

THE ALMOND CONFERENCE

50

YEARS

# THANK YOU TO THE ALMOND CONFERENCE 2022 METAL SPONSORS!



THE ALMOND CONFERENCE

50  
YEARS

# Almond Stewardship 2.0

December 8, 2022

Moderator: Gabriele Ludwig (ABC)

Speakers: Tom Devol (ABC)

Eric Harris (SureHarvest)

Miles Dakin (Pollinator Partnership)

Jesse Roseman (ABC)

 **california  
almonds**<sup>®</sup>  
Almond Board of California

# Almond Board of California —

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*approved by the Board of Directors on  
October 24, 2018*



## Vision

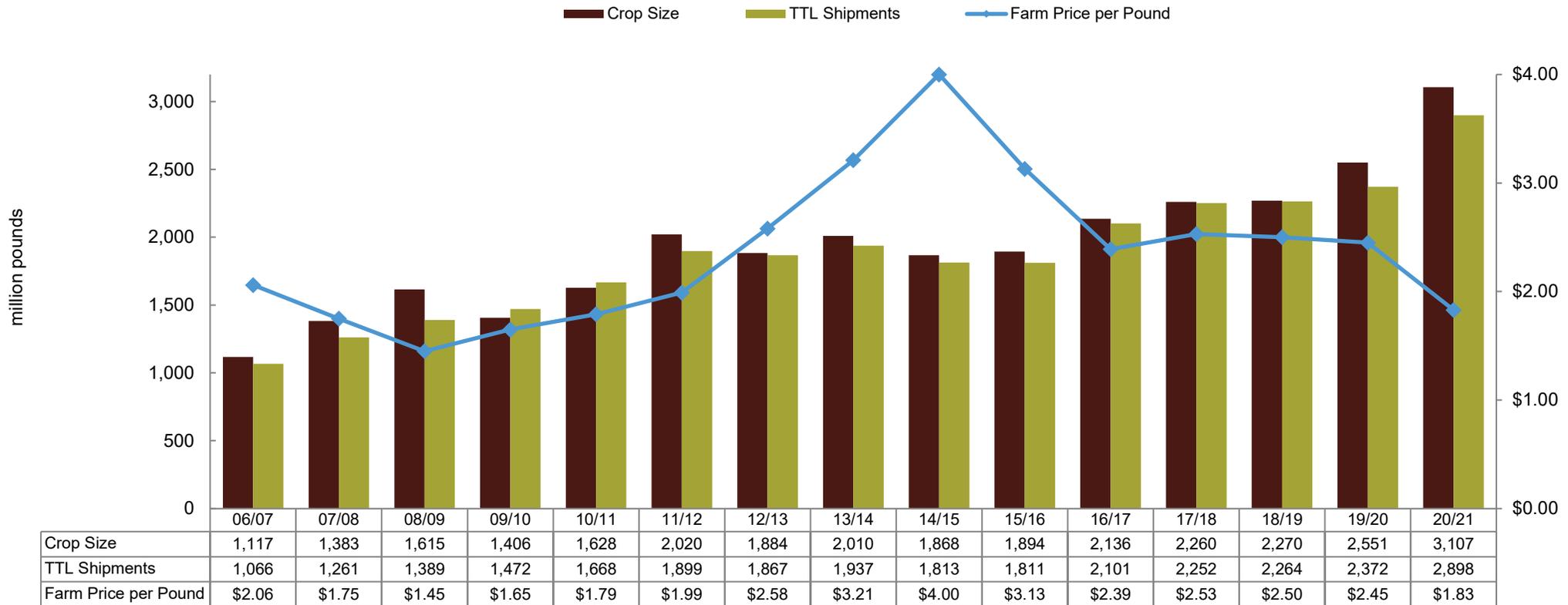
California Almonds make life better by what we grow and how we grow.

## Mission

Expand global consumption of California almonds through leadership in strategic market development, innovative research, and accelerated adoption of industry best practices.

# Versatility and Healthfulness have Driven Increased Almond Production/ Sales

### Historical Crop Size + Shipments vs. Farm Price



Sources: Almond Board of California, USDA, NASS/PRO

# ∴ 4 key trends have propelled almonds the last 10 years

Advancement  
of the Middle  
Class



Increase in  
Nutrition and  
Personal Health



Rise of Snacking



Plant-Based  
Milk Explosion

# Investment in Nutrition Research => Health Halo



Can Assist With  
Blood Sugar Control

Are High in Vitamin  
E

Deliver a Massive  
Amount of Nutrients

Eating Almonds  
Reduces Hunger,  
Lowering Your  
Overall Calorie  
Intake

Magnesium Also  
Benefits Blood  
Pressure Levels

Are Loaded With  
Antioxidants

Almonds May Be  
Effective For Weight  
Loss

Prevent Harmful  
Oxidation of LDL  
Cholesterol

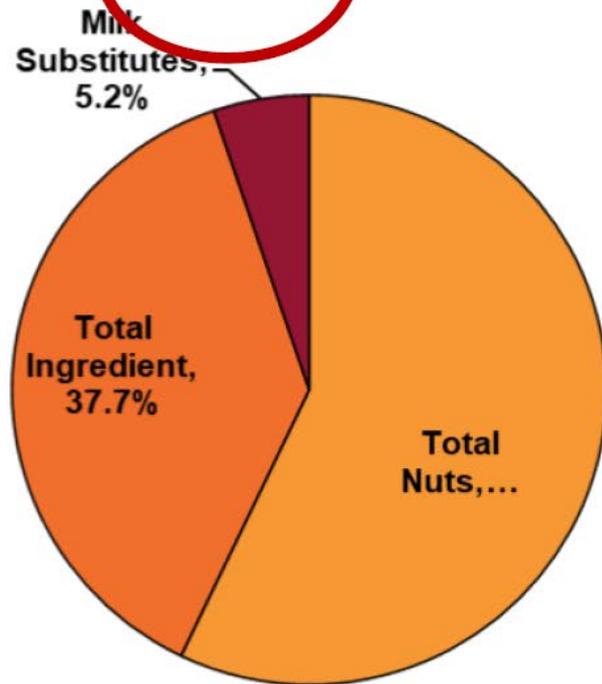
Can Lower  
Cholesterol Levels

<https://www.healthline.com/nutrition/9-proven-benefits-of-almonds>

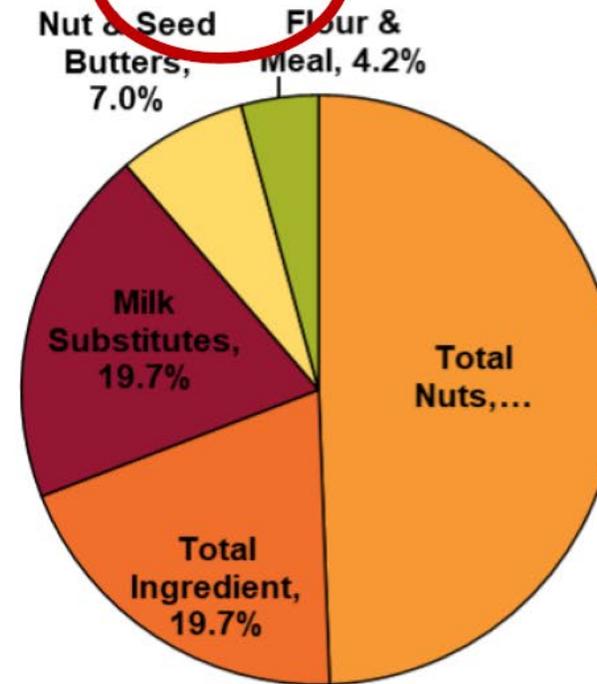
New products more than doubled under health halo (in less than a decade)

## Almond Category Growth

2011: Category Share of Pure Almond Volume Estimated at 145MM Lbs (Nielsen)



2021: Category Share of Pure Almond Volume Estimated at 353MM Lbs (Nielsen)



Putting Almonds on the Front of Pack helps provide health halo to food item

## ::: New Product Introductions and Almond Halo Credibility



antioxidants



plant based  
protein  
no sugar



protein



fiber  
no additives



fiber  
protein  
sugar free



versatile  
fiber

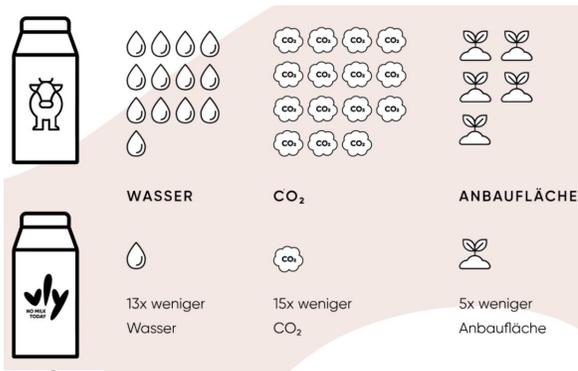


protein  
calcium



# Healthy brands have started to capitalize on their sustainability credentials in their consumer marketing: *Consumer is linking “healthy” with “sustainable”*

**VIV  
ERA**



**Where do we get our beans from?**  
 We source all our beans from Canada & China from reputable growers who do not incorporate pesticides and chemical fertilizers and who do not use genetically modified organisms. We are investigating some European options, although these are small and have only recently been developed.

**FOOD FOR THE PLANET**  
 It's great to know that you can improve the world with every bite you take by eating plant-based foods. Food is responsible for vast amounts of greenhouse gas emissions. If we stopped eating meat, we could cut global CO2 emissions by **24%**; the equivalent of taking **240 million cars** off the roads. For example, producing 1 kg of beef causes 10 to 30 kg of CO2 emissions. Producing 1 kg of tofu, on the other hand, only releases 1 kg of CO2.



## REDUCING FOOD MILES

Did you know that the UK imports half of its food?  
 Help us change that by reducing food miles and keeping it local with the best of organic British dairy.



## POWERED BY NATURE

Here in the Valley, all our electricity is from renewable sources - including solar power from our own farms.  
 We have a whole acre of solar panels on the roofs of our cowsheds which help supply us with our own renewable energy.

## SUSTAINABLE PACKAGING

Most of our packaging is fully recyclable and we're working towards the goal of making our packaging from 100% recycled plastic too.

**NEW!** **OAT DRINK WITH CARBON DIOXIDE EQUIVALENTS**  
 THE ORIGINAL **OATLY!**

chickpea puff snacks  
**HIPPEAS**



**DID YOU KNOW?**  
 Chickpea plants naturally release nitrogen back into the earth as they grow. They're good for the planet... simply by being themselves.





## ⋮ Sustainability is driving desires AND sales

*“A substantial portion of consumers are currently willing to pay for sustainability, demonstrating that there is a market for ‘mission-driven green’ companies and why we see a rise in sustainable companies around the world.”*

- Businesswise, A Berkshire Hathaway Company

But, what do sales say...

Sustainability-marketed products delivered **54.7% of CPG market growth** (2015-2019) despite representing only 16.1% share of the category(\$) in 2019, up +2.4 ppts vs. 2015.

Sustainability-marketed products grew **7.1x faster** than products not marketed as sustainable.

Sustainability-marketed branded products enjoy a **significant price premium of 39.5%** vs. their conventionally-marketed branded counterparts.

# Food Companies setting goals around key sustainability topics:

## Circularity (net-zero and carbon negative/climate positive products)

- Balancing any carbon dioxide released into the atmosphere by a company's activities or going further by ensuring a project removes additional carbon dioxide from the atmosphere.

## Regenerative Ag (Soil Health)

- Practices that can include the use of cover crops, no-till agriculture, crop rotation or reduced fertilizer and pesticide use and more that are aimed at promoting soil health by restoring soil's organic carbon.
- Sustainability Officers are cautionary of greenwashing regenerative agriculture.
- Emerging partnerships and new certifications such as the [Regenerative Organic Certification ROC](#) encompass soil health, animal welfare and social fairness.

## Pollinators and Biodiversity

- Ensuring the food industry can provide new and exciting foods that safeguard ecosystems and the genetic diversity required to ensure pollinators have diverse habitat and crops can evolve to face pests and disease, climate change and extreme weather.

## Water Scarcity (net-zero water usage policies, water reporting)

- Optimizing water resource management, accounting for the long-term effects of climate change.

## Sustainability and nutrition density

- Creating a food system that can provide sufficient energy and essential nutrients required to maintain good health of the population without compromising future generations' ability to do the same.

**The world we want tomorrow  
starts with how we do business today**

**MARS**

Mars committed to a science-based target to reduce our full value chain GHG emissions 27% by 2025 and 67% (two-thirds) by 2050, from 2015 levels.

