

# California red scale

## March 2025

California red scale is a key pest of citrus in the SJV. Its life cycle starts as crawlers produced by overwintering females from the past season. Crawlers move and find a suitable place to start feeding. Once they have settled, they do not move.

### What's happening with the SJV CRS population?

At Lindcove REC, we caught first flyers on March 4. Many PCAs report that CRS flyers were caught on the week of March 4 in Tulare. No reports from Madera county yet.

Counties	Biofix date	DD March 24	Future events
Kern	March 8	82	First generation crawler emergence at 550 DD; Expect in 4-5 weeks
Tulare	March 4	75	
Fresno	March 8	68	
Madera	No reports yet		

White dots on the twig are first instars of California red scale.



### When to spray?

When crawlers emerge from the first and second generation, immatures are the most susceptible stage (thin wax layer). The first and second generations have more synchronized population.

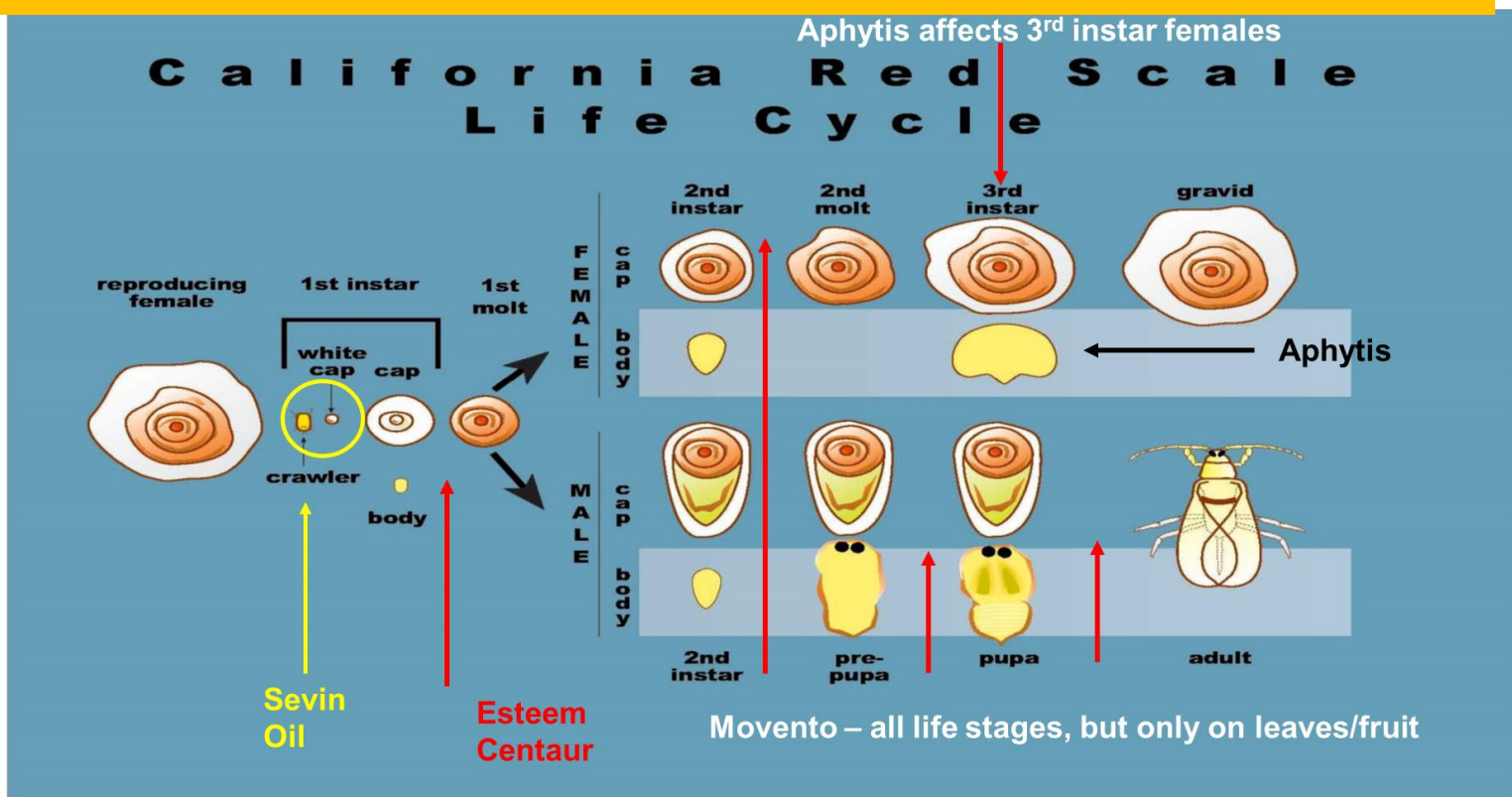
### CRS management: mating disruption, insecticides, *Aphytis*! Points to remember when choosing management strategy.

- Pheromone cards **overestimate scale numbers in *Aphytis* release blocks** –as *Aphytis* attacks third instar females males numbers can be high even when female numbers are low.
- Pheromone cards **underestimate scale numbers Insect growth regulator/mating disruption** –as these treatments affect males more than they affect females. Use a threshold of 30-50 scales per flight.
- When Movento/Admire Pro is used, **CRS males on pheromone cards are not a reliable predictor**, especially if you have a history of scale infestation as these products do not kill scale on wood or scale.

# California red scale management choices – UCIPM Guidelines

Management choices	Efficacy	Selectivity	Spectrum
Mating disruption (Checkmate CRS)	Moderate: Effectiveness varies	Nontoxic	Narrow: CRS
<i>Aphytis melinus</i>	Moderate: effectiveness varies	Nontoxic	Narrow: CRS
Oils (415, omni)	Moderate: short residual	Short term effect on all arthropods	Broad: most pests
Esteem (Pyriproxyfen)	Moderate: Emerging resistance issues	Toxic to beetles	Narrow: CRS
Centaur (Buprofezin)	Moderate	Toxic to beetles	Interm: CRS, Citricola
Movento (Spirotetramat)	Moderate: Doesn't control scale on wood	Toxic to predatory mites	Interm: CRS, ACP
Sevin (Carbaryl)	Moderate: Resistance issues	Toxic to most natural enemies	Broad; CRS, Citricola scale, FRB

**Most pesticide products work best on immatures.**  
**Mating disruption – before male flight. Aphytis – 3<sup>rd</sup> instar females.**



# Recommendations for chemical control of California red scale

- Timing: treat the stage that is most sensitive
- Treat generations 1 or 2 when the scale population is uniform in stage (exception is spirotetramat, which seems to work in fall)
- Use the selective insecticides that allow natural enemies to survive when you can.
- Rotate products to avoid resistance
- Good coverage: 750-100 gpa/acre (7000-15000 l/ha) (spirotetramat 250 gpa/acre)
- Drive slowly! < 1.5 mph (2.4 kph)

## Links to Pesticide trials on CRS

- [CRS trial 2015](#)
- [CRS trial 2016](#)
- [CRS trial 2017](#)
- [CRS trial 2018](#)
- [CRS trial 2019](#)
- [CRS trial 2022](#)
- [CRS trial 2023-1](#)
- [CRS trial 2023-2](#)

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