

Trap Counts & Degree Day Update-2018 (Modesto Area) July 10, 2018

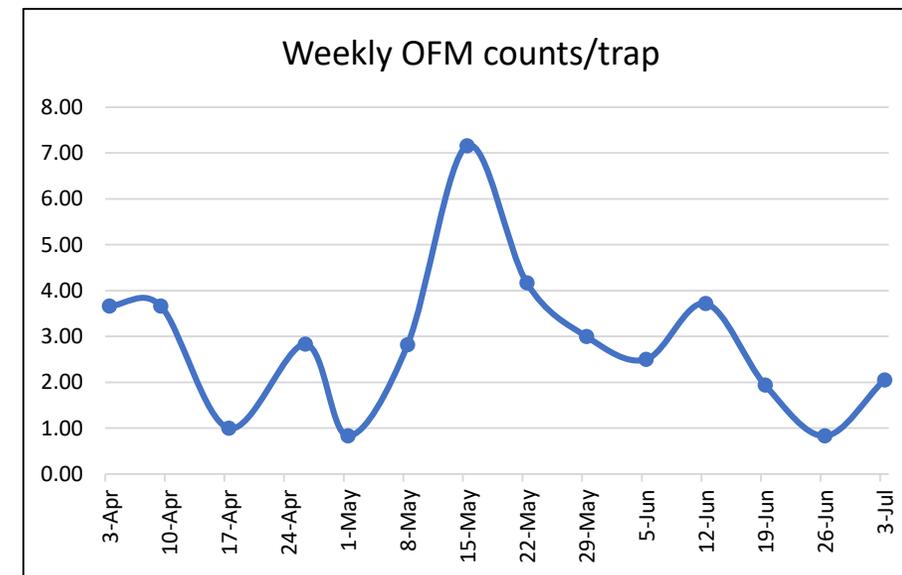
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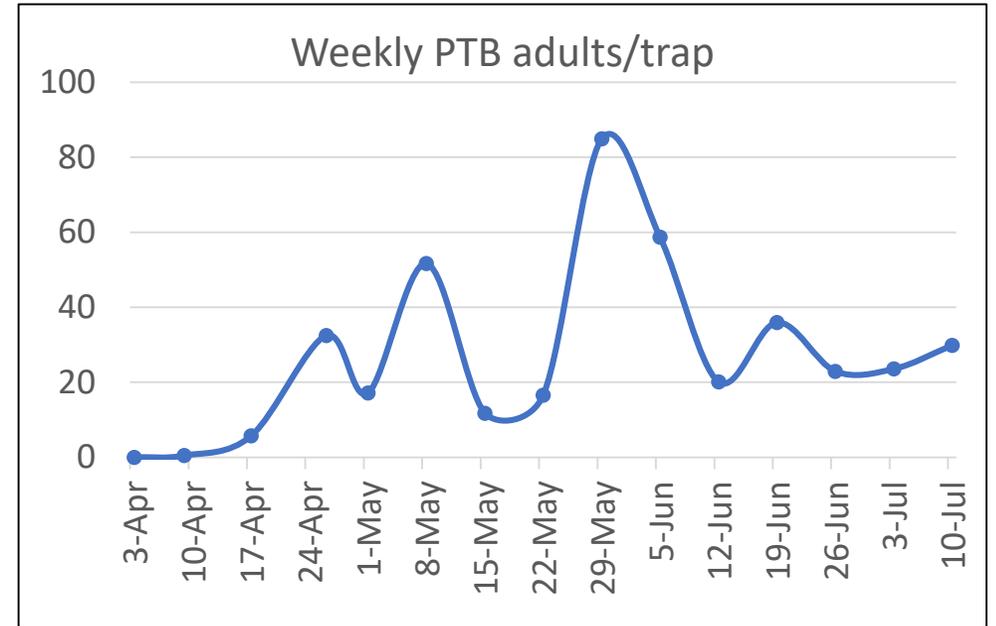
Oriental Fruit Moth

