INSECT PESTS MONITORING FOR TREE FRUIT AND NUT CROPS

May 4, 2022

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

Monitoring

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

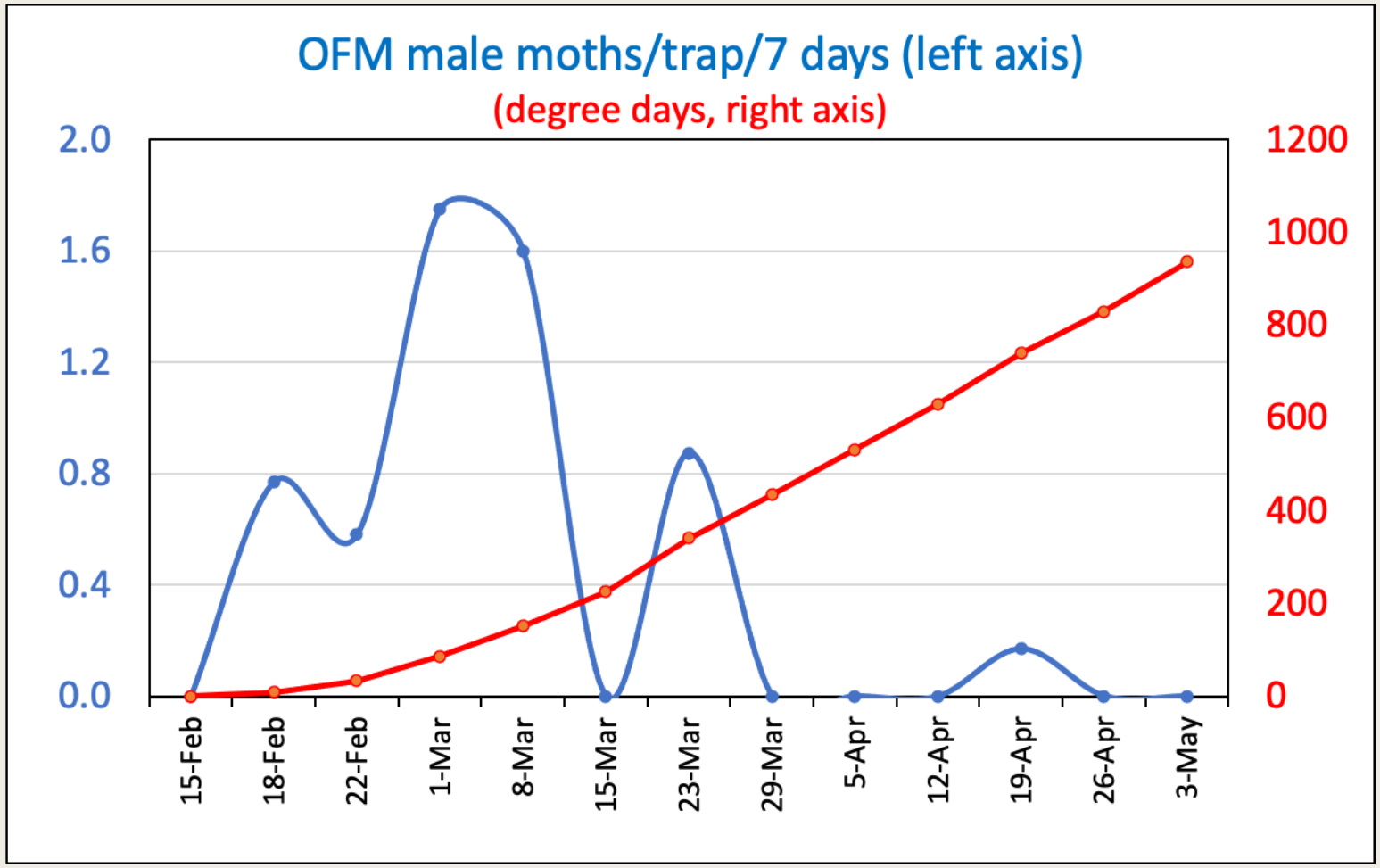
- For DD models: use this link, http://ipm.ucanr.edu/WEATHER/ddretrievetext.html

