



# Bringing Sustainability from the Orchard to the Consumer

Molly Spence, Director of North America, Almond Board of California

SIAL – April 13, 2016

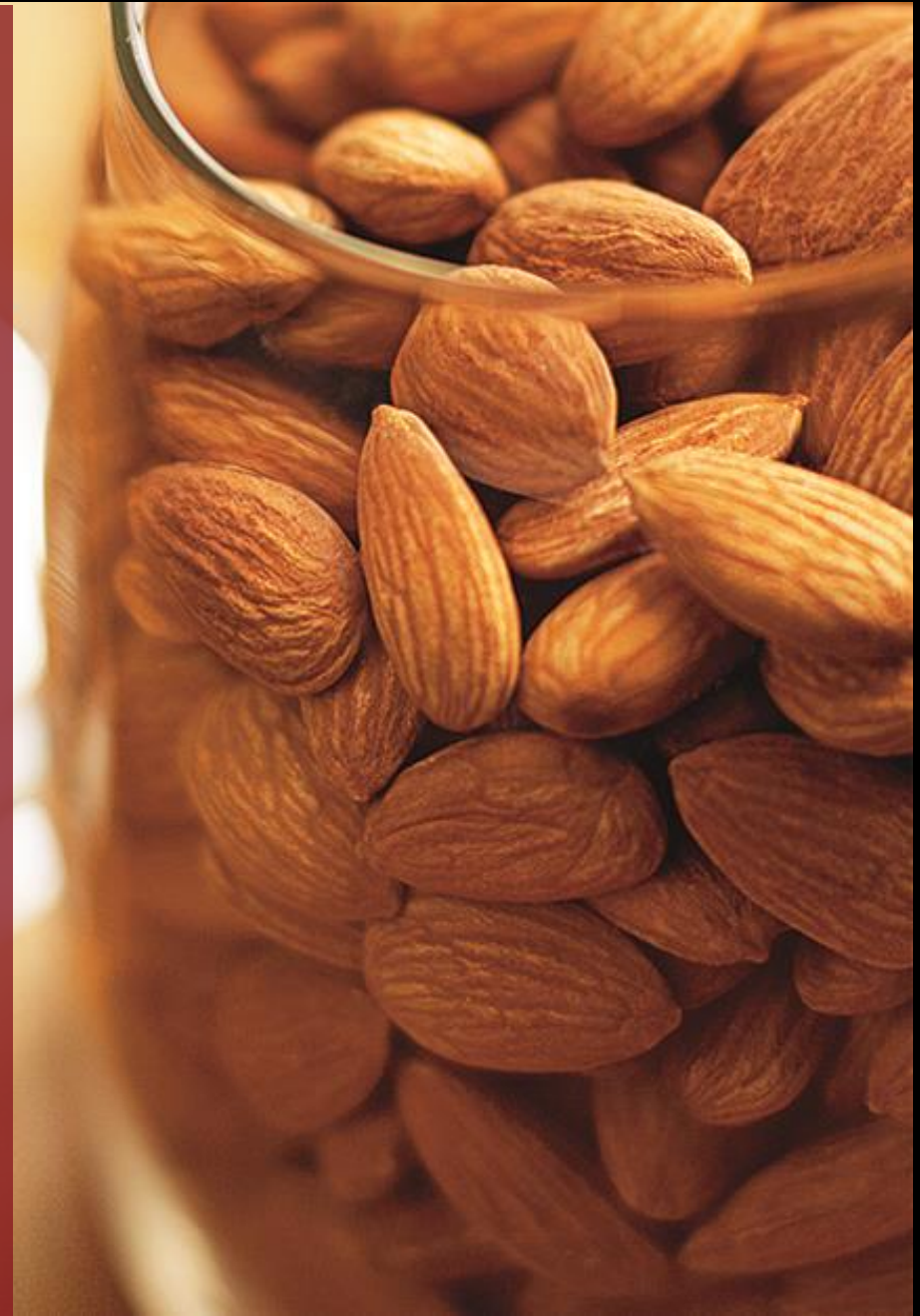




# TODAY

- Background
  - About the California Almond Industry
  - Definition of sustainability
  - Research program
- Sustainability in the Orchards
  - CASP Program
  - Lifecycle Assessment
  - Water Footprint Research
  - Evolving Best Practices
- Bringing Sustainability to Consumers
  - Reactive & Proactive Communication
  - Consumer Insights