Mars' long-term, science-backed ambition is to eliminate unsustainable water use in our value chain, beginning with halving it by 2025\*.

**GreenBiz**

**General Mills, Danone  
dig deeper into  
regenerative  
agriculture with  
incentives, funding**

**How two industry leaders invest to save  
the water supply as scarcity grows**

Kraft Heinz and Nestlé Waters North America sustainability leaders say protection of the lifeblood resource will require looking outside the factory walls

# California Almond Stewardship Platform (CASP)



Almonds have a long history of Stewardship:

- Growing for the longer term when growing trees
- Industry investment in research and outreach seeking to improve almond growing
- Tools including the Self-Assessment program, irrigation, N calculators
- Benchmarking with international program, FSA-SAI, to translate

Help tell your stories of Stewardship!

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YEARS

# CASP Gets a Refresh

12.08.22 / TOM DEVOL  
SR. MANAGER, FIELD OUTREACH & EDUCATION

 **california  
almonds**<sup>®</sup>  
Almond Board of California

# What We Will Cover Today

01

Re-Envisioning CASP

02

Streamlining the Catalog

03

Renaming &amp; Rebranding

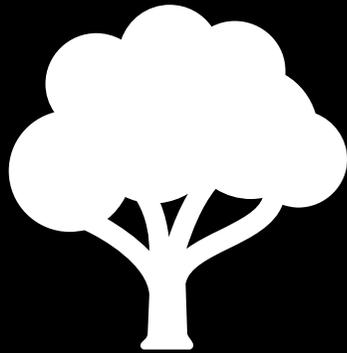
04

Look at Current Grower Activity

05

Leveraging the Data

# CASP 2.0 – Re-envisioning The Program



**Re-Envisioning**



**Renaming**



**Streamlining**

# WHAT IS CASP?

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The **California Almond Stewardship Platform (CASP)** is comprised of research, grower education, almond-based tools and self-assessment data. The CASP self-assessments reflect aggregated industry practices. Through the **Grower Data Assessment & Evaluation** tool, growers can opt-in to share data with handlers as part of their handler's sustainability programs.



CASP TOUCHES MULTIPLE AREAS OF RESEARCH, EDUCATION, ASSESSMENTS & TOOLS



# Streamlining the Catalog

POWERFUL BUT NIMBLE

## Data Sharing

Empowers growers to share their stewardship efforts with the market.

Brings new tools and reports to handlers to communicate growers work in stewardship and sustainability.

New tools coming for handlers.



**CALIFORNIA ALMOND STEWARDSHIP PLATFORM ONLINE SYSTEM**

Tom | [My Profile](#) | [Feedback](#) | [Logout](#)

  
 Assessments ▾

  
 Tools ▾

  
 Reports ▾

  
 Data Share

  
ALMONDS.COM

**Data Sharing**

### Grower Data Sharing

Securely and anonymously share self-assessment results with your handler(s). This is a strictly voluntary option. Share or stop sharing orchard data at any time.

*If your Handler is not on the list, please ask them to create an account or contact support at [CASP@sureharvest.com](mailto:CASP@sureharvest.com).*

0

out of 4

Orchards Shared

[View Profile](#)

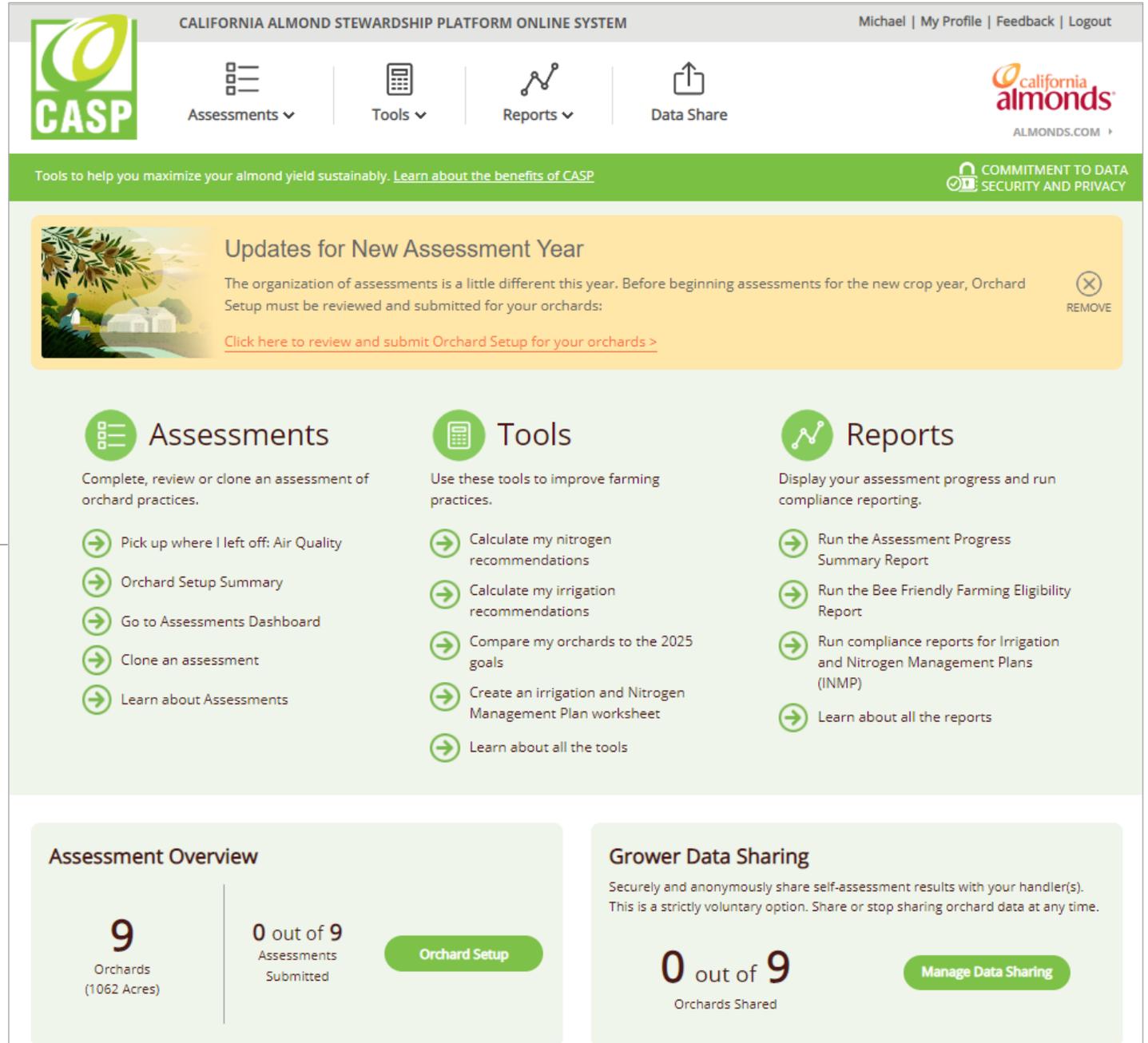
Orchard Name	Acres Shared	Handler	Phone Number	Notes	Share Anonymously <span style="color: orange; font-size: 0.8em;">?</span>
Stewardship Farms - North 200 (200 acres)		<input type="text" value="Select Handler"/>			
Stewardship Farms - Orchard 2 (250 acres)		<input type="text" value="Select Handler"/>			
Stewardship Farms - Orchard 1 (12 acres)		<input type="text" value="Select Handler"/>			
Stewardship Farms - Back 40 (40 acres)		<input type="text" value="Select Handler"/>			

## New Website Addresses

[www.almondstewardship.org](http://www.almondstewardship.org)  
[www.almondstewards.com](http://www.almondstewards.com)

### Note

[www.sustainablealmondgrowing.org](http://www.sustainablealmondgrowing.org) is still active.



**CALIFORNIA ALMOND STEWARDSHIP PLATFORM ONLINE SYSTEM** Michael | My Profile | Feedback | Logout

**CASP** Assessments Tools Reports Data Share **california almonds** ALMONDS.COM

Tools to help you maximize your almond yield sustainably. [Learn about the benefits of CASP.](#) COMMITMENT TO DATA SECURITY AND PRIVACY

**Updates for New Assessment Year**  
 The organization of assessments is a little different this year. Before beginning assessments for the new crop year, Orchard Setup must be reviewed and submitted for your orchards:  
[Click here to review and submit Orchard Setup for your orchards >](#)

**Assessments**  
 Complete, review or clone an assessment of orchard practices.

- Pick up where I left off: Air Quality
- Orchard Setup Summary
- Go to Assessments Dashboard
- Clone an assessment
- Learn about Assessments

**Tools**  
 Use these tools to improve farming practices.

- Calculate my nitrogen recommendations
- Calculate my irrigation recommendations
- Compare my orchards to the 2025 goals
- Create an irrigation and Nitrogen Management Plan worksheet
- Learn about all the tools

**Reports**  
 Display your assessment progress and run compliance reporting.

- Run the Assessment Progress Summary Report
- Run the Bee Friendly Farming Eligibility Report
- Run compliance reports for Irrigation and Nitrogen Management Plans (INMP)
- Learn about all the reports

**Assessment Overview**

9 Orchards (1062 Acres) | 0 out of 9 Assessments Submitted | [Orchard Setup](#)

**Grower Data Sharing**

Securely and anonymously share self-assessment results with your handler(s). This is a strictly voluntary option. Share or stop sharing orchard data at any time.

0 out of 9 Orchards Shared | [Manage Data Sharing](#)

# Catalog Streamlining: Not just cutting questions

## Bottom Line

Ensure ROI to grower – facilitate a tool, incentive opportunity, educational value, regulatory compliance

Align with an external programs (SAI, 2025 Goals, Bee Friendly Farming)