Or google “run UCIPM degree days models”

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

- Oriental fruit moth (OFM)
  - *Biofix: 18 February; DD (5/3): 937*
  - *Predicted 1st gen. spray timing (500-600DD):* ***April 4 -10***

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

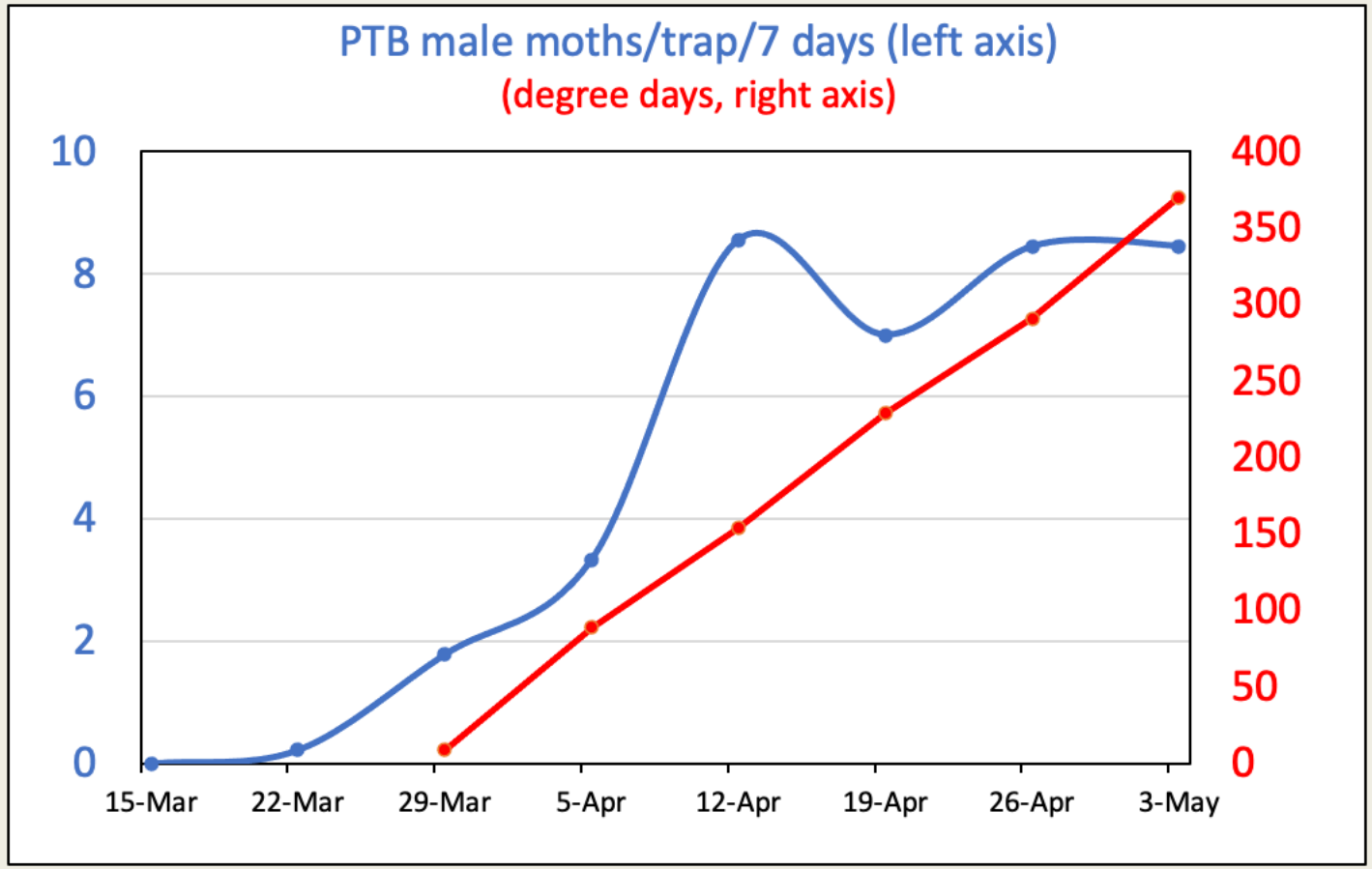


Monitor shoot strikes in late April

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

