



Invisible Empire:

An Introduction to Southern California's Food System



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What is a Food System?

Food is unique among all products created, bought, sold, traded, shipped, and consumed: food is life itself.

Food nourishes our bodies. We are what we eat: our bodies convert mother’s milk, tacos, chocolate, apples, bread, salads, and hamburgers into the proteins, fats, carbohydrates, vitamins, minerals, and water we need to keep our engines running.

Food is culture. Food connects us to one another, to our families, cultures, and histories. For many of us, the memory of Grandma’s enchiladas brings nostalgic smiles to our faces. Food systems are visible in the cuisines, lingo, traditions, and products that are expressions of the history, culture, and ecology of specific communities.

Food is a major part of our economy. Food system workers grow, produce, and catch our food. They harvest, slaughter, process, mix, brew, freeze, and bake our food. They package, store, distribute, stock, sell, and deliver our food. They take our orders, prepare, cook, and serve our food. They cater our weddings, work at our favorite hangouts, and add to a lifetime of memories. They clean up our messes, wash our dishes, and dispose of our food. Every day of our lives is impacted by food system workers.

A “food system” refers to all the people (farmers, bakers, policymakers), resources (land, water), and processes—food production, processing, packaging, distributing, selling, preparing, and disposing—that move food from farm and ocean to our plates. Food systems operate at multiple linked scales, from local, state, and regional, to national and global. **In this brief, food system refers to the people, resources, and processes engaged in these activities within Southern California.** Each component of the food system, and each county in Southern California, has an important role to play in re-imagining a more equitable, sustainable, resilient, and healthy food system for the region.

And yet, for a region of national—and [global](#)—significance, remarkably little is known, discussed, or highlighted about the challenges of *feeding Southern California*. We do not lack for pressing issues—the state of the economy, traffic, air pollution, homelessness—in Southern California, but we take for granted that every food we want, whenever we want it, will continue to be available to us. Where does our food come from? How much—and what kind of—food does Southern California still produce? What do we really know about Southern California’s food system? ***If where our food comes from suddenly mattered, would Southern California be prepared with a reliable, safe, and abundant food supply?***

This brief review of Southern California’s food system highlights challenges that are endemic to our national food system. The good news is that the seven Southern California counties still do grow a substantial amount of citrus fruits, avocados, strawberries, dates, and other fruits, lettuces, carrots, broccoli, and other vegetables, as well as producing milk and eggs. On the other hand, the majority of remaining farmland is used to grow hay to feed livestock in the region (as well as the rest of California, the U.S., and exported to the world), and inedible horticultural products make up the second largest sales category. Just 12% of farms accounted for 95% of total agricultural sales, while

72% of farms accounted for less than 1% of total agricultural sales. Food system jobs employ over 1.3 million people in Southern California, but food system jobs, particularly service sector jobs, receive some of the lowest wages of any occupational category. Diet-related health problems and food insecurity are frequently correlated with ZIP code, race, and ethnicity. And for a region that needs to focus on the long-term challenge of feeding its population, the top material in our municipal solid waste stream is food.

Like everyone else, Southern Californians are vulnerable to climate change disasters, an epidemic of diet-related health problems, chronic food insecurity, and extraordinary economic pressures exerted on small and midsize farms, fisheries, and food businesses. It’s the *scale* of the challenge confronting the region that is novel.

Drawn by the allure of a temperate [Mediterranean climate](#), [economic opportunities](#), strong [educational institutions](#), the magnetic appeal of [Hollywood](#), and much more, the Southern California lifestyle has attracted many millions of people to call it home:

- » Southern California has the most populated county in the country, Los Angeles, and 4—Los Angeles, San Diego, Orange, and Riverside—of the 10 most populated counties in the country;
- » Los Angeles County also has the highest gross domestic product of any county in the country, and Orange and San Diego counties are ranked 9th and 10th (Table 1).

Table 1: Population and GDP in Southern California, 2022

County	Population	U.S. Rank	Gross Domestic Product	U.S. Rank
Los Angeles	9,721,138	1	\$950,734,913,798	1
San Diego	3,276,208	5	\$307,765,603,668	10
Orange	3,151,184	6	\$327,057,590,999	9
Riverside	2,473,902	10	\$120,093,491,954	45
San Bernardino	2,193,656	14	\$127,572,977,532	39
Ventura	832,605	75	\$64,883,865,244	77
Imperial	178,713	304	\$8,867,155,169	381
Southern California	21,827,406		\$1,906,975,598,365	

Sources: Population - U.S. Census Bureau; Gross Domestic Product - FRED (U.S. Bureau of Economic Analysis).

- » Entertainment, aerospace, manufacturing, biosciences, fashion, warehousing, and many more industries now dominate the regional economy, but ***Southern California was once an agricultural juggernaut for the country.***



As Surls and Gerber recount in [From Cows to Concrete: The Rise and Fall of Farming in Los Angeles](#):

“Concrete covers the land where cows grazed and crops thrived. Under the pavement and parking lots of the vast urban landscape lie thousands of acres of once-productive farmland. Farming was at the center of life in Los Angeles from the time of its founding in 1781, an aspect of local history important well into the mid-twentieth century, when Los Angeles County was the top agricultural county in the nation...”

Over the decades, Los Angeles grew from a small farming community into an agricultural powerhouse. Farmers experimented with a multitude of crops, from fruits and vegetables, to hemp, cotton, and flowers. Livestock was important too, with a major stockyard rivaling those in Chicago and Omaha, hundreds of dairies, and poultry ranches. Some enterprises faded away, while others thrived, influencing L.A.’s development as a metropolitan and cultural center. Local agriculture reached its apex in the four decades from 1909 to 1949, when Los Angeles County was the top farm county in the United States.”

Land use changes evident in Los Angeles County have also impacted the other Southern California counties: cropland and pastureland in Orange, Riverside, San Bernardino, San Diego, and Ventura counties significantly decreased after World War II. Imperial County is an anomaly among Southern California counties: it has the smallest population and the most land in agriculture in the region.

WHERE DOES OUR FOOD COME FROM?

In most of our lived experiences, we have not had to answer the question—**Where does our food come from?**—with specificity, although our ancestors certainly could. For example, as recently as 1940, a Los Angeles Chamber of Commerce publication cited in *From Cows to Concrete* claimed “Nearly half of the Los Angeles food supply originates on farms within fifty miles of the city.”

Why does this question matter today? After all, America’s food and beverage production capacity—farms, fisheries, processors, and manufacturers—is enormous, abundant, and diverse. [Food imports](#) from around the world have steadily increased. Our food distribution systems are timely and efficient. Our grocery stores and restaurants are stocked, affordable, and convenient for most people. Even our waste disposal systems are a flush and weekly pickup away.

Accumulating evidence indicates that we are entering a new era: Human activities—including food system activities—are undermining Earth’s life support systems and this is triggering catastrophic changes. Due to linked challenges that are simultaneously taking place everywhere across the planet, we may not be able to reasonably expect that every food we want will be easily available for us to buy year-round. Harrowing news has become the norm:

- » [2023 was the warmest year on record](#), and the [10 warmest years](#) on record were 2023, 2016, 2020, 2019, 2015, 2017, 2022, 2021, 2018, and 2014. Climate change increases the frequency and severity of [weather-related disasters](#) like wildfires and drought, with cascading impacts on ecosystems, infrastructure, human health, and food production systems. Food system activities—cultivating crops and raising livestock, land use changes, energy and resource use throughout supply chains, and the generation of waste—are [major drivers of](#)

[greenhouse gas emission](#). Food system activities are also particularly vulnerable to climate change, as crops, livestock, and aquatic species have distinct growing conditions that can be disrupted by changes in temperature and habitat, loss of seasonality, invasive pests, and more.

- » The [sixth United Nations Intergovernmental Panel on Climate Change Synthesis Report](#) (IPCC) estimates that Earth will cross the critical warming threshold of 1.5° Celsius (2.7° Fahrenheit) above preindustrial levels in the *early 2030s*. Average temperatures have already increased by 1.1° Celsius (2.0° Fahrenheit) above preindustrial levels with widespread observed changes:

“Human-caused climate change is already affecting many weather and climate extremes in every region across the globe. This has led to widespread adverse impacts on food and water security, human health and on economies and society and related losses and damages to nature and people. Vulnerable communities who have historically contributed the least to current climate change are disproportionately affected.”

Since **“There is a [rapidly closing window of opportunity to secure a liveable and sustainable future for all](#),”** (emphasis added) the IPCC strongly encourages “Deep, rapid and sustained mitigation and accelerated implementation of adaptation actions in this decade.

- » The [Fifth National Climate Assessment](#) predicts disruptions to food systems “in ways that reduce the availability and affordability of nutritious food, with uneven economic impacts across society.”
- » The [World Resources Institute](#) estimates that we will need to produce 56% more crop calories to feed 10 billion people in 2050 compared to 2010 to avoid a *global food gap* that will disproportionately impact vulnerable societies. Since the best agricultural land is already in use around the world, we will have to bridge this gap by becoming enormously more productive, all while reducing the greenhouse gas contributions of food systems.

If—when—major food production regions around the planet experience recurring and cumulative challenges, will we continue to be underprepared?

So where does our food come from? The short answer is everywhere. More specifically, we know that most domestic fruits, vegetables, and nuts are grown in California’s Central Valley (a significant amount of dairy products are also produced in the Central Valley), while most domestic grains, livestock, and dairy products are grown and raised in the Midwest. We also know that Canada and Mexico are the top sources of [food imports](#) to the United States.

The scales of the Midwest and Central Valley are enormous: The 12 Midwestern states accounted for 34% of U.S. farms in 2022, 37.5% of land in agriculture, and about 47% of sales. The average Midwestern farm is larger than the average U.S. farm (507 acres compared to 463 acres), and average sales per Midwestern farm are more than \$78,000 higher than the national average (\$391,020 compared to \$285,762). Centrally Valley farms only accounted for 1.5% of U.S. farms, but 6.8% of U.S. agricultural sales in 2022. Central Valley farms have the highest average sales of any region of the country because of the high value of the crops they produce (as well as dairy production): \$1,149,306 compared to \$285,762 (Table 2).

Table 2: Scale of Midwest and Central Valley, 2022

State	Farms	% of US Farms	Avg. Size of Farms	% of Avg. Size of Farms	Acres	% of US Acres	Sales	% of US Sales	Avg. Sales	% of Avg. US Sales
U.S.	1,900,487	100.0%	463	100.0%	880,100,848	100.0%	\$543,087,166,000	100.0%	\$285,762	100.0%
Midwest	650,496	34.2%	507	109.5%	329,862,425	37.5%	\$254,357,016,000	46.8%	\$391,020	136.8%
Iowa	86,911	4.6%	345	74.5%	29,978,165	3.4%	\$43,935,488,000	8.1%	\$505,523	176.9%
Nebraska	44,479	2.3%	989	213.5%	43,975,693	5.0%	\$29,413,398,000	5.4%	\$661,287	231.4%
Minn.	65,531	3.4%	388	83.8%	25,442,625	2.9%	\$28,482,097,000	5.2%	\$434,635	152.1%
Illinois	71,123	3.7%	1,149	248.2%	26,292,041	3.0%	\$26,417,147,000	4.9%	\$1,154,747	404.1%
Kansas	55,734	2.9%	804	173.6%	44,794,702	5.1%	\$23,985,145,000	4.4%	\$430,350	150.6%
Indiana	53,599	2.8%	272	58.8%	14,602,240	1.7%	\$18,029,033,000	3.3%	\$336,369	117.7%
Wisc.	58,521	3.1%	236	50.9%	13,784,678	1.6%	\$16,698,780,000	3.1%	\$285,347	99.9%
Ohio	76,009	4.0%	180	38.8%	13,652,346	1.6%	\$15,412,137,000	2.8%	\$202,767	71.0%
Missouri	87,887	4.6%	308	66.4%	27,026,243	3.1%	\$14,697,022,000	2.7%	\$167,226	58.5%
S. Dakota	28,299	1.5%	1495	322.8%	42,304,601	4.8%	\$12,935,225,000	2.4%	\$457,091	160.0%
Michigan	45,581	2.4%	208	44.9%	9,472,069	1.1%	\$12,212,745,000	2.2%	\$267,935	93.8%
N. Dakota	25,068	1.3%	1537	332.0%	38,537,022	4.4%	\$12,138,799,000	2.2%	\$484,235	169.5%
California	63,134	3.3%	383	82.7%	24,190,604	2.7%	\$59,005,675,000	10.9%	\$934,610	327.1%
Central Valley	31,997	1.7%	403	87.1%	12,906,752	1.5%	\$36,774,333,000	6.8%	\$1,149,306	402.2%
Fresno	4,427	0.2%	375	80.9%	1,659,451	0.2%	\$6,995,967,000	1.3%	\$1,580,295	553.0%
Tulare	3,713	0.2%	353	76.2%	1,310,768	0.1%	\$6,356,368,000	1.2%	\$1,711,922	599.1%
Kern	1,691	0.1%	1,419	306.4%	2,399,512	0.3%	\$5,013,363,000	0.9%	\$2,964,733	1,037.5%
Merced	2,047	0.1%	426	92.0%	872,326	0.1%	\$3,979,951,000	0.7%	\$1,944,285	680.4%
San Joaq.	3,439	0.2%	251	54.1%	862,356	0.1%	\$3,030,490,000	0.6%	\$881,213	308.4%
Stanislaus	3,455	0.2%	198	42.8%	685,145	0.1%	\$2,919,196,000	0.5%	\$844,919	295.7%
Kings	862	0.0%	688	148.6%	593,199	0.1%	\$2,133,236,000	0.4%	\$2,474,752	866.0%
Madera	1,255	0.1%	553	119.3%	693,611	0.1%	\$2,005,144,000	0.4%	\$1,597,724	559.1%
Yolo	795	0.0%	602	130.0%	478,555	0.1%	\$658,725,000	0.1%	\$828,585	290.0%
Sacram.	1,118	0.1%	230	49.6%	25,6617	0.0%	\$568,293,000	0.1%	\$508,312	177.9%
Colusa	715	0.0%	652	140.7%	465,843	0.1%	\$552,806,000	0.1%	\$773,155	270.6%
Glenn	1,084	0.1%	447	96.5%	484,172	0.1%	\$548,427,000	0.1%	\$505,929	177.0%
Butte	1,667	0.1%	233	50.3%	388,383	0.0%	\$514,086,000	0.1%	\$308,390	107.9%
Solano	712	0.0%	477	103.0%	339,476	0.0%	\$465,237,000	0.1%	\$653,423	228.7%
Sutter	890	0.0%	290	62.6%	257,995	0.0%	\$446,473,000	0.1%	\$501,655	175.5%
Yuba	760	0.0%	211	45.6%	160,418	0.0%	\$253,797,000	0.0%	\$333,943	116.9%
Tehama	1,154	0.1%	544	117.5%	627,913	0.1%	\$195,732,000	0.0%	\$169,612	59.4%
Shasta	1,120	0.1%	255	55.2%	286,114	0.0%	\$85,656,000	0.0%	\$76,479	26.8%
Placer	1,093	0.1%	78	16.8%	84,898	0.0%	\$51,386,000	0.0%	\$47,014	16.5%

Our national dependence on the Midwest and Central Valley becomes problematic when risks to these regions intensifies. The Fifth National Climate Assessment projects that “Changes in precipitation extremes, timing of snowmelt, and early-spring rainfall are expected to pose greater challenges for crop and animal agriculture, including increased pest and disease transmission, muddier pastures, and further degradation of water quality” in the [Midwest](#). The National Climate Assessment and [California’s Fourth Climate Change Assessment](#) both project reduced snowpacks, groundwater depletion, increased drought, drier soils, more extreme heat, and more suburban expansion, resulting in food production losses and increased food insecurity throughout the [Southwest](#), including the Central Valley. A recent [New York Times analysis](#) of U.S. groundwater supplies found that many counties in the Midwest and Central Valley (and other regions of the country) were using freshwater “like there’s no tomorrow.”

As climate—and other—challenges increasingly impacts food production regions [around the world](#)—including the Midwest and Central Valley—**what problems might Southern California experience providing a reliable, safe, and abundant food supply for over 21 million people?**

Seven Common Food System Challenges

Using data and analyses from a variety of sources, we can begin to understand what Southern California’s food system now looks like, if it is moving in a just, sustainable, and resilient direction, and where we need to intervene through policy, investment, education, technical assistance, and other change levers.

For example:

- » **Food production trends**, including the number of farms and fishing businesses, acres of land in agriculture, pounds of food produced or caught, and the value of agriculture and seafood sales, can help us understand strengths and vulnerabilities in our food supply.
- » **Economic trends**, including food system employment, number of businesses and business sales, food system wages, and market concentration within industries can help us understand the viability of food system activities in the region.
- » **Health trends**, including the prevalence of diet-related health problems can help us understand how are Black, Hispanic, Indigenous, and other people are disproportionately impacted.
- » **Environmental trends**, including greenhouse gas emissions by food system sector and climate change impacts can help us understand where we need to adapt practices, policies, and infrastructure.
- » **Equity trends**, including the prevalence and persistence of food insecurity can help us understand historic social structures that limit opportunities and resources based on race, ethnicity, income, and geography.

Taken together, these trends demonstrate seven food system challenges impacting every region of the world, including Southern California, requiring proactive attention:

- 1. Lack of Planning for Long-Term Food Supplies:** Unlike other complex systems that provide essential goods and services, like energy and water, **no one is currently in charge of planning and preparing for healthy, reliable, and resilient long-term food supplies.** The de facto response is to imagine that “the market”—with some level of government regulation, oversight, and investment—will continue to generate enough supply to meet demand.
- 2. Risks to Long-Term Food Production:** Climate change (including freshwater stress); land use changes; lack of equitable access to land and fishing grounds for Black, Hispanic, Indigenous, and others; and a range of contaminants (e.g., [antibiotic resistant bacteria](#), [pesticides/chemicals](#), [plastics](#), [PFAS](#), and [zoonotic diseases](#)) all pose a risk to long-term food production
- 3. Challenges to Farm, Fishery, and Food Business Viability:** [Market concentration](#)—mergers and acquisitions among food system businesses—limits opportunities for small and midsize farms, fishing operations, and other food businesses in Southern California to succeed.
- 4. Ongoing Exploitation of Food System Workers:** Food system workers, particularly retail and food service workers and farm-workers, experience some of the *lowest wages* of any occupational category in Southern California, as well as limited benefits.
- 5. Limited Progress Reducing Diet-Related Health Problems:** [Poor diet](#) is the leading cause of death in the United States. Many diet-related health trends continue to move in the wrong direction. For example, [diabetes prevalence](#) and the percentage of adults and children who are [overweight or have obesity](#) have increased. The United States also has the [lowest life expectancy](#) of any other wealthy country. The amount of food we eat and the *composition of ingredients* in our food have changed: [ultra-processed foods](#)—high in sugar, fat, sodium, and artificial flavors—comprise an estimated 58% of caloric intake in the United States.
- 6. Limited Progress Reducing Food and Nutrition Insecurity:** Black, Hispanic, Indigenous, and other communities of color are disproportionately burdened with food and nutrition insecurity and low food access throughout America and Southern California.
- 7. Limited Progress Reducing Wasted Food:** We estimate that food waste makes up about 20.5% (3.2 million tons) of Southern California’s municipal solid waste stream— the largest single material in the waste stream. When food is wasted, so are all of the resources that went into producing it. Food waste is also a major contributor to greenhouse gas emissions.

