

## A TRUSTED RESOURCE

ABC is a trusted resource for data and industry expertise, providing stakeholders with valuable information on matters impacting the entire California almond industry.

As a Federal Marketing Order, ABC is precluded from any lobbying or advocacy activities meant to influence legislation or specific policies. However, USDA/AMS does not restrict the ability of ABC to pursue the many opportunities to share its expertise and fact-based information with government and other stakeholders.

In other words, ABC can **educate**, but not **advocate**.

To further engage on legislation or policy-related matters, ABC staff provides consulting expertise to the Almond Alliance of California, supplying valuable input in support of the Alliance's efforts to ensure the California almond industry has "a seat at the table" with legislators and policy makers.

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## TRADE AND TARIFFS

- Almost 70% of California almonds are exported to 100 countries, so unimpeded market access is critical.
- ABC maintains technical expert advisors in key markets to keep abreast of tariff or technical issues impacting almonds.
- Recent global trade tensions have resulted in higher tariffs in key export markets, particularly China where the tariff increased from 10% in 2018 to 60% in 2019.
- In 2018, trade damages to the almond industry were estimated to be \$1.6 billion.<sup>1</sup>
- Almonds were included in the USDA's Market Facilitation Program in 2018 and 2019, enabling eligible growers to receive payments to address trade damage resulting from ongoing retaliatory tariffs in export markets.
- More than \$5 million in market promotion funding was awarded to almonds through the Ag Trade Promotion program to help build demand and offset export losses due to retaliatory tariffs.
- ABC prepares fact-based comments for U.S. and foreign authorities, addressing almond production practices, trade impact, technical issues and potential benefits associated with proposed trade agreements.

1. Economic Impacts of Increased Tariffs that have Reduced Import Access for U.S. Fruit and Tree Nuts Exports to Important Markets, D. Sumner and T. Hanon, UC Agricultural Issues Center and UCD, August 2018.

## EXPORTS AND INCREASING TECHNICAL ISSUES

- California almonds are the only U.S. commodity recognized under the EU's Pre-Export Certification regulation.
- The almond industry's Pre-Export Checks program for Europe was under pressure due to higher aflatoxin rejections in 2017–18. ABC and almond industry engagement with EU and U.S. authorities successfully resulted in the return to < 1% import controls.
- A strategy involving USDA, Japanese ministries and U.S. technical experts is being implemented to address increased aflatoxin rejections in Japan, with the objective of moving away from 100% import controls.
- Efforts are underway with FDA to harmonize and streamline import/reconditioning procedures for returning consignments.
- Use of pesticides are under increased scrutiny in international markets; research is being conducted to support science-based standards and maximum residue limits at a global level.
- ABC participates in numerous global organizations where food and production standards could be impacted, working through coalitions or as technical advisors to U.S. authorities to ensure almonds are engaged in the discussions – and decisions.

## SUSTAINABILITY AND THE SUPPLY CHAIN

- ABC's California Almond Sustainability Program (CASP) was launched in 2009. CASP consists of nine self-assessment modules that help growers continuously assess and improve their practices.
- About 22% of almond orchards have been assessed.
- The median adoption rate of recommended practices has increased from 75% to 84%.
- CASP includes irrigation and nitrogen management tools that growers can use to comply with regulatory requirements.
- The nitrogen budgeting tool creates nitrogen budgets which meet Irrigated Lands Regulatory Program reporting requirements.
- A supply chain pilot project launched in 2019 will allow growers to share aggregated (not individual) data with their handlers. Handlers can use this information to build confidence and trust with customers and consumers.
- CASP, coupled with relevant U.S. and California regulatory requirements, benchmarked gold to the Sustainable Ag Initiative's (SAI) Farm Sustainability Assessment 2.1 (FSA) — demonstrating CASP is an appropriate way to assess California almond practices against global standards.