- Peach Twig Borer (PTB)
  - *Biofix: 21 March (Denair) ; 29 March (West Modesto);*
  - *DD (5/3 based on 29 March): 370*
  - *Predicted 1st gen. spray timing (400 DD): May 5*

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



In peaches,

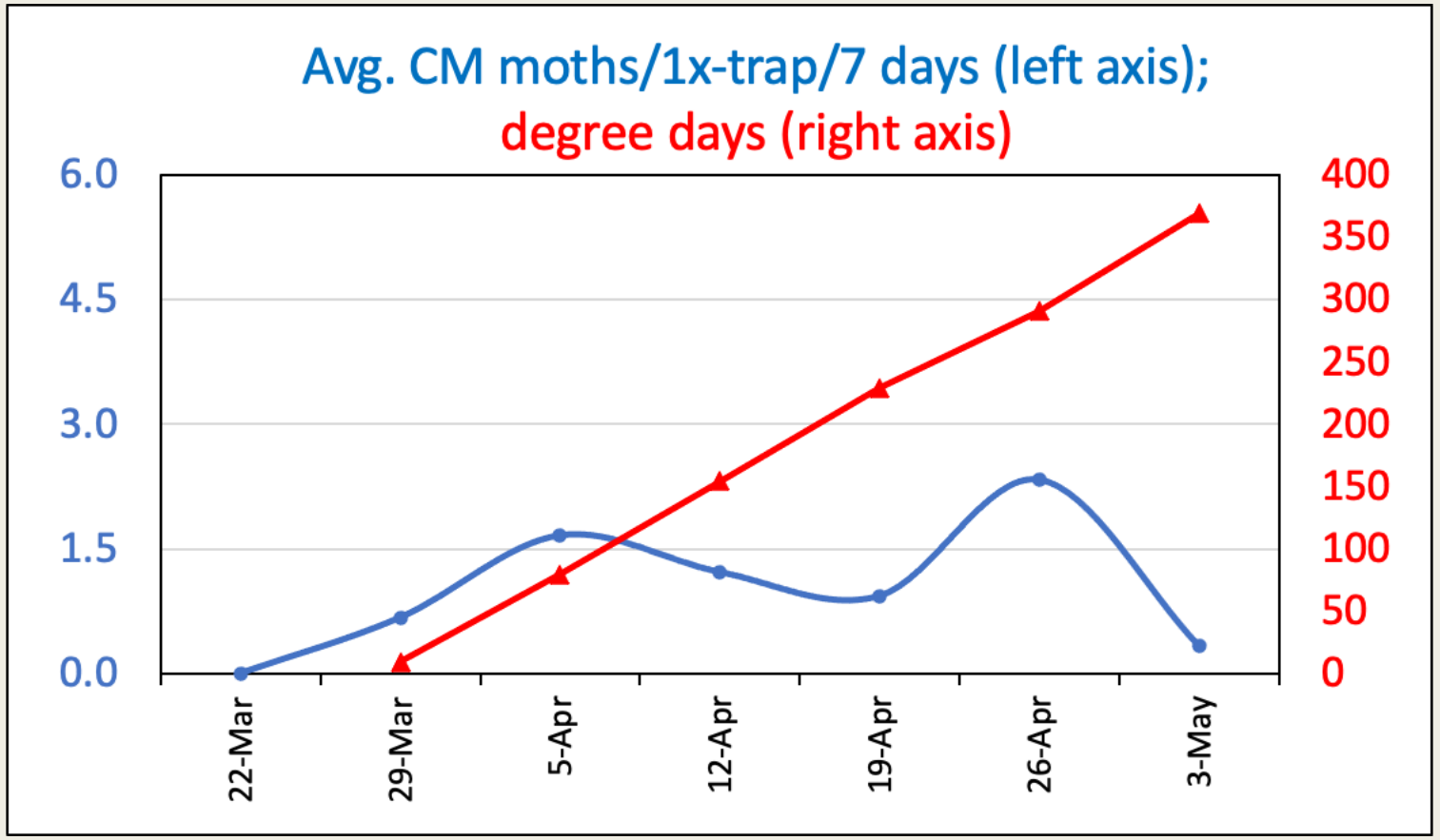
•If the fruit is still green, the best control can be achieved when treatments are applied after about 400 degree-days have accumulated from the biofix.