This food system narrative briefly summarizes these challenges. Data visualizations, maps, videos, and more are available on [SoCal Earth](#).

Lack of Planning for Long-Term Food Supplies

Today, most agricultural production in Southern California takes place in the isolated stretch of Imperial County from the Salton Sea to the Mexican border, around southwestern Ventura County, and in pockets throughout Riverside and San Diego counties. In 2022, Southern California accounted for approximately 6.5% of the total U.S. population, but only about 0.6% of farms, 0.2% of farmland, and 1.5% of agricultural product sales (Table 3). The average size of farms in Southern California (245 acres) is much smaller than the U.S. average (463 acres). The exception is Imperial County, where farms are much bigger—and sales are much higher—than the national average. In fact, Imperial County had the *highest* average sales of any county in California.

Table 3: Scale of SoCal Farms, 2022

County	Farms	% of US Farms	Avg. Size of Farms	% of Avg. Size of US Farms	Acres	% of US Acres	Sales	% of US Sales	Avg. Sales	% of Avg. US Sales
SoCal	10,482	0.55%	245	52.9%	1,721,994	0.2%	\$8,269,602,000	1.5%
Imperial	482	0.02%	1,528	330.0%	736,586	0.08%	\$3,046,146,000	0.6%	\$6,319,805	2,211.6%
Ventura	1,812	0.09%	166	35.9%	300,567	0.03%	\$2,128,934,000	0.4%	\$1,174,908	411.1%
Riverside	2,424	0.13%	149	32.2%	361,970	0.04%	\$1,273,498,000	0.2%	\$525,370	183.8%
San Diego	4,031	0.21%	44	9.5%	179,330	0.02%	\$1,092,921,000	0.2%	\$271,129	94.9%
San Bernardino	809	0.04%	45	9.7%	36,659	0.004%	\$457,547,000	0.08%	\$565,571	197.9%
Los Angeles	766	0.04%	90	19.4%	69,224	0.008%	\$199,849,000	0.04%	\$260,900	91.3%
Orange	158	0.008%	238	51.4%	37,658	0.004%	\$70,707,000	0.01%	\$447,515	156.6%

Source: USDA 2022 Census of Agriculture, [County Summary Highlights](#)

Except for some citrus fruits, avocados, strawberries, lettuces, and other vegetables, it seems likely that Southern California has **low regional self-reliance** (RSR)—an estimate of the region’s production of food commodities compared to its consumption of those same commodities—for the majority of food products. If cascading disruptions in global food supplies become the norm, the region could be particularly vulnerable.

As a practical matter, there are very few examples—anywhere—of long-term planning for healthy, reliable food supplies. [The Netherlands](#) is likely the most famous example of food system planning because the country demonstrated that a common agenda based on national aspirations could lead to major transformations in a short timeframe with investments in infrastructure, logistics and distribution networks, technology, research and development, and sustainable practices, including reduced resource use. Other examples, include regions that have invested in controlled environment spaces for food production, such as [Almeria](#) (Spain), and [Leamington](#) (Canada). Within the United States, one of the more compelling food system plans, [Reimagining Native Food Economies](#), comes from the Native American Agriculture Fund (NAAF). This plan outlines a 10-year vision to develop ten regional food hubs, including West and Southwest Hubs, at a total cost of \$3.4 billion. Each

regional hub would include:

- » Processing facilities for meat, fruits, vegetables, grains, poultry, and dairy products
- » Warehouse and storage facilities
- » Logistics and distribution infrastructure
- » Finance, credit, and business services for Native producers
- » Support for resource management plans, regenerative grazing, carbon sequestration, and other climate smart practices.

Substantial resources and technical assistance are available from the USDA and other federal agencies, including support for [community food projects](#), but there is not a national food strategy. Federal policies primarily impact food systems through a package of legislation known as [the Farm Bill](#), which includes support for farmers and ranchers, conservation programs (e.g., [Environmental Quality Incentives Program](#), EQIP), disaster assistance, and social safety net programs (e.g., the [Supplemental Nutrition Assistance Program](#), SNAP, known as [CalFresh](#) in California). SNAP—which provides food benefits to low-income families—accounts for more than 75% (\$326 billion) of the latest Farm Bill.

More commonly, [food policy councils](#) conduct community food assessments or develop food system plans for their communities. A food policy council is an organized group of stakeholders, either sanctioned by a government body or independent of government, that works to address food systems issues and needs at the local (city/municipality or county), state, regional, or tribal nations levels. [Over 300 food policy councils](#) now exist across the country, and policy priorities tend to be most focused on healthy food access, anti-hunger policies, support for food production, and economic development opportunities across food systems. Despite the significant accomplishments of food policy councils, including stepping up to meet community needs during the COVID-19 pandemic, the majority of food policy councils are hampered by small budgets and limited staffing. A 2020 survey of 198 food policy councils found that 29% (57) of respondents had *no funding*, 34% (67) had between \$1 and \$10,000 in annual funding, and 11% (22) had between \$10,001 and \$25,000. In other words, 74% of food policy councils have budgets of *less than \$25,000*, while 15% (30) have budgets between \$25,001 and \$100,000, and 11% (22) have budgets over \$100,000. The majority, 64%, of food policy councils *do not have staff*.

Across Southern California there is no government agency, nonprofit organization, or other entity responsible for food system planning. To meet the opportunity, a couple of nonprofits in the region provide leadership on food system issues.



The [Los Angeles Food Policy Council](#) is network of over 400 organizations working toward ensuring that food is healthy, affordable, fair, and sustainable for all. LAFPC operates three major programs: [Healthy Markets LA](#) (a business assistance program for small, independent corner stores), [Farm Fresh LA](#) (a program that connects urban growers to corner stores so that CalFresh shoppers can purchase local food), [Cultivating Farmers](#) (a technical assistance program for underserved and beginning farmers). LAFPC also runs a [Food Leaders Lab](#), a 10-week course that provides training and coaching on food justice, systems change, and community health.



The [San Diego Food System Alliance](#) is also a network of organizations trying to transform San Diego County's food system. The SDFSA has a business assistance program, the [Local Food Economy Lab](#), that provides tailored services to small-scale farmers, fishermen, ranchers, and food business owners, particularly for historically underserved communities.



The SDFSA has also developed one of the most comprehensive food system plans in the country, [San Diego County Food Vision 2030](#). The Vision was developed through research and community outreach, including about 3,000 community contributions via surveys, interviews, and other events. The Vision has three goals:

- » [Cultivate Justice](#)
- » [Fight Climate Change](#)
- » [Build Resilience](#)

And ten Objectives:

- » [Preserve Agricultural Land and Soils, and Invest in Long-Term Food Production](#)
- » [Increase the Viability of Local Farms, Fisheries, Food Businesses, and Workers](#)
- » [Scale Up Local, Sustainable, and Equitable Food Value Chains](#)
- » [Elevate Wages and Working Conditions, and Improve Career Pathways](#)
- » [Expand Integrated Nutrition and Food Security](#)
- » [Improve Community Food Environments](#)
- » [Scale Up Food Waste Prevention, Recovery, and Recycling Initiatives](#)
- » [Increase Leadership by Black, Indigenous, and People of Color Across the Food System](#)
- » [Build a Local, Sustainable, and Equitable Food Movement](#)
- » [Plan for a Resilient Food System](#)

SDFSA convenes an [Annual Gathering](#) that provides space for dialogue, networking, and strategizing for how to accomplish the Vision.

Risks to Long-Term Food Production

Risks to long-term food production include:

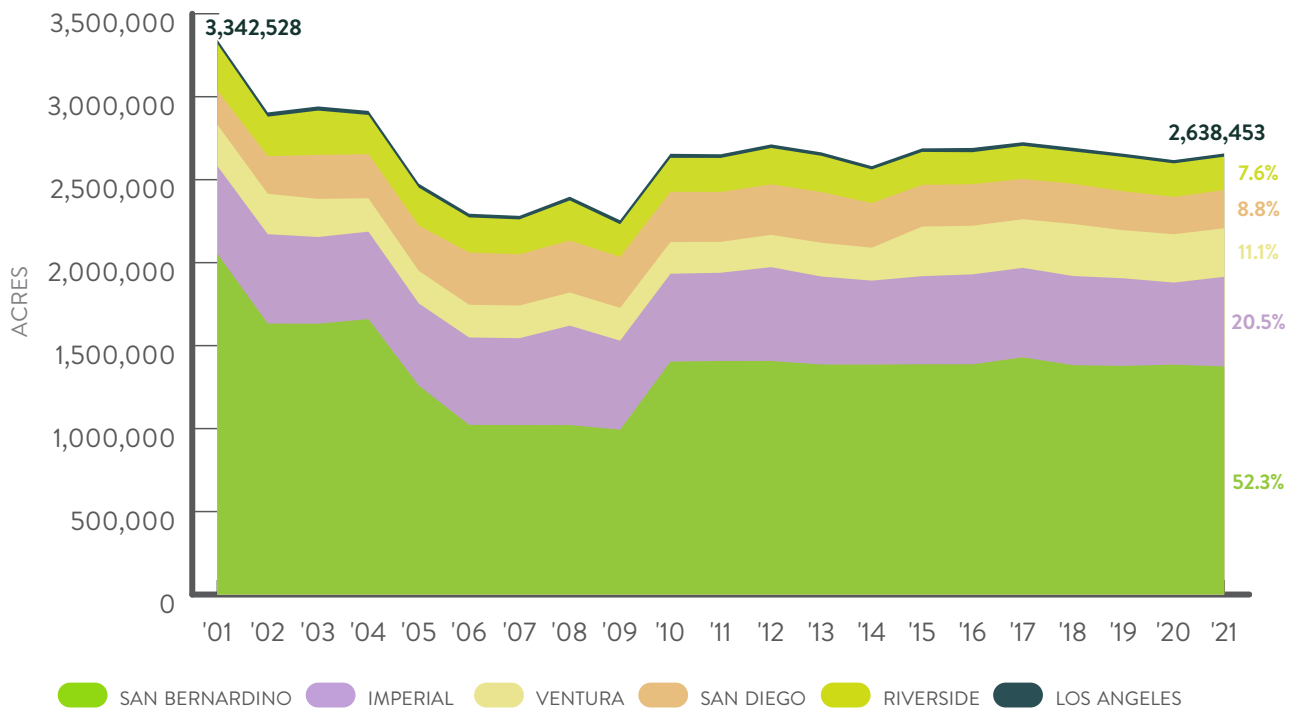
- » Climate change impacts on crops, livestock, aquatic species, supply chains, infrastructure, and workers;
- » Environmental degradation of agricultural resources and oceans;
- » Farmland conversion;
- » Inequitable access to farmland and fishing grounds;
- » Contamination by synthetic pesticides, chemicals, and plastics; spread of antibiotic resistant and zoonotic diseases.

Referring back to our original question—where does our food come from?—this section of the narrative will focus exclusively on trends in agricultural production in Southern California. **Over the past 20 years, farmland acreage, the number of farms, and agricultural sales have all decreased.**

FARMLAND

Total farmland in Southern California has remained relatively stable over the past 10 years - **about 2.6 million acres** (Figure 1), after decreasing from 2001 to 2009. Farmland acreage remained stable in Imperial and Ventura counties, the two counties with the most cropland in the region, but declined in the other heavily populated counties. *A little more than half of total farmland is made up of rangeland*

Figure 1: Total Southern California Farmland by County, 2001-2021

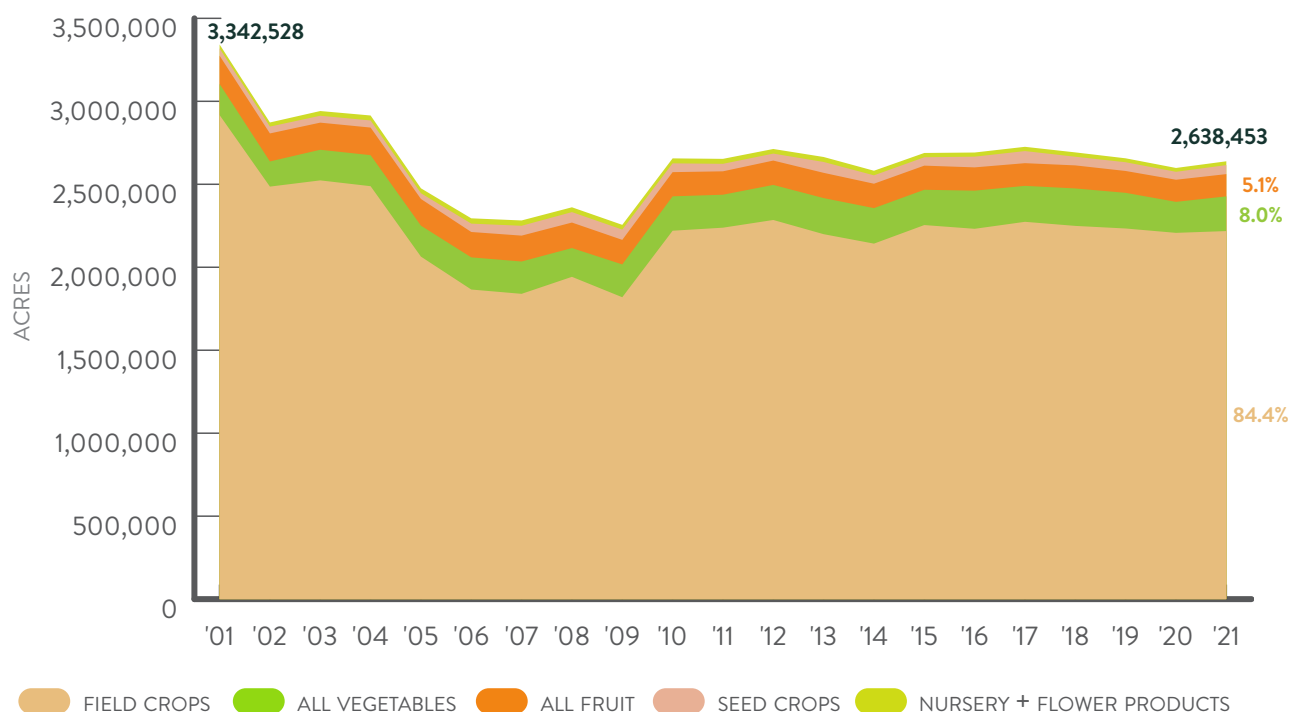


Sources: County Crop Reports for multiple years. Note: the latest available year for L.A. County was 2019 and that value is repeated for 2020 and 2021. Crop Reports for Orange County were not published frequently enough to depict here. In 2022, Orange County had 18,803 acres of farmland, the lowest amount of farmland in Southern California.

in San Bernardino County. However, rangeland acreage skews the picture because most of this land is not actively in production, and most livestock production (e.g., cattle, dairy cows) actually takes place on [concentrated animal feeding operations \(CAFOs\)](#) in Imperial and San Bernardino counties and not from free ranging livestock.

Field crops, which consists of rangeland, alfalfa hay, Bermuda grass hay, Sudan grass hay, other hays, silage, greenchop, and wheat, accounts for over 84% of Southern California farmland (Figure 2). These hays are used as animal feed regionally as well as shipped throughout California, the U.S., and the world. Fruits, vegetables, and nuts make up 13.1% (343,108 acres) of total farmland acreage. As of 2021, Imperial County contained 60% (125,623 acres) of total vegetable and vine crop acreage, followed by Riverside (19.6%) and Ventura (18.0%) counties. Ventura County contained 41.0% (54,982 acres) of total fruit and nut crop acreage, followed by Riverside (28.9%) and San Diego (19.4%) counties.

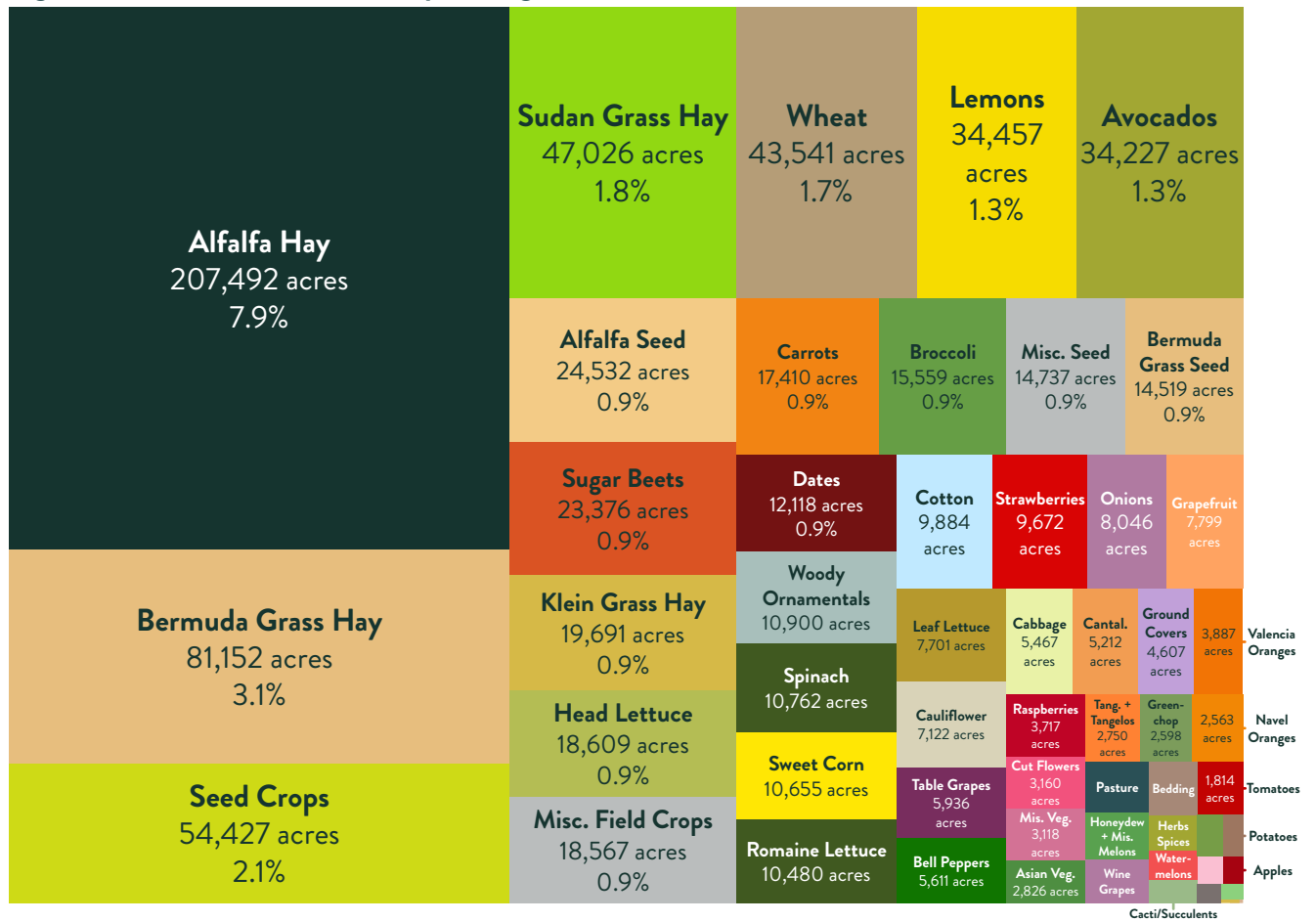
Figure 2: Total Southern California Farmland by Category, 2001-2021



Sources: County Crop Reports for multiple years. Note: the latest available year for L.A. County was 2019 and that value is repeated for 2020 and 2021. Crop Reports for Orange County were not published frequently enough to depict here. In 2022, Orange County had 18,803 acres of farmland, the lowest amount of farmland in Southern California.

