May 2009
Issue 4

UC Citrus Entomology Program
Citrus IPM Newsletter

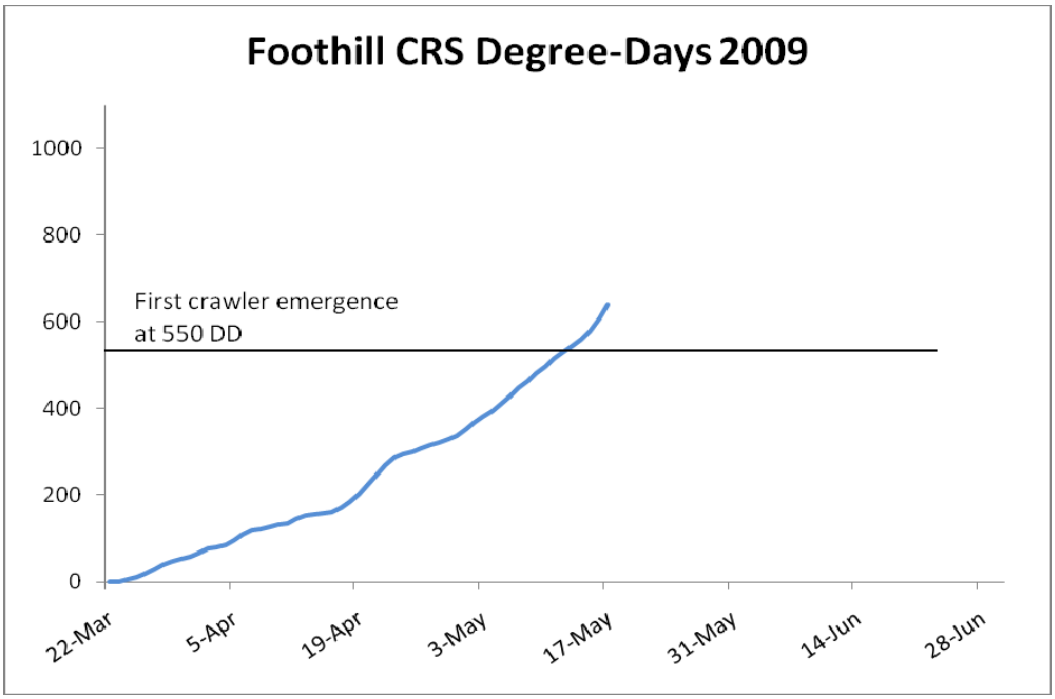
California Red Scale – First Crawlers

First crawler activity for San Joaquin Valley citrus began during the week of May 11 (550 degree days from the first male flight). Growers in Kern and Tulare counties should expect to see peak crawler emergence occur during the week of May 18. Citrus orchards in Fresno and Madera counties are typically five to seven days behind those in the southern counties because their biofix starts later and they accumulate degree days more slowly.

If choosing an organophosphate, carbamate or oil insecticide for scale control, peak crawler emergence is the ideal timing for a spray application (to kill the crawlers as they move about and settle down). If choosing an insect growth regulator for scale control, wait until slightly after peak crawler emergence (to kill 1st instars as they try to molt to 2nd instars). Movento® should be applied 2 weeks prior to the second generation of scale activity because it requires several weeks for uptake. International MRLs for Movento® have not yet been established.

Weekly degree-day accumulations for California red scale for Kern, Tulare and Fresno counties can be found on our website at http://citrusent.uckac.edu/ddchart.htm

UCIPM Guidelines for citrus provide sampling methods and treatment recommendations: http://www.ipm.ucdavis.edu/PMG/r107301111.html



Asian Citrus Psyllid Update

Insecticide treatments (cyfluthrin and systemic imidacloprid) for Asian citrus psyllid have been applied in backyards in San Diego County, Imperial County and Mexico. In areas of California where the treatments were applied last fall (Oct-Nov 08), no psyllids have been found this spring and there has not been a great deal of spread from the originally infested areas. This is good news. It means that insecticide treatments and the public awareness program are proving to be effective in reducing spread of the psyllid. A portion of Riverside County is now in the quarantine zone because there was a find on the border of Riverside and Imperial County. The quarantine is extended 20 miles north of a find.

Maps of Quarantine Zone:

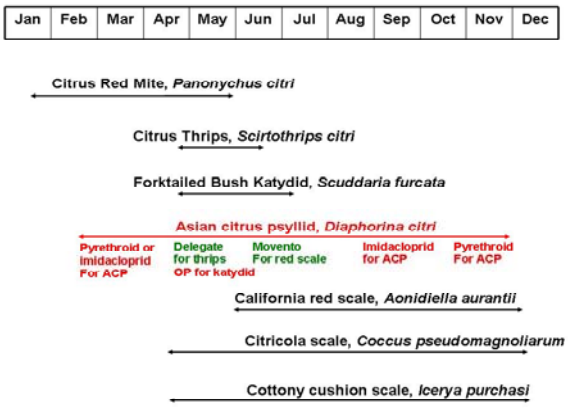
CDFA Map: http://pi.cdfa.ca.gov/pqm/manual/PDF/maps/3435ACPImperialRiversideSanDiego.pdf

USDA Map (shows the finds on the Mexico side of the border):
http://www.aphis.usda.gov/plant_health/plant_pest_info/citrus_greening/downloads/pdf_files/acp_ca_map.pdf

What should I do as a citrus grower or PCA?

