Insect Trap Counts & Degree-Days Update
(Tree Fruit and Nut Crop Insects - Modesto Area)

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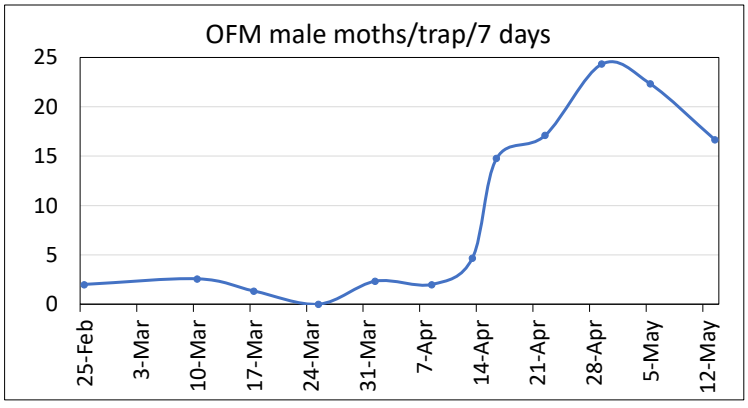
Oriental Fruit Moth
(Traps were placed in almonds)

1st gen. biofix: Feb. 25
Spray timing 1st gen. (500-600 DD): 15-21 April
DD (5/12): 1045 (Since the graph does not clearly gave me the idea on 2nd biofix. I am using average gen. duration (965 DD), as the 2nd biofix, which is 8 May
Spray timing 2nd gen. (400-500 from 8th May): 24-28 May

Date	Avg. moths/trap/7days
25-Feb	2
10-Mar	2.57
17-Mar	1.33
25-Mar	0
1-Apr	2.33
8-Apr	2
13-Apr	4.67
16-Apr	14.78
22-Apr	17.11
29-Apr	24.33
5-May	22.33
12-May	16.66



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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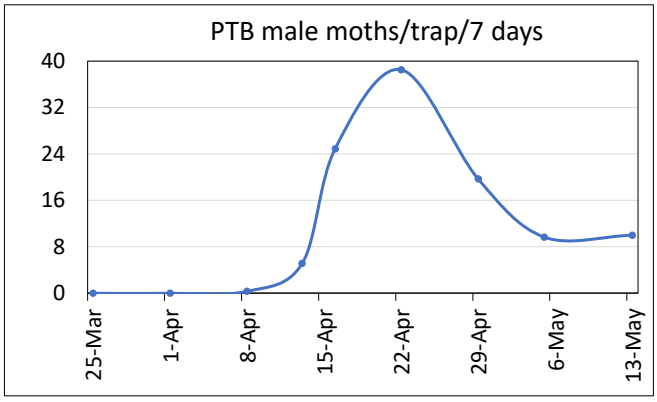
Peach Twig Borer
(Traps placed in almonds)

1st gen. biofix: 8 April
1st gen. spray timing (400-500DD): 7 May-13 May
DD (5/14): 519

Date	Avg. moths/trap/7days
25-Mar	0.00
1-Apr	0.00
8-Apr	0.33
13-Apr	5.13
16-Apr	24.89
22-Apr	38.50
29-Apr	19.67
5-May	9.67
13-May	10.00



PTB Biofix: The first male is trapped in pheromone traps and moths have been captured on at least two consecutive sampling periods

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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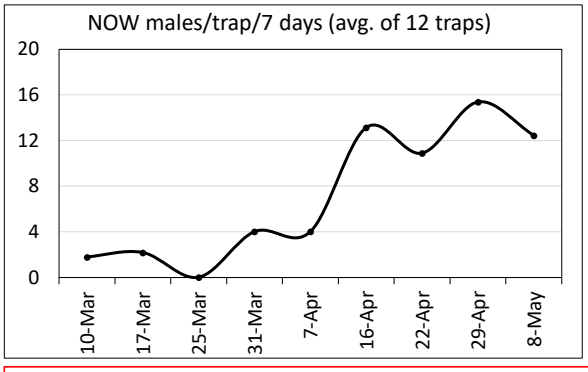
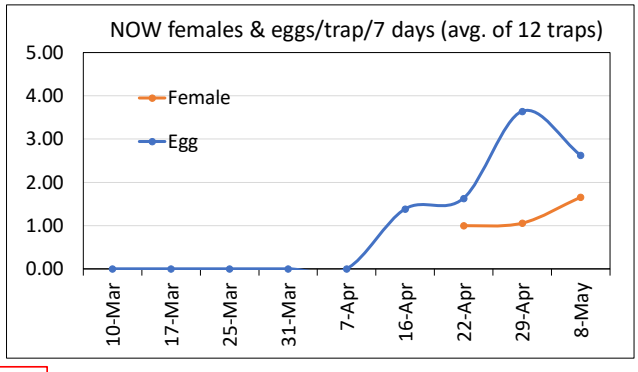
Navel Orangeworm (in almonds)

NOW Egg Biofix: When egg numbers and number of traps with eggs increase for at least two consecutive sampling periods (the biofix point is the first of those two dates) or when 50% or more of the traps have eggs.

