



California Department of
Pesticide Regulation

SPM Advisory Committee

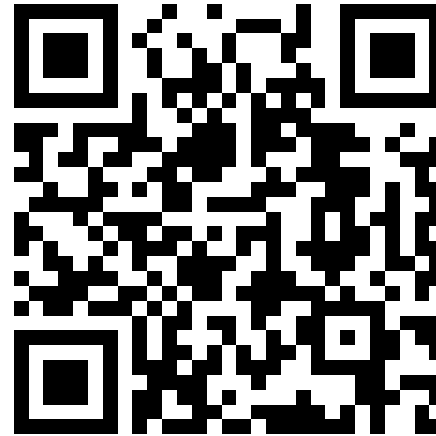
September 16, 2026

Meeting updates

- Recorded meetings:
https://www.youtube.com/@CA_PesticideRegs
- Notes & public comments from June 15th:
<https://www.cdpr.ca.gov/committees/sustainable-pest-management-spm-advisory-committee/>



Public comment period open through October 1, 2026



<https://cdpr.commentinput.com?id=BfmZx2TVPh>

Agenda

- Updates
 - Intros
 - Defining SPM in practice
 - SPM incentives
- SPM pilot program
 - Decision tool for Navel Orangeworm
- Activating markets for SPM
 - Sustainable Food Certifications

Member Introductions

- Name
- Affiliation
- What are your goals for participating in the SPM Committee?
- What is the state of SPM in California from your perspective?

Meeting 1 Follow Up: Defining SPM in Practice

- DPR staff are working on messaging to clarify the relationship between IPM and SPM
- DPR wants to meet with committee members in small groups to refine sector-specific messaging



Meeting 1 Follow Up: SPM Incentives and Support Programs

- 24 incentives or programs
 - 19 agricultural
 - 5 urban
- List is posted online:
<https://www.cdpr.ca.gov/committees/sustainable-pest-management-spm-advisory-committee/>
- Accepting recommendations:
SPMAdvisory@cdpr.ca.gov



SPM Pilot Program

Brian Gress



Background

- \$1 million per fiscal year to fund projects
- Promote and expand SPM adoption across CA
- Support work to meet SPM goals and DPR priorities
- DPR plays active role in developing project scope
- Separate from SPM Grants program





Administrative logistics

- Subject to state contracting rules and competitive bidding
- Limited exemptions for public entities (e.g., UC, CSU, etc.)
- Limitations on passing funds to nonprofits, community groups, etc.

Announced projects

- IPM and Pollinator Habitat Education in California Orchards
 - Miles Dakin, Pollinator Partnership
- Empowering Small and Latino Farmers to Enhance Pest Management through Biodiversity
 - Shelly Connor, Wild Farm Alliance
- Establishing a Regional Decision Aid Support System for Navel Orangeworm
 - Houston Wilson, UC Riverside
- SPM Class with Needs Assessment and Feasibility Survey to Create a Career Training Program
 - Holly Wright, Channel Islands Restoration



Projects in development

- SPM decision-support for veterinarians and companion animals
- SPM-grown food procurement with institutions
- SPM field days in ag for PCAs and policymakers
- SPM for California schools, growers, and communities



SPM Pilot Presentation

Establishing a Regional Decision Aid System for Navel Orangeworm in California Tree Nuts

Dr. Houston Wilson, UC Riverside



Development of a Regional IPM Program for Navel Orangeworm



Houston Wilson

Assoc. Cooperative Extension Specialist

Dept. Entomology, Univ. of California - Riverside

Kearney Ag. Research and Extension Center

Navel Orangeworm

Origins and Pest Status

Navel Orangeworm

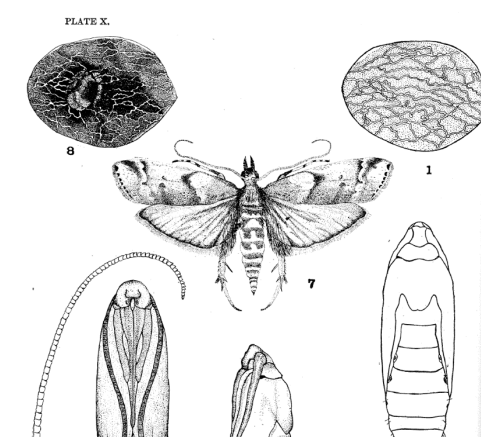
Origins + Arrival in CA

Species Name

Order: Lepidoptera

Family: Pyralidae

Species: *Amyelois transitella*



Arrival in California

1800s – Reported in Mexico, Caribbean, Central America, South America

1900s – Reported on citrus in AZ (“navel orange worm”)

1940s – Reported on walnuts and almonds in CA

1970s – Reported on pistachio in CA

Navel Orangeworm on Walnuts

infestations in northern California orchards dependent on population overwintering in past crop's waste left in field

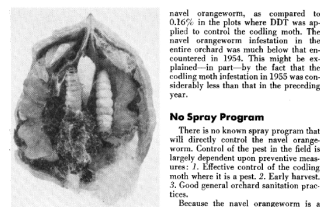
A. E. Michelbacher

The navel orangeworm infestation in the 1955 walnut crop in northern California was less than it was in 1954, but whether the downward trend will continue in 1956 is unknown.

The pest was found in only one of the experimental orchards where the 1955 insect investigations were conducted. That orchard was at Modesto where the pest caused some damage in 1954. One half of the orchard received no winter cultivation, and it was in this portion where a large population of the navel orangeworms survived the winter. The many nuts on the ground and a few left in the trees furnished excellent breeding places for the pest. These sources allowed the pest to carry over until nuts of the current season were rendered in a suitable condition to be infested.

Infestation Count

On May 5, 1955, some 300 of the walnuts were gathered. An examination of the nuts showed that 40% were or had been infested by larvae of the navel orangeworm. There was an average of 10



A walnut husk open showing larvae and the small entry hole to the navel orangeworm. Note the cap-like nature of scaling.

navel orangeworm, as compared to 0.16% in the plots where DDT was applied to control the codling moth. The navel orangeworm infestation in the entire orchard was much below that encountered in 1954. This might be explained—in part—by the fact that the codling moth infestation in 1955 was considerably less than that in the preceding year.

No Spray Program

There is no known spray program that will directly control the navel orangeworm. Control of the pest in the field is largely dependent upon preventive measures: 1. Effective control of the codling moth where it is a pest. 2. Early harvest.

3. Good general orchard sanitation practices. Because the navel orangeworm is a scavenger, uncontrolled infestation of the codling moth encourages attack by the pest. Nuts infested by the codling moth furnish a source of food upon which the navel orangeworm can increase. As a

SOME INSECT PESTS OF SALT RIVER VALLEY.

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has been found in New Mexico that sweet-corn planted later than usual escapes the ravages of the worm, the moths having already laid their eggs in the earlier plants. On the same principle, in the South, corn is planted ahead of the cotton and after a while destroyed, with the result that the cotton is less injured,

THE NEW ORANGE-WORM.

On October 23, I found near Phoenix two oranges on the same tree, which were affected by a worm or caterpillar. The oranges had turned color prematurely, and dropped off at the least touch. From the apex hung in each case a small amount of debris, proclaiming the presence of a worm, and distinguishing them from the fruits affected by the black rot. On opening one of the oranges, the worm was found to occupy a small space near the apex, living on the soft tissues. It resembles in appearance the codling-worm of the apple, which, however, does

Basic Biological Parameters

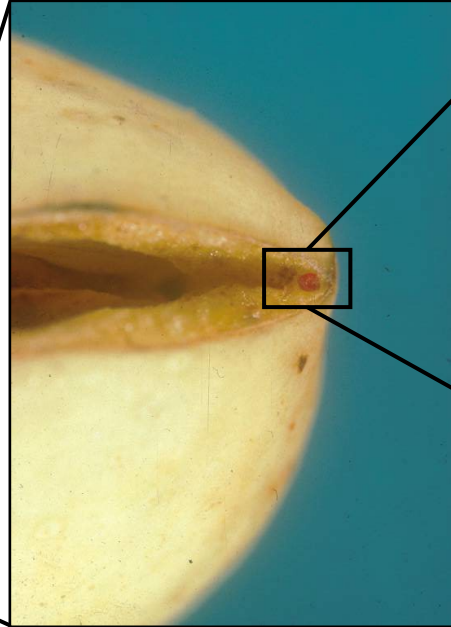
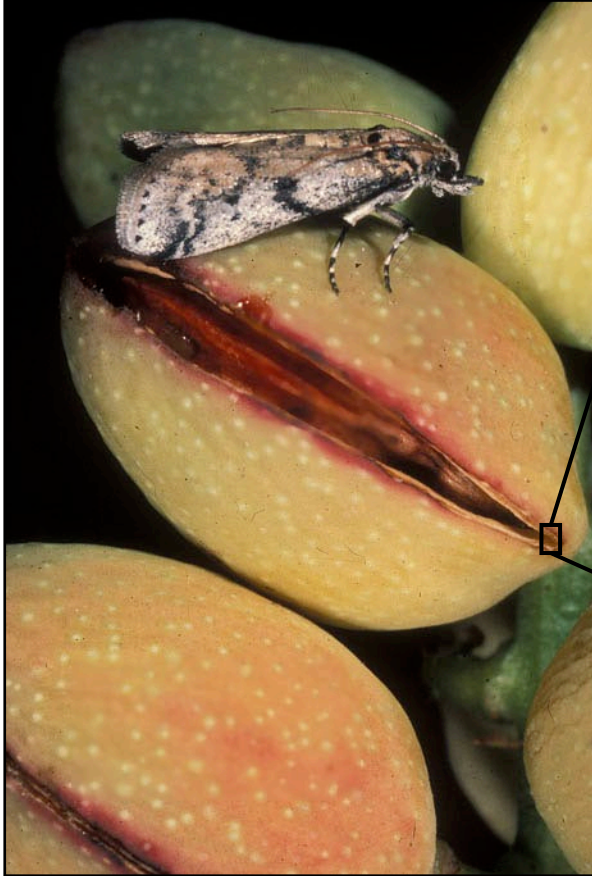
Life Stages

Egg → Larva → Pupa → Adult



Basic Biological Parameters

Eggs Deposited Directly onto the Nuts



Larvae feed on kernels



Navel Orangeworm

Current Pest Status

Extremely Low Tolerance for Damage (<2%)

High Crop Value

- Yield/quality x price – of course...
- Infestation leads to increased processing time/costs
- Carryover of infested remnant/mummy nuts to following year



Navel Orangeworm

Current Pest Status

Extremely Low Tolerance for Damage (<2%)

Aflatoxin

- Known human carcinogen, regulated in domestic/foreign markets
- *Aspergillus flavus* fungi produce aflatoxin
- NOW adults move *Aspergillus* around
- Larval feeding create opportunities for fungal growth on nuts

Spread of *Aspergillus flavus* by Navel Orangeworm (*Amyelois transitella*) on Almond

Jeffrey D. Palumbo, Noreen E. Mahoney, and Douglas M. Light, Plant Mycotoxin Research Unit, Western Regional Research Center, United States Department of Agriculture–Agricultural Research Service (USDA-ARS) Albany, CA 94710; Joel Siegel, USDA-ARS, San Joaquin Valley Agricultural Sciences Center, Parlier CA 93648-9757; and Ryan D. Puckett and Themis J. Michailides, University of California–Davis, Kearney Agricultural Research and Extension Center, Parlier 93648

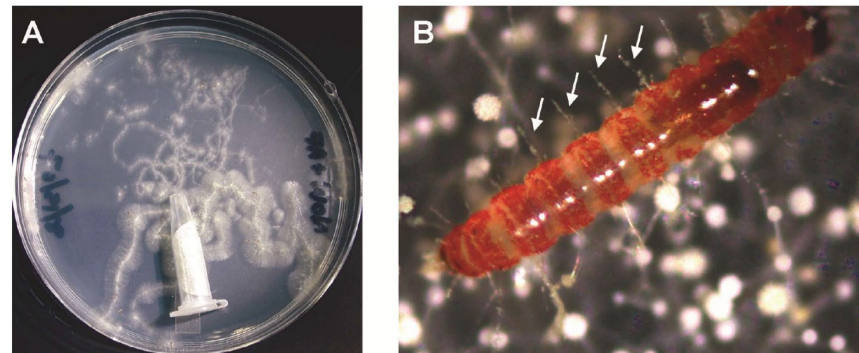


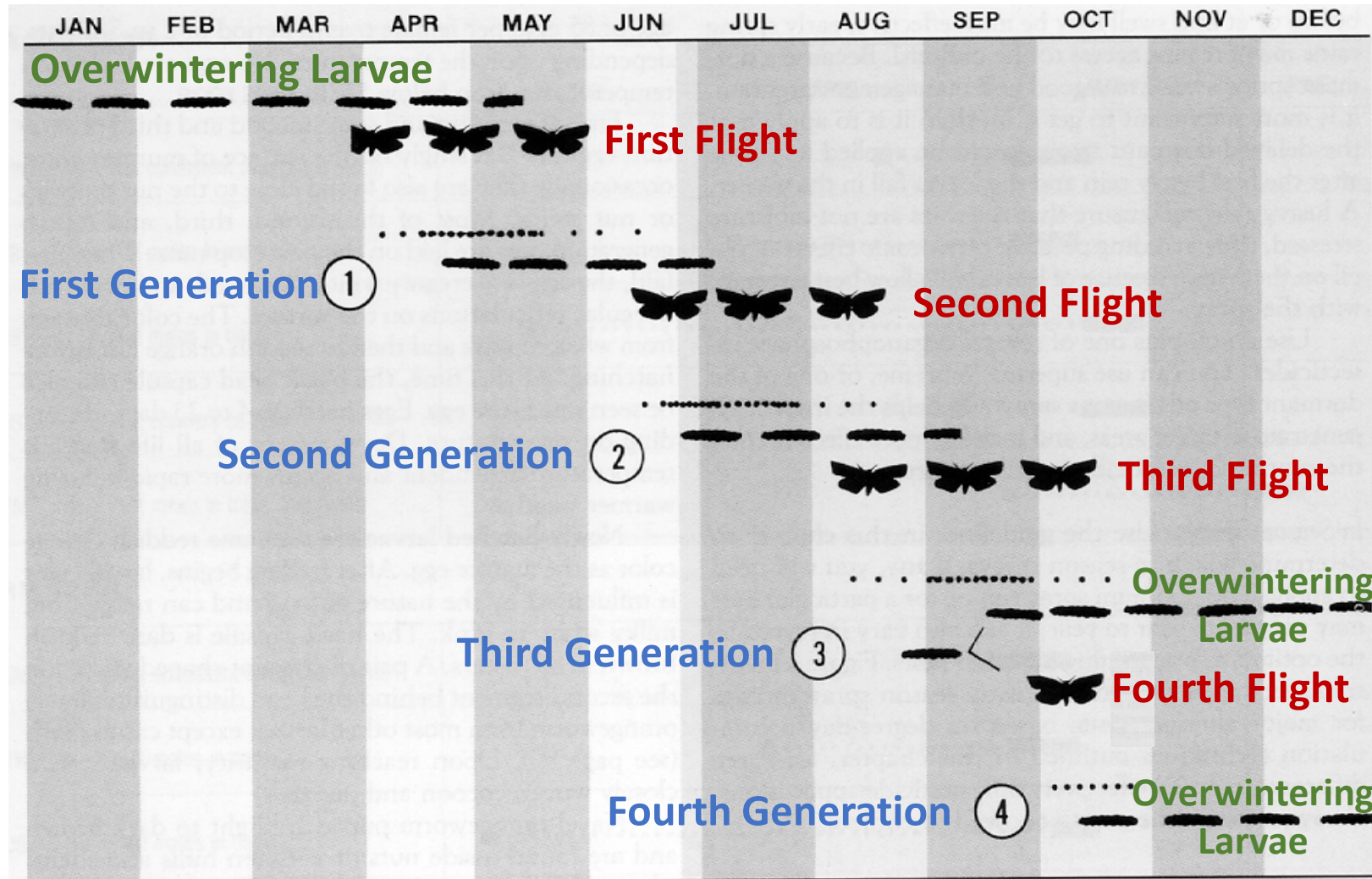
Fig. 1. A, Trails of *Aspergillus flavus* colonies, resulting from navel orangeworm (NOW) transport of conidia from microcentrifuge tube to potato dextrose agar medium. B, Accumulation of *A. flavus* conidia on setae (arrows) of NOW larva after crawling across plates containing sporulating *A. flavus* colonies.

