

# Cotton Seed Bug A New Pest for California Cotton

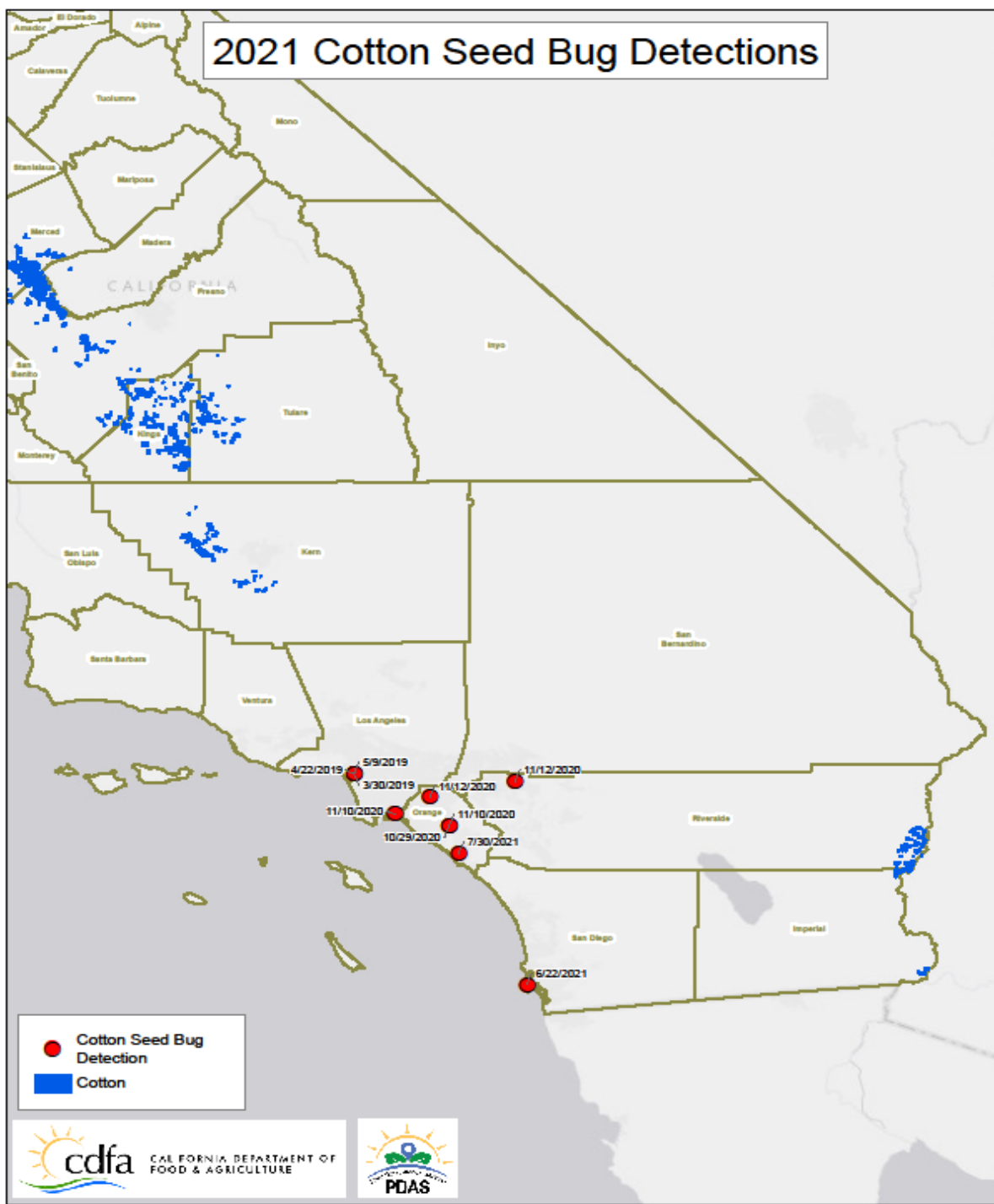


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# 2021 Cotton Seed Bug Detections



# What We Know About Finds

- First find in alley in Santa Monica by citizen scientists
- All subsequent finds in urban areas only
- No finds in commercial cotton
- Finds in LA, Orange, Riverside and San Diego Counties



# Cotton Seed Bug

- Host Plants
  - Malvales
  - Hibiscus
  - mallow
  - cotton



# CSB Facts

- Native to Africa
- Now found in Asia, Europe, Middle East, South America and Carribean



# Cotton Seed Bug Eggs





APHIS PPQ Baltimore

2 mm

5432248



# CSB Damage

- Seed weight loss
- Decreased seed germination
- Reduce oil content
- Cause fiber damage - staining



# Cotton Seed Bug

- Issues
  - No pheromone...no trap!
  - Only control is to spray



# History

- Not found in CA before
- Found in Florida, but eradicated within a very short time with aggressive control strategy



# Available Products in CA

- Avermectin
- Bifenthrin
- Dimethoate
- Imidacloprid
- Lambda-cyhalothrin
- Malathion
- Diflubenzuron
- Neem oil
- Thiamethoxam



# Statewide Survey

- A statewide survey for Cotton Seed Bug is being conducted by CDFA in commercial cotton areas in California from September 1, 2021 – December 31, 2021.
  - Conducted by CDFA with funding from the California Cotton Pest Control Board



# Statewide Survey

- There is no statewide survey planned in the urban areas or other areas outside of commercial cotton in California at this time.



