

California Red Scale

The recent surge in temperature is definitely speeding up the development of California red scale, but the prolonged cool period from June into the first week of July delayed the second generation so that we are expecting the second crawler emergence to begin this week in most areas. Last year at this time, the third male flight was well under way (Figure 1). Male scale from the second flight are still very active in some areas, especially in northern Tulare county. Their numbers should diminish as the 2nd generation of crawlers begin to emerge. From here on out, we can expect to see overlapping generations of red scale. This should be to the advantage of growers on an Aphytis release program, as there will now be a continuous source of 2nd and 3rd instar scale for the wasps to parasitize. Overlapping generations makes timing sprays of the insect growth regulators more difficult because they work best when the insect is molting. When generations are overlapping, some insects are molting and some aren't at any given time when the spray is applied.

California Red Scale Degree-Days
Foothill Region

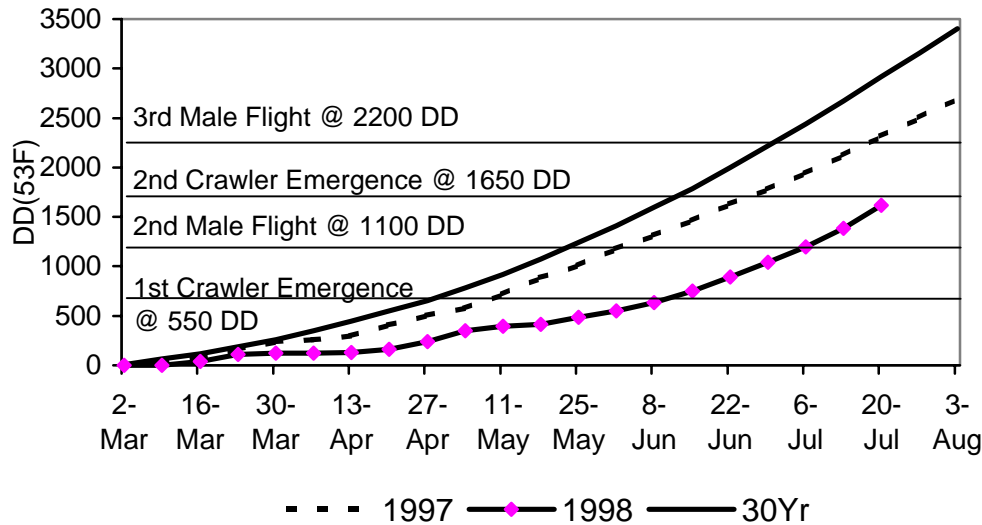


Figure 1

Knack and Applaud Treatments: Growers and PCAs report that in blocks where Knack or Applaud was used in the first generation, there has been little or no second male flight. This indicates good control of red scale by these pesticides. Remember, these insect growth regulators do not kill the crawlers. After a spray you should expect to see crawlers continue to emerge and settle on the fruit. These pesticides kill the scale when they go through their first or second molt. Don't even look at the scale until 30 days after the pesticide application. If the pesticide is working well, then the first instar scale will be dead, stuck in the molt stage or have matured into very small, sickly 2nd and 3rd instars. They will continue to try and grow for a long while but if you look at them closely with a hand lens they do not look "normal" and most will eventually die. These pesticides act much more slowly than the organophosphate (Lorsban and Supracide) and carbamate (Sevin) insecticides. If a second insecticide application for red scale control is planned, the best timing for spray application would be about a week after the second crawler emergence is predicted for your area. If you have an internet connection, see our web page <http://www.uckac.edu/citrusent/> for prediction of the crawler activity in various areas of the San Joaquin Valley.

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