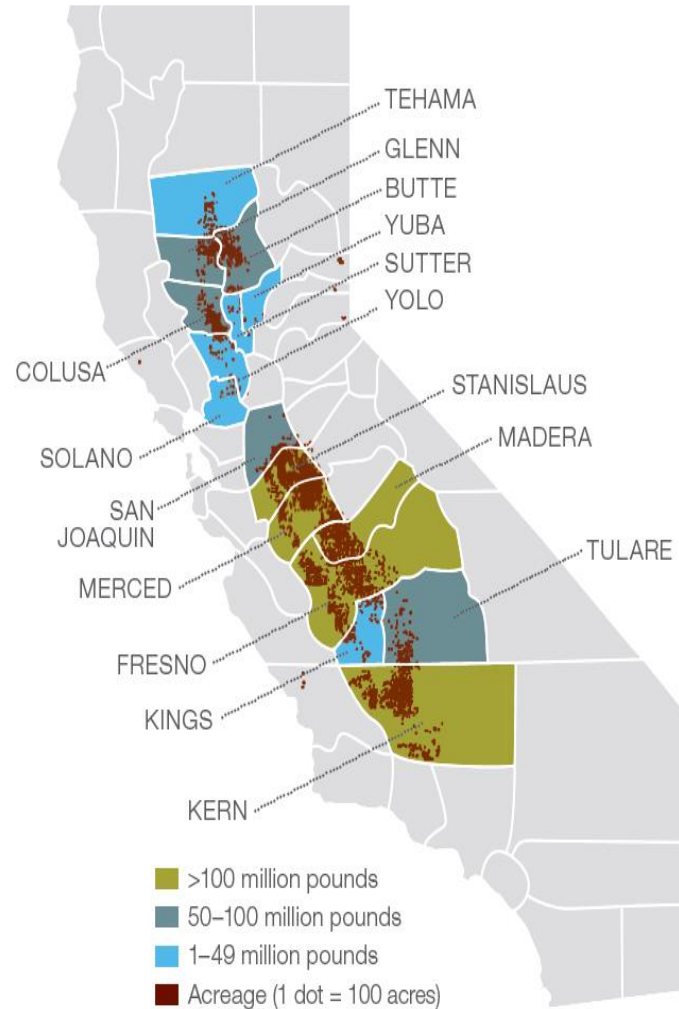
# Background



# The Scope of the California Almond Industry

- Spanning 500 miles (804 km)
- 6,800 growers and 105 handler/processors
- 100% of U.S. production
- 83% of worldwide production
- Almond Board of California is a grower-enacted “Federal Marketing Order” established in 1950
- USDA provides oversight
- Board and Committees all volunteers
- Funded by assessment \$.03/lb and provides
  - Global Market Development
  - Scientific Research
  - Industry Education
  - Quality and Food Safety
  - Regulatory Issues

ALMOND PRODUCTION BY COUNTY (2013/2014)



Sources:

\*USDA National Agricultural Statistics Service, Pacific Region (NASS/PR)

\*\*U.S. Department of Commerce, Foreign Trade Statistics

\*\*\*Agricultural Issues Center, University of California



## Why California?

- California is the most productive almond growing region in the world
  - Rich soil, water availability and infrastructure, innovative technology and research
- California is known for some of the highest standards for environmental, food, and worker safety in the world

### GLOBAL MEDITERRANEAN CLIMATES:

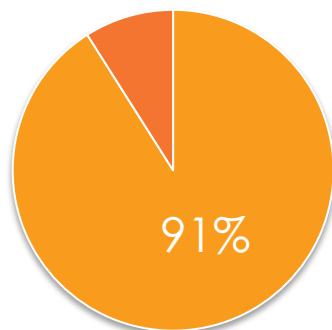


The Mediterranean climate is characterized by warm to hot, dry summers and mild to cool, wet winters

