

California Farm Labor: Jobs and Workers

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The combination of labor-intensive crops, tighter border controls, and new programs that may give some unauthorized foreigners a temporary legal status has increased interest in the number of farm workers and their stability. During the 1990s, there were an average three unique farm workers or Social Security Numbers reported by California farm employers for each year-round equivalent farm job. Analysis of data for 2007 and 2012 find two workers per job, a significant increase in stability. The ratio of workers to jobs may fall further as farmers mechanize, offer higher wages and benefits to retain current workers, or turn to guest workers.

California has led the nation in farm sales since 1950, largely because of the state's specialization in high-value fruit and vegetable crops. California's farm sales of \$45 billion in 2012 included \$17.2 billion worth of fruits and nuts, \$6.8 billion worth of vegetables and melons, and \$3.5 billion worth of horticultural specialties such as greenhouse and nursery products. The value of field crops such as cotton, hay, and rice was \$5 billion, making crop sales \$32.5 billion or 73% of the state's farm sales.

Livestock and poultry sales were \$12.1 billion, including \$6.9 billion or 57% from milk. Fruit, vegetable, and horticultural (FVH) crops accounted for 85% of the state's crop sales and 61% of farm sales.

The production of many fruits and vegetables is labor-intensive, meaning that labor represents 20–40% of production costs. In the 2012 Census of Agriculture, California farmers reported paying \$5.9 billion for workers they hired directly and \$3.3 billion for contract labor; that is, workers

brought to farms by nonfarm entities such as farm labor contractors. California, which accounted for one-eighth of U.S. farm sales, accounted for a quarter of U.S. farm labor expenses.

Hired workers do most of the work in labor-intensive FVH agriculture. According to the National Agricultural Workers Survey, over 85% of the state's farm workers were born in Mexico, and over 60% of crop workers employed on the state's crop farms have been unauthorized for the past decade—10 percentage points higher than the U.S. average of 50%. Farm employers say that farm workers present seemingly valid documentation and SSNs when they are hired.

The state's Employment Development Department (EDD) obtains data on farm workers and their wages when it collects unemployment insurance taxes from employers. Employers who pay more than \$100 in quarterly wages are required to register with the EDD and pay taxes of up to 6% on the first \$7,000 in earnings of each worker's earnings to cover the cost of unemployment insurance benefits for laid-off workers.

We extracted all SSNs reported by agricultural employers (NAICS 11) to EDD in 2007 and 2012, and tabulated their farm and nonfarm jobs in California. This allowed us to assign

workers with more than one job to their primary commodity and county; that is, to the NAICS code and county of the employer(s) where they had their maximum earnings. We excluded about 2,337 SSNs from 2007 and 892 from 2012 because of data concerns.

Farm Jobs and Farm Workers: 2012

Average employment on the state's farms is derived from employer reports of workers on the payroll for the pay period that includes the 12th of the month. Most farm workers are paid weekly, so 412,000 workers employed in 2013 is the average employment of workers on the payroll during the second week of the month. If employment surges or falls in the third or fourth weeks, these additional workers are not included in the average employment data, which is a monthly snapshot, summed, and divided by 12 months. However, our analysis captures these additional workers.

Figure 1 shows two major changes in average farm employment since 1990. First, average employment in agriculture rose 10%. Second, there was a change in who employs farm workers; a decline in direct employment on crop farms (NAICS 111), stable employment of direct-hire workers in animal agriculture (NAICS 112), and a 50% increase in crop support employment

