

Seasonal IPM Update -Northern San Joaquin Valley

Jhalendra Rijal, Ph.D.
Area IPM Advisor
UC Cooperative Extension - Stanislaus, San Joaquin, Merced

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Pest Monitoring

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



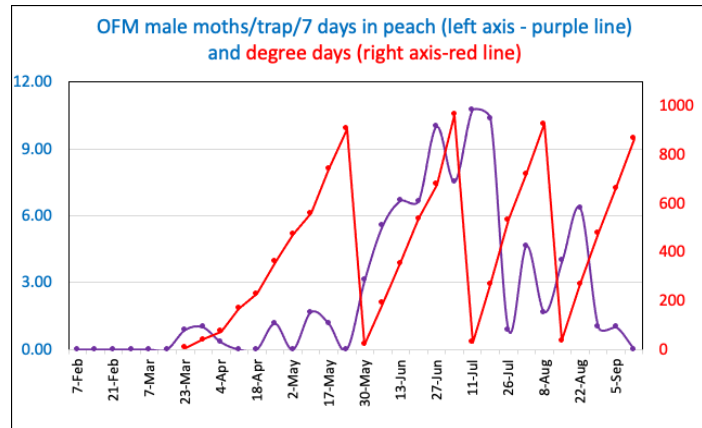
Run Degree Days-UCIPM

For all of our degree-days calculation, we used CIMIS Station #206, Denair, Stanislaus County

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2023 Insect monitoring

Oriental Fruit Moth (OFM): 1st Biofix 23 March; 2nd biofix: 30 May; 3rd biofix: 11 July; 4th biofix: 15 August



Lower/upper threshold
=45/90°F

The low trap count on 29 August is most likely related to the most recent spray

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2023 Insect monitoring

- ▶ Oriental Fruit Moth (OFM):
 - ▶ 1st gen. biofix: 23 March
 - ▶ 1st gen. spray timing (500 - 600DD): 13-17 May
 - ▶ 2nd gen. biofix: 30 May
 - ▶ 2nd gen. spray timing (400-500 DD): 15-19 June
 - ▶ 3rd gen. biofix: 11 July
 - ▶ 3rd gen. spray timing (400-500 DD): 22-25 July
 - ▶ 4th gen. biofix: 15 August (DD as of 9/12): 866
 - ▶ 4th gen. spray timing (400-500 DD): 26-30 August

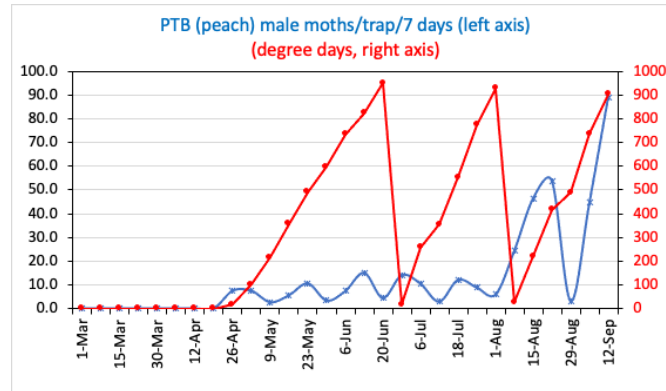
Generation Length (degree-days)			Spray Timing (degree-days)	
1st	2nd	3rd	Early generation	Later generations
920-1010	920-1010	920-1010	500-600	400-500

Integrated
Management Program

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2023 Insect monitoring

- ▶ Peach Twig Borer (PTB): 1st Biofix: 22 April; 2nd biofix: 27 June; 3rd biofix: 8 August