Navel Orangeworm

Seasonal Phenology and Landscape Ecology

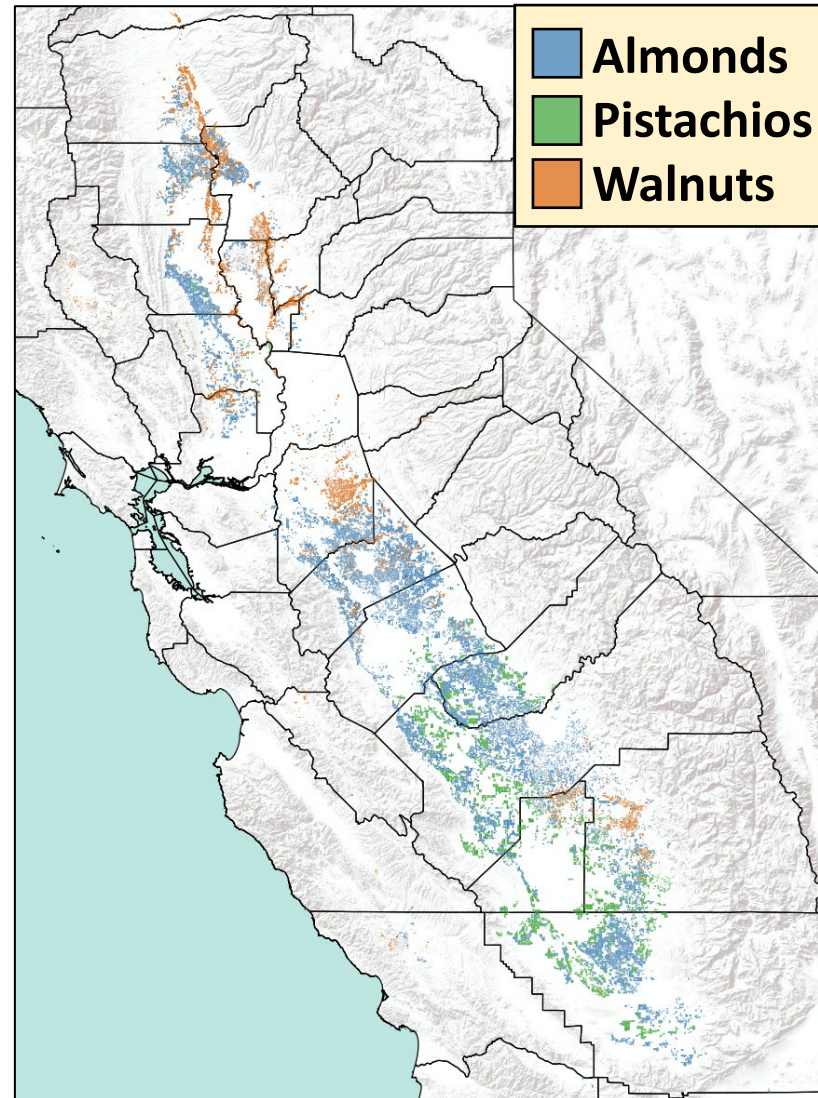
Seasonal Phenology

Overview



Seasonal Phenology

Lots of Host Material - But Asynchronous



Seasonal Phenology

Shifting Resource Availability

Drivers of Development + Population Growth

- Temperature → *faster in warmer regions*
- Host Availability → *can't infest nuts with intact hulls*
- Host Quality → *slower/faster development on old/new nuts*

Crop Vulnerability is Mediated by Hull Integrity

- Hull integrity → *bloom date x weather x management*
- Fairly consistent in almond/walnut, but highly variable in pistachio

