

California Farm Labor 2024
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Highlights

California's farm sales of \$59 billion in 2022 were 11 percent of \$543 billion in US farm sales and higher than the \$44 billion farm sales of #2 Iowa; about 40 percent of CA commodities are exported. California has been the leading farm state since 1949 because of high-value FVH commodities. Crops are 73 percent of California's farm sales, and fruits, nuts, and berries (worth \$23 billion in 2022), vegetables and melons (\$12 billion), and horticultural specialties (\$4 billion) are 90 percent of California crop sales.

Mexican-born workers dominate the farm workforce. California's 850,000+ hired workers have little education (an average 8 years), are aging (average 42), and are half unauthorized. The 40,000 H-2A guest workers, legal Mexican men in their early 30s who are in California for an average six months, cost more than US workers, \$25 to \$30 an hour including wages, housing, and transportation, versus \$20 to \$25 an hour for US workers including wages and payroll taxes. H-2A workers are 20 to 30 percent more productive than US workers and provide labor insurance because they are tied to employers by contracts.

California's fresh produce industry is responding to rising US labor costs in three major ways: more labor-saving mechanization and mechanical aids that raise worker productivity, more H-2A guest workers, and more imports of fruits and vegetables: 60 percent of US fresh fruit, and 40 percent of fresh vegetables, are imported, mostly from Mexico.

Farm Employment

California specializes mostly high-value and often labor-intensive commodities. An acre of midwestern corn or soybeans generates \$800 to \$1,500 in revenue, while an acre of strawberries can generate over \$100,000, highlighting high investment and risks, including \$30,000 to \$40,000 an acre in labor costs.

California farms employed an average 420,000 hired workers in 2022, with employment peaking at almost 500,000 in summer and dipping below 350,000 in winter. Average employment is a measure of full-time equivalent (FTE) jobs, as when three workers each employed for four months create one FTE job. Seasonality and worker turnover mean that twice as many workers, 850,000, are employed for wages sometime during a typical year on California farms. Dividing total wages paid by average FTE employment suggests that California farm workers earn an average \$800 a week and \$42,000 if employed for 52 weeks in 2022. However, California farm workers earned an average \$20,000 because most did not work year round.

California is unique among states in having more workers brought to farms by nonfarm employers, especially farm labor contractors, than are hired directly by farmers. In US agriculture, two workers are hired directly by farmers for each worker who is brought to farms by crop support-service firms such as FLCs, that is, there are two direct hires for each indirect hire. In California, 1.5 workers are brought to crop farms by nonfarm businesses for each worker who is hired directly.

Farmers and Farm Workers

Farmers and farm workers differ in characteristics and income. The median age of farmers is 58, older than the average 42 of US crop workers. Most farmers are white, and many are the 3rd, 4th, or 5th generation to operate a particular farm. Most farm workers were born in Mexico and earn 8x to 10x more in the US than they earned before moving to the US. Most farm workers are settled in one area and have one US farm employer a year, but that employer may be a farm labor contractor who moves workers from farm to farm. The average hourly earnings of California crop and livestock workers who are hired directly by the farms where they work, \$19.75 in 2022, are 12 percent higher than the US average of \$17.55 an hour.

The average directly hired California crop worker earned \$20,000 in 2021, with a range of \$14,000 for workers employed by strawberry farms and \$25,000 for workers employed by nurseries. Dairy workers averaged \$27,000, and employees of farm labor contractors less than \$8,000.

Workers accept seasonal farm jobs because they are the best available given their personal characteristics, generally low levels of education, lack of English, and few links to nonfarm jobs. Most seasonal farm workers arrive in the US in their early 20s and drift out of farm work in their 40s and 50s. US-educated children of seasonal farm workers rarely follow their parents into the fields, making the farm labor market akin to a revolving door that seeks newcomers to the US to ensure that workers are available when needed.

Newcomers to the California farm workforce were mostly unauthorized Mexicans from the 1980s until 2013-14. The rising cost of being smuggled into the US meant that those who succeeded often went to cities for nonfarm year-round jobs rather than becoming seasonal farm workers and expanding the H-2A program from less than 100,000 US jobs certified in 2013 to almost 400,000 in 2023. Legal H-2A guest workers, over 90 percent Mexicans, are 15 percent of US and five percent of California crop workers.

Many policies affect the demand for farm workers, their characteristics and earnings, and the operation of the farm labor market. The IRCA compromise of 1986 (1) legalized unauthorized farm workers and (2) made it easier for farmers to employ H-2A guest workers. This legalization-and-easier-guest-worker formula has been in all farm worker immigration reform proposals since 1986, including the pending Farm Workforce Modernization Act approved by the House in 2019 and 2021.

With Republicans opposed to amnesty, and Democrats opposed to more guest workers, there is little prospect for legalization and easier guest worker legislation to be enacted in 2024. The action is likely to be in the courts, as farmers oppose new DOL regulations that create multiple rather than one Adverse Effect Wage Rate per state, require employers to allow H-2A workers to have visitors in employer-provided housing, and require other actions to protect H-2A and US workers.

