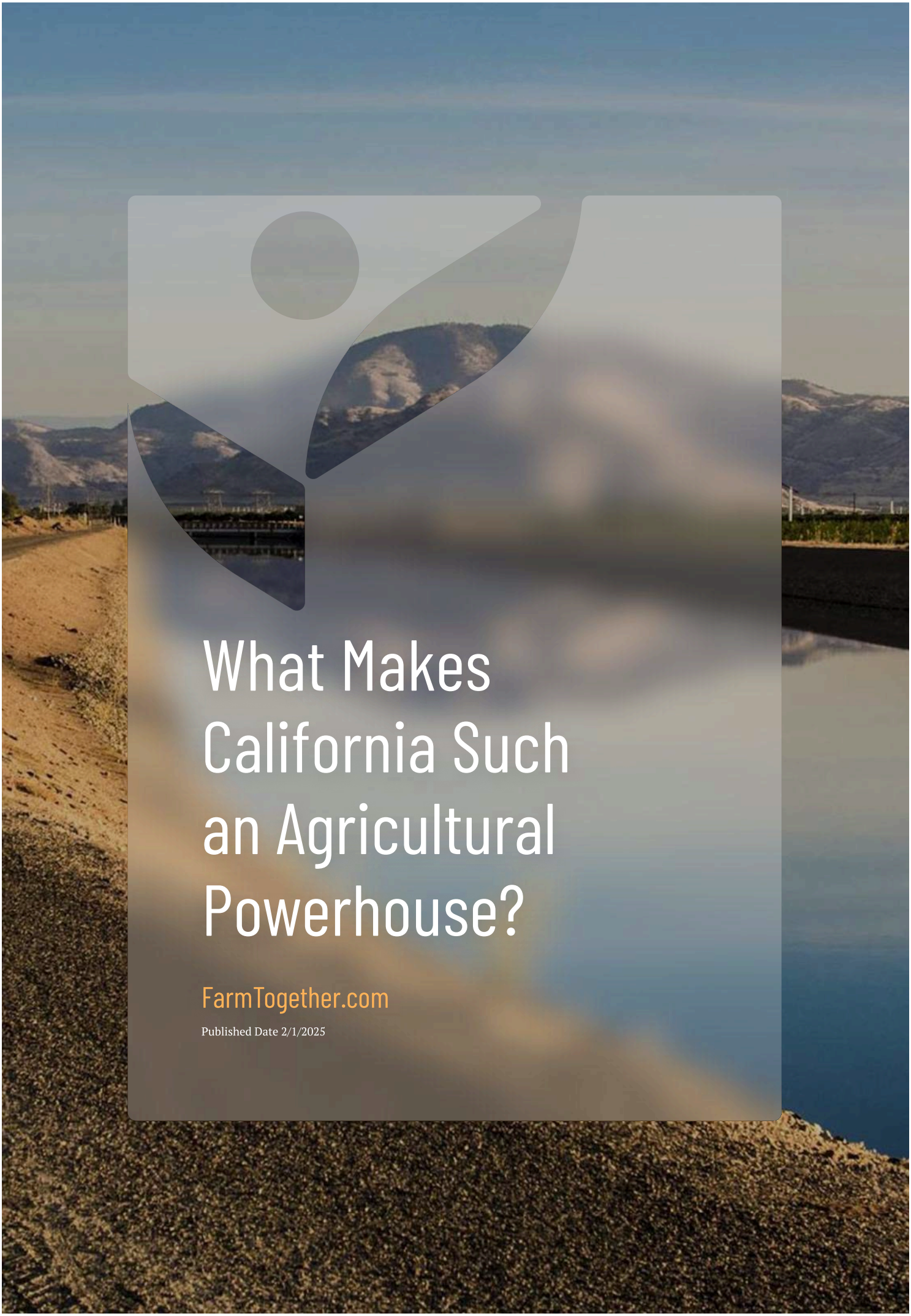

What Makes California Such an Agricultural Powerhouse?

FarmTogether.com

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Table of Contents

What Makes California Such an Agricultural Powerhouse?

California is a vital, irreplaceable cornerstone of global agriculture.

As of the end of the 2023 season, California's agricultural sector continues to thrive, producing over 400 commodities. The state's farms and ranches generated $59.4 billion in cash receipts in 2023, a 1.4% increase from the previous year. This underscores California's dominant role in U.S. agriculture, accounting for approximately 10% of the nation's farm product value. The industry contributes over $100 billion to the economy annually and represents nearly 13% of U.S. agricultural exports. While this reflects the most recent complete reporting year, 2024 data is expected to be released later in 2025.

California's leadership in agriculture is deeply rooted in its ability to produce high-value crops at scale. Over the past decade, the state has consistently supplied approximately 75% of the nation's fruits and nuts. This strength is driven by its Mediterranean climate, advanced resource management, and a legacy of agricultural innovation. If California were a sovereign nation, it would be the world's 5th-largest overall economy, ahead of India and behind Germany.

California's agricultural sector continues to evolve amid changing environmental and regulatory landscapes. While factors like climate variability, shifting water policies, and supply chain adjustments present challenges, California remains a global leader, continuously adapting through research, technology, and investment. The state's robust ecosystem of research institutions, agtech firms, and forward-thinking investors is paving the way for more sustainable and efficient farming practices.

With these advancements and a long-standing reputation for excellence, California remains one of the most attractive regions for farmland investment, offering both historical stability and long-term growth potential in the evolving food economy.

This paper offers an in-depth exploration of California's agricultural leadership, highlighting its resilience, the evolving challenges it faces, and the unique opportunities that position the state as a key player in the future of the global food system.

Sources:

CDFA - California Agriculture Statistics Review 2022-2023
GDP (current US$) - United States
USDA - Value added to the U.S. economy by the agricultural sector, 2013-2022F

Knights Landing Almond Orchard
Sutter County, CA

The California Agricultural Landscape

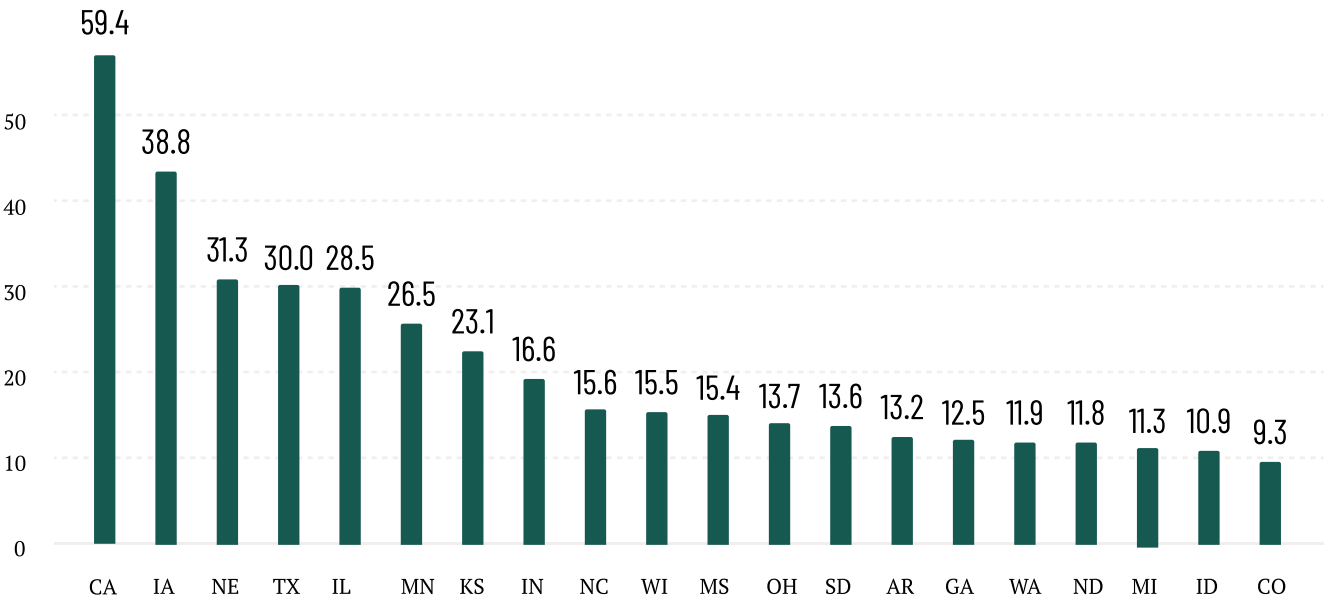
The productivity and diversity of California's farms are unmatched across the United States. Despite accounting for only about 2.7% of the nation's total farmland, California is a national leader in both total crop production and value. This is particularly true for high-value specialty crops, where the state consistently dominates in both acreage and yield.

