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WELCOME TO THE ALMOND ALMANAC

Within these pages you will find a comprehensive overview of California almonds—the state's #1 crop by acreage, #1 ag export and #2 crop by value and the #1 specialty crop export in the U.S.

For almond farmers and processors, this is your annual accounting of how your investment in the Almond Board of California (ABC) is leveraged to build long-term demand for California almonds around the world, as well as protect that demand from erosion due to growing challenges, and an overview of ABCfunded research that underpins the continuous improvement efforts of the California almond community.

For anyone interested in California almonds, the *Almanac* provides the latest statistics¹ about California almond production, acreage and varieties, as well as global shipment and market information.

The Almanac is published annually by the Almond Board of California, the Federal Marketing Order supporting the 7,600 almond farmers and 101 processors in California.

1. The statistical analyses found in the report are prepared on a crop-year basis, spanning August 1 through July 31, and include both current and historical information. The statistical content is compiled using handler forms required by the industry's Federal Marketing Order. Additional data, including crop estimates and farm price, are supplied by the USDA National Agricultural Statistics Service, Pacific Region Field Office.

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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.

California

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20 21

A YEAR IN REVIEW

SETTING RECORDS: The 2020/21 almond crop set records at every turn from the number of pounds harvested to the staggering amount of product sent around the world. This past year the industry produced over 3 billion pounds for the first time in its history topping out at 3.107 billion pounds, an astounding 21.8% increase over the previous year and 37% total increase in the past two years.

DROUGHT IN THE WEST: Meanwhile, widespread drought across the Western U.S. forced farmers of many commodities to make tough decisions to leave land fallow, sell off livestock or push out their orchards years early. Citing the drought and reduced nut sizes, the NASS Subjective Estimate in May of 3.2 billion pounds was lowered to 2.8 billion in July's Objective Report.

LIVING IN A VIRTUAL WORLD: When COVID restrictions prohibited large in-person gatherings, The Almond Conference went virtual for the first time, creating an online exhibit hall and a combination of live and recorded educational sessions, including the annual State of the Industry address beamed "live" from the historic State Theatre in Modesto. More than 3,000 people from 45 countries tuned in.

THE SHOW MUST GO ON

OLYMPICS: ABC partnered with Kerri Walsh Jennings, the winningest player in beach volleyball, with promotions airing May through August 2021. *Learn more on page 22.*

NEW BEAUTY ADS IN INDIA: To educate consumers in India on health benefits, which are lesser known in the market, ABC launched a "beauty from the inside out" program serving up digital video ads on Facebook, Instagram and YouTube. *Learn more on page 26.*

INDUSTRY ROADSHOW: With The Almond Conference going virtual in 2020, ABC worked to bring a core element of the Conference—networking and delivering new resources for growers—to the industry this spring via a series of outdoor meet-ups. *Learn more on page 18.*

CALIFORNIA POLLINATOR COALITION: In April 2021, ABC joined with Pollinator Partnership and the California Department of Food and Agriculture to convene farming and conservation groups into a coalition dedicated to providing enhanced habitat for pollinators. *Learn more on page 11.*



California's almond farmers and ABC were awarded the North American Pollinator Protection Campaign's (NAPPC) **Business for Bees Sustainability Award**, recognizing standout organizations that go above and beyond to support pollinators. The award has only been given twice in NAPPC's 21-year history.

ABOUT OUR COMMUNITY

FARMING ALMONDS

The California almond growing community is driven by family farmers.

California is home to 7,600 almond farms, and 90% of those farms are family farms. Many of them are owned and operated by third- and fourth-generation farmers who live on their land and plan to pass it on to their children and grandchildren.

Nearly 70% of California almond farms are 100 acres or less.

Small or large, California's almond farmers take a long-term view of success based on respect for the land and local communities. Regardless of size, all almond farmers recognize that growth must be matched by an unprecedented commitment to environmental responsibility.

53% 1–49 acres **16%** 50–99 acres **17%** 100–249 acres **14%** 250+ acres

90% Family Farms

10% Other

Source: USDA 2017 Census of Agriculture.

With its Mediterranean climate, California is one of the five places on earth where almonds can grow. And thanks to top agricultural universities and research partners, water infrastructure and great soils, it is the most productive almond growing region in the world.



PROCESSING ALMONDS

101 almond handlers process California almonds. Many of these operations are also family-owned.



SOLID DOMESTIC GROWTH

At 28% share of shipments, the U.S. remained the #1 global destination for California almonds, posting a solid 4.37% year-over-year growth.

RECORD EXPORTS

- Exports topped 2 billion pounds for the first time in history, growing nearly 500 million pounds in export shipments from 2019/20.
- Export shipments went to more than 100 countries with the top ten export markets representing 70% of total export shipments.
- India led the way importing 362 million pounds, becoming the first country outside the U.S. to top 300 million pounds.
- Strong demand throughout Asia and Western Europe helped the industry keep the carryout just above 600 million pounds, much lower than predicted early in the season.

Learn more about almond production and shipments starting on page 30.

Source: Almond Board of California, Almond Board of Australia and International Nut and Dried Fruit Council.

PROGRAMS + BUDGET

2025 GOALS

The Almond Board of California's programs are funded by an assessment placed on every pound of almonds grown in California. Working with board-appointed committees, subcommittees and workgroups, the Board of Directors approves the budget allocation for each program area. These areas are defined in the Program Budget Allocation chart below, and program updates can be found throughout the *Almanac*.

PROGRAM BUDGET ALLOCATION

CROP YEAR 2020/21*



COMMITTEE STRUCTURE





The Almond Leadership Program is a one-year leadership training program that inspires and prepares almond community members to join a network of leaders meeting the challenges of a changing industry. Program requirements can be found at Almonds.com/AlmondLeadershipProgram



Established in 2018, the Almond Orchard 2025 Goals are a tangible example of the California almond community's commitment to continuous improvement. Built on a foundation of past successes, the goals help focus our research and outreach priorities in key areas—water, pest management, zero waste and dust—and provide a roadmap leading toward the industry's future. They also are a way to proactively address questions from regulatory officials, food manufacturers and the public about how almonds are grown.

THREE YEARS INTO THE JOURNEY, THERE ARE MANY TANGIBLE SIGNS OF PROGRESS BEING MADE UP AND DOWN CALIFORNIA'S CENTRAL VALLEY. HERE ARE A FEW EXAMPLES.



FURTHER REDUCING THE WATER USED TO GROW ALMONDS SIGN OF PROGRESS: PRECISION IRRIGATION

Farmers use technology to make informed estimates of how much water trees need. 93% of almond farmers monitor their soil moisture during the irrigation season using a wide variety of measurement tools, including high-tech soil moisture and plant stress sensors, to maximize the effectiveness of every drop by applying irrigation water at the right time and in the right amount!



ACHIEVING ZERO WASTE IN OUR ORCHARDS

SIGN OF PROGRESS: ASSESSING MARKET POTENTIAL FOR COPRODUCTS

Working toward the goal of optimal use, ABC is assessing the value proposition of new product streams for almond hulls and shells. This represents a shift from research to market development, taking promising ideas out of the lab and into the real world.



INCREASING ADOPTION OF ENVIRONMENTALLY FRIENDLY PEST MANAGEMENT TOOLS

SIGN OF PROGRESS: IDENTIFYING BENEFICIAL PESTS

Beneficial insects are good bugs that eat the bad bugs that damage almonds or almond trees. By managing the orchard ecosystem to provide a welcoming habitat for beneficials— sometimes through planting cover crops between the tree rows—farmers can reduce the need for pesticides.

IMPROVING LOCAL AIR QUALITY DURING ALMOND HARVEST

SIGN OF PROGRESS: LOW-DUST EQUIPMENT INCENTIVES

In recent years, equipment manufacturers have developed new low-dust harvesting equipment, but buying new equipment can be cost-prohibitive for farmers, especially small family operations. Partnering with allied organizations, the Almond Board helped secure federal and state incentives to help offset these costs.

For more information on the Almond Orchard 2025 Goals, visit Almonds.com/Goals

MEASURING PROGRESS



INNOVATION THROUGH RESEARCH

Rooted in research and founded in fact, the Almond Board of California supports the almond community by investing in independent scientific research.

Since 1973, ABC's research-focused committees have guided the investment of \$102 million, working with leading universities and experts to uncover the positive impacts of almonds on human health, improve food safety and yields, and optimize farming practices.

Together these programs help California almond farmers and processors provide almond lovers around the world with a safe, wholesome and sustainable product.

GROWER SELF-ASSESSMENTS DOUBLE IN PAST YEAR

The California Almond Sustainability Program (CASP) is a selfassessment tool that helps individual growers document practices across their operation. The past year has seen a record number of almond growers complete all nine self-assessment modules in the CASP. The number of modules completed more than doubled-from 13,169 to 29,279. This means over half of all modules completed since the program was launched in 2009 were completed in the past assessment year.