# Family Farms

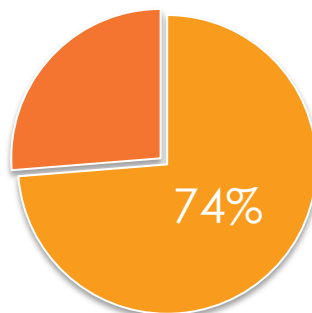
**More than 6,800 total farms**

**More than 90%  
Family Farms**



■ Family Farms ■ Other

**Nearly 3/4  
Under 100 Acres**



■ <100 Acres ■ Other

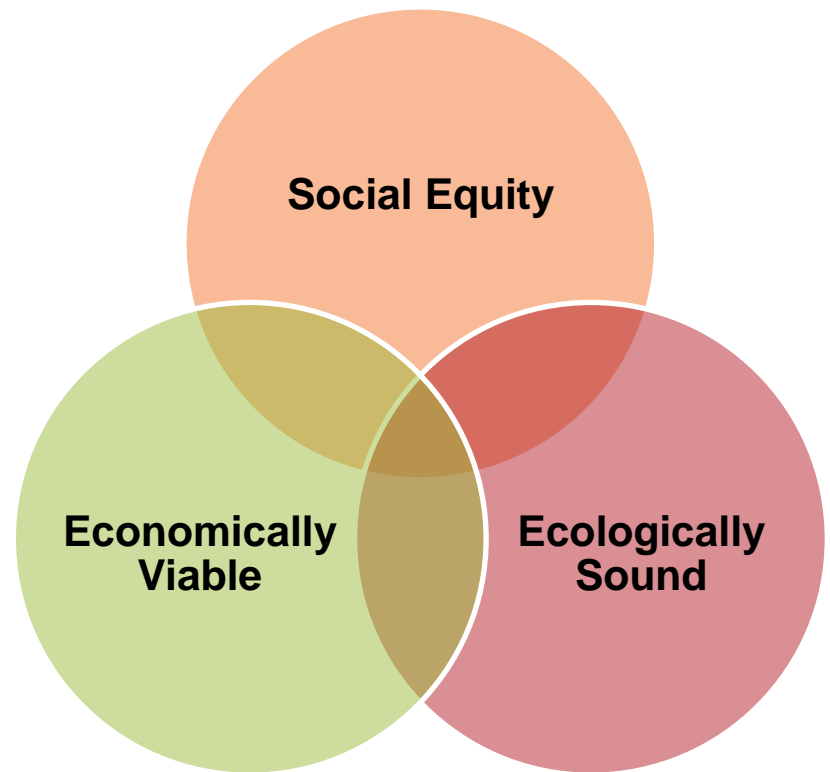




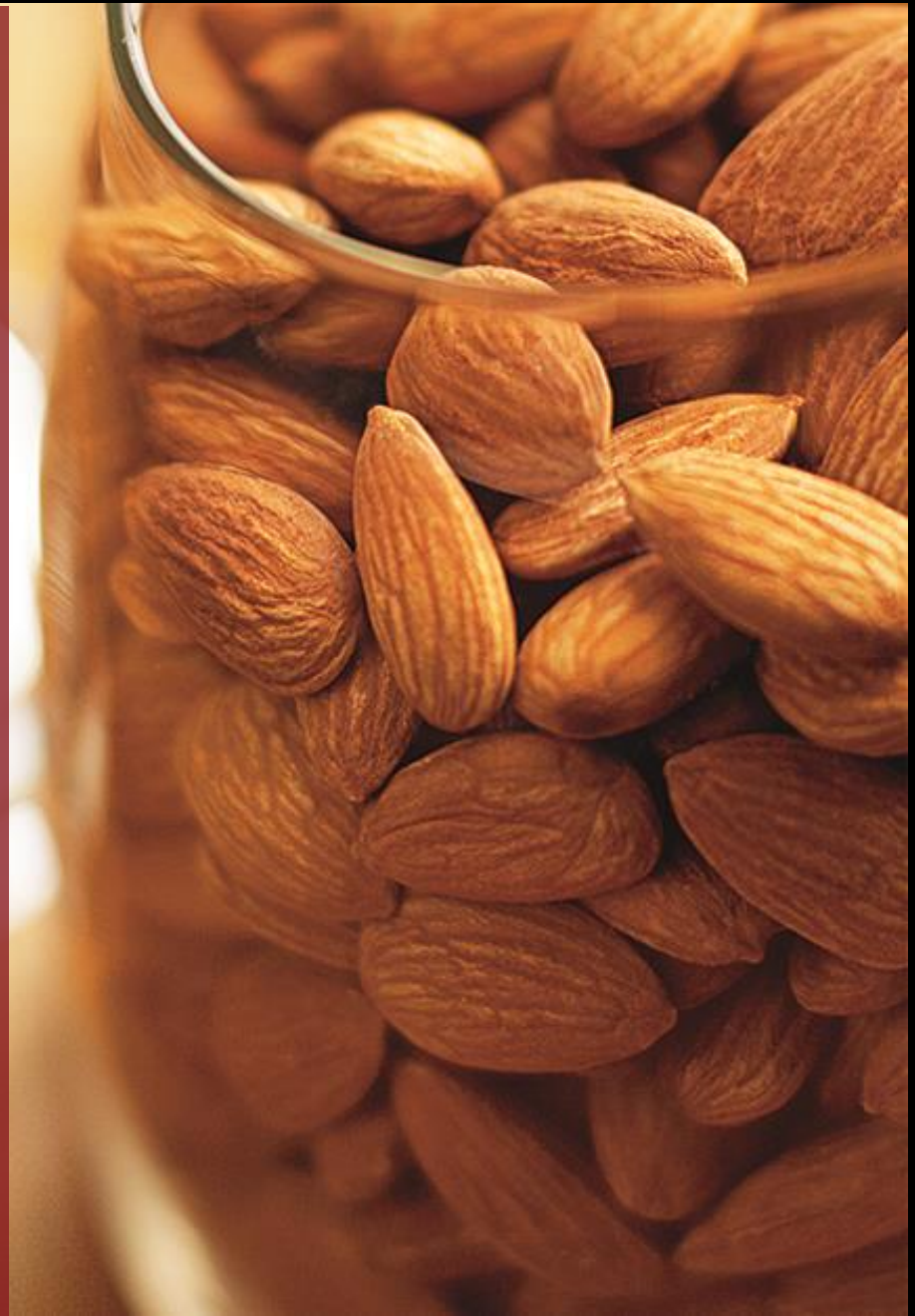
# The Almond Board of California's Definition of Sustainability

*Sustainable almond farming utilizes production practices that are economically viable and are based upon scientific research, common sense and a respect for the environment, neighbors and employees.*

*The result is a plentiful, healthy and safe food product.*



Sustainability  
in the  
Orchards:  
Research &  
Programming





# Research at the Almond Board...

- ...is the foundation for continuous improvements in growing almonds productively, safely, and in a way that is environmentally responsible.
- Through ABC, California's almond community has been investing in research on topics related to almonds' sustainability **since 1973** with a total investment of more than **\$50 million** to date.



