

# 2024 IPM Update -23 April

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

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## Monitoring

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



Or google "Run Degree Days UCIPM"

Note:

- All trapping data reported in this presentation were collected from 2-4 commercial orchards in Stanislaus County. The weather station used for calculating degree days was CIMIS Station #206, Denair.
- Therefore, the information provided here should be used as a general reference, this is not a recommendation of any kind. All growers/PCAs should have their monitoring systems and tools in place, and use that information in making pest management decisions as "every orchard is different"

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# Degree-day models: UCIPM

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## How to Manage Pests

### Run Models and Calculate Degree-Days

Our degree-day calculator has two branches. You can run preset models as recommended in our pest man Or, you can specify thresholds and method of calculation to calculate any degree-days. Weather data for th come from the UC IPM database for California, a file you supply, or data you enter online. | [Acknowledge](#)

| [Using this calculator](#) | [Reference degree-day tables](#) | [About degree-days](#) |

[Run models](#)  
[Calculate degree-days](#)

**Run models**—using degree-days, as recommended by UC Cooperative Extension

**Select an organism and preset thresholds**

- Beet armyworm (Lower=54 F)
- California red scale (Lower=53 F)
- Codling moth (Lower=50 F, Upper=88)
- Conspense stink bug (Lower=53.6 F)
- Cotton (Lower=60 F)
- Elm leaf beetle (Lower=52 F)
- Fuller rose beetle (Lower=51 F)
- Lygus bug (Lower=54 F)

- [Reference degree-day tables](#) for accumulating de
- [Other models](#) of plants, pests, and beneficials—u (unknown validation)


**Calculate degree-days**—specify thresholds


**Specify thresholds and method of calculation**

**Thresholds**

Fahrenheit  Celsius

<http://ipm.ucanr.edu/WEATHER/ddretrievetext.html>






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# Timing for trap Deployment -almond/peach

Insect pest	Trap placement date	Purpose
Navel orangeworm (eggs)/other traps	April 1 /mid-March	Monitor biofix and determine hull-split spray timing. (Egg trap)
Oriental fruit moth	February 15 - February 7	Monitoring needed only in orchards with a history of damage.
Peach twig borer	March 20	Determine biofix for each generation. Use degree-days (see <i>UC IPM Pest Management Guidelines: Almond</i> ) to determine May spray and hull-split spray timing.
San Jose scale	February 25 (San Joaquin Valley) March 1 (Sacramento Valley)	Determine biofix (see IPM website, <a href="http://www.ipm.ucdavis.edu">http://www.ipm.ucdavis.edu</a> ). Monitor beneficials.



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## Egg trap for navel orangeworm



- Multiple traps; minimum 4 traps/orchard
- Bait: almond meal
- Biofix: 50% of traps have egg captures consistently in two consecutive weeks - the earlier date would be a biofix.

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## Adult traps for navel orangeworm

Peterson/pistachio bait bag



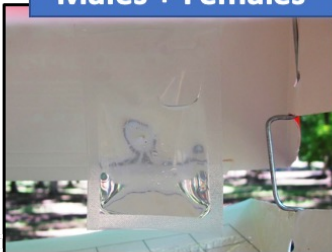
Gravid Females



PPO



Males + Females



Pheromone



Males



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## Codling Moth Traps

### Under no-mating disruption:

- ▶ **1 mg (1X) pheromone lure** - only attracts males
- ▶ Under low pressure: Use CM-DA lure –attracts both males & females



### Under mating disruption or influenced by MD

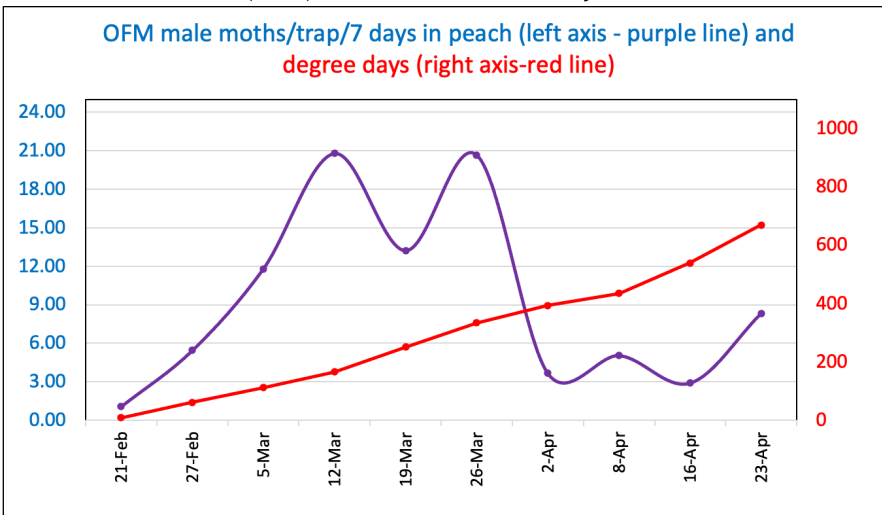
- ▶ CM-DA lure for seasonal activity
- ▶ 1 mg (1X) pheromone lure