1. Put out yellow sticky traps and watch for psyllid eggs and nymphs on new flush.
2. If you find psyllids, contact your County Ag Commissioner immediately.
3. Prepare to address a psyllid infestation with insecticide treatments: Many insecticides can work to reduce a psyllid infestation; the trick is going to be avoiding flaring other pests because broad spectrum insecticide use will increase to 3-4 applications per year. Don't treat for psyllid until you actually find some.
4. If you have an infestation, the first line of defense should be pyrethroids and systemic imidacloprid or Movento. Then as the season progresses, when you treat for other pests, use insecticides that would be effective against psyllid.
5. Once you find a psyllid, treat the infested citrus block and all neighboring citrus quickly and frequently (see below).

See the UCIPM Guidelines for citrus for a list of effective insecticides:
http://www.ipm.ucdavis.edu/EXOTIC/diaphorinacitri.html



This figure shows the time periods when control of various pests is needed relative to the pesticides needed for control of Asian citrus psyllid.
Pesticides in red are broad spectrum and in green are soft for beneficials.

The University of California and the Citrus Research Board will be conducting training sessions this summer in how to deploy traps, sample trees, and conduct control strategies.

Citrus Peelminer

Pheromone traps in Tulare County are continuing to capture small numbers of citrus peelminer adults from the first flight. It is really difficult to detect flights using pheromones because so few individuals are captured. We simply take the initial flight (early April) and calculate 580 degree-day intervals from that point in time to predict the rest of the flights. We predict that the second flight of peelminer will occur at the end of May. Pummelo and grapefruit growers should be concerned with the third flight, which is not predicted to start until late June. During the 3rd flight, the green pummelos and grapefruit have reached the preferred size for peelminer egg laying. The peelminer doesn't attack the susceptible navels varieties until the 4th or 5th flight. There is no need to apply insecticide treatments until the flights are targeting susceptible varieties of citrus. We will keep you informed of the degree day accumulation and the flights as the season progresses.

Weekly degree-day accumulations for Tulare County can be found on our website: http://citrusent.uckac.edu/PeelminerDDcurrent.htm

2009 Citrus Peelminer Flights

	1st male flight	2nd male flight	3rd male flight	4th male flight	5th male flight	6th male flight	7th male flight	8th male flight
Estimated Degree Days	Biofix	580 DD	1160 DD	1740 DD	2420 DD	3000 DD	3580 DD	4160 DD
Host Plant	Willow/ oleander stems	Walnut Stems	Pummelo grapefruit	Pummelo grapefruit susceptible oranges	Pummelo grapefruit susceptible oranges	Oranges	Oranges	Oranges
Tulare	April 7	June 1 (predicted)						

See our new publication: Citrus peelminer and citrus leafminer for more information: http://citrusent.uckac.edu/8321CitrusLeafminerAndPeelminer.pdf

Citricola Scale

At this time of year, citricola scale females have moved out to the ends of branches, turned gray in color, plumped up, and are starting to produce eggs. When the eggs hatch in June and July, nymphs will move onto leaves and appear as small translucent oval shapes along leaf veins and edges. Sample the southeast side of the tree. The treatment window for citricola is fairly long compared to other citrus pests (July-Sep), and treatment should occur after all eggs have hatched.

In situations where citricola scale has developed resistance to chlorpyrifos, Applaud® and Assail® provide good single season control.

See the UCIPM guidelines for sampling methods and treatment recommendations: http://www.ipm.ucdavis.edu/PMG/r107301511.html

Citrus Thrips

With petal fall ending, it is time to be sampling 2x a week for citrus thrips nymphs. Where predatory mites are active (> 0.5/leaf), the treatment threshold is 10% fruit infested with thrips. In the absence of predators, the threshold falls to 5% thrips-infested fruit. It is only the immature nymph stage that damages the fruit and the fruit can not be damaged once it reaches 25 mm in size. When treatment is necessary, it is important to rotate between chemical classes to prevent resistance from occurring. Remember that Success® and Delegate® are the same class of insecticide and so this is not a rotation. Delegate® does not yet have MRLs established for all countries.

See our web site for identification guides http://citrusent.uckac.edu/thripsonesheetID.pdf and the Citrus IPM Guidelines for sampling and treatment information http://www.ipm.ucdavis.edu/PMG/r107301711.html

The Citrus IPM Newsletter is published by the University of California Citrus Entomology Laboratory at the Kearney Agricultural Research Center.

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