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President & CEO

18th Annual Food Quality & Safety
Symposium

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Crop Year 2014-15 in Headlines

August 2014

The Dark Side of Almond Use

Best Of



theatlantic.com

November 2014

How almonds are sucking California dry

By David Willis, www.bbc.com
November 13th, 2014

BBC News, Los Angeles



California's worst drought for more than a century is causing huge problems for farmers, who need a trillion gallons of water per year for their almond orchards alone. But it also leaves homeowners facing difficult choices about what to do with their lawn.

I have a neighbour, Deborah, and ever since I've lived here, her front lawn has been luxuriant and green.

February 2014

Editorial: State's growing, and thirsty, almond industry sowing seeds of discontent




sacbee.com

April 8, 2015

Seriously, Stop Demonizing Almonds

Best Of



gizmodo.com

April 2015

Almonds, the demons of drought? Frustrated growers tell another story

It's not clear exactly when almonds became the scapegoat for the California drought.

latimes.com

June 2015

The Water-Hogging Crops That Put Food on the Table for Low-Income Workers

By Padma Nigam, www.takepart.com
June 2nd, 2015



A worker prunes almond trees in an orchard near Redwood in the Central Valley, California. Almonds, a major crop of farming in California, use up some 26 percent of the state's water reserves, according to some estimates. Photo by: Photo: Lucy Mahoney/Reuters

California almonds and the farmers who grow them have received a lot of bad press in recent months as city dwellers facing mandatory water restrictions turn their ire on the thirsty crop.

July 2015

FOX BUSINESS

Is California Sucking the Almond Industry Dry?

By Jade Scipioni
Published July 09, 2015 | FOXBusiness

If you don't live in California, the serious drought—which is now in its fourth painstaking year—may not affect your everyday life. But you are probably eating their almonds. The state produces 80% of the world's almonds and the industry has been taking the brunt of the water shortage ever since.

"Blame game doesn't help. Yes, it takes about one gallon of water to produce one almond. And it also takes 1.4 gallons of water to produce two oives. And, four glasses of milk needs about 143 gallons of water to produce. Should we stop making milk in California too? Where does it end?" says Dr. Harinder Grewal, Senior Agricultural Inspector for the Department of Agriculture at Stanislaus County, California.

California produces nearly half of all U.S. grown fruits, nuts, and vegetables, according to the California Department of Food and Agriculture. But the real money maker is almond production which contributes over 100,000 jobs and \$11 billion to the state's economy, according to the University of California Agricultural Issues Center.

July 2015

Evil Almonds? California's Drought Villain Is a Climate Change Hero



takepart.com

Reputation Management and The Crop of Choice

Taking the Lead

Balanced and Positive
Media Coverage
2015- 2016

Almonds Feature Prominently in Drought Coverage, but Expanding the Conversation

Almonds are part of the California bounty negatively impacted by the drought.

All foods need water.

Almonds don't require significantly more than many foods.

Almonds are efficient

water users. Almonds use 13% of irrigated ag land, but only 9% of irrigation water

Engaging the Consumer

Paradoxical Crossroads

Unprecedented achievements
Unprecedented challenges

Industry Scale & Success =
Visibility & Responsibility

Almonds are good

- For me
- For my family
- For my environment
- For my community

Areas of Industry Alignment

Position Taking and Goal Setting

- Applied Water
- Ground Water Management
- Precision Agriculture
- Central Valley Air
- Healthy Bees
- Additional Growth of the Industry

Accelerated Innovation Management (AIM):

Initiative 1: Adopt minimum irrigation standards; assess and ensure global best practices brought to the Central Valley

Initiative 2: Accelerate recharge potential in the Central Valley

Initiative 3: Optimize air quality impacted by farming operations

Initiative 4: Optimize almond agronomics into the 22nd Century



Op-Ed California agriculture: It's worth the water

"Food is central to California in more than just the nutritional sense. It contributes to nearly every aspect of our economy and our lives, an important point to keep in mind as we weigh what our water is worth during this drought, and the next one."

GROUNDWATER RECHARGE



Can almond acreage help refill California's underground aquifers?



