

California Red Scale –First Crawlers

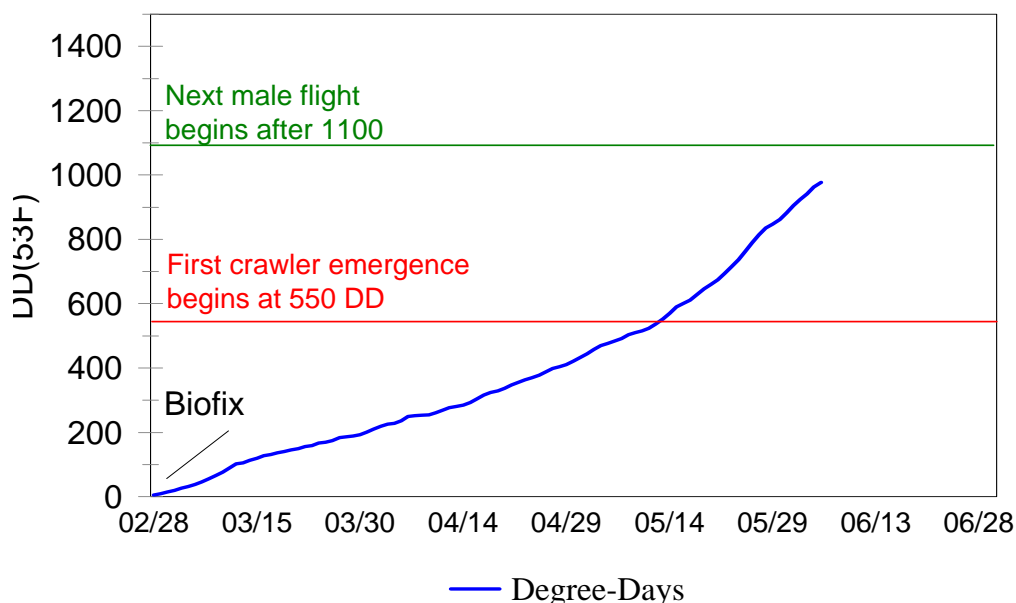
	1st male flight	1st gen. crawlers (actual)	2nd male flight (predicted)	2nd gen. crawlers	3rd male flight	3rd gen. crawlers	4th male flight	4th gen. crawlers	5th male flight
Estimated Degree Days	biofix	550 DD	1100 DD	1650 DD	2200 DD	2750 DD	3300 DD	3850 DD	4400 DD
Kern	Mar 1	May 9	Jun 13						
Tulare	Mar 1	May 16	Jun 20						
Fresno	Mar 8	May 16	Jun 20						

Current DD (as of June 6) – 1030 Kern, 997 Tulare, 906 Fresno

The 1st generation of California red scale crawlers emerged during the second and third week of May. At the moment, the San Joaquin Valley is running about 150 degree-days cooler than the 30-year average. This slows the development of California red scale. We expect to see the second flight of male scales during the weeks of June 13 and June 20. Events happen earliest for aKern as it is warmer in that region.

CRS Degree-day calculations for various regions of the San Joaquin Valley are maintained on our website: <http://citrusent.uckac.edu/DegreeDay.htm>.

