

Insect Monitoring and IPM Updates

July 28, 2020

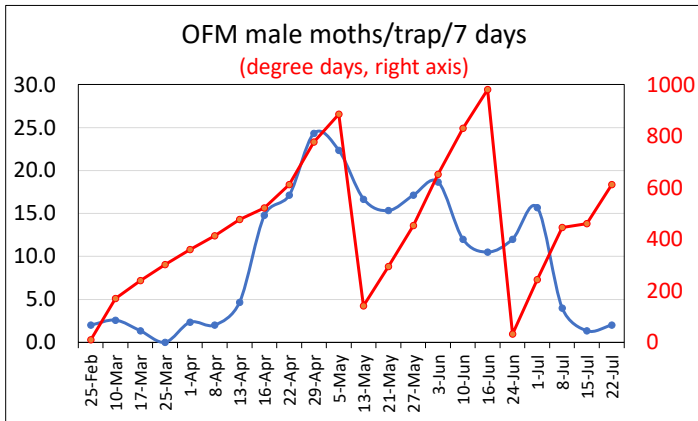
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Oriental Fruit Moth (Traps were placed in almonds)

1st flight biofix: 25 Feb.
Spray timing 1st gen. (500-600 DD): 15-21 April
2nd flight biofix: 8 May;
Spray timing 2nd gen. (400-500 from 8th May): 25-29 May
3rd flight biofix: 24 June; 3rd flight spray timing (400 DD): 5 July
DD (7/22): 612



Shoot strike monitoring in peach
Timing: mid-June, mid-July

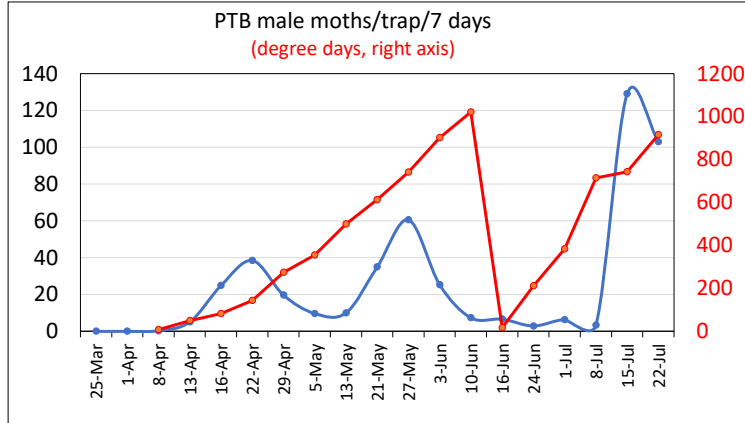
Typical generation periods and spray timing

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

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Peach Twig Borer (Traps placed in almonds)

1st flight biofix: 8 April
1st flight spray timing (400-500DD): 7 May-13 May
2nd flight biofix: 16 June
2nd spray timing (300-400 DD): 28 June - 2 July
DD (7/22): 915



Shoot strike monitoring

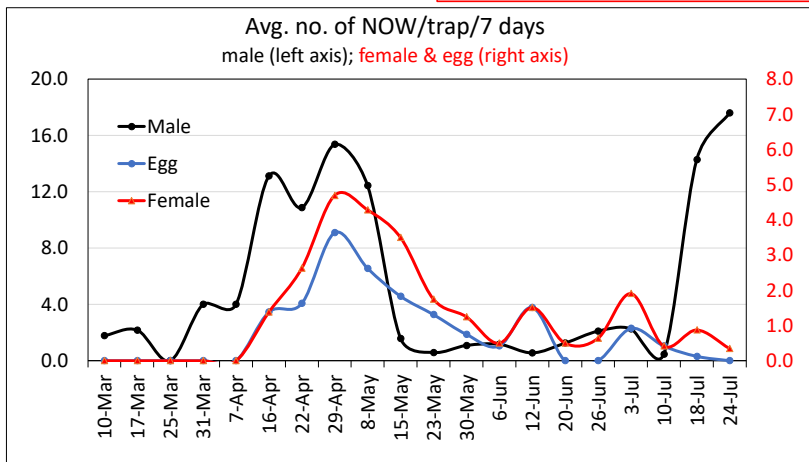
- For 2nd flight biofix (which was 24 June based on avg. degree days but did not really pick up the population until mid-July. Since my traps were in almonds, the numbers might be early July number might be impacted by hull split sprays. DD accumulation as of July 22, was 915.
- For each generation, shoot strikes first appear when the degree-day accumulation from moths in traps approaches 400 DD. More evident around 700-800 DD.
- Spray timing: 300-400 DD from the biofix
- Treatment threshold is three strikes per tree