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

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

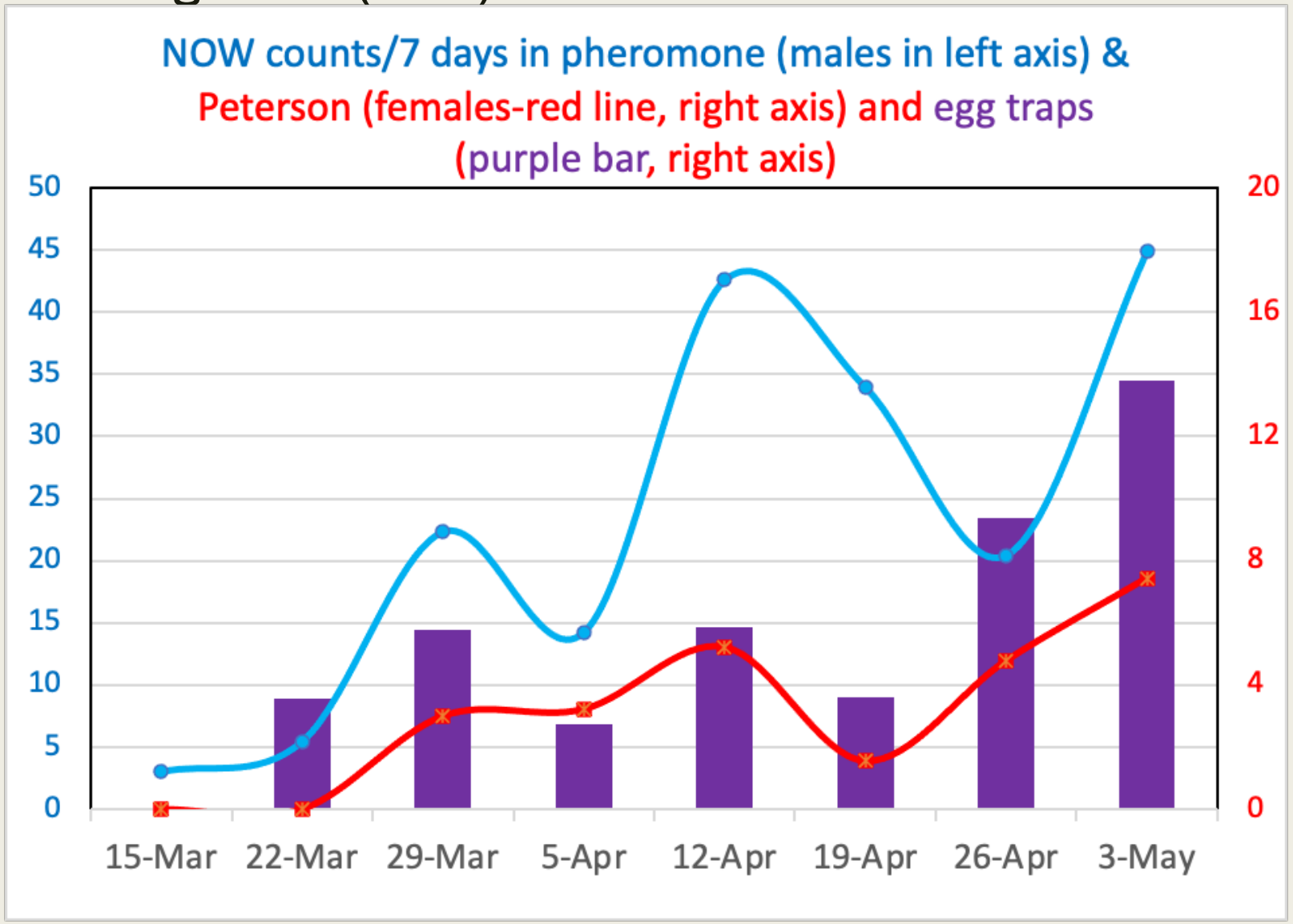
- Codling Moth (CM) – 1x pheromone lure
  - *Biofix: 29 March*
  - *DD (5/3): 369*
  - *Predicted 1st gen. spray timing*
    - 1A timing (300 DD): April 25; 1B timing (600 DD): May 17

