

Citrus Cutworm

Source of Information: Lindcove Research and Extension Center

Biofix: January 25, 2000 for the Exeter and Ivanhoe area

Lower Developmental Threshold: 45.6°F

Current Accumulated Degree Day Units: 660 DD

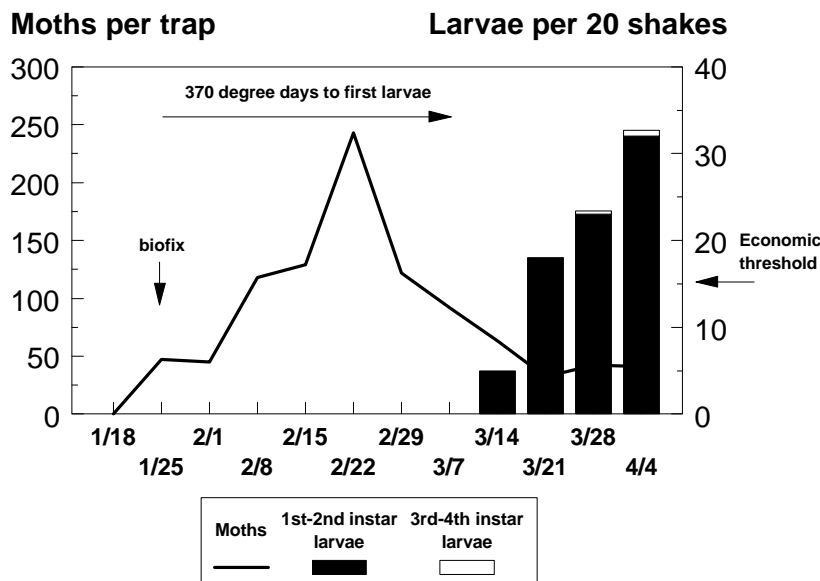
Begin Sampling for Cutworm Larvae: 250 DD (This occurred the last week of February)

Expect to find 1st and 2nd instar larvae: 350-400 DD (This occurred the second week of March)

Citrus cutworm activity seems to be higher this year than the previous two years. Possibly the mild winter allowed more of the pupae in the ground to survive. The figure below shows several important measurements and events for citrus cutworm in the Exeter area. We began accumulating degree-day units for citrus cutworm on the biofix day January 25, 2000. We estimate using a lower developmental threshold of 46°F and a biofix of the second week of consecutive moth flight, we will see larvae emerging approximately 350-400 degree-days later. The earliest we have seen larvae emerge is at 250 degree-days and so that is when we began sampling. We saw larvae emerging in the Exeter area during the week of March 14, approximately 370 DD after the biofix. As of April 4, we have accumulated 660 degree-days and we are starting to see 3rd and 4th instar larvae. In the block shown below, the cutworm larvae are above the economic threshold of 15 worms per 20 shakes over a beating sheet (you can also use 15 worms per 25 net shakes or 15 worms per 1 hour search as a threshold) and so should be treated with an insecticide. Remember that stomach poisons like Kryocide/Prokil and the microbial BT products work best when the larvae are small (1st-2nd instars). Broad spectrum pesticides will work more quickly than the stomach poisons and are more effective against larger instars, but have restrictions to protect bees during bloom. Once petal fall is declared, the treatment threshold for citrus cutworm drops to 3-5 worms per 25 net shakes, per hour search, or per 20 shakes over a beating sheet. The citrus cutworm prefers to feed on fruit and so our tolerance for worms is very low when the petals drop off and the fruit is fully exposed to cutworm feeding.

See your Citrus IPM manual or guidelines for details of how to sample for citrus cutworm. Insecticide treatment recommendations can be found in the citrus guidelines that you can purchase from your UC Cooperative Extension Office, or by subscription as Publication 3339 from UC DANR Communication Services (800-994-8849), or on the world wide web (<http://www.ipm.ucdavis.edu>).

Exeter - Citrus Cutworm



California Red Scale

Source of Information: Lindcove Research and Extension Center

Biofix: March 15, 2000 for the Exeter area

Lower Developmental Threshold: 53°F

Current Accumulated Degree Day Units: 163 DD

Expected First Generation of Crawler activity: 550 DD

California red scale males began flying the second week of March. We have only accumulated 163 DD units in the Exeter area. We expect to see the first generation of crawler emergence at 550 DD. 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 <http://www.uckac.edu/citrusent/DegreeDay.htm>. The start and peak of the male flight is very useful information because if you also know the accumulated degree-day units in your orchard you can predict when the crawlers will emerge (most effective time for Lorsban, Supracide and Sevin sprays), when scale are in the white cap stage (most effective time for Esteem sprays) and when scale are in the 3rd instar stage (the favorite stage for attack by *Aphytis* parasites).

Full Registration of Esteem for California red scale as of March 21, 2000

Esteem is now fully registered for citrus for control of California red scale. The recommended rate is 16 oz per acre. We had hoped to have language on the secondary label that would restrict the use of this insecticide till July in order to protect vedalia beetles, however, that did not happen. Esteem is very toxic to eggs and pupae of the vedalia beetle. We need to avoid spraying this insecticide during March through June in order to allow the vedalia beetle time to control the cottony cushion scale problems. Since Esteem is effective in killing California red scale no matter what generation it is sprayed on, and the vedalia beetles are needed during March-June, it is very important that everyone hold off all Esteem treatments until the 2nd generation of California red scale (white cap stage) activity (1800 Degree days) which usually occurs in mid July.

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