California farmers hope to capture El Niño rains
Growers will flood fields after big storms



Almond board partners to study groundwater recharge



Partnership to explore groundwater recharge on almond orchards



California's new hot commodity: Stormwater



Almond Farmers Could Help Refill California's Low Groundwater Tables



Recharge method could boost Merced-area aquifers up to 20 percent, report says

Reputation Management and The Crop of Choice

Developing the Next Phase 2016

Leading the way

Board of Directors Strategic Retreat (Feb 2016)

Maintaining Almond Relevance

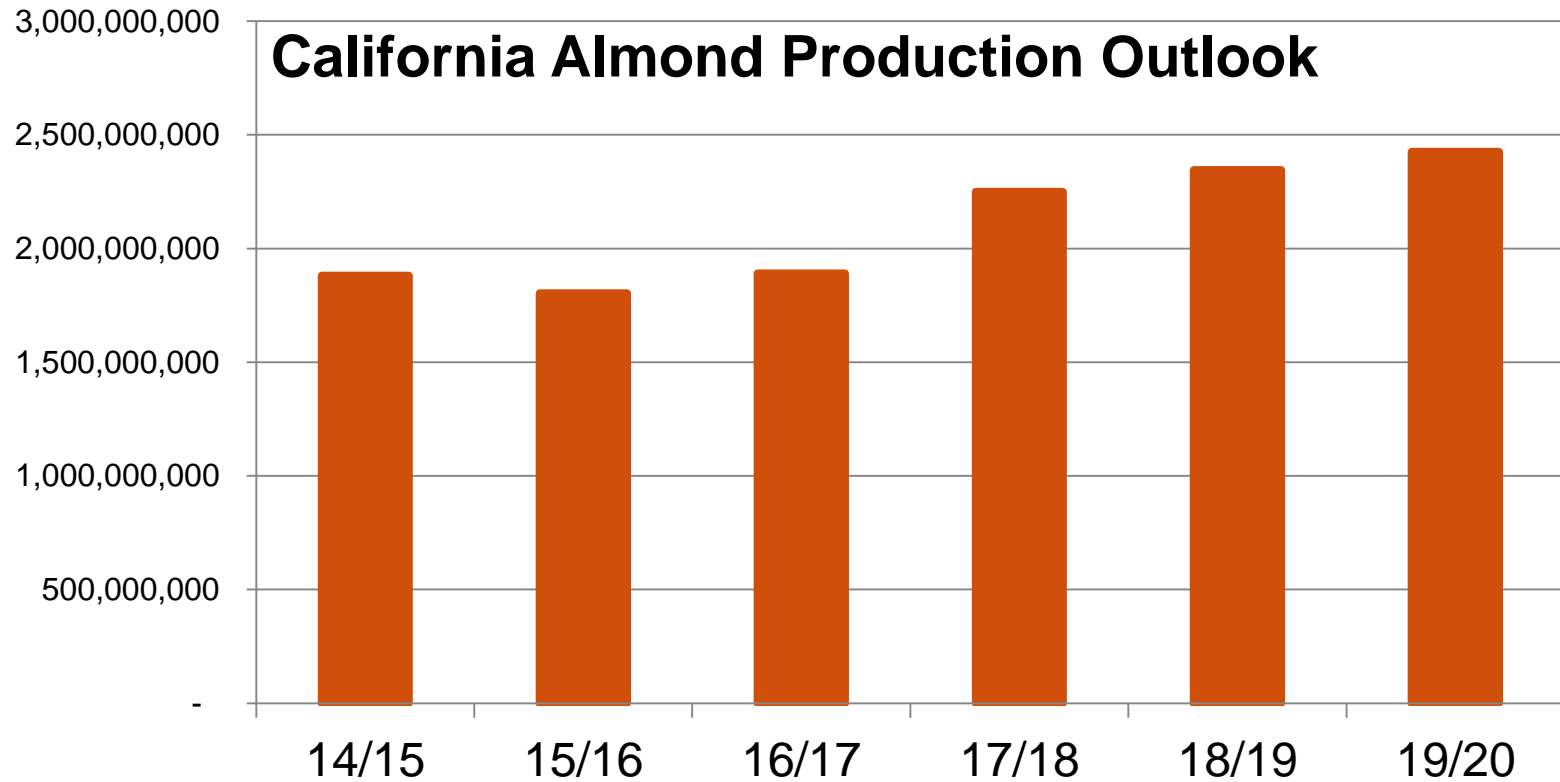
What's Happening

- Increased population, changing expectations
- Emphasis on nutrition, diet and natural resources...leave the world a better place
- Focus on sustainability, water top of mind
- No known replacement for water
- Consumer value equation shifting
 - Taste, Price, Convenience...Health, Wellness, Safety, Sustainability
- Impacts buying habits