**Some of California's greenhouse gas funds are used in the Healthy Soils Program to incentivize practices in almonds, such as cover crops and pollinator hedgerows.**

## HONEY BEE HEALTH

- Almond pollination utilizes more than two-thirds of U.S. honey bee hives. In 2016, pollination services accounted for 80% of beekeeper income.<sup>1</sup>
- Beehives brought in to pollinate almonds consistently leave almond orchards stronger than when they arrived. Almond pollen is nutritious for bees and is their first natural food source of the year.<sup>2</sup>
- ABC continues to fund more research on bee health (including Varroa mites, bee diseases, bee genetics, pesticides, nutrition, etc.) than any other crop or commodity group.<sup>3</sup>
- ABC's Honey Bee Best Management Practices — developed in cooperation with key stakeholders, — protect honey and native bee health during almond bloom and beyond. Between 2006 and 2017, chemical insecticide use during bloom declined by 67%.<sup>4</sup>
- Tech Transfer Teams, supported by ABC, benefit beekeepers and the almond industry. Beekeepers served by these teams lost 36% fewer colonies, on average, than those commercial beekeepers who did not participate.<sup>5</sup>
- The number of U.S. honey bee hives is at a 20-year high. However, beekeepers still experience significant in-season losses and must work hard to maintain healthy apiaries.<sup>6</sup>

1. USDA-ERS. Land Use, Land Cover, and Pollinator Health: A Review and Trend Analysis. June 2017.  
2. Ramesh Sagili. Department of Horticulture. Oregon State University.  
3. Gene Brandi, Vice President, American Beekeeping Federation.  
4. CA Department of Pesticide Regulation.  
5. Bee Informed Partnership. Nov. 2016.  
6. USDA-NASS. Honey Production Report. 1996-2016.

# KEY ISSUES & FAST FACTS 2020



california  
**almonds**  
Almond Board of California

**CALIFORNIA ALMONDS** make life better by what we grow and how we grow. Almonds play a significant role in the overall health and well-being of our growers, consumers, the environment and our economy. With more than 1 million bearing acres, the California almond industry recognizes its role as a leader in California agriculture and global almond production, and is working to grow almonds in better, safer and healthier ways to protect our communities and the environment.

**California Almonds are...**

- The No. 1 U.S. specialty crop export.
- California's No. 1 ag export with a value of more than \$4.5 billion.
- California's third-largest crop with a farmgate value of \$5.5 billion.
- Creating more than 104,000 California jobs.
- 91% family farms.
- The No. 1 nut in global new product introductions since 2007.

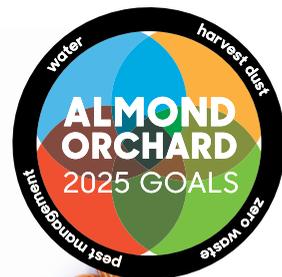
For additional information on key issues impacting the California almond industry, please contact [regulatoryissues@almondboard.com](mailto:regulatoryissues@almondboard.com)

**ALMOND ORCHARD 2025 GOALS**

Almond growers have been on a journey of continuous improvement for many years, finding ways to responsibly grow more almonds to meet global demand. The Almond Board of California's Board of Directors has prioritized industry resources in four key areas that will ensure almonds remain an economically, environmentally and socially responsible crop for California. The Almond Orchard 2025 goals serve as a guidepost, strategically focusing research, education and outreach initiatives that enable the almond industry to meet the challenges facing agriculture.

**The Almond Orchard 2025 Goals focus on the following commitments:**

- Reduce the amount of water used to grow a pound of almonds by 20%.
- Reduce dust during almond harvest by 50%.
- Increase adoption of environmentally friendly pest management tools by 25%.
- Achieve zero waste in our orchards by putting everything we grow to optimal use.



**WATER USE**

- 79% of almond orchards use efficient micro-irrigation,<sup>1</sup> far above the 42% average for California agriculture.<sup>2</sup>
- Water-saving technologies have helped growers reduce the amount of water it takes to grow a pound of almonds by 33% since 1994.<sup>3</sup>
- 87% of almond growers schedule irrigation based on tree need, soil and/or weather conditions instead of a predetermined schedule.<sup>4</sup>
- ABC has funded 210 water research projects since 1982.
- ABC has partnered with researchers, growers, and NGOs such as Sustainable Conservation to ensure groundwater recharge is a policy priority to help sustainably manage California's vital water resources.
- UC research determined nitrogen use efficiency (NUE) for almonds is 70–85%, one of the most efficient crops.<sup>5</sup> Typical NUE in other crops is 50% or less.
- The Irrigation Improvement Continuum, launched in 2017 and based on ABC research and expert advice, is a mechanism for growers to improve water use efficiency.