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



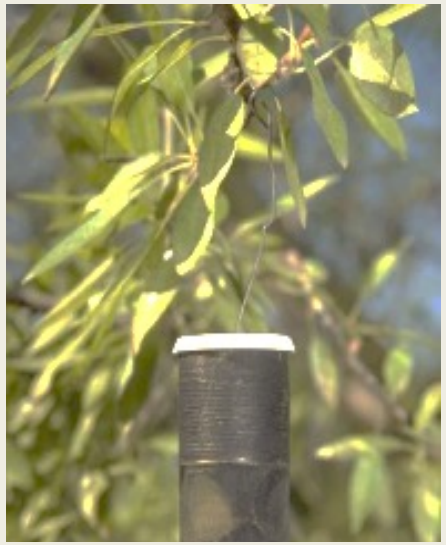
Pest Activities/DD in Traps *(Denair II CIMIS #206)*

- Navel Orangeworm (NOW) in Almonds



Almonds- NOW eggs in the last 4 wks

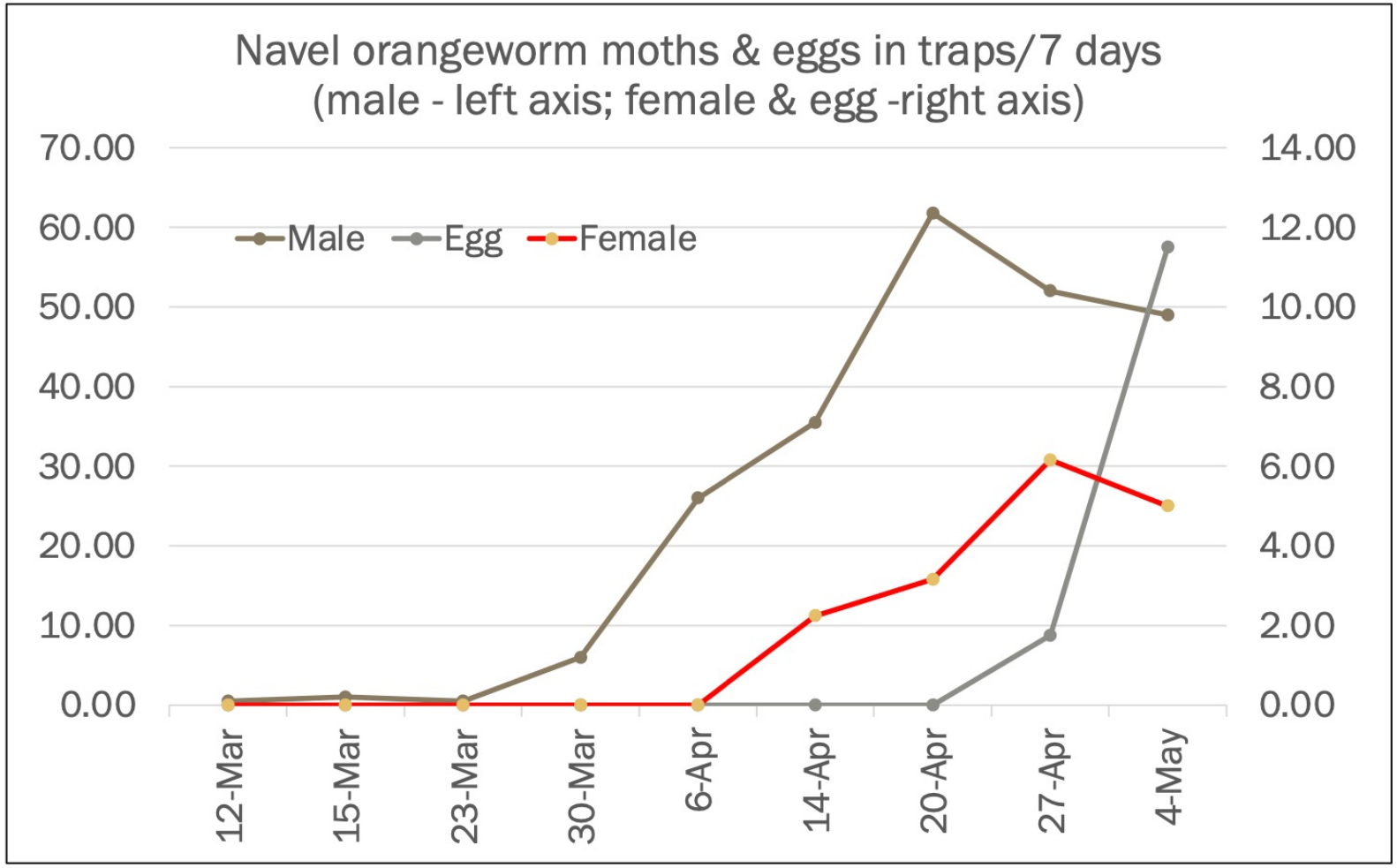
Egg laying biofix:
22 March



		Site 1	Site 2	Site 3
12-Apr	Egg Trap 1	46	5	31
	Egg Trap 2	1	1	27
	Egg Trap 3	37	0	9
	Egg Trap 4	0	0	33
	Egg Trap 5	0	0	22
	Egg Trap 6	1	2	28
	Egg Trap 7	0	1	20
	Egg Trap 8	0	0	15
	Average	10.625	1.125	23.125
19-Apr	Egg Trap 1	0	1	5
	Egg Trap 2	1	2	6
	Egg Trap 3	0	0	9
	Egg Trap 4	0	0	1
	Egg Trap 5	0	1	12
	Egg Trap 6	0	0	18
	Egg Trap 7	0	0	13
	Egg Trap 8	0	0	17
	Average	0.125	0.5	10.125
26-Apr	Egg Trap 1	0	3	22
	Egg Trap 2	15	0	10
	Egg Trap 3	57	1	30
	Egg Trap 4	10	0	7
	Egg Trap 5	0	0	12
	Egg Trap 6	7	1	9
	Egg Trap 7	5	0	13
	Egg Trap 8	0	9	14
	Average	11.75	1.75	14.625
3-May	Egg Trap 1	8	5	28
	Egg Trap 2	21	2	35
	Egg Trap 3	19	2	20
	Egg Trap 4	36	6	31
	Egg Trap 5	25	3	45
	Egg Trap 6	17	12	22
	Egg Trap 7	10	21	29
	Egg Trap 8	4	28	31
	Average	17.5	9.875	30.125

2021 data (for comparison)

Navel Orangeworm (NOW) Activities in Traps (Almonds) High pressure



- Both male in pheromone & female activities in Peterson baits increased
- Eggs laying biofix; 22 April
  - 100 DD : 2 May
  - 1056 DD: 29 June
- Egg biofix: when egg numbers and number of traps with eggs increase for at least two consecutive sampling periods or 50% of the traps have eggs (UCIPM)

