

INSECT PESTS MONITORING FOR TREE FRUIT AND NUT CROPS

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Monitoring

- Use traps to monitor insect pests
- Keep trapping records
- Use biofix, *UCIPM guidelines*
- Use degree day models for making treatment decisions

- For DD models: use this link,
<http://ipm.ucanr.edu/WEATHER/ddretrievetext.html>

Or google “run UCIPM degree days models”



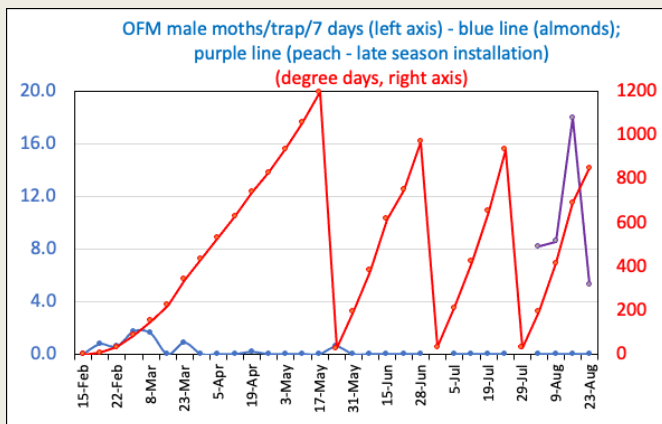
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Pest Activities/DD in Traps (Denair II CIMIS #206)

■ Oriental fruit moth (OFM)

- Biofix: 18 February; 1st gen. timing (500-600DD): April 4 -10
- 2nd gen. Biofix: 24 May; DD (6/21): 748
- 2nd gen. spray timing (400-500 DD): June 7-11
- 3rd gen. biofix: 28 June; spray timing: July 10-12
- 4th gen. biofix: 29 July; spray timing: Aug 9

Generation Length (degree-days)			Spray Timing (degree-days)	
1st	2nd	3rd	Early generation	Later generations
920-1010	920-1010	920-1010	500-600	400-500



Note: My traps (total 9) in all three almond orchards have been catching no OFM in majority portions of the season. So, at some point I was not able to track the flight and provided flight just based on degree days. In Late July, I placed 3 traps in a peach orchard which had OFM activities, and started tracking the flight (see purple line in the figure) from those traps. Of course, it was late attempt to provide some flight activity.

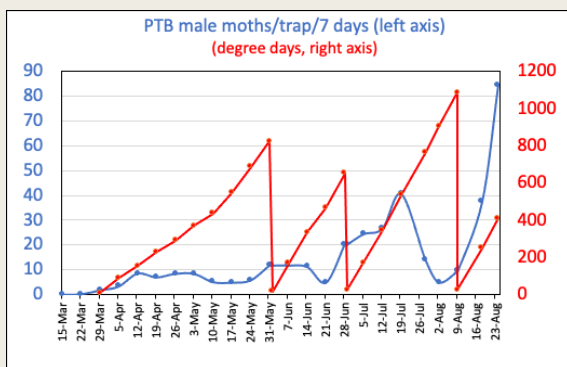
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Pest Activities/DD in Traps (Denair II CIMIS #206)

■ Peach Twig Borer (PTB)

- Biofix: 21 March (Denair) ; 29 March (West Modesto);
- Predicted 1st gen. spray timing (400 DD): May 5
- 2nd gen. biofix: 28 June; spray timing (300 DD): 10 July
- 3rd gen. biofix: 9 August

Generation Length (degree-days)			Spray Timing (degree-days)	
1st	2nd	3rd	Early Generation	Later Generations
1030	1030	1030	400-500	300-400



In peaches,
-If the fruit is still green, the best control can be achieved when treatments are applied after about 400 degree-days have accumulated from the biofix.

-If fruit has begun to color, treat at 300 degree-days.

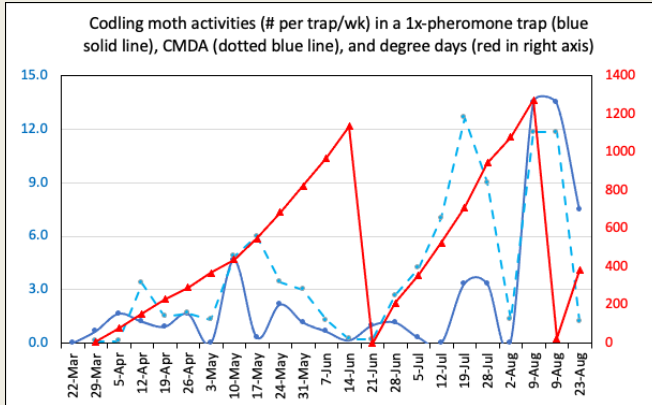
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Pest Activities/DD in Traps (Denair II CIMIS #206)

■ **Codling Moth (CM) – biofix dates based on 1x pher lure**

- **Biofix: 29 March**
- Predicted 1st gen. spray timing
-1A timing (300 DD): April 25; 1B timing (600 DD): May 15
- 2nd gen. biofix: June 21
- Predicted 2nd gen. spray timing: July 2
- 3rd gen. biofix: August 9; spray timing: 15-18 Aug

Generation Length (degree-days)			Spray Timing (degree-days)	
1st	2nd	3rd	Early generation	Later generations
1060	1100	1200	1A Peak: 300 1B Peak: 600-700	300