# Almond Industry Sustainability- Related Research

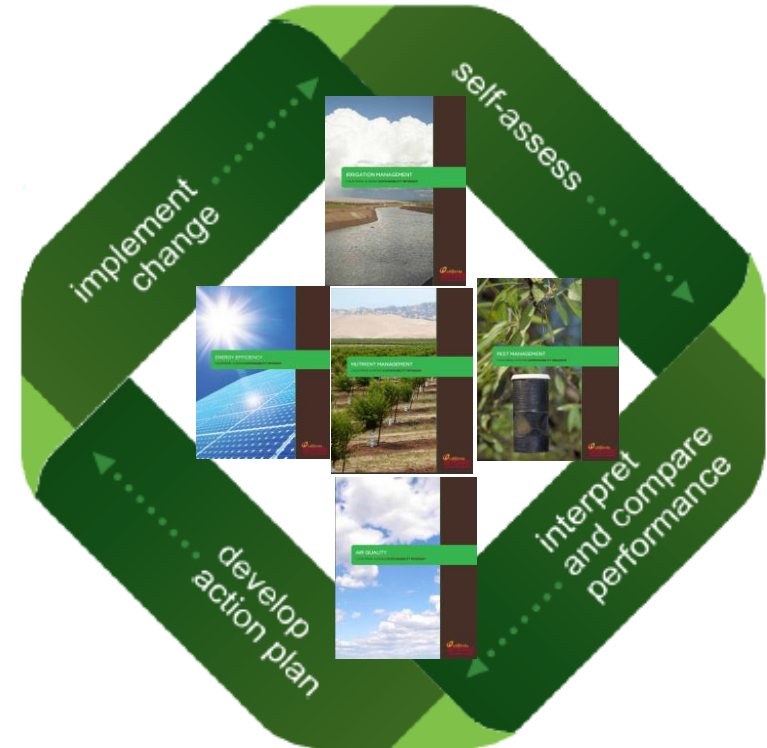
- Consistently funding and executing initiatives since 1973
- Info on specific initiatives is at [almondsustainability.org](http://almondsustainability.org)





# California Almond Sustainability Program (CASP)

- CASP encourages almond grower and handler self-assessment surveys to track adoption of responsible farming practices
- Current CASP modules (with more in development):
  - Efficient irrigation management
  - Nutrient management
  - Air quality
  - Groundwater quality
  - Energy efficiency
  - Ecosystem
  - Financial management
  - Pest management



# CASP Reporting/ Use of Data

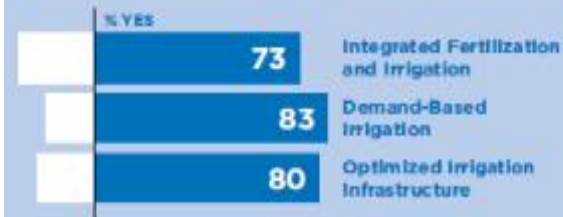
## 2014 First Report Released

- Based on first 4 years
- Statistical Analysis re representativeness
- Calls out strengths and areas for improvement based on value analysis (which practices have widest impacts used/not used)
- Next report 2019? See what has changed
- No Third Party Verification to date because of cost
- Analysis of data used to develop outreach and education programs to growers e.g. in irrigation management (continuum)
- Analysis of data used to communicate to additional consumer, regulatory & trade



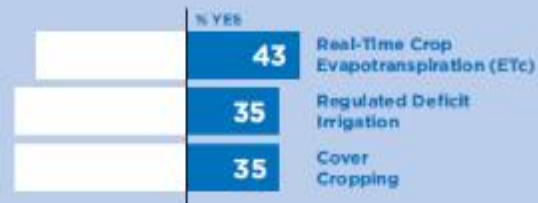
### WATER QUANTITY STRENGTHS

The top three ways that almond growers conserve water while protecting the environment (% of assessed orchards)



### WATER QUANTITY OPPORTUNITIES

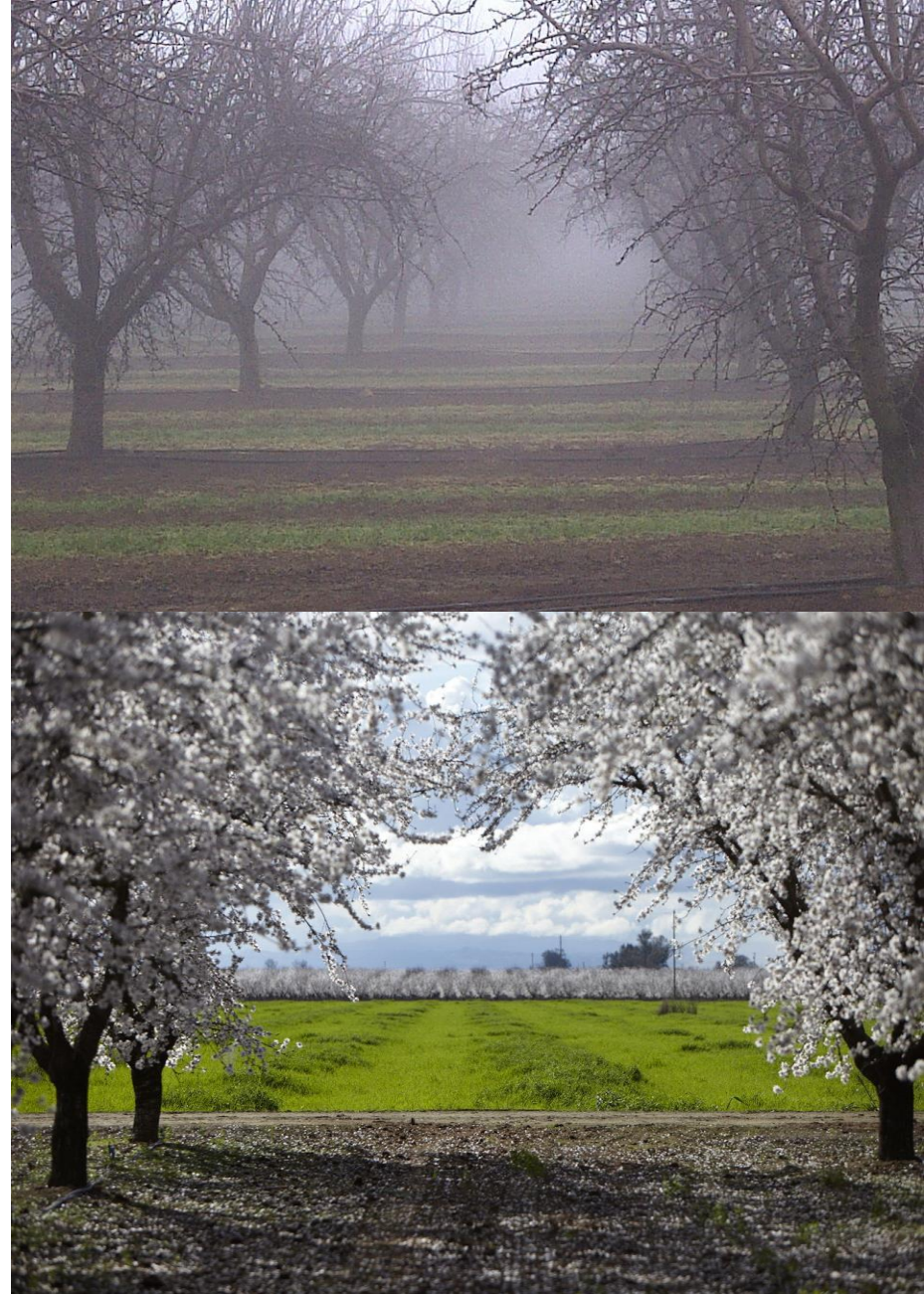
The top three ways that growers could increase water conservation and protect the environment (% of assessed orchards)