Move from 9 modules **to fully assessed orchards**

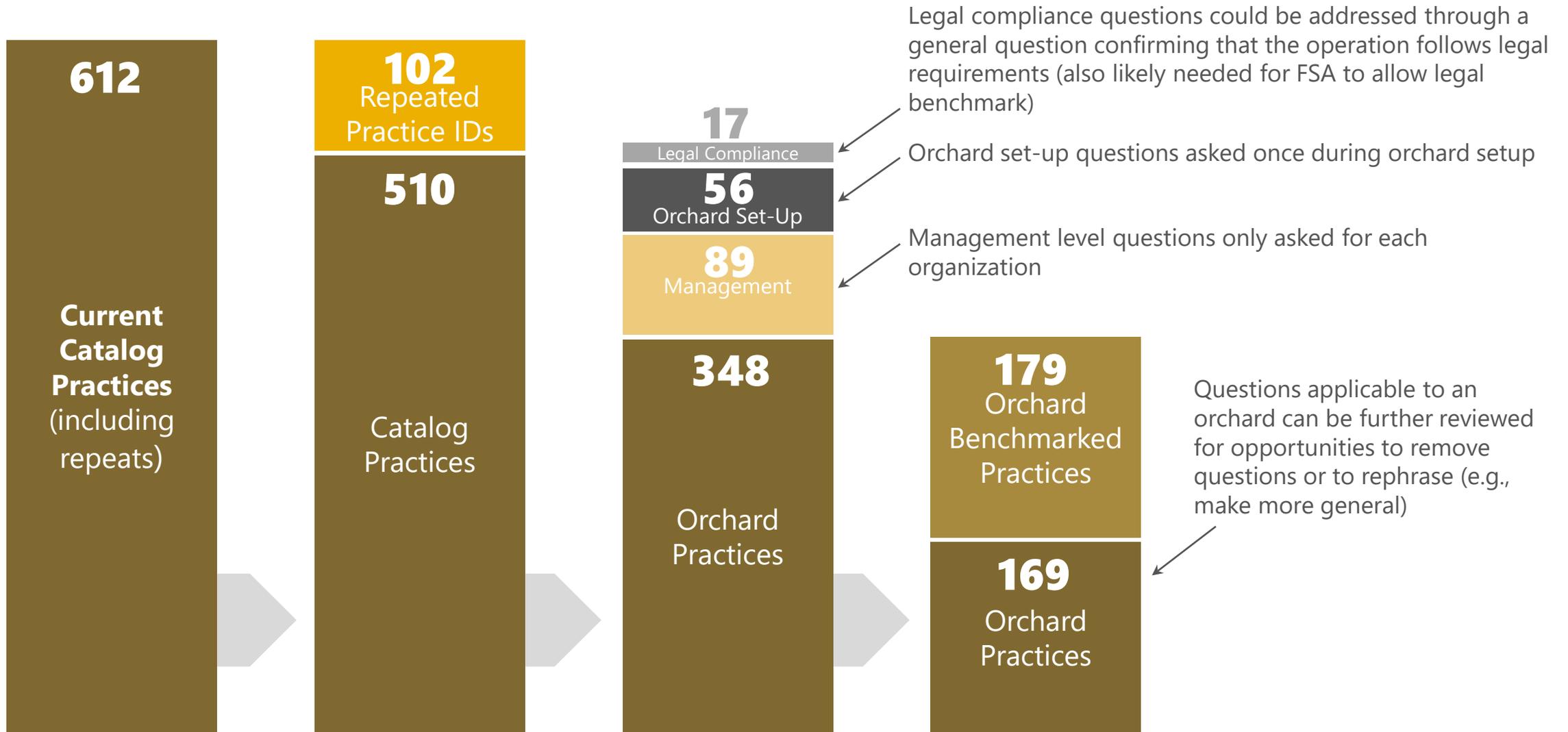
**Remove** repeated questions

**Reduction** in total question catalog

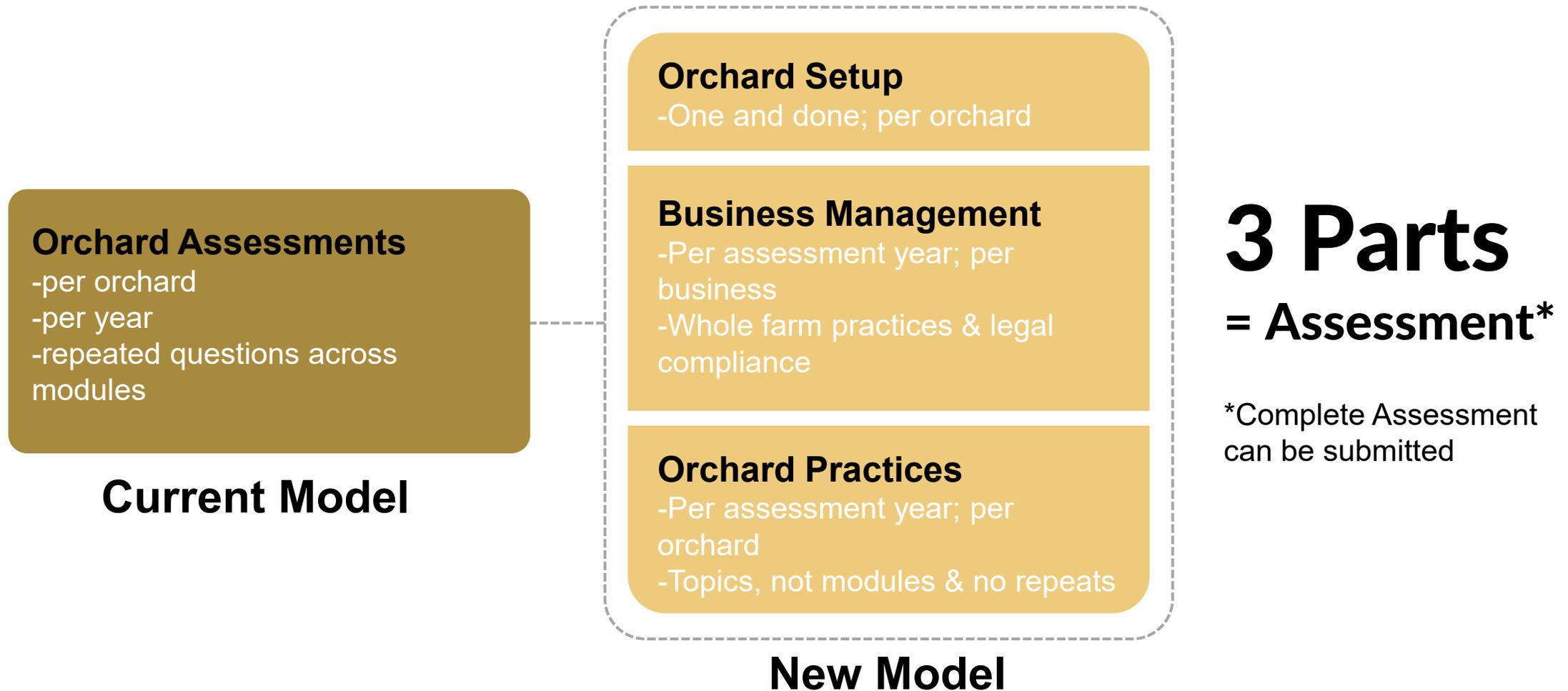
**Restructure** to make it easier for growers

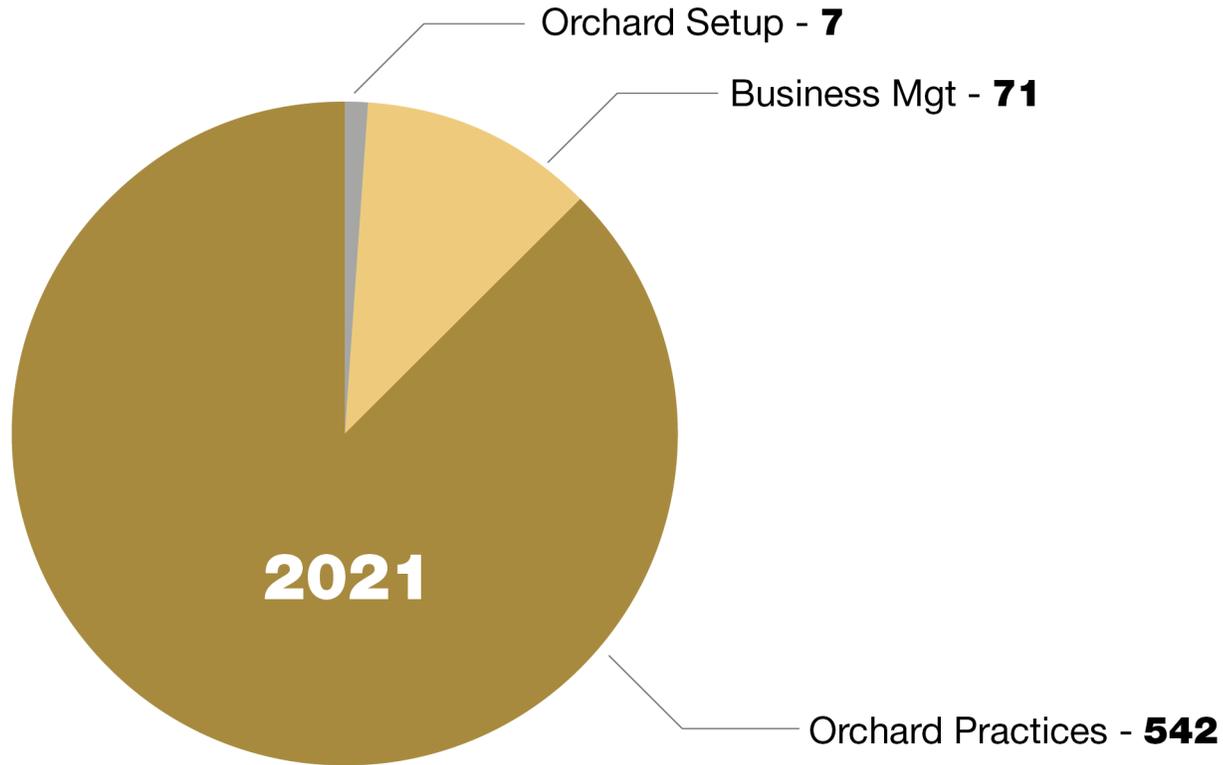
Keep & improve **Cloning Tool**

# Streamlining the Catalog

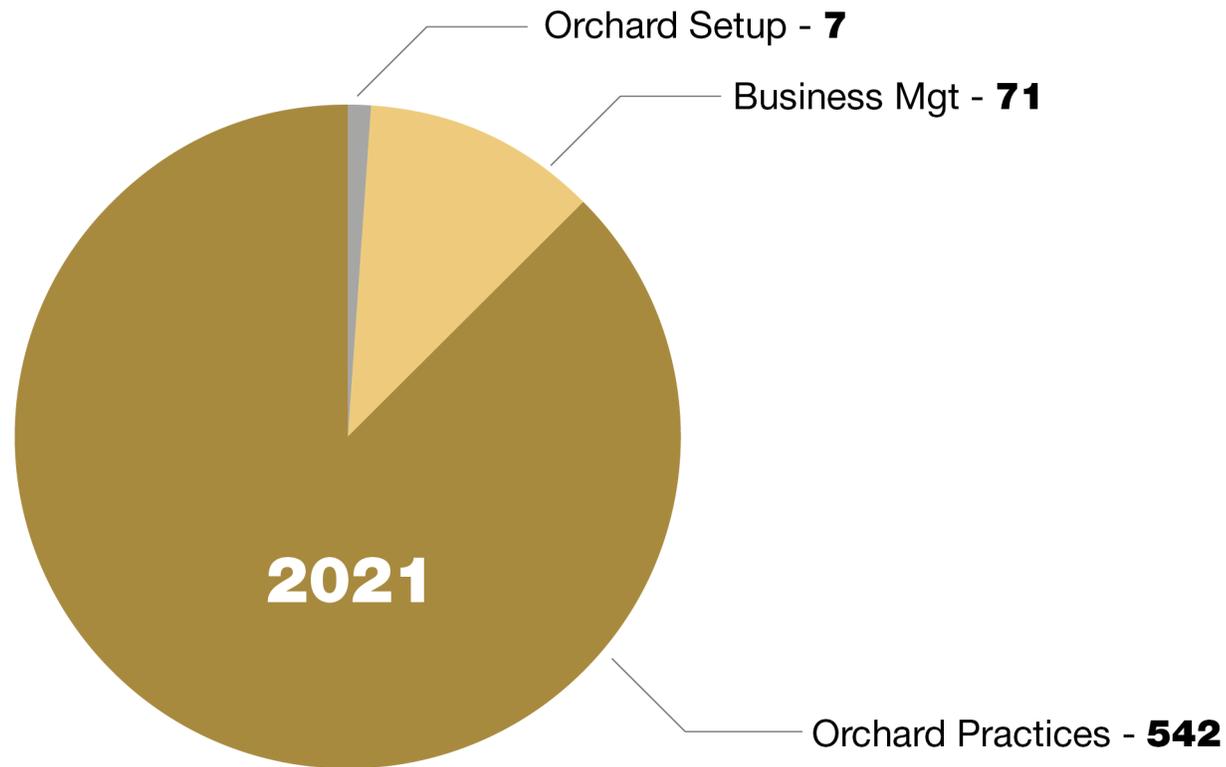


# New Structure for Assessment



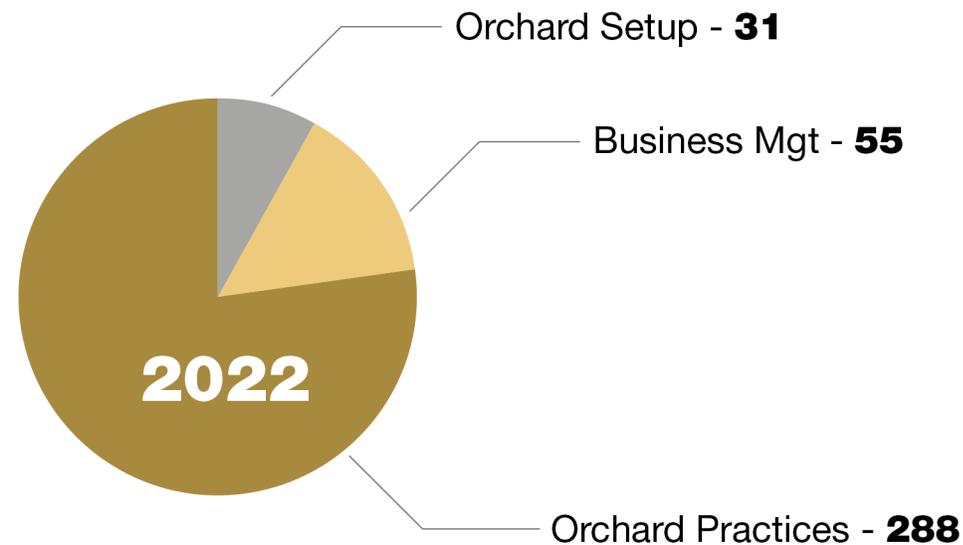


Assessment Catalog Size 2021  
**620 Questions**



Assessment Catalog Size 2021  
**620 Questions**

Goal of **30%** Reduction  
Final Reduction - **40%**



Assessment Catalog Size 2022  
**374 Questions**



# Renaming & Rebranding

TIME FOR A CHANGE





**California Almond  
Stewardship Platform**



California Almond  
Stewardship Platform

**Research**

**Education**

California Almond Stewardship Platform Online System

**Self-Assessment**

**Grower Tools**

Unique logo versions for  
online system and the  
self-assessment.