Date	Weekly avg. orchard 1	Weekly avg. orchard 2	Overall avg.	Biofix	Degree-days
3-Apr	4.00	3.33	3.67	11 March (1 st biofix)	Spray timing (500DD, 1 st flight): 23 April
9-Apr	2.67	4.67	3.67		
17-Apr	1.67	0.33	1.00		
26-Apr	2.00	3.67	2.83		Spray timing (400DD, 2 nd flight): 30 May
1-May	1.67	0.00	0.83		
8 May	2.33	3.30	2.82		
15 May	2.00	12.33	7.16	12 May (2 nd biofix)	
22 May	3.33	5.00	4.17		
29 May	4.33	1.67	3.00		
5 June	5.00	0.00	2.50		19 June DD: 895
12 June	5.33	3.00	3.72		
19 June	2.33	1.33	1.94		
26 June	2.33	1.33	1.94	22 June (3 rd biofix)	Spray timing (3 rd flight, 400DD): July 4
3 July	2.67	1.67	2.06		10 July DD: 580



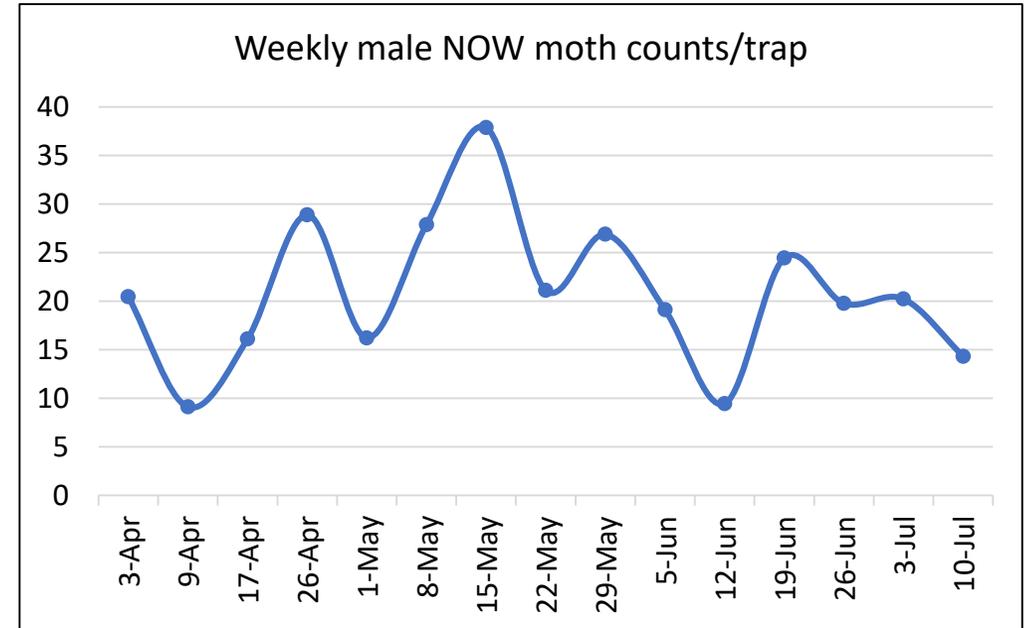
Peach Twig Borer

Date	Weekly avg. orchard 1	Weekly avg. orchard 2	Weekly avg. orchard 3	Overall avg.	Biofix	Degree-days
3-Apr	0	0	0	0	1 st flight (9 April)	May spray timing 300-400DD: 6-10 May
9-Apr	0.00	0.33	0.67	0.44		
17-Apr	3.33	5.67	9.33	5.70		
26-Apr	24.00	33.33	48.00	32.48		
1-May	23.00	30.00	3.33	17.15		
8 May	48.33	72.00	34.66	51.66		19 June DD: 1078
15 May	3.66	26.67	5.00	11.77		
22 May	3.33	41.67	7.33	16.59		2 nd biofix: 15 June
29 May	4.67	164.67	77.00	84.93		
5 June	2.67	124.33	43.00	58.67		Predicted spray timing for 2 nd gen (250-300DD): 26-28 June
12 June	5.00	46.33	8.67	20.11		
19 June	12.33	69.67	33.67	35.96		
26-Jun	19.00	29.00	28.33	22.93		
3-Jul	23.33	36.67	22.00	23.56		
10-Jul	7.33	60.00	38.33	29.85		10 July DD: 622