A major driver of the grower increase is handler participation in the CASP Supply Chain Program, which allows growers to share their information, confidentially and collectively, with their handler. This allows their handler to share that aggregate information with their customers. The number of orchards assessed under the Supply Chain Program more than doubled in the past year, from 608 to 1,431, while acreage assessed under the program grew from 71,508 to 150,358 acres.

CASP RECOGNIZED GLOBALLY

The CASP self-assessment tool is benchmarked against the global Sustainable Agriculture Initiative (SAI) Farm Sustainability Assessment (FSA), a recognized global sustainability platform. Benchmarking to SAI saves time, reduces redundancy and provides credibility in the global marketplace. Of the 2020 crop year orchards that benchmarked to one of SAI's medal levels. 7% met the requirements for Bronze, 82% for Silver and 11% for Gold.



RCHARDS

DOUBLED TO

1.431

Acreage

acres.

assessed grew

2020 ALMOND

BENCHMARKED

MEDAL LEVELS

BRONZE

SILVER 11% GOLD

7%

82%

TO ONE OF SAI'S

ORCHARDS

from **71,508** to 150,358

Strategic Ag

Innovation Committee **FOUNDED: 1973** INVESTMENT TO DATE: \$57.4M

PROJECTS FUNDED: 469 For more about farming

innovation and sustainability, see pages 10-13.

Nutrition Research

S. A.

Committee **FOUNDED: 1995 INVESTMENT TO DATE:** \$33.3M **PROJECTS FUNDED: 125** For more about almonds'

impact on human health, see pages 14-15.

Almond Quality, Food Safety + Services Committee FOUNDED: 2001 **INVESTMENT TO DATE:** \$11M PROJECTS FUNDED: 124 For more on almond quality and safety, see page 16.



PRODUCTION AND ENVIRONMENTAL RESEARCH

THE ORCHARD OF THE FUTURE

California's almond farmers are committed to responsible stewardship of the land for the benefit of our families, communities and everyone who loves to eat almonds. We have supported that commitment with nearly 50 years of investment in research to improve farming practices, reducing environmental impacts and increasing profitability.

A STRATEGIC APPROACH

ABC-funded production and environmental research is directed by the industry, for the industry. Guiding that investment are three distinct workgroups—Production Stewardship, Pollination and Biomass—each composed of growers, processors and allied industry stakeholders. Based on research priorities set by the Strategic Ag Innovation Committee (SAIC), the workgroups review research proposals, track progress and set long-term research strategies.

In partnership with ABC's Research and Innovation staff, these groups oversee research across seven core topic areas—each integral to high-yield almond production and on-farm sustainability.



a adap

Building and vetting cutting-edge tools that improve almond irrigation for most efficient use of water across all of California's orchards.

PRECISION IRRIGATION



SOIL HEALTH + NUTRIENT MANAGEMENT Improving soil quality through

cover crops and organic inputs and increasing fertilizer precision for improved orchard health.



VARIETIES + ROOTSTOCKS Developing and evaluating almond rootstocks and varieties via traditiona



practices for optimal yields. BIOMASS + COPRODUCTS



round and informing bloom-specific

INTEGRATED PEST MANAGEMENT

BEE HEALTH + POLLINATORS Supporting pollinator health year-



HARVEST

Re-envisioning almond harvest to reduce dust and improve efficiency.



Bees and almonds: a partnership designed by nature. When almond trees bloom, bees get their first nutritious food source¹ of the year as they pollinate our orchards, consistently leaving stronger than when they arrive². While bees are only with us for two months of the year, we work to support their health all year long because what's healthy for bees supports healthy, high-yielding almond farms.







FARMER BEST PRACTICES

Developed in collaboration with partners beyond our industry and widely adopted by almond farmers, ABC's *Honey Bee Best Management Practices* serve as a guide for almonds and other crops for protecting bee health on-farm. Many almond farmers are taking their beefriendly practices a step further by planting blooming cover crops and hedgerows, guided by ABC's *Cover Crop Best Management Practices*, adding supplemental nutrition and habitat on-farm for all pollinators.

RESEARCH FOR BETTER BEE HEALTH

ABC has led bee health research efforts since 1995, funding 130 projects so farmers can confidently provide safe habitats for bees before they move on to pollinate other crops. Looking beyond our orchards, we're also working with experts to collaboratively solve the complex set of challenges bees face: varroa mites, other pests and diseases, lack of floral resources, limited genetic diversity and pesticide exposure.

SUPPORTING BEEKEEPERS

Almond farmers have been longtime allies of beekeepers, partnering each year for pollination services and funding research via ABC. Out of that research is a new nonchemical approach for controlling varroa mites that ABC is helping to spread the word about. By storing their hives indoors at precise temperatures, beekeepers can break the pest's reproductive cycle and spread, stopping infestations more effectively than traditional miticide treatments and saving beekeepers time and money.

Introducing the California Pollinator Coalition

POLLINATOR PARTNERSHIP

This spring ABC led the development and launch of the California Pollinator Coalition with the California Department of Food and Agriculture and international nonprofit Pollinator Partnership. Joined by 20+ organizations representing most of California's farmland, the coalition is expanding pollinator habitat and finding solutions to bee health challenges.

 Ramesh Sagili. Department of Horticulture, Oregon State University. 2. Ellen Topitzhofer, et al. Assessment of Pollen Diversity Available to Honey Bees in Major Cropping Systems During Pollination in the Western United States. Journal of Economic Entomology. 2019.



WATER WISE



BY 2025, THE ALMOND COMMUNITY COMMITS TO **REDUCE THE AMOUNT OF** WATER USED TO GROW A POUND OF ALMONDS BY AN ADDITIONAL 20%.

With its Mediterranean climate, California is one of the five places on earth where almonds can grow–a key reason why farmers are committed to using water in the most responsible way possible. It's also why 82% of almond orchards use efficient microirrigation¹, a driving force behind the 33% reduction in the amount of water needed to grow each pound of almond between the 1990s and 2010s² But we know there is still more to be done, and that's why we're doing it-rooted in research that drives further water conservation in almonds and across all of agriculture with 239 water research projects funded to date.



BY 2025, THE ALMOND COMMUNITY COMMITS TO ACHIEVE ZERO WASTE **IN OUR ORCHARDS** BY PUTTING EVERYTHING WE GROW TO OPTIMAL USE.

Almonds grow in a shell, protected by a hull, on a tree. Traditionally, these have been used as livestock bedding, dairy feed and electricity generation, but the almond community is spurring innovation for higher value and even more sustainable uses. We've funded 92 research projects to date in areas like recycled plastics, fuel and regenerative agriculture, and are assessing the value proposition of possible new product streams for almond hulls and shells through a new market development approach.



PRECISION IRRIGATION RESEARCH: HOW MUCH

Today, farmers use technology to make informed estimates of how much water their trees need. To move from estimates to actuals, farmer-funded research is evaluating existing and developing new remote sensing technology that can quantify how much water the trees are using in real time. Validating these will mean quicker adoption on-farm and ensures the best technology is used by the private sector.

PRECISION IRRIGATION RESEARCH: WHEN

Like in the "how much" focus area, researchers are

testing different tree sensors to help farmers make

sensors are like Fitbits for trees and can tell farmers

precisely when they need to irrigate to avoid hurting

more precise decisions on when to irrigate. These

crop yields and tree health.







WHOLE ORCHARD RECYCLING

At the end of their productive lives, whole almond trees are ground up and incorporated back into the soil, a climate-smart approach that improves soil health, water efficiency and yields in subsequent orchards. In 2020, half of the farms assessed through the California Almond Sustainability Program that replanted their orchards used this practice, capturing and storing 2.4 tons of carbon per acre¹, each acre recycled equivalent to living car-free for a year.²

SUGAR EXTRACTION

CIRCULAR ECONOMY

Almond hulls contain significant amounts of extractable sugar and antioxidants that can be used in many ways. Nutraceutical bars and dietary supplements are one promising approach, leveraging existing consumer love of almonds to build buzz around new products. Another promising option is as a skincare or cosmetic ingredient.



PRECISION IRRIGATION RESEARCH: WHERE

By combining "how much" technology with different types of spatial imagery, researchers are creating and validating tools that assess variability within individual orchards, accounting for things like crop yields, soil, tree varieties and plant health. With this, farmers and irrigation companies will be able to design irrigation systems that can meet hyper-local needs and conserve water.



TORREFACTION

Through torrefaction, burning in the absence of oxygen, almond shells can be transformed into many different things. One option is adding them to post-consumer recycled plastics for strength, heat stability and color, increasing our ability to recycle existing plastic. Another is as a replacement for carbon black, an important ingredient in tires that is traditionally sourced from fossil fuel byproducts.

1. California Almond Sustainability Program. Nov. 2021. 2. University of California, 2010. Food and Agriculture Organization of the United Nations, 2012. Almond Board of California, 1990-94, 2000-14.

1. Emad Jahanzad, et al. Orchard recycling improves climate change adaptation and mitigation potential of almond production systems. PLoS ONE. March 2020. 2. Seth Wynes, et al. The climate mitigation gap: education and government recommendations miss the most effective individual actions. Environmental Research Letters. 2017.