**Grower adoption of irrigation best practices is supported by California and federal incentive programs.**

1. CASP, August 2019.
2. California DWR. California Water Plan Update 2013: Volume 3, Chapter 2.
3. University of California. UC Drought Management. Feb. 2010. UN FAO. FAO Irrigation and Drainage Paper 66 – Crop yield in response to water. 2012. ABC Almond Almanac 1990-94, 2000-14.
4. CASP, August 2019.
5. Muhammad, et. al. Seasonal changes in nutrient content and concentrations in a mature deciduous tree species: Studies in almond. European Journal of Agronomy. 2015

**DUST/AIR QUALITY**

- ABC's Managing Dust at Harvest resource tool provides growers with tips and techniques to reduce dust such as setting sweeper heads correctly, reducing the number of sweeper passes, etc. The practices are based on ABC-funded research to address air quality and dust issues.
- Research has found that new harvesting equipment technologies can further reduce PM2.5 and PM10 dust emissions by more than 50%.
- Growers and almond industry members are exploring new off-ground harvest techniques that involve catching nuts before they reach the ground, further reducing dust at harvest.
- ABC research is focused on potential economic and environmental benefits of off-ground harvest as well as addressing hurdles to adoption, including orchard configuration, drying processes, technology and equipment changes.

**ABC has assisted in securing incentive funds through the Natural Resources Conservation Service and local air districts to assist almond growers in transitioning to low-dust harvester technology.<sup>1</sup>**

1. William B. Faulkner (2013) Harvesting equipment to reduce particulate matter omissions from almond harvest, Journal of the Air & Waste Management Assn.

**PEST MANAGEMENT**

- Most almond growers utilize integrated pest management (IPM) in their orchards. This ecosystem-based approach emphasizes the balanced use of multiple tactics (nonchemical and chemical) to effectively and safely manage pests.<sup>1</sup>
- ABC has funded pest management research since 1973, providing almond growers with science-based, IPM solutions for many pest problems.
- The California almond industry has been recognized for its success in adopting IPM and for reducing unnecessary uses of pesticides.
- ABC is engaging with registrants, industry and government authorities to encourage a risk-based, harmonized approach to setting and evaluating Maximum Residue Limits (MRLs). Strict MRLs in export markets can result in trade disruption.
- Over the last two years, ABC has provided more than 25 comments to EU, U.S. and global authorities supporting the almond industry's responsible use of chemical tools.
- Grower self-assessments report more than 58% increase in use of recommended pest management practices.

**NRCS offers cost-share grants for certain IPM practices, including mating disruption and orchard sanitation for Navel Orangeworm (NOW) management.**

1. CASP, August 2019.

**ZERO WASTE**

- Almonds grow in a shell, on a tree, protected by a hull. Research is identifying value-added benefits for this natural biomass.
- Whole Orchard Recycling grinds up orchards at the end of their lives and incorporates the woody material into the soil. Preliminary findings indicate this may return nutrients to the soil, increase water infiltration and storage,<sup>1</sup> and slow the release rate of carbon dioxide into the atmosphere.<sup>2</sup>
- Research shows that biosolarization (placing almond hulls, shells and woody biomass under tarps) uses the natural power of the sun to make the soil inhospitable to key soil pests.
- Research is exploring extracting sugars from almond hulls to serve as fuel or a food ingredient.
- The sugar content in almond hulls is comparable to sugar beets.
- Research shows a process called torrefaction transforms almond shells into a charcoal-like product ideal for strengthening biodegradable plastics such as tires, flowerpots, garbage cans and more.
- ABC is working with USDA on China market access for pelletized almond hulls. Other global markets are also being explored.

**In the San Joaquin Valley, a pilot program is incentivizing adoption of Whole Orchard Recycling.**

1. 16-PREC3-Holtz. Almond Orchard Recycling.
2. Alissa Kendall, et al. Lifecycle-based Assessment of Energy Use and Greenhouse Gas Emissions in Almond Production, Part 1: Analytical Framework and Baseline Results. Journal of Industrial Ecology. 2015.