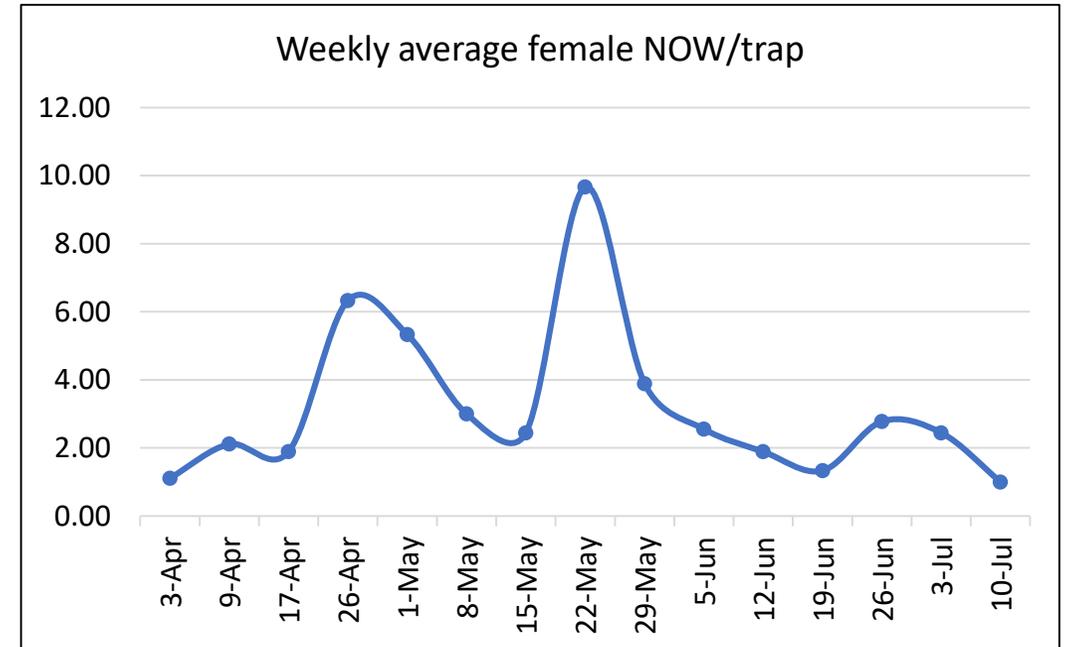
Navel Orangeworm-males (almonds)

Date	Weekly avg. orchard 1	Weekly avg. orchard 2	Weekly avg. orchard 3	Overall avg.
3-Apr	8.87	19.60	32.90	20.46
9-Apr	3.67	8.67	15.00	9.11
17-Apr	16.00	13.33	19.00	16.11
26-Apr	30.00	21.67	35.00	28.89
1-May	8.33	17.00	23.33	16.22
8 May	7.66	34.33	41.66	27.88
15 May	18.33	58.33	37	37.88
22 May	13	33.33	17	21.11
29 May	29.33	39.33	12	26.89
5 June	12.33	28.33	16.67	19.11
12 June	5.00	16.67	6.67	9.44
18 June	19.33	42.67	11.33	24.44
26-Jun	12.33	20.67	26.33	19.78
3-Jul	11.33	36.67	12.67	20.22
10-Jul	0.33	23.00	19.67	14.33