NUTRITION RESEARCH

SPOTLIGHT ON DIABETES

			۲
	WORLD	USA	INDIA
TOTAL POPULATION ¹	7,870,000,000	333,400,000	1,369,790,804
% DIABETICS	~6% and increasing ²	>10% and increasing ³	>10% and increasing ⁴

The prevalence of diabetes is increasing worldwide at an alarming rate. India, the top export market for California almonds, is considered "the diabetes capital of the world." But did you know that the rates of diabetes in India and the U.S. are similar (>10%) and increasing? In fact, the rate of prediabetes in the U.S. is approximately 35%, and people are younger and younger at the age of diagnosis.³

ABC's Nutrition Research Committee (NRC) has always had an interest in studying almonds' health benefits related to diabetes, but recognizing the alarming increase in incidence, the NRC doubled down on its efforts to fund glucose regulation studies in younger populations in India and the U.S.





DIABETES STUDIES FUNDED

Results from an NRC-funded study conducted in young adults were first published in 2018. The study targeted college freshmen, vulnerable to increased risk of cardiometabolic disorders owing to the transition to nutritional independence⁵

This 8-week study of 73 college students at the University of California, Merced demonstrated that incorporating almonds as a daily snack (56.7g/~2oz) in the diets of predominantly breakfast-skipping students led to lower insulin resistance and smaller decline in good cholesterol levels as compared to those who ate crackers instead.

Given the scarcity of information on diabetes stats across different age groups in the Indian population, the NRC realized that a cohort of studies needed to be funded in that market. In 2017, the committee funded three separate studies, one focusing primarily on adolescents and young adults.

Results from that study, published in 2021, not only discovered prediabetes in subjects as young as 16 years old, but also demonstrated that daily almond consumption (56g/2oz) for 12 weeks reduced HbA1c (a clinical marker of blood sugar), bad cholesterol levels and total cholesterol levels⁶

NUTRITION RESEARCH IN THE MEDIA

The Global Market Development teams take every opportunity to communicate new almond research findings to consumers, health professionals and food professionals. With the heightened public health concern around diabetes in India, ABC successfully promoted the findings of Dr. Madan's most recent study in adolescents and young adults with prediabetes in Mumbai. Study outreach was launched via a virtual press conference in early July, and coverage quickly multiplied to make it the first ABC-funded study to exceed 100 million impressions in India. Study outreach took place in other markets around World Diabetes Month (November) and World Diabetes Day (November 14th).



1. worldometers.info/world-population/us-population/ 2. diabetesatlas.org/data/en/world/ 3. singlecare.com/blog/news/diabetes-statistics/ 4. healthline.com/health/diabetes/diabetes-in-india 5. Dhillon et al. Glucoregulatory and cardiometabolic profiles of almond vs. cracker snacking for 8 weeks in young adults: a randomized controlled trial. 2018; Nutrients, 10, 960. 6. Madan et al. Effect of almond consumption on metabolic risk factors—glucose metabolism, hyperinsulinemia, selected markers of inflammation: a randomized controlled trial in adolescents and young adults. 2021; Front. Nutr., 8:668622.

NUTRITION RESEARCH UNDERWAY

ALMOND QUALITY AND FOOD SAFETY



DELIVERING ON FOOD SAFETY + QUALITY

California almond growers and producers are committed to providing a high-quality, nutritious and safe food to customers around the world. Rooted in research, our food safety and quality programs continue to evolve and serve as the cornerstone for ensuring continued confidence in California almonds.



EVER-EVOLVING ALMOND FOOD SAFETY

Good Agricultural Practices (GAPs) are used by almond growers to ensure mitigation of potential hazards. As new practices are explored, continued evaluation of impact to food safety remains an essential component to ensuring the integrity of California almonds. New practices under development, such as off-ground harvesting, have been researched with efforts to identify and address implications to the food safety system. Similarly, California almond food safety programs and GAPs continue to be evaluated against current practices to ensure they are up to date.

LEVERAGING DATA

The Almond Board of California gathers data on the crop each year to monitor and address food safety issues as well as support sensible regulatory limits and consistent analytical methodologies across markets. Samples taken across the growing region from multiple varieties provide analytical data that helps almonds meet global food safety standards. It also provides meaningful data that ABC uses to ensure consistent data-backed standards are applied by almond importers around the world.

GLOBAL TECHNICAL + REGULATORY AFFAIRS

A RAPIDLY CHANGING GLOBAL ENVIRONMENT

There have been dramatic changes to the agricultural supply chain over the past year, forcing producers and customers to make significant adjustments, something the Almond Board of California is closely monitoring. Integrating Almond Board-funded research, relationships, proactive engagement and technical expertise, ABC is working on the industry's behalf to ensure California almonds remain a leader in a rapidly changing global environment.

FOCUS ON KEY ISSUES TRADE ENVIRONMENT & NEW ADMINISTRATION PRIORITIES

70% of California almonds are exported, so a clear U.S. trade strategy is essential. ABC is monitoring where industry initiatives align with broader policies that will impact almond shipments, including:

- A renewed trade strategy to expand and enhance agricultural exports.
- The review of existing trade agreements, focusing more on worker and environmentalfriendly provisions.
- U.S. engagement in global initiatives to fight climate change with a big focus on climate-smart agriculture and ag innovation.
- Stepped-up enforcement of existing trade agreements.

ABC is also monitoring the negotiation of new agreements to ensure U.S. negotiators are fully aware of market access issues confronting California almond exports, including:

- A trade agreement with the United Kingdom, which open further opportunities for almonds.
- Assessment of U.S.-China Phase One Agreement and continued retaliatory tariffs.
- WTO rules covering agricultural subsidies, sanitary/phytosanitary standards and technical barriers.

ALMOND EXPORT LOGISTICS DELAYS

Empty container exports, canceled booking/sailings and excessive carrier fees are rampant, and most experts expect this situation to continue well into 2022. Almond Board surveys provide a picture of what the industry has been facing, including:

- 4- to 6-week delays in getting product to buyers overseas.
- Warehouses filled up with rolled bookings that compete for space.
- Double- and triple-digit increases in shipping costs, fees and rates.

U.S. ALMOND EXPORTS BY VALUE JAN-DEC 2020 EU: Almonds #2 ag export (\$1.6B) behind sovbeans (\$1.9B). INDIA: Almonds #1 ag export (\$824M) \$1.6 B accounting for half of all U.S. ag exports (47%). CHINA + HK: Almonds #2 tree nut export (\$345M) and #13 ag export overall. JAPAN: Almonds #10 export overall (\$238M). \$824 M IIΔF Almonds #1 ag export (\$194M) accounting for 21% of all U.S. ag exports \$345 M Almonds #10 ag export S KOREA. \$238 M \$194 M \$182 M overall (\$182M). \$100 M MEXICO: Tree nuts are small sector category export (\$100M) EU27+UK INDIA CHINA + JAPAN UAE SOUTH MEXICO HONG KONG KOREA

LEARN MORE ABOUT THE ESSENTIALS

The Almonds Essentials podcast, found on the Food Professional Tools page on Almonds.com, highlights relevant research from ABC, exploring specific topic areas in a short format. Two episodes in particular, "Going Further with Food Safety" and "The Rhyme and Reason Behind Roasting Science", feature Guangwei Huang, Associate Director of Food Research & Technology, and Tim Birmingham, Director of Quality Assurance and Industry Services, discussing how the Almond Board of California helps almond growers deliver on food safety and quality.

GLOBAL COMMUNICATIONS

HOW WE GROW

Global Communications serves two primary purposes. The first is to keep farmers and processors informed of the latest research, innovation, consumer attitudes and behaviors, and global issues impacting how we grow almonds. The second is to share the story of how we grow almonds–responsibly–with consumers around the world.

TRANSFERRING KNOWLEDGE TO THE ALMOND COMMUNITY

A core element of the Global Communications program is transferring knowledge from Almond Board of California-supported research to farmers and processors. The Almond Board's Field Outreach team, publications, webinars and The Almond Conference are all focused on ensuring farmers and processors have the information they need to make key decisions to improve profitability and make continuous improvements to their operations. Here are a few highlights from 2021:

INDUSTRY ROADSHOW

1

The ABC Field Outreach team loaded up the Almond Van and went on an Industry Roadshow stopping at 18 locations from Chico to Bakersfield, meeting with growers one-on-one. The team hand-delivered more than 1,000 grower packets with the annual *Almanac* and new resources including almond-specific Pest ID cards and the irrigation improvement continuum.



TRAINING TUESDAYS

The Industry Outreach team paired up with the ABC Research and Innovation Department to deliver online training sessions for growers on the first and third Tuesdays of the month. Training Tuesdays were an immediate success, attracting more than 100 growers, pest control advisors and other industry members, per training, to hear the latest research on topics directly related to what was happening in the orchard throughout the growing season.

NEW INDUSTRY RESOURCES

In 2021, working with the ABC Research and Innovation department, The Industry Outreach team developed and distributed new materials to aid growers in making decisions in the orchard. New resources include best management practices for cover crops and nitrogen management, as well as a guide to whole orchard recycling and how-to videos covering everything from dust reduction to integrated pest management.