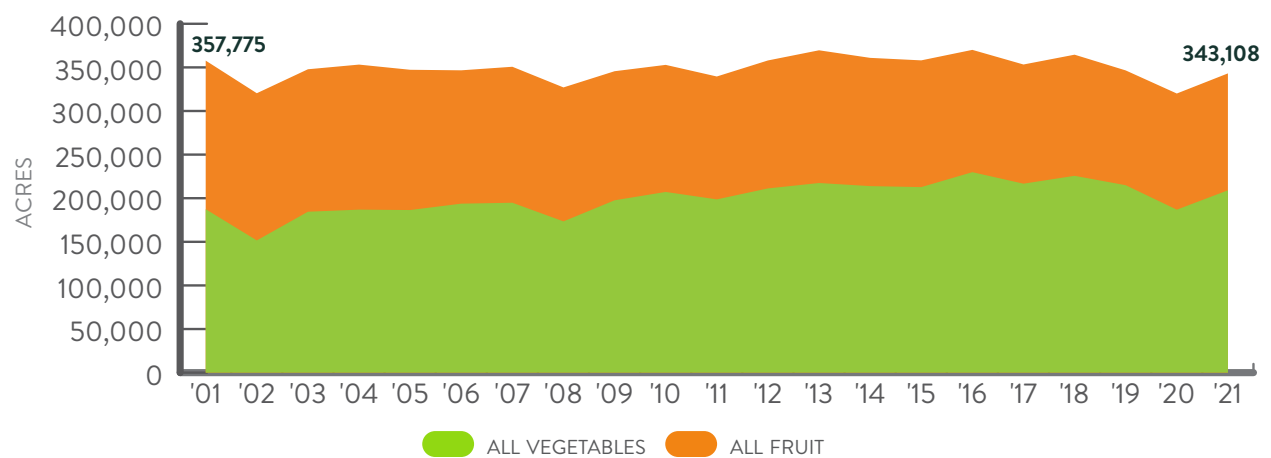
Figure 3 provides a detailed view of crop acreage for 2021, excluding rangeland. Livestock feed made up 6 of the top 10 crops by acreage. The top edible crop, by acreage, was wheat, followed by lemons, avocados, and carrots. Removing field crops, seed crops (e.g., alfalfa seed), and nursery/greenhouse/flower acreage from the mix, **Southern California contained about 350,000 acres of vegetables and fruits over the past 20 years** (Figure 4). Imperial County accounted for 39.7% (136,278 acres) of total vegetables and fruits acreage, followed by Ventura (27.0%, 92,658 acres), and Riverside (23.2%, 79,727 acres).

Figure 3: Southern California Crop Acreage, 2021



Sources: County Crop Reports for multiple years. Note: the latest available year for L.A. County was 2019 and that value is repeated for 2020 and 2021. Crop Reports for Orange County were not published frequently enough to depict here. In 2022, Orange County had 18,803 acres of farmland, the lowest amount of farmland in Southern California.

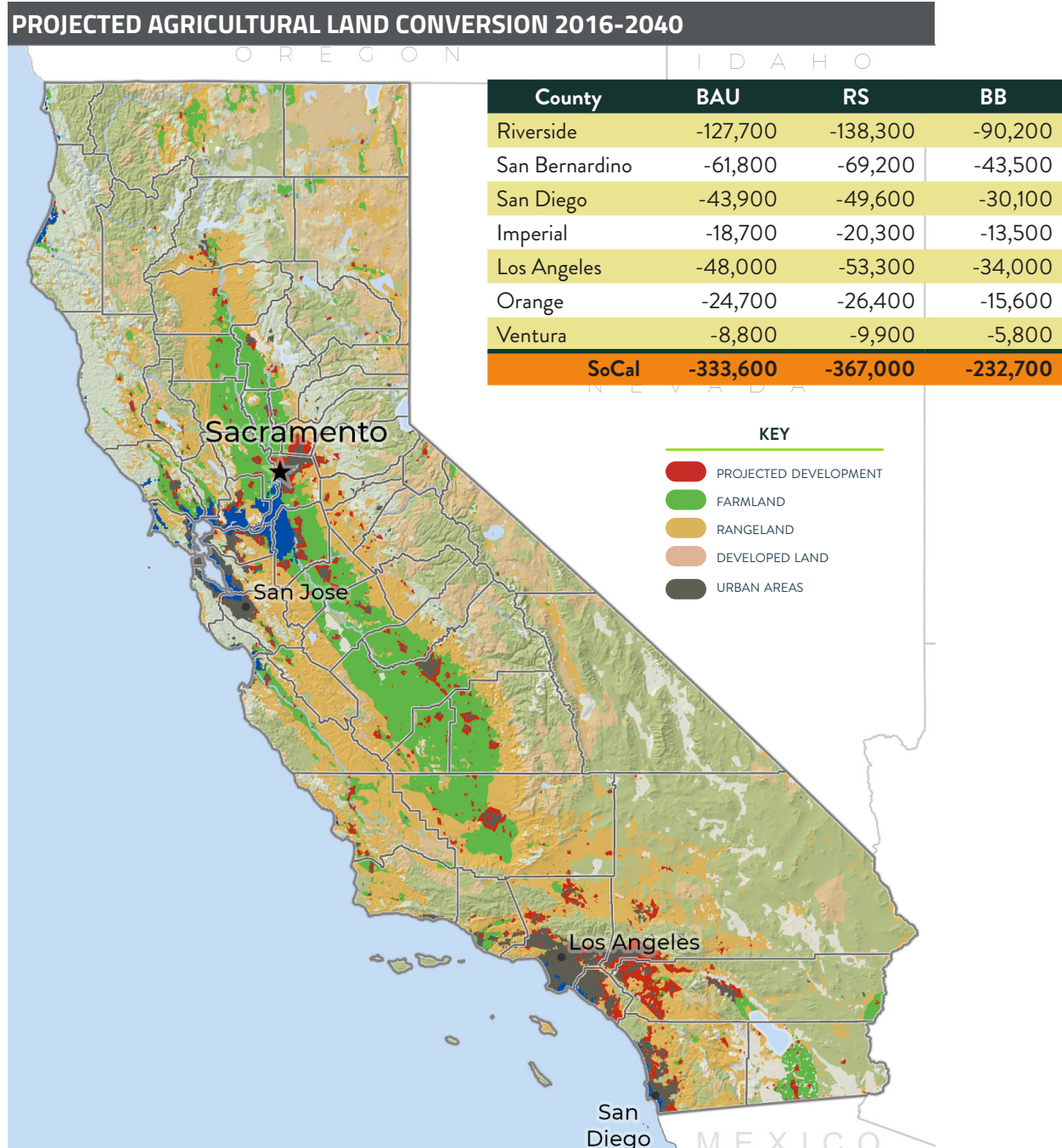
Figure 4: Southern California Vegetable and Fruit Acreage, 2001-2021



Sources: County Crop Reports for multiple years. Note: the latest available year for L.A. County was 2019 and that value is repeated for 2020 and 2021. Crop Reports for Orange County were not published frequently enough to depict here. In 2022, Orange County had 18,803 acres of farmland, the lowest amount of farmland in Southern California.

A 2022 AFT analysis, [Farms Under Threat 2040: Choosing an Abundant Future](#), articulated three pathways for imagining land use changes from 2016 to 2040: *Business as Usual* (i.e., historical trends continue), *Runaway Sprawl* (i.e., new development is very inefficient), and *Better Built Cities* (i.e., new development is denser). Under the *Business as Usual* scenario, Southern California is projected to convert 333,600 acres of agricultural land to more-developed uses by 2040, while *Runaway Sprawl* would result in a conversion of 367,000 acres, and *Better Built Cities* would end up converting 232,700 acres.

Figure 5: Southern California Crop Acreage, 2021



Source: American Farmland Trust, Farms Under Threat, <https://development2040.farmland.org/>.

FARMS

From 1945 to 2022, the number of farms in Southern California **decreased 75.0%**, from 41,937 to 10,482 farms, although the total number has been relatively steady since 1997 (Figure 6). Orange, Los Angeles, Imperial, and San Bernardino counties experienced the largest cumulative decreases, while Ventura and San Diego counties had smaller decreases over the past 70 years. The average size of farms in Southern California is relatively small compared to California and U.S. averages, with the exception of Imperial County: as the number of farms in the county *decreased* and land in agriculture *increased*, average farm size in Imperial County increased 815%.

Figure 6: Number of Farms in Southern California, 1945-2022

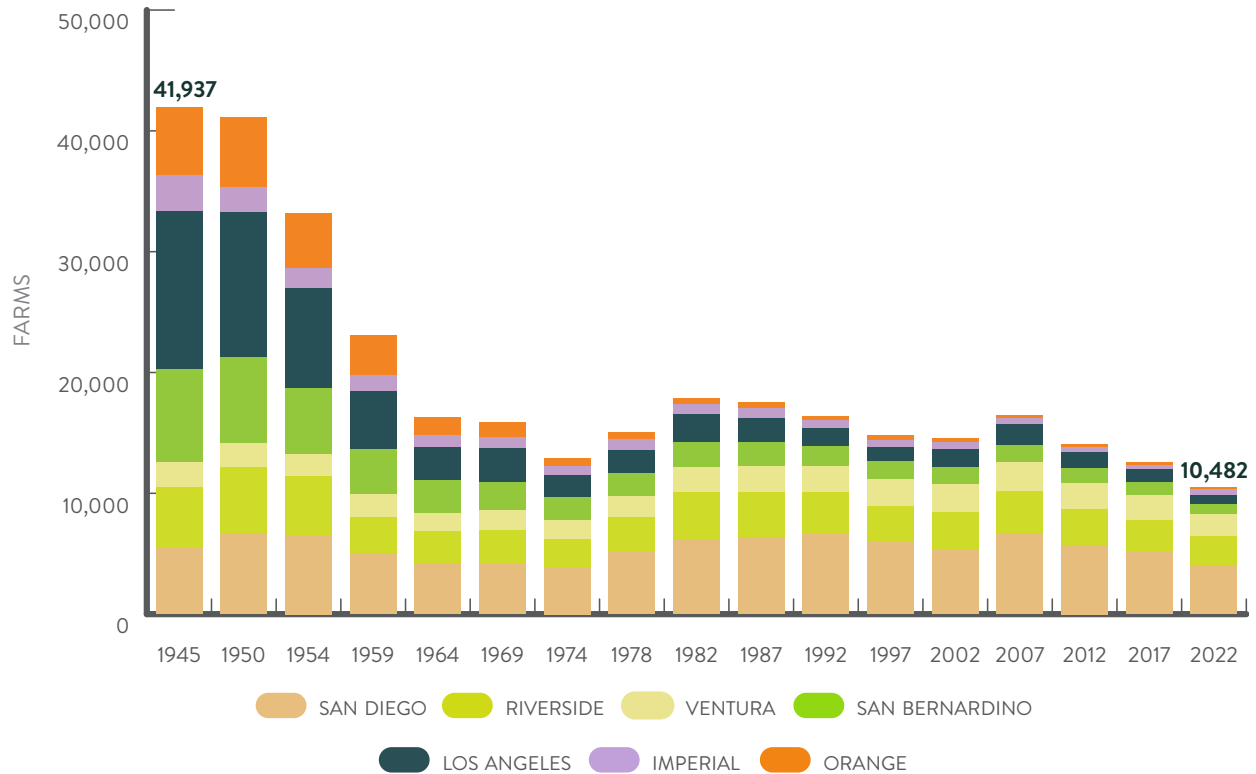


Table 4: Number of Farms in Southern California, 1945 to 2022

County	1945	2022	Cumulative Change (1945-2022)	Average Farm Size Acres (1945)	Average Farm Size Acres (2022)
San Diego	5,430	4,031	-25.8% (-1,399)	168	44
Riverside	5,109	2,424	-52.6% (-2,685)	141	149
Ventura	2,002	1,812	-9.5% (-190)	260	113
San Bernardino	7,729	809	-89.5% (-6,920)	55	45
Los Angeles	13,114	766	-94.2% (-12,348)	52	90
Imperial	2,932	482	-83.6% (-2,450)	167	1,528
Orange	5,621	158	-97.2% (-5,463)	62	238
Southern California	41,937	10,482	-75.0% (-31,455)	98	164

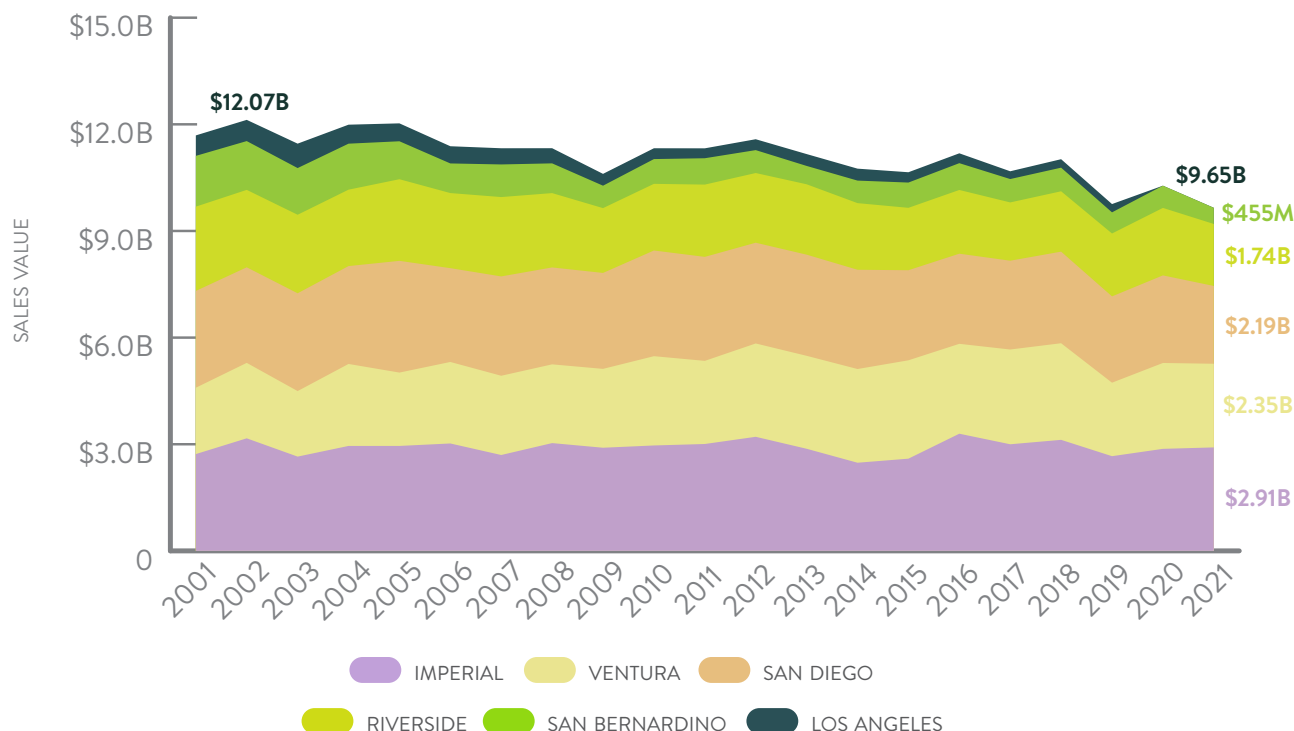
Source: USDA [Census of Agriculture](#), multiple years.

AGRICULTURAL SALES

County Crop Reports suggest that total agricultural sales across Southern California decreased by about \$2 billion (-17.7%) from 2001 to 2021 (Figure 7). After 8 Central Valley counties, Imperial County ranked 9th for agricultural sales in California in 2021, while Ventura County ranked 10th, followed by San Diego (13th) and Riverside counties (14th). San Bernardino County ranked 30th out of 58 California counties in agricultural sales in 2021, followed by Los Angeles (33rd) and Orange counties (38th).

In 2021, Imperial County accounted for 30.1% (\$2.91 billion) of regional sales, followed by Ventura (24.3%, \$2.35 billion), San Diego (22.7%, \$2.19 billion) and Riverside (18.0%, \$1.74 billion) counties (Figure 7).