Of the $59.4 billion in total cash receipts generated by California's farm sector in 2023, approximately 73% came from crop production rather than livestock. This concentration in high-value crops underscores the state's economic strength in agriculture, as California produces around 15-20% of the total U.S. crop value.

This outsized share of national crop production comes from less than 40% of California's total farmland, making cropland in the state among the most economically productive in the world. While livestock operations contribute to the state's agricultural economy, California's primary strength lies in its diverse, high-value crop portfolio—particularly almonds, grapes, strawberries, lettuce, and other specialty crops that the state produces at a scale unmatched by any other region in the U.S.

California's 9.6 million acres of irrigated cropland generate approximately $41 billion in total cash crop value, making them roughly four times as productive per acre as the national average in terms of cash value of crops harvested. This exceptional productivity underscores California's pivotal role in U.S. agriculture.

Top 20 US States by Total Ag Cash Receipts (2023, Billions)



Sources:

California Department of Food and Agriculture (CDFA) 2023 Statistics Report
Total U.S. cropland area projection from 2012 to 2028 (in million acres)*
USDA ERS: Cash receipts by State 2023
USDA ERS: Cash receipts by commodity, state ranking, 2022
USDA NASS: Farms and Land in Farms 2023 Summary

California's Mediterranean Climate

Perhaps the single most influential characteristic of California's agricultural and economic performance is the state's Mediterranean climate.

There are five major Mediterranean climate zones in the world: the Mediterranean Basin, the Cape Region of South Africa, Southwestern and Southern Australia, Central Chile, and California. All located within 30-45 degrees latitude (north or south of the Equator), these climate regions share distinct characteristics—mild, wet winters and warm, dry summers with ample sunshine. Unlike much of the world, where precipitation is spread throughout the year, Mediterranean climates receive the majority of their rainfall during the winter months. This creates unique growing conditions, as frosts and snowfall are rare, allowing certain plant species to continue growing or even blooming throughout the winter instead of entering dormancy.

Although Mediterranean climates cover less than 2% of the earth's land area, they account for roughly 20% of global biodiversity in terms of species richness. This ecological diversity extends to agriculture, supporting a broad range of high-value crops that thrive under these conditions.

Many of the world's highest-value crops—including olives, grapes, tree nuts, stone fruit, citrus, and berries—are almost exclusively grown in Mediterranean climates. Even for crops that can grow in other regions, per-acre yields in Mediterranean climates often surpass those from other agricultural zones, making them particularly economically efficient for farming.

This is especially true in California, where the state's Mediterranean climate is considered one of the most productive in the world, even when compared to other Mediterranean climate zones. California's Mediterranean climate has three primary subtypes, each contributing to the diversity of its agricultural output:

> **Coastal Climate** – Cooler summers and frequent marine fog, benefiting crops like leafy greens, wine grapes, and berries.
>
> **Inland Climate (Central Valley Periphery)** – Found further inland, ringing the Central Valley, this subtype experiences warmer summers and cooler winters, making it ideal for crops like almonds, walnuts, and peaches.
>
> **Valley Climate (Central Valley Core & Other Inland Valleys)** – Characterized by hotter summers and mild winters, this is the warmest Mediterranean subtype in California, particularly well-suited for high-yield crops such as tomatoes, melons, and pistachios.

Overall, California's Mediterranean climate is not only a defining factor in the state's agricultural success but also a model for high-value crop production worldwide. Its ability to support year-round farming, accommodate a diverse range of specialty crops, and drive exceptional per-acre yields has positioned California as a global agricultural powerhouse. This unique climate enables efficient growing seasons that maximize both productivity and quality, allowing the state to meet domestic demand while also supplying international markets with essential crops that thrive in few other places.

Sources:

California Coastal Commission - Climate and Topography
Commission on Ecosystem Management: Mediterranean-Type Ecosystems

The Central Valley's Geographic and Climatic Advantage

The Central Valley, in particular, benefits from a combination of geographic and climatic factors that make it one of the most productive agricultural regions in the world. The Sierra Nevada mountain range to the east captures precipitation from storm systems that develop over the Pacific Ocean, providing the region with more water resources than California's arid eastern deserts. The southward slant of the Sierra Nevada's slopes enhances sunlight exposure, further optimizing growing conditions for many crops. The low elevation and vast, flat expanse of the Central Valley ensure that crops receive ample sunlight throughout the day, promoting high per-acre yields and crop quality.

These combined climatic and geographic advantages reinforce California's Mediterranean climate as a key driver of its agricultural dominance, making the state one of the most valuable and productive farming regions in the world.

Fertile Soils & Unmatched Crop Diversity

California's Mediterranean climate zones align with some of the nation's most fertile soils, notably the San Joaquin series, which is recognized as California's state soil. Approximately 438,000 acres of this soil have been identified and mapped in the Central Valley. These fertile soils support a vast array of crops, many of which are predominantly or exclusively produced in California.

The state leads the nation in the production of several high-value crops, including:

- **Almonds:** California produces nearly 100% of the U.S. supply.
- **Apricots:** The state is a major producer, contributing significantly to national output.
- **Dates:** California is the primary U.S. producer.
- **Figs:** The state accounts for nearly all U.S. production.
- **Kiwi fruit:** California is the leading producer in the U.S.
- **Nectarines:** The state produces a substantial portion of the nation's supply.
- **Olives:** California is the primary producer in the U.S.
- **Pistachios:** The state produces nearly 100% of the U.S. supply.
- **Prunes:** California leads in U.S. production.
- **Walnuts:** The state produces nearly 100% of the U.S. supply.

Additionally, California is a standout leader in the production of:

- **Avocados:** The state is a major contributor to U.S. production.
- **Grapes:** California produces the majority of the nation's supply.
- **Lemons:** The state leads in U.S. production.
- **Melons:** California is a significant producer.
- **Peaches:** The state contributes substantially to national output.
- **Plums:** California is a major producer.
- **Strawberries:** The state leads in U.S. production.