2

SHARING OUR SUSTAINABILITY STORY

Consumers all over the world love almonds for their nutrition and versatility. In fact, this "health halo" is based upon 20+ years of Almond Board-funded nutrition research exploring the various health benefits of almonds. However, consumers are increasingly interested in learning more about how their food is grown—and who grows it. The Global Communications team is dedicated to educating the public about almonds' orchard-to-table story and sharing the responsible practices used to grow them. *Learn more on page 20.*

Vex

ABC collaborated with Vox to produce an article and several short videos highlighting the almond community's responsible growing practices. Check it out at bit.ly/almondvox

And it's one of only five places in the world where almonds can grow.



to grow each almond than two decades ago.

Did You Know?



To keep the almond industry up to date on ABC-funded programs such as global marketing and technical and regulatory affairs, ABC publishes online and hard-copy newsletters. The weekly *In the Orchard* digital and bimonthly *How We Grow* print newsletters are a great way to stay informed on what the Almond Board is doing to promote almonds around the world. Reach out to inquiries@almondboard.com to ensure you are on the list.

BUILDING TRUST

Operating in the U.S., UK, France, Germany and Italy.



Across the globe, people love almonds for their nutrition and versatility. Building upon that "health halo," ABC's Sustainability Communications program works to build trust in California almonds by highlighting the farmers who grow them and the responsible practices used in their production.

This program is focused on public relations, advertising and consumer research within the U.S. and Europe and supports ABC's global marketing regions when issues arise.





In the past year, our E/V charging station advertisements did more than just share how almonds are grown. They also contributed to:



156,507 POUNDS OF CARBON OFFSET

1,455 TREES PLANTED

5,783 GALLONS OF GAS SAVED

@GrowingAlmonds is your social media home for all things almonds sustainability. Check it out on Instagram and Facebook.



GROWING GLOBAL DEMAND

The Almond Board of California is charged with building long-term demand for California almonds. By conducting a rigorous market analysis, the Global Market Development team identifies and prioritizes the best markets around the world that will provide the greatest return on investment to the almond community. The Almond Board currently runs marketing programs in 11 key markets. Learn more about ABC's marketing activities on pages 22–29.



GLOBAL SPOTLIGHT:

Almonds continue to grow as a key ingredient in consumer products with over 12,000 new products introduced in 2020. In fact, almonds:

- Accounted for 41% of nut introductions.
- Were the #1 nut for plant-based claims.
- Were the most popular nut for new product introductions in Europe, Asia-Pacific and North America, and the U.S. leads new almond introductions globally.
- #1 on-pack health claim for new products was "Gluten-Free," which accounted for 26% of new almond introductions.



UNITED STATES MARKET SUMMARY

Active Since: 1999 FY 2020/21 Shipments: 808 Million Pounds The #1 global destination for California almonds

REACHING MILLENNIALS TO FURTHER EXPAND ALMOND CONSUMPTION

In FY 20/21, ABC's U.S. marketing shifted focus to a new target audience, "Mindful Millennials," who place higher value on nutrition and overall wellness. However, while these Millennials have a general understanding of almonds' health benefits, they do not know all the good things almonds have to offer.

2021 OLYMPIC GAMES: Leveraging a cultural moment in time and Kerri Walsh Jennings-three-time gold medalist in beach volleyball-the U.S. team launched advertising across broadcast television and social media during the Olympics. Kerri's Kick-Casserole commercial featured the mother of three at a school potluck snacking on almonds when a misstep occurs, and she dives in-literally-to help. This commercial aired May through August on NBC, the Discovery Network, Hulu, Facebook, Instagram and more. It also aired throughout the 2021 Olympic Games on NBC, NBC social networks, USA and CNBC, as well as during The Today Show commercial breaks. Along with public relations, this work garnered over 500 million impressions. NBC was a terrific partner despite the Olympics' postponement by keeping ABC media costs flat and providing free incremental impressions during the Olympics. Kerri Walsh Jennings was a great ambassador for the Almond Board, contributing a significant amount of free social media posts and mentions about almonds as well as speaking at the 2019 Almond Conference.

ALMONDS FUEL GOOD, FEEL GOOD AND DO GOOD: Through consumer research, ABC found that Millennials have an affinity for purpose-driven products. With a clear focus on targeting Millennials, ABC launched *Do Good* with Massy Arias and Charity Miles. Massy, like many fitness influencers, has a cult following. Combining that with Charity Miles—a top fitness app where users log their movement and for every mile moved they earn money for a charity of their choosing—ABC was able to reach Millennials in an authentic way. The partnership resulted in 120 million impressions. Over 500,000 people logged onto Charity Miles to partner with ABC to give back to the charity of their choice. In total, they exercised 3.5 million miles, which equates to approximately \$35,000 to charities.





In early 2022, ABC will launch a new advertising campaign focused on communicating to Mindful Millennials, the new U.S. target. The campaign will emphasize how snacking on almonds can help Mindful Millennials achieve their overall wellness goals.

SHIPMENTS TO MEXICO UP 25% VS. FY 2019/20.

MEXICO

MARKET SUMMARY

Active Since: 2018 FY 2020/21 Shipments: 30 Million Pounds

GROWING DEMAND FOR HEALTHY SNACKS

ABC's program in Mexico features a campaign that reinforces the idea that one good choice-almondscan lead to big changes.

#PONTEALMENDRA: This past year, ABC partnered with a famous actress and fitness guru, Bárbara de Regil, to bring positive energy to their *Ponte Almendra* advertising campaign in Mexico. The campaign uses eye-catching content to draw attention to almonds' nutritional benefits. Advertisements aired on TV, were plastered on the side of buses driving throughout Mexico City and were also featured digitally on social media (Facebook and Instagram). de Regil also published a special TikTok video on Almond Day, February 16, which garnered an impressive two million organic (un-sponsored) views in one day.







SOUTH AMERICA

ALMOND BOARD TO BEGIN HEALTH + TRADE OUTREACH

The South American market—with its overall sizeable population (dominated by Brazil), increasing interest in healthy living, low awareness of almonds' health benefits and rising middle class could be a region primed to increase almond consumption. In 2022, ABC is planning to learn more about consumers in this region by conducting in-depth consumer research, along with some initial outreach to start increasing awareness of almonds' health benefits.

COMING

SOON:



UK

EUROPE UK, GERMANY, FRANCE AND ITALY MARKET SUMMARY

Active Since: 2008 FY 2020/21 Shipments: 730 Million Pounds*

BUILDING HEALTH + SUSTAINABILITY HALOS FOR ALMONDS

The #1 reason Europeans snack on almonds is health. Extending that health halo is ABC's #1 priority, but consumers' expectations of their food and how it is produced continue to grow. To keep almonds relevant, our work focuses on health and sustainability, growing what Europeans know about California almond production. You'll see a sample of our demand-building initiatives on pages 24 and 25 and can learn how ABC shares almonds' sustainability story on page 20.

DO YOU ALMOND?:

ABC's Do You Almond? campaign launched in 2020 with a huge splashadvertisements were even featured at the London Waterloo station. To build on the momentum, in FY 20/21, ABC partnered with 12 influencers to show how they "nail it like a natural," powered by their favorite snack-almonds. These influencers took to Instagram, bringing comedy, fitness and nutritional education via video content. Whether it be a daring kite surfing trick, a round of one-handed pull-ups, a laborintensive landscape project or the ultimate task: parenting, influencers showed how almonds help them to level-up their daily activities. The campaign reached 4.1 million video impressions and 10.5 million other impressions.









ALMONDS: THE ULTIMATE WAY TO RECHARGE YOUR DAY THE NATURAL WAY: In recent years, almonds have become entrenched as a healthy snack in a market where snacking was not considered "the norm." Taking advantage of this behaviour change, in FY 20/21 the team conducted consumer research which resulted in a new target audience and advertising campaign being developed in France. The new advertising, scheduled to launch in 2022, will focus on "taking a break with almonds to help recharge your day," positioning almonds as a source of long-lasting natural energy.

While campaign development was happening, ABC continued with a robust public relations program in this market, with a specific focus on health benefits.



A SMART SNACK BURSTING WITH BEAUTY:

In Germany, advertising took a 360° surround sound approach to drive top-of-mind awareness and encourage daily usage of almonds. The current campaign, which launched in 2017, was adjusted to focus on beauty and energy. In addition, the team launched a new influencer-led program focused on beauty by partnering with four influencers including Jana Ina Zarrella, a television host, model and singer. This approach in Germany allowed almonds to speak to audiences in an authentic way from a trusted voice that demonstrated almonds are a natural beauty booster.



RECHARGE YOUR ENERGY: In Italy, ABC's first campaign launched in 2018 and almonds have taken a strong leadership position. In fact, almonds are the #1 nut for top-of-mind awareness, snacking associations and go-to snack nut. In addition, Italy currently has the highest per capita consumption of all of ABC's global markets.