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

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Navel Orangeworm (in almonds)

NOW egg biofix: 13 April
1st gen. "May" spray timing (100DD from egg biofix): 26 April
Expected 2nd flight male moth activity range (based on 1st flight activity, 16 April to 8 May; 1056 DD) = 27 June – 7 July (not very high activity to date)



NOW 2nd gen. flight

- In my trapping orchards, I have not seen high level of activity of NOW in the 2nd flight (expected peak last June through 2nd wk. of July). Need to watch 3rd flight activity a little more closely.
- Hullsplit spray decision should be made based on NOW activity and the stage of the nut development.
- Spray timing is at 1% of the fruits are at hullsplit stage (See photo)



Split <3/8 inch(=1cm)

- DD to complete one generation in mummy nuts (i.e., 1st gen.): 1056
- DD to complete one generation in seasonal almonds (i.e., 2nd-4th gen.): 700
- DD to complete one generation in seasonal pistachio: 500

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UC Davis Almond Hullsplit Prediction Model

Hull Split Calculator

[About Hull-Split Prediction](#) | [Model Development](#) | [GO TO THE MODEL](#) | [References](#)

Hull Split Calculator

Please Select a Station

Full Bloom Date

CIMIS Station

[View Data](#)

Cultivar	2020	2019	2018	2017	2016	2015	2014
NonPareil	07/08	07/09	07/13	07/09	07/02	07/02	06/30
Sonora	07/24	07/24	07/29	07/24	07/15	07/14	07/12
Price	07/27	07/28	08/01	07/27	07/20	07/19	07/17
Wood Colony	08/06	08/07	08/11	08/07	07/31	07/31	07/29
Winters	08/07	08/08	08/12	08/07	07/31	07/30	07/28
Aldrich	08/07	08/08	08/12	08/08	08/01	08/01	07/30
Padre	08/10	08/11	08/15	08/10	08/03	08/02	07/31
Butte	08/13	08/14	08/17	08/13	08/08	08/07	08/06
Ruby	08/17	08/18	08/22	08/18	08/11	08/11	08/09
Carmel	08/19	08/20	08/23	08/19	08/14	08/13	08/12
Monterey	08/20	08/21	08/25	08/20	08/13	08/12	08/10
Mission	08/21	08/22	08/26	08/22	08/15	08/15	08/13

Hullsplit prediction dates for Nonpareil variety using full-bloom date of 18 Feb, and weather station Denair CIMIS Station (Modesto area)

Cultivar/Year	2020	2019	2018
NonPareil	8 July	9 July	13 July

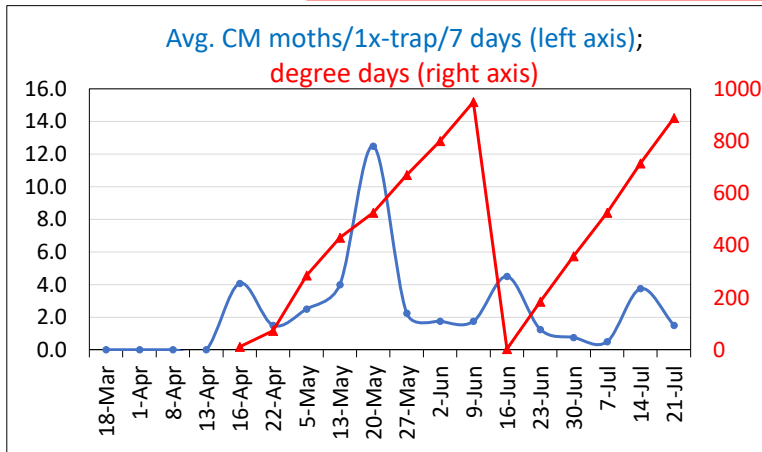
Model source:

http://fruitsandnuts.ucdavis.edu/Weather_Services/almond_hullsplit_prediction/predicting_hullsplit/

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Codling moth in walnuts

1st Biofix: 16 April
Spray timing 1A (300 DD): 7 May; Spray timing 1B (600-700 DD): 23 May – 27 May
2nd gen. biofix: 16 June
Spray timing (2nd gen., 250 DD): 26 June; DD (7/28): 1068