Navel orangeworm-females (pistachio-bait trap in almonds)

Date	Weekly avg. orchard 1	Weekly avg. orchard 2	Weekly avg. orchard 3	Overall avg.
3-Apr	0.33	0.67	2.33	1.11
9-Apr	0.33	1.33	4.67	2.11
17-Apr	1.00	1.00	3.67	1.89
26-Apr	7.67	3.00	8.33	6.33
1-May	8.67	3.67	3.67	5.33
8 May	2.66	2.66	3.67	2.99
15 May	1.66	4.33	1.33	2.44
22 May	15.00	7.00	7.00	9.67
29 May	1.67	3.00	7.00	3.89
5 June	2.67	1.00	4.00	2.56
12 June	1.33	2.00	2.33	1.89
19 June	1.00	0.67	2.33	1.33
26-Jun	1.33	2.00	5.00	2.78
3-Jul	2.33	0.67	4.33	2.44
10-Jul	0.67	1.33	1.00	1.00



Navel orangeworm-egg trap in almonds

Date	Weekly avg. orchard 1	Weekly avg. orchard 2	Weekly avg. orchard 3	Overall weekly avg.	Biofix	Degree-days
3-Apr	0.00	0.00	0.00	0.00	9 April	Spring spray timing (100 DD): April 25
9-Apr	0.50	0.00	3.50	1.33		
17-Apr	0.00	0.50	4.00	1.50		
26-Apr	2.25	0.00	52.00	18.08		
1-May	1.00	0.00	24.75	8.58		
8 May	2.66	4.67	26.00	11.11		1200 DD from egg laying biofix: 6 July
15 May	10.75	10.75	22.5	14.67		
22 May	11.75	15.75	42.00	23.17		
29 May	2.50	7.75	14.25	8.17		
5 June	2.25	2.75	10.75	5.25		
12 June	2.25	3.25	4.75	3.42		
19 June	4.5	3	5.25	4.25		
26 June	3.00	2.25	10.75	5.33		
3 July	0.50	5.00	5.75	3.75		
10 July	4.50	3.00	7.75	5.08		