In FY 20/21, ABC maintained the course with its Energy Recharge campaign, positioning almonds as a source of natural energy, as well as reinforcing portion size.



FY 2019/20.

INDIA MARKET SUMMARY Active Since: 2010 FY 2020/21 Shipments: 362 Million Pounds

EXPANDING REACH TO YOUNGER AUDIENCES WHILE STRENGTHENING TRADITION

Almond Board programs in India have strategically reinforced traditional morning consumption as well as consumption as a snack among all family members and gifting during Diwali to drive further growth in this market. ABC also educates consumers on health benefits, which are lesser known in India. This duel approach has proven very successful in keeping almonds top of mind and driving volume.

ENGAGING YOUNGER CONSUMERS BEYOND TRADITION: Like in many

parts of the world, a person's appearance is important in India. In FY 20/21, ABC created several 10-second videos featuring the skin, hair and weight management benefits of almonds. These video ads ran on Facebook and YouTube.

TOMORROW BEGINS TODAY: ABC's family consumption

campaign reinforces tradition aiming to make almonds a daily habit to drive further growth. There are various ad executions targeting different family members. One advertisement reminds mothers to give almonds to their children while two other ads feature working professionals, reminding them to take care of themselves and their families.

DIWALI: The gift of health has never been so important. During the short gifting period, ABC's Diwali campaign focuses on the "gift of good health that shows you care" by giving almonds.







CHINA IS THE SRD LARGEST EXPORT MARKET FOR CALIFORNIA ALMONDS AND SAW A REBOUND IN SHIPMENTS WITH A 65% INCREASE VS. THE PRIOR YEAR.

CHINA

MARKET SUMMARY

Active Since: 1999 FY 2020/21 Shipments: 162 Million Pounds

BEAUTY FROM THE INSIDE OUT

Shipments to China tend to be unpredictable for a variety of reasons, but despite tariffs and COVID-19-related challenges, shipments to this market experienced a rebound in FY 20/21, seeing a 65% increase compared to the prior year. With such positive signals and a strong belief in the Chinese market potential, ABC continues to build market awareness of almonds as an "essential step in your everyday skin beauty routine."

MAGIC HANDS: ABC's *Magic Hands* creative launched in 2019 and is the overarching campaign in China. It is a playful campaign that depicts "Magic Hands"—a.k.a almonds—working to improve skin radiance while also showing the nut itself as being beautiful in all its forms (in-shell, almond blossoms, etc.).



THE SKIN EXPERTS 2.0: Riding on the success of last year's The Skin Experts program, ABC hosted another livestreaming video session called The Skin Experts 2.0 featuring several key influencers: two dermatologists, a nutritionist and cosmetic formulator. This program leveraged the credibility, influence and knowledge of health and beauty influencers to reach Chinese consumers, strengthening their awareness of the health and beauty benefits of California almonds. The program once again reached over 170 million Chinese consumers, 22 million of them tuned in live, giving them a reason to believe in the beauty power of almonds.



E-COMMERCE: Chinese e-commerce is a highly developed market and has adapted to the changing needs of consumers. Leveraging a growing e-commerce trend, shopping festivals, ABC recently partnered with Tmall to generate awareness of almonds and to educate consumers on the skin health benefits of almonds.



SOUTH KOREA

Program Relaunch: 2011 FY 2020/21 Shipments: 77 Million Pounds

OWNING VITAMIN E

Koreans aim to gain their vitamin intake from their food, and in this market it is very common to ask what vitamins and minerals are in food to ensure a balanced nutrient intake. Leveraging this insight, ABC educates consumers on the vitamin E content in almonds.

ALMONDS, THE PERFECT BEAUTY SNACK: As an authentic way to reach consumers, ABC partnered with Mun Ka-Young to talk about why she eats almonds. A digital rooftop billboard was featured in one of the most crowded areas in Seoul. ABC also collaborated with *Cosmopolitan* magazine to run a six-page paid editorial article highlighting Mun and the various ways in which almonds can enhance health and beauty. The content was featured on TikTok, YouTube, Instagram, *Elle* magazine and more.



CREDENTIALS RESONATE WITH THE FOOD INDUSTRY. its pudeve

ALMOND VERSATILITY

Almonds continue to be a top ingredient in snack product development globally. In the U.S. alone, nearly 50 percent of the crop is used as an ingredient in large-volume categories including bars, cereals, snack mixes and beverages.¹ As shipments have increased, the ingredient usage has kept its pace, making it increasingly important to inspire product developers through advertising and education around nutrition, versatility, consumer demand and sustainability. In FY 20/21 this audience was highly engaged online, thus programs focused on digital placements and virtual events.

TRADE MARKETING + STEWARDSHIP

VIRTUAL ORCHARD TOUR: In May, ABC hosted the first-ever Virtual Orchard Tour, which brought over 1,000 food professionals from North America and Europe into California's orchards. The two-day program consisted of educational presentations with live Q&As focusing on general sustainability information and nutrition research. The tour was also brought to life through in-orchard sessions featuring the stories of four different almond growers located throughout the Central Valley.



VIRTUAL TRADE MEDIA EVENT: The Food Professional program hosted its first-ever virtual trade media event in June and July. The event invited eight up-and-coming, innovative product developers from the U.S. and Europe to discuss their inspiration and motivation behind using almonds as a key ingredient and resulted in over 300,000 impressions in influential food and beverage industry publications. *Food and Beverage Insider* noted that "while almonds have plenty to offer as a nutritious snack on their own, their versatility as an ingredient base for other finished products is what ultimately stood out during the Almond Board's Virtual Food Trends Showcase."

2020/21 ADVERTISING HIGHLIGHTS: The trade online advertising program had to focus efforts toward efficient digital placements as more content was delivered online than ever before. New sponsorship and advertising opportunities allowed the program to differentiate almonds versus other nuts and ingredients in this competitive landscape. The campaign went on to exceed media impressions goals and garner 6.5 million impressions. Food & food Beverage Insider

> Prepared Foods



INCREASING CONSUMER AWARENESS OF THE BEAUTY BENEFITS OF ALMONDS

Since relaunching in the Japan market in 2018, ABC has been focused on educating consumers on the beauty benefits of almonds.

EDUCATING CONSUMERS: In an effort to find new ways to educate consumers on the beauty benefits of almonds in Japan, ABC partnered with Moeko Fukuda. Fukuda is known in Japan as the first Bachelorette in the TV show *The Bachelorette* and is also a model and sports traveler.



CONSIDERED THE TOP NUT FOR SNACKING FOR THE FIRST TIME EVER.

ALMONDS ARE

JAPAN MARKET SUMMARY

Program Relaunch: 2018 FY 2020/21 Shipments: 92 Million Pounds

FORECASTS VS. ACTUAL PRODUCTION

CALIFORNIA ALMOND FORECASTS VS. ACTUAL PRODUCTION

CROP YEARS 2012/13-2021/22 | MILLION POUNDS

21 22 3,200 lbs 3,107 lbs	
3 107 lbs	
3 107 lbc	
20 3,107 lbs	
20 21 3,000 lbs 3,000 lbs	
3,000 lbs	
2,551 lbs	
19 20 2 500 lbs 2 500 lbs	
2,500 lbs	
18 2,270 lbs	
18 2,450 lbs 2,450 lbs 2,300 lbs	
2,300 lbs	
2,260 lbs	
17 2,250 lbs 2 200 lbs	
18 2,200 lbs	
16 2,136 lbs	
16 17 2,050 lbs 2,050 lbs	
2,000 lbs	
1,894 lbs	
15 16 1,800 lbs 1,800 lbs	
1,850 lbs	
14 1,868 lbs	
14 15 1,808 lbs 2,100 lbs 1,950 lbs	
2,010 lbs	
13 14 1,850 lbs 2,000 lbs	
2,000 lbs	
1,884 lbs	TION
12 13 2,100 lbs 3,000 lbs 3,000 lbs	CAST
2,000 lbs SUBJECTIVE FORE	CAST

CALIFORNIA ALMOND CROP ESTIMATES VS. ACTUAL RECEIPTS CROP YEARS 2002/03-2021/22 | MILLION POUNDS

CROP YEAR	OBJECTIVE FORECAST	HANDLER RECEIPTS	LOSS AND EXEMPT	REDETERMINED MARKETABLE WEIGHT	LBS. REJECTS IN RECEIPTS
2002/03	980.0	1,083.7	20.2	1,063.5	8.2
2003/04	1,000.0	1,032.9	21.8	1,011.1	19.8
2004/05	1,080.0	998.0	25.2	972.8	14.5
2005/06	880.0	911.7	23.0	888.7	16.0
2006/07	1,050.0	1,116.7	28.9	1,087.8	24.0
2007/08	1,330.0	1,383.0	24.7	1,358.3	17.2
2008/09	1,500.0	1,614.6	42.7	1,571.9	13.9
2009/10	1,350.0	1,405.9	26.9	1,379.0	19.6
2010/11	1,650.0	1,628.2	27.9	1,600.3	18.1
2011/12	1,950.0	2,020.4	40.5	1,979.9	16.1
2012/13	2,100.0	1,884.0	35.6	1,848.4	23.1
2013/14	1,850.0	2,009.7	39.0	1,970.7	21.0
2014/15	2,100.0	1,867.9	29.3	1,838.6	23.4
2015/16	1,800.0	1,894.4	47.8	1,846.6	25.3
2016/17	2,050.0	2,135.7	48.3	2,087.4	26.0
2017/18	2,250.0	2,260.5	48.6	2,211.9	54.8
2018/19	2,450.0	2,269.6	46.2	2,223.3	39.3
2019/20	2,200.0	2,551.2	47.0	2,504.2	42.1
2020/21	3,000.0	3,107.0	50.8	3,056.1	44.0
2021/22+	2,800.0	*	56.0	2,744.0	*

Source: Almond Board of California. Objective forecast provided by USDA-NASS Pacific Regional Office. *Not available at time of publication. *Estimated.