# Current Activity Stats

STRONG INCREASE IN USE

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 50 YEARS of The Almond Conference

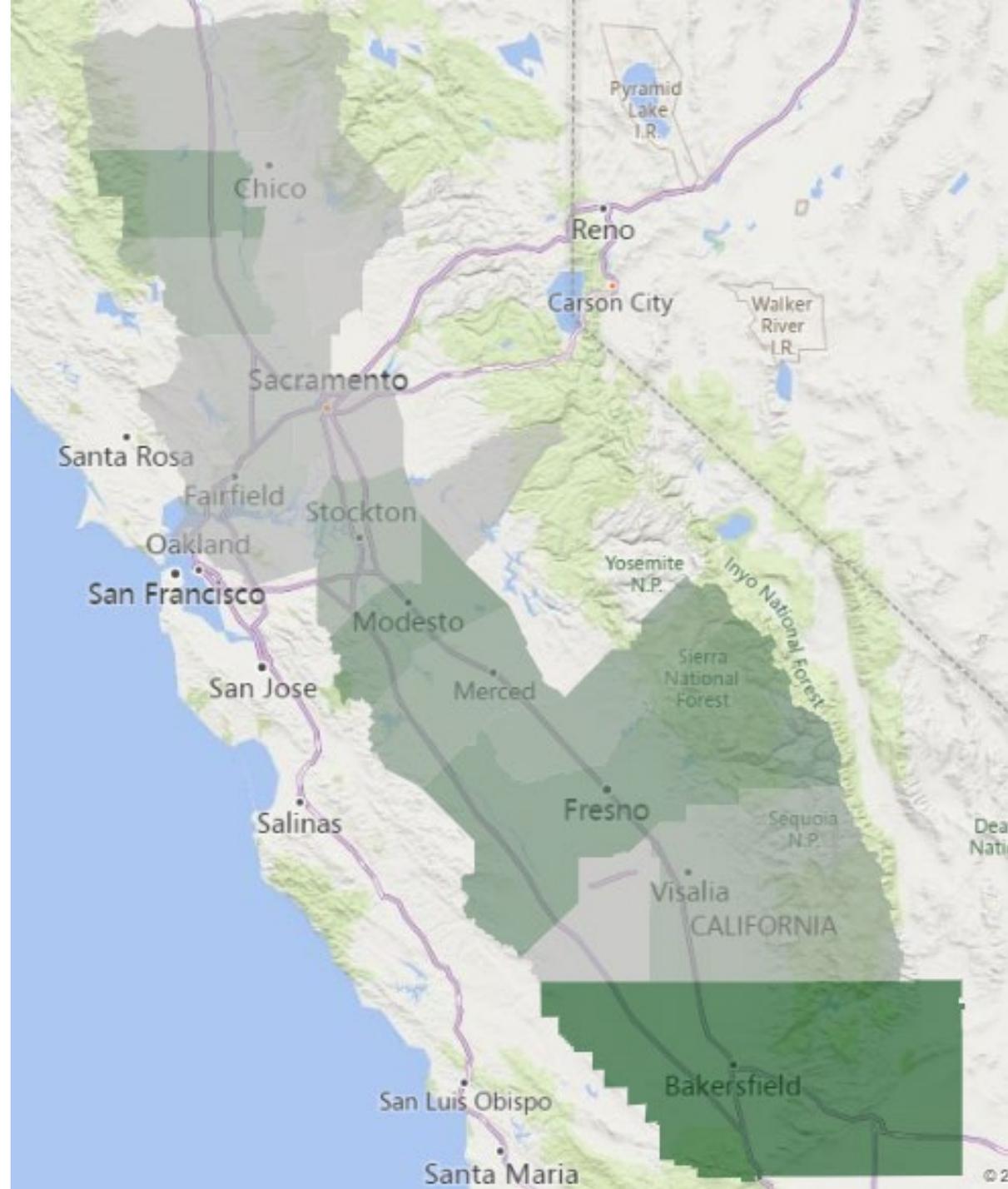
# CASP Participation

11/18/22

Participant Enabled to Complete Assessments		<b>3049</b>
Organizations Represented by Assessments		<b>1198</b>
Total Orchard Assessed Acres		<b>531,144</b>
Percentage Statewide Assessed Acres		<b>40.24%</b>
All Acres Managed by Assessed Organizations		<b>650,230</b>
Percentage Statewide Bearing Acres		<b>49.26%</b>

## 2021 Assessed Acreage

Rank	County	Assessed Acres
1	Kern	56,964
2	Fresno	45,400
3	Stanislaus	36,846
4	Merced	28,844
5	Madera	26,483
6	San Joaquin	19,251
7	Tulare	15,489
8	Glenn	15,171
9	Colusa	12,984
10	Kings	6,257
11	Solano	5,618
12	Yolo	3,134
13	Sutter	3,113
14	Butte	2,786
15	Contra Costa	1,319
16	No County Data	1,096
17	Tehama	875
18	Placer	726
19	Sacramento	338
<b>Total</b>		<b>282,693</b>



# Breakdown Of Topic Areas Completed

## 40%

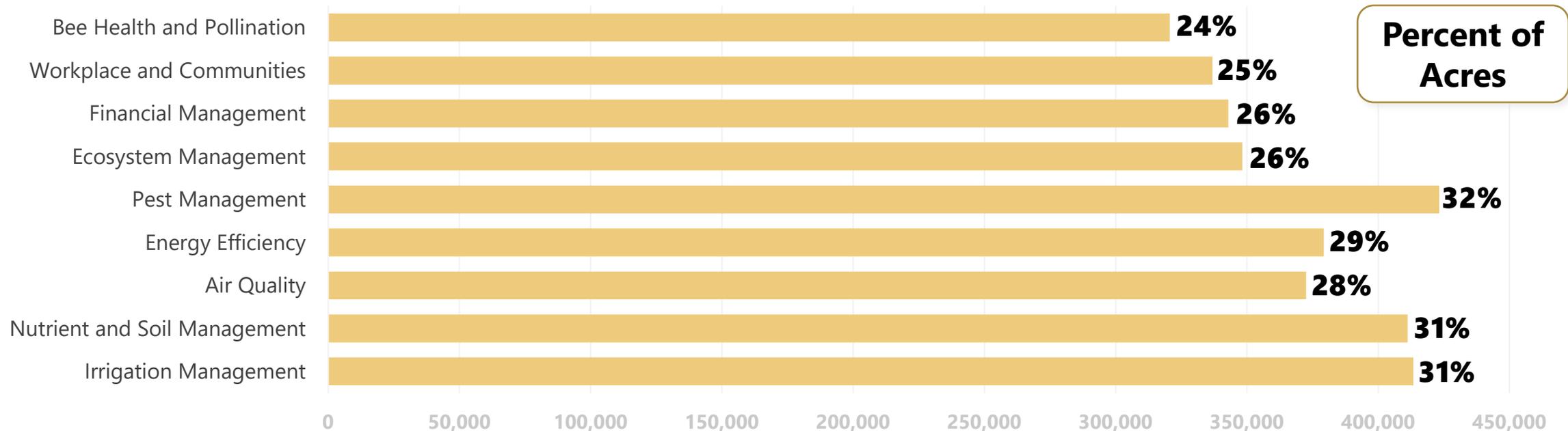
Total Orchard Acres

## 49%

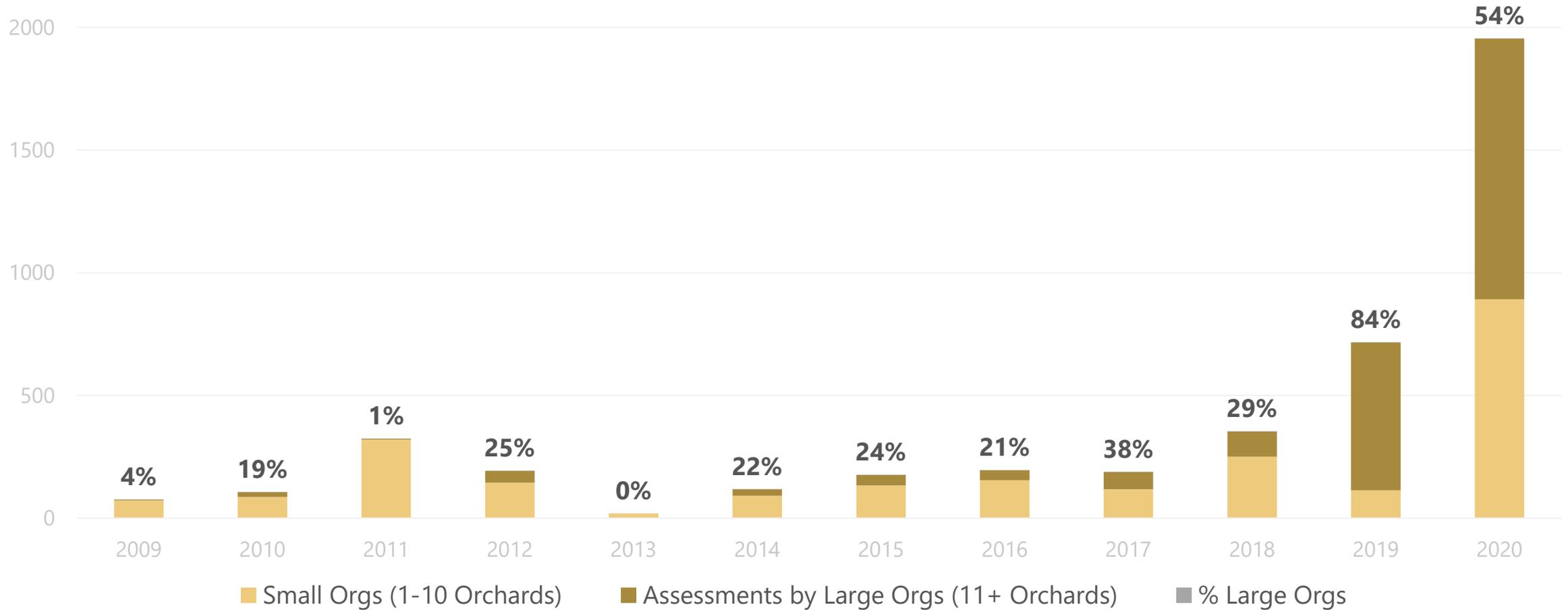
Total Acres Managed by Org

## 23%

Full Assessment Acres



# Assessments – Organization Size

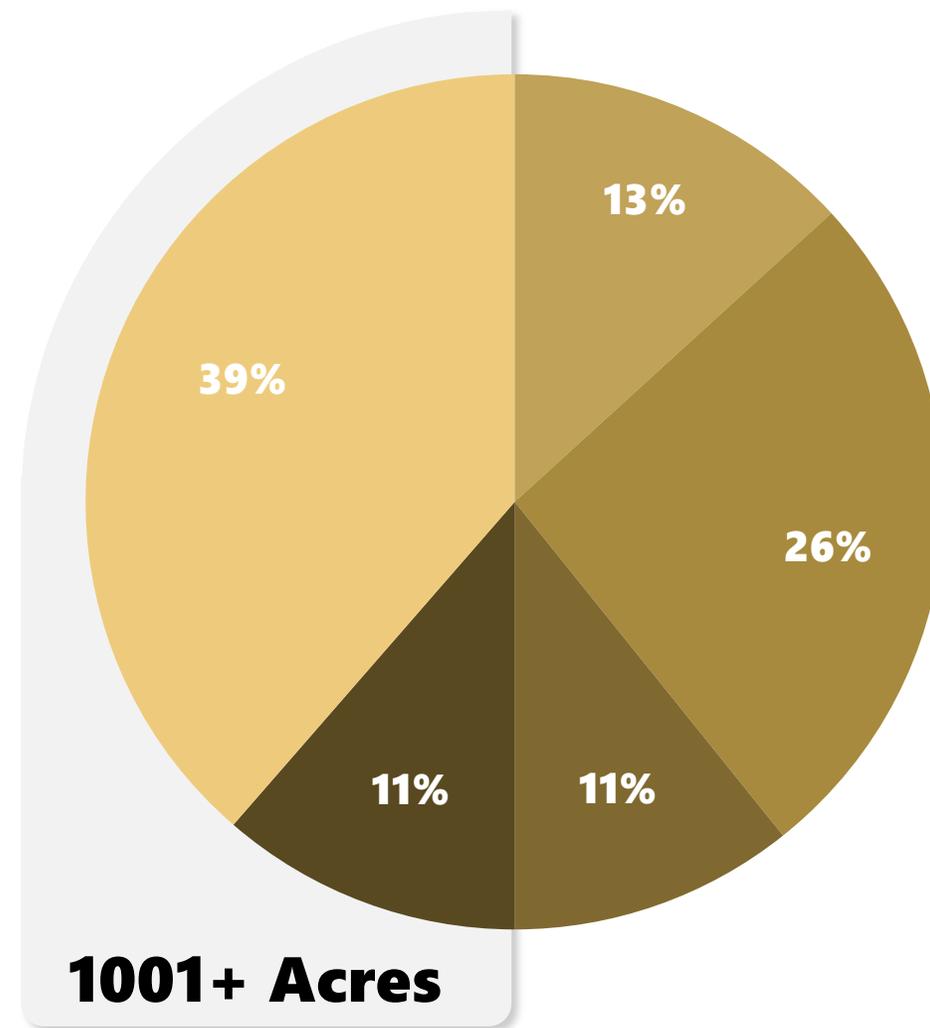


Large organizations responsible for **1% to 38%** of assessments from 2009 to 2018, **84% in 2019** and **54% in 2020**.