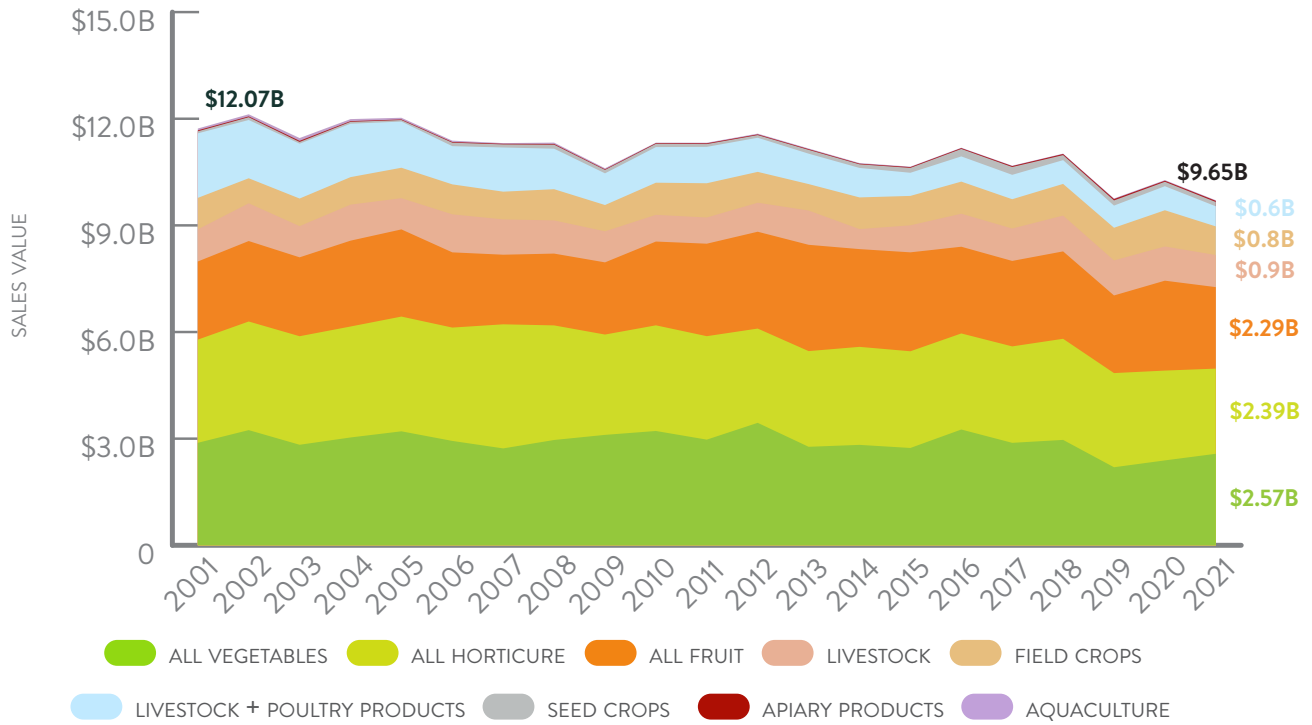
Figure 7: Total Agricultural Sales by County, 2015-2021 (CDFA)



Sources: County Crop Reports for multiple years. Adjusted for inflation to 2023 dollars using producer price indices. Crop Reports for Orange County were not published frequently enough to depict here.

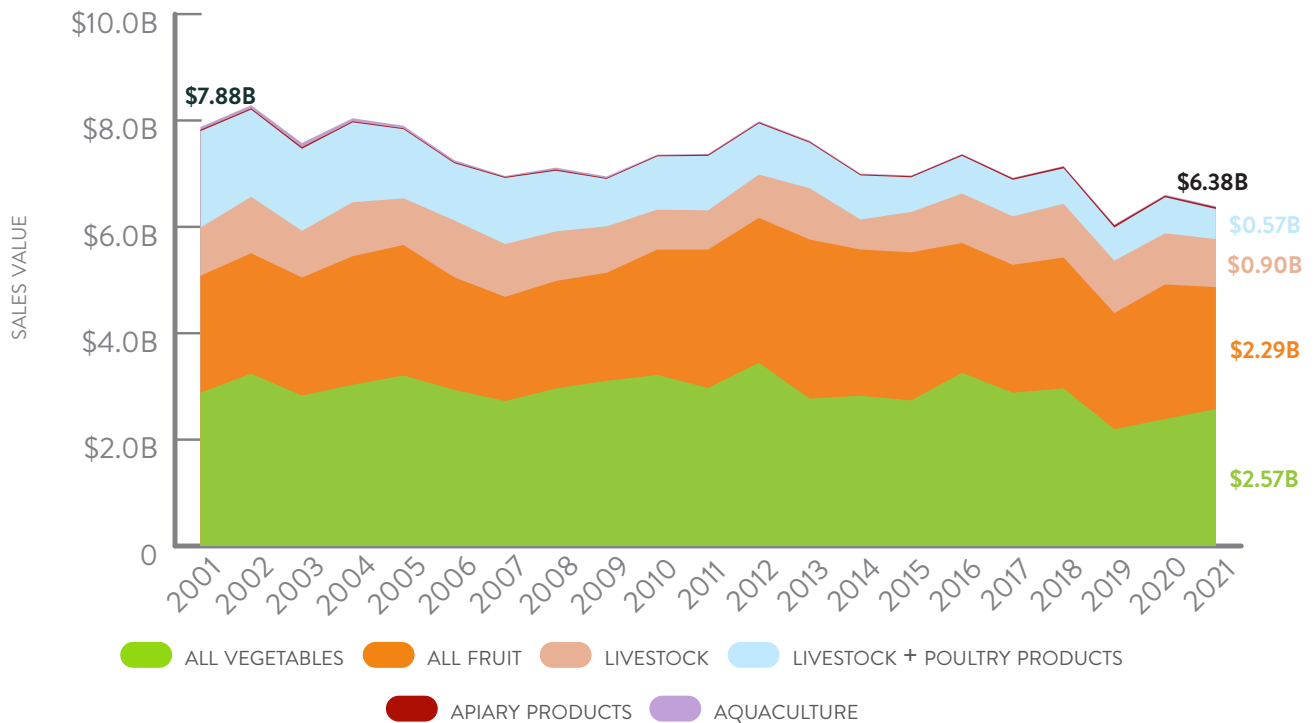
In 2021, the top category of agricultural sales in Southern California were vegetables (\$2.57 billion, 26.7% Figure 8), consisting mostly of lettuces, celery, broccoli, peppers, and other crops. Horticultural products (\$2.39 billion, 24.8%)—grown in nurseries and greenhouses—made up the second largest category of sales, consisting mostly of woody ornamentals and foliage. **Woody ornamentals make up the largest single category of agricultural sales in Southern California.** The third largest category of agricultural sales in Southern California in 2021 was fruits (\$2.29 billion, 23.8%), consisting mostly of strawberries, avocados, raspberries, grapes, dates, and other unspecified fruits (mostly citrus fruits). Next up were livestock (\$903 million, 9.4%), mostly cattle, raised in Imperial and San Bernardino counties. Although hay and field crops make up the lion’s share of

Figure 8: Total Agricultural Sales by Category, 2015-2021 (CDFA)



Sources: County Crop Reports for multiple years. Adjusted for inflation to 2023 dollars using producer price indices. Crop Reports for Orange County were not published frequently enough to depict here.

Figure 9: Total Agricultural Sales by Category, 2015-2021 (CDFA)



Sources: County Crop Reports for multiple years. Adjusted for inflation to 2023 dollars using producer price indices. Crop Reports for Orange County were not published frequently enough to depict here.

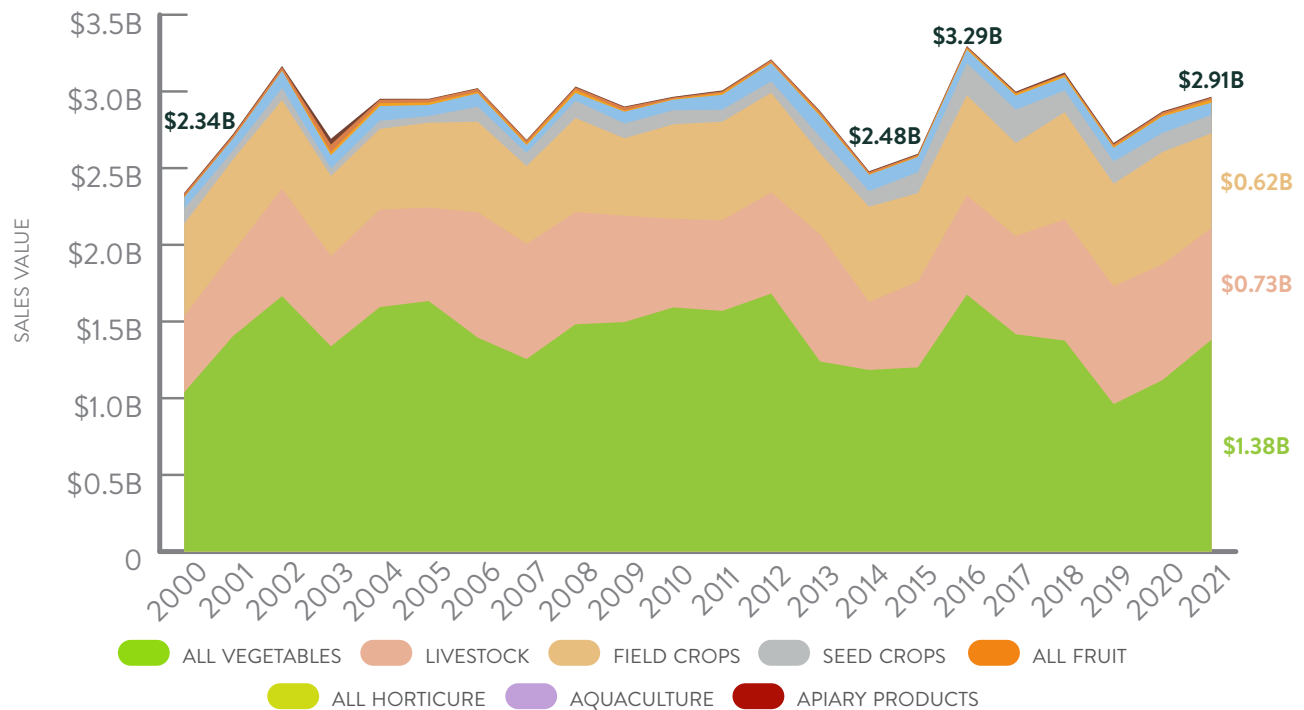
farmland in Southern California, these product categories generate comparatively modest sales (\$804 million, 8.3%). Livestock and poultry products, mostly milk and eggs, made up the next largest sales category (\$566 million, 5.9%). Seed crops, including a variety of hay, vegetable, and cotton seeds, generated \$120 million in sales (1.2%). Finally, apiary products (\$33.3 million, 0.3%), including pollination services and honey, and aquaculture products (\$15.9 million, 0.2%), including catfish, rounded out regional agricultural sales.

Sales values for products that are directly eaten by people equaled \$7.88 billion in 2001 and \$6.38 billion in 2021, an 18.9% decrease (Figure 9).

Imperial County generated the highest agricultural sales of any county in Southern California, \$2.91 billion (Figure 10), and has the second largest amount of farmland. Out of about 540,000 acres of farmland, 350,000 acres (64.6% of acres) are field crops (e.g., a variety of hays) and over 54,000 acres (10.1% of acres) are seed crops. Vegetables accounted for 23.3% (125,623 acres) of farmland and consisted of a variety of lettuces, broccoli, cabbage, carrots, melons, onions, and so on. Vegetables accounted for 47.5% of sales in 2021, followed by livestock (25.0%), and field crops (21.2%). From 2000 to 2021, agricultural sales in Imperial County averaged well over \$2 billion.

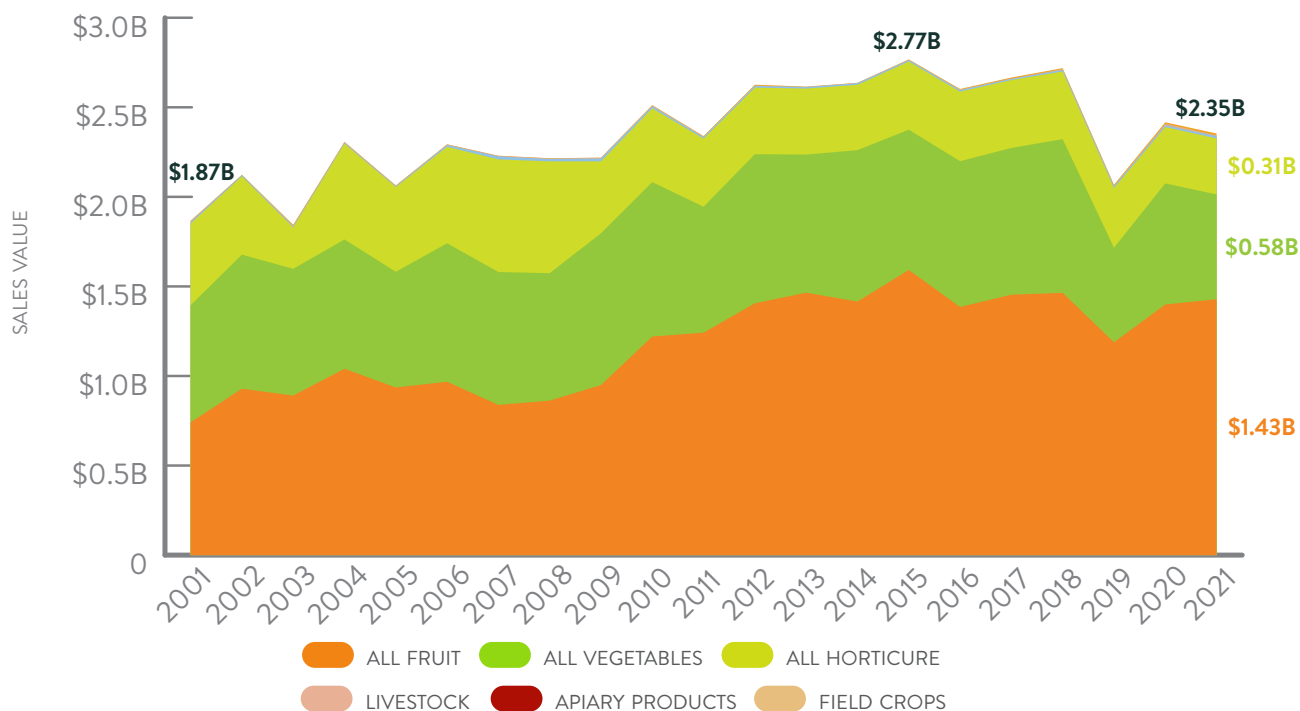
Ventura County had the second highest agricultural sales, \$2.35 billion (Figure 11), in Southern California, and the third most amount of farmland. Fruit accounted for 60.7% of sales and consisted of strawberries, lemons, raspberries, avocados, and more. Vegetables made up 24.9% of sales and consisted of celery, peppers, lettuces, cabbage, cilantro, and more. Total agricultural sales increased from 2001 to 2021.

Figure 10: Total Agricultural Sales in Imperial County, 2000-2021 (CDFA)



Source: Imperial County Crop Reports for multiple years, <https://agcom.imperialcounty.org/crop-reports/>. Adjusted for inflation to 2023 dollars using producer price indices.

Figure 11: Total Agricultural Sales in Ventura County, 2001-2021 (CDFA)



Source: Ventura County Crop Reports for multiple years, <https://www.ventura.org/agricultural-commissioner/reports/>. Adjusted for inflation to 2023 dollars using producer price indices.

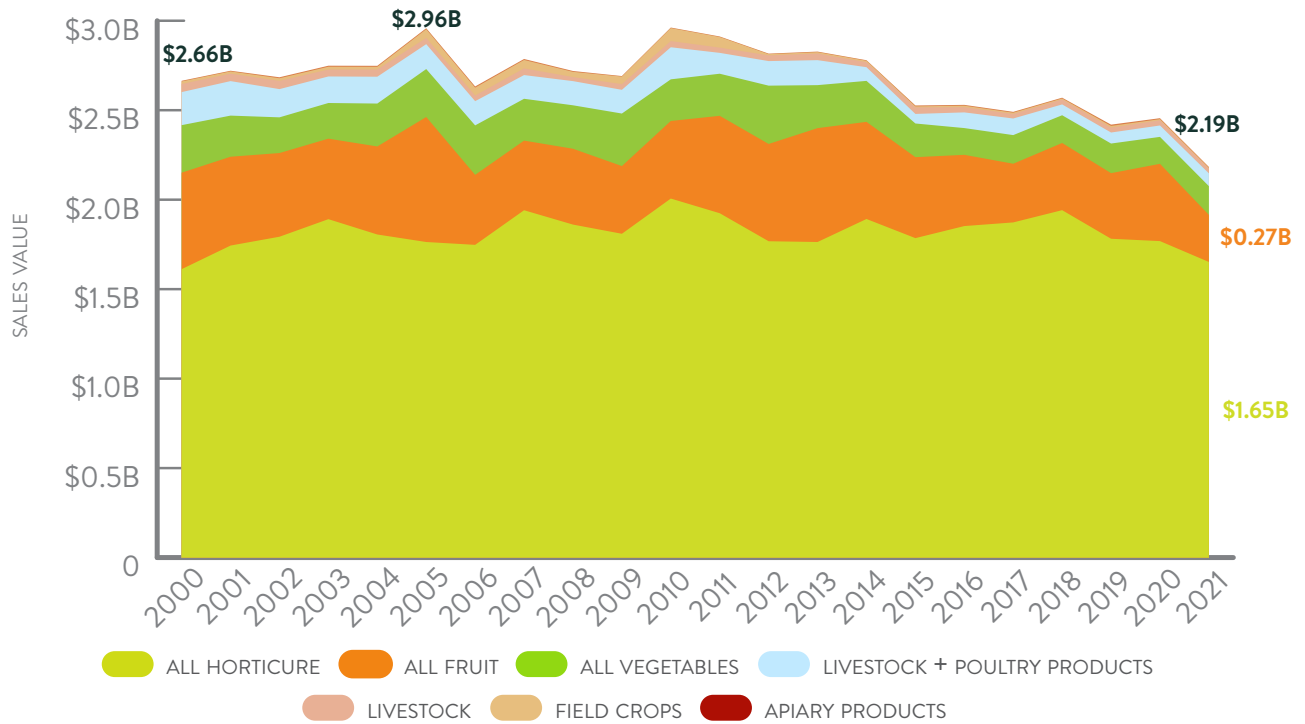
San Diego County had the third highest agricultural sales, \$2.19 billion (Figure 12), and the fourth most amount of farmland. Inedible horticultural products accounted for 75.5% of total agricultural sales in 2021, followed by fruit (12.3%, mostly avocados and citrus crops). Agricultural sales in San Diego County generally decreased from 2000 to 2021.

Riverside County had the fourth highest agricultural sales, \$1.74 billion (Figure 13), and fifth most amount of farmland. Fruits accounted for 27.8% of sales and consisted of grapes, avocados, dates, lemons, and more. Vegetables accounted for 23.6% of sales and consisted of peppers, lettuces, cauliflower, spinach, and more. Milk, eggs, and other livestock products accounted for 19.6% of sales. Agricultural sales in Riverside County decreased from 2000 to 2021.

San Bernardino County had the fifth highest agricultural sales, \$455 million (Figure 14), and the most farmland in Southern California. Livestock products (33.71%)—milk and eggs—and livestock (25.54%)—beef and dairy cattle—accounted for the majority of sales. Agricultural sales in San Bernardino County significantly decreased from 2000 to 2021.