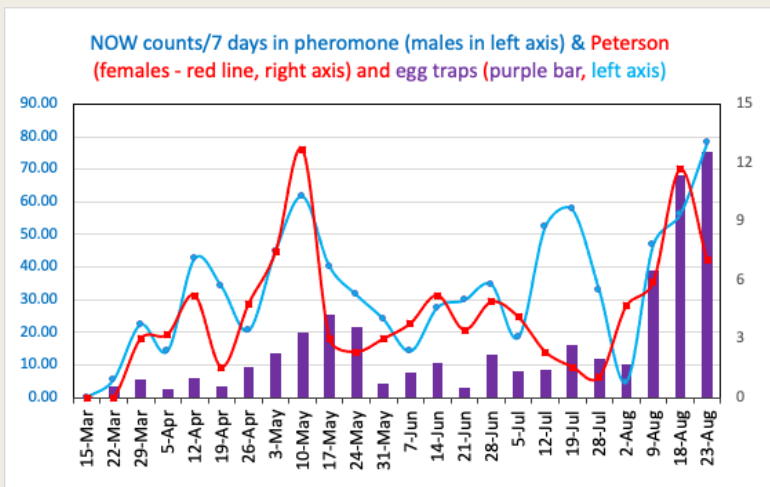


- Besides trap counts, it is important to conduct damage nut sampling to make IPM decisions.

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Pest Activities/DD in Traps

■ **Navel Orangeworm (NOW) in Almonds**

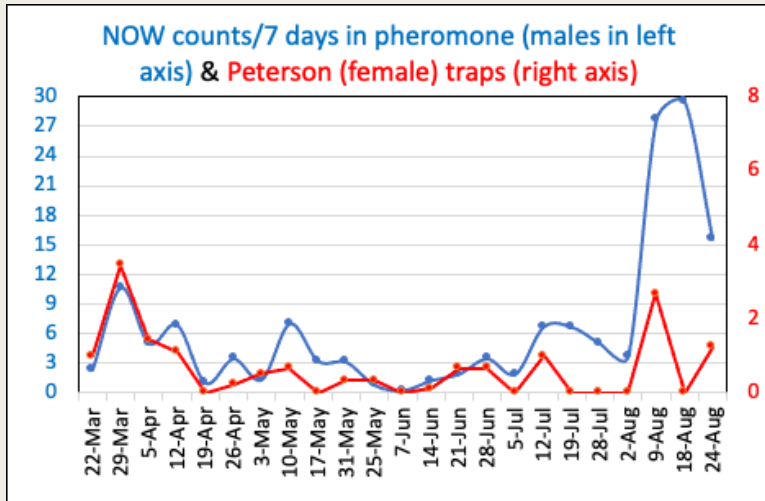


- Egg-laying activity has increased in the last 2-3 weeks, and moths are always flying, including females (avg. 4-5 females per Peterson trap). However, the most critical indicator is the hullsplit status of the Nonpareil.
- Hullsplit status can vary based on several external factors such as geographic location, irrigation conditions/frequency, the tree's overall health, full bloom timing, etc. So, we should treat each orchard or orchard block separately in terms of hullsplit status
- If you have a full bloom date, you can predict hullsplit using the UC model.
https://fruitsandnuts.ucanr.edu/Weather_Services/almond_hullsplit_prediction/predicting_hullsplit/
- Taking reference to full bloom timing (Feb. 14) of Nonpareil in Salida, CA, the predicted hullsplit timing is July 8. You can check yours. Again, actual observation is more important than model prediction.
- Identify almond hullsplit:
<http://ipm.ucanr.edu/PMG/C003/m003fc/hullsplit.html>
- We are at peak (moths and egg counts) of the 3rd flight.

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Pest Activities/DD in Traps

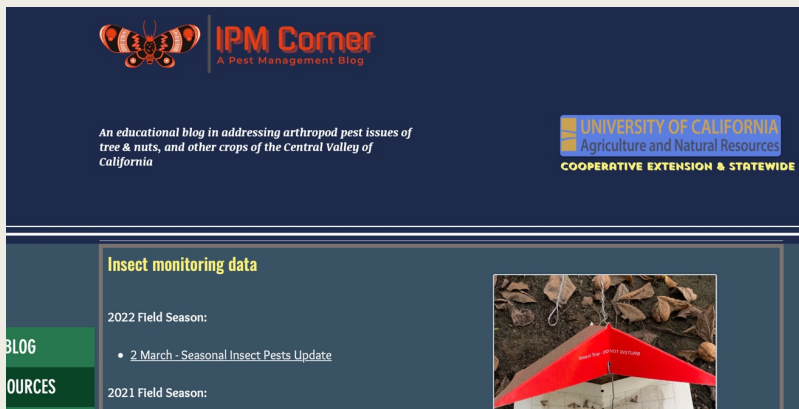
■ Navel Orangeworm (NOW) in Walnuts



- Overwintering NOW moths in traps in walnuts have been relatively low compared to almonds. This trend is usual for NOW early generation flights in walnuts
- NOW activity in current 3rd flight has been increased exponentially at least in pheromone traps. Some of this might be contributed by the on-going almond harvest in the area

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You can access updated info here: [IPMCorner.com](https://ipmcorner.com)



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Disclaimers

The information provided here is for your reference purpose only. Every orchard is different regarding the insect activity and damage history. We highly encouraged to use your own monitoring tools, biofix dates, and degree-days for making pest management decisions.

The average numbers of insect captured may not represent what you are observing in your orchard(s). The average trend is more important than the exact number. All insect monitoring/DD information provided here are derived from the traps/weather stations located in Modesto area (Stanislaus county) in general, and may not be fully applicable to other geographic region/locations

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