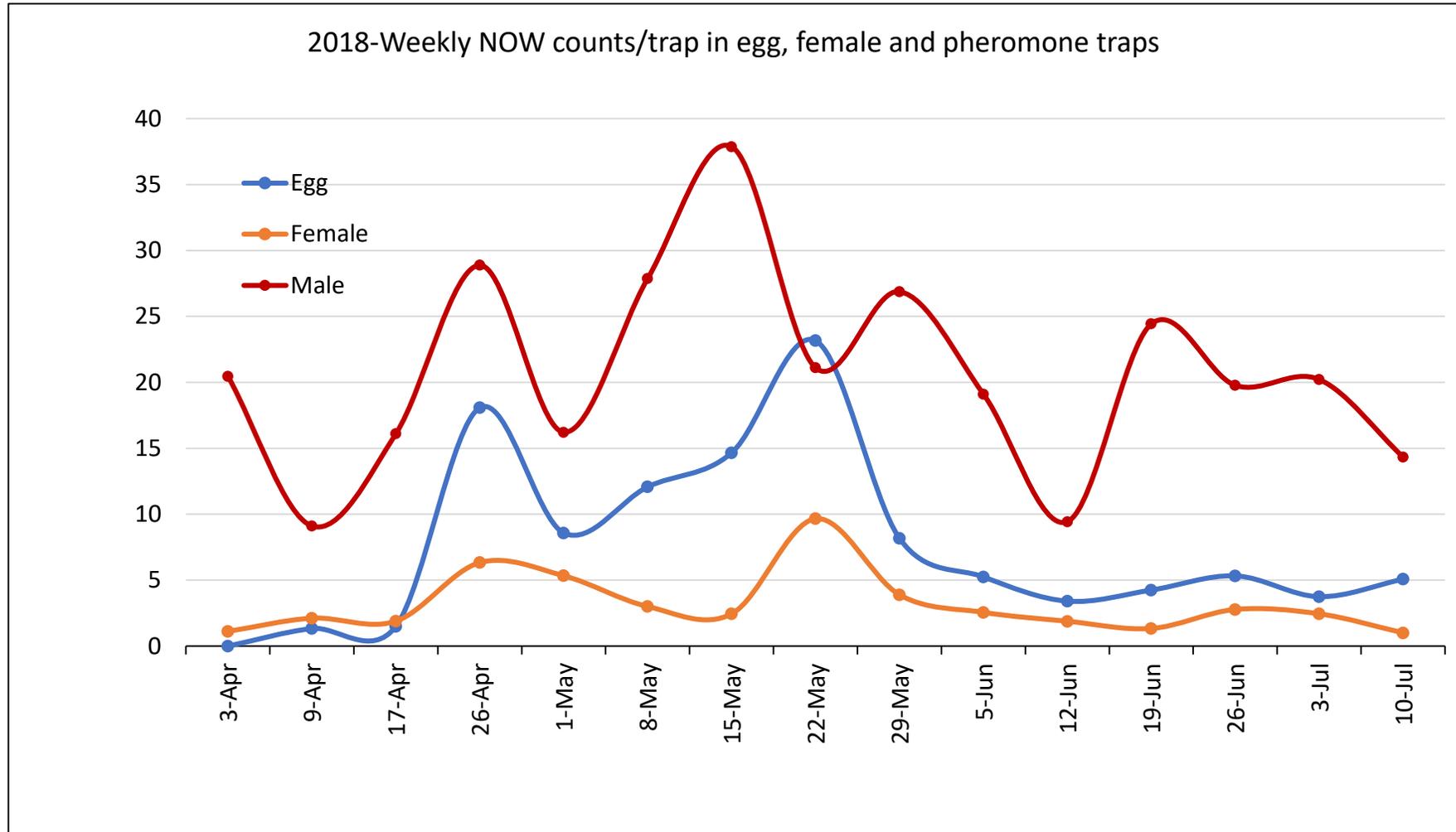
Stage of the hull split that we are referring for the pest management point of view (see picture)



Split <math>< 3/8</math> inch(=1cm)