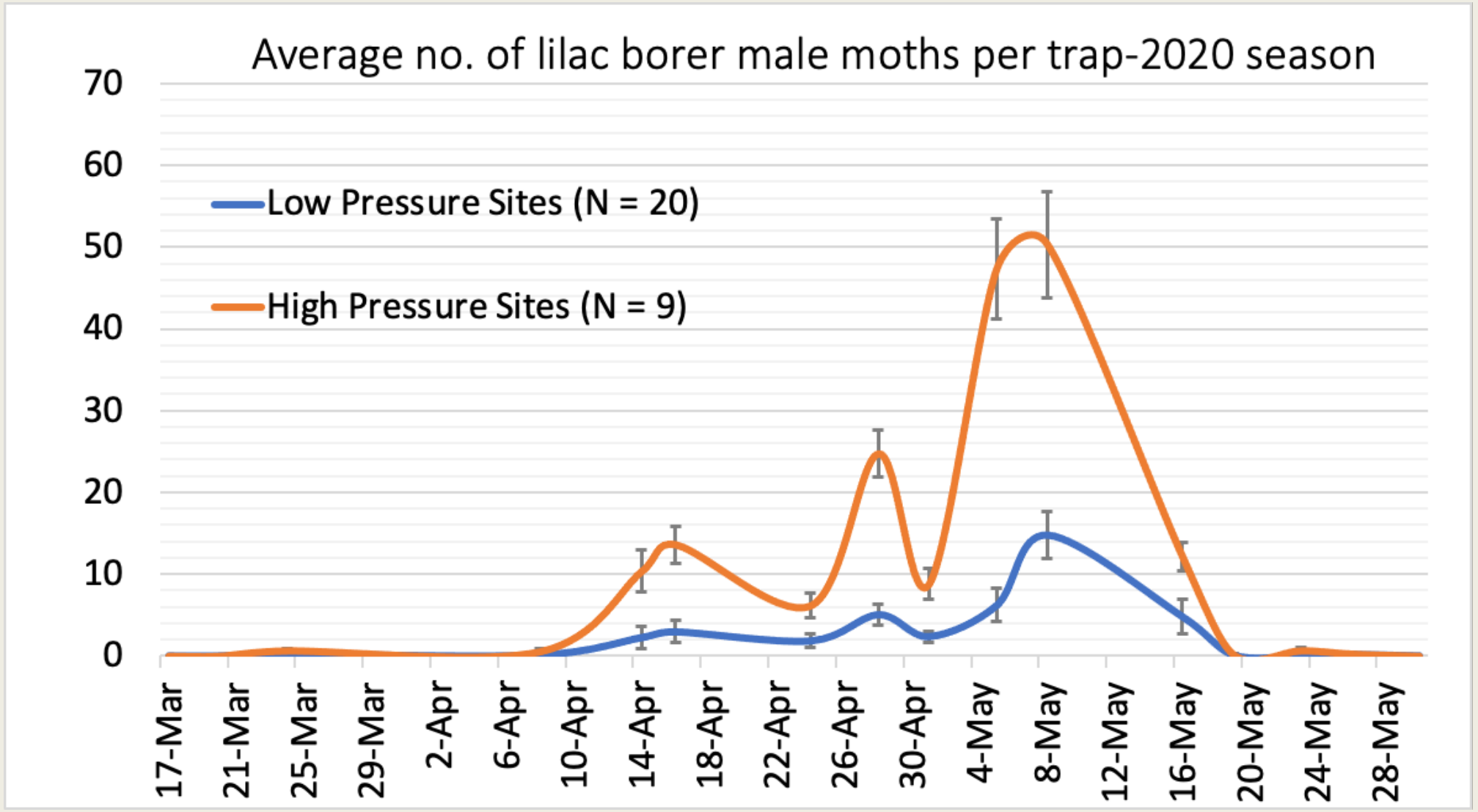
What is new?