Need for Action

- Grow with limited access to water, fossil fuel, land
- Time to innovate is NOW
- Set the standard for sustainable Ag
- Build credibility through friendships
- Message to influence consumer behaviors; speak their language

FY2014/2015 – FY2019/2020 Projections



30% increase over four years

NUT OF CHOICE (NOC)– Preparing for Larger Crops

- Review of key markets and recommendations on funding necessary to prepare the way for supply increases
- GMDC motion to the BOD that additional funding be provided
- Value proposition is changing – ethical, transparency, “clean” ingredients are joining taste, health, wellness
- Sustainability, social impact are fundamental – we must be able to tell an authentic and engaging story about our journey
- Reputation is not only about us, but the company we keep

Market	Market Attractiveness Score and Rank	Target Message Delivery Goal	Budget Implication of Target Message Delivery Goal
United States	92.1 / 1	Increase	Increase
South Korea	73.0 / 2	Increase	Increase
Canada	72.6 / 3	Maintain	Maintain
India	71.9 / 4	Increase	Increase
UK	70.8 / 5	Maintain/Increase	Maintain/Increase
France	70.1 / 6	Increase	Increase
China	65.1 / 7	Increase	Maintain
Germany	62.0 / 8	Increase	Increase
Japan	57.5 / 9	Increase	Increase

Crop of Choice

Milestone Areas of Focus, 2014-2016

BOD SR 14

2014-2016

BOD SR 16

Water

Quantity
Quality
Uncertainty

AIM
SGMA
Knowledge

WUE
Recharge
Recycle

Pollination

Contributor
Bee health
Guilty party

Collaborator
BMPs
Positive influence

Leader
Safe orchards
Solution provider

Food Safety

Risks abound
Uncertainty
Crisis management

At the table
FSMA influencer
Crisis avoidance

Managed risk
Preferred industry
Enhanced compliance

Sustainability

8 CASP modules
Grower tools
LCAs

Mined data
Applied data
RM benefits

Re-envision CASP
Certification
COC/NOC value

Health & Nutrition

More leverage
Continue investment
Modified direction

Milked the cow
Pipeline full
Type & geographies

Enhance relevance
New angles
Time will tell

Advocacy

Expanded topics
MOA management
Leverage

Expanded outreach
Coordination
More resources

Strategic focus
Collaboration
Leverage

Water Management and Efficiency

Focuses on accelerating the transition of growers up an irrigation improvement continuum with the adoption of more efficient irrigation and scheduling and management practices, resulting in the maximization of “crop per drop”. Adopting more advanced water management technologies.

Sustainable Water Resources

Explores how best to leverage a unique strength of the industry, its acreage, for increasing groundwater recharge in aquifers, which collectively are California’s largest water storage system. Working to recycle municipal waste water and other degraded water as a way of increasing overall water availability for farmers and all Californians.

Air Quality

Delving into the various ways almond production impacts air quality as well as evaluating options to decrease emissions.

22nd Century Agronomics

Recognizes that we need to better understand and then adopt the technologies that will lead California Almond farming into the 22nd century. Each component of almond farming will be considered, from land preparation and varietal development to equipment and processing.



Farm of the Future

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Developing the Next Phase 2016

Leading the way

Board of Directors Strategic Retreat (Feb 2016)

Ag/Consumer/Grower Nexus

- Information technology radically shaped competition and strategy
- On the brink of the third transformation
- Key disruptors have an impact on transformative future
 - Smart, Connected Products
 - The New Space Race
 - Investment Capital Unleashed
- Opportunities for the Almond Industry
 - Execute AIM with vigor
 - Facilitate more smart, connected products
 - Define and communicate a vision for smart, connected products for the almond value chain
 - Lead, design and implement brand based transparency and authenticity



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Developing the Next Phase 2016