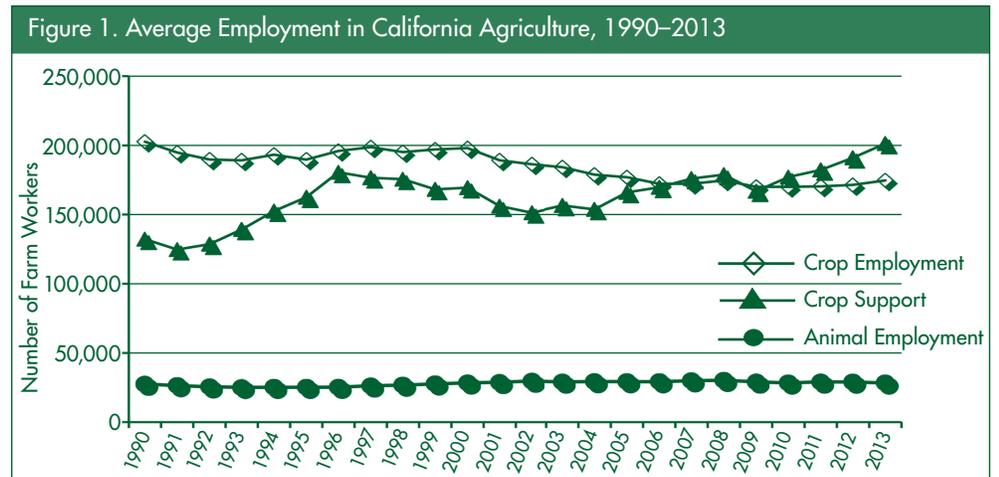
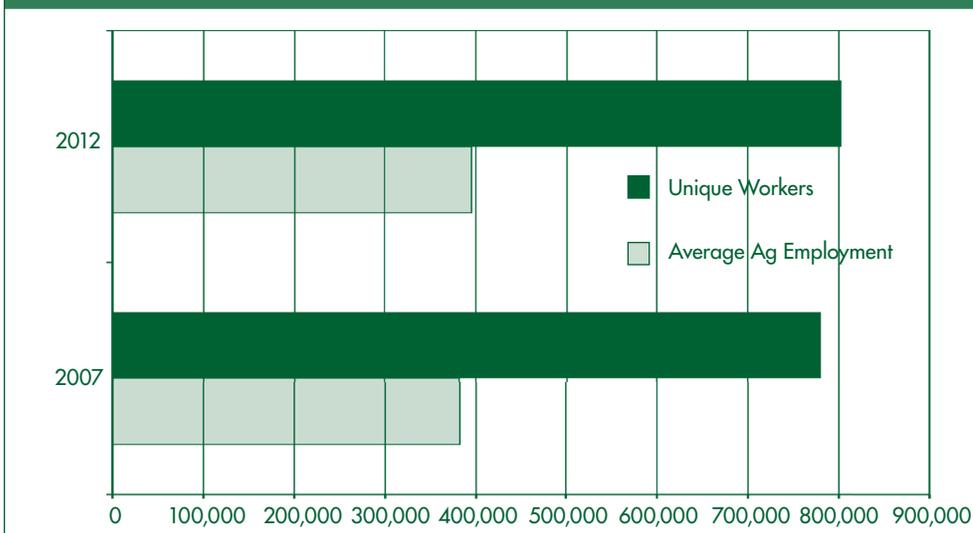


Figure 2. Average Agriculture Employment and Unique Workers, 2007 and 2012



(1151), most of which represents workers brought to farms by farm labor contractors. Since 2010, average employment by crop support establishments has been rising by 10,000 a year. In

2013 crop support firms brought more workers to crop farms—an average of over 200,000—than the 175,000 workers that crop farms hired directly.

How many unique farm workers are

hired during a year? Average employment is an estimate of full-time equivalent jobs, not the total number of farm workers. Figure 2 shows that when average employment in California agriculture was 399,000 in 2012, there were 803,000 unique SSNs reported by agricultural establishments—a two-to-one worker to job ratio. In 2007 when average employment was 386,000, there were 780,000 unique SSNs—also a two-to-one worker to job ratio.

The 803,000 farm workers in 2012 earned a total \$14.1 billion, including \$10.3 billion or over 70% from agricultural employers (NAICS code 11). Average earnings for all workers with at least one farm employer were almost \$18,000 in 2012 while average earnings for primary farm workers, defined as those who had their maximum earnings in agriculture, were \$15,000.

