

## California Red Scale

**Source of Information:** Lindcove Research and Extension Center

**Biofix:** March 15-22, 2000 for Kern and Tulare Counties

**Lower Developmental Threshold:** 53°F

**Current Accumulated Degree Day Units (June 1):**

Kern: 949 DD

S. Tulare: 809 DD

N. Tulare: 856 DD

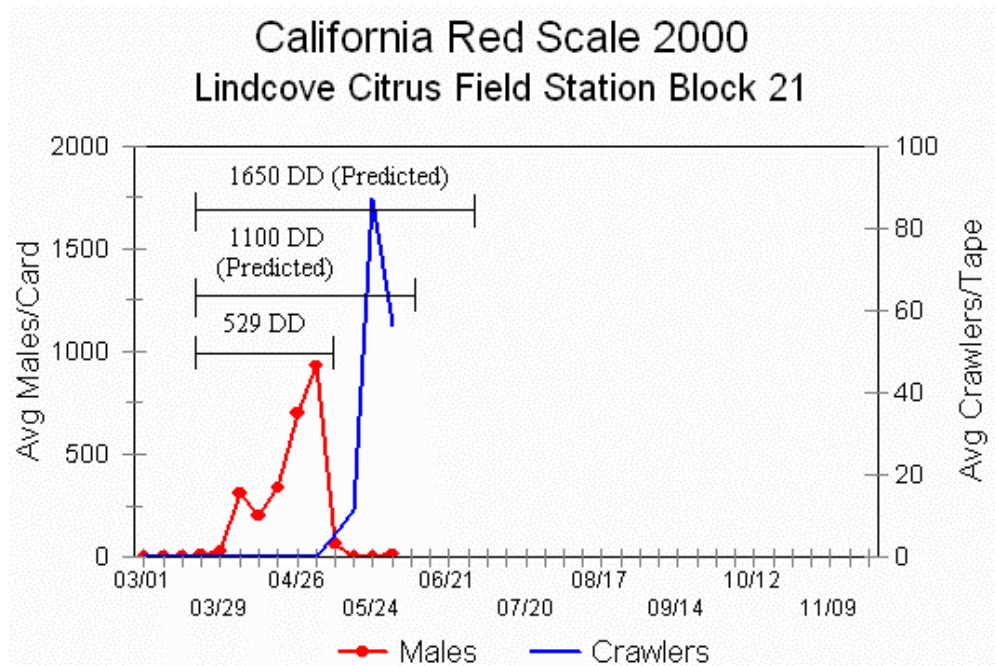
Fresno: 822 DD

Madera: 624 DD

**Expected Second Male Flight: 1100 DD**

**Expected Second Crawler emergence: 1650 DD**

California red scale males began flying the second week of March. In the Exeter / Porterville / Bakersfield areas, crawler emergence began the week of May 8, at 530 to 550 degree-days. This was confirmed by our observations at the Lindcove Field Station and at test blocks in Kern County. Fresno County and cooler areas of Tulare County should have seen crawler emergence about a week later. Now, degree-day accumulations are about a week away from the 1100 mark, which is when the second male flight is predicted to start (see chart). Growers and consultants who use pheromone cards to track red scale are advised to have clean traps out at this time in order to correctly identify the start of the second flight. **If temperatures remain warm for the next three weeks, the beginning of the second crawler emergence should occur the week of June 26.** Populations of California red scale develop in response to temperature and various regions of the San Joaquin Valley accumulate temperature units at different rates. See our web site for up-to-date degree day accumulations for the various regions at <http://www.uckac.edu/citrusent/DegreeDay.htm>.



**If you plan to treat with Lorsban, Supracide, or Sevin:** spray when the scale are crawlers. The insect is small, moving around and very susceptible to these insecticides. Spray during the 1<sup>st</sup> (550 DD) or 2<sup>nd</sup> generation (1650 DD) of activity to have the greatest impact on the population.

**If you plan to treat with Esteem:** Spray when the scale are white caps, just before they begin to molt and wait until the second generation of scale activity (1800 DD). Esteem is very toxic to eggs and pupae of the vedalia beetle. Vedula beetle is the best natural control of the cottony cushion scale. We need to avoid spraying Esteem during March through June in order to allow the vedalia beetle time to finish cleaning up the cottony cushion scale problems. Esteem will very effectively control California red scale when applied in the second generation (July).

**If you are releasing *Aphytis* for California red scale:** Try to avoid using an insecticide for scale control. Oil is still the recommended insecticide for the *Aphytis* release program. Generally it is applied during July. However, even oil has a negative impact on *Aphytis* because it can synchronize the scale stages and leave the *Aphytis* without 3<sup>rd</sup> instar scale to lay their eggs in.

## **Citricola Scale Alert!**

Citricola scale is very sensitive to that broad spectrum insecticides, Lorsban, Supracide, and Sevin that we used for California red scale for many years. We stopped using those insecticides for California red scale in 1997 because many populations of red scale were resistant to them. In 1998 and 1999 many growers used Esteem to control red scale and it did a great job on that pest. Esteem does not work very well on citricola scale. Esteem affects molting and citricola scale only molts twice per year. Here we are, 3 years later, and we haven't used the Lorsban, Supracide, or Sevin treatments in many orchards for 2-3 years. Citricola scale is popping up in quite a few orchards throughout the San Joaquin Valley. Be on the lookout for the gray bodies of citricola scale lining up on the twigs. They have matured into females and are releasing crawlers onto the leaves from May-July. If you have citricola scale in your orchard, Esteem will not help you and you need to go back to a Lorsban, Supracide, or Sevin treatment for scale control.

## **Citrus Cutworm**

The season for citrus cutworm concluded for the citrus growing regions of the San Joaquin Valley the week of May 22. At this time, pupae are resting in the soil underneath the citrus trees 1 – 2 inches below the surface. They will finish their development into adult moths during November and December, and emerge early next year. We have not had any reports of serious damage to plums by citrus cutworm this year, but we have observed that the larvae may remain active a few weeks later in plums as opposed to citrus.

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