## Assessments by Organization Acreage Size

- 1-100 acres
- 101-500 acres
- 501-1000 acres
- 1001-2500 acres
- 2500+ acres

Organizations with 1001 acres or more responsible for **50% of 2020 assessments.**





# Leveraging the Data

BRINGING BETTER ROI TO GROWERS

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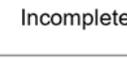
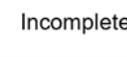
**50**

YEARS of The Almond Conference

# Leveraging Data to Help Growers

## Benchmarking to other programs

 All valid questions answered    
  Some questions answered    
  No questions answered    
 External Programs

	 <b>Assessment</b>			 <b>Irrigation Improvement Continuum</b>							<b>Status</b>
	Orchard Setup	Business Management	Orchard Practices	Irrigation System Performance	Applied Water	Orchard Water Requirements	Soil Moisture	Plant Water Status	FSA Performance	BFF Eligibility	
Stewardship Farms South - Back 40 (40 acres)				3.0	3.0	3.0	1.0	2.0	 Silver	 Eligible	 Review & Submit
Stewardship Farms - North 200 (200 acres)				2.0	3.0	2.0	3.0	2.0	 Silver	 Eligible	 Submitted
Stewardship Farms North - Orchard 1 (12 acres)									No Score	 Incomplete	 Incomplete
Stewardship Farms - Orchard 2 (250 acres)									No Score	 Incomplete	 Incomplete

# SAI Platform

Farm Sustainability Assessment



## 170 Member Companies

- Data from CASP is benchmarked to the SAI Farm Sustainability Assessment (FSA)
- Strengthens data from CASP self-assessments.
- International sustainability assessment
- Growers looking for FSA certifications can work with SAI



Example Members

# Bee Friendly Farming

## Working With Pollinator Partnership

- Data from CASP is benchmarked to the Bee Friendly Farming (BFF) Program.
- Use CASP self-assessment data to qualify for BFF.
- Growers looking for BFF certifications can work with Pollinator Partnership.



### California Almond Stewardship Platform (CASP) Bee Friendly Farming Report

This confidential report was prepared for:

Name: Tom Devol  
 Business: Stewardship Farms  
 Address: CA  
 Phone: (530) 570-5558  
 Email: tdevol@jainsusa.com  
 Assessment Year: 2022

Follow these steps to apply for Bee Friendly Farming certification through Pollinator Partnership.

Generate and save this PDF report from CASP.

#### Open the [BFF Application](#)

The online application is managed by Pollinator Partnership and requires completion of the following sections:

- About You**
- Bee Forage and Habitat**
- Confirmation and Payment**

#### About You

- Your Name, Farm Name, Email and Phone Number
- Choose **Almonds** for Primary Production
- Under Existing Certifications, choose **California Almond Stewardship Platform**. Once selected, most questions in Bee Forage and Habitat and the entire Integration Pest Management section are skipped.

**Bee Friendly Farming Certification Application**  
 It takes approximately 40 minutes to fill out this form. Be sure to have electronic versions available of the photos and maps that you will need to complete the form before starting. This is a great way to show all the things you do for bees and the other pollinators!

- About You
- Bee Forage and Habitat
- Integrated Pest Management
- Confirmation and Payment

#### Primary Production \*

Almonds

#### Existing Certifications

California Almond Stewardship Platform

Recent audit information from other qualifying certifications your farm holds can be submitted in place of the rest of this form. Qualifying certifications are listed in the dropdown box above. If you hold a certification that is not listed above, please contact isaac@pollinator.org for assistance.

#### Existing Audit Files \*

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# Bee Friendly Farming

Miles Dakin  
Pollinator Partnership  
December 8<sup>th</sup>, 2022

**POLLINATOR  
PARTNERSHIP**



 **california  
almonds**  
Almond Board of California

# Today's Talk

1. What is Bee Friendly Farming?
2. Habitat Examples
3. How to Get BFF Certified
4. Resources



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# What is Bee Friendly Farming?



california  
almonds<sup>®</sup>  
Almond Board of California

# Bee Friendly Farming

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Bee Friendly Farming Certified (BFF) is a second-party-verified certification program from the 501 (c) 3, award-winning nonprofit **Pollinator Partnership**, whose 25 year history has allowed it to grow into the largest non-profit focused exclusively on pollinator issues in the world.

**POLLINATOR  
PARTNERSHIP**



# What do pollinators need?

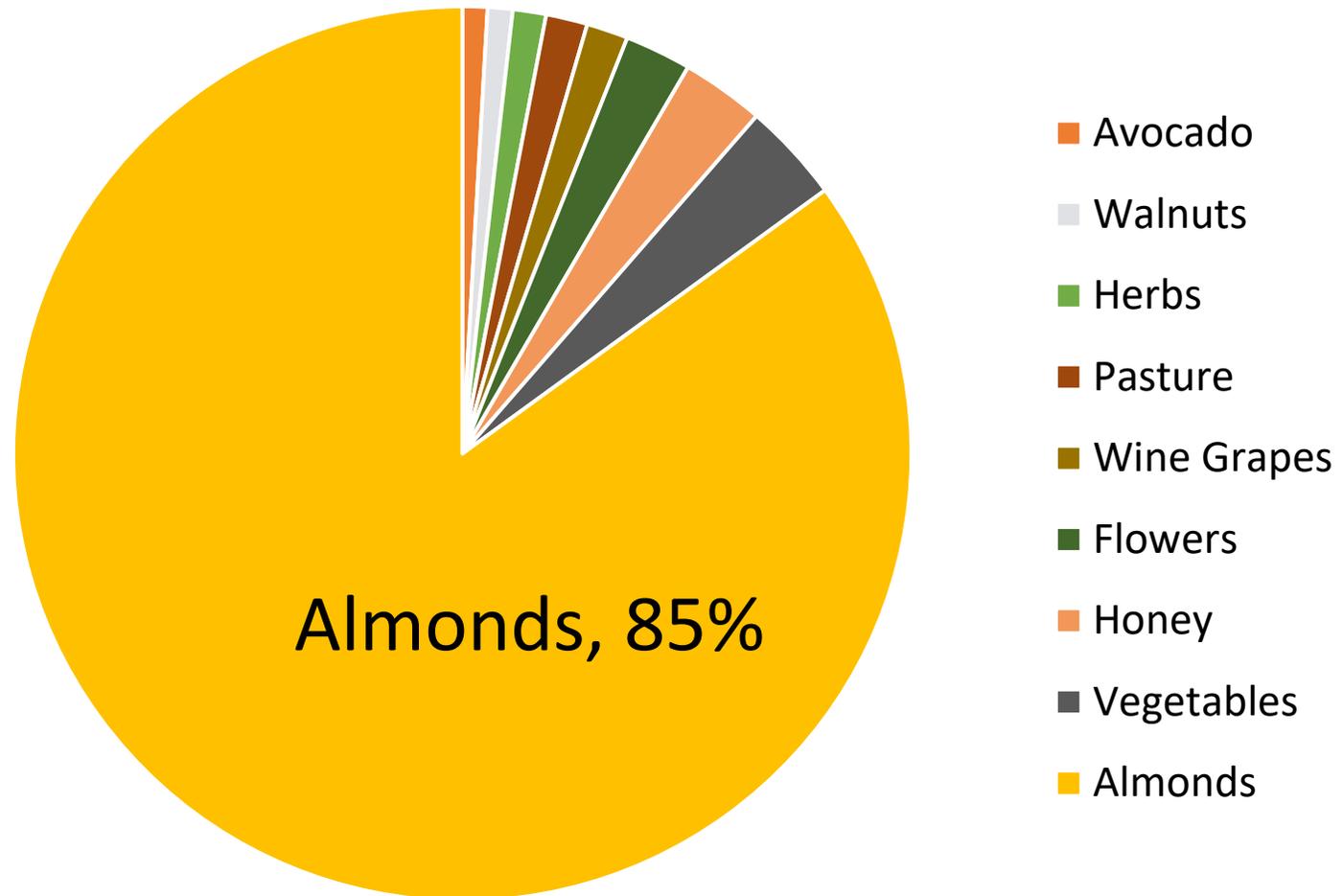
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- Diverse Native plants
- Introduced, non-invasive can be good too
- Continuous bloom
- Flowers rich in protein and nectar
- Host plants
- Mix: woody, herbaceous, grasses
- Habitat Connectivity
- Reduced Pesticide Exposure
- Nesting areas



# Bee Friendly Farming Certified Farmers

Almonds represent the largest number of certified farms



## BFF Certified Criteria



1. Offer forage providing good nutrition for bees on at least 3% of land. Forage can be temporary, including cover crops.



## BFF Certified Criteria



2. Provide bloom of different flowering plants throughout the growing season, especially in early spring and late autumn.



## BFF Certified Criteria



3. Offer clean water for bees if not inhibited by government mandated water restrictions.



## BFF Certified Criteria



4. Provide permanent habitat for nesting through features such as hedgerows, natural brush, buffer strips, or bare ground.



## BFF Certified Criteria



5. Practice Integrated Pest Management (IPM); reduce or eliminate the use of chemicals.



## BFF Certified Criteria



6. Pay annual certification and complete 3-year compliance



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# Examples of Pollinator Habitat



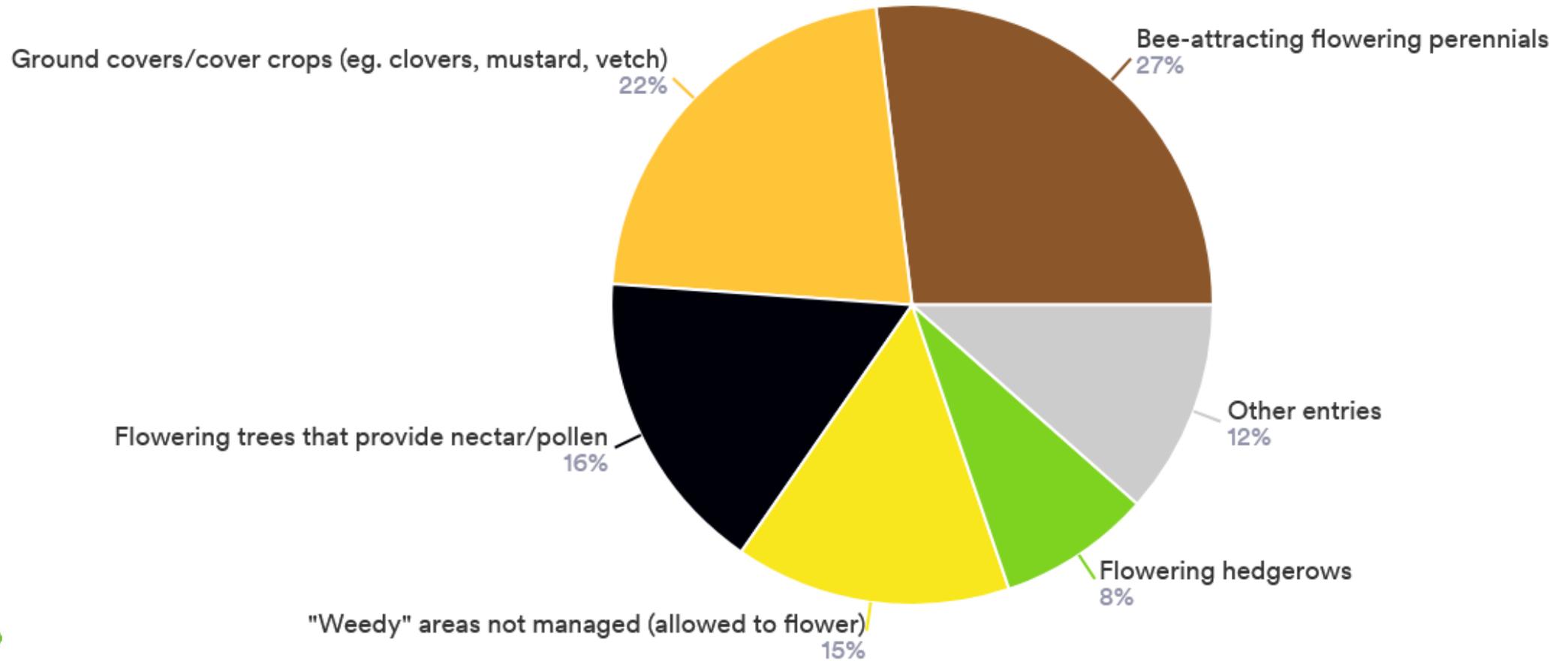
 **california  
almonds**  
Almond Board of California







