

# California Agriculture: Water, Labor, and Immigration

**Philip Martin**

Farmers fear shortages of water and labor. Both have been in short supply in recent years due to drought and reduced Mexico–U.S. migration. California agriculture may be at a crossroads on both issues, facing higher costs and more uncertainty about the availability of two critical inputs.

California's last "normal" water year was 2011, when farm sales were \$43 billion. Table 1 shows that during the 2012–15 drought, farm sales rose to \$47 billion in 2012, \$51 billion in 2013, and \$53 billion in 2014. In some cases, smaller volumes of produce can result in higher prices, but this did not occur during the drought years.

California has nine million irrigated acres of farm land, and agriculture normally uses 33 million acre feet of water. About 500,000 acres were fallowed in 2014 and 2015, resulting in up to 10,000 fewer farm jobs. In normal water years, 60% of agricultural irrigation water is surface water and 40% is ground water.

In dry years, these ratios are reversed, as groundwater pumped from underground aquifers replaces surface water. California in 2014 became the last western state to regulate groundwater pumping, enacting laws that created local groundwater sustainability agencies to register private wells, monitor the water-measuring devices that must be attached to pumps, and regulate groundwater pumping to avoid depleting groundwater.

The 2015–16 water year was normal. The state's 154 major reservoirs on April 1, 2016 held almost 22 million acre-feet of water, 85% of normal, so that federal and state farm-water contractors are likely to get half or more of their contracted water. Each water district contracts for a specific share of the surface

water available to the federal Central Valley Project and the State Water Project, and CVP and SWP managers provide a percentage of each district's contracted water based on availability.

Three factors shape the longer term outlook for water and agriculture. First, most climate-change models expect warmer winters that are less suited to California's water storage and transport system. If more precipitation falls as rain rather than snow, the capacity of dams and reservoirs to store water for summer irrigation is reduced. Agriculture could cope by changing seeds and farming practices to use less water, but such changes could lower yields and increase labor costs. Alternatively, lower-value forage crops such as alfalfa for dairy cows could be grown outside California, freeing up water for higher-value crops.

Second, is the hardening of the demand for water, as trees and vines that must be watered for 20 to 30 years replace annual crops on land that can be fallowed in dry years. For example, the acreage of almonds, which normally receive three to four acre-feet of water a year, more than doubled over the past three decades to 900,000 acres, while cotton declined from 1.6 million acres in 1980 to 160,000 acres in 2015.

Third, is water marketing to shift water around the state, so that some of the farmers who grow rice and other water-intensive crops in the Sacramento Valley could fallow their land and sell their water to farmers who grow higher-value crops in the San Joaquin Valley. If farmers were to acquire property rights in ground water, they would have incentives to buy water in wet years and recharge aquifers.

## Labor

The average employment of hired workers in California agriculture rose 12% over the past decade, reaching

415,000 in 2014. Average employment is a measure of full-time equivalent jobs, not unique farm workers. Some 829,000 unique workers filled these jobs, a ratio of two workers per FTE job, reflecting seasonality (employment rises 20–30% in the summer months), and turnover, as many workers are employed only a short time on farms.

Average employment has been rising because the expansion of some labor-intensive crops, such as berries, more than offsets jobs lost to labor-saving mechanization in others such as raisins. Figure 1 (page 10) shows the shift from crop farmers hiring workers directly, an average 175,000 in 2014, to relying on crop support firms to bring an average 205,000 workers to farms. That is, 54% of those employed on crop farms are there by nonfarm employers rather than being hired directly by the farmer where they work. Almost 70% of crop support employment is with farm labor contractors (FLCs).

Farm employers face labor challenges, including paying the statewide \$15 minimum wage by 2022. The federal minimum wage was \$7.25 an hour in 2015, which was 42% of the \$17.40 median hourly earnings of all U.S. workers, while the California minimum wage of \$9 was 47% of the state's \$19.15 median wage. Median wages vary within

Table 1. California Water Availability and Farm Sales, 2011–2016

Year	Acre Feet (millions)	Farm Sales (\$billions)
2011	72.7	43.4
2012	41.6	47.0
2013	44.3	50.9
2014	31.3	53.5
2015	37.2	
2016	51.9	
Average 1922–2008	50.2	

Source: Jay Lund, <https://californiawaterblog.com>

Figure 1. Average Employment, California Crops, and Crop Support, 1990–2014



California. Figure 2 shows that the \$15 an hour minimum wage in 2022 is projected to be 70% or more of the median wage in the San Joaquin Valley, which includes half of the state’s farm workers.