# Lifecycle Assessment (LCA)

- Study funded by the Almond Board of California and the CA Department of Food and Agriculture Specialty Crops Block Grant Program
- Two studies have been published to date based on almond LCA research
- At baseline, our industry is offsetting about 50% of its carbon
- We're now researching ways to further this via improved management of inputs and outputs





# California Almond Water Footprint Research Underway

**WATER-SAVING  
MICRO-IRRIGATION  
TECHNOLOGIES**

have helped farmers

**REDUCE**

the amount of water it  
takes to grow

**1LB** of   
by

**33%**

**SINCE 1994<sup>2</sup>**



# Always-Evolving Best Practices

- Good Agricultural Practices (GAPs)
- Good Management Practices (GMPs)
- Bee Management Practices (BMPs)



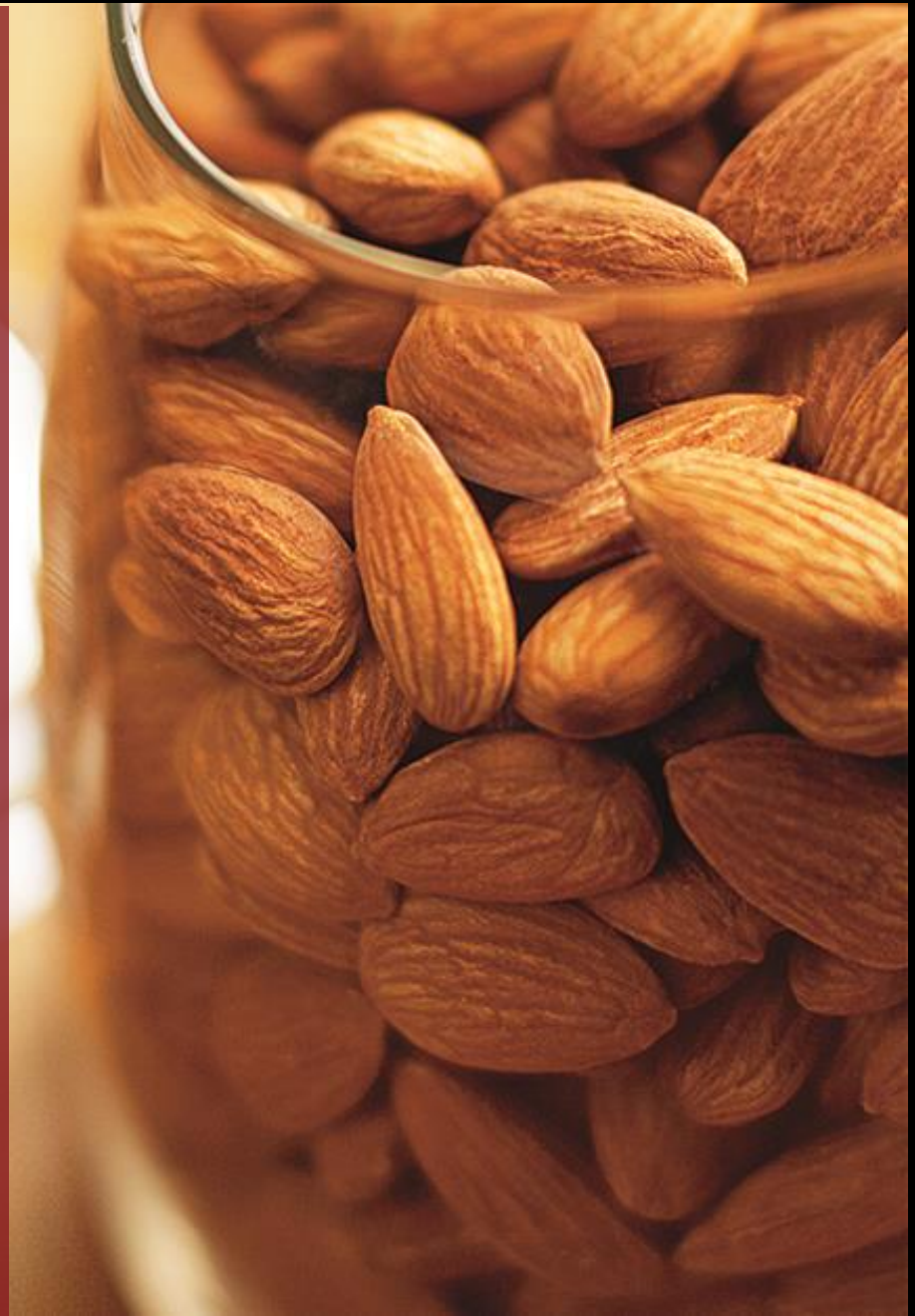


# ALMOND ORCHARD OF THE FUTURE

AIM Initiatives:  
Where can the almond  
community and ABC  
make a difference?