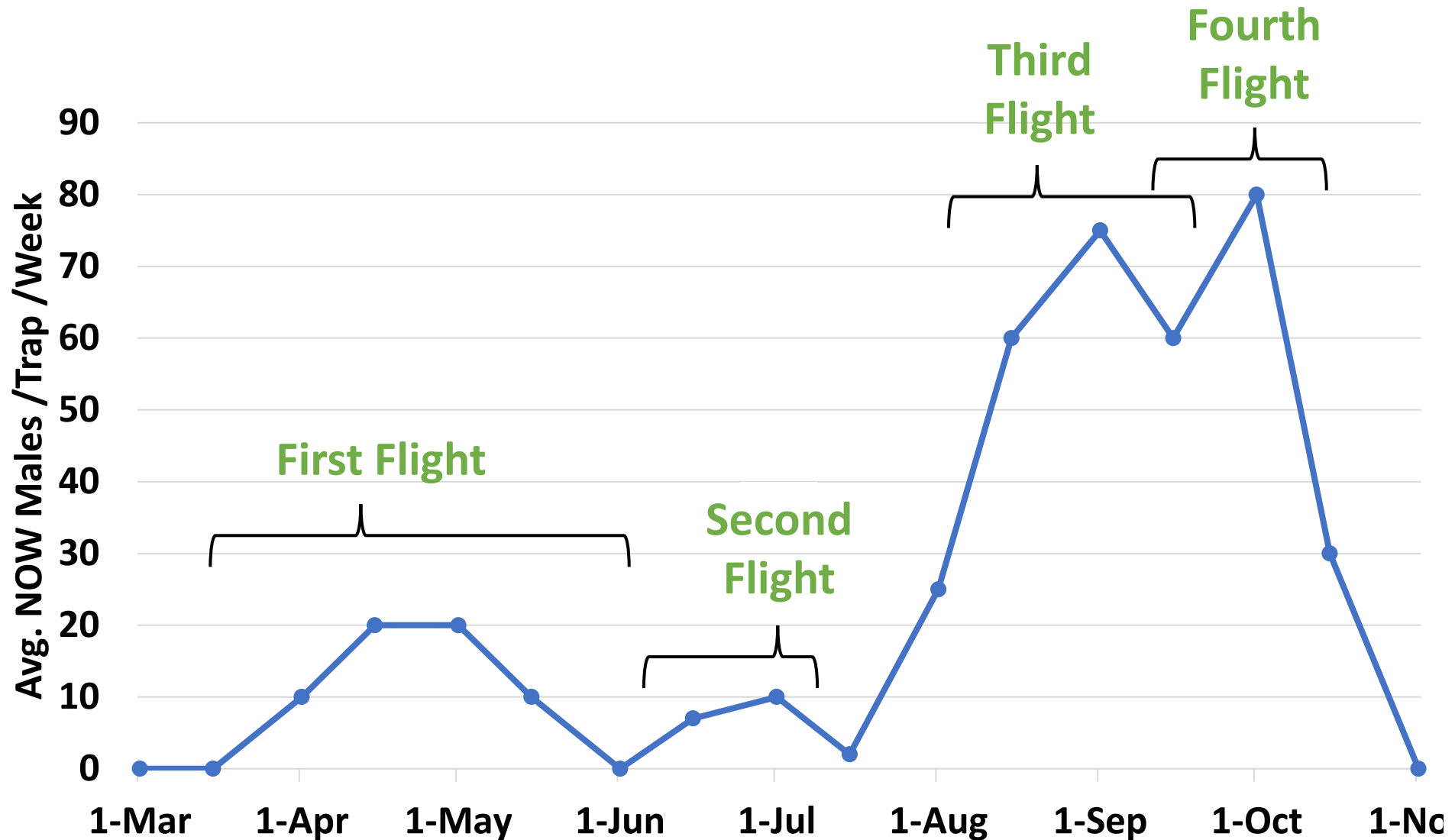


Increasing host availability as hull integrity declines

Old/Mummy vs. New Crop Nuts

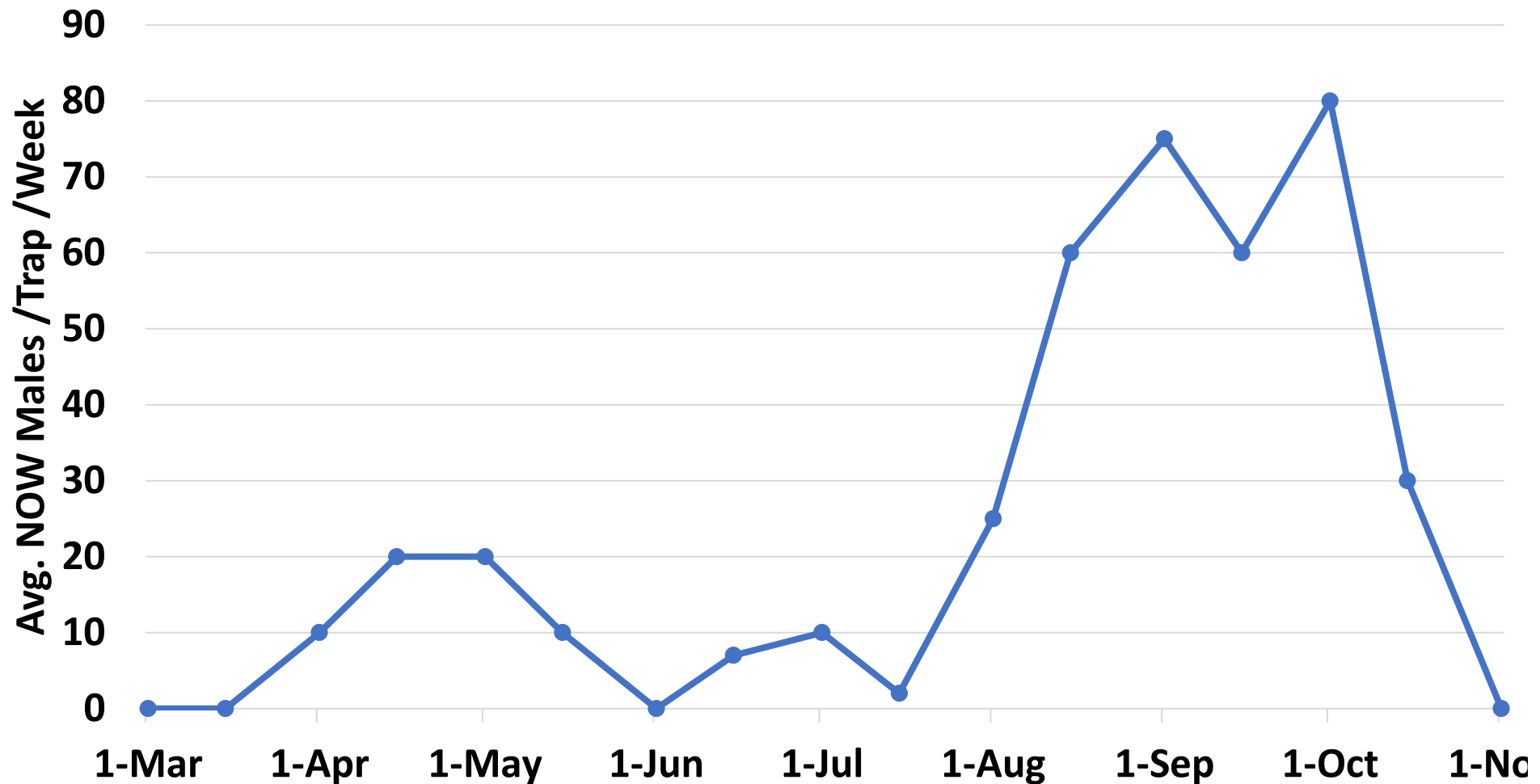
Seasonal Phenology

Increasing Populations Over Time



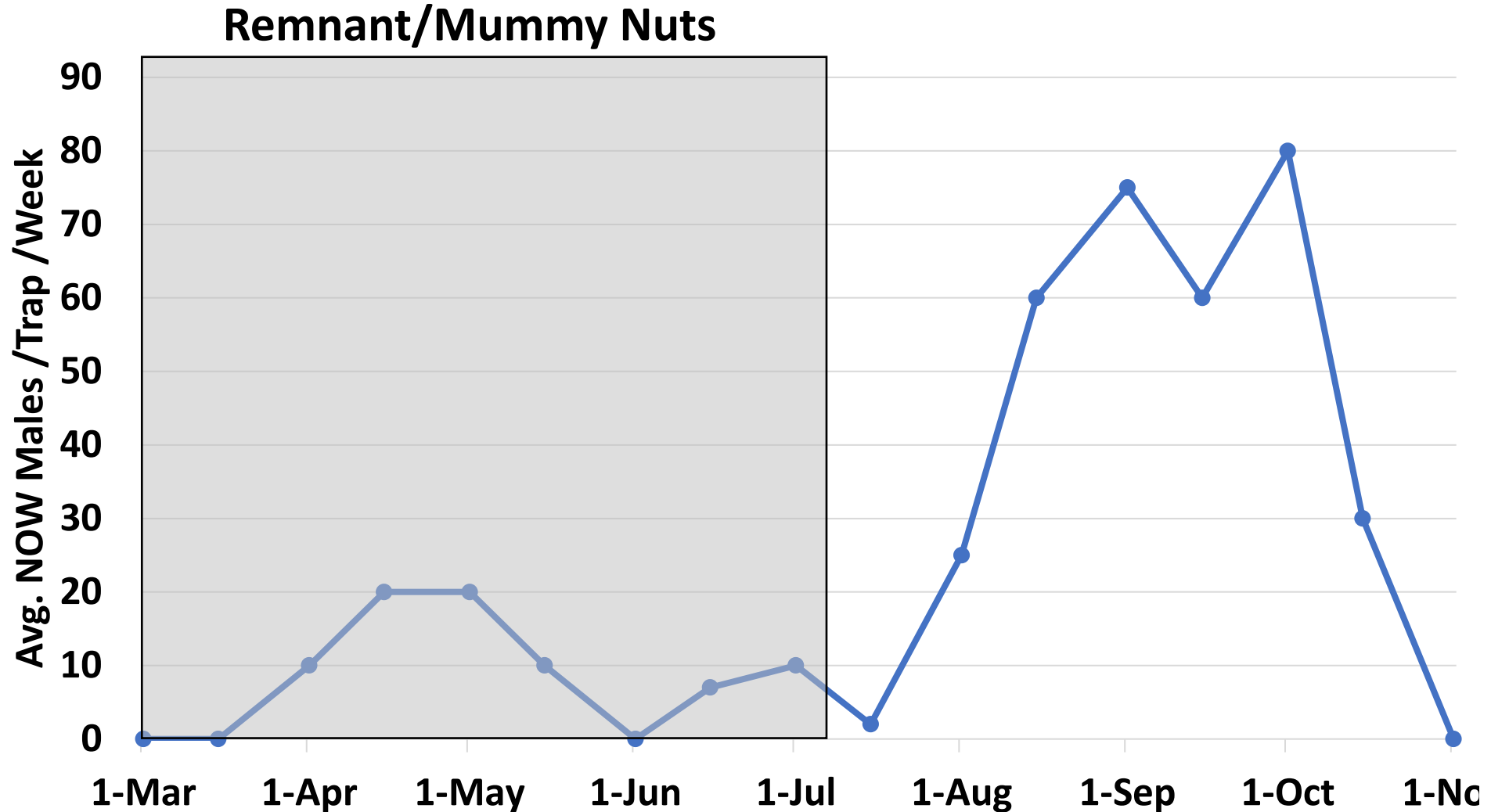
Seasonal Phenology

Increasing Populations Over Time



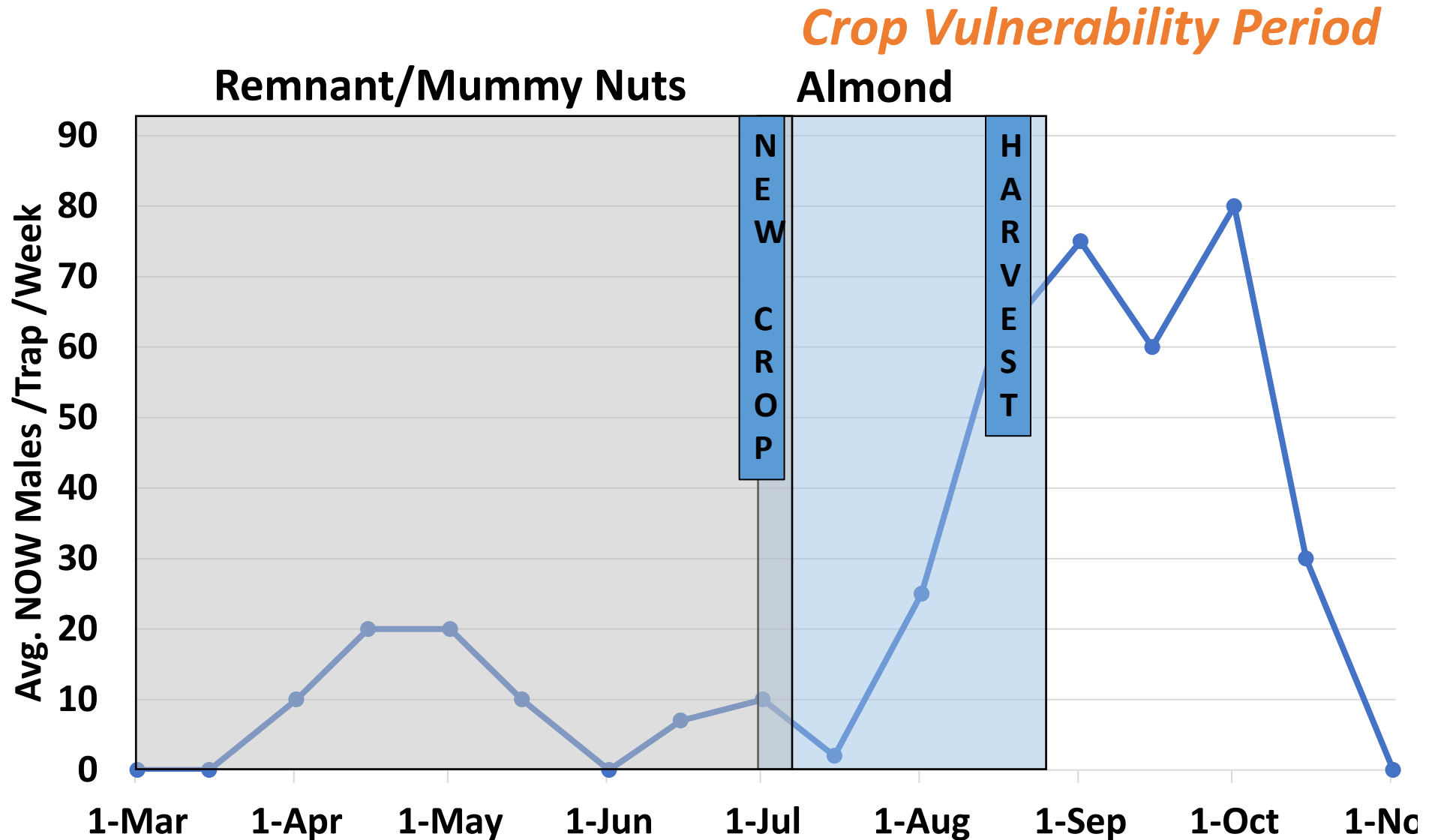
Seasonal Phenology

Increasing Populations Over Time



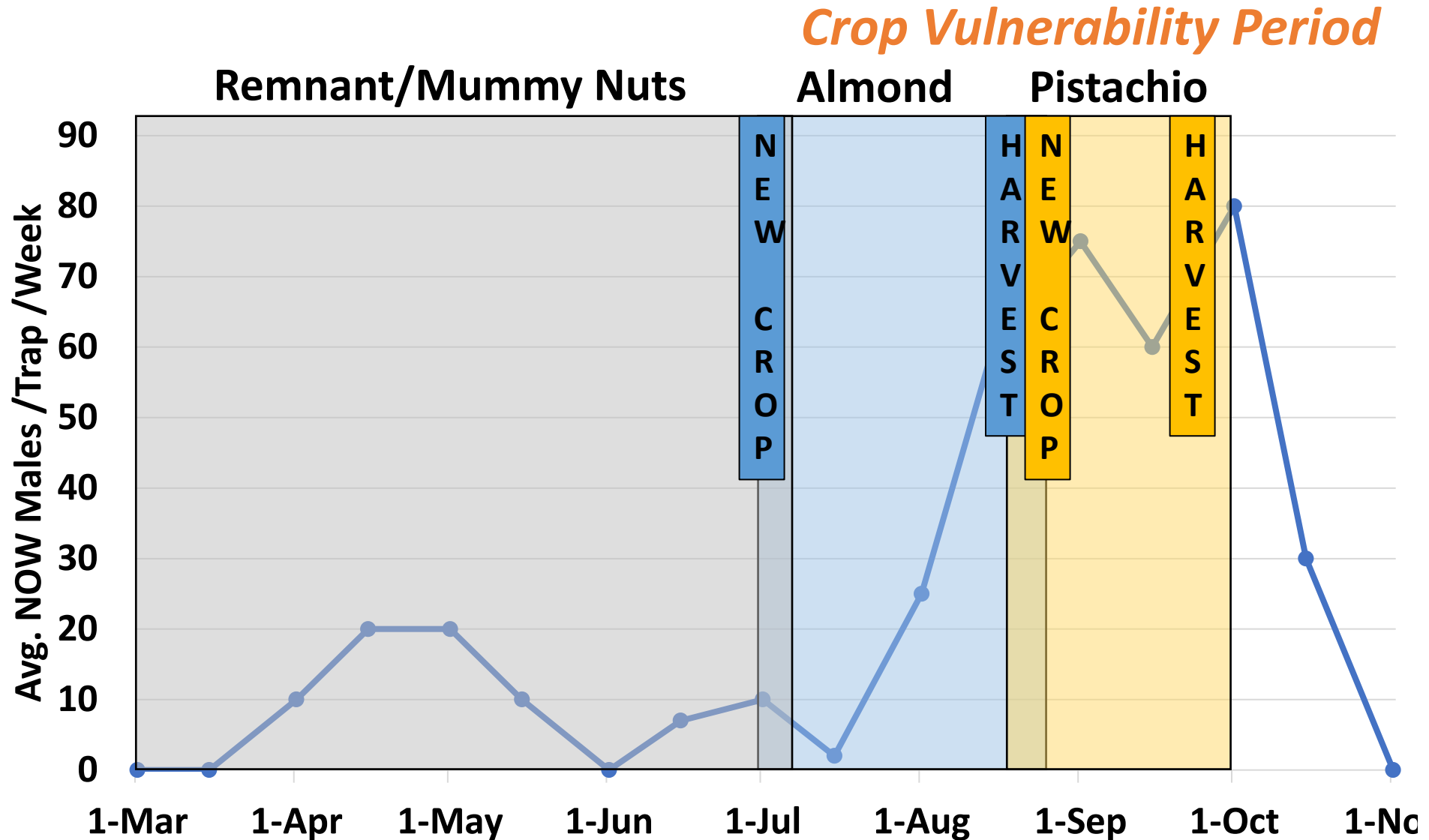
Seasonal Phenology

Increasing Populations Over Time



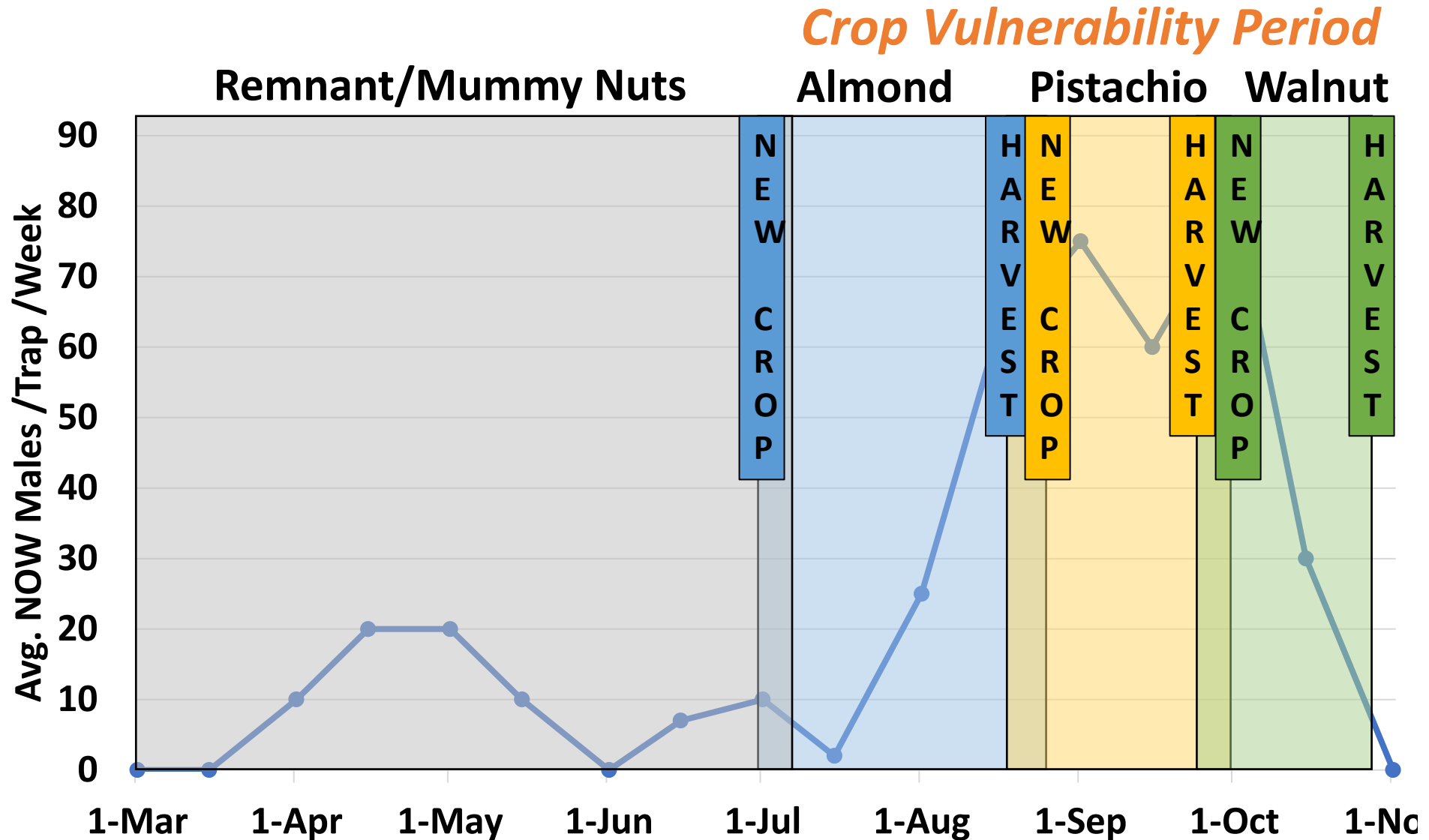
Seasonal Phenology

Increasing Populations Over Time



Seasonal Phenology

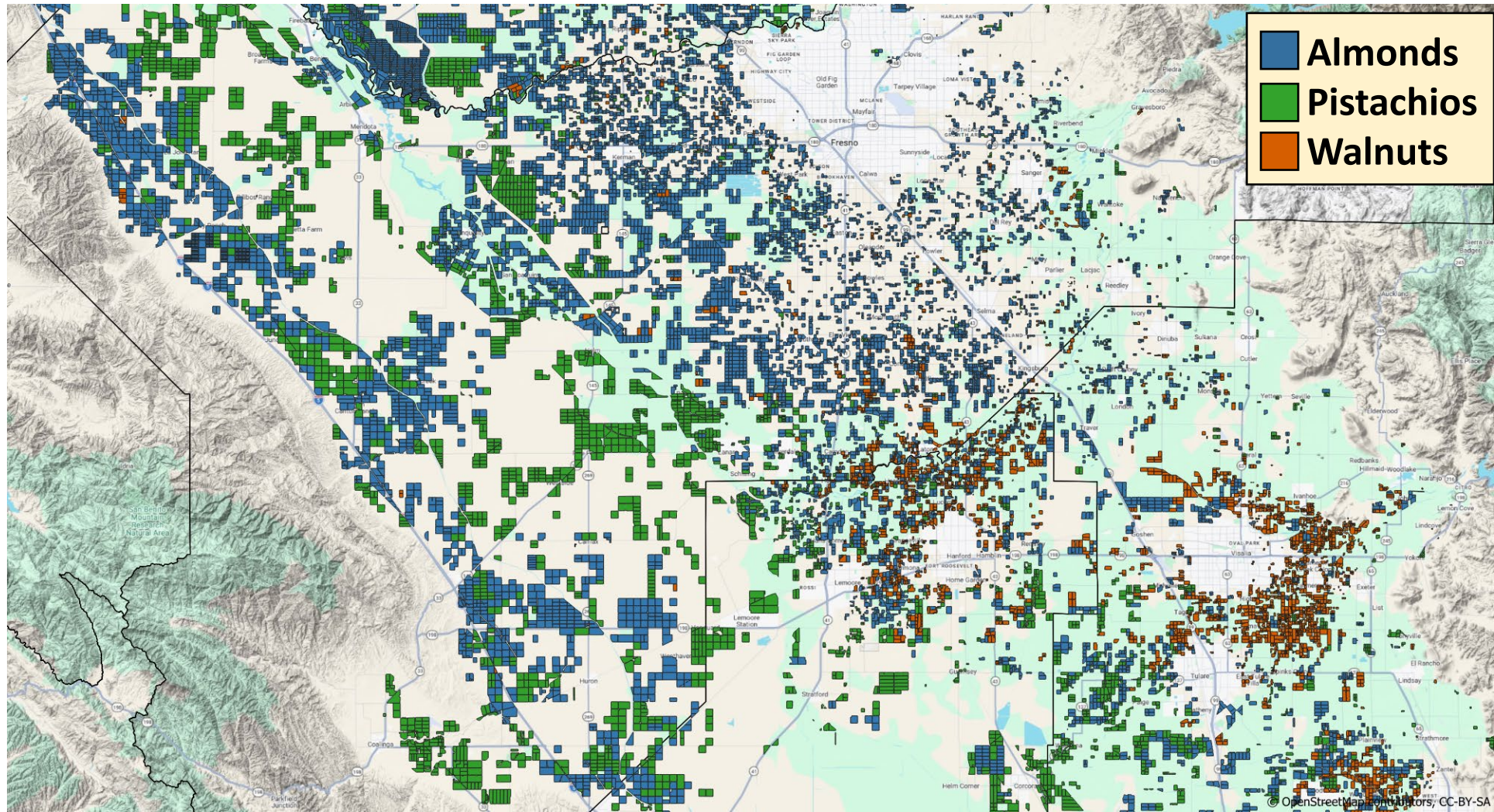
Increasing Populations Over Time



Seasonal Phenology

Asynchronous Host Material

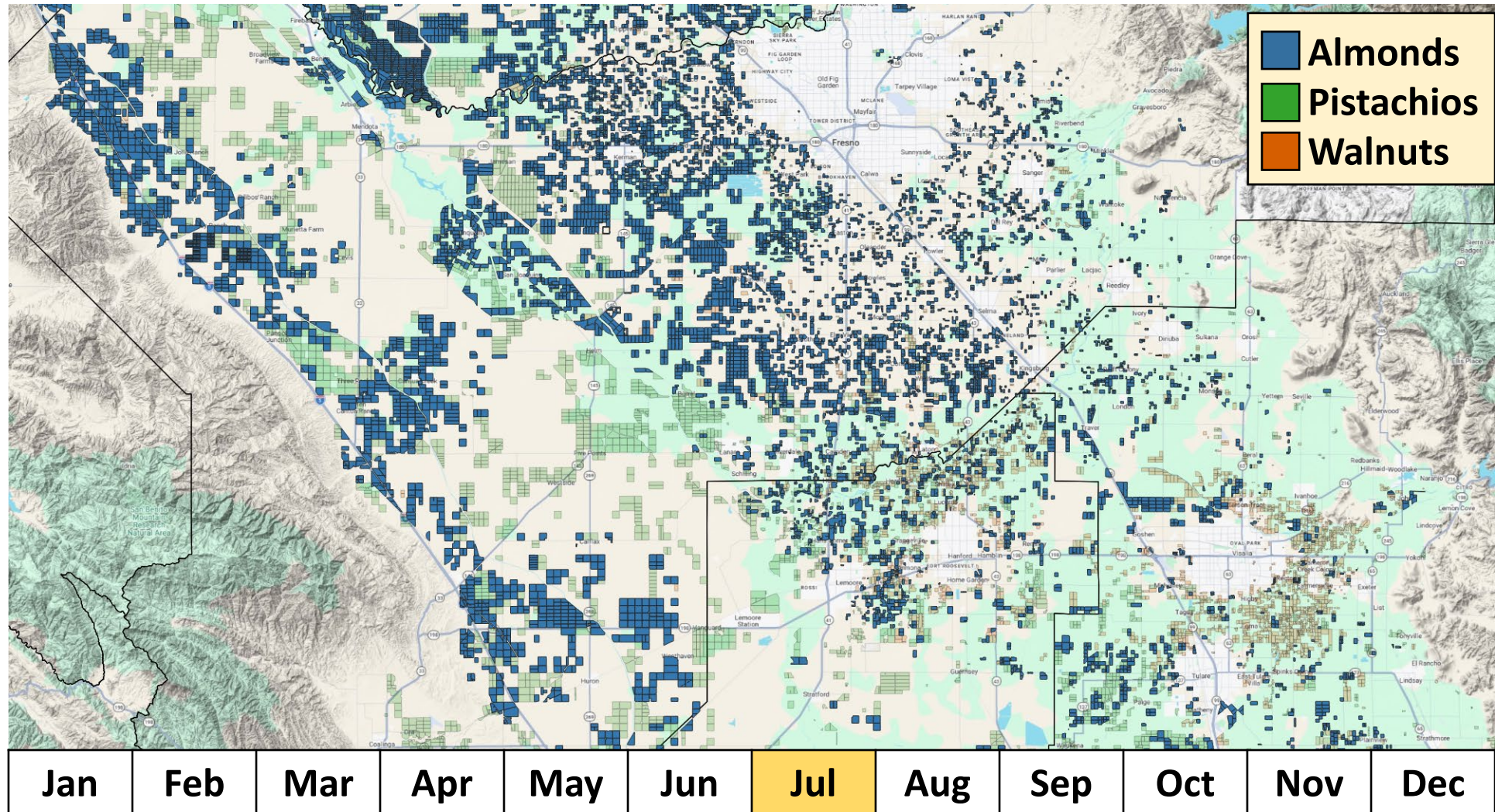
Spatial Arrangement of Orchards



Seasonal Phenology

Asynchronous Host Material

Seasonal Progression of Crop Vulnerability

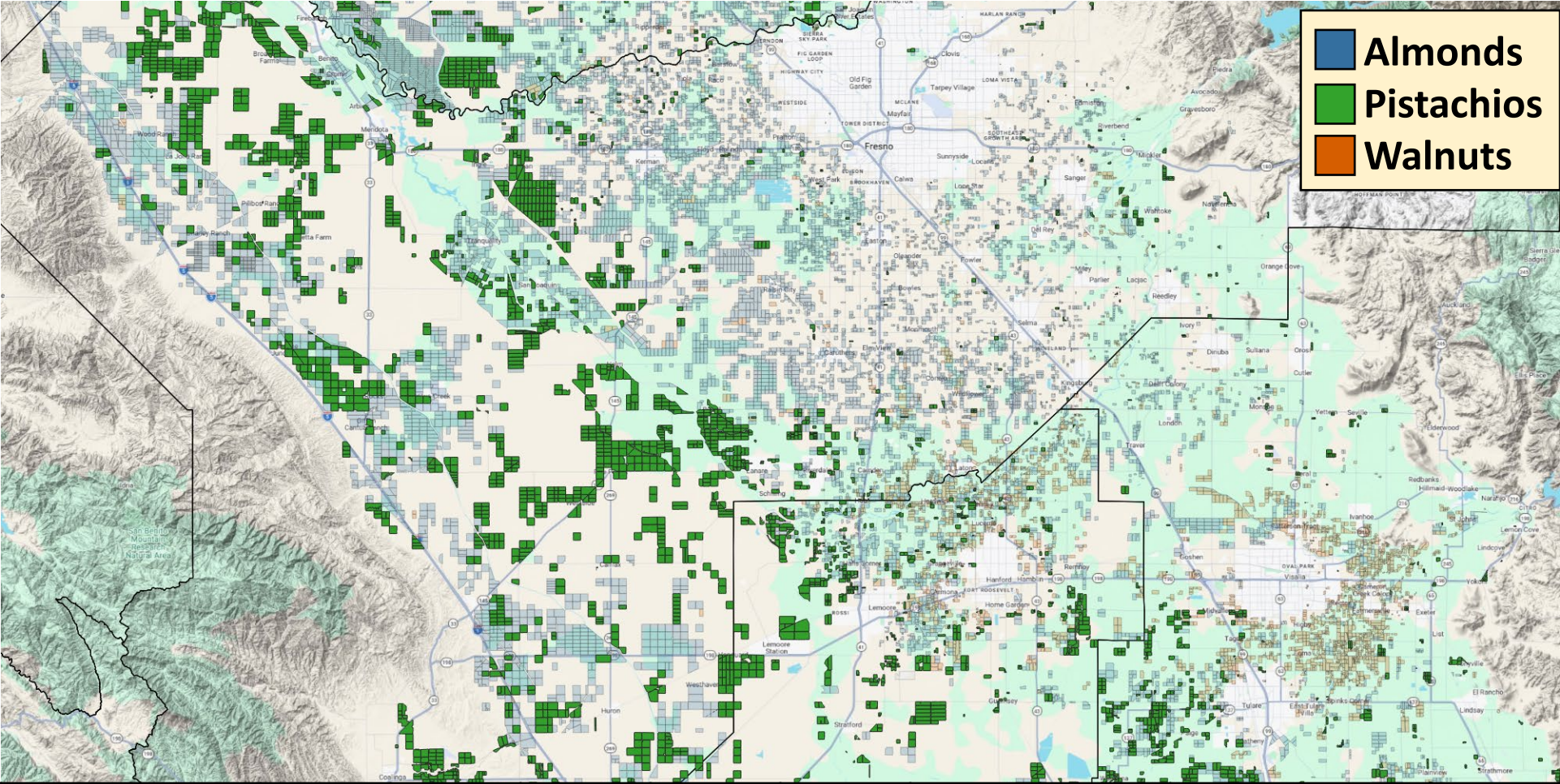


Seasonal Progression of Crop Vulnerability



Seasonal Phenology

Asynchronous Host Material