Use these traps to determine the biofix and track the flights, and degree-days for making spray timing decisions

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## 2024 Insect monitoring

Oriental Fruit Moth (OFM): 1<sup>st</sup> Biofix: 21 February



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## 2024 Insect monitoring

- ▶ Oriental Fruit Moth (OFM): 1st Biofix 21 February
  - ▶ 1st gen. spray timing (500 - 600DD): 12-19 April
  - ▶ DD accumulated (as of 4/23): 669



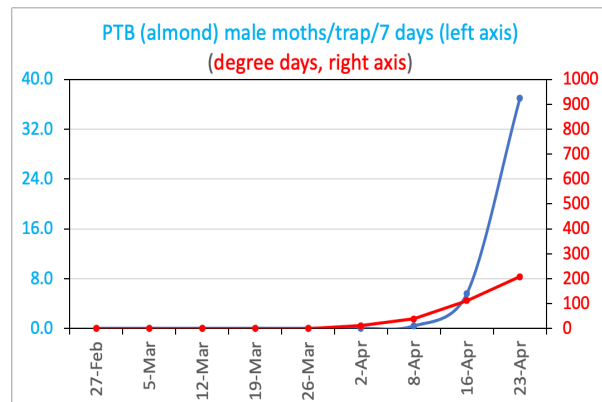
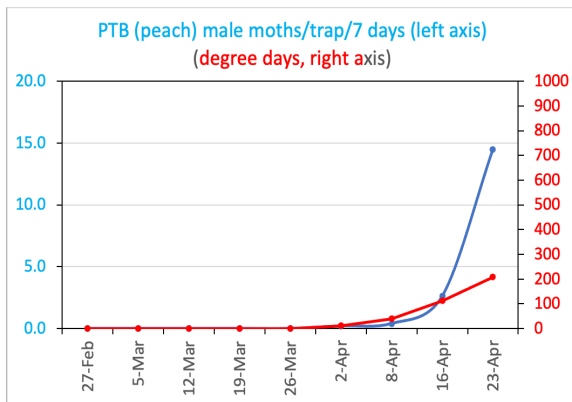
Generation Length (degree-days)			Spray Timing (degree-days)	
1st	2nd	3rd	Early generation	Later generations
920-1010	920-1010	920-1010	500-600	400-500

<https://ipm.ucanr.edu/agriculture/peach/peach-twig-borer/>

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## 2024 Insect monitoring

- ▶ Peach Twig Borer (PTB): 1<sup>st</sup> Biofix: 2 April



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## 2024 Insect monitoring

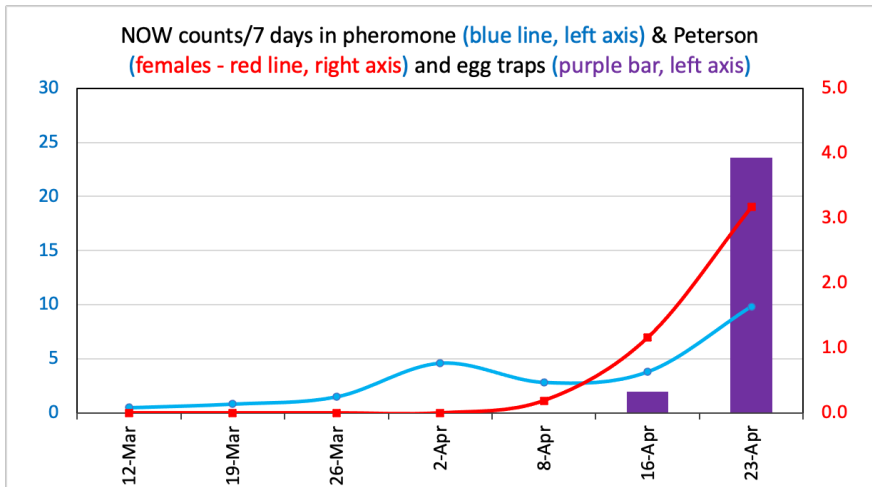
- ▶ Peach Twig Borer (PTB): Biofix 2 April
  - DD accumulation (as of 4/23): 208
  - 1st gen. spray timing (400 - 500DD): 6-12 May