Sources:

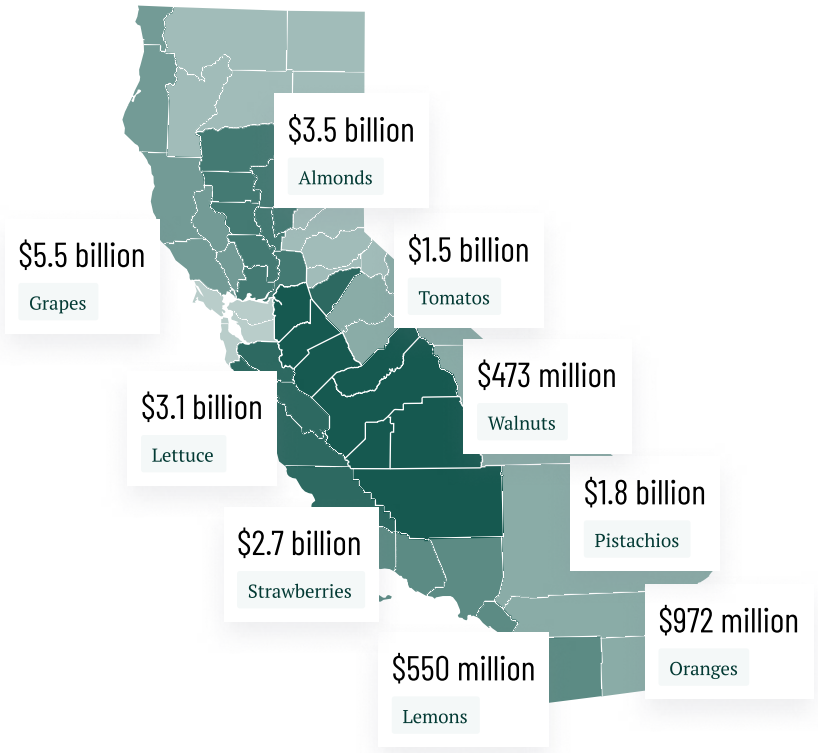
California Coastal Commission - Climate and Topography
CDFA - California Agriculture Statistics Review 2022-2023
Commission on Ecosystem Management: Mediterranean-Type Ecosystems

Economic Impact of California's Top Crops

California's agricultural economy is not only diverse but also deeply region-specific, with certain crops thriving in distinct growing zones. From the vineyards of the Central Coast and San Joaquin Valley to the lettuce fields of the Salinas Valley and the citrus groves of Southern California, each region plays a vital role in the state's $100 billion agricultural industry.

The map below highlights California's most valuable crops—grapes, almonds, tomatoes, lettuce, walnuts, strawberries, pistachios, lemons, and oranges—pinpointing the regions where they drive the highest economic returns.

Popular Crops in Each of CA's Major Growing Regions, by Total Economic Value



Major Growing Regions Within CA

- San Joaquin Valley
- Central Coast
- Sacramento Valley
- South Coast
- Southeast Interior
- North Coast
- Cascade-Sierra
- Bay Area

Vista Luna Organic Vineyard

San Joaquin County, CA

Monarch Citrus Grove

Tulare County, CA

Sierra Foothills Pistachio Orchard

Tulare County, CA

Sources:

CDFA - California Agriculture Statistics Review 2022-2023
USDA ERS

FarmTogether.com

California: An Agriculture Powerhouse

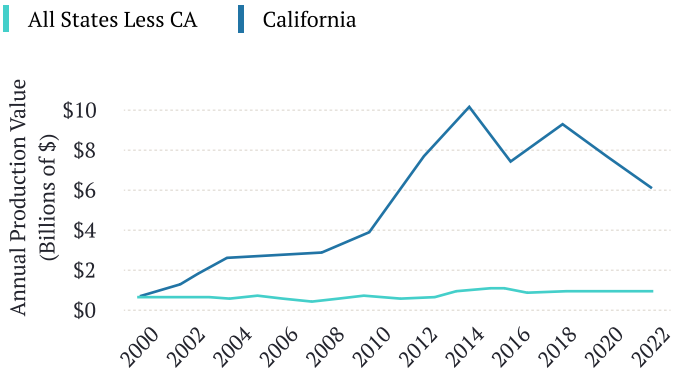
California Commodities Spotlight

Tree Nuts

In the 2023 growing season, California produced over $6 billion worth of tree nuts, continuing its dominance as the world's top supplier. The state accounted for 74% of global almond production, 63% of the world's pistachios, and 99% of U.S. walnuts.

Sierra Foothills Pistachio Orchard
Tulare County, CA

Annual Tree Nut Production Value



Source: USDA National Agriculture Statistics Service

California continues to lead the nation in pistachio production, with the 2023 harvest yielding approximately 1.49 billion pounds from 462,000 bearing acres, according to the USDA National Agricultural Statistics Service. This represents a significant increase from the 2022 harvest of 1.1 billion pounds. The state's pistachio exports were valued at $2.2 billion in 2022, highlighting the crop's substantial contribution to California's agricultural economy.

In the walnut sector, California maintains its dominant position, accounting for 99% of U.S. production. In 2022, the state's walnut growers produced 752,000 tons, more than double the amount produced 15 years prior. This growth underscores California's pivotal role in supplying both domestic and international markets with high-quality walnuts

Although almonds are botanically classified as a stone fruit, most industry references to California tree nuts include almonds within this category. California is the exclusive producer of almonds in the United States, accounting for 100% of the nation's supply. As of 2023, the state has approximately 1.38 million bearing acres dedicated to almond cultivation. In 2022, California's almond exports were valued at $4.7 billion, reinforcing almonds as the state's top-valued agricultural export commodity. Notably, California supplies about 85% of the world's almonds, exporting to more than 100 countries globally. In 2023, almonds ranked as the fifth highest-valued commodity in California, with a production value of $3.88 billion.

Sources:

CDFA - California Agriculture Statistics Review 2022-2023
CDFA - California Agricultural Exports 2022-2023
INC Statistics Database
The Packer
USDA NASS 2024 California Almond Objective Measurement Report
West Coast Nut - 2025 Pistachio Market Update

Citrus

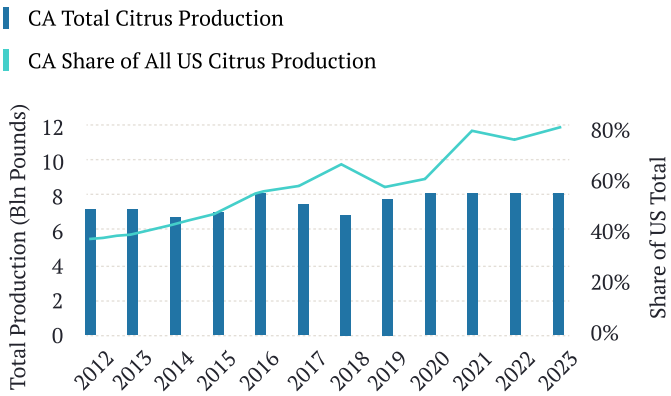
California's leading role in the U.S. citrus industry is bolstered by its diverse production and resilience against challenges that have adversely affected other major citrus-producing states.

Golden Citrus Orchard
Tulare County, CA

California's citrus industry continues to be a significant contributor to both the state's and the nation's agricultural output. In the 2023–24 season, California's utilized citrus production reached approximately 4.15 million tons, accounting for 79% of the total U.S. citrus production.

The economic impact of this production is substantial. In the 2023–24 season, the value of California's citrus production was estimated at $2.55 billion. This marks a 5% increase from the previous season.

California is Increasingly Important to US Citrus Production



Source: USDA NASS Citrus Fruits 2024 Report

Approximately 70% of California's citrus-bearing acreage is situated in the San Joaquin Valley, encompassing the renowned "citrus belt," the state's most productive citrus-growing region. This area cultivates a diverse array of citrus fruits, including navel and Valencia oranges, mandarins, grapefruits, and lemons.

Over the past two decades, California's prominence in the national citrus industry has grown significantly, largely due to the decline in Florida's production caused by citrus greening disease (Huanglongbing or HLB) and successive hurricanes. For instance, in the 2023–24 season, California accounted for 79% of total U.S. citrus production, while Florida contributed 17%, a substantial decrease from previous years.