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CROP

CALIFORNIA ALMOND ACREAGE



Source: USDA Agricultural Statistics Service, Pacific Region (NASS/PR) 2020 Acreage Report. *Estimate; non-bearing acreage for 2021 available in April 2022.



Source: USDA, NASS/PRO 2021 California Almond Objective Forecast.

CALIFORNIA ALMOND CROP-SIZE HISTORY + INEDIBLE PERCENTAGE CROP YEARS 2011/12-2020/21



Source: Almond Board of California.



CALIFORNIA ALMOND ACREAGE + FARM VALUE CROP YEARS 2012/13-2021/22

		ACREAGE	IN ACRES			YI	ELD	VALUE IN DOLLARS			
CROP YEAR	BEARING	NON-BEARING	TOTAL	FIRST YEAR PLANTINGS	AVERAGE TREES PER ACRE	BEARING ACRE YIELD (LBS.)	PRODUCTION* (MILLION LBS.)	FARM PRICE	FARM VALUE (\$1,000)	VALUE PER BEARING ACRE	
2012/13	820,000	110,000	930,000	29,177	112.0	2,300	1,884	\$2.58	\$4,816,860	\$5,874	
2013/14	880,000	120,000	1,000,000	32,462	112.0	2,280	2,010	\$3.21	\$6,384,690	\$7,255	
2014/15	930,000	170,000	1,100,000	40,250	114.0	2,010	1,868	\$4.00	\$7,388,000	\$7,944	
2015/16	950,000	240,000	1,190,000	47,930	114.0	2,000	1,894	\$3.13	\$5,868,750	\$6,178	
2016/17	970,000	300,000	1,270,000	42,716	116.0	2,210	2,136	\$2.39	\$5,052,460	\$5,209	
2017/18	1,030,000	330,000	1,360,000	37,124	117.0	2,200	2,260	\$2.53	\$5,603,950	\$5,441	
2018/19	1,090,000	300,000	1,390,000	32,331	119.0	2,090	2,270	\$2.50	\$5,602,500	\$5,140	
2019/20	1,180,000	340,000	1,520,000	22,142	122.0	2,170	2,551	\$2.45	\$6,169,100	\$5,228	
2020/21	1,250,000	350,000	1,600,000	14,808	122.0	2,490	3,107	\$1.83	\$5,619,930	\$4,496	
2021/22 [†]	1,330,000	ŧ	ŧ	ŧ	122.0	2,110	2,800	§	§	§	

Source: USDA, NASS/PRO. Note: Almond Board does not track prices. *Production numbers provided by Almond Board of California. *Estimated as of July 12, 2021. *Acreage statistics will be available in April 2022. §Value statistics will be available in July 2022.

CROP

ALMOND TREE FRUIT WEIGHT CROP YEAR 2020/21



Source: Kernel Weight–USDA Incomings received by Almond Board of California. Shell & Hull Estimations–Varietal Coproduct Ratios and Production Volumes (Almond Board of California 2021).

CALIFORNIA ALMOND PRODUCTION BY COUNTY CROP YEARS 2011/12-2020/21 | MILLION POLINDS

C	COLUSA		2011/1 2010	BUTTE BUTTE	TEHAMA	Solano	SUTTER	YUBA AUD2	STANISLAUS	MERCED	SAN JOAQUIN	FRESNO	KERN	MADERA	TULARE	KINGS	ALL OTHERS	TOTAL
	NORTHERN							С	ENTRA	۱L		SC	OUTHEI	RN				
2011/12	85.5	59.7	17.9	49.0	11.9	5.1	6.9	N/A	269.7	216.7	87.9	443.0	472.6	206.1	44.5	39.0	1.6	2,017.2
2012/13	85.1	57.9	18.1	50.9	12.5	5.4	7.0	N/A	261.8	201.4	91.5	413.6	393.4	203.5	49.1	30.7	2.1	1,884.1
2013/14	103.6	69.7	22.5	56.0	14.7	6.0	7.3	N/A	284.9	213.8	95.9	398.1	427.2	216.9	55.8	32.6	1.9	2,006.9
2014/15	90.2	58.7	18.1	55.2	13.3	5.1	7.7	N/A	274.4	198.2	94.3	370.5	390.3	202.9	57.0	31.9	1.9	1,869.7
2015/16	109.7	75.4	27.3	57.4	16.0	6.0	7.4	N/A	260.7	188.7	97.2	376.5	366.1	215.2	53.9	32.4	2.3	1,892.1
2016/17	104.0	68.9	28.0	54.3	17.4	6.2	8.3	N/A	291.0	222.3	104.9	433.2	433.2	242.6	73.9	40.3	2.1	2,130.6
2017/18	112.9	72.6	39.7	52.1	18.6	8.4	8.7	N/A	303.2	223.7	108.7	494.4	429.5	264.0	80.9	43.6	2.4	2,263.7
2018/19	96.8	69.4	39.4	57.1	16.2	11.3	9.0	N/A	341.9	235.1	135.5	462.4	398.2	261.4	81.1	48.5	4.7	2,268.1
2019/20	113.6	63.5	55.8	43.2	18.4	14.5	10.4	1.3	302.3	223.4	124.4	598.3	491.7	298.9	116.4	68.8	6.8	2,551.5
2020/21	156.2	96.0	79.5	70.6	29.9	29.7	19.3	2.7	437.2	305.9	177.9	655.5	495.7	351.3	120.1	78.9	8.5	3,114.9

Source: Kernel Weight–USDA Incomings received by Almond Board of California. Shell & Hull Estimations–Varietal Coproduct Ratios and Production Volumes (Almond Board of California 2021).

Did You Know?

Almond hulls are the #1 farm byproduct fed to California's dairy cows. They provide 5-9% of cows' daily ration but could be used for up to 20%, reducing the need to grow other feed crops.

CROP

CALIFORNIA ALMOND RECEIPTS BY COUNTY + VARIETY CROP YEAR 2020/21 | IN POUNDS

COUNTIES	% CROP	NONPAREIL	MONTEREY	BUTTE/ PADRE	INDEPEN- DENCE	CARMEL	FRITZ	ALL OTHERS	ALL VARIETIES
NORTHERN			·						
BUTTE	2.3%	30,181,314	3,935,526	7,370,610	1,519,685	5,270,887	648,771	21,713,626	70,640,419
COLUSA	5.0%	72,984,655	16,711,796	16,899,115	3,251,210	11,375,799	8,399,655	26,540,286	156,162,516
GLENN	3.1%	48,186,601	6,446,061	9,671,658	951,379	8,381,096	1,261,052	21,077,609	95,975,456
SOLANO	1.0%	10,894,716	2,433,756	1,479,884	7,825,531	1,046,376	8,265	6,025,011	29,713,539
SUTTER	0.6%	6,522,877	2,273,406	2,829,572	2,111,684	846,273	45,644	4,646,697	19,276,153
TEHAMA	1.0%	15,537,429	1,856,189	3,396,324	441,898	3,036,663	2,308	5,677,926	29,948,737
YOLO	2.6%	35,624,891	10,129,369	6,010,670	5,635,763	3,998,204	933,069	17,183,916	79,515,882
YUBA	0.1%	963,310	209,650	40,160	798,760	100,157	57,860	519,448	2,689,345
OTHERS	0.2%	2,241,962	456,496	208,728	1,451,484	139,439	3,230	965,584	5,466,923
TOTALS:	15.7%*	223,137,755	44,452,249	47,906,721	23,987,394	34,194,894	11,359,854	104,350,103	489,388,970
CENTRAL									
MERCED	9.8%	122,233,889	39,097,007	37,945,689	25,475,156	18,075,556	11,134,592	51,897,284	305,859,173
SAN JOAQUIN	5.7%	66,137,356	9,111,272	16,589,402	31,097,061	17,400,401	5,951,523	31,658,157	177,945,172
STANISLAUS	14.0%	165,227,844	32,230,320	51,951,030	53,490,217	39,361,613	12,996,639	81,920,540	437,178,203
OTHERS	0.1%	776,721	343,834	99,122	752,567	253,604	0	238,597	2,464,445
TOTALS:	29.6%	354,375,810	80,782,433	106,585,243	110,815,001	75,091,174	30,082,754	165,714,578	923,446,993
SOUTHERN									
FRESNO	21.0%	264,630,237	127,114,547	80,552,108	53,324,710	8,796,065	18,851,434	102,219,500	655,488,601
KERN	15.9%	220,483,152	120,078,830	54,834,043	15,883,357	7,646,730	33,706,634	43,087,085	495,719,831
KINGS	2.5%	28,711,624	17,534,583	10,199,905	11,132,900	121,220	1,843,039	9,339,940	78,883,211
MADERA	11.3%	154,026,933	70,050,978	38,147,749	9,647,090	9,937,616	11,573,256	57,929,348	351,312,970
TULARE	3.9%	51,008,240	26,980,883	7,918,539	17,241,263	1,074,825	5,808,508	10,100,343	120,132,601
OTHERS	0.0%	44,777	221,022	0	11,164	3,845	0	240,437	521,245
TOTALS:	54.6%	718,904,963	361,980,843	191,652,344	107,240,484	27,580,301	71,782,871	222,916,653	1,702,058,459
GRAND TOTAL	100.0%	1,296,418,528	487,215,525	346,144,308	242,042,879	136,866,369	113,225,479	492,981,334	3,114,894,422