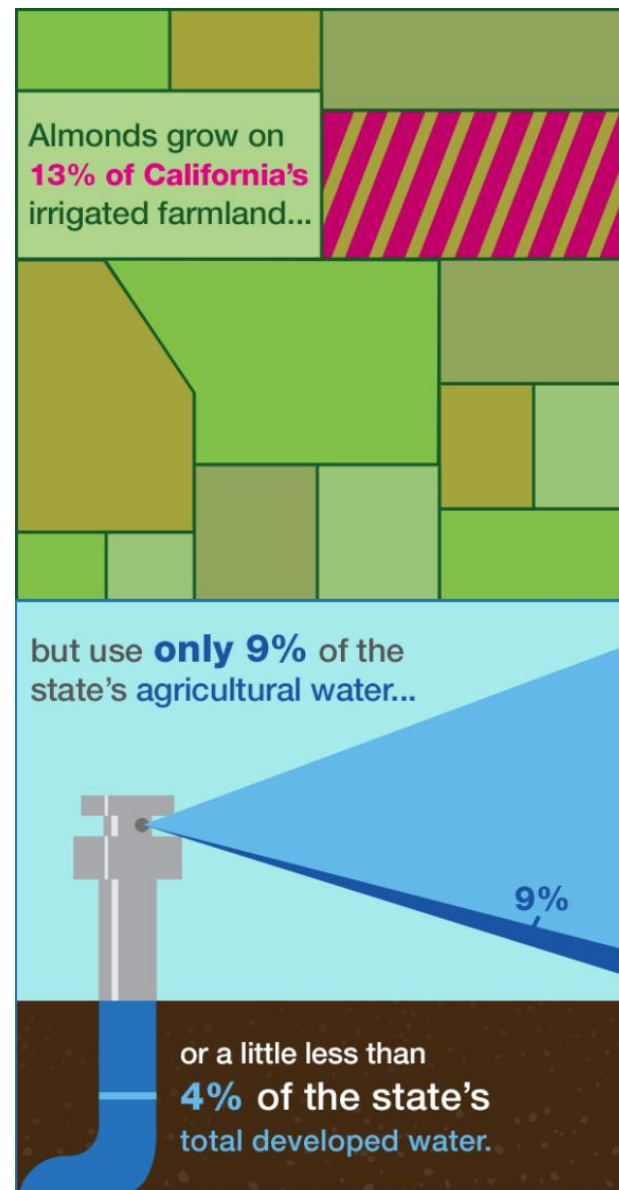


# Communicating Sustainability to Our Audiences





# In the Heat of California's Drought: Communicating Simple Facts





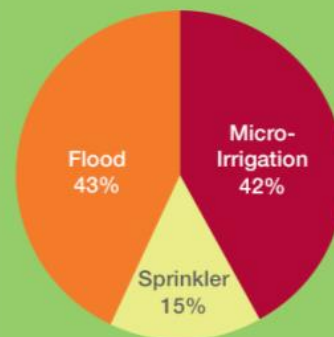
## Other communication during the drought...

California Almond growers are lead adopters in efficient irrigation technologies.

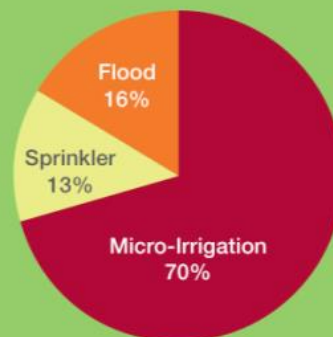
- Through Almond Board research programs, almond farmers have been funding **water efficiency research since 1982** with over **90 projects** funded to date.
- Over the past 20 years, almond growers have improved their water use efficiency by 33%, producing **more crop per drop**.
- **83% of growers practice demand-based irrigation** using a combination of weather data, tree demand data, and/or soil moisture data
- **70% of almond orchards use micro-irrigation**, decreasing water runoff, applying water directly in the root zone, and allowing for precise timing and rate of irrigation.