A notable advantage for California is that over 90% of its citrus harvest is destined for the fresh fruit market, attributed to the varieties grown and the high-quality fruit produced. In contrast, a significant portion of Florida's citrus is processed into products like juice.

Sources:

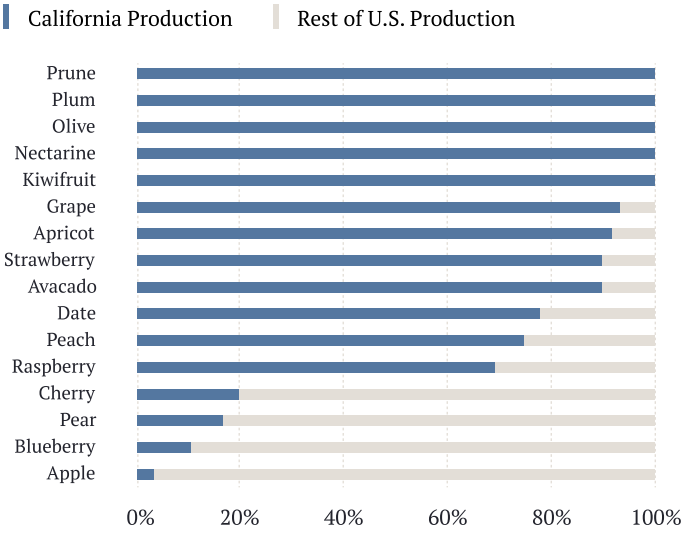
CDFA 2024 California Citrus Acreage Report
CCFA CA Citrus Pest and Disease Prevention Program
Citrus Industry Magazine 2007-2024
USDA NASS Citrus Fruits 2024 Summary

Non-Citrus Fruit

California dominates several specialty fruit markets, including crops that can be grown at scale almost exclusively within the state. This unparalleled production capacity underscores its essential role in both national and global fruit supply chains.

As the nation's top producer of stone fruit, California accounts for over 80% of total U.S. production. The state grows approximately 70% of the nation's peaches, 95% of apricots, 95% of fresh plums, and 99% of nectarines. In the 2023 growing season, California was responsible for the entire U.S. production of kiwifruit, nectarines, olives, plums, and prunes, as well as over 90% of the nation's apricots.

U.S. 2022/2023 Non-Citrus Fruit Production



Source: USDA National Agriculture Statistics Service

California is responsible for approximately 88% of the United States' avocado production, cultivating seven commercial varieties across 52,534 acres as of 2023. The predominant variety is the Hass avocado, which accounts for about 95% of the state's avocado yield.

Berry crops also figure significantly in California's farming landscape. In 2023, California produced 2.27 billion pounds of strawberries, accounting for 89% of U.S. production, with a farm value of $2.85 billion, making it the state's sixth most valuable agricultural commodity, despite occupying less than 1% of the state's farmland. The California Strawberry Commission reported an 11% year-over-year increase in volume, driving $235.9 million in category sales and reinforcing the state's dominance in the strawberry market.

Sources:

California Avocados - Avocado Types and Varieties
California Avocado Growers - 2023 Statewide Avocado Acreage Report
CDFA - Annual Report on Price Posting for Processing Strawberries - 2023 Season
USDA NASS Noncitrus Fruits and Nuts 2023 Summary - May 2024

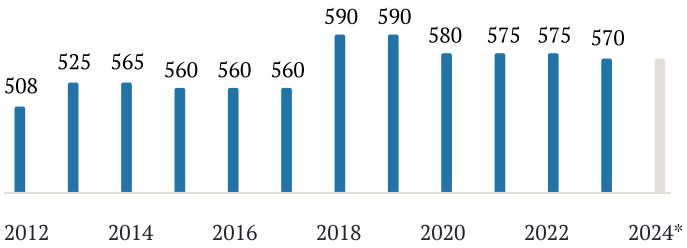
Wine Grapes

California's wine industry remains a cornerstone of both the state's economy and the global wine market. As of 2023, the industry contributes approximately $88.12 billion to California's economy, solidifying its position as the fourth-largest wine producer worldwide, following Italy, France, and Spain.

Vista Luna Organic Vineyard
San Joaquin County, CA

California is responsible for approximately 81% of all U.S. wine production, with 605.98 million gallons produced in 2023. This extensive production is supported by an estimated 570,000 bearing acres of wine grape vineyards.

California Wine Grape Bearing Acreage: 2012-2023 ('000 acres)



Source: USDA National Agriculture Statistics Service; 2024 Grape Acreage Report is expected to be released in April 2025.

In 2023, California's winegrowers crushed nearly 3.67 million tons of wine grapes, marking an 8% increase from the previous year. The state is home to over 60 different varieties of red wine grapes, which accounted for the largest share of the total grape crush, at 1.9 million tons. Among these, Cabernet Sauvignon led production, representing 17.3% of the total crush. White wine varieties accounted for approximately 1.77 million tons, with Chardonnay as the dominant variety, making up 17.5% of the total tonnage.

Notably, over 80% of California wines are produced in wineries that have obtained certified sustainability qualifications, and more than 50% of the state's vineyard acres are certified under sustainability programs. These certifications include LODI RULES for Sustainable Winegrowing, Napa Green Vineyard Certification, Certified California Sustainable Winegrowing, and Sustainability in Practice (SIP) Certified

California's wine industry is not only a significant economic driver but also a major employer. The industry directly employs approximately 255,734 people and supports an additional 116,192 jobs in supplier and ancillary industries, totaling 371,926 jobs statewide.

California's diverse climates and soils support a wide range of grape varieties, contributing to its reputation for high-quality wines. California's 147 American Viticultural Areas (AVAs) constitute a majority of all AVAs in the U.S., highlighting the state's diverse wine-growing regions.

Sources:

American Vineyard Magazine - Preliminary 2023 Grape Crush Report
Discover California Wines
USDA NASS - California Grape Acreage Report, 2023 Summary
WineAmerica - CA Economic Impact Study 2022
Wine Institute - California and US Wine Sales

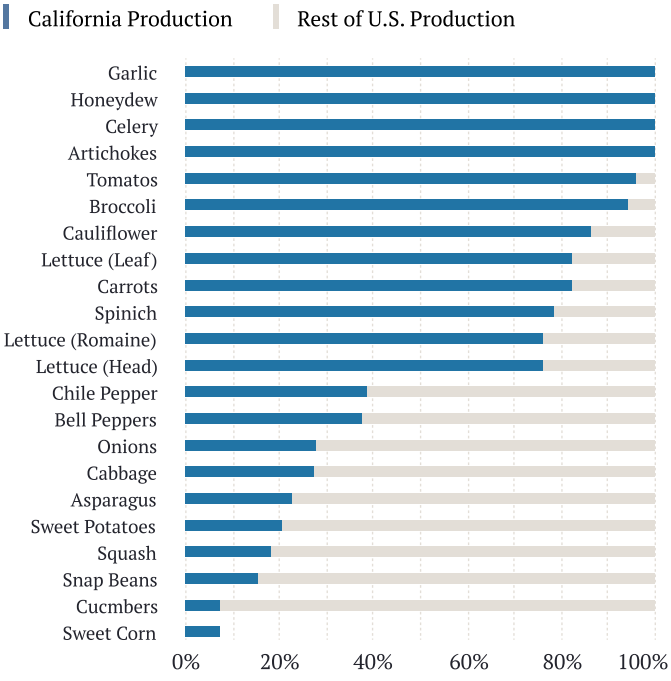
Vegetables

As the largest vegetable producer in the United States, California's vegetable production is not only extensive but also diverse, encompassing a wide range of crops that contribute significantly to both the state's economy and the nation's food supply.