Lower/upper threshold =50/88°F

The low trap count on 29 August is most likely related to the most recent spray

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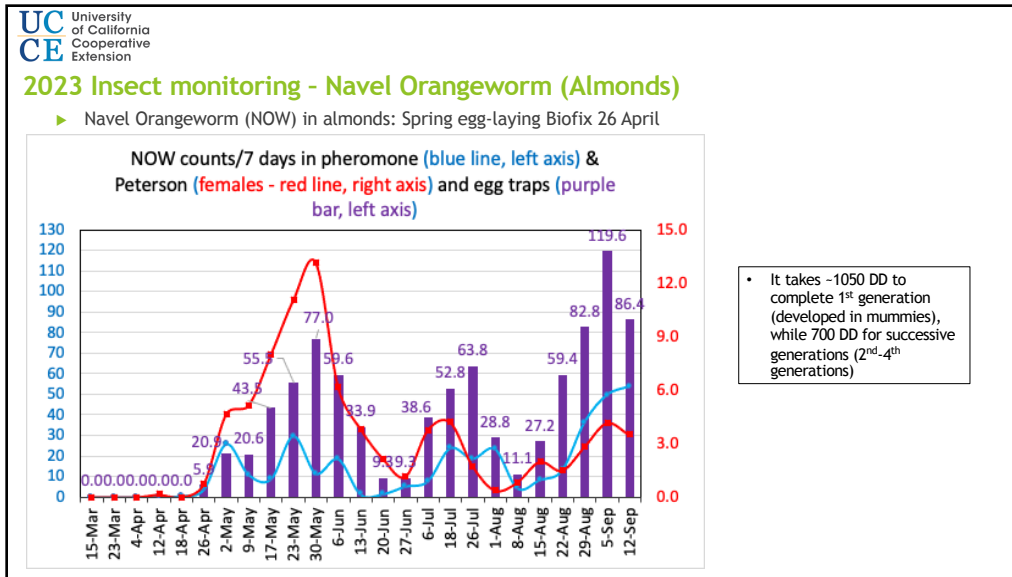
2023 Insect monitoring

- ▶ Peach Twig Borer (PTB):
 - ▶ 1st biofix: 22 April
 - ▶ 1st gen. spray timing (400 - 500DD): 19-24 May
 - ▶ 2nd biofix: 27 June
 - ▶ 2nd gen. spray timing (300 - 400DD): 8-13 July
 - ▶ 3rd biofix: 8 August
 - ▶ 3rd gen. spray timing (300 - 400DD): 18-22 August
 - ▶ DD as of 9/12: 901

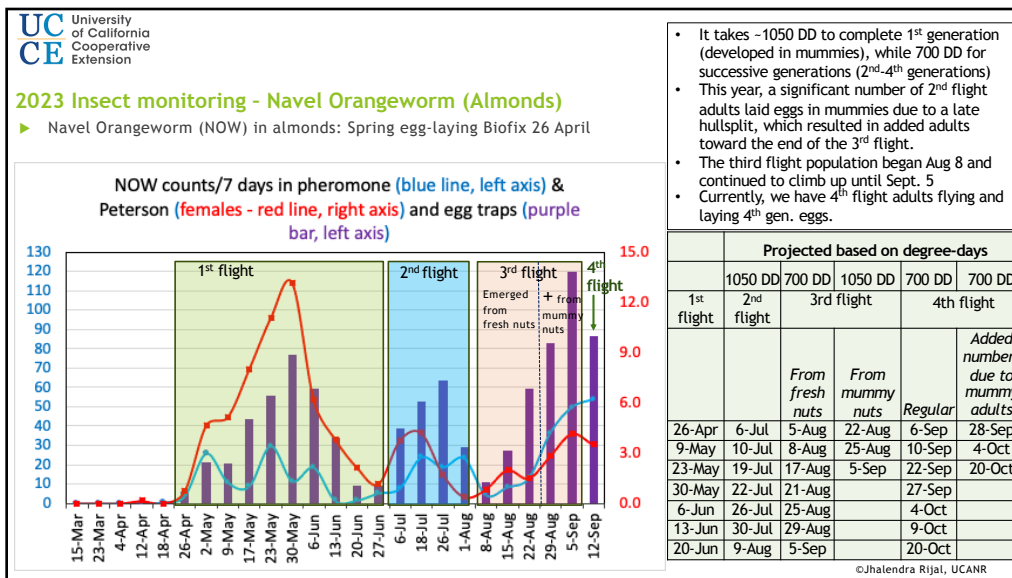
Generation Length (degree-days)			Spray Timing (degree-days)	
1st	2nd	3rd	Early Generation	Later Generations
1030	1030	1030	400-500	300-400