* Totals may not add properly due to rounding

Source: USDA Form FV193, Report of Inedible Content of Almond Receipts. Note: The varieties Butte, Padre and Butte/Padre are combined under Butte/Padre.

TOP TEN ALMOND-PRODUCING VARIETIES

CROP YEARS 2010/11 VS. 2020/21



Source: USDA Incoming Receipts. Note: The varieties Butte, Padre and Butte/Padre are combined under Butte/Padre. Totals may not add precisely due to rounding.

CARRY-IN AS A PERCENTAGE OF PRIOR YEAR SHIPMENTS CROP YEARS 2012/13-2021/22



Source: Almond Board of California. *Forecasted.

Did You Know?

California is one of five places on earth with the Mediterranean climate needed to grow almonds.



CROP + SHIPMENTS

HISTORICAL CROP SIZE + SHIPMENTS VS. FARM PRICE CROP YEARS 2006/07-2020/21 | MILLION POUNDS



POSITION REPORT OF CALIFORNIA ALMONDS

CROP YEARS 2012/13-2021/22 | MILLION POUNDS

CROP YEAR	REDETERMINED MARKETABLE WEIGHT	CARRY-IN	RESERVE	TOTAL SALABLE SUPPLY	DOMESTIC SHIPMENTS	EXPORT SHIPMENTS	TOTAL SHIPMENTS	SALABLE CARRY-OVER
2012/13	1,848.4	335.2	N/A	2,183.6	588.4	1,278.0	1,866.5	317.2
2013/14	1,970.0	317.2	N/A	2,287.2	641.8	1,295.6	1,937.4	350.6
2014/15	1,838.6	350.6	N/A	2,189.2	639.4	1,173.1	1,812.5	376.6
2015/16	1,846.6	376.6	N/A	2,223.2	593.2	1,218.0	1,811.2	412.0
2016/17	2,087.4	412.0	N/A	2,499.4	676.0	1,425.0	2,101.0	398.7
2017/18	2,211.9	398.7	N/A	2,610.6	734.7	1,516.8	2,251.5	359.0
2018/19	2,223.3	359.0	N/A	2,582.3	741.2	1,522.9	2,264.0	318.3
2019/20	2,504.2	318.3	N/A	2,822.5	774.3	1,598.2	2,372.4	450.1
2020/21	3,056.1	450.1	N/A	3,506.2	808.1	2,090.0	2,898.1	608.1
2021/22*	2,744.0	608.1	N/A	3,352.1	798.6	2,053.5	2,852.1	500.0

Source: Almond Board of California. Note: Totals may not add precisely due to rounding. *Estimated.



	WORLD DESTINA Destination	2016/17	2017/18	ARS 2016/17-2 2018/19	2019/20 2019/20	LLION PC 2020.
mericas	Canada	66 51	58.30	60.52	50 50	62.93
North America	Mexico	55.51 18.47	22.17	23.55	59.59 24.23	30.2
	TOTAL NORTH AMERICA	73.98	80.50	84.08	83.85	93.25
	Argentina Brazil	2.67	2.31	0.35	1.40 4.97	3.29
	Chile	7.27	6.50	5.40	7.30	11.89
Latin America/	Colombia	2.25	3.44	3.51	5.17	7.04
Caribbean	Costa Rica	0.66	0.81	1.08	0.27	1.3
	Dominican Republic Peru	1.81	2.11	0.39	3.20	4.95
	Trinidad	0.38	0.69	0.68	0.60	0.82
	TOTAL LAT AMER/CARIBBEAN TOTAL AMERICAS	17.35 91.34	20.88 101.38	16.88 100.9	24.97 108.83	39.2 132.4
sia-Pacific	TOTAL AMERICAS	91.04	101.30	100.9	100.03	132.4
	China/Hong Kong	150.77	169.78	128.09	98.55	162.3
Northeast Asia	Japan South Korea	71.15 54.45	78.80 50.84	81.28 56.92	84.95 56.10	92.02
	Taiwan	11.46	9.61	9.34	9.95	13.75
	TOTAL NORTHEAST ASIA	287.93	309.04	275.63	249.55	344.8
	Indonesia Malaysia	2.63	3.38	4.63 9.34	4.26	5.38
	Philippines	0.72	0.49	0.56	0.55	1.10
Southeast Asia	Singapore	3.57	4.08	3.85	4.14	5.34
	Thailand Vietnam	3.97 42.59	5.19 55.17	7.33 57.23	8.25 14.38	9.40
	TOTAL SOUTHEAST ASIA	42.59 59.15	75.35	83.02	40.36	65.7
	Afghanistan	0.00	1.38	2.27	2.83	2.48
	Bangladesh India	0.00 167.08	0.40	0.13 231.35	0.48	2.92
South/Central Asia	Kazakhstan	0.96	7.77	7.87	8.92	10.9
	Nepal	0.29	0.15	0.54	0.96	1.80
	Pakistan	20.80	11.82	9.69	10.18	11.4
	TOTAL SOUTH/CENTRAL ASIA Australia	193.44 3.54	221.83 3.82	251.88 5.73	279.15 3.32	391.80 2.60
Australasia/Oceania	New Zealand	3.29	3.36	3.70	3.93	4.73
	TOTAL AUSTRALASIA/OCEANIA	6.84	7.22	9.46	7.34	7.3
urope	TOTAL ASIA-PACIFIC	547.36	613.45	620.00	576.39	809.7
	Belgium	19.50	20.76	24.53	22.32	23.30
	Denmark	7.42	8.23	7.48	7.55	
	France Germany	27.83	29.21 134.33	30.02 110.46	30.52 133.93	
	Greece	9.02	10.27	11.40	12.16	
	Ireland	0.55	0.60	0.64	0.74	8.61 34.85 157.11 17.13 0.78 96.79 93.64 7.03 1.48 238.94
Western Europe	Italy Netherlands	<u>58.14</u> 51.51	68.38 52.04	67.06 72.19	76.67	
	Norway	5.44	6.43	5.60	7.03	
	Portugal	1.77	2.46	1.99	1.54	
	Spain Sweden	210.63	203.36 7.31	195.64 7.20	192.56 7.76	238.94
	Switzerland	3.60	4.82	5.01	2.23	1.94
	United Kingdom	34.37	34.08	32.60	34.14	41.4
	TOTAL WESTERN EUROPE Bosnia	566.45	583.04 0.18	572.65 0.22	603.43 0.22	729.92
	Bulgaria	2.11	2.19	2.24	2.88	2.19
	Croatia	1.87	2.15	3.03	4.47	5.70
	Czech Republic Estonia	2.11 6.28	1.84	1.80 8.54	1.89	2.04
Central/	Georgia	0.25	0.22	1.38	2.09	2.85
Eastern Europe	Latvia	1.55	5.52	2.51	1.57	2.12
	Lithuania	3.23	4.22	4.79	6.07	9.3
	Poland Serbia	2.93	3.83	4.39	3.98	7.3
	Ukraine	0.77	1.75	2.84	3.90	7.2
	TOTAL CENTRAL/E. EUROPE	25.65 592.10	36.91 619.95	35.43 608.08	42.50 645.93	62.03 791.9
iddle East/Africa		332.10	019.90	008.08	040.93	791.9
	Bahrain	1.15	1.50	1.69	1.73	1.4
	Cyprus	1.12	1.21	1.22	1.29	1.2
	Iraq Israel	1.11 10.49	8.75	1.24 11.53	1.22	1.22
	Jordan	10.17	9.49	11.40	12.62	12.79
Middle East	Kuwait	4.27	3.72	4.87	3.36	3.70
	Lebanon Oman	5.46 0.04	6.35 0.18	7.45	3.96 0.53	3.82
	Qatar	1.12	2.10	2.92	2.21	1.84
	Saudi Arabia	20.83	14.74	20.27	23.15	23.0
	Turkey United Arab Emirates	53.46 64.37	51.74 63.54	36.14 69.01	61.38 86.32	66.70
	TOTAL MIDDLE EAST	173.59	164.28	167.92	212.29	254.80
	Algeria	9.93	5.28	7.58	9.74	8.48
North Africa	Egypt	1.91	2.25	4.08	7.51	8.9
North Africa	Libya Morocco	0.41	0.39 3.66	0.84 7.12	2.16 28.06	65.8
	Tunisia	1.22	0.25	0.34	0.61	1.18
Cult Culture AC	TOTAL NORTH AFRICA	14.58	11.84	19.96	48.15	93.29
Sub-Saharan Africa	South Africa TOTAL SUB-SAHARAN AFRICA	5.57 5.87	5.68 5.89	5.56 5.93	6.12 6.57	7.4
	TOTAL MIDDLE EAST/AFRICA	194.04	182.01	193.81	267.01	355.9
	TOTAL EXPORT SHIPMENTS:	1,424.83	1,516.79	1,522.85	1,598.16	2,090.0
						2,000.0
	TOTAL USA SHIPMENTS:	675.96	734.73	741.17	774.25	808.0

Source: Almond Board of California. Note: Totals may not add precisely due to rounding. Destinations that shipped more than 500,000 pounds in crop year 2020/21 are listed.