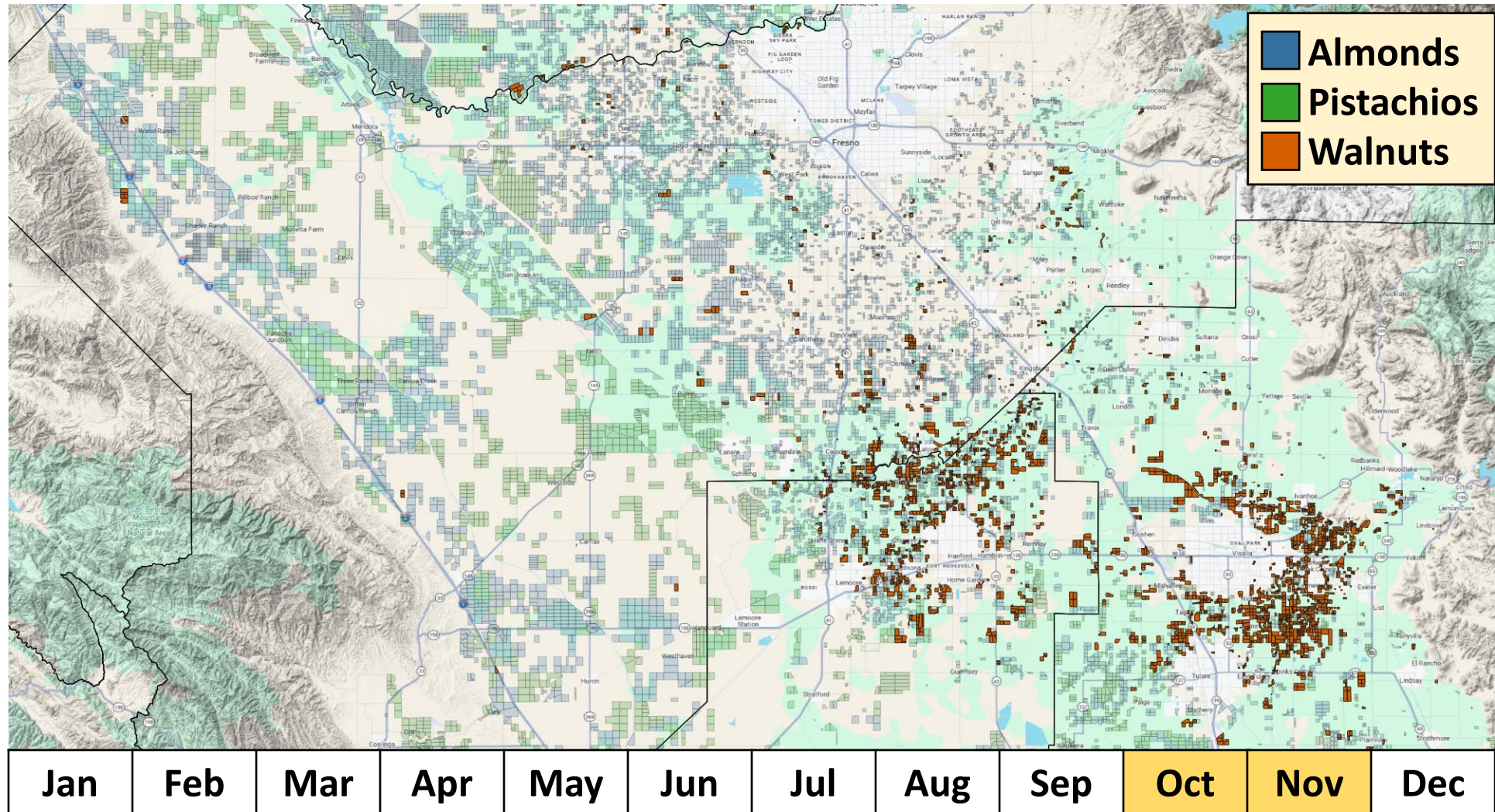


Dec

Seasonal Phenology

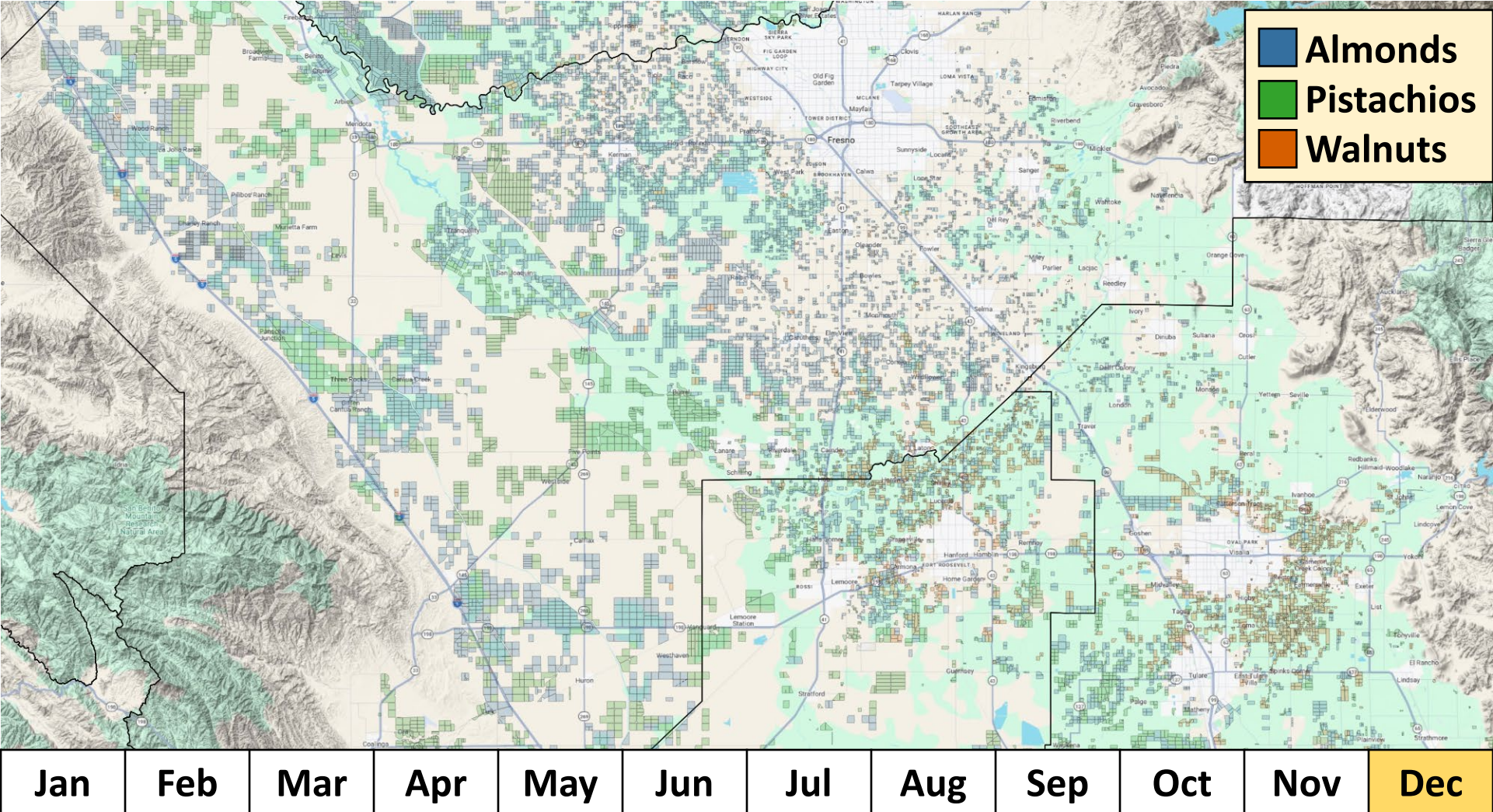
Asynchronous Host Material

Seasonal Progression of Crop Vulnerability



Seasonal Phenology

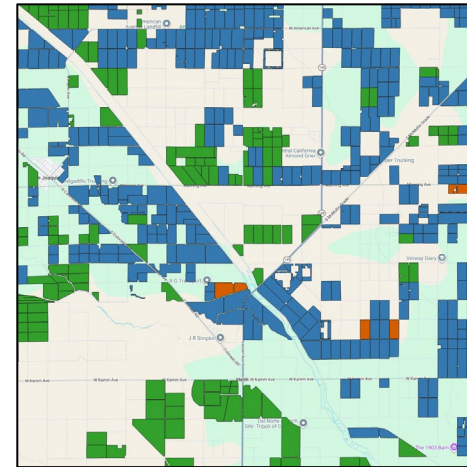
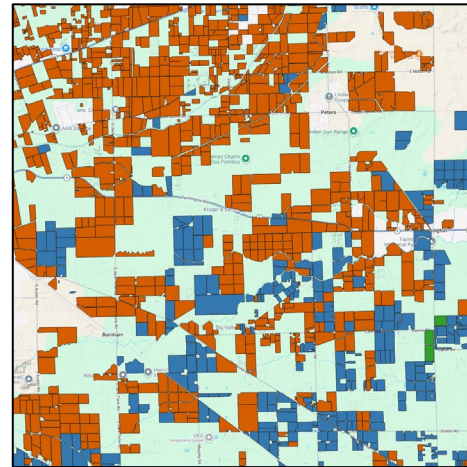
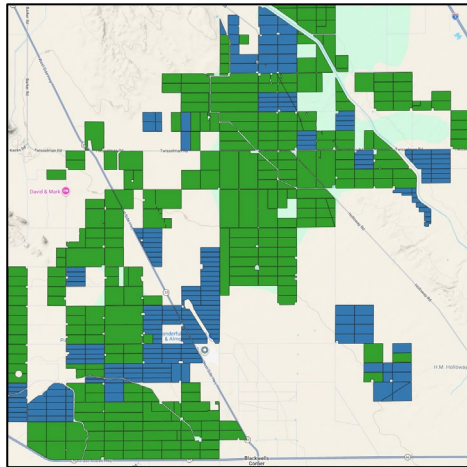
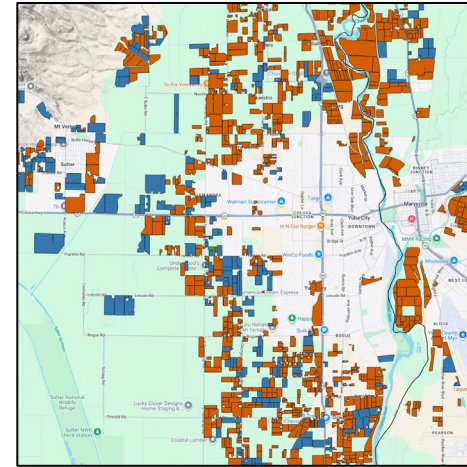
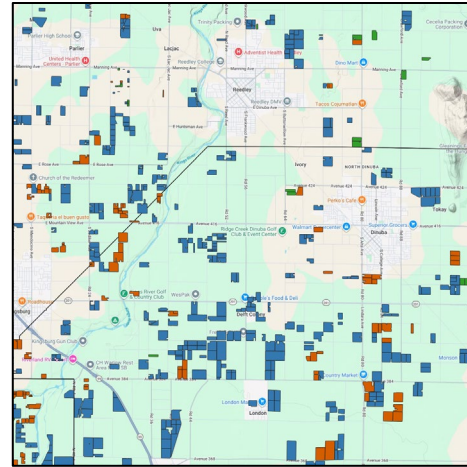
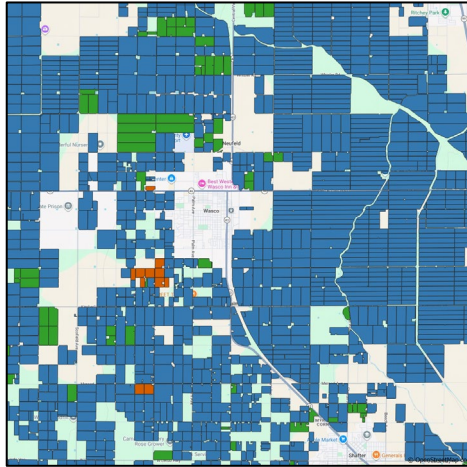
Asynchronous Host Material



Seasonal Phenology

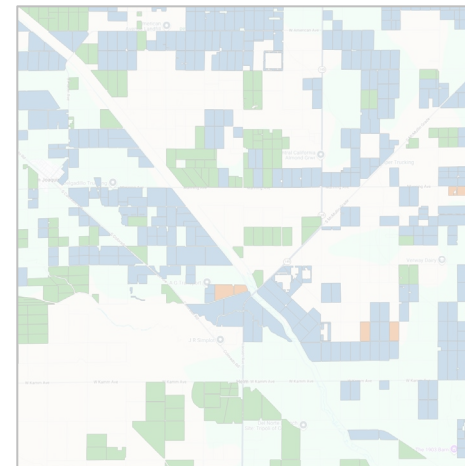
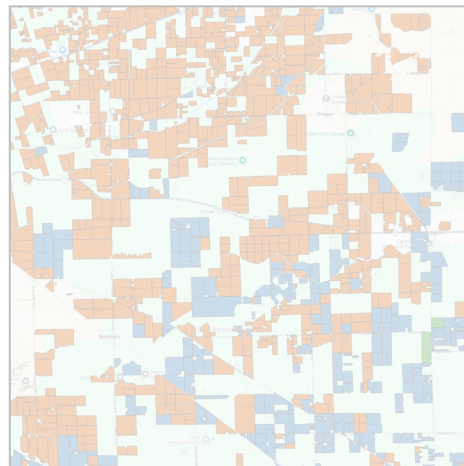
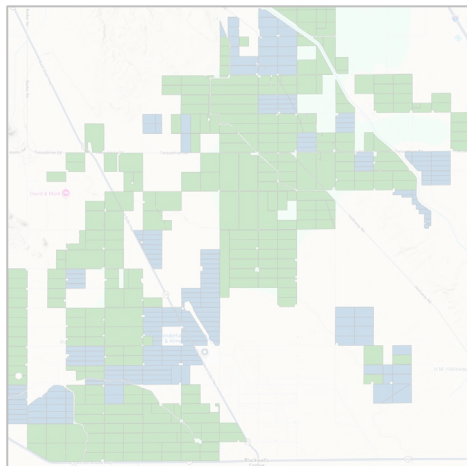
Asynchronous Host Material

Spatial Configuration Varies a Lot!



Shifting Resource Availability Likely Influences...

- Regional Population Development
- Timing and Extent of Movement Between Orchards



Shifting Resource Availability Likely Influences...

- Regional Population Development
- Timing and Extent of Movement Between Orchards

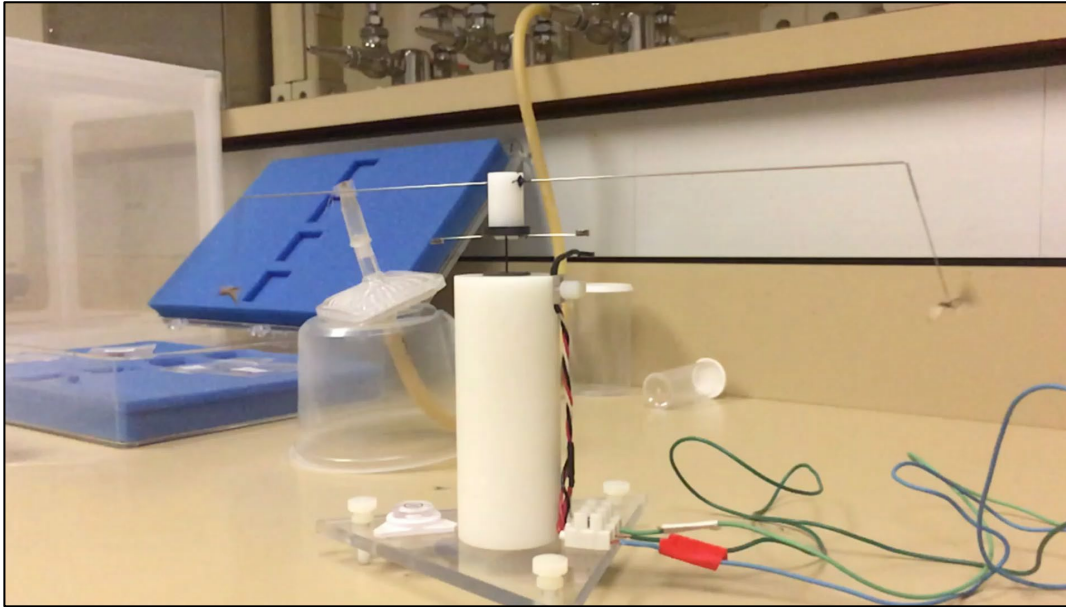
Possibly Additional Influences From...