NOW egg Biofix: 13 April
1st gen. "May" spray timing (100DD from egg biofix): 26 April
DD (5/14 from 13 April): 348
Time to complete 1st gen. (1056 DD from egg biofix): June 26





- 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
- DD required to hatch eggs from egg laying: 100

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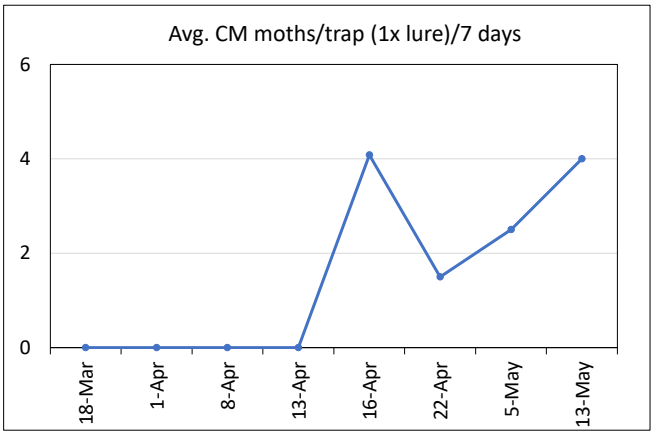
Codling moth in walnuts

1st Biofix: 16 April
Spray timing (1A, 300 DD): 7 May
Spray timing (1B, 600-700 DD): 22 May – 27 May
1st gen. DD (5/14): 448

Moths/trap/7 days

	CM 1x
18-Mar	0.00
1-Apr	0.00
8-Apr	0.00
13-Apr	0.00
16-Apr	4.08
22-Apr	1.5
5-May	2.5
13-May	4



CM Biofix: The first date that moths are consistently found in traps and sunset temperatures have reached 62°F.

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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Advisory regarding the Brown Marmorated Stink Bug (BMSB) infestation in San Joaquin, Stanislaus and Merced counties orchards

- If you have almond and peach orchards in proximity to BMSB favorite host- tree of heaven (*Ailanthus altissima*), watch for the BMSB presence/infestation in the orchard (also in tree of heaven if possible).
- Put the BMSB trap in edge of the orchard to intercept incoming BMSB from the nearby overwintering source. Keep in mind, infestation is not limited to the orchards near to tree of heaven. Any orchards can have BMSB infestation in these counties.

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Advisory regarding the Brown Marmorated Stink Bug (BMSB) infestation in San Joaquin, Stanislaus and Merced counties orchards

- In a farm call (5.4.20), I visited an almond orchard in the Escalon area (San Joaquin County). The orchard had BMSB damage as the owner of the orchard showed me two BMSB adults along with damaged nuts (see in the picture). There was a pretty significant amount of nut drop showing the signs of BMSB feeding on it. Notice the small multiple feeding spots indicated by gummings on the nuts. Leaffooted bug feeding usually has 1-2 stings on the nut while BMSB has multiple feeding spots in a nut.

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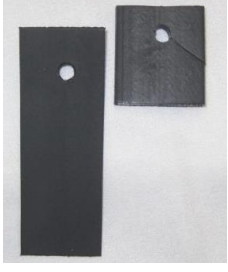
Recommendation for Brown Marmorated Stink Bug (BMSB) Monitoring

- Put couple of sticky traps (minimum 3 traps with BMSB dual lure) in border rows beginning mid-March. Idea is that intercepting stink bugs while they are moving into the orchard from nearby overwintering sites.
- In BMSB dual lure, there are two pieces (see the picture). Both needs to be placed together in one trap for the effective attraction
- Change lure in every 12 wks (Trece lure)
- Change sticky panel as necessary
- In addition, do visual inspection of the orchard for bugs, and feeding damage, especially in trees that are in orchard edge

Sticky Panel Trap



Trécé dual lure
(murgantiol & MDT)

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DAY	DESCRIPTION	HIGH / LOW	PRECIP	WIND	HUMIDITY
TONIGHT MAY 14	Partly Cloudy	--/54°	10%	NW 15 mph	64%
FRI MAY 15	Mostly Sunny	81°/54°	10%	NW 17 mph	43%
SAT MAY 16	Partly Cloudy	85°/57°	0%	NW 15 mph	36%
SUN MAY 17	Showers	78°/57°	50%	SSW 13 mph	56%
MON MAY 18	Showers	71°/51°	40%	WSW 13 mph	52%
TUE MAY 19	Partly Cloudy	70°/51°	20%	NW 12 mph	55%
WED MAY 20	Mostly Sunny	78°/52°	10%	NW 13 mph	45%
THU MAY 21	Sunny	82°/52°	0%	NW 13 mph	42%
FRI MAY 22	Mostly Sunny	83°/55°	0%	NW 13 mph	39%
SAT MAY 23	Mostly Sunny	86°/55°	0%	NW 12 mph	35%
SUN MAY 24	Sunny	87°/58°	0%	NW 13 mph	35%
MON MAY 25	Partly Cloudy	90°/60°	0%	NW 12 mph	35%

10 days weather forecast- Modesto

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Notes:

Weather station used to calculate degree days: Denair_II.A (CIMIS #206, Denair II)

The information provided in this document 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 insect density presented in these slides may not represent the number what you are finding in your orchard. Consider comparing the biofix, overall activity, trend of occurrence, instead of the number or average insect counts

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