Wide Integrated Management Program

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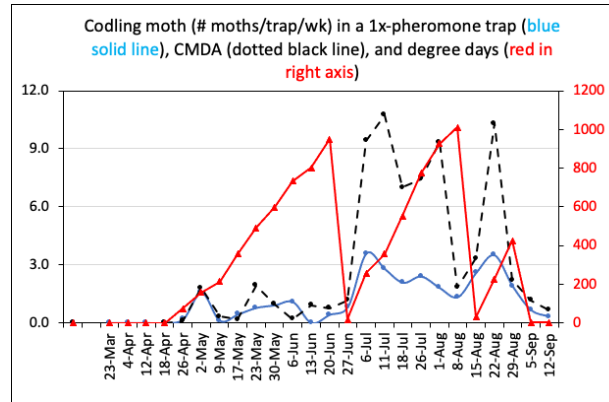
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2023 Insect monitoring

► Codling Moth (CM) in Walnuts : 1st biofix 22 April; 2nd biofix: 27 June; 3rd biofix: 15 August



- The 3rd biofix was set as August 15 since we check traps every week. But if you check traps in the middle of the week. The biofix can be anytime after August 8 and before August 15, and 1100 DD needed to complete 2nd generation has also been reached between these dates. So, take this biofix info and adjust yours based on your trap counts
- In most years, the third generation's late-stage (i.e., mature) larvae drop from the infested fruits to the ground and diapause (winter dormant state) inside the thick, silken cocoons under loose bark and soil or debris around the base of the trees. These larvae pupate in the next spring and emerge as adult moths.

Codling moth:
Lower/upper threshold= 50/88°F

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2023 Insect monitoring

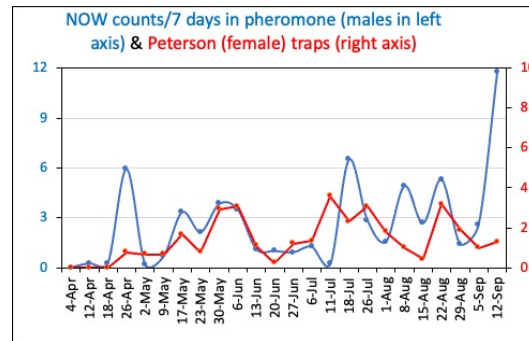
- Codling Moth (CM):
 - 1st biofix: 22 April
 - 1st gen. spray timing:
 - 1A flight (300 DD): 12-14 May
 - 1B flight (600 - 700 DD): 29 May - 3 June
 - 2nd biofix: 27 June
 - 2nd gen. spray timing - predicted (300 DD): 9 July
 - 3rd biofix: 15 August; spray timing (300 DD): 25 August
 - DD as of 9/15: 783

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

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2023 Insect monitoring

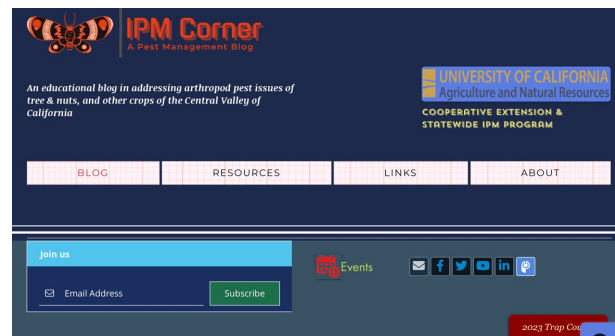
► Navel Orangeworm (NOW) in Walnuts



- Minimal risks from NOW in walnuts, especially from the first 2 flights
- The tail end of the 3rd flight can be a risk to early varieties
- Chandler is the least susceptible, and 4th flight might infest them.
- NOW pheromone trap counts have gone up this week, most likely due to almond harvest in the area

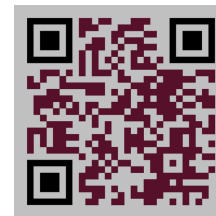
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Jhalendra Rijal Twitter/X

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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.

In this presentation, discussing research results requires the use of pesticide trade names, but this does not constitute an endorsement of the products, nor does not imply that other products are not available. Some products mentioned may be for experimental use only and included for informational purposes. Pesticide Label is the law! Please follow all instructions and safety precautions on the label when applying pesticide products.

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