Machines, Migrants, and/or Imports

There are three major ways to provide Americans with fresh fruits and vegetables: **machines** to replace hand workers and aids to make them more productive, migrant **H-2A workers**, and **imported produce**. Higher farm wages are more likely to speed mechanization and increase imports rather than attract more US workers into seasonal farm jobs.

Labor-saving mechanization is the major response to rising farm labor costs and is easiest for crops that ripen uniformly, so the machine can make one pass through the field, as with tree nuts, and for commodities that are processed, as with tomatoes and wine grapes. The challenge is to mechanize fragile commodities such as apples and strawberries that do not ripen uniformly using cameras that detect ripe fruit and suction cups or grippers to pick each apple or berry without damage and convey it to a bin.

Replacing hand workers with machines usually involves (1) new varieties of plants such as uniformly ripening lettuce or dwarf apple trees whose limbs are trained on wires like vineyards to make the apples more visible, (2) new farming systems that use precision planters to make it easier for machines to know where desired plants are located, and (3) cameras and gripper devices that are efficient (detect all of the ripe produce) and pick as fast as humans, who can pick an apple or strawberry every 2-3 seconds.

Mechanical aids are an in-between solution to increase worker productivity. Slow-moving conveyor belts that travel in front of strawberry harvesters eliminate the need for workers to take full trays to the end of their row, get empty clamshells, and resume picking. Hydraulic platforms that replace ladders make it easier for several workers on the to harvest apples and other tree fruit. Robots with scales can anticipate when grape or berry pickers will need another tray or carton and bring empty containers and take away full ones.

The second option is more migrant H-2A guest workers from lower-wage countries. The 1942-64 Mexico-US Bracero program peaked at 455,000 in the mid-1950s, when 20 percent of US crop workers were Braceros. After the Bracero program ended, farm labor costs jumped as the United Farm Workers won 40 percent wage increases in table grape contracts, prompting wide-ranging labor-saving mechanization that included machines to harvest processing tomatoes and the replacement of 50 to 60 pound lugs with bulk bins and forklifts to handle harvested produce. Unauthorized migration surged and union pressures fell in the 1980s and 1990s, reducing interest in labor-saving mechanization.

The H-2A program quadrupled over the past decade. Half of the almost 400,000 H-2A jobs are in five states, Florida, California, Georgia, Washington, and North Carolina, and each has 25,000 to 50,000 H-2A jobs. H-2A workers must be paid a higher-than-minimum wage AEW that ranges from less than \$15 in the southeastern states to almost \$20 in California, which forces employers to weigh the higher costs of H-2A workers against their higher productivity and the labor insurance they provide. Growth in the H-2A program slowed in 2023, and H-2A jobs fell in AZ and CA.

More imports are the third response to rising farm labor costs. Mexico provides half of US fresh fruit imports and three-fourths of US fresh vegetable imports. Many Mexican fresh produce exports are from controlled environment agriculture (CEA) structures that range from plastic-covered hoop structures to greenhouses, which means higher yields, a longer growing season, and better food safety. Some 750,000 workers are employed on Mexican farms that export fruits and vegetables to the US, and most earn at least twice the Mexican minimum wage of 249 pesos (\$14.50) a day in 2024 or 375 pesos (\$21.85) in border areas. Mexican farm wages of \$3 to \$5 an hour are a third of US farm wages of \$15 to \$20 an hour.

Outlook

Fresh produce was available from local farms seasonally until the 1950s and 1960s, when California pioneered farming systems that allowed the separation of the production and consumption of fresh and perishable commodities. New plant varieties and farming systems, better cooling and packing technologies, and refrigerated transportation over interstate highways allowed California to replace New Jersey as the US garden state.

The separation of fruit and vegetable production and consumption is spreading to lower-wage countries, explaining why most US fresh avocados, blueberries, and tomatoes are imported. As the US shifts from agricultural trade surpluses to deficits, how will differences between US grain and meat farmers who export much of what they produce be reconciled with US fresh fruit and vegetable growers who face rising imports?

Producing fresh fruits and vegetables in the US is likely to require more investment, raising the question of where to invest. Should investment:

- emphasize machines to replace hand workers, as with robots that pick apples
- develop aids to make hand workers more productive, such as robot carriers and platforms
- build housing and other infrastructure to employ more H-2A workers
- increase investments in lower-wage countries

The answer for the top 10 farm growers and marketers that account for half of more of the US production of many individual fruits and vegetables is likely to be to invest in all: machines, aids, housing, and abroad, because the winning strategy is not yet clear.

Commodities such as apples that face little import competition, have access to capital and long time horizons, and are innovating with new varieties, are likely to invest H-2A infrastructure and aids as a bridge to full mechanization. Commodities such as mature-green fresh tomatoes are likely to become vine-ripes in US CEA and abroad. The future of farm labor will be shaped by consumer demand, technological and labor factors and policies, and producer attitudes, capital, and capacities for change.