tulare	12	717	124	0	0	717
Yolo	1	7	4	2	0	7
<b>Total</b>	<b>193</b>	<b>14,015</b>	<b>2,180</b>	<b>62</b>	<b>208</b>	<b>14,223</b>

\*Ten percent of County Agricultural Commissioner's recorded okra was surveyed. Not all recorded okra field sites contained okra. In cases where a field site did not contain okra, then an attempt to survey another recorded okra field would occur. A maximum of 2 attempts were made for each field site. If these additional fields did not contain okra, then the survey for that field site was deemed complete.

\*\* Total Acreage Surveyed only includes acreage from okra field sites that contained okra.

All boll samples were inspected by the California Department of Food and Agriculture with negative results for CSB. Boll samples were processed by pulling out the cotton fibers in every sampled boll and carefully inspecting the entire boll sample. Any found specimen was removed and inspected using the United States Department of Agriculture (USDA) CSB identification guide to determine if the specimen was CSB. All non-target specimens were stored in vials of ethanol that were labelled with field site information. CSB was not identified in any samples.

# 2022 Cotton Seed Bug Survey



## Crop

- Cotton
- Okra