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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## 2024 Insect monitoring

- ▶ Navel Orangeworm (NOW) in almonds: Egg laying biofix: 16 April

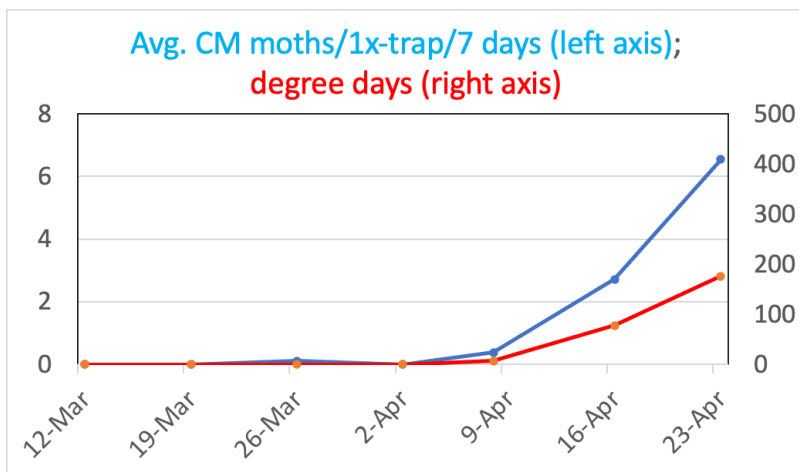


Projected spring spray timing (100DD): April 27

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## 2024 Insect monitoring

► Codling Moth (CM) in Walnut: Biofix 8 April



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## 2024 Insect monitoring

► Codling Moth (CM): Biofix 8 April

DD accumulation (as of 4/23): 176

1st gen. spray timing:

1A flight (300 DD): 2 May

1B flight (600 - 700 DD): 19 May - 24 May

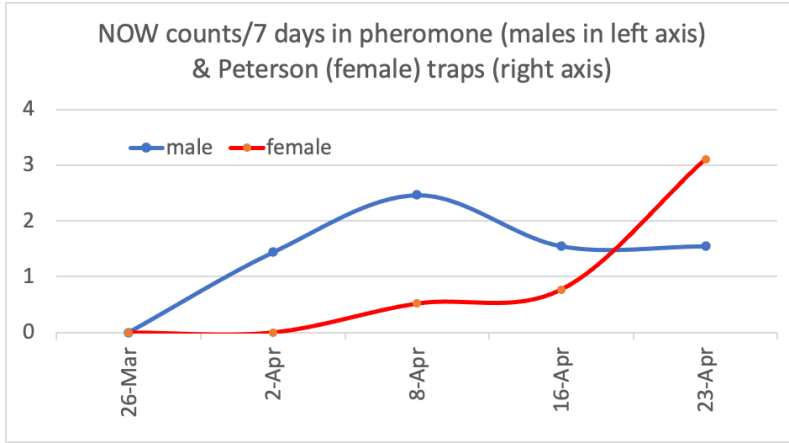
Generation Length (degree-days)			Spray Timing (degree-days)	
1st	2nd	3rd	Early generation	Later generations
1060	1100	1200	1A Peak: 300 1B Peak: 600-700	300

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# 2024 Insect monitoring

## ► Navel Orangeworm (NOW) in Walnuts



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# Hemipteran pests

## ► BMSB trap

- March 26: First capture (1 adult) in almonds
- April 8 -all traps (visual, beating tray, trap) had BMSB in almond orchard
- Some gummy fruits
- Some leaffooted bugs activities reported
- Increased activity of BMSB in almond orchards. See photo from Delhi, Merced County taken 4/23/24 (gummy nuts + BMSB adult)



BMSB trap

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## What's New?