- Crop Sanitation Levels
- Mating Disruption
- Insecticide Application Timing

Seasonal Phenology

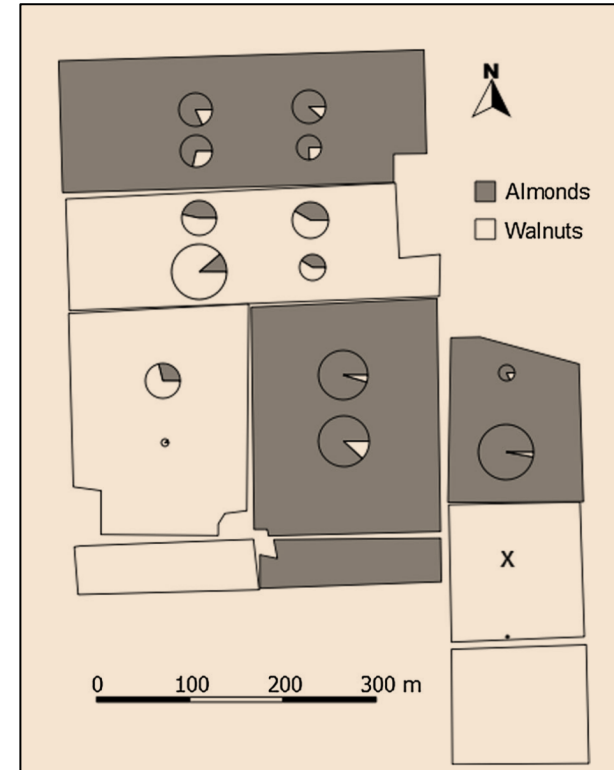
Navel Orangeworm Flight and Movement

Relatively Strong Fliers - Go Between Orchards



Tandem NOW on a flight mill

***Video: Joshua Reger, Ph.D. Candidate
Wilson Lab @ Dept. Entomology, UC Riverside***



NOW Move Between Orchards

Figure: Bayes et al. 2014

Sappington & Burks 2014 *Environ. Entomology*, 43(3): 696–705

Bayes SK, Hellerstein MK, Fitch M, et al. 2014. *Oecologia* 175(4):1073–1080

Navel Orangeworm

Monitoring and Management

Monitoring

Current Options and Timing

Monitoring

Current Options and Timing

Timing	Observation	Purpose
Winter	Abundance and infestation of remnant/mummy nuts	Estimate overwintering population and early-season host availability
Spring	First flight egg deposition	Set biofix for phenology models
Spring/ Summer	Male flight activity	Confirm phenology and compare populations between orchards
Fall	Infestation of new crop nuts	Estimate program efficacy