California Farmer  
Irrigation Methods



California Almond  
Grower Irrigation  
Methods



**70 percent** of almond growers  
use efficient micro-irrigation.

# Social Media



 **californiaalmon...** FOLLOWING

64 likes 2w

**californiaalmonds** A soft snow of almond blooms, makes us feel like we're living in a dream. Don't forget to share your almond blossom photos and videos.  
#californiadreaming #bloom #almondblossoms #almonds

**imcarlosgiraldo** i respect the effort and passion! Im always looking to associate and work with other successful entrepreneurs!

 **California Almonds**  
February 19 · 🌐

Almond farmers are serious about recycling. Watch the 'Iron Wolf' push, grind, and put back an entire almond tree into the soil. Why? Early research shows this could be a great way to store carbon & more.



4.8K Views



 **californiaalmon...** FOLLOWING

101 likes 1w

**californiaalmonds** These orchards not only inspire us but they inspired so many artists including Van Gogh. Why? Well some say that flowering trees represent awakening and hope. What do you think?  
#almondbloom #almonds #inspiration #awakening #california #beauty  
**thenewhumanitarian** &👤  
**auntie\_a3** @thibeauking

take extraordinary steps to ensure bees remain safe and healthy, both inside their orchards and throughout the year.

**ALMONDS.COM/ POLLINATION**

**50** BMPs have been presented at over **50** INDUSTRY MEETINGS more than **7,000** COPIES have been distributed.

The Almond Board's Honey Bee Best Management Practices (BMPs) are having an on-the-ground impact on protecting honey bees in the orchard and beyond.

**\$2** MILLION in honey bee health research since 1995

**100** HONEY BEE HEALTH PROJECTS


**“ BMPs GO FAR BEYOND THE ALMOND ORCHARD** also providing important insights for all crops when it comes to **PROMOTING HONEY BEE HEALTH.”**  
- Eric Mussen, Apiculturist Emeritus, University of California Cooperative Extension

Almond Board of California participated in White House meetings on the recently released *National Strategy to Promote the Health of Honey Bees and Other Pollinators*.

ABC has taken a leadership position engaging and collaborating with universities, government agencies, nonprofits and beekeeping groups to communicate, educate and inform honey bee research, policy, education and outreach. See page 24 for a list of partnerships.


 Jess Schmidt, Pinetree and 25 others

3 shares

 Write a comment...



# Food Professional Section, Newsroom & Blog on Almonds.com



CONSUMERS FOOD PROFESSIONALS HEALTH PROFESSIONAL

Snacking Health & Nutrition Almond Recipe Center


**BLOG**


## Honey Bees Use 'Bee Pastures' Planted by Almond Farmers As Almond Pollination Winds Down

Posted March 23rd, 2016

[Share](#) 13 [Tweet](#) 2 [Pinterest](#) 0 [googleplus](#) 0 [Email](#) 0

By the time petals fall from almond blossoms, the nectar and pollen that [honey bees](#) collect and spread from flower to flower to pollinate the crop are gone. So as the almond bloom draws to a close, beekeepers arrive to remove their hives from the orchards, often moving their bees to pollinate other crops. But in the meantime, honey bees look outside of almond orchards for alternate food sources.






CONSUMERS FOOD PROFESSIONALS HEALTH PROFESSIONALS ALMOND GROWERS ALMOND PROCESSORS

Snacking Health & Nutrition Almond Recipe Center About Almonds

English US/Canada

Search

### GROW WHAT YOU KNOW ABOUT ALMONDS



Almond growers innovate to help the environment, community and economy

[Learn More](#)


SHOP ALMOND TINS

### The California Almond Industry Commits to Next-Generation Growing Solutions


California is one of only a few places on earth with the Mediterranean climate ideal for growing almonds and more than 400 other crops, including fruits, nuts and vegetables. Like almonds, much of California's agriculture is not grown anywhere else in the United States. According to the USDA, California produces 99 percent of the nation's almonds, artichokes, dates, figs, raisins, kiwifruit, olives, cling peaches, pistachios, dried plums, pomegranates, sweet rice and walnuts. These specialty crops thrive in California's climate.<sup>1</sup>

**DID YOU KNOW?**

Almond trees and the water used to grow them actually produce two separate products. In addition to the nut itself, the almond's hull is used to feed livestock, reducing the amount of land and water that would otherwise be used to grow feed crops like hay. Even the shell of the almond is used for livestock bedding and alternative energy.



For California almond farmers, the use of sustainable farming practices hits close to home.<sup>2</sup> More than 90 percent of California almond farms are family farms – many owned by third and fourth generation family farmers who live on the land and know first-hand the importance of sustaining it for their children, grandchildren and future generations to come.<sup>3</sup> In addition to providing a safe and stable supply of almonds, California's community of more than 6,800 almond growers are committed to using sustainable agricultural practices that respect the environment, are economically viable and protect their local communities in an effort to be as resourceful as possible.<sup>2</sup>