Each orchard has 4 egg traps baited with almond meal

Navel Orangeworm Activity in Almond Orchard-Modesto Area



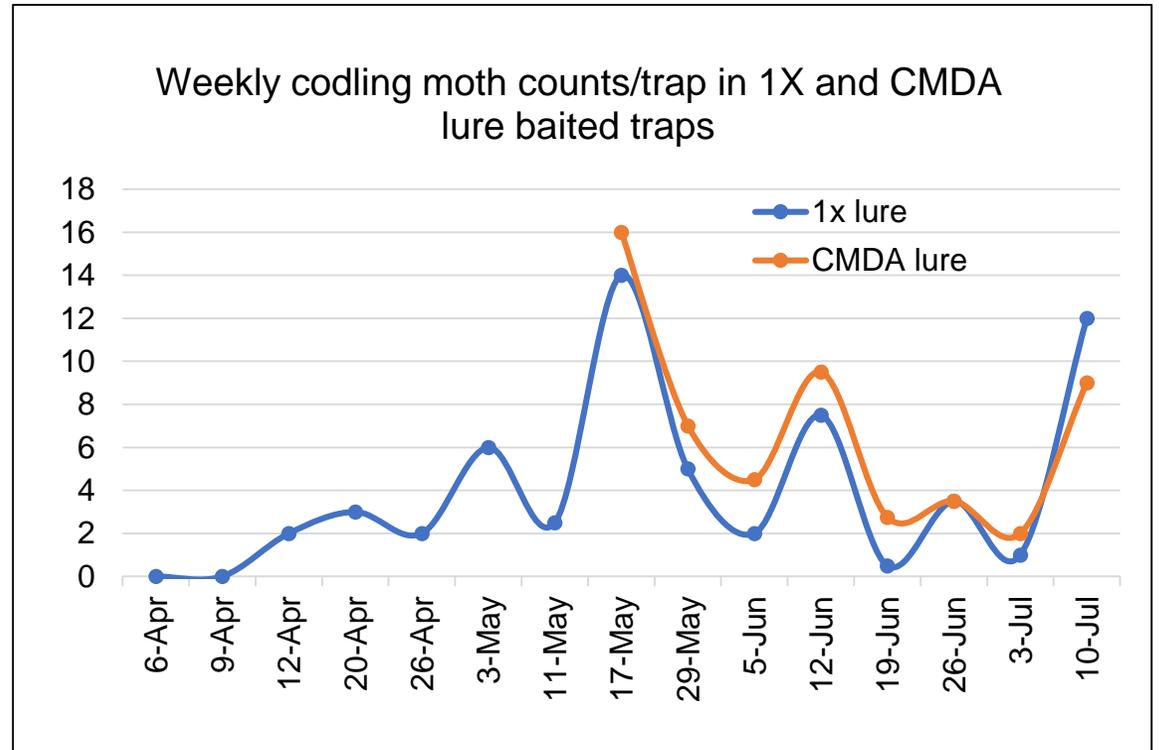
Egg laying biofix: 9 April

1st hull split spray timing should be determined based on female egg laying activity (egg and/or female traps) and the stage of the hull split (~1% of nuts with split opening of ~3/8 inch)

Codling Moth (1x pheromone trap)

Date	Weekly average (1x pheromone lure)	Weekly average (CMDA lure)	Biofix*	Degree-days	
6-Apr	0.00		1 st biofix 1 April	1A Peak (300DD): 29 April	
9-Apr	0.00				
12-Apr	2.00			1B Peak spray timing (600DD): 20 May	
20-Apr	3.00				
26-Apr	2.00				
3 May	6.00				
11 May	2.50				
17 May	14.00	16.00		19 June DD: 101	
29 May	5.00	7.00			
5 June	2.00	4.50			
12 June	7.50	9.50	2 nd biofix: 15 June		
19 June	0.50	2.75			
26 June	3.50	3.50	Predicted 2 nd flight (2A) spray timing (250 DD): June 25		
3 July	1.00	2.00			
10 July	12.00	9.00		10 July DD: 622	
			Predicted 2 nd flight (2B) spray timing (700 DD): July 13		

*Biofix: Vary from orchard to orchard. Very inconsistent trap capture in many cases. So, please follow your trap counts for making spray decisions



We started seeing little more CM activity in traps beginning 10 July. This is likely the 2B flight. Based on 700DD from the biofix, the 2B spray timing will be on July 13 (around mid-July in general terms)

Upcoming weather:

10-Day Weather Forecast- Modesto, CA

DAY		DESCRIPTION	HIGH / LOW	PRECIP	WIND	HUMIDITY
TODAY JUL 11		Sunny	100°/66°	0%	NW 9 mph	21%
THU JUL 12		Mostly Sunny	99°/68°	10%	NNW 10 mph	33%
FRI JUL 13		Sunny	99°/66°	0%	NNW 13 mph	36%
SAT JUL 14		Sunny	100°/67°	0%	NW 14 mph	33%
SUN JUL 15		Partly Cloudy	102°/69°	0%	NW 12 mph	32%
MON JUL 16		Mostly Sunny	102°/67°	0%	NW 12 mph	31%
TUE JUL 17		Partly Cloudy	101°/67°	0%	NW 12 mph	30%
WED JUL 18		Sunny	101°/68°	0%	NW 12 mph	28%
THU JUL 19		Mostly Sunny	102°/68°	0%	NW 12 mph	29%
FRI JUL 20		Sunny	101°/68°	0%	NW 12 mph	28%
SAT JUL 21		Mostly Sunny	100°/68°	0%	NW 12 mph	28%
SUN JUL 22		Sunny	101°/69°	0%	NW 13 mph	29%
MON JUL 23		Mostly Sunny	102°/69°	0%	NW 13 mph	28%
TUE JUL 24		Sunny	102°/68°	0%	NW 12 mph	28%
WED JUL 25		Sunny	103°/68°	0%	NW 12 mph	27%