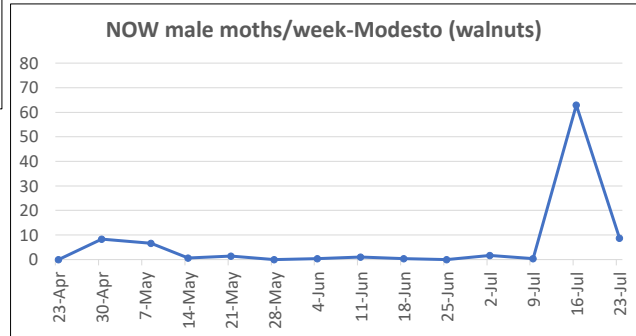
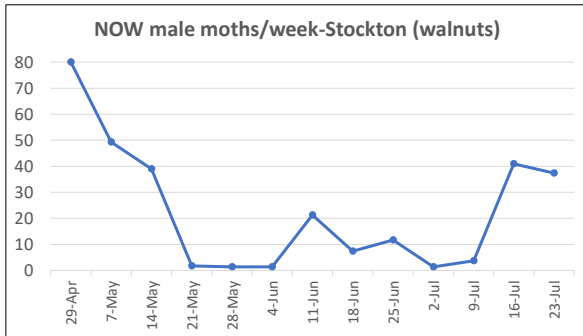
CM 3rd Biofix: when an increase occurs in trap catches between 800 to 1300 DD from first biofix (average is 1100 DD)

Typical generation periods and spray timing

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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Navel Orangeworm in walnuts



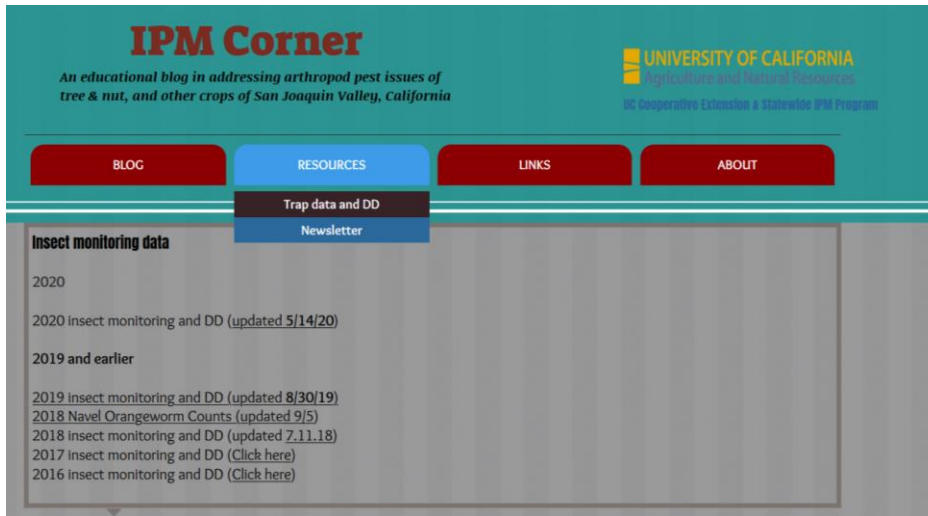
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10 days weather forecast-Modesto

Wed 29	100°/64°	Sunny	0%	☁ NNW 14 mph
Thu 30	99°/63°	Sunny	0%	☁ NNW 13 mph
Fri 31	98°/61°	Sunny	0%	☁ NNW 15 mph
Sat 01	100°/62°	Sunny	0%	☁ NW 12 mph
Sun 02	100°/64°	Sunny	0%	☁ NW 12 mph
Mon 03	99°/63°	Sunny	0%	☁ NW 13 mph
Tue 04	98°/62°	Sunny	0%	☁ NW 13 mph
Wed 05	97°/62°	Sunny	0%	☁ NW 9 mph
Thu 06	98°/62°	Sunny	0%	☁ NNW 9 mph
Fri 07	97°/63°	Sunny	0%	☁ NNW 9 mph
Sat 08	98°/64°	Sunny	0%	☁ NNW 11 mph
Sun 09	99°/64°	Sunny	0%	☁ NNW 11 mph

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Trap counts/DD info at IPMCorner.com



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Disclaimer:

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 number of insect captured may not represent the number what you are getting in your orchard. The average trend is more important than the exact number

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