The real average hourly earnings of California farm workers peaked in the mid-1970s, reached a low in the 1990s, and rose to almost \$12 an hour in 2015—below their \$14 an hour equivalent of mid-1970s wages. Poverty persists in farming areas, with 20% or more of San Joaquin Valley residents living in families with incomes below the poverty line. Will higher minimum wages reduce poverty and preserve jobs as the expansion of labor-intensive crops continues, or will uncertain water and higher minimum wages curb expansion, spur mechanization, and increase poverty?

The major short-term farm labor challenge is fewer Mexican newcomers, almost all of whom arrive as unauthorized workers. Farm employers are responding with 4-S strategies: **satisfy** current workers to retain them longer in the farm work force, **stretch** the current work force with mechanical aids that increase productivity and make farm work easier, **substitute** machines for workers, and **supplement** the workforce with H-2A guest workers.

About 90% of California farm workers were born in Mexico and 60% are not authorized to work in the United States. Most crop workers are men

(75%), settled, and aging, giving California a more unauthorized, less educated (average seven years) and older workforce than the rest of the United States. Farm work is very much like nonfarm work, with workers living off the farm where they work, commuting to work in carpools, and living in families that include U.S.-born children. Many farm worker traits such as years of U.S. farm work experience have a V-shape. For example, California crop workers had an average 11 years of U.S. farm work experience in the early 1990s, nine years in 2000, and 16 years today.

### Immigration

The U.S. has 20% of the world’s 250 million international migrants—almost 44 million—including a quarter who are not authorized to be in the United States. About eight million of the 11 million unauthorized foreigners are in the U.S. labor force, including at least a million employed in agriculture. The U.S. has been debating what to do about unauthorized foreigners for the past three decades.

California’s seasonal farm labor market has been a revolving door for over a century, with newcomers normally staying in the seasonal farm work force a decade or two and their children educated in California shunning farm work. Waves of newcomers—Chinese, Japanese, Filipinos, Dust Bowl

farmers, and Mexicans—filled seasonal farm jobs until they returned home or found better nonfarm jobs in the U.S.

In the early 1980s, up to a quarter of California crop workers were unauthorized. The farm labor compromise included in the Immigration Reform and Control Act of 1986 allowed them to legalize and made it easier to hire legal guest workers under the H-2A program. With IRCA introducing sanctions on employers who knowingly hired unauthorized workers, farm labor costs were expected to rise as farmers raised wages to retain newly legalized workers or built housing to hire guest workers.

IRCA backfired, and illegal immigration surged in the 1990s. Farm wages fell and unauthorized workers spread to all commodities and states as H-2A guest worker admissions dropped to less than 20,000 in the mid-1990s. As the unauthorized share of crop workers surpassed 50%, farmers asserted that there was a shortage of legal U.S. workers to harvest their crops, that H-2A program requirements to provide housing were too cumbersome, and that agriculture needed an E-Z guest worker alternative. Congress considered several such programs, but President Clinton threatened a veto and none was enacted in the 1990s.

The 2000 election of President Fox in Mexico and President Bush in the U.S. spurred farm employers and worker advocates to negotiate AgJOBS, an IRCA-like effort to legalize unauthorized farm workers and make it easier to hire guest workers. AgJOBS was not enacted, but in November 2014 President Obama issued an executive order to create the Deferred Action for Parents of Americans (DAPA) program. If implemented, DAPA could legalize four million unauthorized parents with legal U.S. children, including up to 500,000 farm workers, giving them three-year work permits.

Texas and 25 other states sued to block DAPA, arguing that it was an unconstitutional overreach of executive power. Meanwhile, the H-2A

program is expanding, quadrupling in California to over 10,000 jobs certified to be filled with guest workers in the past five years, although H-2A workers remain less than 5% of the state's average farm employment. If there is no DAPA or other immigration reforms, the farm labor stage could be set for a return to the 1950s, when some farmers built housing on their farms and others joined labor cooperatives that housed Bracero guest workers and moved them from one farm to another as needed. Instead of coming from Mexico, 21<sup>st</sup> century guest workers may come from Asia and elsewhere, especially if they are allowed to stay in the U.S. more than the usual maximum of 10 months a year.