Navel Orangeworm

Key Management Strategies

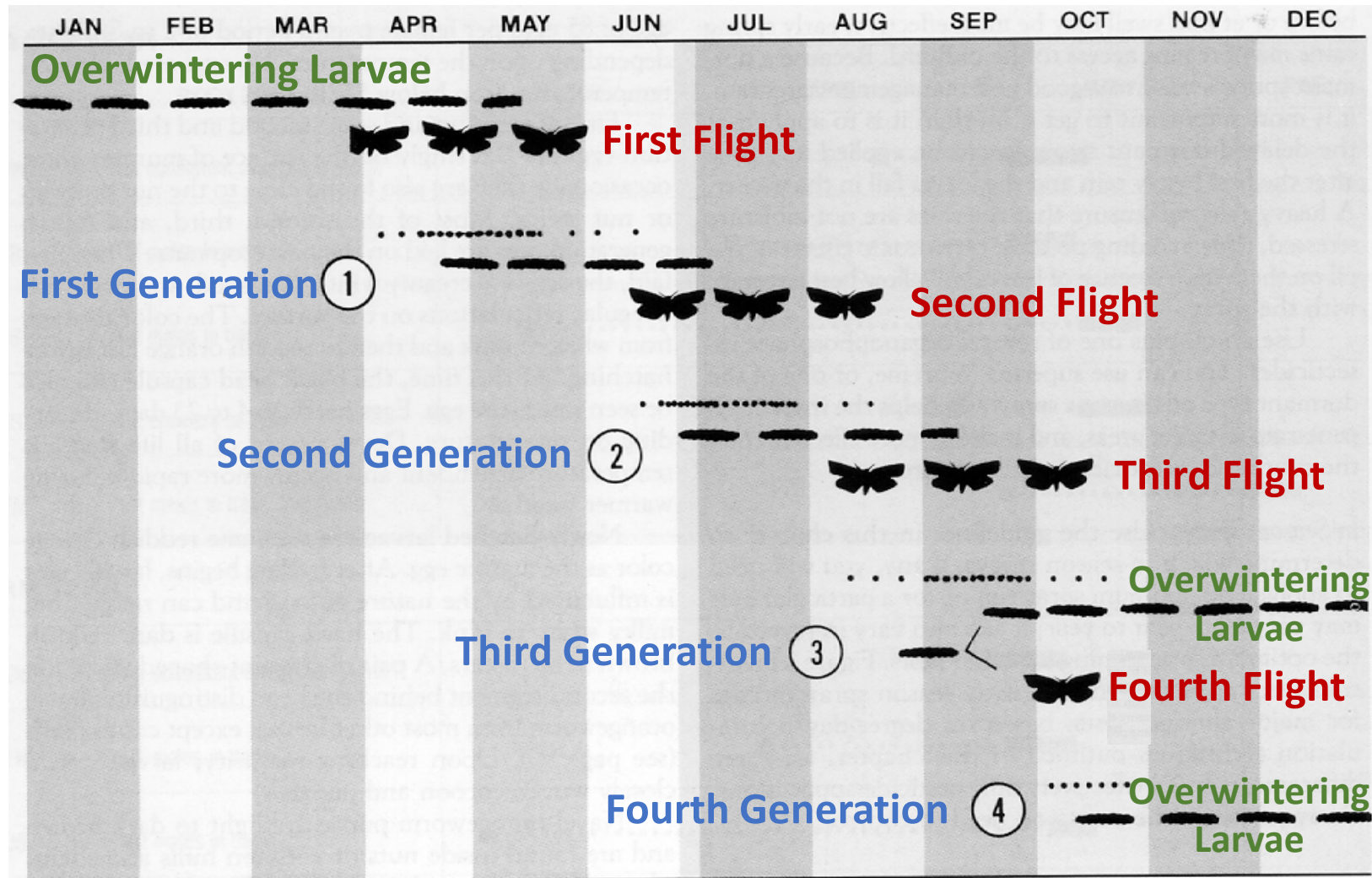
Navel Orangeworm

Key Management Strategies



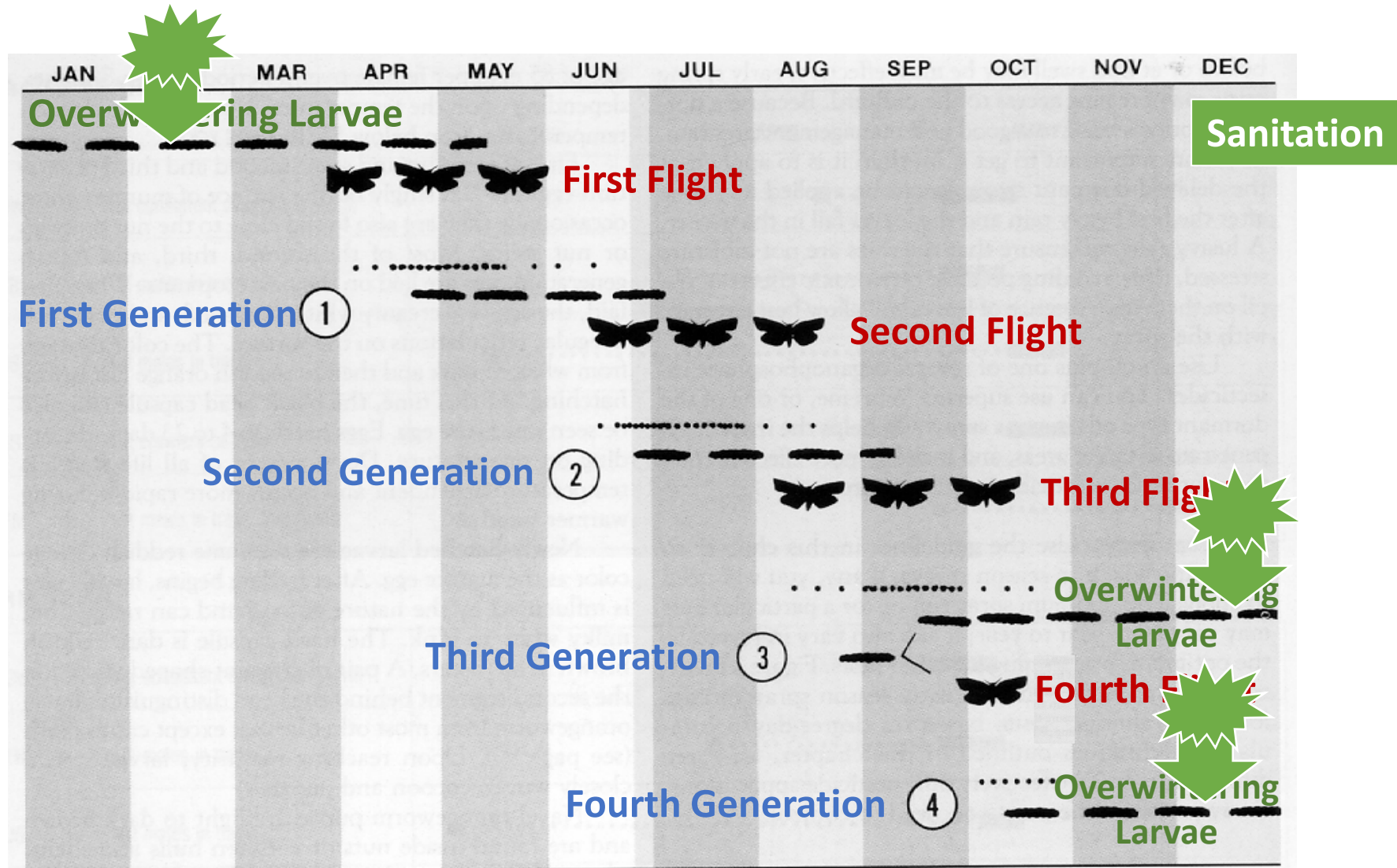
Navel Orangeworm

Key Management Strategies



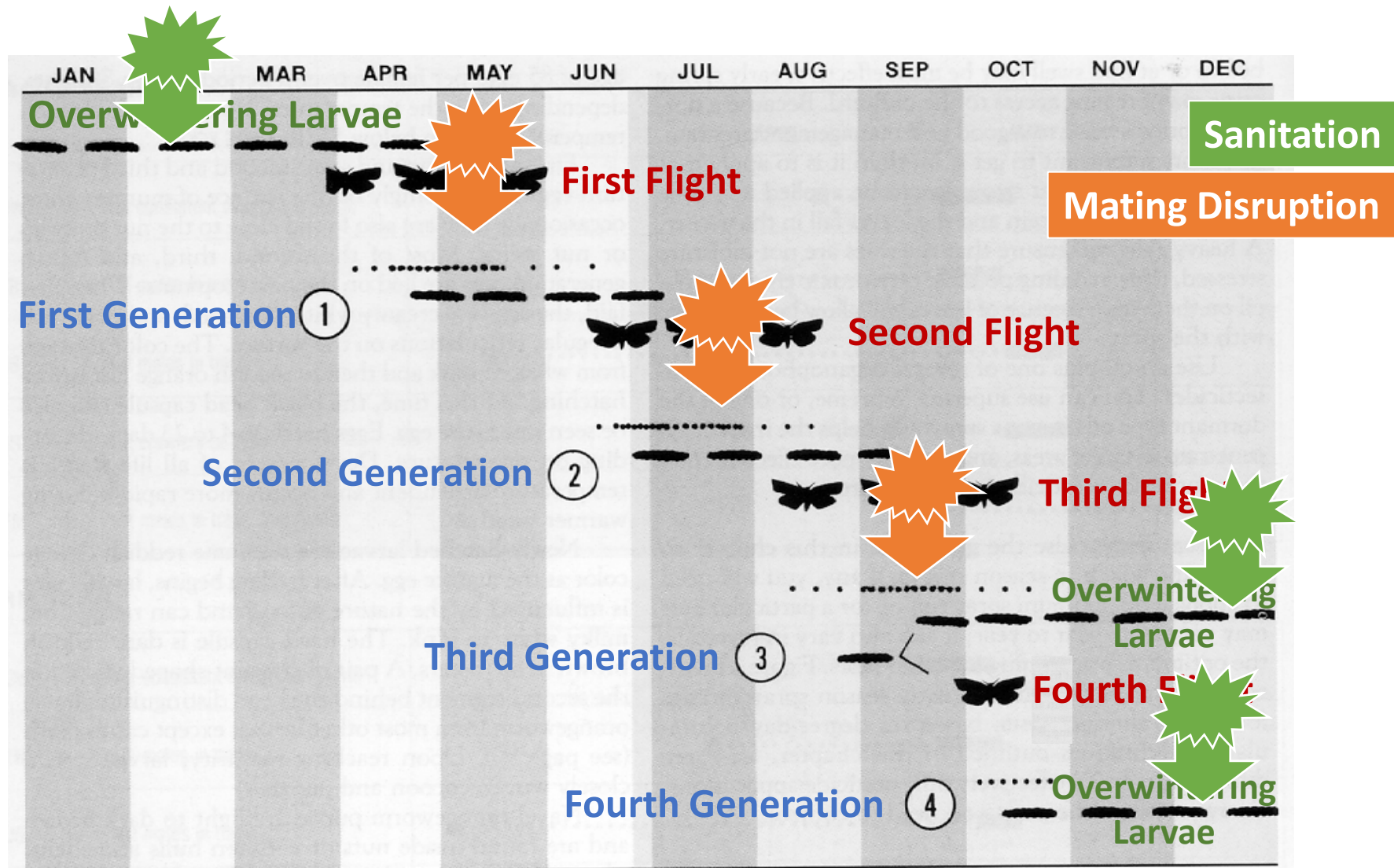
Navel Orangeworm

Key Management Strategies



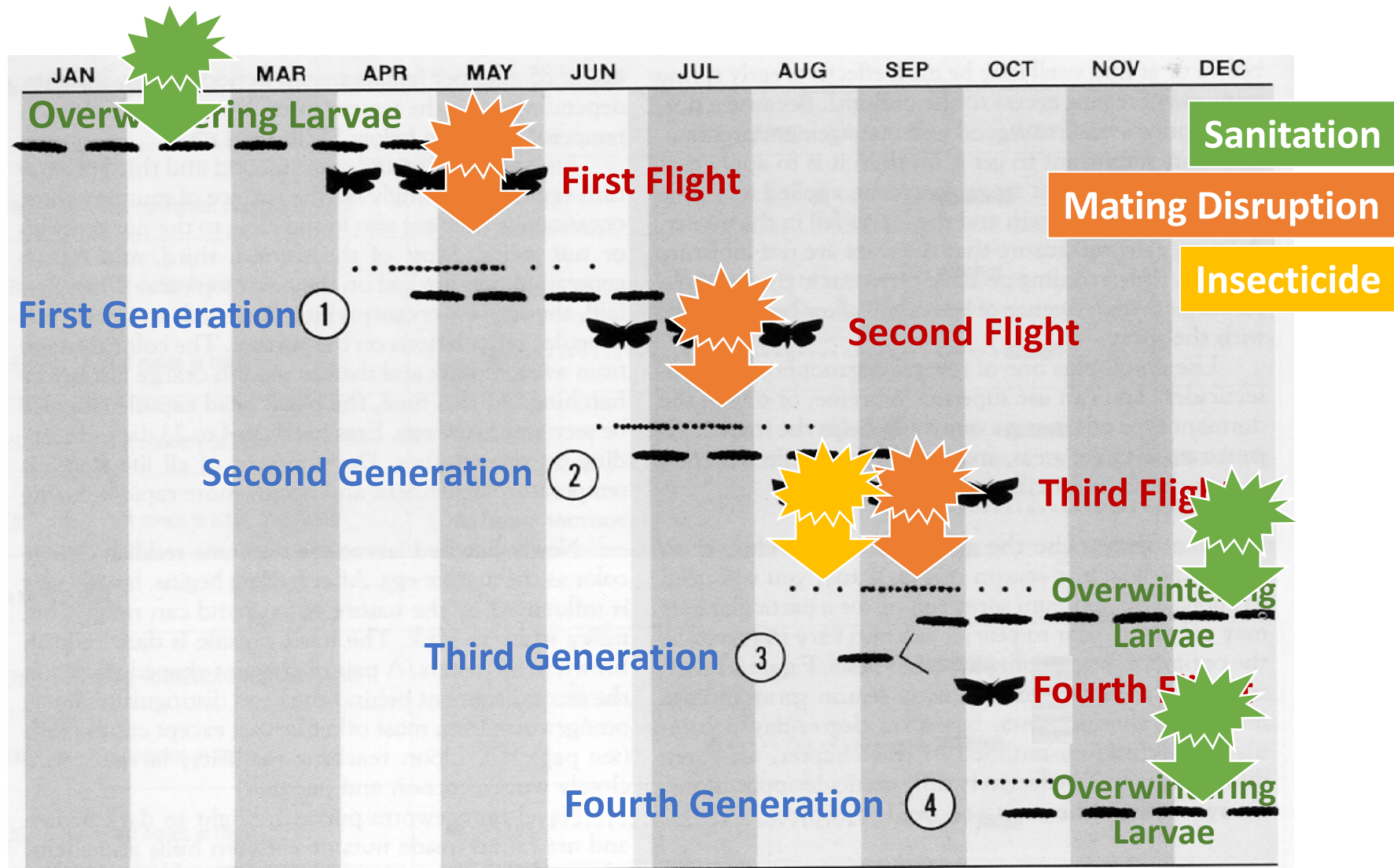
Navel Orangeworm

Key Management Strategies



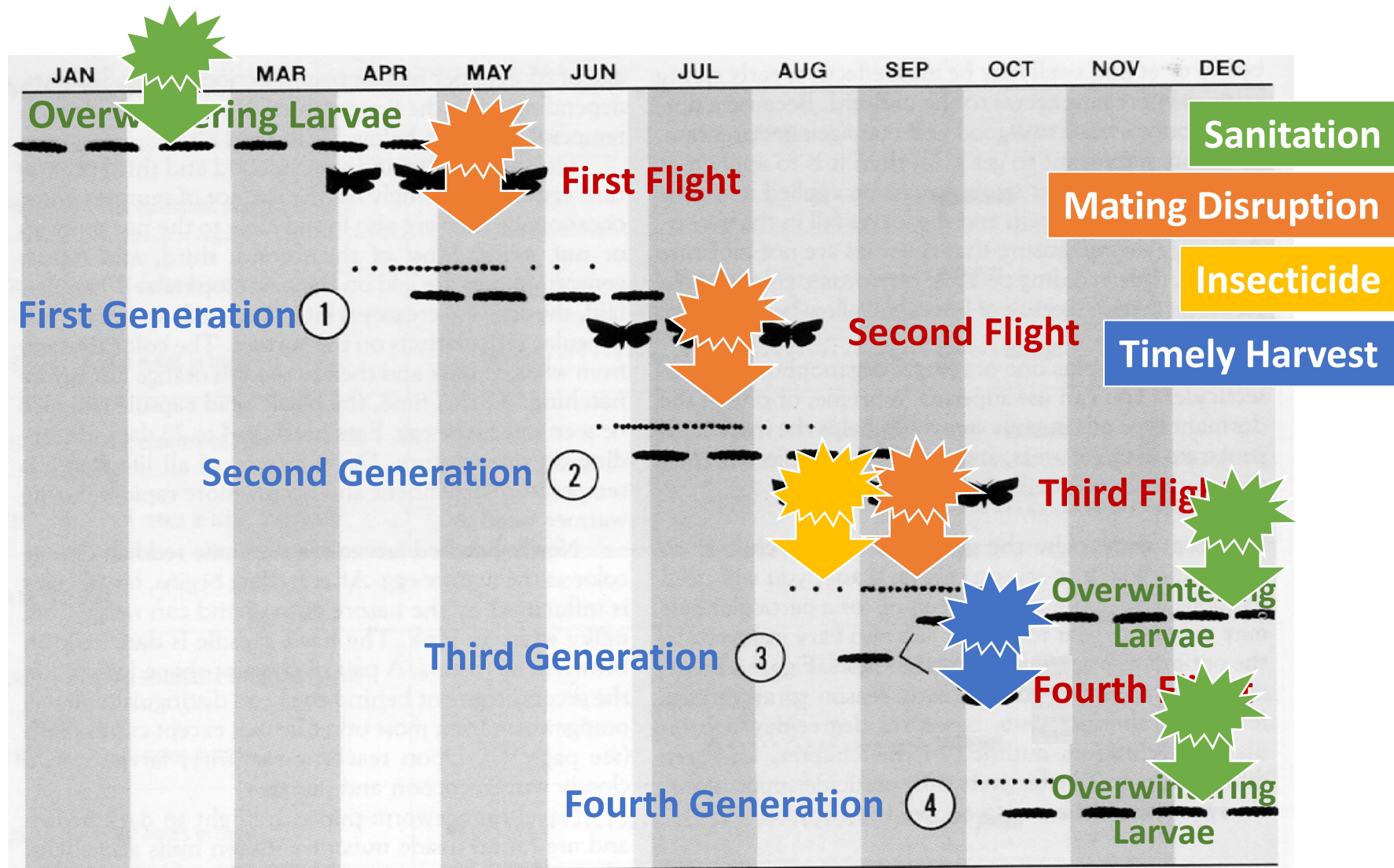
Navel Orangeworm

Key Management Strategies



Navel Orangeworm

Key Management Strategies



Navel Orangeworm

Key Challenges

and the

Need for Regional IPM

Survey of Navel Orangeworm Management

Certain Practices Not Being Fully Adopted

Surveys and Needs Assessments

Adoption of *Amyelois transitella* (navel orangeworm) monitoring and management practices across California tree nut crops

Phoebe E. Gordon^{1,*}, Brittney K. Goodrich^{2,}, Houston Wilson^{3,}

¹Cooperative Extension, University of California Division of Agriculture and Natural Resources, Madera, CA 93638, U
of Agricultural and Resource Economics, University of California, Davis, CA 95616, USA,³Department of Entomology,
California, Riverside, Parlier, CA 93648, USA *Corresponding author, mail: pegordon@ucanr.edu

Subject Editor: Michelle Samuel-Foo

Received 24 February 2023; Editorial decision 26 June 2023

Type	Practice	Adoption
Management	Crop Sanitation	90%
	Pesticide Sprays	90%
	Mating Disruption	38% ←
Monitoring	Evaluate Remnant Nuts	80%
	Phenology Models	72%
	Pheromone Traps	69%
	Egg Traps	63%
	Ovibait Traps	41%



Navel Orangeworm Roundtable

Identifying Additional Grower Needs for NOW

Key Findings/Priorities

- Regional Monitoring
- NOW Risk Prediction
- Areawide Management

Navel Orangeworm Roundtable

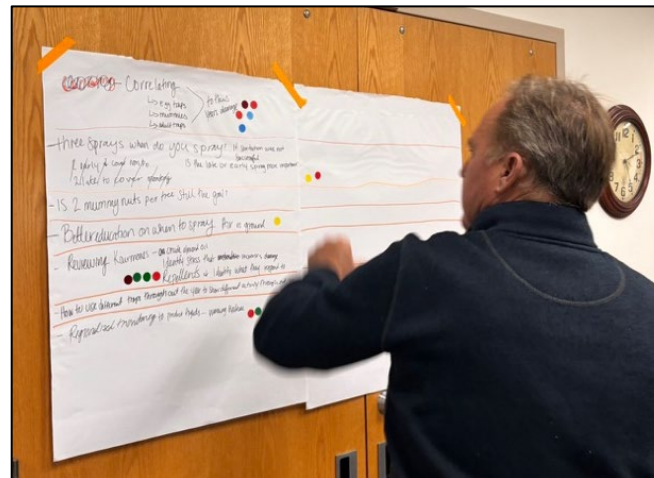
April 8, 2025 (8:30 am – 4:30 pm)

USDA ARS San Joaquin Valley Agricultural Sciences Center, Parlier, California

Meeting Summary

Overview

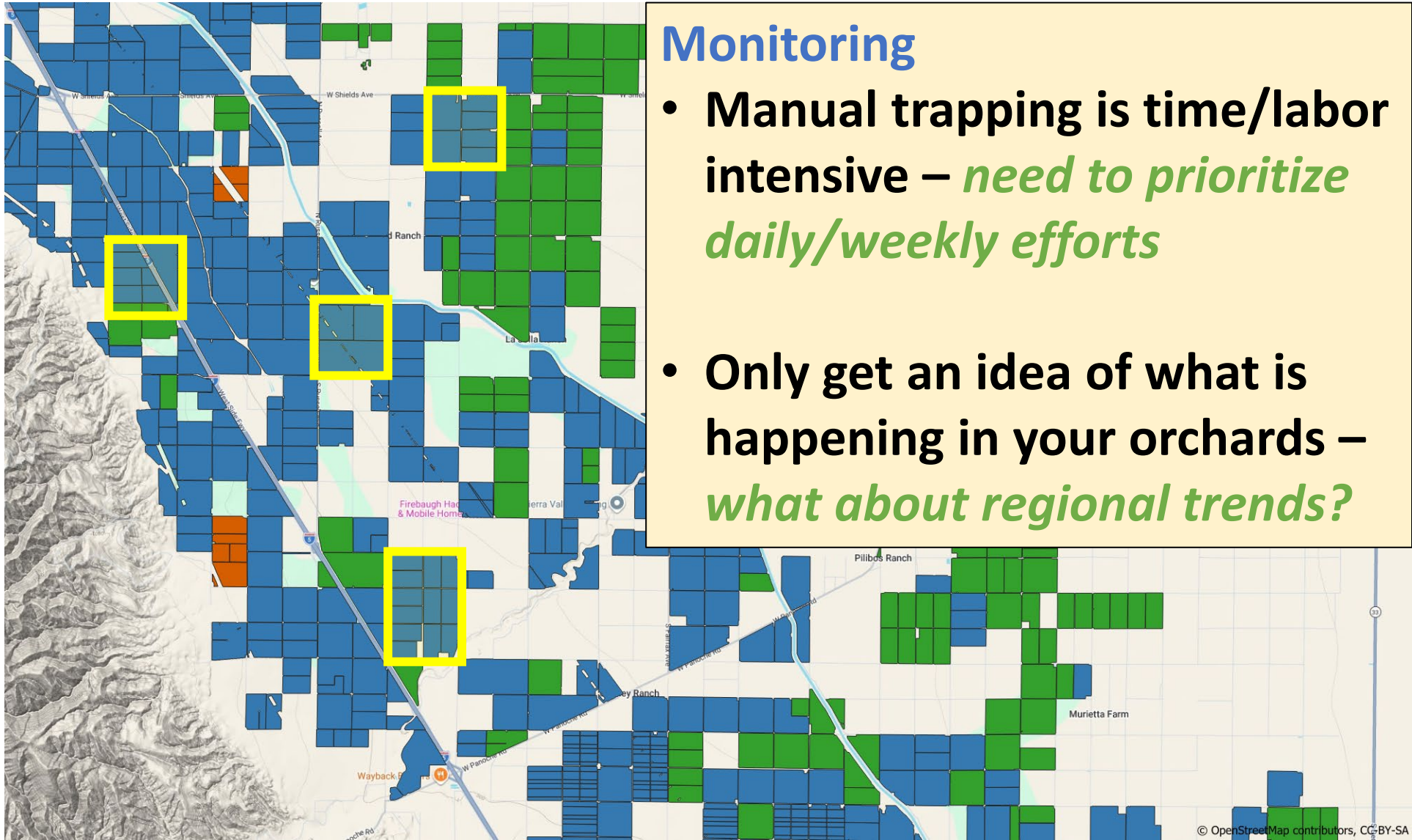
The California Almond Board held a meeting to create shared understanding of current knowledge of the navel orangeworm (NOW) and sterile insect technology (SIT) and develop “roadmap” to focus resources to continue to improve NOW management in almonds, walnuts, and pistachios. This memo summarizes what was presented at the meeting, the input received from participants at the meeting and as well as the next steps.



Organized by the Almond Board of California

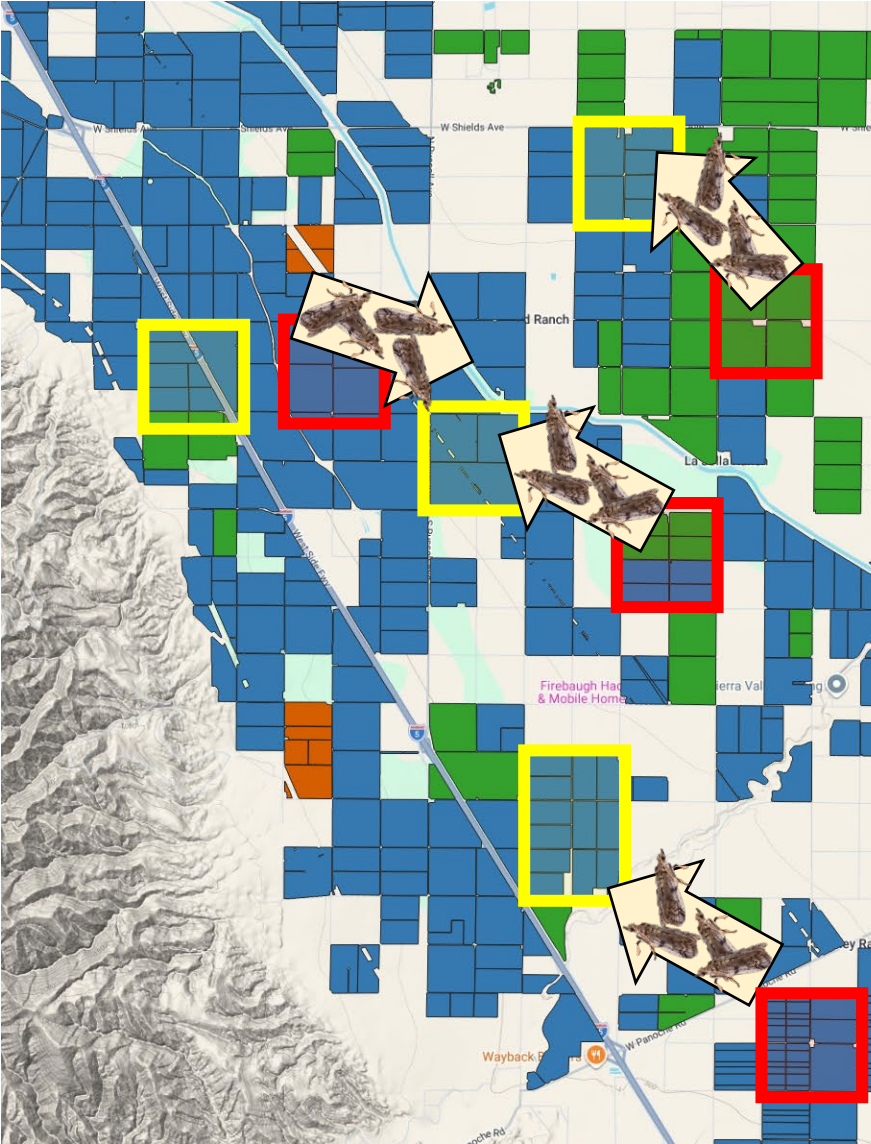
Navel Orangeworm - Key Challenges

Need for Regional Monitoring and Management



Navel Orangeworm - Key Challenges

Need for Regional Monitoring and Management



Management

- Movement between orchards can undermine local management efforts – *but how to know when/where this might happen?*
- Mating disruption works better at scale – *but how to coordinate regional adoption?*

Navel Orangeworm

Regional IPM Program

Navel Orangeworm

Regional IPM Program

➤ Project Goal

- **Develop a digital agriculture infrastructure that supports California transition to SPM through timely and effective management of navel orangeworm**

Navel Orangeworm

Regional IPM Program

➤ Project Goal

- **Develop a digital agriculture infrastructure that supports California transition to SPM through timely and effective management of navel orangeworm**

➤ Primary Components

- **Aggregate resources for NOW monitoring/management**
- **Provide regional NOW monitoring with smart traps**
- **Facilitate coordination and adoption of best management practices**

Navel Orangeworm

Regional IPM Program

➤ Project Goal

- Develop a digital agriculture infrastructure that supports California transition to SPM through timely and effective management of navel orangeworm

➤ Primary Components

- Aggregate resources for NOW monitoring/management
- Provide regional NOW monitoring with smart traps
- Facilitate coordination and adoption of best management practices

➤ DPR Funding Supports

- i. Expanded regional monitoring
- ii. Targeted outreach, esp. in sensitive areas (hospitals, schools, waterways etc.)
- iii. Establish “neighborhood groups” to scale mating disruption
- iv. Community engagement

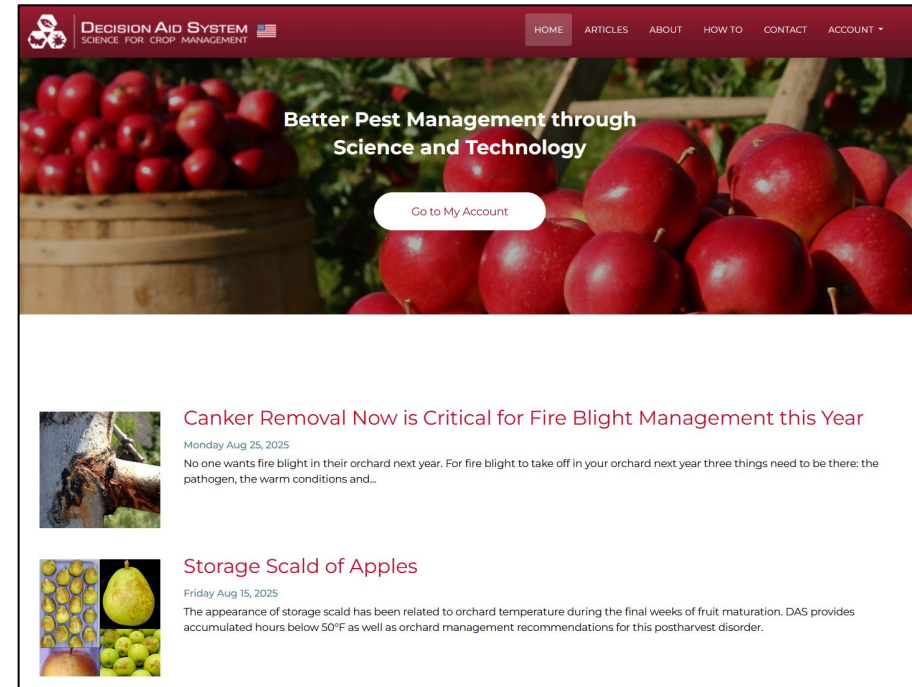
Regional IPM Program for Navel Orangeworm

Decision Aid System (DAS)

Background

Developed at Washington State University

- Web-based platform designed to transfer time-sensitive information to decision makers.
- Runs insect, disease, and horticultural models to predict on-farm conditions in real time
- Links these site-specific forecasts to appropriate management and pesticide guidelines.