## Type of Forage



## How to get Certified

- Plant pollinator habitat and implement IPM!
- Visit [BeeFriendlyFarming.org](https://BeeFriendlyFarming.org) to see the criteria and find the application link



## How to get Certified

- Fill out the application (30- 45 minutes) and pay annual fee of \$45/ farm
- Decision Sent within 4-6 weeks



## How to get Certified

- If necessary, BFF team members will reach out for follow up information
- Maintain certification through compliance (every 3 years)



# Use CASP BFF Report

## Expedite the Application Process!

### Confirmation and Payment

- Number of distinct properties (follow the onscreen directions)
- How you heard about BFF
- Confirmations

### Bee Friendly Farming Certification has five requirements:

1. Offer forage providing good nutrition for bees on at least 3% of land. Forage can be temporary, including crops and cover crops.
2. Provide bloom of different flowering plants throughout the growing season, especially in early spring and late autumn. There is no minimum land coverage for seasonal bloom.
3. If not inhibited by government mandated water restrictions, offer clean water for bees.
4. Provide habitat for nesting through features such as hedgerows, natural brush, buffer strips, or bare ground.
5. Practice Integrated Pest Management (IPM); reduce or eliminate the use of chemicals.

Full confidentiality is maintained for all information provided and generated this report. Individual assessment results have not been shared with other individuals or organizations.

Go to <https://www.pollinator.org/bff/bff-us> to find out more about Pollinator Partnership.

### Summary

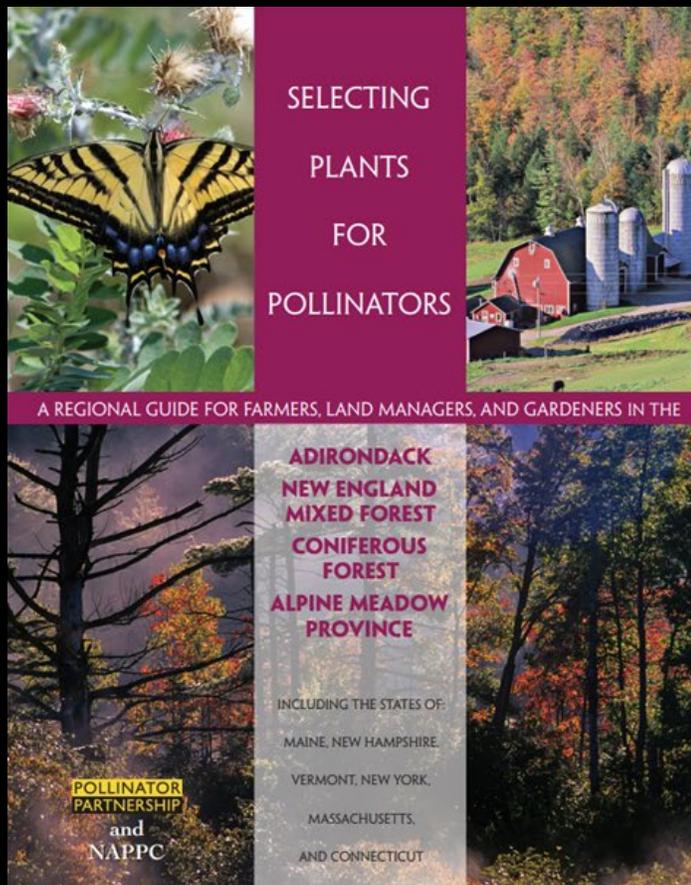
Location	Acres	Eligibility Status	BFF 1	BFF 2	BFF 3	BFF 4	BFF 5
West Orchard	200	Eligible	Yes	Yes	Yes	Yes	Yes
<b>Sum of Eligible Acres</b>	<b>200</b>						



# Resources Available

## Ecoregional Planting Guides

<https://www.pollinator.org/guides>

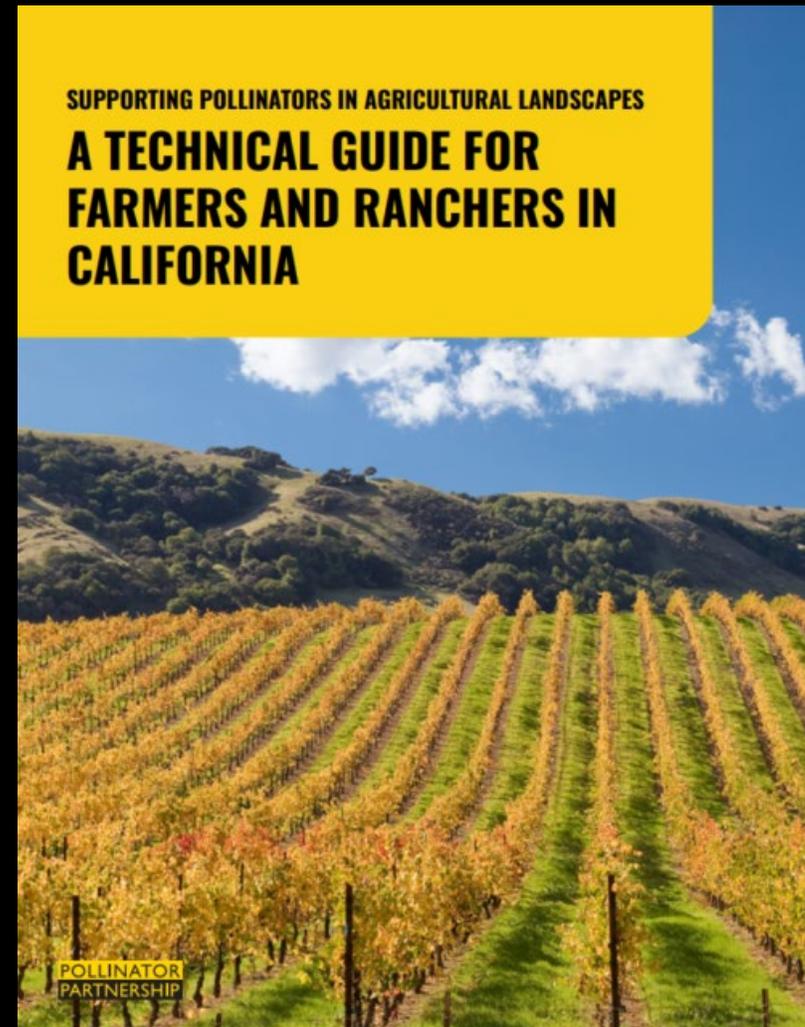


Botanical Name	Common Name	Color	Height	Flower Season	Sun	Soil	Visitation by Pollinator
<b>Trees &amp; Shrubs</b>							
<i>Fallugia paradoxa</i>	Apache plume	white	3-6'	Apr-Oct	full sun	gravelly alluvium	bees, flies, butterflies, moths
<i>Fendlera rupicola</i>	cliff fendlerbush	white	3-6'	Apr-Oct	full sun	rocky	bees, flies, butterflies, moths
<i>Dasiphora fruticosa</i> ssp. <i>floribunda</i>	shrubby cinquefoil	yellow	2-4'	Jun-Jul	full sun	clay to sandy loam	bees, flies, butterflies
<i>Prunus virginiana</i>	chokecherry	white	6-30'	May-Jun	full sun to partial shade	various	bees, flies, butterflies
<i>Robinia neomexicana</i>	New Mexico locust	rose-pink	10-30'	Apr-Jul	full sun to full shade	clay to sandy loam	bees, bumblebees
<i>Rosa woodsii</i>	Woods' rose	rose-pink	2-3'	Jun-Aug	full sun to full shade	clay loam to sandy loam	bees, flies, butterflies
<b>Perennial Flowers</b>							
<i>Achillea millefolium</i>	common yarrow	white	6-12"	May-Aug	full sun	various	bees, flies, butterflies, moths
<i>Agastache pallidiflora</i>	Bill Williams Mountain giant hyssop	white to deep rose-purple	12-30"	Jul-Oct	partial to full shade	loamy	butterflies, bees, hummingbirds
<i>Calypso bulbosa</i>	fairy slipper	purple to magenta	3-8"	May-Aug	full shade	humus	bumblebees



# Resources Available

<https://www.pollinator.org/bff>



## How is the certification verified?

The dedicated BFF Team examines each farm through:

- on-site photos
- maps
- records
- information delivered by third- party partners such as the California Almond Stewardship Platform (CASP) or LIVE Certified
- a nearly 50-question application.

Often this process leads to follow-up interviews or requests for clarification.

**Before any certification is awarded, all criteria must be verified.**



**Coming in 2023:**  
**Third - Party Verification Option for Bee  
Friendly Farming**





# How does this benefit you?

These practices provide numerous agronomic, ecological, and social benefits

- Habitat and cover crops improve soil health, water retention, and carbon sequestration
- IPM reduces inputs and pest pressure
- Meet sustainability requirements from buyers
- Be a part of the industry wide movement
- Buyers can use the BFF Logo on packaging and marketing material





Jan 17, 2023 - 10 am PT

# Webinar: Introduction to Bee Friendly Farming



Hosted by Pollinator Partnership with support from Toyota Motor North America

This short 45-minute webinar describes the benefits and steps to become a Bee Friendly Farming Certified farm, orchard, or ranch. Sign up today!



Register today!

Contact [miles@pollinator.org](mailto:miles@pollinator.org) for more information

**POLLINATOR  
PARTNERSHIP**



## Coming in 2023: NRCS Regional Conservation Partnership Program

- Increase capacity of California agricultural lands to provide habitat, forage, and other support to wild and managed pollinators
- Creation of pollinator corridors through collaboration among neighboring farms/ranches
- **\$1.2 million will go directly to farmers to implement this program**



[bff@pollinator.org](mailto:bff@pollinator.org)