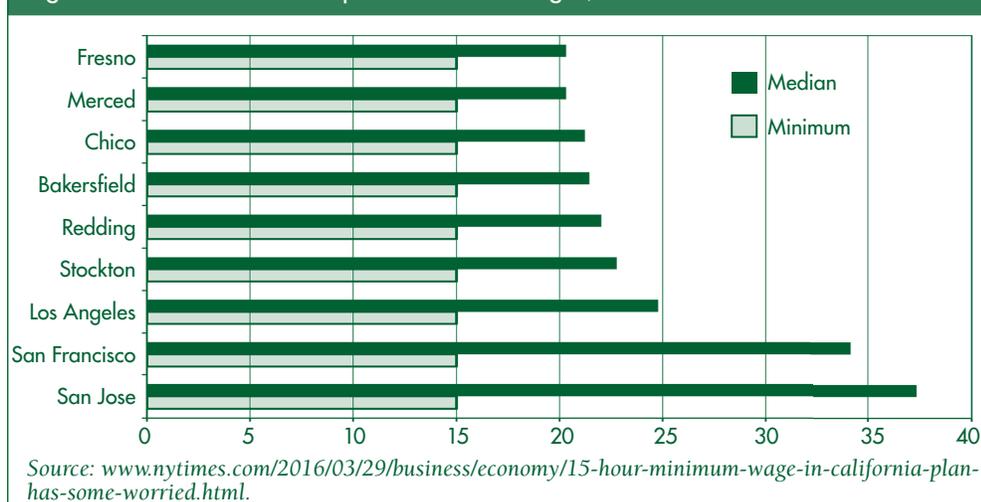
## ALRB

The Agricultural Labor Relations Board administers the 1975 Agricultural Labor Relations Act, which was enacted “to bring peace and justice to the fields” by giving farm workers the right to organize into unions and bargain over wages and working conditions with their employers. There were an average three elections a day on California farms in 1975, but since then there have been far fewer, and none in the past several years.

The ALRA had several unique features, including quick elections and a makewhole remedy if employers fail to bargain in good faith with a certified union. That is, employees can receive the additional wages and benefits they could have expected if their employer had bargained in good faith. These provisions, as well as the access regulation that gives union organizers the right to go onto farms and talk to workers, made the ALRA controversial, with farmers complaining that the state was unfairly supporting unions.

Over the past two decades, the dominant United Farm Workers union has switched the focus of its activities from the fields to the Legislature. The UFW, arguing that farm employers delayed bargaining despite the makewhole

Figure 2. Minimum and Projected Median Wages, 2022



remedy, got the ALRA amended in 2002 to provide for mandatory mediation that should guarantee workers a first contract within eight months after a union is certified to represent them.

The ALRB has undertaken new initiatives, creating a worker education unit to make non-Spanish speaking and other farm workers aware of their rights under the ALRA. Most ALRA activity today involves protected concerted activities, as when two or more workers complain about wages and working conditions and suffer retaliation as a result.

California was a pioneer when it enacted the ALRA, and may be a pioneer to develop effective remedies for unauthorized farm workers. Under the U.S. Supreme Court's 2002 Hoffman Plastics decision, unauthorized workers who are fired unlawfully do not get back pay because they were not eligible to be employed in the first place. However, the California Supreme Court in 2014 allowed Vincente Salas, who used another person's Social Security number to get hired and was not rehired after filing a worker's compensation claim, to recoup unpaid wages for the period between his first attempt to return to work and the date the employer learned that he was unauthorized. The Salas decision could require farm employers who unlawfully fire workers to pay them for time not worked until the employer learns they are unauthorized.

## Conclusions

California farm sales have been rising despite more costly water and labor, reaching record levels, and demonstrating the adaptability of California agriculture. Many commodities are labor-intensive, explaining why the employment of farm workers is rising. Over half of the workers employed in FVH commodities are unauthorized. If the DAPA program were implemented, over half of the 400,000 unauthorized farm workers in California could obtain three-year work permits, which may encourage them to stay in agriculture and assert their labor rights or move on to nonfarm jobs, which could further expansion of the H-2A guest worker program.

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