# Cotton Seed Bug Survey Plan

- Designated sample field sites will constitute 10% of cotton acreage in each county in the State.
- Visual survey will be performed and a small number of cotton bolls will be collected from each sample field site



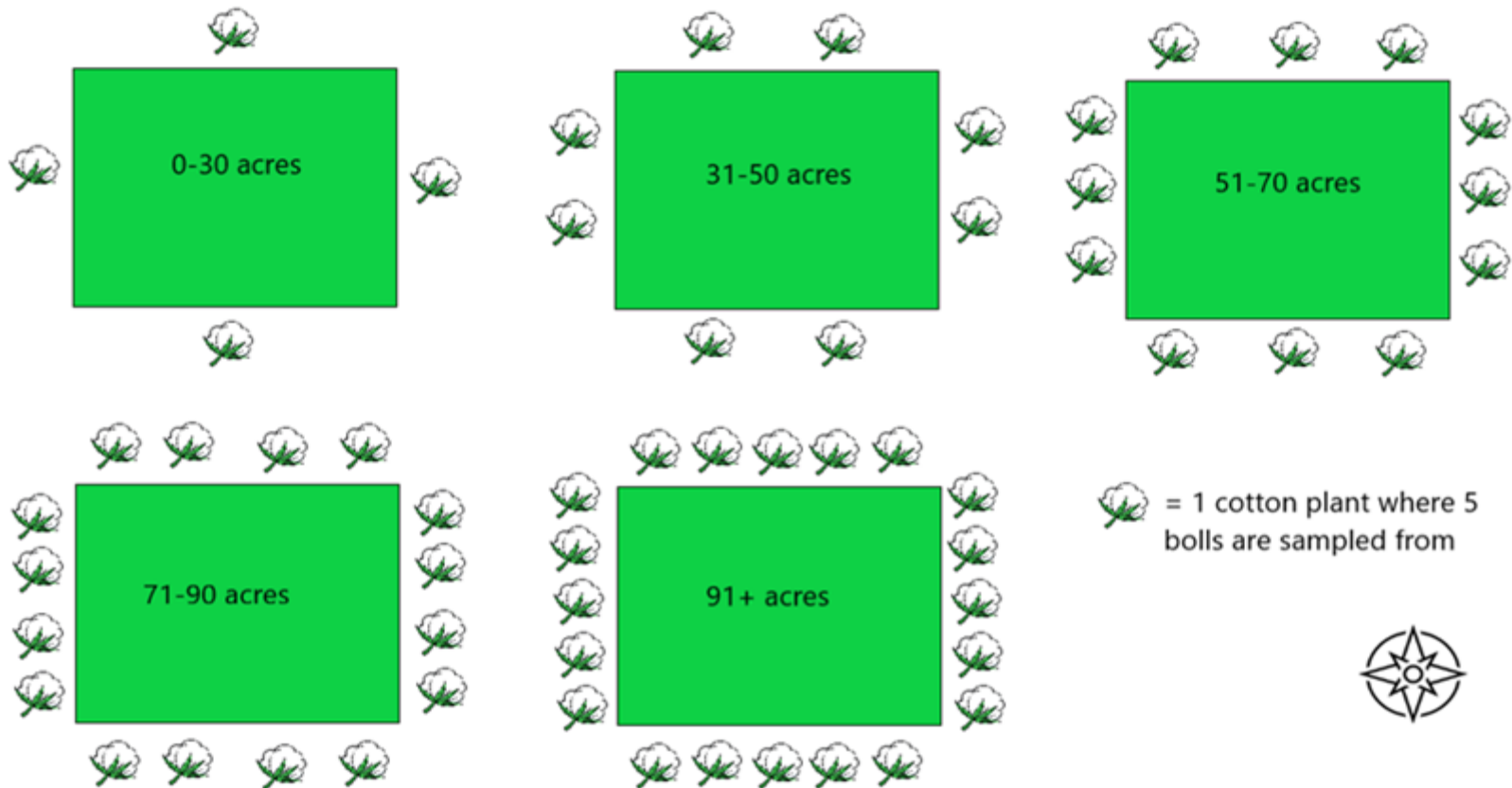
# Cotton Seed Bug Survey Plan

- Each field will be surveyed visually by walking the perimeter. For each 20 acres 5 bolls will be sampled from one plant per side (N,S,E,W).
- 20 acres = 5 bolls from each plant sampled
  - (1 plant N + 1 plant S + 1 plant E + 1 plant W) = 20 bolls total
- 40 acres = 5 bolls from each plant sampled
  - (2 plants N + 2 plants S + 2 plants E + 2 plants W) = 40 bolls total
- 60 acres = 5 bolls from each plant sampled
  - (3 plants N + 3 plants S + 3 plants E + 3 plants W) = 60 bolls total
- And so on for each added 20 acres





# Field Site Sampling



# Cotton Seed Bug Survey Plan

- Collected bolls will be double bagged, labelled, sprayed with alcohol and frozen prior to transport for identification.
- In addition to boll sampling, any suspect adults will be collected and placed in vials with alcohol.
- Dead insects will be sent to the CDFA Plant Pest Diagnostics Center (PPDC) for CSB identification.



# Where do we go from here?

- Concerns
  - Damage
    - Seed weight loss
    - Oil content loss
  - Quarantine for planting seed
- Conduct survey
- Develop pheromone
- Aggressive control strategy