Brown marmorated stink bug

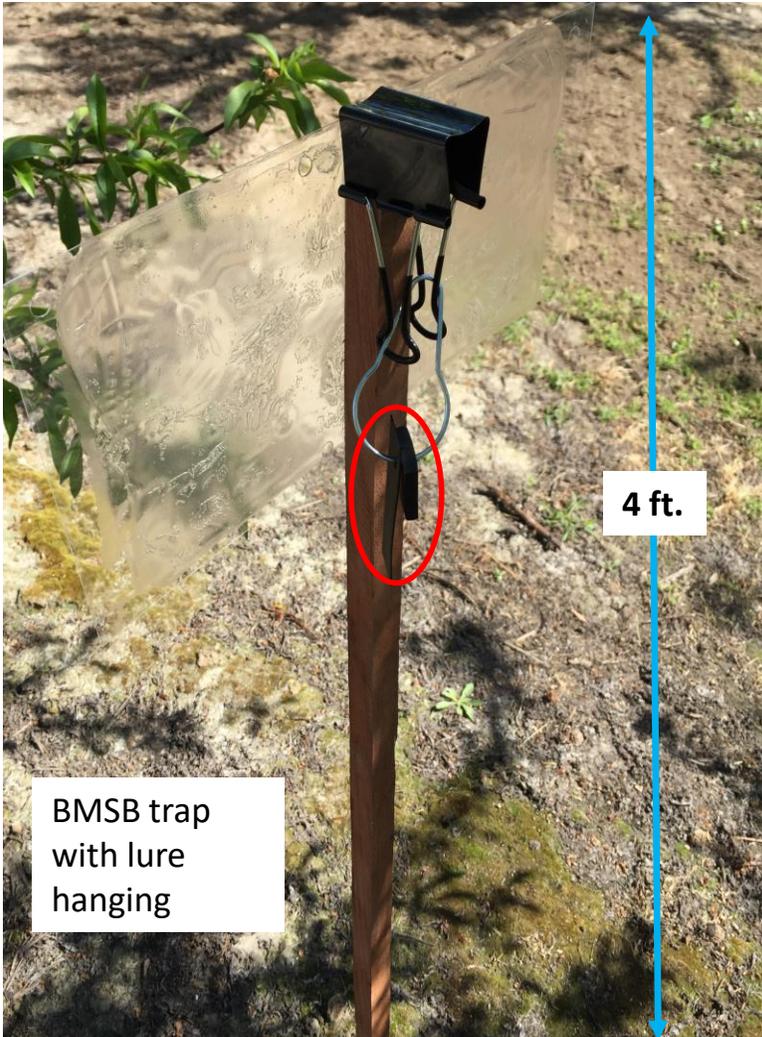


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- Two BMSB adults feeding on developing nuts (left). Picture taken
- BMSB feeding caused substantial nut drop in a couple of almond orchards in Stanislaus and Merced Counties (right)



Brown marmorated stink bug



BMSB monitoring:

- Use sticky panel trap for monitoring.
- Put the traps (2-3) in border rows facing open field and/or other potential overwintering sites (house, tree of heaven, etc.)
- The traps should be placed on the ground in a 4-ft tall wooden stake with sticky card and lure attached to the top
- Visual sampling for damaged nuts and live insect/egg mass is also important



New mating disruption product for NOW registered for organic and conventional use



Rate: @20 dispensers/acre

Use: almond, walnut, pistachio and others

CIDE Trak NOW Meso