<https://decisionaid.systems/>

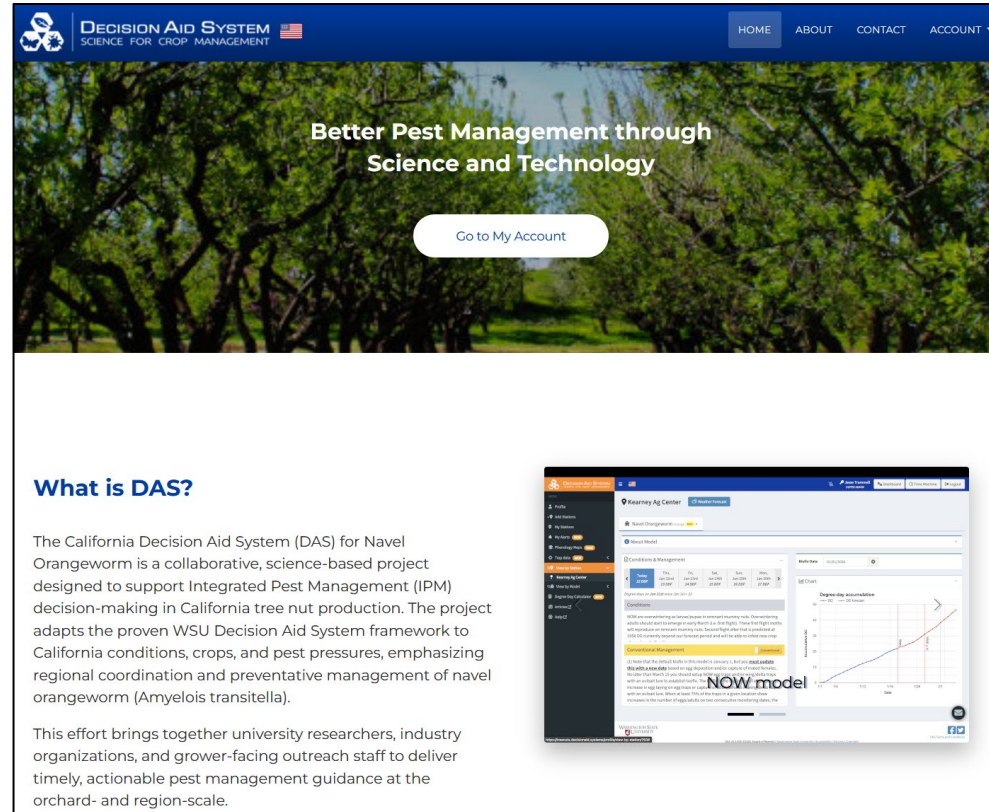
Regional IPM Program for Navel Orangeworm

Decision Aid System (DAS)

Background – DAS for NOW in California

DAS for Tree Nuts / Navel Orangeworm

- Centralize relevant information from various sources
 - UC IPM Program
 - UCD Fruit & Nut Research and Information Center (FNRIC)
 - Regional pest monitoring
 - Various weather datasets
- Generate site-specific information and forecasting
- Facilitate coordination of regional IPM activities
- Free / No subscriptions



The image shows the Decision Aid System (DAS) website and a screenshot of the DAS interface. The website header includes the logo, "DECISION AID SYSTEM SCIENCE FOR CROP MANAGEMENT", and navigation links: HOME, ABOUT, CONTACT, ACCOUNT. The main banner features the text "Better Pest Management through Science and Technology" and a "Go to My Account" button. Below the banner, the "What is DAS?" section explains that the California Decision Aid System (DAS) for Navel Orangeworm is a collaborative, science-based project designed to support Integrated Pest Management (IPM) decision-making in California tree nut production. It adapts the proven WSU Decision Aid System framework to California conditions, crops, and pest pressures, emphasizing regional coordination and preventative management of navel orangeworm (*Amyelois transitella*). A screenshot of the DAS interface shows a sidebar with navigation options like Home, Conditions, and Forecasting. The main content area displays a "Navel Orangeworm" section with a "Conditions Management" table and a "Forecasting" section with a "Degree-day accumulation" graph. The graph shows a blue line for the "NOW model" and a red line for the "Forecast" model, with a red vertical line indicating the current date.

What is DAS?

The California Decision Aid System (DAS) for Navel Orangeworm is a collaborative, science-based project designed to support Integrated Pest Management (IPM) decision-making in California tree nut production. The project adapts the proven WSU Decision Aid System framework to California conditions, crops, and pest pressures, emphasizing regional coordination and preventative management of navel orangeworm (*Amyelois transitella*).

This effort brings together university researchers, industry organizations, and grower-facing outreach staff to deliver timely, actionable pest management guidance at the orchard- and region-scale.

<https://treenuts.decisionaid.systems/>

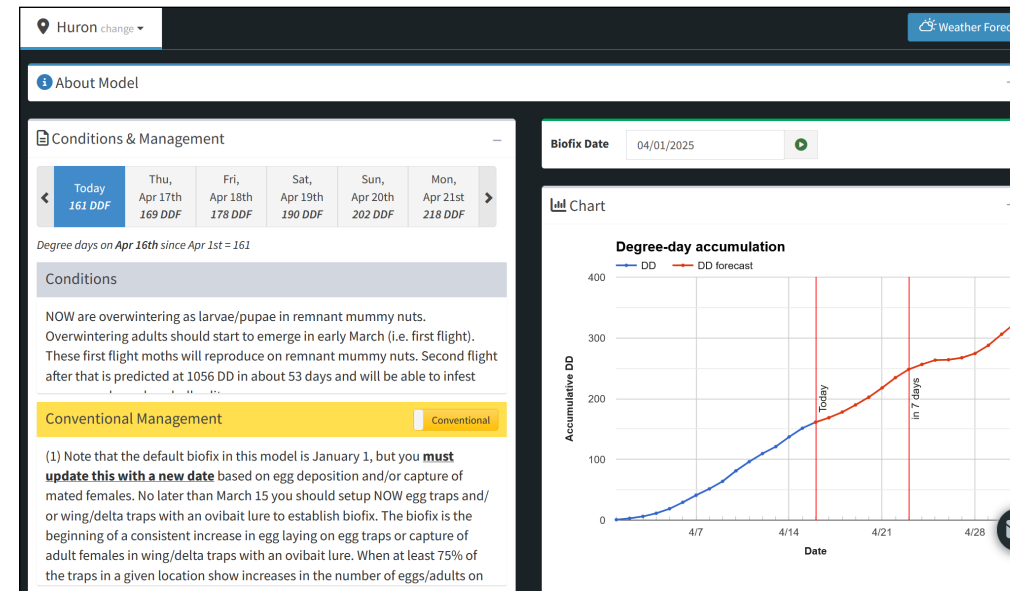
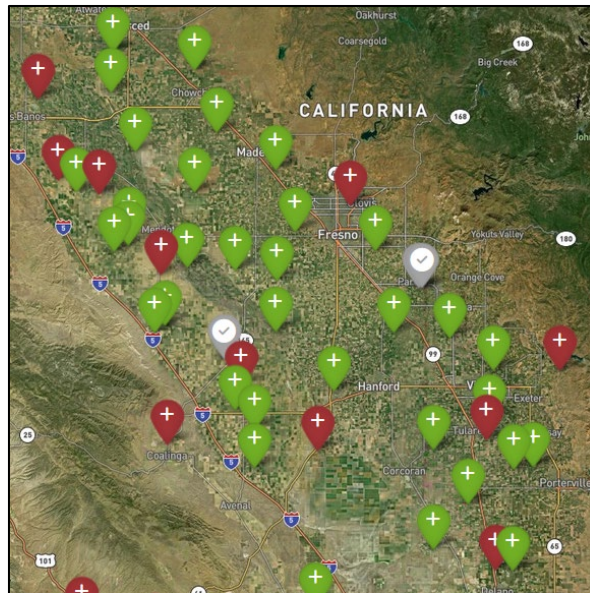
Regional IPM Program for Navel Orangeworm

Decision Aid System (DAS)

Overview

(1) Core Features

- Navel Orangeworm + Tree Phenology Models
 - Based on physical and/or virtual weather station networks
- Natural Language Guidance
 - Recommendations drawn from UC IPM



Regional IPM Program for Navel Orangeworm

Decision Aid System (DAS)

Overview

(1) Core Features

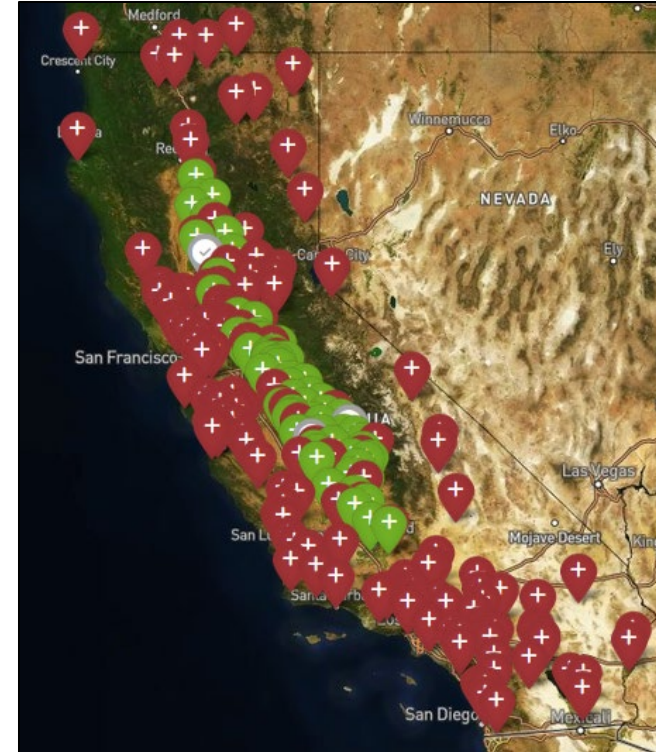
- **Weather Data – Multiple Options**
 - DayMET (1 x 1 km data; Oak Ridge Nat. Lab.)
 - CIMIS (Dept. Water Resources)
 - WildEye (Admin. Comm. for Pistachios)
 - Your own weather stations
- **Automated Alerts**
 - Based on your location(s)



DAS

Second NOW flight is 15% underway.
1% hull-split (almonds) expected on 7/2/26.

[Click here](#) for regional map and management options.



Regional IPM Program for Navel Orangeworm

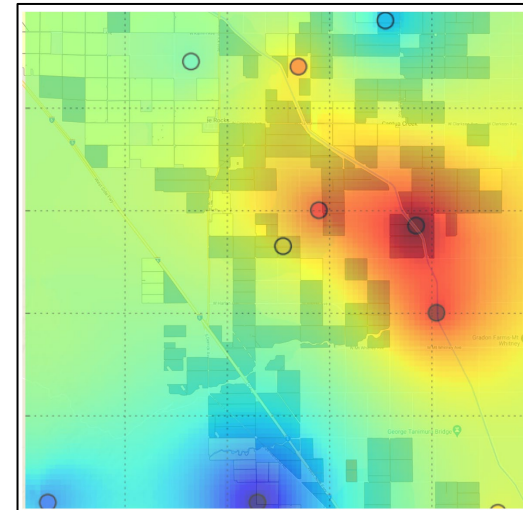
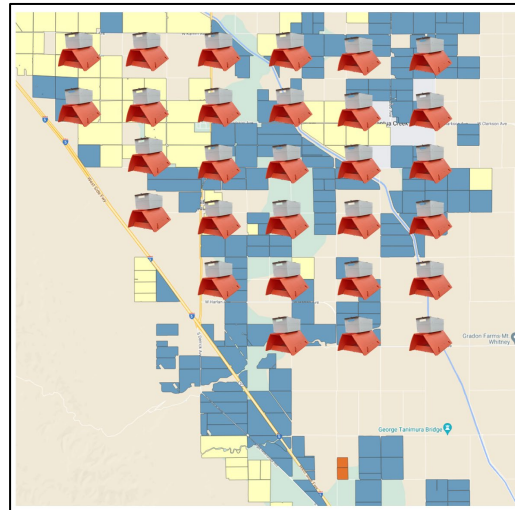
Decision Aid System (DAS)

Overview

(2) Regional Features

➤ NOW Monitoring Networks

- Fresno Co. and Stanislaus Co.
- Each monitoring point includes two traps
 - a) pheromone + phenyl propionate (PPO)
 - b) ovipositional bait



Regional IPM Program for Navel Orangeworm

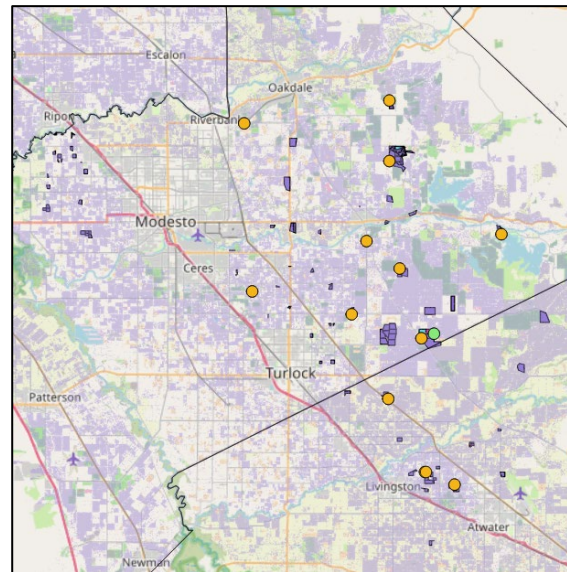
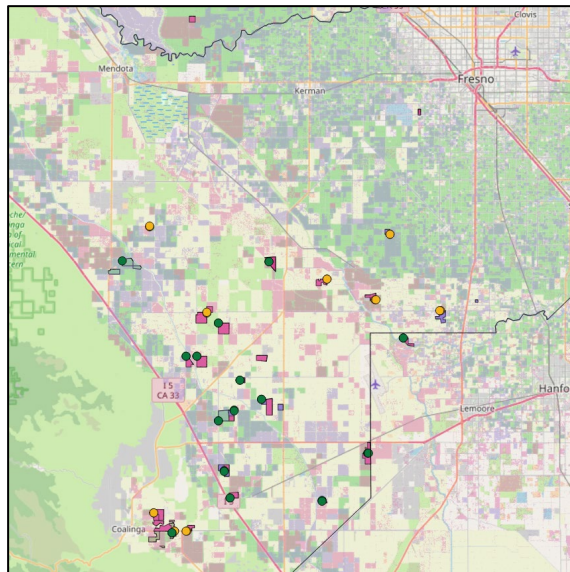
Decision Aid System (DAS)

Overview

(2) Regional Features

➤ NOW Monitoring Networks

- Fresno Co. and Stanislaus Co.
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 - a) pheromone + phenyl propionate (PPO)
 - b) ovipositional bait



Progress in 2026

- Fresno – 22 stations
- Stanislaus – 13 stations

Regional IPM Program for Navel Orangeworm

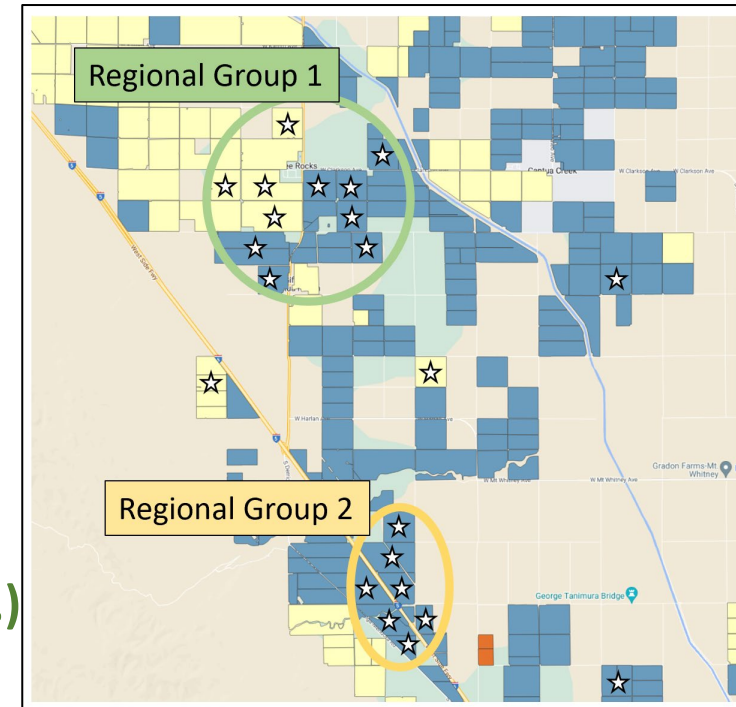
Decision Aid System (DAS)

Overview

(3) Coordination Features

➤ Form/Enroll in a Neighborhood Group

- Goal = scale mating disruption
- Minimum group size = ~1,000 acres
- Requirements
 - i. Provide parcel IDs + block details
 - ii. Follow a mummy sampling protocol
 - iii. Use mating disruption
 - iv. Share spray info (AI, timing, rate etc.)
 - v. Share harvest date + crop damage
- Benefits
 - i. Rebate program for mating disruption
 - ii. Improve efficacy of mating disruption
 - iii. Shared data contribute to regional research on NOW management



Regional IPM Program for Navel Orangeworm

Decision Aid System (DAS)

Benefits

Why Use the DAS for NOW?

- More accurate monitoring of NOW and crop development
- Gain insight on regional NOW activity and crop damage trends
- Maximize impact of mating disruption through regional adoption
- Better pesticide treatment timing
- Lower NOW damage and aflatoxin risk
- Contributes to new statewide model advancing SPM in tree nuts

DAS FOR NOW - REGIONAL IPM GROWER ENROLLMENT FORM	
CONTACT INFORMATION	
Organization Name:	Contact Name:
Phone Number:	Email Address:
Mailing Address:	
Total Acreage:	Crops:
PCA Contact Information:	
RANCH INFORMATION	
Ranch Name:	County:
APN(s):	
Crop & Variety:	Planted Date:
Does this ranch currently have NOW traps? ☐ Yes ☐ No	If yes, how many:
Ranch Name:	County:
APN(s):	
Crop & Variety:	Planted Date:
Does this ranch currently have NOW traps? ☐ Yes ☐ No	If yes, how many:
Ranch Name:	County:
APN(s):	
Crop & Variety:	Planted Date:
Does this ranch currently have NOW traps? ☐ Yes ☐ No	If yes, how many:
Please provide the following documents for all acreage you wish to be enrolled:	
☐ Ranch maps showing cross streets and block boundaries	
☐ GPS coordinates of weather stations and smart traps, if applicable	
Please provide information on management practices currently implemented to combat NOW:	
CONSENT & AGREEMENT	
By enrolling in the Decision Aid System (DAS), I confirm that the information I provided is true and accurate to the best of my knowledge. I understand that my information may be used, aggregated, anonymized, and shared with other DAS participants, project partners, and funders to support DAS tools, research, outreach, and coordinated pest management efforts. Participation is voluntary, and I may withdraw at any time.	
Signature:	Date:
Name, Title:	
Please email to this form and applicable attachments to cclark@americanpistachios.org and jcoelho@americanpistachios.org for submission.	
Thank you for enrolling in the Decision Aid System (DAS). Your participation helps strengthen regional monitoring, improve pest management solutions, and support sustainable solutions for California tree nut production. We appreciate your time, collaboration, and commitment to advancing effective NOW management.	