California is responsible for over 43% of U.S. vegetable acreage, 60% of the nation's total production, and 59% of the total value of U.S. vegetable production. In the 2022-23 season, the value of California's utilized vegetable production reached $9.76 billion.

California leads the nation in the production of a wide variety of vegetables, including nearly all of the nation's artichokes, celery, garlic, and honeydews. The state is also home to more than three-quarters of all U.S. acreage for key crops such as tomatoes (90%), broccoli (88%), carrots (82%), cauliflower (84%), lettuce (75%), and spinach (77%).

U.S. 2022-23 Vegetable Production



Source: USDA National Agriculture Statistics Service

California has consistently been the nation's largest exporter of vegetables, responsible for over 51% of total U.S. vegetable exports during the 2022-23 season. That year, California exported over $2.2 billion worth of vegetables.

The value of California's vegetable production ranks among the highest of all agricultural commodities, driven by strong domestic demand and robust export markets. Nationally, the total U.S. production of the 26 estimated vegetable and melon crops increased by 6% in 2023, reaching 758 million cwt, demonstrating ongoing demand growth.

Sources:

CDFA - California Agriculture Statistics Review 2022-2023
CDFA - 2023 Exports Report
USDA NASS - Vegetables 2022 Summary - February 2023

Sustaining California's Agricultural Growth: Water Infrastructure, Policy, and Technology

Though uniquely suited to sustain an impressive diversity of crops, California experiences the most variable precipitation of any U.S. state due to its climate. The state is well known for oscillating between drought and flood years. During flood years, most precipitation falls in areas far from major agricultural regions—while 75% of the state's total precipitation falls north of Sacramento, the majority of California's most productive agricultural counties are located in the southern half of the state. This heavy precipitation also occurs during winter months, when many of California's key crops are dormant. Atmospheric rivers, powerful storm systems originating over the Pacific, contribute 30-60% of the state's precipitation through just a handful of storms each year.

As a result, maintaining a consistent water supply year-round—especially during drier months when crop water demand is highest—remains a challenge. Nearly all of California's farms rely heavily on irrigation, with ongoing improvements essential to sustaining the state's global leadership in agriculture.

California's continued agricultural resilience and growth are supported by major infrastructure projects and technological innovations, backed by significant investment from both industry and government. These efforts are reinforced by legislation aimed at ensuring the long-term sustainability of the state's water resources.

Sources:

California Coastal Commission - Extreme Weather

Knights Landing Almond Orchard

Sutter County, CA

In an average year, California receives 200 million acre feet of precipitation, which is equivalent to covering the entire state in 2 feet of water.

Broadly speaking, water supplies can be subdivided into two categories: surface water and groundwater.

Surface Water Diversion Projects

Surface water comprises any above-ground water source, including natural bodies like rivers and lakes, as well as human-made reservoirs. In California, surface water supplies are highly variable across regions and over time—both within a year and from one year to the next. Particularly for farms in the southern portions of the state, including the San Joaquin River Basin, which forms the lower two-thirds of the Central Valley, most locally available surface water during drought years originates from snowpack in the Sierra Nevada. This supply alone is inadequate to meet the combined water demands of municipalities, agriculture, and other users in the region.

To address these water supply imbalances, since the mid-20th century, California has implemented major surface water diversion projects. The state is home to two significant initiatives—the State Water Project and the federally managed Central Valley Project—which together form an extensive network of canals and aqueducts redirecting water from Sierra Nevada snowmelt, rivers, lakes, and reservoirs to users throughout California. This includes transporting water from sources as far north as Shasta Lake, northwest of Redding, to farmers as far south as the Bakersfield area in the San Joaquin Basin. A system of irrigation districts allocates surface water supplies, controlling how much water is released for consumption and mitigating long-term risks to available supply and the health of the state's aquatic ecosystems.

These projects have enabled farmers to capitalize on fertile soils in the drier southern reaches of the valley by utilizing irrigation water often transported from the northern end of the state. However, this extensive redistribution has fundamentally reshaped California's hydrology, as millions of acre-feet of water are redirected annually.

Groundwater Management & Regulation

Despite significant advancements in surface water infrastructure, many regions of California continue to rely on groundwater to supplement available surface water for irrigation. Groundwater plays a crucial role in stabilizing agricultural production, particularly in drought years when surface water allocations are reduced or unavailable.

California's agriculture industry owes much of its success to the ability of farmers to tap into groundwater resources, ensuring crop viability even in the face of variable precipitation patterns. This reliance is particularly pronounced in the Central Valley, which spans approximately 20,000 square miles and is one of the most productive agricultural regions in the world. The Central Valley aquifer system is the second-largest and second-most pumped in the United States, after the High Plains (Ogallala) Aquifer in the Midwest.

Sources:

Bureau of Reclamation - Central Valley Project
California Department of Water Resources - State Water Project
California State Water Resources Control Board
Sierra Nevada Conservancy
U.S. Geological Survey - Central Valley Aquifer System
U.S. Geological Survey - Groundwater

The Sustainable Groundwater Management Act

Groundwater pumping in California reached a critical point during the historic statewide drought that began in 2011. In response, the state government enacted the Sustainable Groundwater Management Act (SGMA) in 2014. SGMA mandates that all high- and medium-priority groundwater basins be sustainably managed by 2040 and grants local agencies the authority to develop Groundwater Sustainability Plans (GSPs) to regulate groundwater use among farmers and other stakeholders. This legislation aims to mitigate adverse impacts from overdrafting aquifers, including land subsidence, water quality degradation, permanent reduction of aquifer capacity, chronic depletion of interconnected surface and groundwater systems, and seawater intrusion in coastal aquifers. SGMA represents a significant step toward mitigating long-term risks to the landscape, infrastructure, water supplies, and the overall vitality of California's agriculture industry.

In response, Groundwater Sustainability Agencies (GSAs) across the state have implemented multifaceted management plans to ensure the long-term viability of groundwater supplies for agriculture. These plans include initiatives such as groundwater recharge projects, water recycling programs, groundwater banking, inter-district water sharing agreements, public-private partnerships, technological modernization, and refinements to local water rights laws. Collectively, these actions are anticipated to reduce the need for groundwater pumping restrictions in some of the state's most agriculturally productive counties.

Sources:

California Department Of Water Resources - Sustainable Groundwater Management Act (SGMA)
Public Policy Institute of California (PPIC) - Drought & Groundwater Sustainability in California's Farming Regions

Groundwater Sustainability Agencies are Formed

June 2017

Groundwater Sustainability Plans are Developed

January 2020

Groundwater Sustainability Plans are Implemented

2020-2040

California's Groundwater Supply Reaches Sustainable Levels

2040

Technologies Driving Water Conservation and Irrigation Efficiency

Coinciding with the passage and implementation of the Sustainable Groundwater Management Act (SGMA), there has been a rapid increase in the adoption of various water-saving technologies, as well as significant investment in research and development geared toward long-term water sustainability.

Drip irrigation, once considered a cutting-edge practice, has become the industry standard for irrigating much of California's permanent and specialty cropland. Drip systems can be installed both above and below ground, delivering precise amounts of water directly to the crop's root zone, resulting in significant water savings over more conventional irrigation methods. These systems can be automated to operate on specific schedules based on the crop's water demands at different times of the year, helping to mitigate heat and water stress during hot and dry periods, all while minimizing water loss through runoff or evapotranspiration. Often, drip systems are used in conjunction with other on-farm technologies, such as weather stations and subsurface soil moisture probes, to ensure that irrigations are timed and delivered to best meet the crop's water needs.