# THANK YOU

**POLLINATOR  
PARTNERSHIP**



THE ALMOND CONFERENCE

50  
YEARS

# Almond Grants and Incentive Programs

12/8/22 / Jesse Roseman

 **california  
almonds**<sup>®</sup>  
Almond Board of California

# Incentives and Almond Orchard 2025 Goals

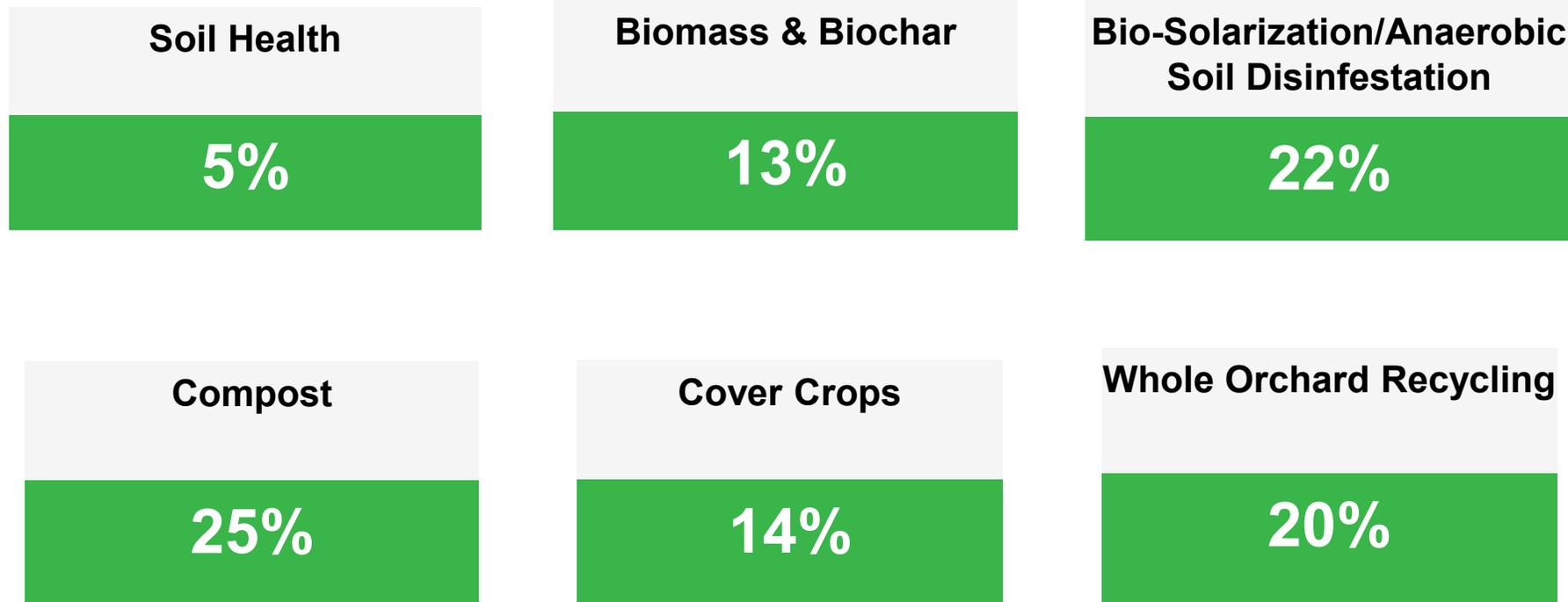


- Agencies have a wide range of incentives available for growers to adopt new practices
- Many incentivized practices support achievement of 2025 Goals
  - Irrigation and nutrition management improvements
  - Low-dust harvesters
  - Whole orchard recycling
  - Mating disruption
  - Groundwater recharge
- Each agency has different guidelines, priorities, review processes, and payment rates

<b><u>INCENTIVES OFFERED BY AGENCIES IN THESE CATEGORIES</u></b>			
<b><u>2025 Goal</u></b>	<b>NRCS</b>	<b>CDFA</b>	<b>SJV Air District</b>
Water			
Harvest Dust			
Zero Waste			
Pest Management			

# ABC Soil Health Research Investments

- ABC investments for over 40 years
- 1981- July 2020: \$2,991,464
- 15 primary research projects
- 60% of funding invested into research conducted between 2015 - 2020

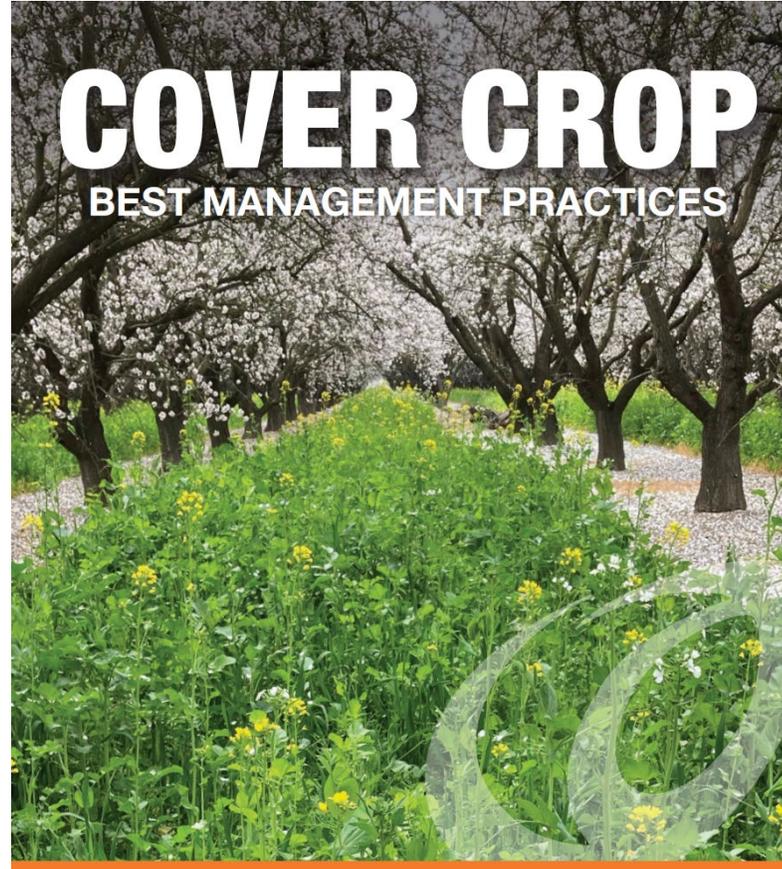


# Cover Crops

## Benefits

- Enhance pollinator forage
- Enhance beneficial insects
- Suppress pest nematodes
- Improve water infiltration
- Improve winter orchard access
- Reduce compaction and erosion
- Manage salinity and sodicity
- Reduce N losses; increase soil N
- Support soil biology
- Increase soil carbon and organic matter
- Manage weeds

## Resources



## Agencies and Programs

- CDFA
  - Healthy Soils Program
  - Quantifiable greenhouse gas (GHG) reductions through soil carbon sequestration
- NRCS
  - Environmental Quality Incentives Program (EQIP)
  - Conservation Stewardship Program (CSP)
  - Conservation Incentive Contracts (CIC)
  - Regional Conservation Partnership Programs (RCPP)
  - Conservation Innovation Grant (CIG)

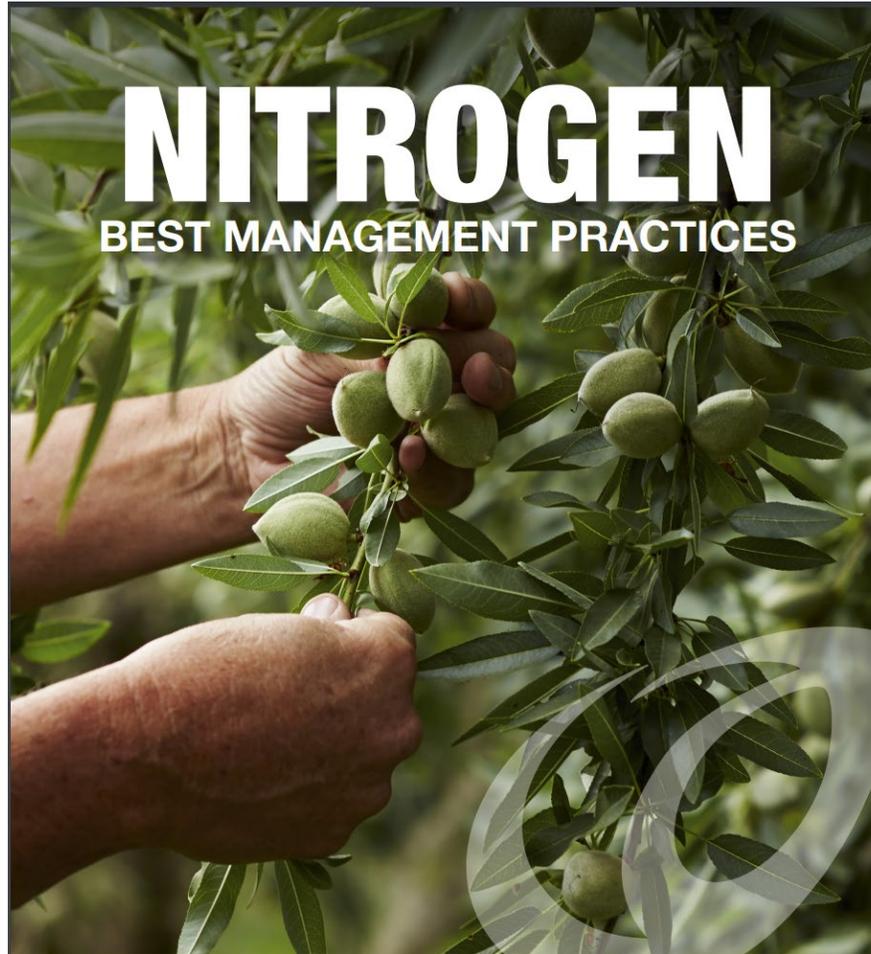


# Compost

## Benefits

- Some N, P, K as well as micro-nutrients
- Soil Organic Matter
- Improve soil composition and structure
- Water holding capacity

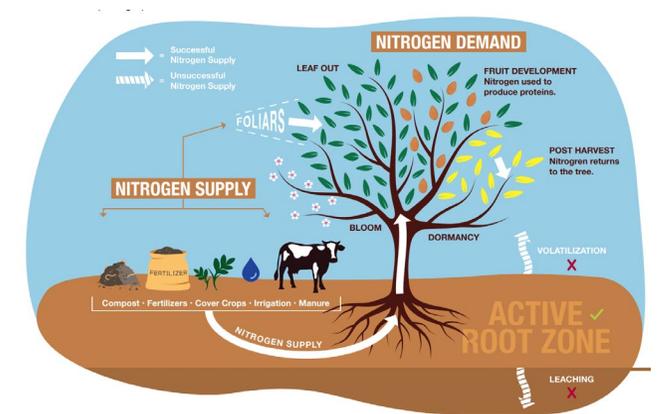
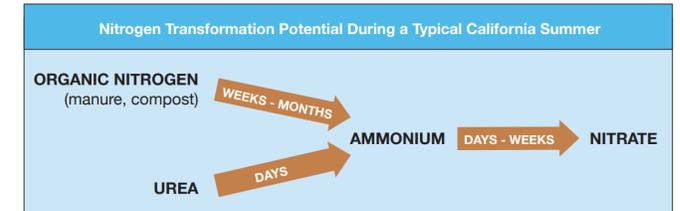
## Resources



california  
**almonds**  
Almond Board of California

## Agencies and Programs

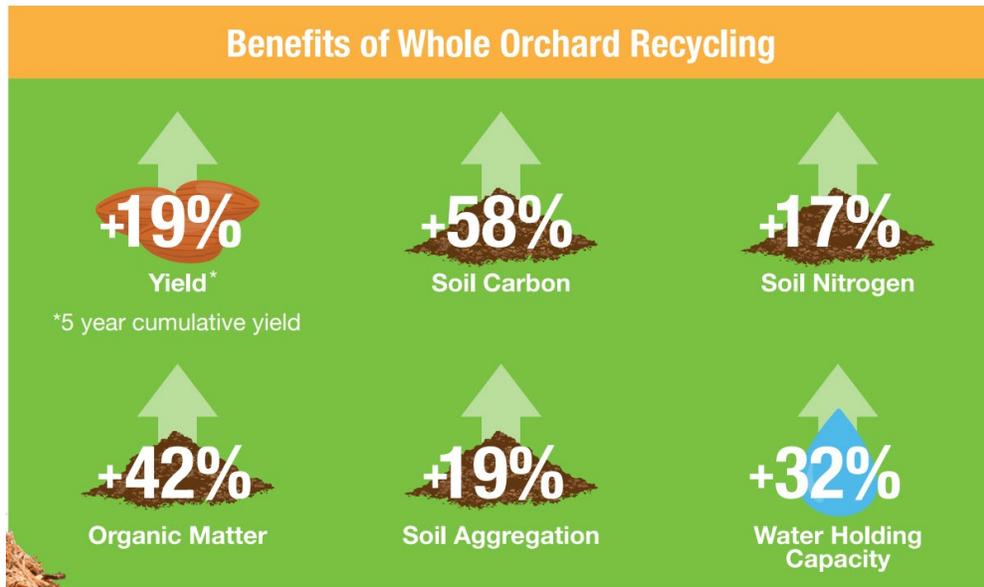
- CDFA
  - Healthy Soils Program
- NRCS
  - EQIP, CSP, CIC, RCPP