Foothill Region Degree-Days 2005 California Red Scale

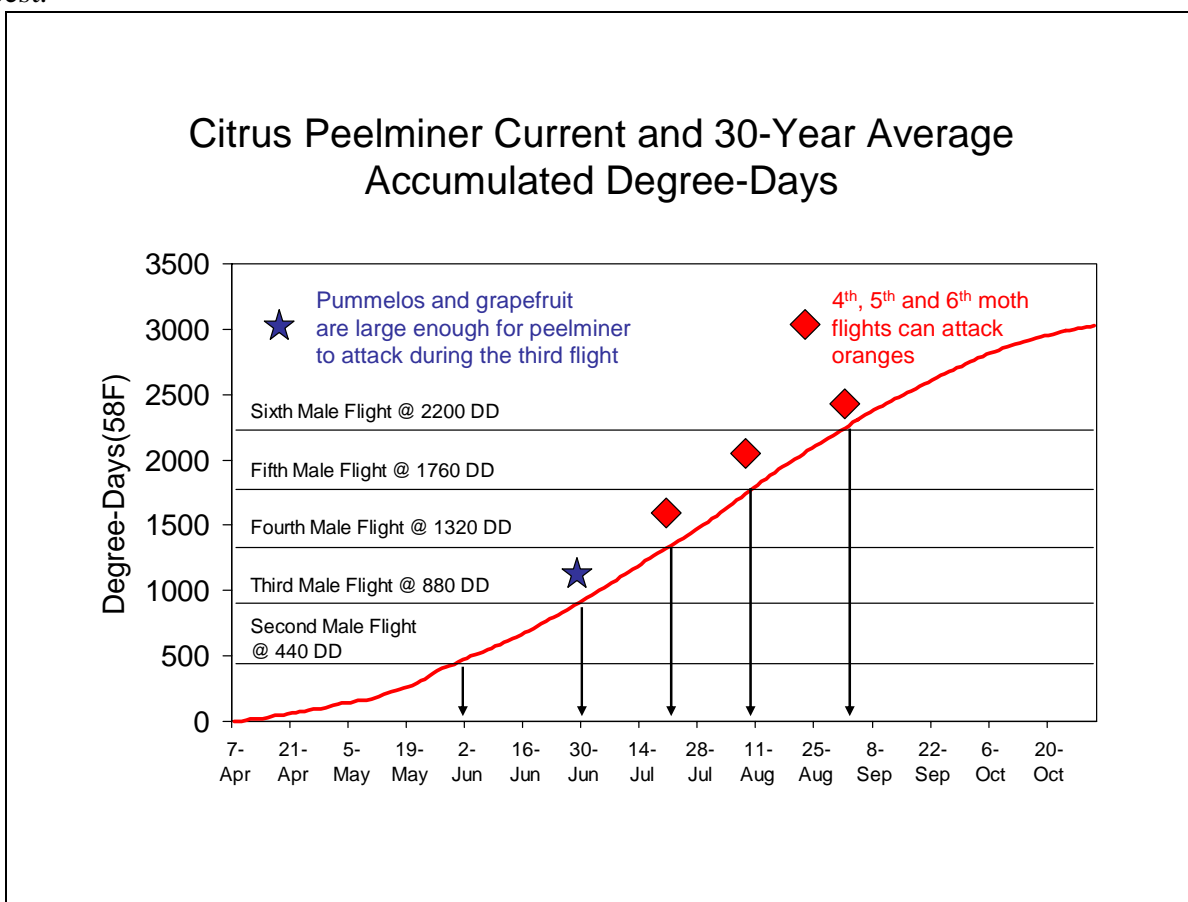


Citrus Peelminer

We placed pheromone traps in a number of citrus orchards and other crops in Tulare County and have observed two flights of citrus peelminer this season. The first moth flight occurred during the first week of April and the second one during late May. We expect the next flight of citrus peelminer to occur during the third week of June. The first two flights of moths lay their eggs on stems of a variety of crops including citrus. The third moth flight attacks pummelo and grapefruit as the fruit begins to get some size to it. It is not until the 4th moth flight or later flights that we begin to see mining in susceptible orange varieties (Fukumotos, TI, Atwoods).

An effective pheromone trap has just been developed by Dr. Millar at UC Riverside. It should help improve the efficacy of insecticides, especially Micromite, which acts only on the egg stage. In previous years, growers sprayed when they saw mining and that was too late for Micromite. Now we are able to use pheromone traps to see when the moths are flying and laying eggs and growers can treat more precisely. We will be posting the degree day information for peelminer on our web site so that you can see when flights are occurring in the Tulare County area.

Since there are restrictions on the amount of Micromite and other insecticides that you can apply per season, and since it is likely to take several pesticide treatments to reduce peelminer, we are recommending that you wait to treat until the third flight for pummelos and grapefruit and later flights for oranges (depending on your previous experience with Peelminer) when the moths first lay eggs on the fruit. Try to treat two or three consecutive moth flights. If your orchard has sustained less than 5% damage and/or you don't grow the susceptible varieties of oranges, then avoid treating for citrus peelminer since insecticides are only somewhat effective in reducing this pest.