Additionally, California farmers have enhanced their water-saving capabilities by planting tree and vine crops on drought-resistant rootstocks, incorporating innovations in plant genetics to breed drought-tolerant varieties, employing soil management strategies that improve organic matter and water-holding capacity, and, when necessary, implementing deficit irrigation strategies. These approaches, along with the latest advancements in irrigation and water management technology, have contributed to significant improvements in water-use efficiency over the past few decades.

These efforts are heavily incentivized within the agriculture industry, thanks in large part to commitments from leading industry associations representing growers' interests. For example, the Almond Board of California committed in 2018 to reducing the amount of water used to grow a pound of almonds by an additional 20% by 2025. As of 2022, farmers had already achieved three-quarters of that goal.

Sources:

Almond Board of California - 2024 Almond Almanac
Pacific Institute - Smart Irrigation Scheduling
The New Humanitarian - California Almond Growers Look to Increase Water Savings

Sustainable Farmland Fund

Shaping the Future: Trends in California's Climate and Agriculture's Water Use

When examining California agriculture's history of water use, the influence of modern infrastructure, technological innovation, and agronomic advancements has been undeniably positive regarding agriculture's overall water footprint. From 1980 to 2015, agriculture's share of overall freshwater use statewide decreased by approximately 14%, while the total combined value of all harvests increased by 38%. Farmers in California have been among the most willing in the country to adopt new water-saving measures. Thanks to their efforts, the state produces nearly twice as much food as it did four decades ago, while using only about 10% more water.

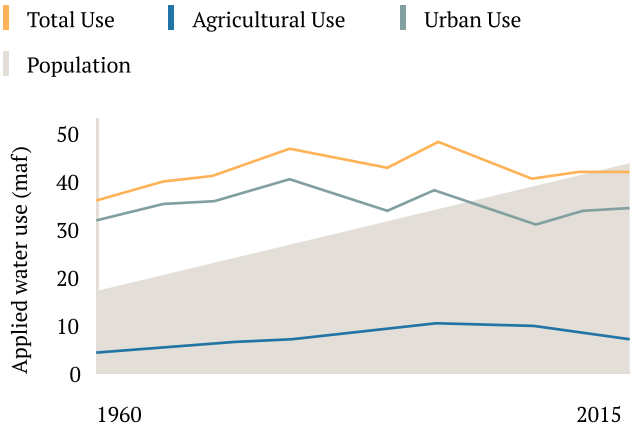
Despite this progress, challenges remain in ensuring an adequate water supply for California farms, which are crucial to the future of agriculture. Over the past decade, climate change has led to prolonged and exacerbated dry spells, wildfires, and heat waves across California. The last ten years have included several of the warmest years on record, as well as two multi-year droughts, the most recent occurring between 2021 and 2022. While these challenges are significant, California's agricultural sector has remained resilient, responding with innovation and adaptation.

Importantly, California is not alone in facing these challenges—climate change is impacting agricultural regions across the world, from Europe to South America, forcing farmers everywhere to rethink how they grow food.

Sources:

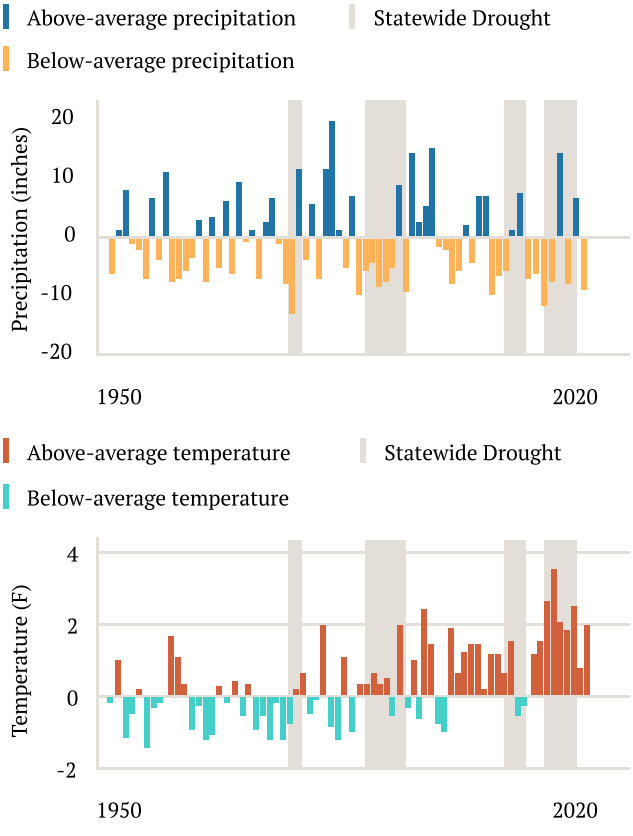
Pacific Institute - Urban and Agricultural Water Use in CA, 1960-2015
Public Policy Institute of California - Droughts in California
Public Policy Institute of California (PPIC) - Policy Brief: Drought & California Agriculture
Public Policy Institute of California - Water Use in California
Water Education Foundation - California Water

Both Agricultural and Urban Water Use Have Fallen Over the Past Two Decades



Source: Water Use: California Department of Water Resources; Population: Department of Finance.

Droughts Are a Recurring Feature of California's Climate. Warming is Making Them Worse.



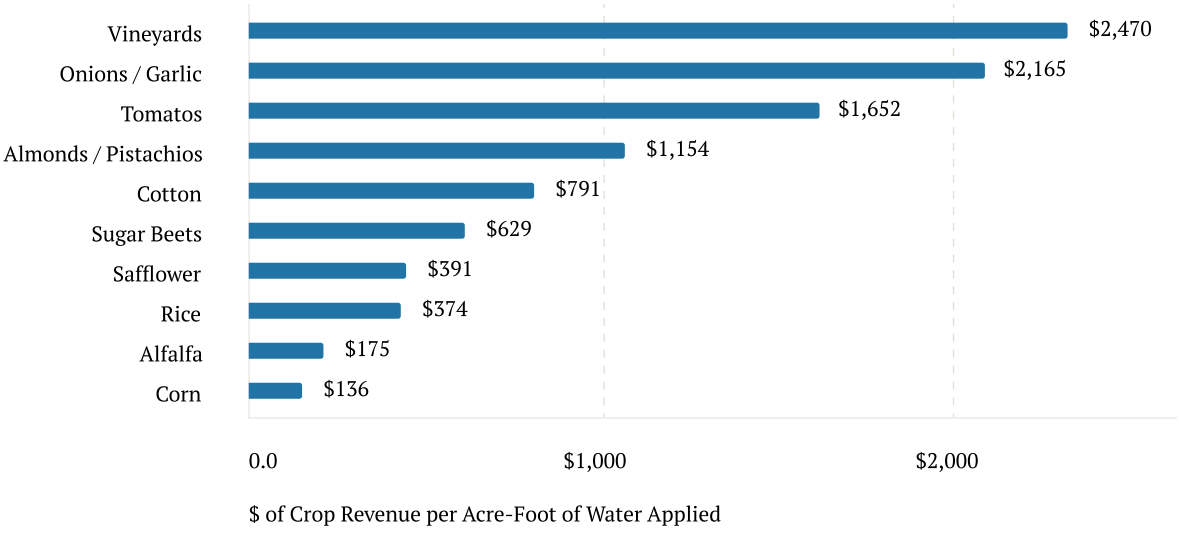
Source: Public Policy Institute of California - Droughts in California

Unlike many other agricultural regions, however, California benefits from a well-developed infrastructure, advanced irrigation systems, and a long history of successfully managing water constraints. The state's high-value crops, investment in research and technology, and ability to scale sustainable practices give it a unique advantage in navigating the evolving agricultural landscape. Rather than being a region to avoid, California stands at the forefront of global agricultural innovation, demonstrating how a world-class farming sector can thrive in the face of 21st-century environmental pressures.