2,251.52

2,264.02

2,372.41

2,898.13

TOTAL GLOBAL SHIPMENTS: 2,100.79

SHIPMENTS





Source: Almond Board of California.



Source: Almond Board of California. Note: Totals may not add precisely due to rounding.

EXPORT SHIPMENTS BY PRODUCT TYPE CROP YEARS 2016/17-2020/21 | MILLION POUNDS



Source: Almond Board of California.



Source: Almond Board of California July 2021 Position Report.

Did You Know?

Water-saving technologies like microirrigation helped farmers **reduce the amount of water** it takes to grow each pound of almonds by 33% between the 1990s and 2010s¹.

1. University of California, 2010. Foo 2012. Almond Board of California, 19

ALMONDS + OTHER CROPS



Source: CDFA, California Agricultural Statistics Review.

*Calendar year January through December 2019. Value based on farm-gate prices. **Bearing acreage.



Source: California Department of Food and Agriculture: California Agricultural Production Statistics. cdfa.ca.gov/Statistics *Calendar year January through December 2020.







Source: USDA, Economic Research Service, Fruit & Treenut Situation and Outlook. *Preliminary.

U.S. PRODUCTION + IMPORTS OF COMPETING NUTS CROP YEARS 2011/12-2020/21 | MILLION POUNDS (SHELLED BASIS)

CROP YEAR	ALMONDS		WALNUTS		HAZELNUTS		PECANS		PISTACHIOS		MACADAMIAS		ALL TREE NUTS	
	Crop	Imports	Crop	Imports	Crop	Imports	Crop	Imports	Crop	Imports	Crop	Imports	Crop	Imports
2011/12	2,020.4	15.9	400.6	4.8	31.2	9.6	124.6	74.6	222.0	0.9	22.3	86.1	2,821.1	449.3
2012/13	1,844.0	39.4	442.1	8.4	28.4	15.2	140.8	79.3	278.3	1.2	20.0	111.1	2,753.5	515.6
2013/14	2,009.7	33.9	437.7	11.9	36.9	14.5	130.8	92.5	234.5	0.5	18.6	112.5	2,868.2	582.1
2014/15	1,867.9	31.2	506.1	21.2	26.1	10.9	128.1	104.0	246.3	0.9	20.9	133.8	2,795.4	666.9
2015/16	1,894.4	31.8	527.0	10.8	23.3	9.2	104.5	113.7	134.6	1.2	21.4	155.5	2,705.1	668.1
2016/17	2,135.7	26.6	608.4	15.7	35.1	11.5	127.9	132.6	446.3	1.4	19.1	137.6	3,372.6	697.2
2017/18	2,260.5	32.5	557.1	12.7	25.6	13.8	141.1	137.1	226.9	1.6	22.3	171.9	3,233.5	738.8
2018/19	2,269.6	32.2	601.5	2.6	40.8	16.8	103.6	166.0	487.5	1.3	16.0	256.0	3,518.9	720.2
2019/20	2,551.2	26.3	559.2	2.7	35.2	13.5	134.7	153.8	370.7	1.6	18.5	207.5	3,669.6	755.9
2020/21*	3,107.0	21.6	685.4	2.1	50.4	10.5	152.7	137.5	524.8	3.1	17.9	148.3	4,538.2	705.2

Sources: USDA, Economic Research Service, Fruit & Tree Nut Yearbook Tables. Note: Crop totals represent utilized production. Almond crop totals are from Almond Board of California's year-end Position Report. *Preliminary.

Did You Know?

Growing 400+ commoditie California produces **more than 1/3 of U.S. vegetables and 2/3 of fruits and nuts.**



DOING MORE THROUGH COLLABORATION

Since 2013, the Almond Board of California and Almond Alliance of California (AAC) have worked together to provide a voice to California almond industry decision-makers on how almonds are grown, sold and traded. In 2021, we worked together to address the impacts of COVID-19 and continued tackling issues facing the industry such as shipping and logistics, regulations, pollinators, air guality, water availability and more.

LOGISTICS CHALLENGES

Disruptions in the global supply chain resulting from COVID-19 impacted ocean carrier service and empty container availability, rippling through supply chains, leading to congestion at California's seaports. This resulted in large cost increases to almond exporters and reduced their ability to meet timely deliveries to international destinations. In response, the AAC helped lead the charge for action through the Federal Maritime Commission and proposed amendments to the federal Shipping Act, as well as worked very closely with ABC and the Agriculture Transportation Coalition to address immediate impacts of the global supply chain crisis, helping keep the almond industry apprised of latest developments and best practices.

WATER AND DROUGHT

As growers confront water limitations due to California's Sustainable Groundwater Management Act, they have also had to weather a multi-year drought and surface water shortages. Priorities were developed for federal and state budgets to provide opportunities to improve above ground and below ground water storage, conveyance and efficiency incentives.

CALIFORNIA AND FEDERAL ADMINISTRATION PRIORITIES

Climate change and labor issues have become drivers of both regulations and incentive programs. Securing credit for carbon storage and other production methods that reduce greenhouse gas emissions has been an ongoing joint effort. Private markets may provide opportunities for growers to receive ecosystem credits and payments. While the ending of ag burning in the San Joaquin Valley presents challenges, shared efforts resulted in significant funding for new equipment and expanded incentives to drive adoption of alternatives such as whole orchard recycling.



LOOKING TO 2022

With aligned federal and state interests, the Almond Board and AAC will remain focused the goals and contributions of California almonds and the role they play in California, the U.S. and around the world.







GROWIN

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Annual year-end report that provides an overview of almond statistics and Almond Board of California programs

Provides information on almond

and USDA standards and grades

An overview of almond varieties, sizes,

forms and USDA standards and grades

varieties, forms, handling tips,

GUIDE TO CALIFORNIA

ALMONDS POSTER

ALMOND ALMANAC

GROWING GOOD

TECHNICAL KIT

Overview of the responsible practices used to grow California almonds Almonds.com/GrowingGood

2025 GOALS ROADMAP

Illustrates how the almond community is measuring and working toward the Almond Orchard 2025 Goals Almonds.com/2025Goals



An annual publication featuring one-page summaries of each research project underway Almonds.com/ResearchDatabase



ALMOND LEADERSHIP PROGRAM Leadership A year-long program covering all facets of the California almond industry through seminars, tours, special projects and community service events Almonds.com/ AlmondLeadershipProgram



CALIFORNIA ALMOND SUSTAINABILITY PROGRAM Free online productivity tools and assessment modules for farmers and processors to learn about best practices and regulatory requirements SustainableAlmondGrowing.org

AG IN THE CLASSROOM

Teaching resources explaining how

almonds are grown and processed, the

history of California almonds, and the

many ways to enjoy the versatile nut

Almonds.com/AgInTheClassroom



ALMOND BOARD RESOURCES

THE ALMOND CONFERENCE Annual event for farmers and processors to receive updates on industry research, production news and regulatory issues. Presentations from past Conference events and information about the upcoming Conference can be found at Almonds.com/Conference Save the date: December 6-8, 2022 AlmondConference.com

INDUSTRY RESOURCE DIRECTORY

Connects farmers and processors to

allied industries like beekeepers, farm

Almonds.com/ResourceDirectory



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INDUSTRY NEWS

advisors and solar providers

Online resource of industry articles, ranging from production tips to updates on markets and regulatory insights Almonds.com/IndustryNews



ALMOND LIVING MAGAZINE

A digital magazine housing articles that touch on various ABC initiatives. This is a great place to see firsthand how ABC is connecting with consumers and food and health professionals Almonds.com/Magazine



PRESS ROOM

One-stop shop for the latest news published by ABC Almonds.com/PressRoom



YOUTUBE

A place for almond farmers and processors to stay in touch with ABC @AlmondBoardofCalifornia



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