Lilac borer or ash borer in olives
Podosesia syringae (Lepidoptera: Sesiidae)

http://cesanjoaquin.ucanr.edu/news_986/Field_Notes_Newsletter/?newsletteritem=85012

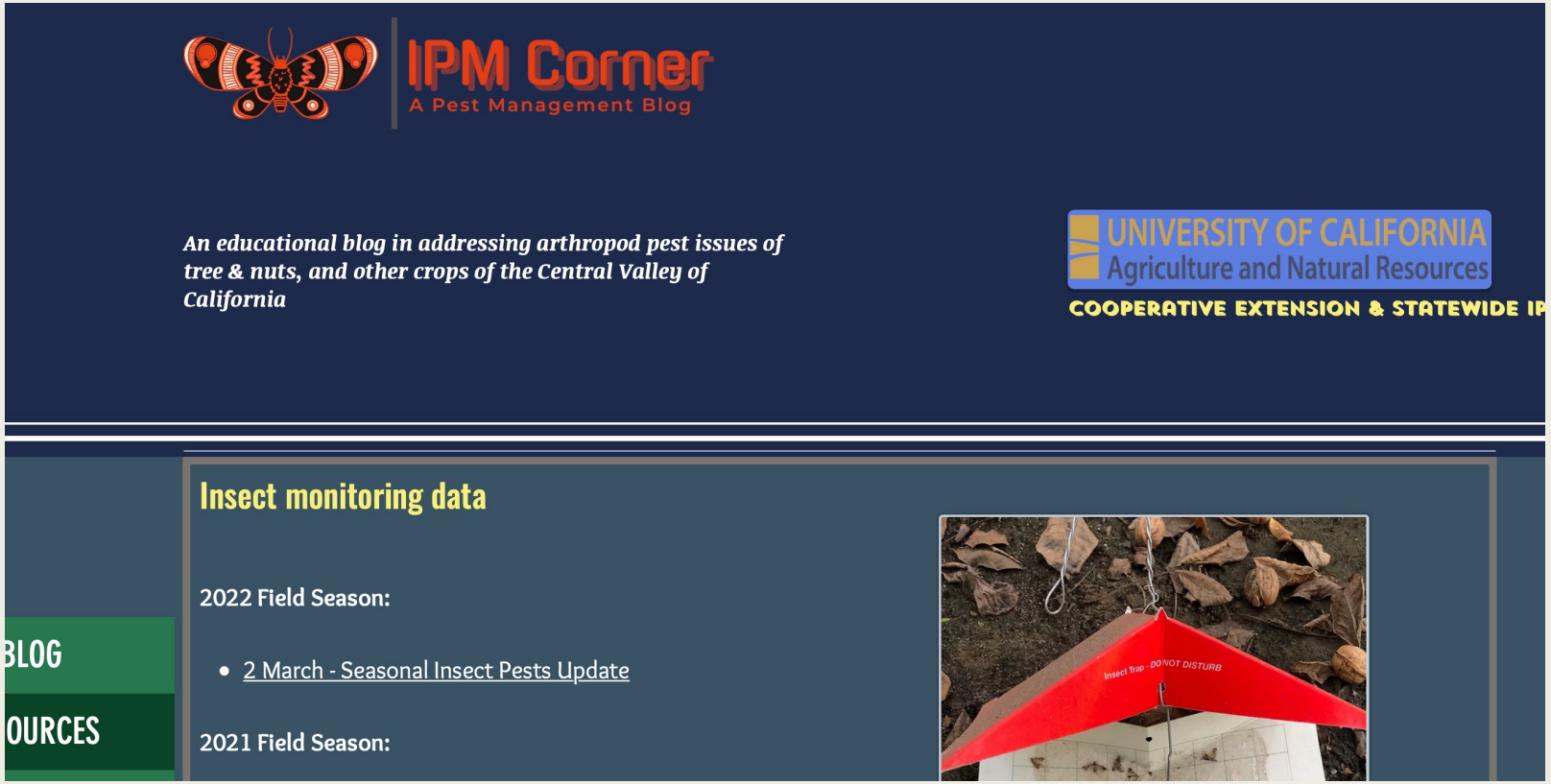
Lilac borer pupal case protruding from the infested branch

Lilac borer or ash borer in olives



Not all LFB/BMSB infested nuts produce external gummings

You can access updated info here: IPMCorner.com



Jhalendra Rijal Twitter

@IPMCorner

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