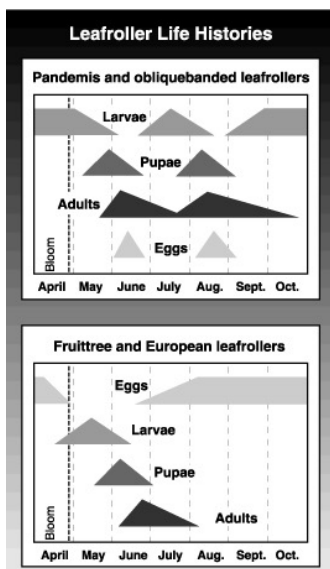


## Leafrollers

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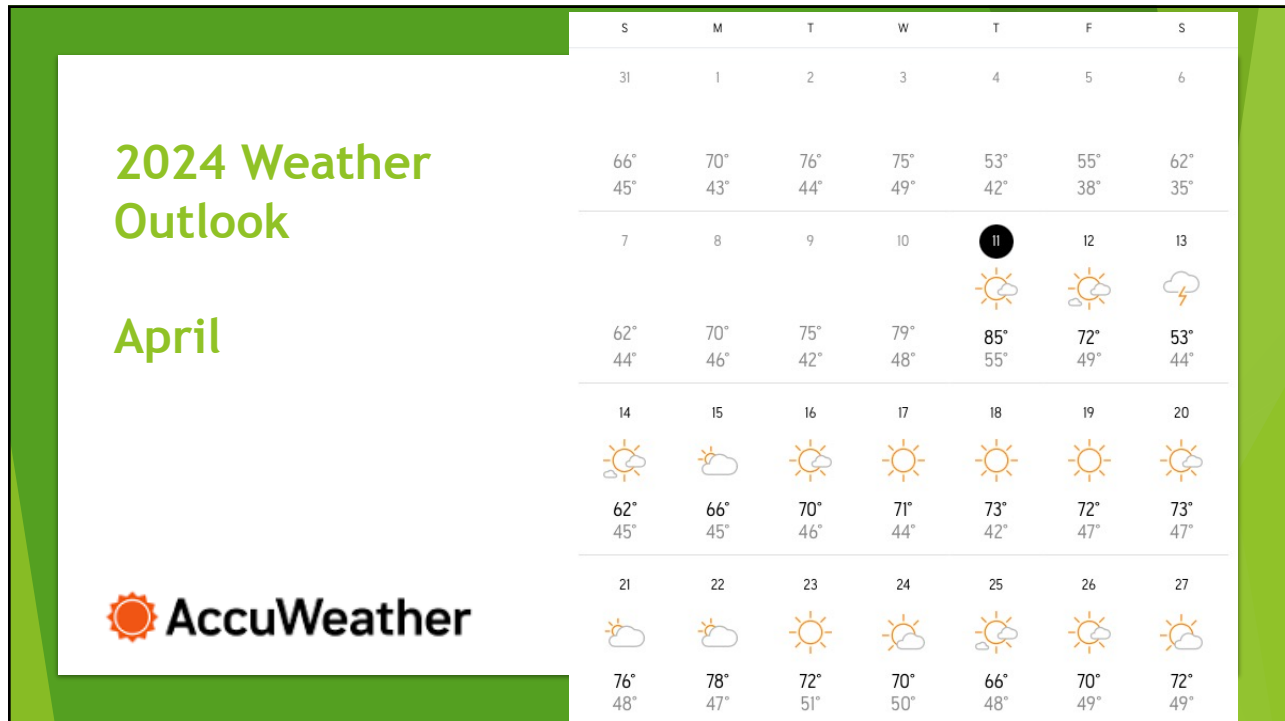
## Leafrollers

- OBLR overwinter as larvae (other fruit tree leafrollers overwinter as eggs, and one generation/year). OBLR has two generations/year.



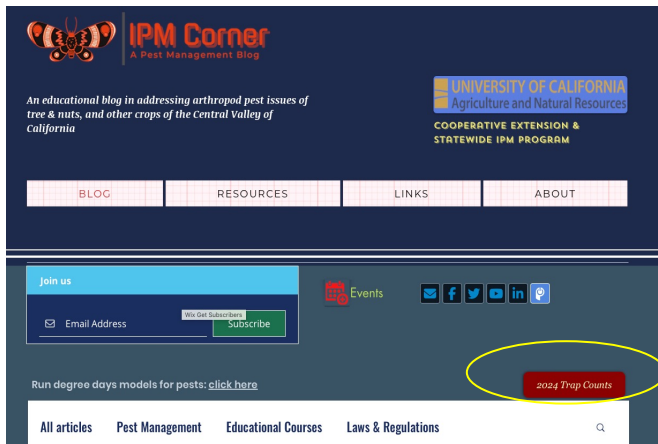
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Updated information is also available in [www.IPMCorner.com](http://www.IPMCorner.com) website as well.



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