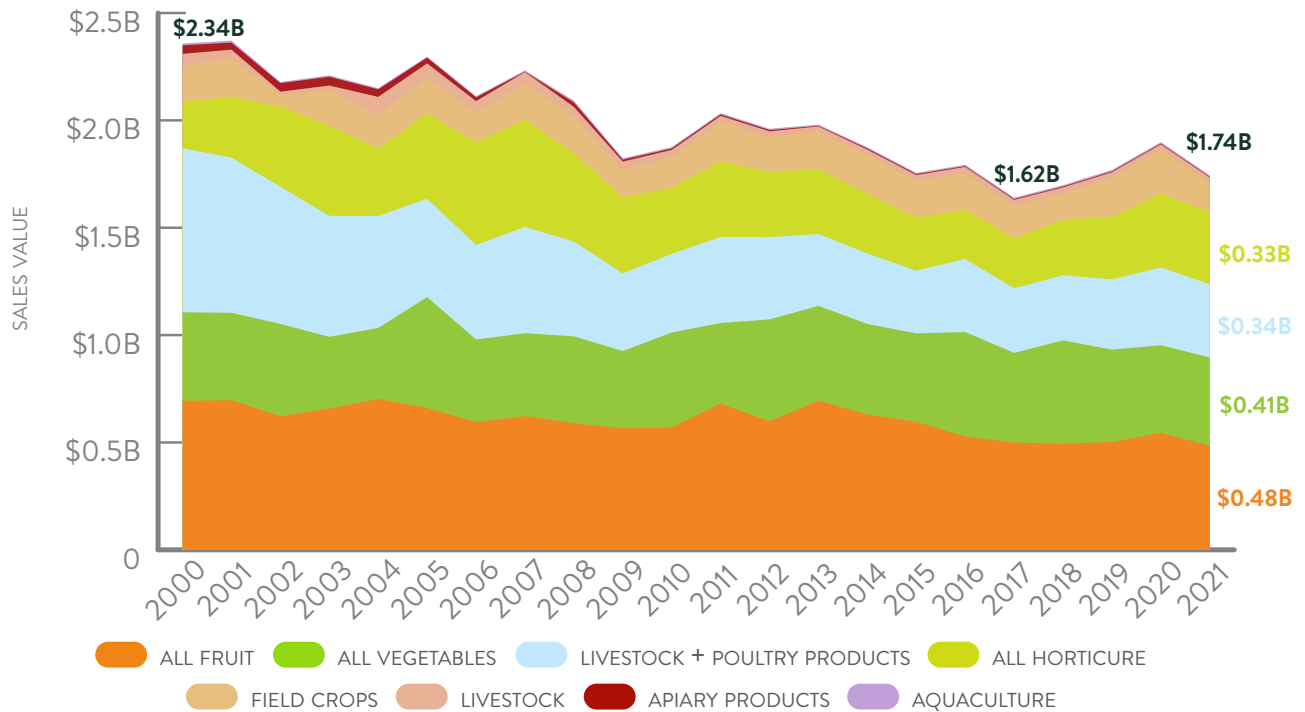
Los Angeles County had the sixth highest agricultural sales, \$244 million (Figure 15), and the sixth most amount of farmland in Southern California. Inedible horticultural products accounted for 60.4% of agricultural sales in 2021, followed by vegetables (19.5%). Agricultural sales in Los Angeles County significantly decreased from 2000 to 2021.

Figure 12: Total Agricultural Sales in San Diego County, 2000-2021 (CDFA)



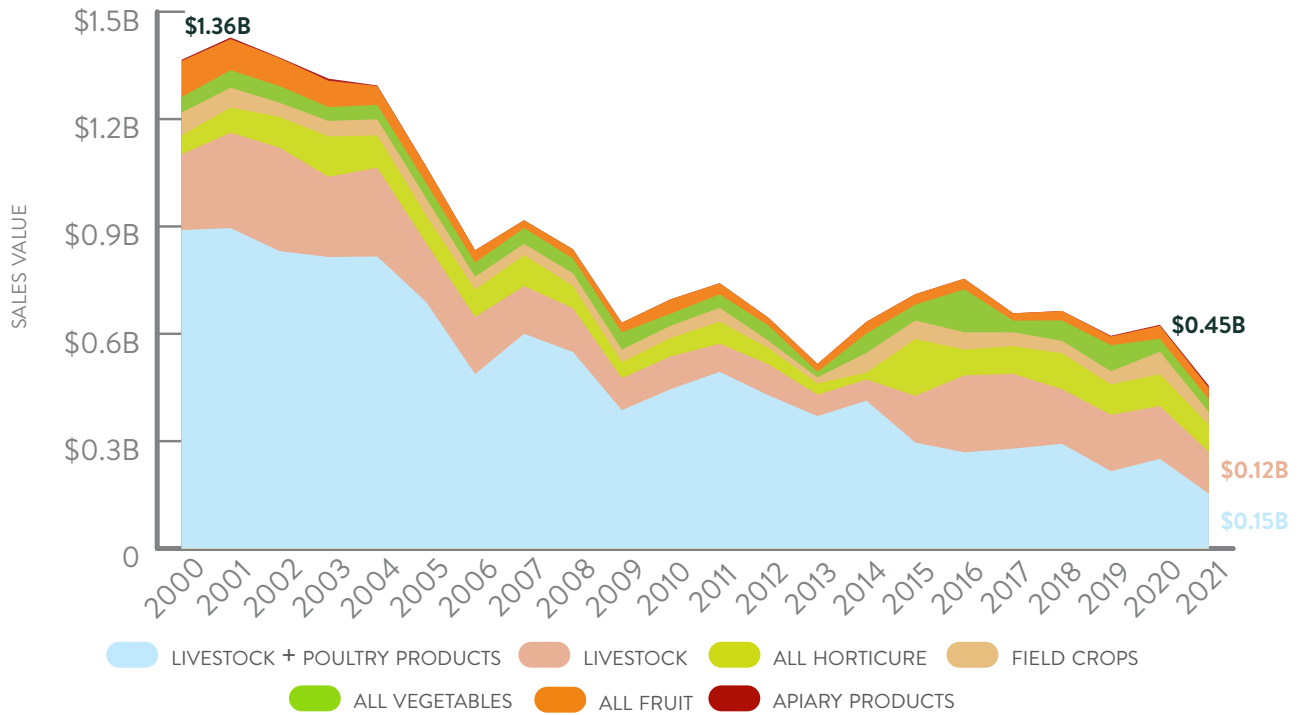
Source: San Diego County Crop Reports for multiple years, <https://awmsdcroreport.com/>. Adjusted for inflation to 2023 dollars using producer price indices.

Figure 13: Total Agricultural Sales in Riverside County, 2000-2021 (CDFA)



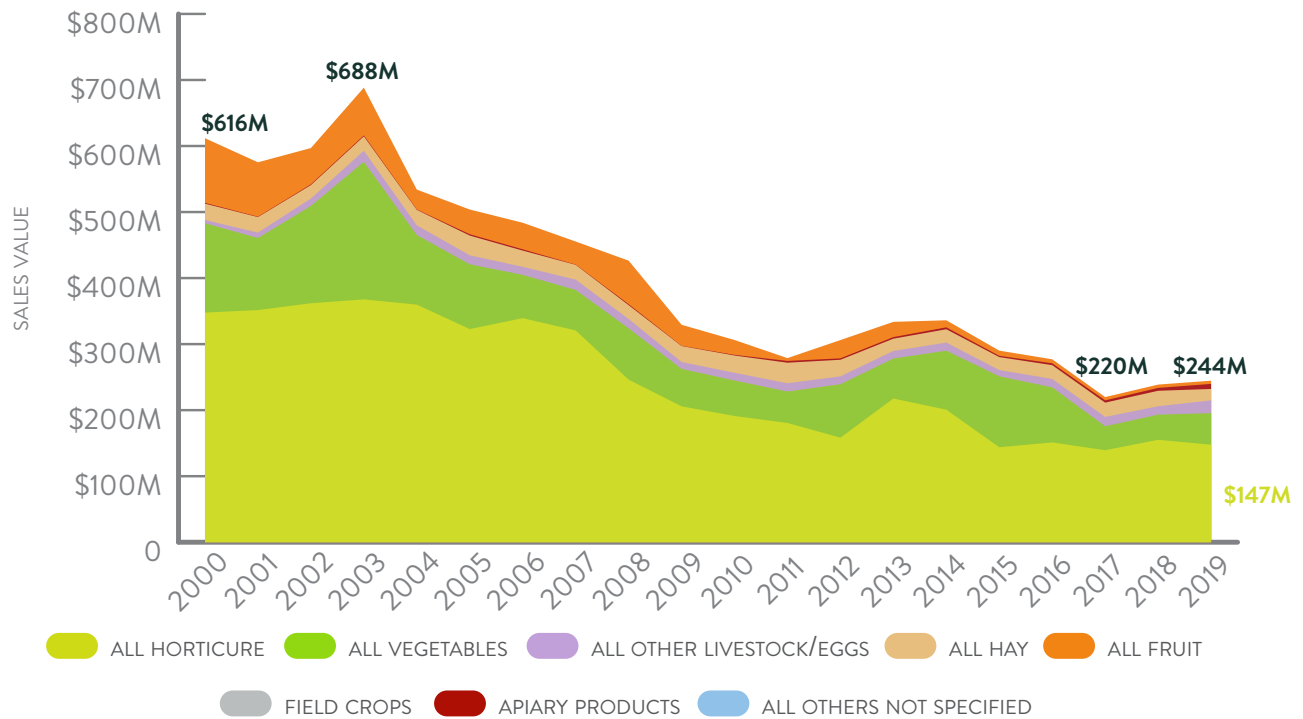
Source: Riverside County Crop Reports for multiple years, <https://rivcoawm.org/resources/publications-databases>. Adjusted for inflation to 2023 dollars using producer price indices.

Figure 14: Total Agricultural Sales in San Bernardino County, 2000-2021 (CDFA)



Source: San Bernardino County Crop Reports for multiple years, <https://awm.sbcounty.gov/crop-reports/>. Adjusted for inflation to 2023 dollars using producer price indices.

Figure 15: Total Agricultural Sales in L.A. County, 2000-2021 (CDFA)



Source: Los Angeles County Crop Reports for multiple years, <https://acwm.lacounty.gov/crop-reports/>. Adjusted for inflation to 2023 dollars using producer price indices.



Despite the long-term decrease in land in agriculture and farms in Southern California, the region is still a top producer for some categories in California and, by extension, the nation (Table 5).

For example:

- » **Imperial County** is the top producing county in the state of California for 4 categories, and it ranked second for 7 categories.
- » **Ventura County** is the top producing county in the state of California for 3 categories, and it ranked second for 3 categories.
- » **Riverside County** is the top producing county in the state of California for 2 categories, and it ranked second for 2 categories.
- » California accounted for 15% of national horticulture sales in 2021, and San Diego, Riverside, and Ventura counties accounted for 46.6% of California horticulture sales.
- » California accounted for 88.3% of national strawberry sales, and Ventura County accounted for 23.0% of California strawberry sales.
- » California accounted for 75.7% of national lettuce sales, and Imperial County accounted for 19.9% of California strawberry sales.
- » California accounted for 96.9% of national lemon sales, and Ventura, Riverside, and San Diego counties accounted for 39.9% of California lemon sales.
- » California accounted for 95.7% of national avocado sales, and Ventura, San Diego, and Riverside counties accounted for 70.9% of California avocado sales.
- » California accounted for 79.3% of national raspberry sales, and Ventura County accounted for 47.7% of California raspberry sales.

Table 6 highlights the top twenty edible agricultural products for the past five years for Southern California.

Table 5: Top Southern California Agricultural Products, 2021

CA Product Rank by Sales	CA Share of U.S. Receipts	Rank Among California Counties				
		1st	2nd	3rd	4th	5th
5. Horticulture	15.0%	San Diego 33.5%	Riverside 6.8%	Ventura 6.3%		
6. Cattle			Imperial 14.0%			
8. Strawberries	88.3%			Ventura 23.0%		
9. All Lettuce	75.7%		Imperial 19.9%			
13. Alfalfa	9.9%	Imperial 23.4%			Riverside 7.7%	
15. Lemons	96.9%		Ventura 26.5%		Riverside 7.1%	San Diego 6.3%
20. Broccoli	87.8%		Imperial 19.7%		Riverside 3.8%	
22. Carrots	93.4%	Imperial 10.9%		Riverside 4.5%		
25. Eggs				Riverside 15.8%		San Ber. 1.9%
27. Avocados	95.7%	Ventura 30.9%	San Diego 20.3%	Riverside 19.7%		
29. Raspberries	79.3%	Ventura 47.7%				
31. Cauliflower	77%			Imperial 17.6%		Riverside 3.9%
32. Spinach	72.4%		Imperial 19.0%		Riverside 5.3%	Ventura 5.0%
36. Onions	28.6%		Imperial 21.3%			
39. All Peppers	40.0%	Riverside 28.6%	Ventura 17.0%			
46. Misc. Livestock		Imperial 24.4%				
51. Cabbage			Ventura 25.4%		Imperial 8.9%	
53. Fresh Corn	19.1%		Imperial 27.7%		Riverside 13.9%	
54. Dates	59.3%	Riverside 76.1%	Imperial 23.8%			
55. Cantaloupe	58.7%	Imperial 25.3%			Riverside 4.7%	

Table 6: Top 20 Categories by Sales Value 2016-2021 (CDFA)

	2016	2017	2018	2019	2020	2021
Cattle	\$835,434,495	\$711,385,952	\$824,995,330	\$794,381,787	\$793,485,025	\$756,224,658
Strawberries	\$735,634,191	\$872,394,341	\$867,169,394	\$543,430,315	\$633,719,338	\$710,482,034
All Lettuce	\$502,565,558	\$433,745,181	\$380,581,111	\$354,801,679	\$323,352,838	\$548,837,811
Milk	\$419,982,437	\$399,851,726	\$478,409,344	\$381,678,004	\$419,601,194	\$412,039,351
Lemons	\$489,444,612	\$441,024,266	\$384,395,778	\$434,313,106	\$459,595,599	\$401,398,180
Avocados	\$376,264,678	\$242,074,611	\$378,647,811	\$268,761,974	\$602,625,532	\$364,164,323
Celery	\$378,474,854	\$381,930,016	\$445,264,506	\$182,966,102	\$301,574,574	\$249,874,808
Broccoli	\$298,831,951	\$162,417,280	\$179,484,600	\$197,279,557	\$156,258,123	\$242,669,583
Raspberries	\$165,837,620	\$201,866,020	\$196,781,613	\$233,016,939	\$144,351,529	\$178,783,158
Eggs	\$142,003,968	\$277,554,947	\$70,321,106	\$233,654,972	\$248,501,779	\$146,425,222
Peppers	\$195,587,154	\$152,402,531	\$144,470,385	\$123,718,440	\$107,470,215	\$137,571,687
Dates	\$71,478,082	\$90,100,215	\$127,896,397	\$149,398,434	\$138,698,418	\$128,491,608
Carrots	\$157,654,605	\$134,575,875	\$128,909,439	\$147,870,629	\$144,047,511	\$125,975,678
Table Grapes	\$200,963,295	\$207,635,211	\$164,177,552	\$168,357,860	\$148,290,940	\$120,371,508
Cauliflower	\$77,957,877	\$62,920,824	\$84,779,396	\$53,642,905	\$84,486,920	\$120,187,594
Spinach	\$150,377,079	\$107,362,071	\$62,718,431	\$87,168,996	\$70,773,326	\$98,864,097
Onions	\$168,073,226	\$150,894,826	\$202,325,298	\$68,023,272	\$108,122,137	\$91,749,352
All Oranges	\$118,563,277	\$97,619,481	\$89,583,467	\$111,088,463	\$91,027,568	\$80,995,980
Cabbage	\$60,464,374	\$108,578,983	\$75,184,846	\$51,369,284	\$62,731,507	\$55,934,802
Grapefruit	\$88,227,315	\$77,207,340	\$74,069,248	\$70,432,236	\$79,649,690	\$52,571,252

Sources: County Crop Reports for multiple years. Adjusted for inflation to 2023 dollars using producer price indices.



Challenges for Farm, Fishery, and Food Business Viability

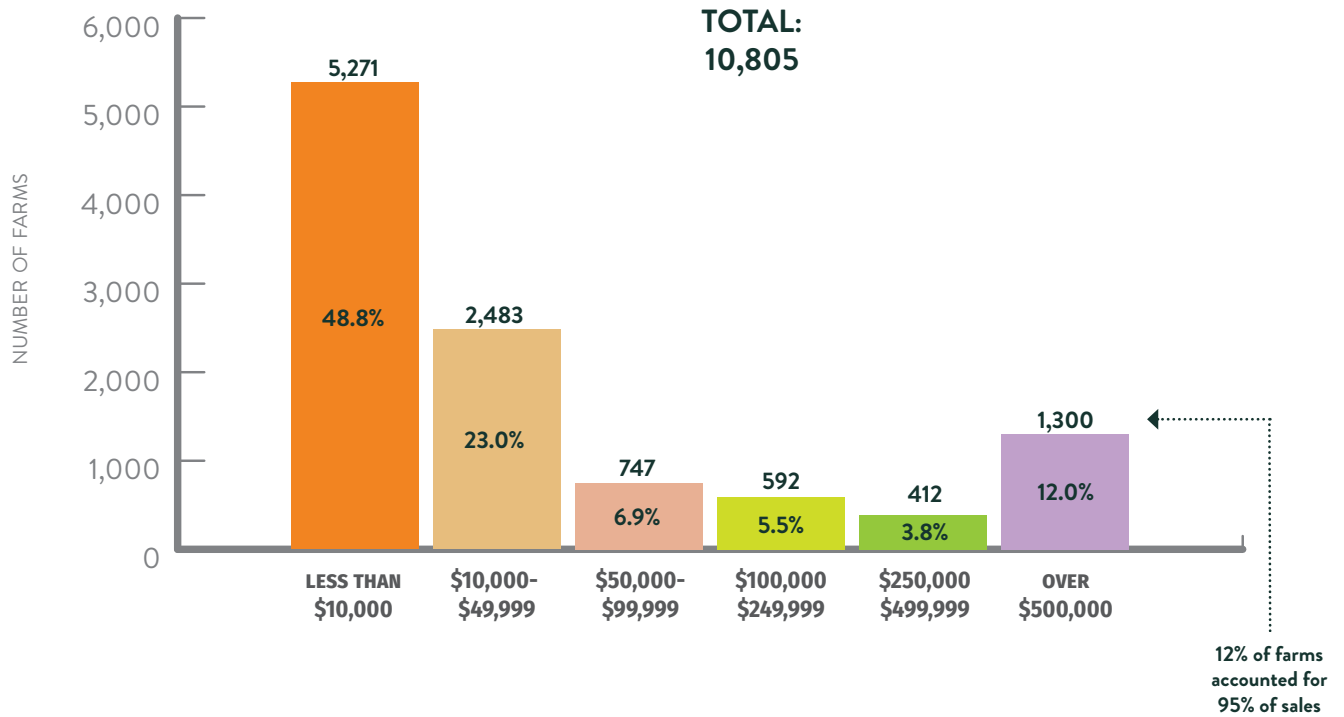
[Eye-opening research](#) on the concentration of ownership, wealth, and power among food system businesses shows that, starting in the 1980s, an acceleration in mergers and acquisitions among food system businesses has meant that just a few companies dominate almost all aspects of food production, processing, manufacturing, distribution, and retailing. For example, data from the USDA Census of Agriculture paints a consistent picture of a scale asymmetry endemic to farming across the country, including Southern California: the majority of farms are small and generate comparatively low sales. Conversely, a small number of large farms generate the majority of sales.