Given the outsized contributions of California's farms to the U.S. food supply and economy, the state's agricultural sector remains at the forefront of adaptation.

This drive for adaptation has led California's farmers to rethink how they use water, prioritizing efficiency and economic returns. In response to these challenges, they have emphasized the production of higher-value crops to maximize revenue per unit of water applied. Permanent specialty crops—such as tree nuts, grapes, and other fruits—have seen their share of total irrigated cropland acreage increase from 16% in 1980 to 33% in 2015 statewide, and from 21% to 45% in the southern Central Valley during the same period. This shift represents a move away from more conventional crops, such as row crops like cereal grains, which are less water-efficient in California's landscape. Ultimately, this emphasis enhances the economic resilience of the state's agricultural sector, which generates over $50 billion in annual revenue and employs more than 420,000 people.

Economic Productivity of Water Farming



Sources: FarmTogether Research; Pacific Institute for Studies in Development, Environment, and Security

California's ability to adapt to 21st-century challenges is underpinned by ongoing investment in agricultural innovation and policy-driven sustainability efforts. The state continues to lead in precision irrigation, soil health management, and climate-resilient crop development, ensuring long-term viability despite increasing environmental pressures. Strong public-private partnerships and industry-backed sustainability commitments further reinforce California's role as a global model for resilient agriculture and a key driver of the U.S. food economy.

Sources:

California 100 - Agriculture and Food Systems in California
California EDD - Agricultural Employment in California
CDFA - California Agricultural Production Statistics
Public Policy Institute of California (PPIC) - Policy Brief: Drought and California's Agriculture
Public Policy Institute of California - Water Use in California

Energizing California Agriculture's Growth: A Legacy of Technological Innovation

California has long been known as the world's leading hub of technological innovation, and this reputation extends to its agriculture industry. The state attracts more investment in farm technology than any other region, positioning its farms at the forefront of innovation.

According to AgFunder's 2024 AgriFoodTech Investment Report, the United States remains the dominant player in agrifood technology investment, accounting for 30% of global venture capital funding in 2023. California alone represents a significant share of this funding, reinforcing its status as the nation's leader in agricultural technology and innovation.

California's agricultural technology sector continues to drive innovation across every stage of farming and land management. From land preparation and crop protection to irrigation, harvesting, and post-harvest storage, advancements in precision agriculture, automation, and AI-driven solutions are transforming the industry. Autonomous machines designed to address labor shortages are becoming increasingly integrated into harvesting operations, particularly for high-value specialty crops such as tree nuts and vineyards.

> Key areas of new technology development in farming include robotics, artificial intelligence, biotechnology and genomics, remote sensing technologies such as drones and satellite imagery, as well as sensors and IoT technologies to monitor conditions and automate processes in the field.

Complementing this vibrant startup ecosystem is an unparalleled network of research and field-testing institutions. The University of California's Agriculture and Natural Resources division operates several Research and Extension Centers across the state, such as the Kearney Agricultural Research and Extension Center, renowned for its leadership in developing new fruit, nut, and grape varieties, as well as innovative cultural and irrigation practices.

Additionally, the University of California Cooperative Extension has been collaborating with farmers, ranchers, and environmentalists for over a century to identify concerns and innovate solutions that support productive agriculture, healthy ecosystems, and prosperous communities throughout California.

These institutions, along with various private research entities, receive diverse funding from public and private sources. Collectively, they engage in deep research, technology development, field testing, and extension services to ensure that new technologies are effectively deployed in the field, thereby maintaining California's leadership in agricultural innovation.

Sources:

AgFunder - 2024 AgFunder AgriFoodTech Investment Report
UC Davis College of Agricultural and Environmental Sciences Cooperative Extension
University of California Agriculture and Natural Resources

A Leader in Community Engagement & Sustainability

California continues to lead national progress in agricultural sustainability, encompassing both social and environmental dimensions. Agriculture forms the bedrock of many California communities and local economies, and the strength and continued development of these communities weigh heavily in the state's industry's progress and evolution

Employing the largest number of farmworkers in the nation, California has implemented progressive policies governing worker compensation, occupational health and safety, immigrants' rights, occupational training, and housing to maintain a healthy, engaged, and productive labor force. For instance, the state has made significant investments in farm-to-school programs, allocating approximately $86 million since 2021, benefiting nearly half of all California students. In 2024 alone, the California Department of Food and Agriculture (CDFA) awarded an additional $52.8 million to 195 farm-to-school projects across the state.

Beyond government mandates, many of California's leading agricultural companies exceed requirements, driven by consumer interest in responsibly grown food. This approach has become a competitive advantage in the industry. At the local level, California is also among the country's most engaged states in agricultural community-building events, peer-to-peer learning opportunities for farmers, farm safety and skills training, and youth education programs.

Sources:

Berkeley Food Institution - Food Policy News
CDFA - 2023-24 California Farm To School Incubator Grant Program Award

Golden Citrus Orchard
Tulare County, CA

A Leader In Certified Organic Produce & Ingredients

California's leadership in sustainable agriculture is particularly evident in its significant share of the certified organic produce and ingredients market, as well as its unique support systems for organic farmers. The state leads the nation in the number of organic farms, land under organic production, and organic sales. In 2022, California accounted for 36% of the total U.S. value of organic products sold, amounting to approximately $3.6 billion. More recent state-level data for 2023 and 2024 has not yet been released, as organic sales figures are typically published on a two-year reporting cycle.

> Organic certified cropland acreage in California totaled over 1.8 million in 2022 - a nearly 250% increase from 2008. This acreage now produces nearly $11.1 billion worth of organic crops by total cash receipts, up more than 20% since 2018.

California is the only state with its own state-level organic program authorized to assume the USDA's National Organic Program authority, allowing it to regulate the evolution of organic standards and practices within the state. The California State Organic Program (SOP) provides oversight, including legislative reviews and advisory committees focused on certification, labeling, and marketing of organic products.

Additionally, the state boasts a robust network of certifiers, led by the non-profit California Certified Organic Farmers (CCOF). Dedicated to advancing organic agriculture, CCOF offers certification and auditing services, transition planning support for farmers switching to organic production, and grant opportunities through its foundation. In 2023, the CCOF Foundation granted over $1 million to organic producers, including $125,000 to Future Organic Farmers, $200,000 to farmers transitioning to organic, and $705,000 to farmers in crisis. CCOF is also deeply involved in youth sustainability education, marketing activities, advocacy, and promotions, further strengthening California's leadership in organic agriculture.

Beyond current leadership, California has set ambitious long-term goals to further expand organic production. In its 2022 Scoping Plan for Achieving Carbon Neutrality, the state outlined plans to increase organic production to 20% of cultivated farm acres by 2045. Intermediate targets include having 10% of annual and perennial crops certified organic by 2030 and 15% by 2038.

In addition to state-level initiatives, the USDA's Natural Resources Conservation Service (NRCS) in California is offering federal funding through the Organic Transition Initiative (OTI). This program provides technical support, market development resources, and financial assistance to help producers transition to certified organic production.

These strategic investments and policy commitments reinforce California's position as the national leader in organic agriculture, ensuring continued growth in sustainable farming practices and strong market support for organic producers.