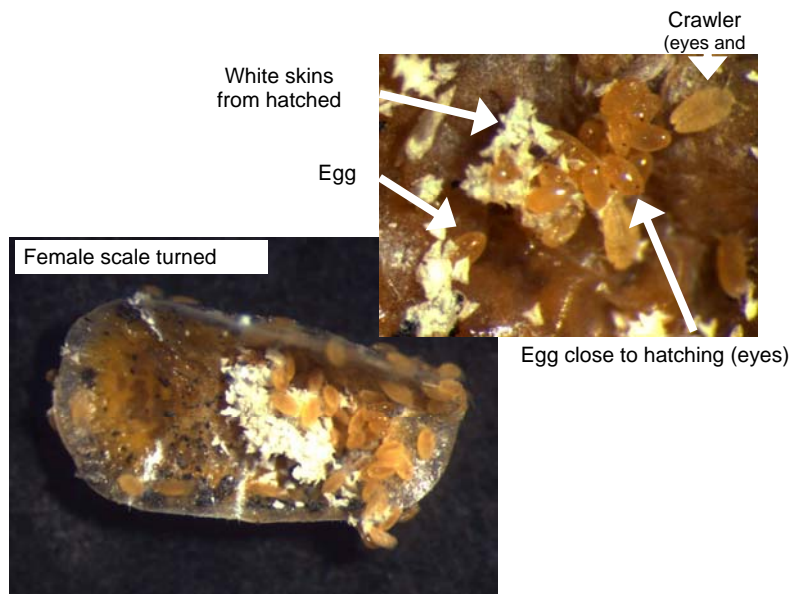
Citricola Scale

I have had numerous questions from growers and PCAs concerning citricola scale in the past few weeks. Here are the questions and my answers.

Q1 “Can I treat for red scale and citricola scale at the same time?” My answer is, that it depends on what level of control you want to get. The ideal insecticide, water volume, and timing for citricola scale and California red scale are different enough that you should treat them separately if they are both at economically damaging levels. If you try to cut corners by treating them at the same time, you will kill fewer individuals and you may have to come back and retreat this season or next season. If one pest is currently a minor pest, then lean towards the application type that is best for the pest you are most concerned about. California red scale is best treated during the first or second crawler generation (this year mid-May and Mid July (predicted)). Citricola scale is best treated after all of the crawlers have emerged and settled down on the leaves (end of July through September).

Q2 “I see a lot of citricola scale crawlers, should I treat citricola scale now?” It is still too early for treating citricola scale. Right now, the citricola scale females are still producing eggs, many of the citricola crawlers are protected under the female bodies, and the crawlers will continue emerging for 4-6 weeks. If you spray now for citricola scale, you will not kill as many as you would if you waited till late July/early August when the females are dead and the nymphs have settled down on the leaves and are no longer protected by the female scale body. Citricola scale control is a numbers game, the better the job that you do, the lower you suppress the population and the longer the period of time till you have to spray for this pest again.

Q3 “How do I know when to treat the orchard?” Flip over the brownish-gray female citricola scales every couple of weeks and use a hand lens to see what is under them. Right now (early June, see pictures below), you will see 1) yellowish eggs, 2) white skins left over from hatching eggs, and 3) crawlers. The hatch is not done yet. When the females look dried and flattened and the only thing underneath them are the white skins left over from egg hatch (no eggs or crawlers) then it is time to treat the orchard. Assail and Applaud will significantly reduce citricola scale populations, but Lorsban (applied as ≥ 6 pts/acre using proper timing) is most effective in reducing scale for more than one season.



Two New Pesticide Registrations for Citrus

** Note that the new dry flowable 70 DF formulation of Applaud has a 3 day preharvest interval (reduced from 60 days for the 70 WP formulation).

Applaud (buprofezin) - insect growth regulator, chitin synthesis inhibitor (new formulation)

(This is a summary, please see the product label and supplemental label for more details)

Applaud 70DF

Pests Controlled: California red scale, cottony cushion scale, citricola scale

Dosage: 2.14-2.86 lb = 35-46 oz (1.5-2 lb ai) per acre.

Method of Application: Apply by ground application using 750-2000 gallons of water per acre. Do not apply more than 2 applications per season. Allow at least 60 days between applications.

Timing of application: Apply when peak crawler emergence occurs. More effective at the beginning of the season when the population is fairly uniform.

REI: 12 hours

PHI: 3 days

Kanemite (acequinocyl) - Miticide

(This is a summary, please see the product label and supplemental label for more details)

Kanemite 15 SC

Pests Controlled: citrus red mite, Texas citrus mite

Dosage: 21-31 oz per acre

Method of Application: Apply by ground using 100-250 gallons of water per acre. Do not use less than 100 gallons of water per acre. Do not apply more than 62 oz per acre per season. Allow a minimum of 21 days between applications.

REI: 12 hours

PHI: 7 days

The Citrus IPM Newsletter is published by the University of California Citrus Entomology Laboratory at the Kearney Agricultural Research Center. For information or to subscribe or unsubscribe please send an email to gregm@uckac.edu or call (559)646-6597