Almond Board of California



# Recent Announcements

- HONEY BEES USE 'BEE PASTURES' PLANTED BY ALMOND FARMERS AS ALMOND POLLINATION WINDS DOWN
- ALMOND FARMERS RECOGNIZED FOR INNOVATION, LEADERSHIP
- ALMOND BOARD OF CALIFORNIA EMBRACES LEADERSHIP ROLE AND PLANS FOR THE FUTURE
- A PARTNERSHIP AS SWEET AS HONEY
- WHOLE ORCHARD RECYCLING COULD BENEFIT SOIL QUALITY AND PROVIDE ADDITIONAL CARBON SEQUESTRATION
- MODESTO ALMOND FARMER BANKS LOCAL STORMWATER
- FOCUS AT ANNUAL ALMOND CONFERENCE IS CLEAR: ACCELERATED INNOVATION
- GROUNDWATER RECHARGE: NOTHING NEW FOR FRESNO COUNTY ALMOND GROWER
- ALMOND INDUSTRY LAUNCHES STRATEGIC PLAN TO ACCELERATE INNOVATION AND SUSTAINABILITY
- CAN GROWING ALMONDS FIGHT CLIMATE CHANGE?
- ALMOND INDUSTRY AND SUSTAINABLE CONSERVATION PARTNERSHIP EXPLORES ALMOND ACREAGE GROUNDWATER RECHARGE
- ALMOND INDUSTRY INNOVATION IN ACTION
- USDA FUNDS NEW PILOT PROJECT TO HELP ALMOND GROWERS GAIN GREATER ACCESS TO GREENHOUSE GAS MARKETS

# This Just In: Industry Award Nominations for Our Communications Efforts....



## *2016 SABRE Awards North America finalists*

The 2016 North America SABRE Awards shortlist includes around 300 campaigns, selected from among more than 2,000 entries in this year's competition, which recognizes Superior Achievement in Branding, Reputation and Engagement. The campaigns were evaluated by a jury of more than 40 industry leaders.



SABRE Awards North  
America

Awards Ceremony



# Talking with Our Consumer Target, Savvy Snackers



“I probably snack about six times a day.”

“I plan my snacks more than I plan for my meals.”

“I try to eat natural foods, but it’s about 50/50 natural and processed snacks.”

“Ultimately, I’m going for balance in my snack choices.”



For many Savvy Snackers, almonds are *the* go-to snack.

“Almonds are just about the **healthiest thing you can eat.**”

“Almonds are my **favorite nut.**”

“I don't look forward to eating carrots; I **look forward to eating almonds!**”

“Almonds are **a snack you can trust.** So many things are good for you one day, and the next day they're not. With almonds, you *know* they're healthy.”



However, most have very little understanding of how almonds are grown.

Without knowing anything about how almonds are grown, negative stories about almonds (and specifically almonds' water use) can **erode their confidence** in choosing to snack on almonds.

“I don't know if I'd stop eating almonds, but I might not feel as good about it.”





Even basic information about how and where almonds are grown is seen in a positive light.

“I had no idea how big and important the almond industry is to the economy.”

“It's cool that we [the U.S.] are growing a product that so many people around the world are eating.”

“I really like that they use all the parts of the almond so that there's very little waste.”



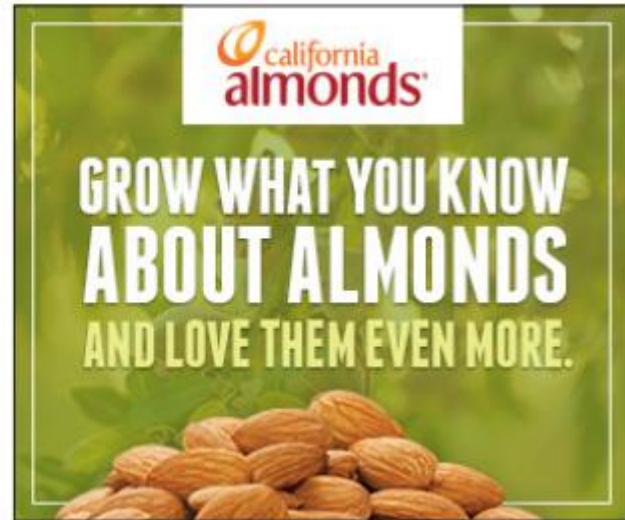
# Our opportunity...

- Savvy snackers love almonds.
- But they know very little about how almonds are grown.
- So when they hear something bad about how almonds are grown, it erodes their good feelings.
- When they hear facts we may think are commonplace, they are surprised and pleased, and feel even better about eating almonds.
- We have the opportunity not only to work to continually improve our industry's sustainability for the future, but also to more pointedly share what's currently happening.





## New Campaign: Grow What You Know About Almonds.





california  
almonds

WHAT DO YOU  
KNOW ABOUT  
ALMONDS?

california  
almonds

WHERE DO  
ALMONDS  
COME FROM?

- TREES
- BUSHES

california  
almonds

WHERE DO  
ALMONDS  
COME FROM?

- TREES
- BUSHES

california  
almonds

HOW MANY JOBS  
DO ALMONDS  
CREATE?

- 10,000
- 100,000

california  
almonds

HOW MANY JOBS  
DO ALMONDS  
CREATE?

- 10,000
- 100,000


california  
almonds

GROW WHAT  
YOU KNOW  
ABOUT ALMONDS.

california  
almonds

california  
almonds  
Almond Board of California



A photograph of an almond orchard with several almond trees in bloom. The trees have green leaves and clusters of light pink blossoms. The background is a soft-focus view of the orchard, with sunlight filtering through the trees, creating a warm, golden glow. The text is overlaid on the left side of the image, enclosed in a thin white rectangular border.

**GROW WHAT  
YOU KNOW  
ABOUT ALMONDS**  
AND LOVE THEM EVEN MORE.





THANK YOU!

Molly Spence

[mspence@almondboard.com](mailto:mspence@almondboard.com)