# Whole Orchard Recycling

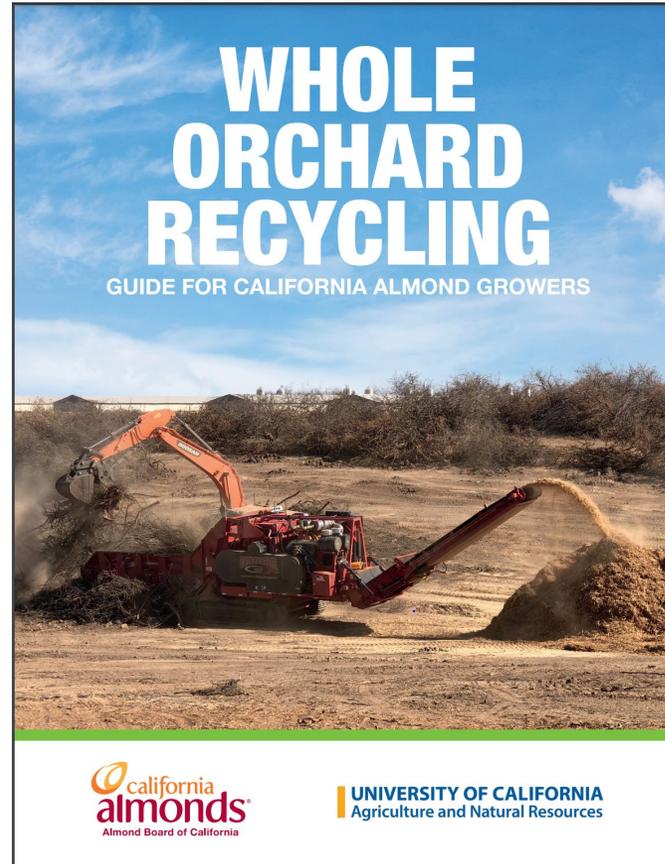
## Benefits

- Addresses the phase-out and eventual loss of ag burning



- Website:  
<https://orchardrecycling.ucdavis.edu/>

## Resources



## Agencies and Programs

- CDFA
  - Healthy Soils Program
- NRCS
  - EQIP, CSP, CIC, RCPP
- SJV Air District
  - Alternatives to Open Ag Burning

# Groundwater Recharge

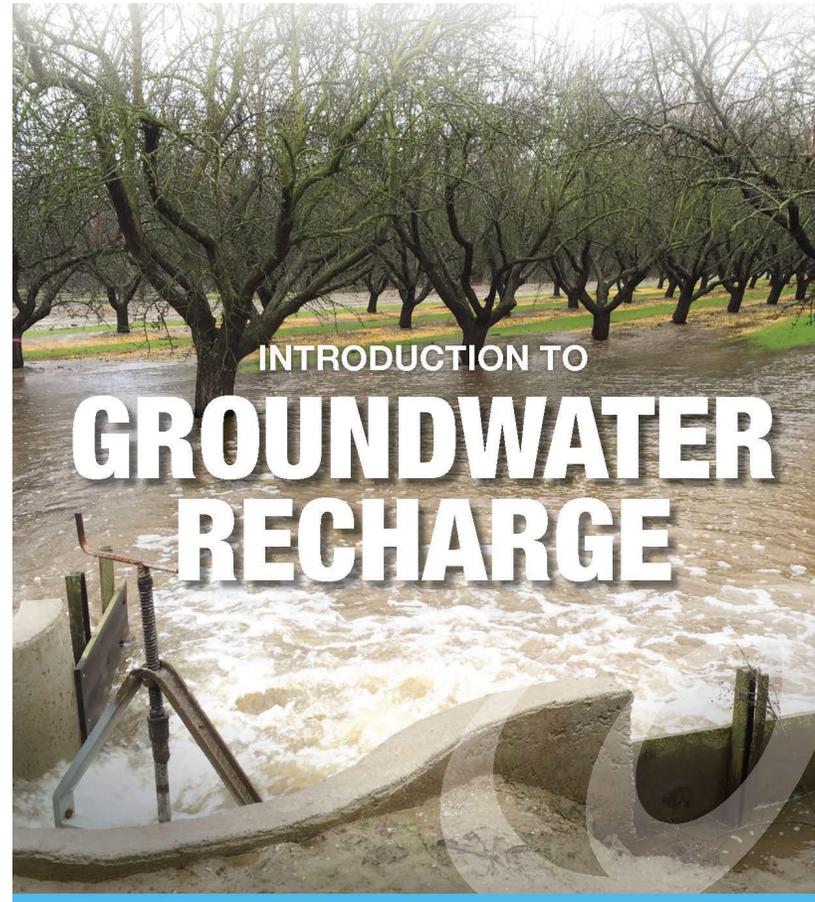
## Benefits

- Address a future of declining groundwater quality, quantity, and availability
- Improve overdrafted aquifers, increase storage, and decrease pumping costs
- Improve salt management and mitigate subsidence
- SGMA compliance
- Secure reliable, sufficient, and drought resilient groundwater supplies

## Topics covered

- What is Groundwater Recharge?
- Supporting research
- Key questions- is recharge a fit?
- Recharge methods
- Grower examples

## Resources



## Agencies and Programs

- NRCS
  - Pilot projects in Madera County, Chowchilla Water District, Tulare Irrigation District and Delano-Earlimart Irrigation District are eligible for this pilot program
  - Expansion planned
- GSAs/ Irrigation Districts
  - Regionally available or In development

# Engine Replacement

## Benefits

- Variety of treatments intended to reduce agricultural air pollution
- Improving diesel exhaust emissions is accomplished by replacing with new “like” equipment powered by the cleanest emissions-certified nonroad diesel engines available.
- Replaced equipment must be a Tier 0, 1 or 2
- Must purchase a Tier 4

## No Industry Resources Available

## Agencies and Programs

- NRCS
  - EQIP, CSP
- SJV Air District
  - Ag Tractor Replacement (Self-Propelled)
  - Ag Pump Repower
  - Shuttle Trucks, Sweepers, Shakers, Self-Propelled Harvesters, Brush Shredder, Sprayers
- Sacramento Valley Air Districts
  - See their engine replacement programs

# Low-dust Harvesters

## Benefits

- Proposals for using “low dust” harvesters within any PM designated nonattainment area of California will receive a higher priority
- Newer harvesters on average reduce dust (PM10 and PM2.5) around 50%

## Resources



## Agencies and Programs

- NRCS
  - EQIP, CSP
- SJV Air District
  - Low Dust Harvesting Equipment



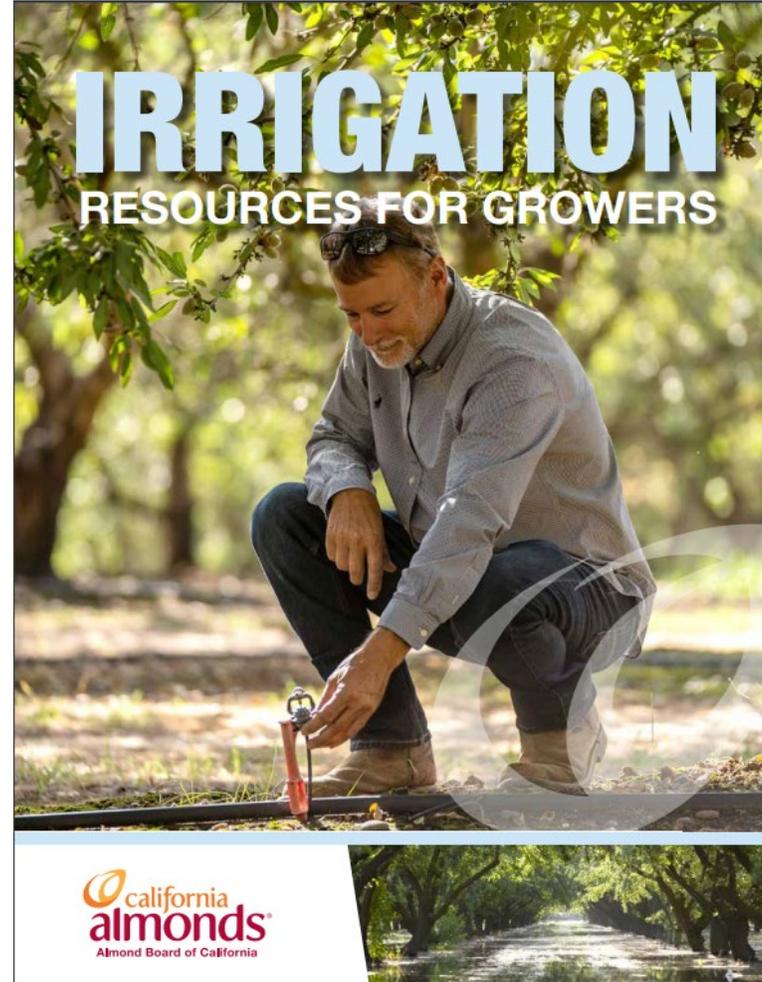
Photo by Jason Bayer, Exact

# Irrigation and Nutrition

## Benefits

- **Irrigation System Improvements**, conservation practices to improve irrigation water use efficiency and protect water quality.
  - Irrigation system evaluations and improved systems or system components as indicated
- **Irrigation Water Management**, optimize irrigation water use and conservation objectives by careful management of timing and amount of irrigation water applied
  - Weather stations
  - Flow meters
  - Soil moisture management and sensing

## Resources



## Agencies and Programs

- CDFA
  - State Water Efficiency & Enhancement Program (SWEET)
- NRCS
  - EQIP, CSP, CIC

# Integrated Pest Management and Pollinator Support

## Benefits

- Adoption of a comprehensive IPM, including range of prevention, avoidance, monitoring, and suppression activities
- Non-chemical pest control options (e.g. mating disruption)
- Mulch and cover cropping for weed control
- Plants to support pollinators & beneficial insects

## Resources

UC IPM Pest Management Guidelines - ALMOND

**Conservation Practice 595  
Conservation Pest Management System**



U.S. Department of Agriculture  
Natural Resources Conservation Service



UC IPM  
Statewide Integrated Pest Management Program

**Documentation for use of Integrated Pest Management (IPM) Program  
including Mating Disruption for Navel Orangeworm (NOW) Control in Almonds**

*All guidance based on University of California  
Integrated Pest Management Program Guidance*

NRCS does not provide pest management recommendations. All NRCS Pest Management Conservation System assistance is guided by the University of California Integrated Pest Management Program.

Please refer to UC IPM guidance ([Almond / Agriculture: Pest Management Guidelines / UC Statewide IPM Program \(UC IPM\) \(ucanr.edu\)](#)) for information to guide year round IPM in almonds, including information about chemical suppression methods (e.g. pesticide use) and management of mode of action and product choices to avoid development of pest resistance.

It is the responsibility of the producer to be aware of county and state regulations regarding pesticide application and to engage the services of a licensed pest management professional as necessary.

This document outlines core elements of an IPM based approach to Navel Orangeworm control in almond found here: [Navel Orangeworm / Almond / Agriculture: Pest Management Guidelines / UC Statewide IPM Program \(UC IPM\) \(ucanr.edu\)](#). See the above link or consult a UC IPM specialist for additional information. This practice may also be used to address a different pest/disease issue, please ask for assistance to prepare documentation for use of this practice with a different pest or in a different crop.

By providing the information requested in these documents, you will allow an NRCS planner to include Pest Management Conservation System (Conservation Practice 595) in your Conservation Plan, and to verify that you have completed the core elements of an IPM program to control NOW in an almond orchard, as agreed upon to receive financial assistance via Farm Bill Programs including Environmental Quality Incentives Program (EQIP) and Conservation Stewardship Program (CSP).

For questions, please contact your NRCS Conservation Planner:  
(NRCS STAFF WORKING DIRECTLY WITH THE CUSTOMER WILL INSERT THEIR CONTACT INFORMATION HERE, I ALSO THINK WE SHOULD INCLUDE THE AREA LEVEL LEAD FOR THE PRACTICE)

**Thank you for your stewardship efforts!  
Implementation Requirements for NRCS Conservation Practice 595**

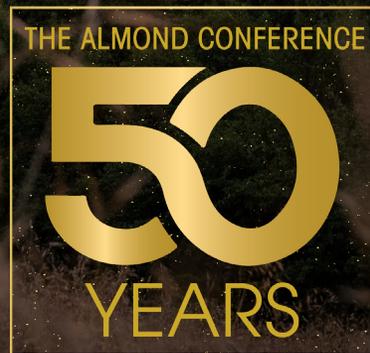
(8/17) Almond Year-Round IPM Program Annual  
Checklist  
Download this checklist at <http://ipm.ucanr.edu/FORMS>

## Agencies and Programs

- NRCS
  - EQIP, CSP
- CDFA
  - Pollinator Habitat Program
  - Block Grants



# THANK YOU



Contact Jesse Roseman, [jroseman@almondboard.com](mailto:jroseman@almondboard.com)