Regional IPM Program for Navel Orangeworm

Decision Aid System (DAS)

Leadership Group

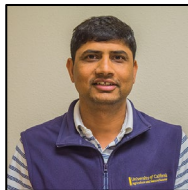
Project Team



Houston Wilson
UC Riverside



Dave Crowder
WA State Univ.



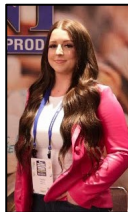
Jhalendra Rijal
UC IPM



Chuck Burks
USDA ARS



Joe Coelho + Carlee Clark
American Pistachio Growers



Management Team

Joe Coelho, Director of Sustainability and Grower Outreach, American Pistachio Growers (APG), 559-260-5114, JCoelho@americanpistachios.org
Carlee Branco, Grant Administrator, Healthy Soils Block Grant Program, American Pistachio Growers (APG), 559-410-7482, C Branco@americanpistachios.org
Steve Vasquez, Executive Director, Administrative Committee for Pistachio & California Pistachio Research Board, 559-255-6480, stephenv@acpistachios.org
Joe Grant, Research Director, California Walnut Board & Commission, 916-932-7070, jagrant@ucanr.edu
Lauren Fann, Manager – Pest Management, Almond Board of California, 209-876-2956, lfann@almondboard.com

Mel Machado, Chief Agricultural Officer, Blue Diamond Growers, 209-545-6222, mmachado@bdgrowers.com

Johnny Etchamendi, Pest Control Advisor & Owner, Mendi Ag Services, 661-331-5421, jetxamendi@hotmail.com

Michael Haupt, Director of Farming, Pomona Farming, 661-203-6340, michael.haupt@pomona-farming.com

Shane Bickner, Crop Manager, Woolf Farming, 559-381-9009, sbickner@woolffarming.com

Kevin Brooks, Pest Control Advisor & President/Owner, KB Horticultural Sciences Inc., 559-908-6686, kbrookspca@gmail.com

**Commodity
Boards**

Processors

Growers / PCAs

Regional IPM Program for Navel Orangeworm

Decision Aid System (DAS)

Outreach Plan

(4) Outreach, Participation and Feedback

- Early adopters/promoters in Fresno/Stanislaus
 - Core group within the Management Team
- Common Extension/Education Events
 - The Almond Conference, Statewide Pistachio Day, UCCE Field Days, Tree/Vine Expos etc.
- Targeted Outreach in Enviro. Sensitive Areas
 - Orchards near rural communities, hospitals, schools, sensitive waterways etc.
- Community Engagement
 - Raise awareness with the public, highlight benefits beyond the orchard



Thank You!

Houston Wilson
Assoc. Coop. Extension Specialist

Houston.Wilson@ucr.edu
Dept. Entomology, UC Riverside



[Funding]

- California Pistachio Research Board
- Almond Board of California
- CDFA OARS BIFS Program
- CA Department of Pesticide Regulation



WASHINGTON STATE
UNIVERSITY



UC Integrated
Pest Management

University of California
Agriculture & Natural Resources



The Office of
Agricultural Resilience
& SUSTAINABILITY



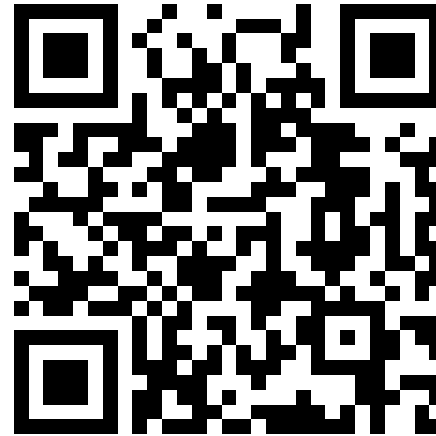
SPM pilot program discussion



<https://cdpr.commentingplatform.com?id=BfmZx2TVPh>

1. What types of SPM projects should DPR fund?
2. What are priority topics, communities, regions, etc., to fund?
3. Should DPR fund fewer large-scale projects or several small-scale projects?
4. Should DPR fund long-term or short-term projects?
5. What factors should DPR consider and evaluate when we review project proposals?

Public comment period open through October 1, 2026



<https://cdpr.commentinput.com?id=BfmZx2TVPh>



10-minute break



Activating Markets for Sustainable Pest Management: SPM-Aligned Food Certifications and Practices

Lisa Estridge

Environmental Program Manager I

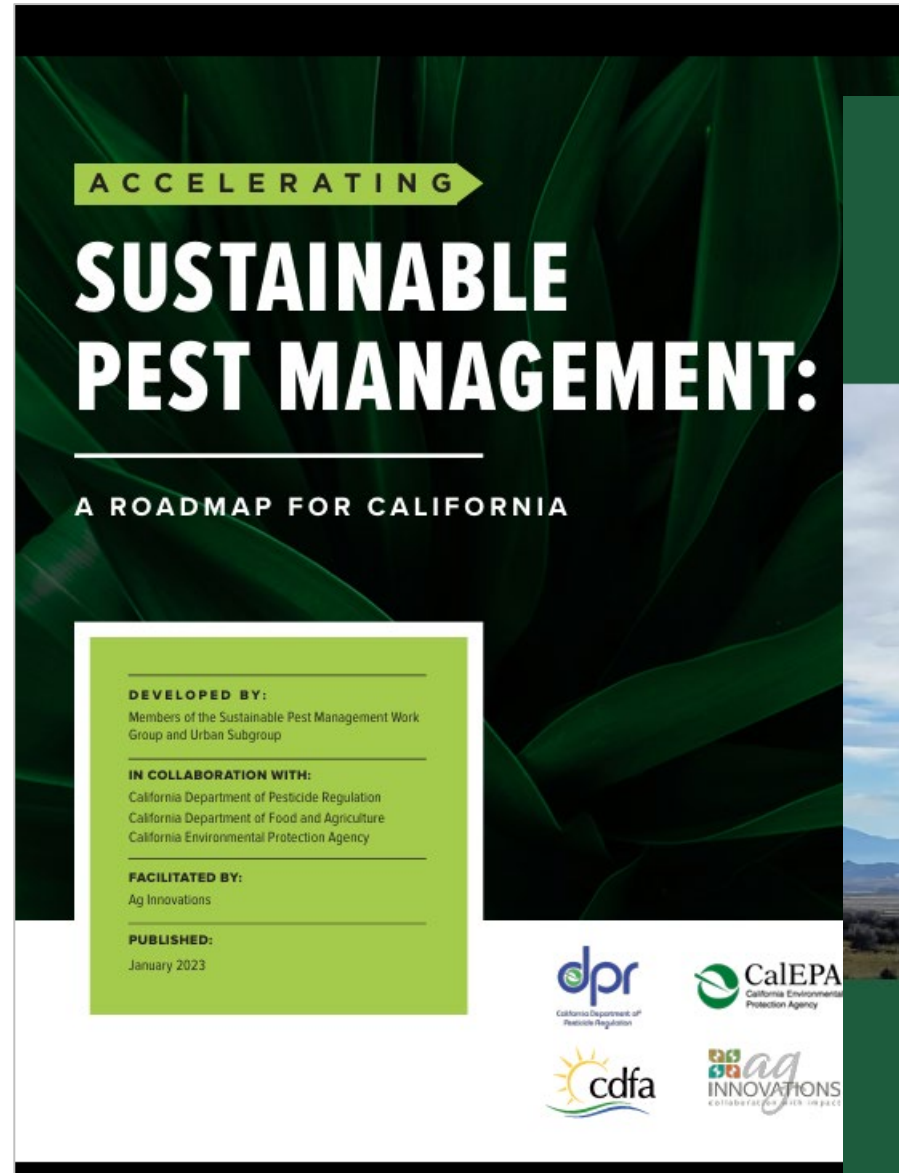
IPM Branch, DPR

Outline

- Background from the SPM Roadmap and DPR Strategic Plan
- Project to Compile SPM-Aligned Certifications and SPM Practices
- Committee Input and Discussion



Background from the SPM Roadmap and DPR Strategic Plan



Department of Pesticide Regulation Strategic Plan 2024-28



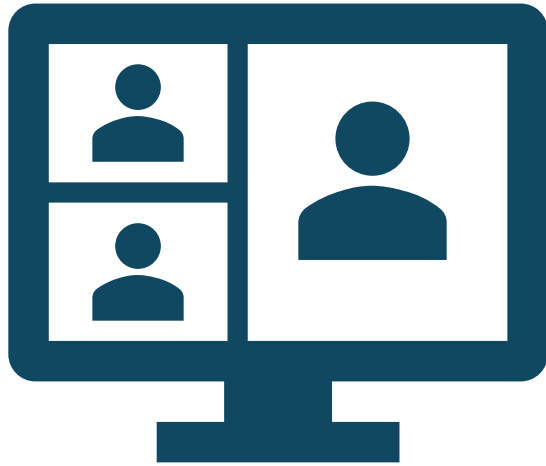
California Department of
Pesticide Regulation



Project to Compile SPM-Aligned Certifications and SPM Practices

- DPR compiled a list of existing third-party food certifications that have IPM requirements and align with SPM
- DPR assembled a list of IPM and SPM practices from the list of food certifications
- Now: DPR is soliciting public input and determining next steps

Met with External Partners



March – December 2025

- CDFA
- IPM Institute of North America
- Sysco Corporation
- California Certified Organic Farmers
- Certified Naturally Grown

Compiled a List of Third-Party Food Certifications that Have IPM Requirements

Criteria

- Pest management component/requirements for certification
- Applicable to California-grown produce

Not Considered

- Methods for earning and keeping certification
- Cost for initial and ongoing certification
- Participation metrics

Compiled a List of Third-Party Food Certifications that Have IPM Requirements



- 30 existing food certifications that have IPM requirements for CA-grown produce
- Compiled from many sources, SPM Roadmap, suggestions from our meetings with external partners, etc.
- **Not a comprehensive list**

Compiled a List of Third-Party Food Certifications that Have IPM Requirements

	Certification Name	Certifying Organization
1	Bee Friendly Farming	Pollinator Partnership
2	Bee Better Certified	Xerces Society for Invertebrate Conservation
3	Biodynamic Certified	Demeter
4	Bird Friendly for certified coffee and cocoa	Smithsonian's National Zoo & Conservation Biology Institute
5	Certified Naturally Grown	Certified Naturally Grown
6	Certified Regenerative	A Greener World Standards
7	Certified Sustainably Grown	SCS Global Services
8	Equitable Food Initiative Certification	Equitable Food Initiative
9	Fair Food Program	Fair Food Standards Council / Coalition of Immokalee Workers
10	Fair for Life	Ecocert
11	Fair Trade Certified	Fair Trade USA
12	Fair Trade Standard	World Fair Trade Organization
13	Fairtrade mark	Fairtrade International
14	FairWild Standard	FairWild Foundation
15	Food Alliance Certified	Food Alliance

	Certification Name	Certifying Organization
16	Food Justice Certified	Agricultural Justice Project
17	Global G.A.P.	Global G.A.P.
18	LEAF Marque	Linking Environment and Farming
19	Lodi Rules	Lodi Rules
20	Naturland Standards	Naturland
21	Organic Guarantee System	IFOAM Organics International
22	Pesticide Free Certification	SCS Global Services
23	ProTerra Standard	ProTerra Foundation
24	Rainforest Alliance Sustainable Agriculture Standard	Rainforest Alliance
25	Real Organic Project Standards	Real Organic Project
26	Regenerative Organic Certified	Regenerative Organic Alliance
27	Salmon-Safe Certified	Salmon-Safe
28	Sustainability in Practice (SIP) Certified	Sustainability in Practice (SIP) Certified
29	Sustainability Standard	IPM Institute of North America
30	USDA Organic Seal - Organic Certification	USDA

Assembled a List of IPM and SPM Practices from the List of Food Certifications

Methodology

1. Identified the specific IPM/SPM practices that are required by certifications
2. Created an organized list assembled from 30 sources



Assembled a List of IPM and SPM Practices from the List of Food Certifications

1. Identified the specific IPM/SPM practices that are required by certifications

Sustainability Standard, IPM Institute of North America

Water Conservation				
2.05.01	Prevent contamination	Does the organization implement measures to prevent water contamination with sediment, nutrients and pesticides?	20	Y/N

Assembled a List of IPM and SPM Practices from the List of Food Certifications

1. Identified the specific IPM/SPM practices that are required by certifications

SPM Pillar:
Environmental
Protections

SPM Criteria:
Water
Conservation

SPM Practice:
Prevent pesticide runoff/
water contamination

Sustainability Standard, IPM Institute of North America

Water Conservation				
2.05.01	Prevent contamination	Does the organization implement measures to prevent water contamination with sediment, nutrients and pesticides?	20	Y/N

SPM Pillar	SPM Criteria	SPM Practices
Environmental Protections	Environmental Conservation Methods that help conserve the environment	Air quality; Land use; Zero deforestation; Waste management; Energy efficiency/Climate neutrality; Broadened environmental protections
	Soil Conservation Methods that improve or conserve soil fertility	Managing crop nutrients; Implementing crop rotation; Utilizing vegetative cover; Adding organic matter inputs such as compost and manure; Managing fertilizers effectively; Practicing conservation tillage; Applying mulch; Preventing erosion; Irrigation management to prevent runoff, leaching, and nutrient loss; Mitigating soil contamination
	Water Conservation Methods that help conserve water	Efficient water use/Precision irrigation/Moisture sensors; Weather-based irrigation system/irrigation timing; Optimizing water retention of crops/applying mulch; Water recycling; Preventing pesticide runoff/ water contamination; Water monitoring/testing
	Biodiversity Methods that preserve or improve biodiversity	Crop diversity; Agroforestry/Planting hedgerows; Vegetative cover/Cover crop; Maintaining natural habitats; Minimizing or avoiding the use of chemicals to protect non-targeted species
	Pollinator Protection Methods that help conserve and protect pollinators	Managing permanent or temporary pollinator habitat; Planting pollinator-friendly plants and shrubs; Eliminating or reducing the use of pesticides that would negatively impact pollinator health
	Pesticide Use Mitigation Methods that reduce the use of pesticides	Reducing pesticide use; Prohibited chemicals; Reducing drift and off-site movement; Reducing exposure to non-targeted organisms
Human Health & Social Equity	Administrative Accountability Certification meets all legal requirements	Regulatory Compliance; Recordkeeping
	Worker Protection Methods that help protect worker health	Provide (safety) training; Provide PPE; Working conditions; Prevent exposure to chemicals; Heat exposure reduction
	Social Equity Methods that protect human health and foster social equity	Provide fair pay; Working hours; Human health; Worker rights; Fair hiring; Livable conditions
Economic Vitality	Economic Vitality Practices are economically viable	Cost effectiveness; Practices are financially sustainable; Economic benefits to the community
Other	IPM Practices Methods that prevent, destroy, repel, or mitigate any pest	IPM plan; Pest monitoring; Pest prevention; Physical/Mechanical control; Biological control; Cultural practices/Habitat modification

Lessons Learned

- There are many existing food sustainability certifications.
- Many advance and support SPM practices, but individual certifications may not be comprehensive in promoting all SPM practices.
- Most advance environmental sustainability but have less focus on social and economic sustainability.
- There may be more sustainability factors than what is online or required.





Activating Markets for SPM Discussion

1. How can DPR turn information we gathered on third-party food certifications with IPM requirements into a useful resource without endorsing any particular certification or creating a new certification?
2. If you could have one tool or resource to activate markets for produce grown using SPM, what would you want that tool or resource to do?
3. What would make an SPM procurement resource useful enough that it would be used to make business decisions?
4. Which partnerships should DPR engage to activate markets for SPM?

Activating Markets for SPM Discussion



<https://cdpr.commentingplatform.com?commentid=BfmZx2TVPh>

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Activating Markets for SPM Discussion



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Activating Markets for SPM Discussion



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Activating Markets for SPM Discussion

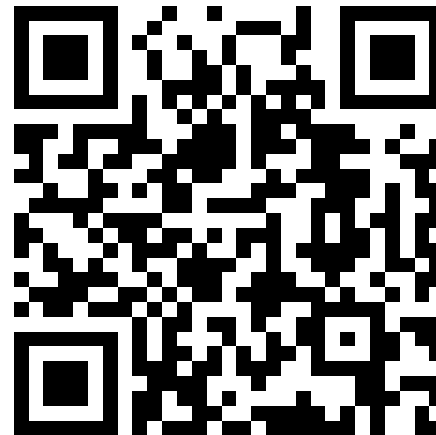


<https://cdpr.commentingplatform.com?id=BfmZx2TVPh>

4. Which partnerships should DPR engage to activate markets for SPM?

Closing Remarks

Public comment period open through October 1, 2026



<https://cdpr.commentinput.com?id=BfmZx2TVPh>

Updates on other SPM initiatives

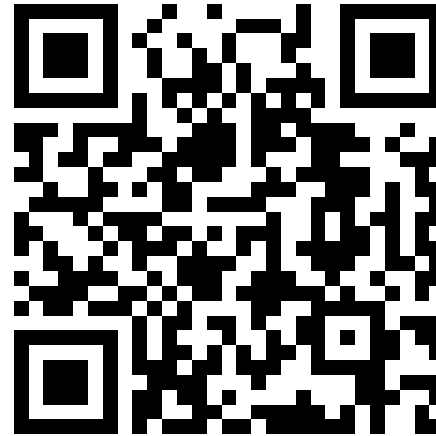


Next SPM Advisory Committee Meeting

- Date: Wednesday December 2, 2026
- Time: 1:00 pm to 4:00 pm
- Topics:
 - SPM metrics
 - CDFA & CAPCA study on PCA use of SPM practices



Public comment period open through October 1, 2026



<https://cdpr.commentinput.com?id=BfmZx2TVPh>



Thank you

Next meeting: December 2, 2026 1:00 pm – 4:00 pm

SPMAdvisory@cdpr.ca.gov