Almond Orchard of
the Future

Crop of Choice Strategic Capabilities and Supporting Initiatives

9 Capabilities with Supporting Initiatives and Resource Requirements

- 1) **Energy** - Demonstrate a reduction in fossil fuel reliance and the potential for integrated systems that convert bio-bass to energy as a component.
- 2) **Soil Health Management** - Demonstrate a clear understanding of what constitutes “soil health for almonds” and apply that understanding via practices to optimize orchard performance and environmental benefits.
- 3) **Value Added Orchard Utilization**- Maximize value added utilization for all orchard products, other than the edible nut, and the value of ecosystem services, which are financially viable and environmentally friendly.
- 4) **Pollination** - Demonstrate the ability to provide a safe, nutritional environment for pollinators, ensure a sufficient supply of honey bees for almonds, and reduce reliance on honey bees in the long term.
- 5) **Food Safety** - Optimize grower and handling practices to ensure food safety while meeting sustainability goals and requirements.
- 6) **Pest Management** - Implement measures for early detection of pests and utilize precision methods delivered through a suite of advanced technology tools.
- 7) **Harvesting** - Develop and implement innovative harvesting practices that are practical and economically viable, and that minimize dust, maximize almond quality/safety, and ensure the safety of farm workers.
- 8) **Irrigation & Nutrients** - Ability to target irrigation and nutrient applications in an automated way that is ideally at the individual tree level using the ability to monitor the status of water and nutrient levels via advanced technology.
- 9) **Orchard, Tree, Rootstock** - Rely on advanced research to develop rootstocks, varieties, and orchard management practices to improve orchard health, efficiency, and reduce environmental impacts while maintaining/improving desirable almond characteristics.

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Developing the Next Phase 2016

Leading the way

Crop of Choice Strategic Retreat Final Recommendations (January 2016)

9 Capabilities with Supporting Initiatives and Resource Requirements

A strategic diversification of investment intended to address the most important and pressing Crop of Choice challenges, in a timely and effective way

	Current CY 15/16 Budget	Incremental CY 16/17	Incremental CY 17/18	Incremental CY 18/19	Incremental CY 19/20
Irrigation & Nutrients	\$ 831,000	\$ 1,870,000	\$ 1,870,000	\$ 1,870,000	\$ 1,870,000
Orchard, Tree, Rootstock	\$ 389,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 925,000
Harvesting	\$ 64,000	\$ 300,000	\$ 280,000	\$ 200,000	\$ 200,000
Value Added Orchard Utilization	\$ 82,000	\$ 500,000	\$ 500,000	\$ 500,000	\$ 500,000
Soil Health Management	\$ 183,000	\$ 550,000	\$ 550,000	\$ 550,000	\$ 550,000
Pest Management (insects, diseases, post harvest)	\$ 685,000	\$ 600,000	\$ 600,000	\$ 600,000	\$ 450,000
Food Safety	\$ 137,500	\$ 650,000	\$ 600,000	\$ 350,000	\$ 100,000
Pollination	\$ 357,000	\$ 225,000	\$ 225,000	\$ 225,000	\$ -
Energy	\$ -	\$ 250,000	\$ 350,000	\$ 350,000	\$ 300,000
Crop of Choice Initiatives	\$ 2,728,500	\$ 5,945,000	\$ 5,975,000	\$ 5,645,000	\$ 4,895,000
Total Crop of Choice	\$ 2,728,500	\$ 8,673,500	\$ 8,703,500	\$ 8,373,500	\$ 7,623,500

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Developing the Next Phase 2016

Leading the way

Board of Directors Strategic Retreat (Feb 2016)

Creating an Advocacy Voice

- AHPA held a strategic planning retreat in January to re-envision its future
- Broad and diverse industry participation in process
- Redefined its mission and vision to become **the premier advocate dedicated to the California Almond community**
- Strategic priorities – advocacy, membership, programs/services, partnerships, organization
- AHPA's new name is the **Almond Alliance of California**

Reputation Management and The Crop of Choice

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Increasing CASP participation in 2016



	May 2, 2016	June 6, 2016	Increase
Individual Participants:	1,521	1,611	90
Organizations Represented by Orchard Assessments:	594	613	19
Orchards Assessed:	852	874	22
Acres Assessed:	172,979	196,247	23,268
Acres Managed by Organizations Represented by Assessments:	406,041	430,589	24,548

The California Almond Sustainability Program (CASP) formalizes grower sustainability practices and ensures continuous improvement through grower self-assessments.

We are leaders

- Health+
- Conscious Consuming
- Transparency = Trust





Thank You