The majority of farms in Southern California—71.8% (7,754)—had sales of less than \$50,000.

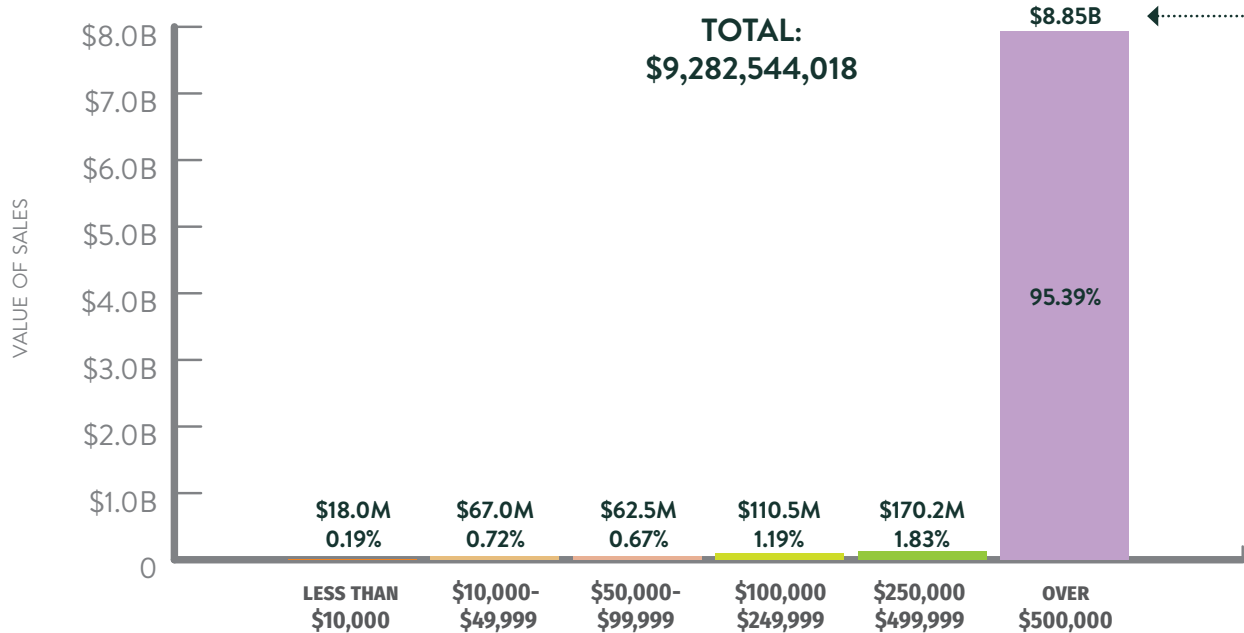
These farms generated 0.91% (\$85,059,743) of total agricultural sales in 2022. In contrast, 12.0% (1,300) of farms with sales over \$500,000 accounted for 95.4% (\$8.8 billion) of total agricultural sales (Figure 16). The majority of these farms were in Imperial, Ventura, and Riverside counties.

Small and midsize farmers face significant economic pressures, including low cash receipts, increasing expenses, and challenges accessing markets. The cost of land in Southern California can also be prohibitive to new, beginning, or disadvantaged farmers. Scale and tenure can also be a limiting factor for accessing and affording the most critical Southern California resource: freshwater. [Research](#) conducted by ProPublica and the Desert Sun found that just 20 farming families in Imperial County with “[prior perfected rights](#)” used more Colorado River water than over 300 other farmers in the Imperial Irrigation District. Of those 20 farming families, four used a majority of the water they received to grow food that people eat, while the others were principally hay growers.

Figure 16: Number of Farms by Economic Class, 2022



Value of Sales by Economic Class, 2022



Source: USDA 2022 Census of Agriculture, [Table 2: Market Value of Products Sold](#). Adjusted for inflation to 2023 dollars.

Ongoing Exploitation of Food System Workers

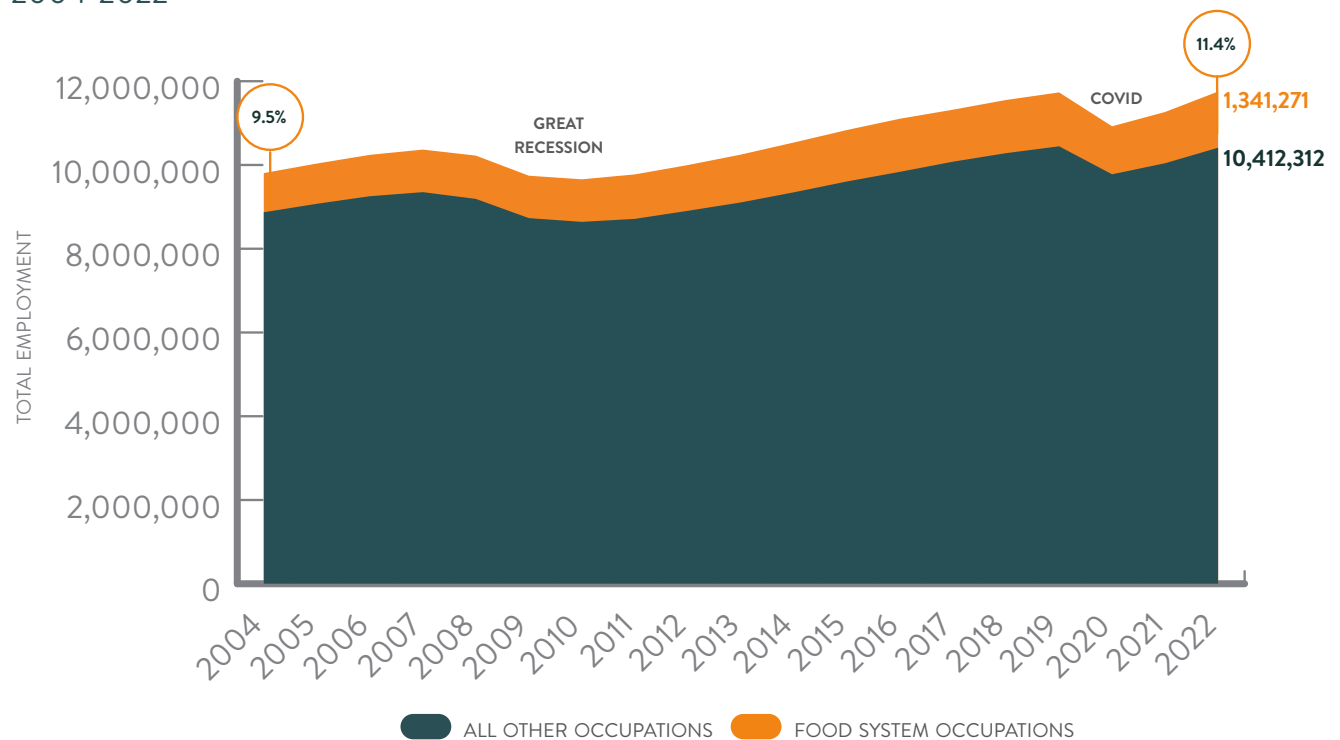
FOOD SYSTEM EMPLOYMENT

Food system workers make up a significant amount of employment in most communities. For example, food system employment makes up more than 11.4% (1,341,271 jobs) of total employment in Southern California, but it is important to emphasize that we can't precisely measure or include certain occupations. For example, some amount of "Water Supply and Irrigation Systems," "Veterinary Services," and "General Freight Trucking" must include food system specific jobs, but we don't know how many. Trucking, in particular, could add thousands of jobs to the total. **The bottom line is that a significant number of people are employed in Southern California's food system.**

There is some variation between the counties in terms of total food system jobs as a percentage of all jobs. For example, in 2022, food system jobs made up:

- 20.3% (15,237) of all jobs in Imperial County
- 13.6% (54,136) of all jobs in Ventura County
- 13.3% (132,253) of all jobs in Riverside County
- 11.7% (116,465) of all jobs in San Bernardino County
- 11.4% (203,278) of all jobs in San Diego County
- 11.0% (613,041) of all jobs in Los Angeles County
- 10.6% (206,861) of all jobs in Orange County

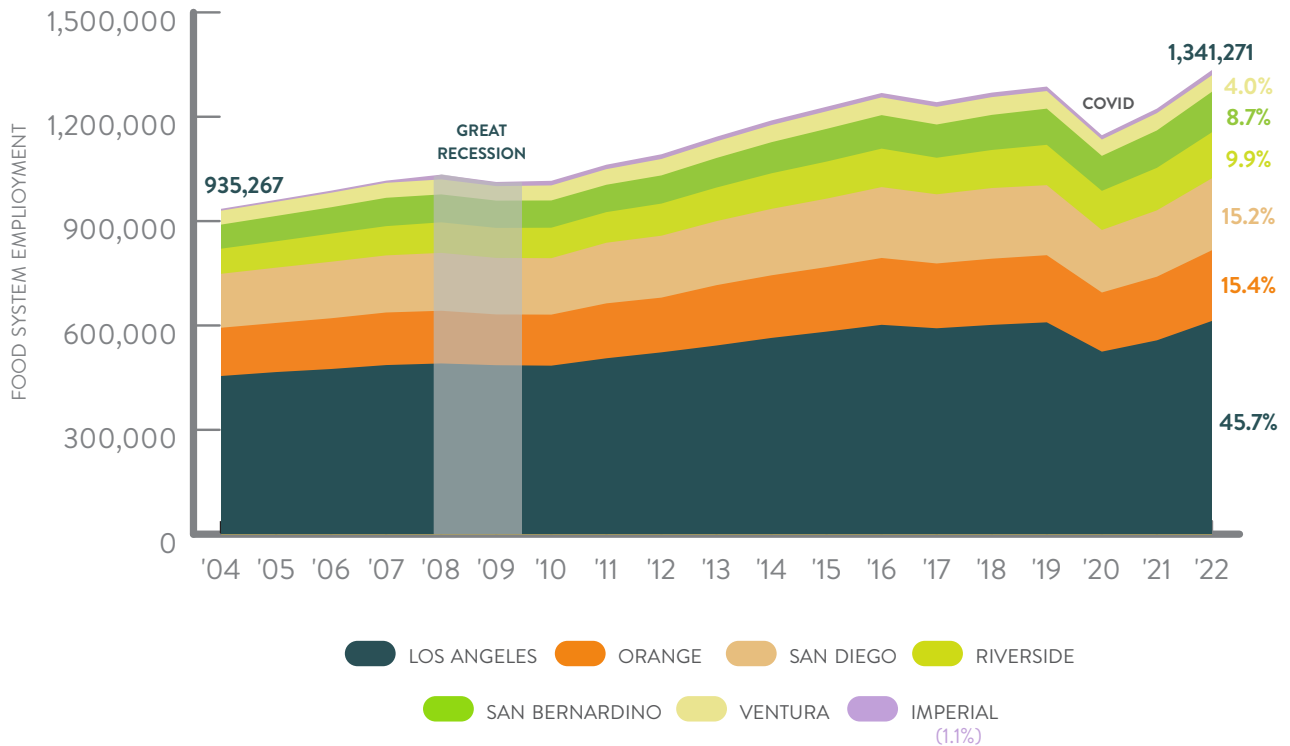
Figure 17: Food System Employment as Percent of Total Southern California Employment, 2004-2022



Source: U.S. Bureau of Labor Statistics, [Quarterly Census of Employment and Wages](#); U.S. Census Bureau, [Nonemployer Statistics](#).

L.A. County is the largest county in the country by population (9,829,544 people), so it makes sense that it accounts for biggest share of food system jobs. In fact, Figure 18 corresponds to overall population size (e.g., Orange County has the second largest population in Southern California and the second largest number of food system jobs. Imperial County has the smallest population in Southern California and the smallest number of food system jobs).

Figure 18: Food System Employment by County, 2004-2022

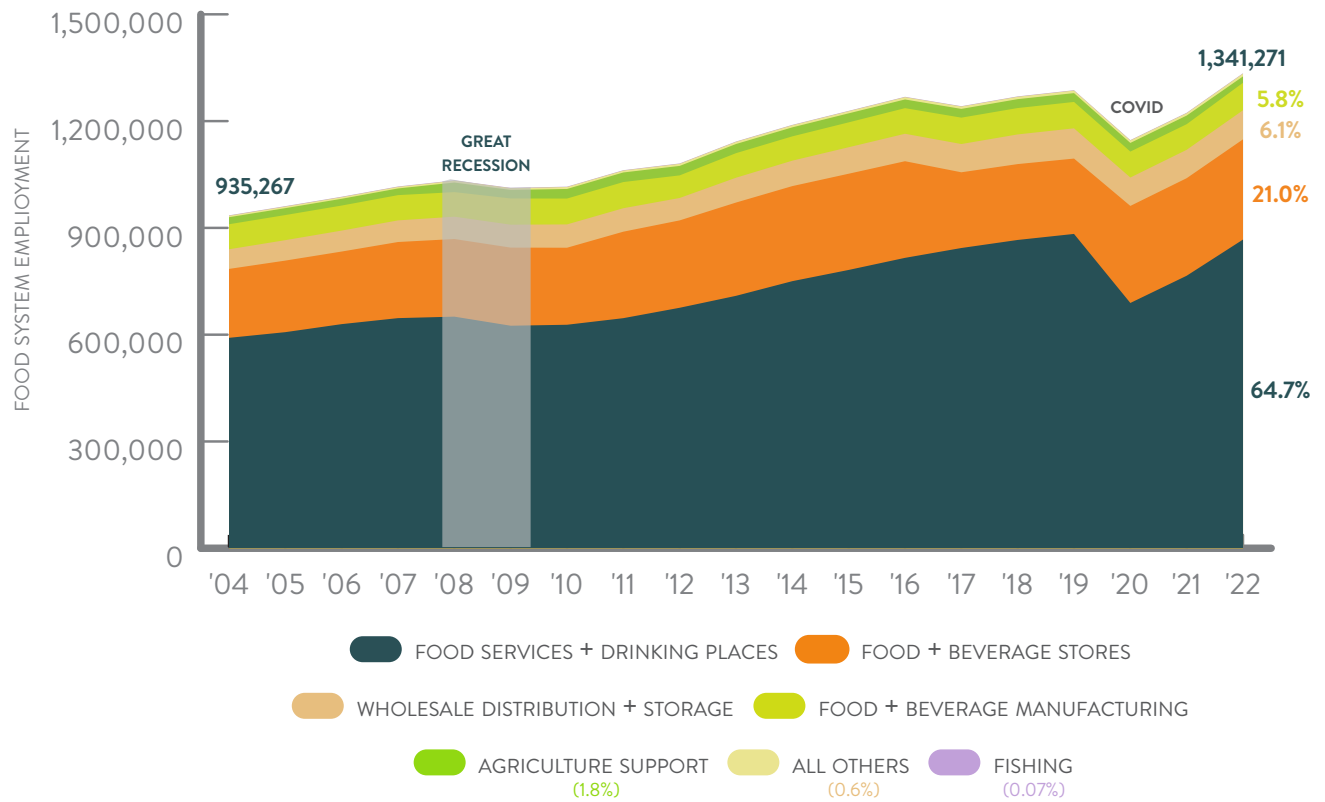


Source: U.S. Bureau of Labor Statistics, [Quarterly Census of Employment and Wages](#); U.S. Census Bureau, [Nonemployer Statistics](#).

Food system *service sector jobs*—restaurants, fast food, stores, bars—account for the lion’s share of food system jobs in Southern California (as they do in every other part of the country). Food services and drinking places make up the biggest percentage of jobs in every Southern California county, while food producing jobs—farming and fishing—make up the smallest overall percentages (Figure 19).

“All Others” includes solid waste collection, community food services (e.g., food banks), and government agricultural production regulation.

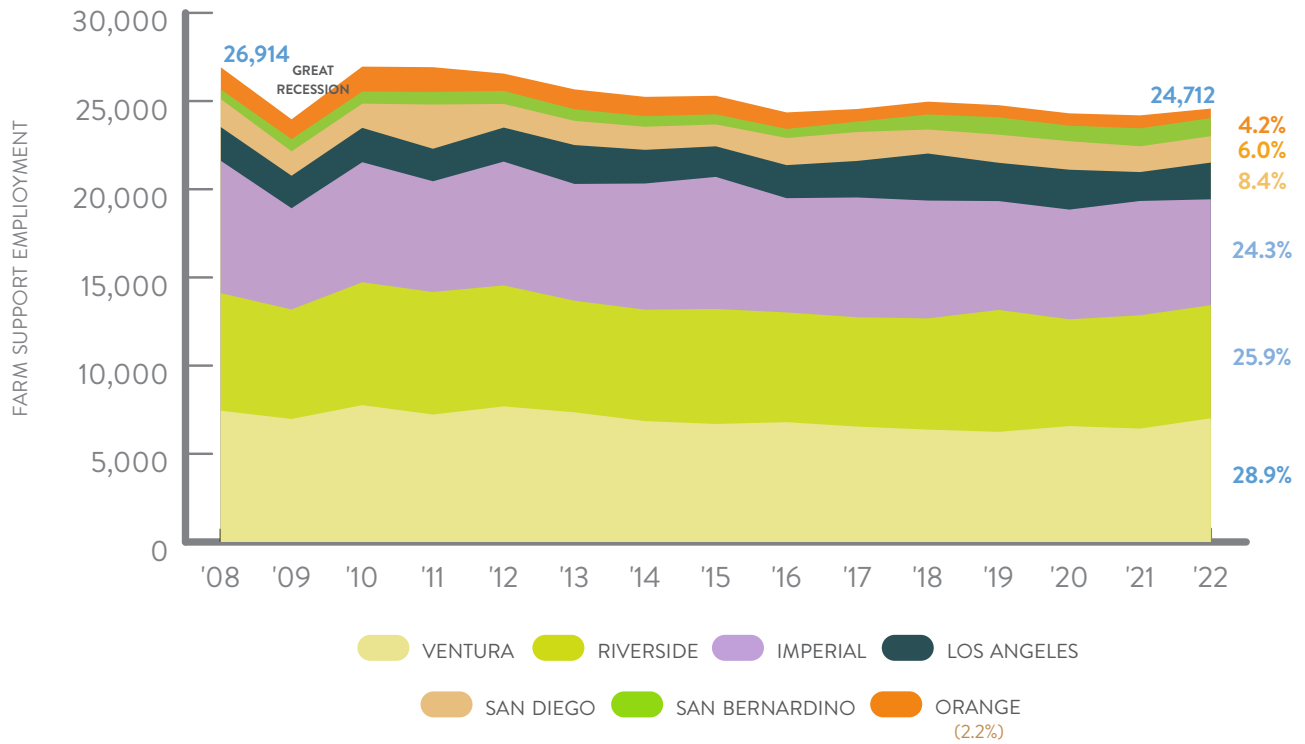
Figure 19: Food System Employment by Category, 2004-2022



Source: U.S. Bureau of Labor Statistics, [Quarterly Census of Employment and Wages](#); U.S. Census Bureau, [Nonemployer Statistics](#).