Sources:

CCOF 2023 Impact Report
CDFA Organic Transition Program
NASS USDA 2022 Census
NCRS Organic Transition Initiative
Fresno State Digital Agriculture Solution Hub
The Organic & Non-GMO Report
UC Davis Agriculture and Natural Resources

The Future Outlook for Agriculture in California

California's agricultural sector stands at a pivotal juncture, facing significant challenges yet poised for continued leadership in U.S. and global agriculture. The state's history of innovation and resilience suggests it will remain a critical force in the industry.

From an investment perspective, aligning with California's unique agricultural opportunities while addressing its challenges is essential. The state boasts some of the nation's most valuable cropland, with land values increasing since 2020. However, factors such as water rights significantly influence property values and are likely to shift the landscape of highest-producing farmland toward areas of greater water security. Climate change, international commodity market competition, and increases in the costs of farming driven by global macroeconomic conditions all present further hurdles.

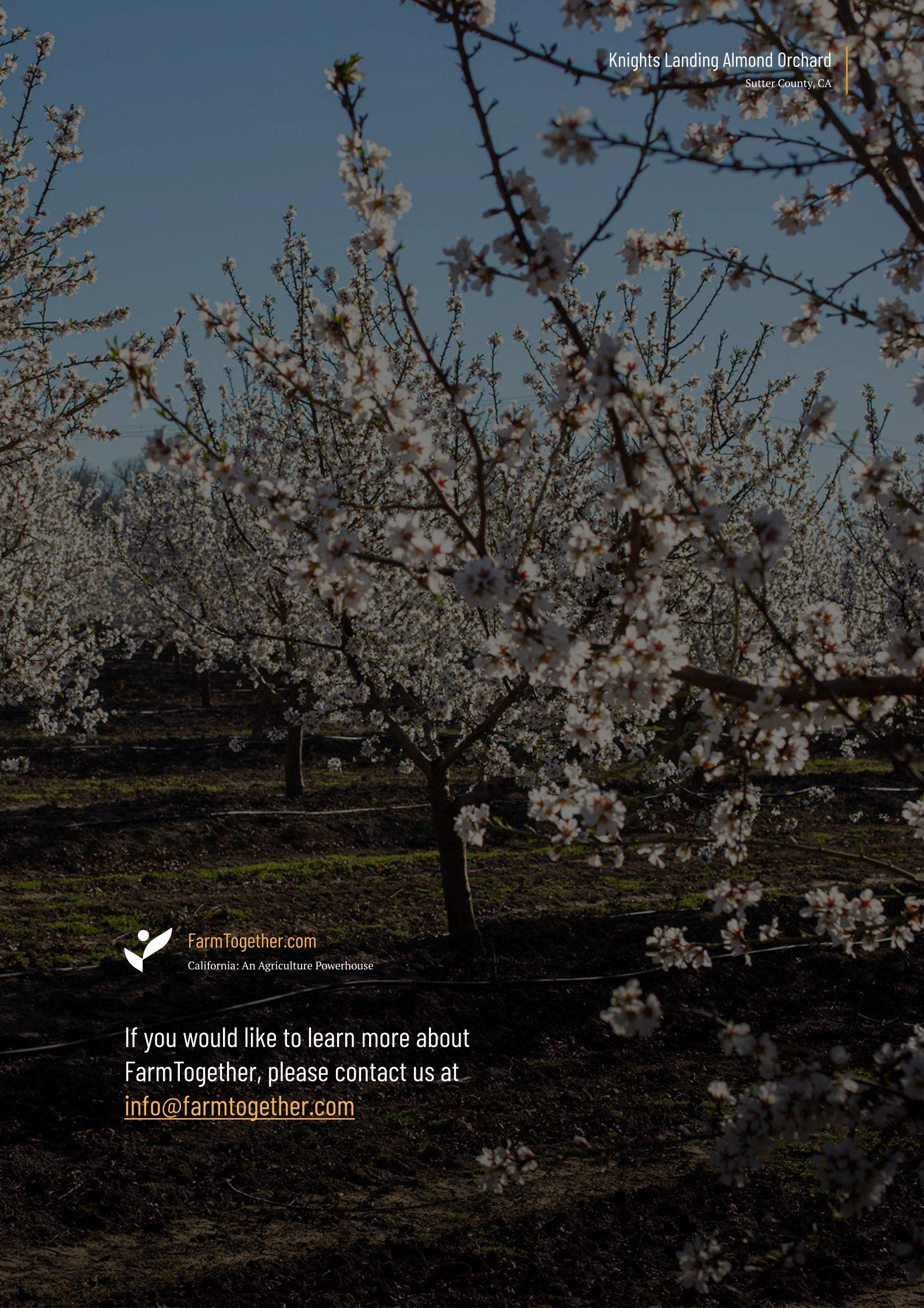
Despite these challenges, California offers abundant opportunities for profitable farming, arguably more than any other state. The influx of investment in resource-saving and productivity-enhancing technologies provides farmers with tools to optimize land use and confront 21st-century challenges. Support from public, private, and non-profit institutions dedicated to agriculture further bolsters the industry's future.

This wealth of opportunity exists within the world's most productive and diverse agricultural region, supported by a unique combination of climate and landscape factors that have sustained exceptional production for centuries.

In summary, while challenges persist, California's agricultural sector is well-positioned to adapt and thrive, continuing its legacy of innovation and productivity.

Vista Luna Organic Vineyard

San Joaquin County, CA



Knights Landing Almond Orchard
Sutter County, CA

FarmTogether.com
California: An Agriculture Powerhouse

If you would like to learn more about FarmTogether, please contact us at info@farmtogether.com

About FarmTogether

FarmTogether is a farmland investment firm providing investors with creative capital solutions in real assets.

Our offerings are curated by an expert team with cross-industry experience across farmland investing, asset management, and tech demonstrated by $2.1B+ of collective capital deployed[3]. Through FarmTogether's differentiated investment philosophy and process, robust network of industry relationships, and proprietary sourcing engine, Terra, our team is able to efficiently source a diverse range of high-quality farmland deals across the US. FarmTogether specializes in high-value permanent crop acquisitions across prime growing regions of the country, a highly complex market with significant upside potential.

FarmTogether's current portfolio is diversified across a variety of metrics, including geography, commodity, deal structure, and investment strategy to fulfill our clients' unique investment objectives. FarmTogether currently serves accredited and institutional investors via the following investment solutions: Separately Managed Accounts, the FarmTogether Sustainable Farmland Fund, Sole Ownership Bespoke Offerings*, Single-Asset Crowdfunded Offerings, and Tenancy in Common Offerings*. *These products may be eligible for a 1031 exchange.

Endnotes

1 Collective capital deployed includes capital invested prior to employment at FarmTogether.

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Investing in securities or farmland investments (the "Investments") listed on FarmTogether pose risks, including but not limited to market risk, credit risk, interest rate risk, and the risk of losing some or all of the money you invest. Before investing you should: (1) conduct your own investigation and analysis; (2) carefully consider the investment and all related charges, expenses, uncertainties and risks, including all uncertainties and risks described in offering materials; and (3) consult with your own investment, tax, financial and legal advisors. Such Investments are only suitable for accredited investors who understand, and are willing and able to accept, the high risks associated with private investments.

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> Investors should carefully consider the investment objectives, risks, charges, and expenses of any security before investing. The private placement memoranda for FarmTogether's securities contains this and other information about the securities and can be obtained by emailing info@farmtogether.com or by referring to the offering pages on FarmTogether.com. The private placement memorandum should be read carefully before investing in any FarmTogether security.