Farm support employment (Figure 20) was flat from 2008 to 2022 in Southern California. Ventura, Riverside, and Imperial counties account for the majority—79.1% (19,568)—of farm support employment (mostly “Support Activities for Crop Production”).

Figure 20: Farm Support Employment by County, 2004-2022

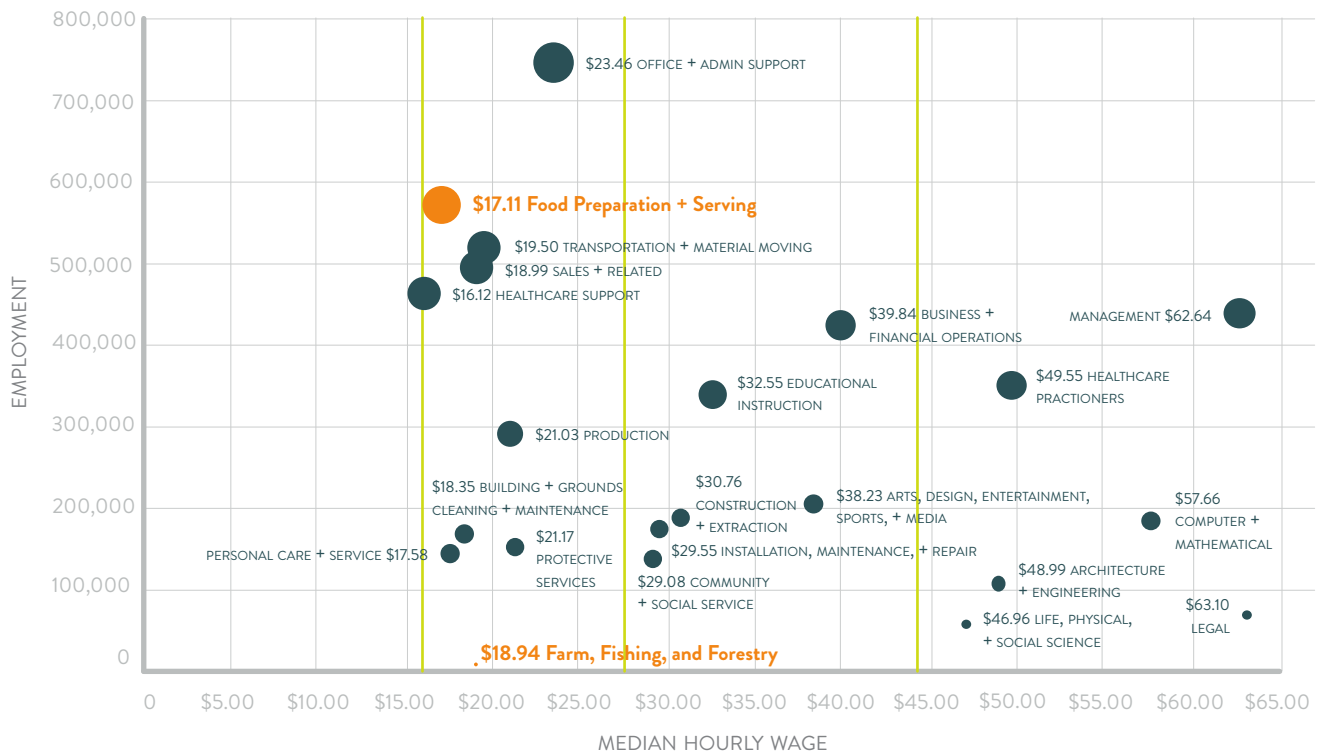


Source: U.S. Bureau of Labor Statistics, [Quarterly Census of Employment and Wages](#); U.S. Census Bureau, [Nonemployer Statistics](#).

FOOD SYSTEM WAGES

Although food system employment accounts for a significant amount of jobs in Southern California, the contributions of food system workers to our society and economy have been overlooked and undervalued. “Food Preparation and Serving Related Occupations” receive the second lowest median hourly wage of all major occupations in the L.A. metropolitan region - \$17.11. This is above California’s minimum wage (\$16), but below [livable wage levels](#) in this region for a variety of individual and household types (Figures 21 and 22).

Figure 21: Median Hourly Wages for Major Occupational Categories in L.A.—Long Beach—Anaheim Metro Region, 2023



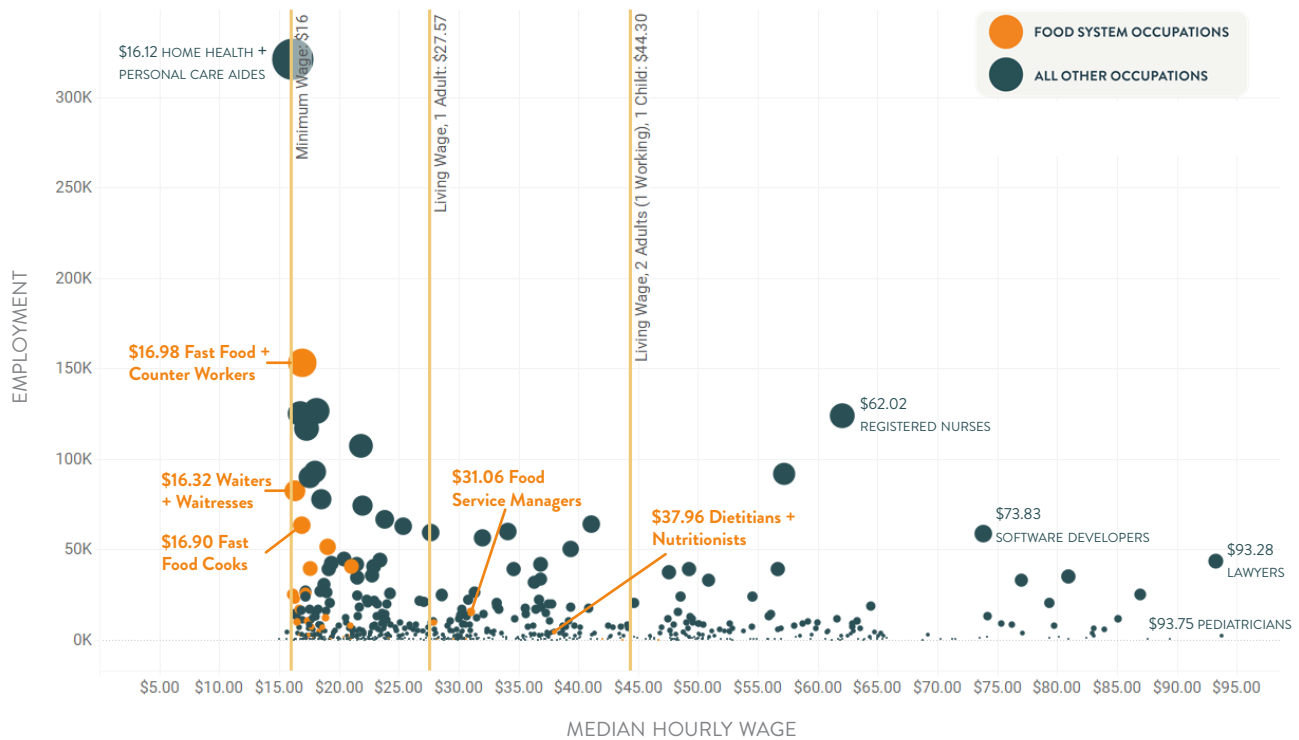
Sources: U.S. Bureau of Labor Statistics, Occupational Employment and Wage Statistics, <https://www.bls.gov/oes/current/oesrscma.htm#C>. Living Wage Calculator: <https://livingwage.mit.edu/metros/31080>.

As a society, we pay for low wages one way or another: food system workers are disproportionately impacted by nutrition insecurity. The [U.S. Government Accountability Office \(GAO\)](#) analyzed data on Medicaid and [Supplemental Nutrition Assistance Program \(SNAP\)](#) enrollment and benefits in 11 states. These two programs, combined with the refundable portion of the Earned Income Tax Credit, comprised almost two-thirds of federal expenditures (nearly \$700 billion) distributed via 82 programs for supporting low-income individuals, families, and communities. The 21 million wage-earning adults enrolled in Medicaid or SNAP in these 11 states shared a range of common labor characteristics: about 70% of wage earners in both programs worked *full-time* hours (i.e., 35 hours or more) on a weekly basis, 90% of wage earners participating in each program worked in the private sector, and 72% worked in one of five industries, including Leisure and Hospitality (i.e., stores and restaurants).

The GAO found that restaurants and other eating places—a category that includes sit-down restaurants, fast food franchises, and pizza shops—employed the largest percentage of working adult Medicaid enrollees in five of the six states that provided data, and employed the largest percentage of working adult SNAP recipients in seven of the nine states that provided employer data.

[Low wages disproportionately impact women, Black, and Hispanic/Latino Americans](#), and one of the reasons is that women, Black, and Hispanic workers are concentrated in the lowest paying segments and sections of the restaurant industry. Additionally, according to the [National Agricultural Workers Survey](#), about two-thirds (63%) of farmworkers in the country are from Mexico and 78% of farmworkers were Hispanic/Latino.¹⁰⁸ Farmworkers experience a number of challenges, including being [35 times more likely to die of heat](#) than other workers.

Figure 22: Median Hourly Wages for Major Occupational Categories in L.A.—Long Beach—Anaheim Metro Region, 2023



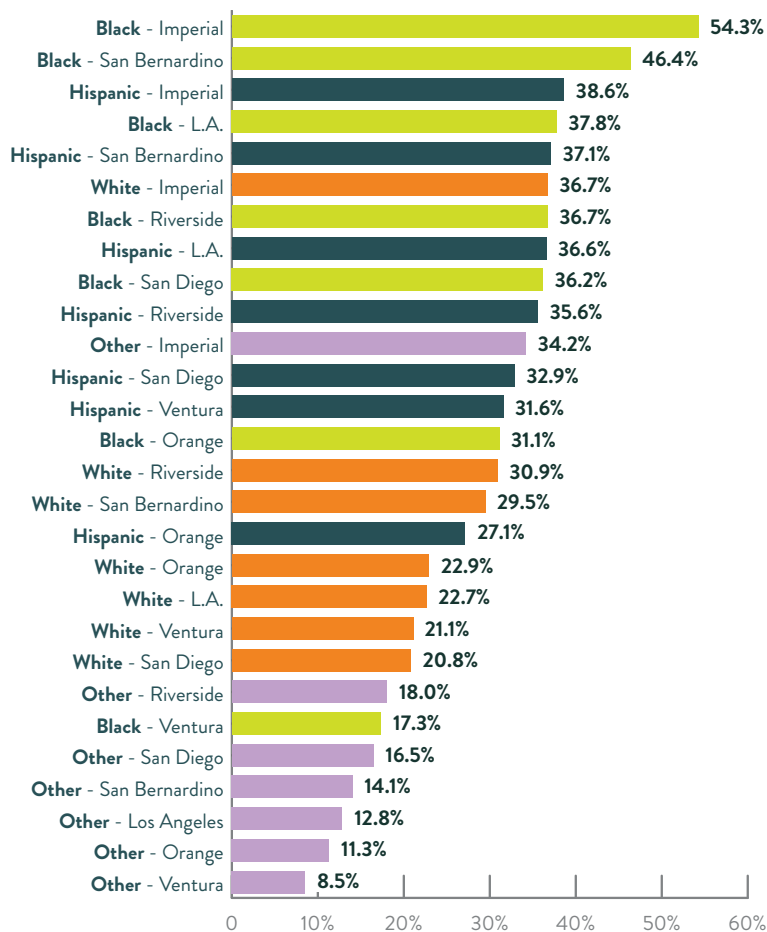
Sources: U.S. Bureau of Labor Statistics, Occupational Employment and Wage Statistics, <https://www.bls.gov/oes/current/oesrca.htm#C>. Living Wage Calculator: <https://livingwage.mit.edu/metros/31080>.

Limited Progress Reducing Diet-Related Health Problems

Diet-related health problems create many challenges for a significant number of people and the ripple effect of these challenges are far-reaching. Research from the [Journal of the American Medical Association](#) found that **poor diet is the leading cause of illness and death in America** and “Suboptimal intake of specific foods and nutrients was associated with a substantial proportion of deaths due to heart disease, stroke, or type 2 diabetes.” The amount of food we eat and the *composition of ingredients* in our food also changed over the 20th century: **today, ultra-processed foods comprise an estimated 58% of caloric intake in the United States.** [Ultra-processed foods](#)—high in sugar, fat, sodium, and artificial flavors—are “hyper-palatable: Irresistible, easy to overeat, and capable of hijacking the brain’s reward system and provoking powerful cravings.”

If unhealthy food is ubiquitous, why does every dataset with demographic information reveal that Hispanic, Black, Indigenous, Native Hawaiian/Pacific Islander, and Southern Californians of two or more races are disproportionately impacted by inequities in diet-related health outcomes? Two comprehensive frameworks—[social determinants of health](#) and [commercial determinants of health](#)—set the stage for shaping our health, well-being, and quality of life. Social determinants of health refers to conditions of economic stability, education access and quality, health care access and quality, characteristics of neighborhood and built environment, and social and community context. Not surprisingly, variations in social determinants of health, including food and nutrition insecurity and food access challenges, disproportionately impact Black, Hispanic, Indigenous, low income, and other Southern Californians. For example, we can see higher rates of adults with obesity among Black and Hispanic Southern Californians, particularly in counties with lowest median household income: Imperial and San Bernardino (Figure 23).

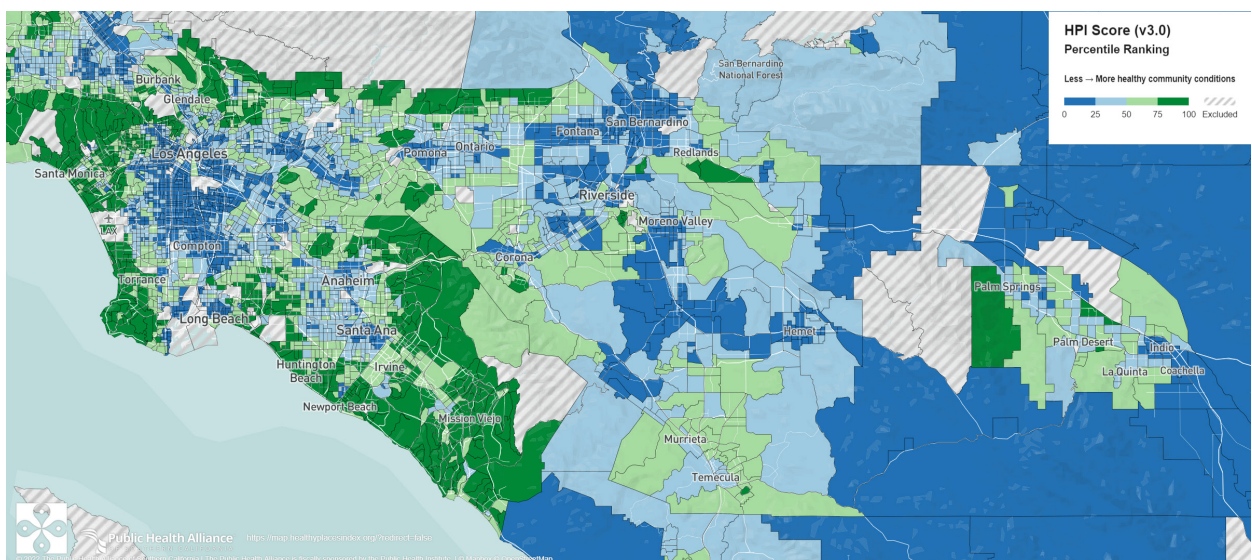
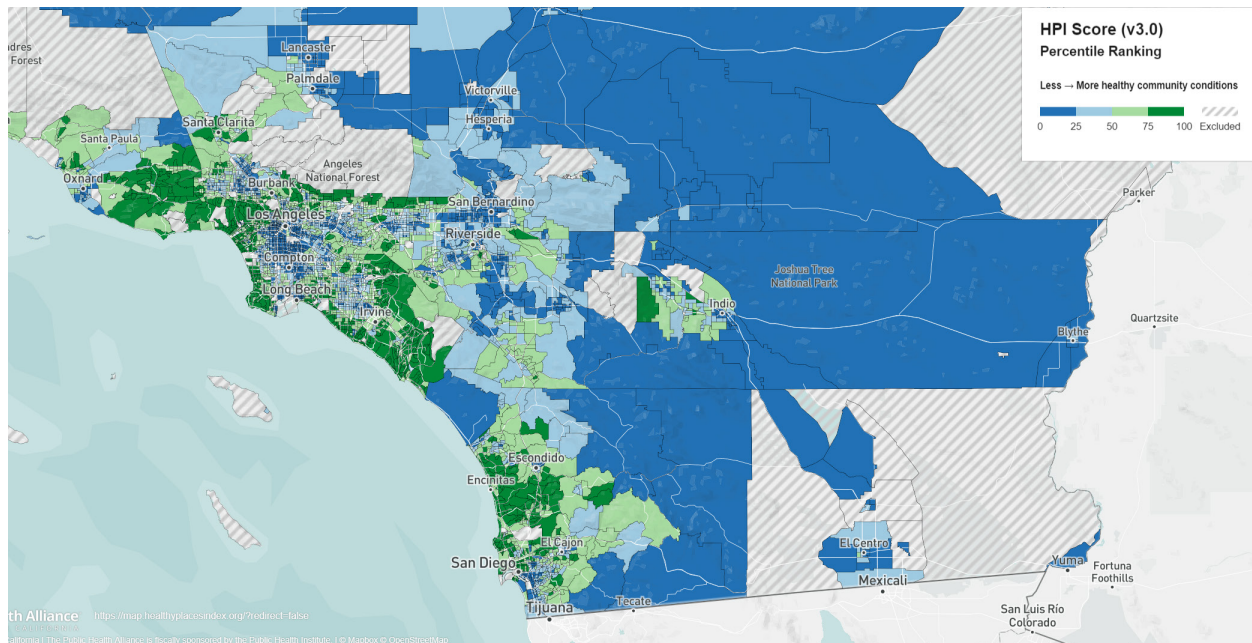
Figure 23: Prevalence of Adult Obesity by Race/Ethnicity and County, 2020-2021



Source: California Department of Public Health, Nutrition and Physical Activity Branch, [Community Obesity Profiles](#), (based on data from UCLA’s California Health Interview Survey).

Commercial determinants of health refers to the responsibility of corporations, particularly corporations in four industry sectors— tobacco, ultra-processed foods, alcohol, and fossil fuels— in escalating rates of poor health, social and health inequities, and ecological degradation. Taken together, social and commercial determinants of health frequently mean that the ubiquity of unhealthy, ultra-processed foods goes hand-in-hand with unequal access to healthy food within our communities. For example, the [California Healthy Places Index](#) indicates that neighborhoods that are disproportionately Hispanic and low income (some of which were [historically redlined](#)), with [low income and low access](#) to grocery stores, and rural communities have less health community conditions than communities that are predominantly White and Asian (Figure 24).

Figure 24: California Healthy Places Index

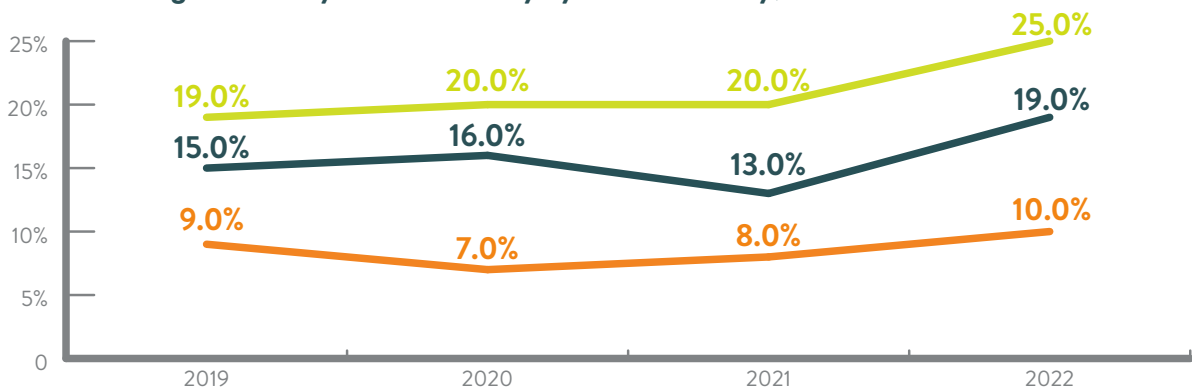


Source: California Healthy Places Index, <https://www.healthplacesindex.org/>.

Limited Progress Reducing Food and Nutrition Insecurity

The common denominator for suboptimal health, well-being, and quality of life, including food and nutrition insecurity, is *poverty*, which [Matthew Desmond](#) describes as a “relentless piling on of problems” and a “tight knot of social maladies.” Despite the region’s huge and dynamic economy, an average of 2.3 million Southern Californians were food insecure from 2017 to 2022. Black and Hispanic people had higher rates of food insecurity than White people (Figure 25 shows data for L.A. County).

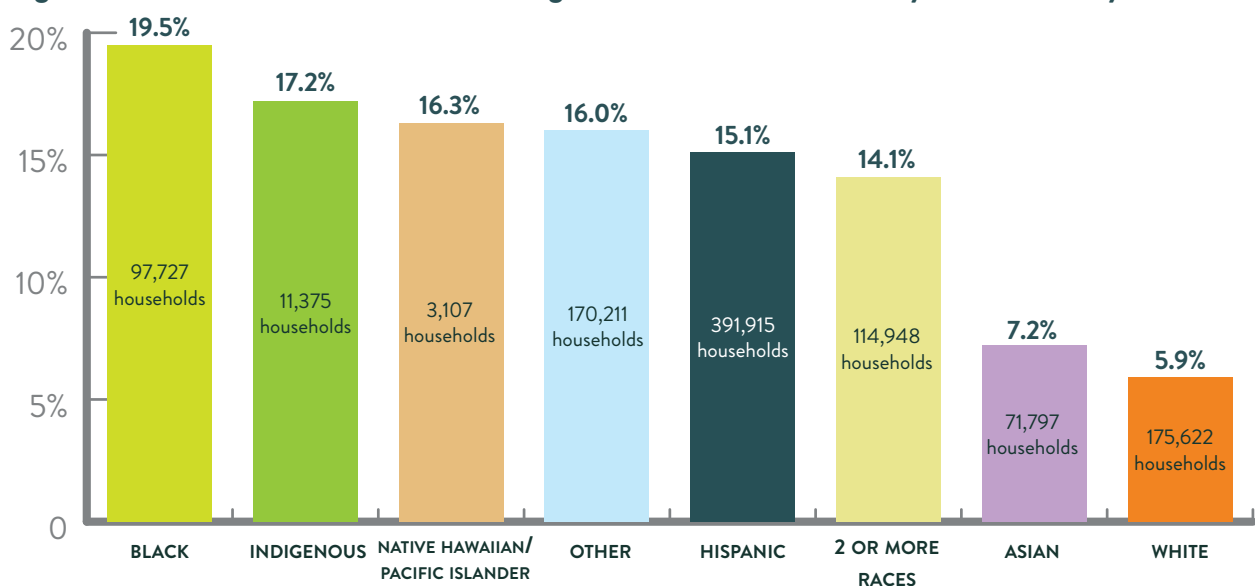
Figure 25: Los Angeles County Food Insecurity by Race/Ethnicity, 2019-2022



Source: Feeding America, Map the Meal Gap, <https://map.feedingamerica.org/>.

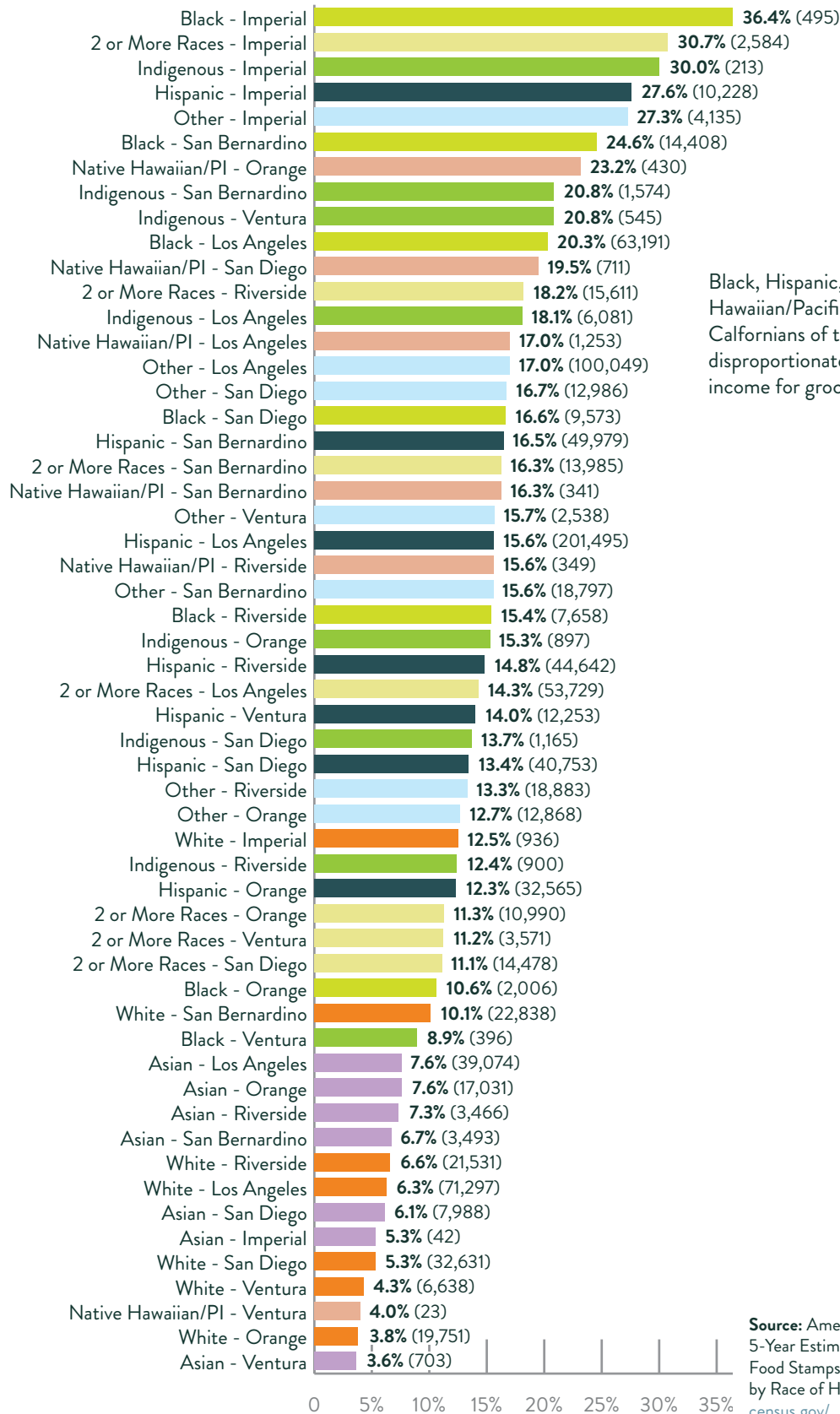
An average of **11.5% (1,036,702)** of Southern California *households* received Supplemental Nutritional Assistance Program (SNAP, known as CalFresh in California) benefits to supplement their grocery budgets from 2018 to 2022. Imperial County had the highest percentage of food insecure people, even though it has the smallest population of Southern California counties.

Figure 26: Percent of Households Receiving SNAP/CalFresh Benefits by Race/Ethnicity



Source: American Community Survey, 5-Year Estimates (2018-2022), Receipt of Food Stamps/SNAP in the Past 12 Months by Race of Householder, <https://data.census.gov/>.

Figure 27: Percent of Race/Ethnicity Receiving SNAP/CalFresh By County



Black, Hispanic, Indigenous, Native Hawaiian/Pacific Islander, and Southern Californians of two or more or other races disproportionately receive supplemental income for groceries.

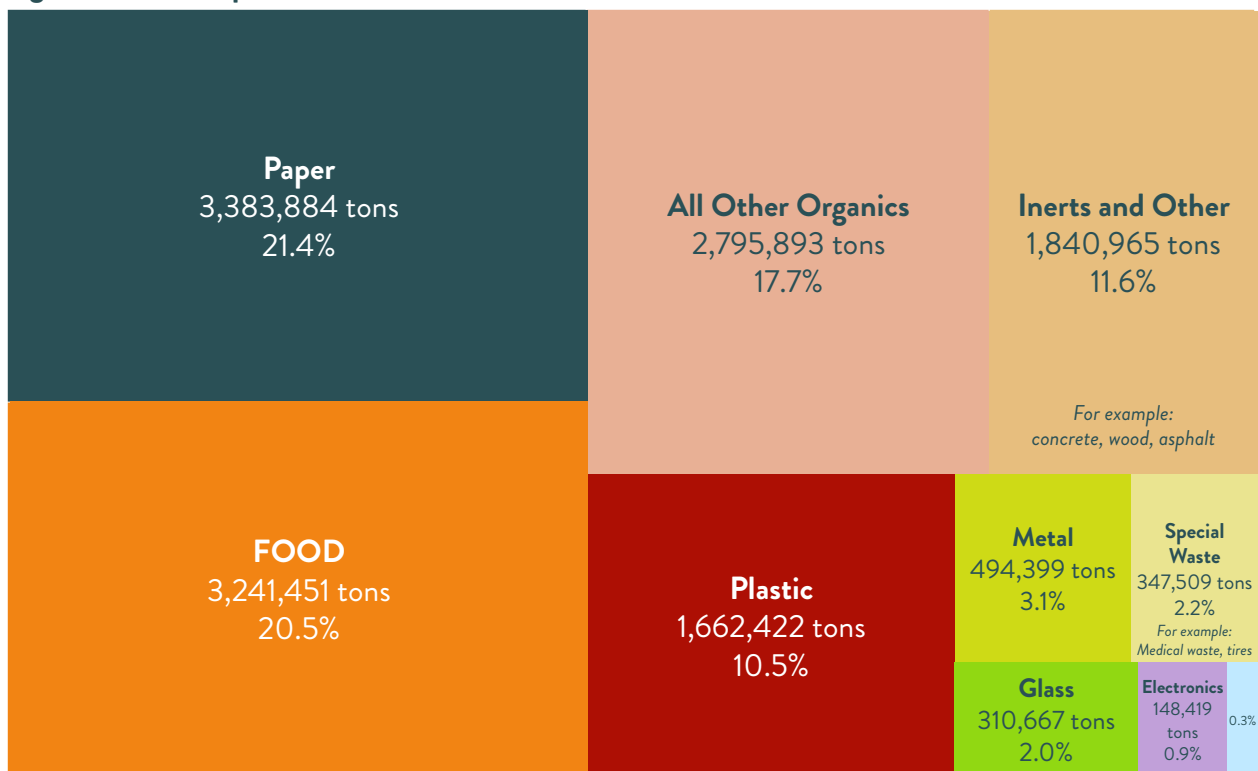
Source: American Community Survey, 5-Year Estimates (2018-2022), Receipt of Food Stamps/SNAP in the Past 12 Months by Race of Householder, <https://data.census.gov/>.

Limited Progress Reducing Wasted Food

The [U.S. Environmental Protection Agency](#) (EPA) estimates that more than 30% of the food produced in the United States is *never eaten*. This results in a waste of resources—land, soil, freshwater, pesticides, fertilizers, and energy—used to produce food as well as the *generation* of environmental impacts like greenhouse gas emissions, climate change, soil degradation, and air pollution. California has a law, [SB 1383](#), that sets statewide targets for reducing organic waste disposal, including penalties for failure to comply. [Recent research](#) suggests that, of the nine state-led efforts to ban food waste, all have failed to reduce food waste except Massachusetts. The authors suggest this is the case because Massachusetts has reduced organic waste disposal due to the simplicity of its regulations, sufficient infrastructure (i.e., composting sites), a low cost of compliance, and/or strong enforcement. [SB 1383 is still rolling](#) out in California, with 480 out of 617 jurisdictions now having residential organic waste collection and 206 organic waste processing facilities in place, with 20 more under development.

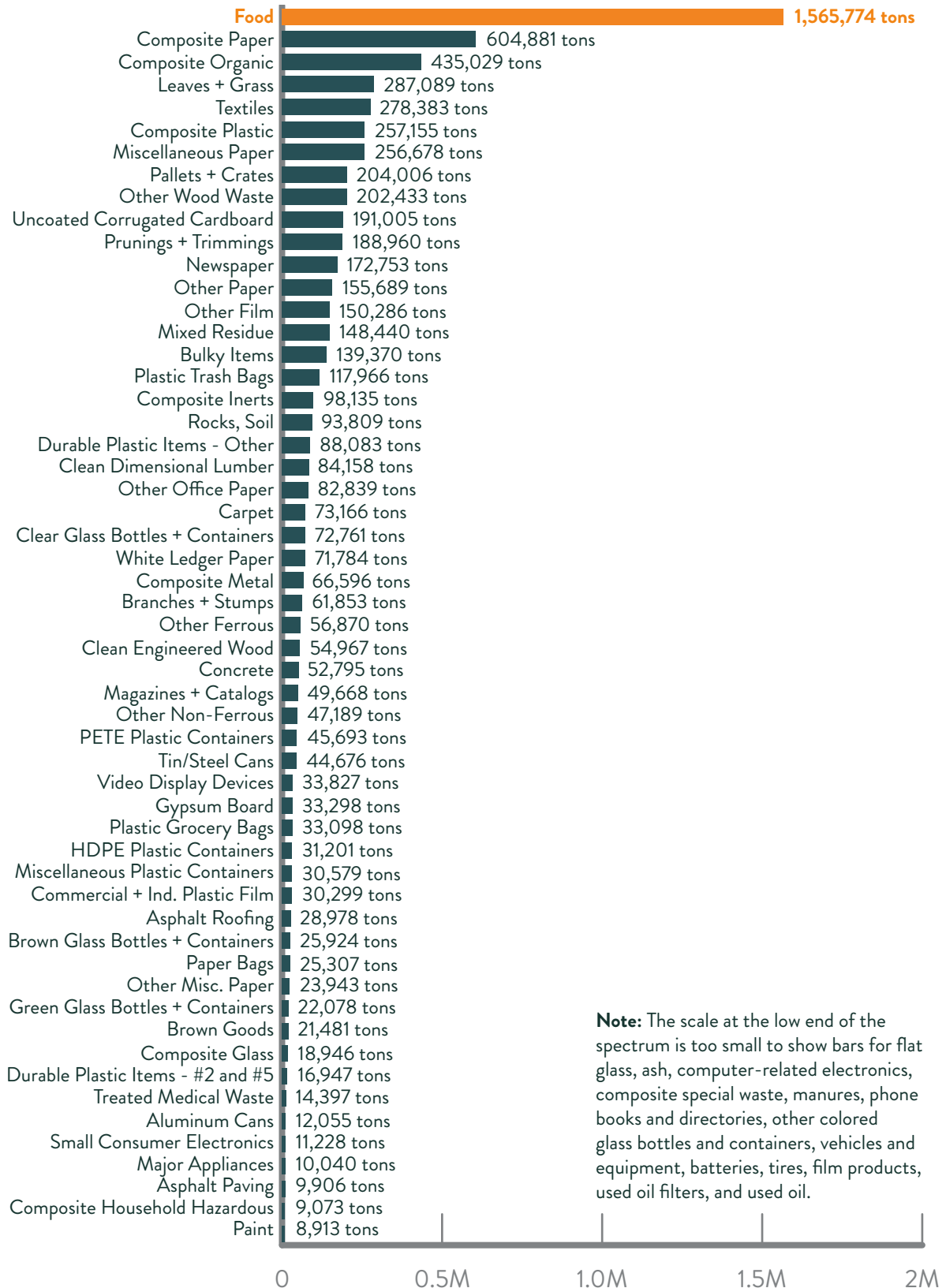
One way we can analyze food waste is via [waste characterization studies](#). Waste characterization studies involve sampling residential, industrial, commercial, and institutional (ICI) waste from many sources and then identifying material types (e.g., glass, plastic, paper, food waste). After all types of paper products, food is the top material in Southern California’s disposed waste stream (Figure 28). When all materials are disaggregated, food is the top material in most county’s waste streams (Los Angeles County is depicted in Figure 29).

Figure 28: Municipal Solid Waste Characterization for Southern California



Source: CalRecycle, Waste Characterization Tool, <https://www2.calrecycle.ca.gov/WasteCharacterization/>.

Figure 29: Los Angeles County Municipal Solid Waste Characterization



Note: The scale at the low end of the spectrum is too small to show bars for flat glass, ash, computer-related electronics, composite special waste, manures, phone books and directories, other colored glass bottles and containers, vehicles and equipment, batteries, tires, film products, used oil filters, and used oil.

Source: CalRecycle, Waste Characterization Tool, <https://www2.calrecycle.ca.gov/WasteCharacterization/>.