Workers can be assigned to the primary NAICS or commodity in which they had the highest earnings. For example, 675,000 of the 803,000 farm workers had their highest earnings from a farm employer, and 491,000 of these primary farm workers had only one agricultural employer in 2012.

Table 1 shows that 56% of the primary farm workers in 2012 were employed by crop support employers (NAICS 1151), followed by 23% who were employed by fruit and nut farming establishments (NAICS 1113). These two sectors had the lowest average earnings, explaining why overall average earnings for primary farm workers were only \$15,000 even though all commodities except crop support and fruit and nut had higher average earnings.

There is significant variance in earnings by sector. Workers whose maximum earnings were with crop support firms (NAICS 1151) earned an average \$11,700 in 2012 while those employed in animal agriculture earned over \$25,000. Average earnings for directly hired workers on crop farms varied from a high of \$23,500 in

Table 1. California Farm Workers and Earnings, 2012

	Primary Workers	Earnings (\$mil)	Average Earnings (\$)	Only Job	Share
NAICS Agriculture	674,645	10,324.30	15,303	490,615	73%
1111 Oilseed/Grain Farming	4,625	114.8	24,825	3,299	71%
1112 Vegetable/Melon Farming	47,254	1,028.80	21,733	32,250	68%
1113 Fruit/Tree Nut Farming	152,542	2,441.80	16,007	103,708	68%
1114 Greenhouse/Nursery Production	34,953	821.1	23,494	27,139	78%
1119 Other Crop Farming	18,161	461	25,389	13,241	73%
1121 Cattle Ranching and Farming	25,662	705.1	27,480	20,728	81%
1123 Poultry and Egg Production	2,879	76.8	26,689	2,171	75%
1129 Other Animal Production	2,804	70.8	25,270	2,169	77%
1151 Support Crop Production	378,960	4,337.30	11,709	280,606	74%
1152 Support Animal Production	3,114	77.2	24,795	2,593	83%
Nonfarm	127,977	3,798.10	29,678	1,849	1%
All Workers with One Ag Job	802,622	14,122	17,595		

Primary workers are SSNs with maximum earnings in this NAICS sector. 674,645 or 84% of the 803,514 unique SSNs reported by agricultural employers had maximum earnings in ag NAICS sectors.

Table excludes 2,187 workers employed in forestry, fishing, and hunting.

greenhouses and nurseries to \$21,700 on vegetable farms and \$16,000 on fruit and nut farms. Average worker earnings were lowest in sectors with the highest share of seasonal jobs.

Three-fourths of the \$10 billion in agricultural earnings were from three NAICS codes: 1151 crop support activities, \$4.3 billion, 1113 fruits and nuts, \$2.4 billion, and 1112 vegetables, \$1 billion. Other major sources of agricultural earnings were NAICS 1114 greenhouses and nurseries, \$821 million, and NAICS 1121 cattle and dairy, \$705 million.

If the state's 800,000 farm workers are assigned to the NAICS code where they had maximum earnings in 2012, several groups of workers can be identified. Almost 675,000 or 84% of farm workers had their maximum earnings from agricultural establishments, including:

- 379,000 or 56% whose maximum earnings were from NAICS 1151 crop support establishments
- 153,000 or 22% whose maximum earnings were from NAICS 1113 fruit and nut establishments
- 47,000 or 7% whose maximum earnings were from NAICS 1112 vegetable establishments.

Among the 675,000 primary farm workers in 2012, over 85% were employed by crop support firms (often labor contractors), fruit and nut farms, and vegetable and melon farms.

Second, there were 491,000 farm workers who had only one job in one NAICS sector in 2012; that is, three-fourths of workers whose maximum earnings were from agricultural establishments worked in only one agricultural NAICS sector such as fruit and nut farming. These "one-farm employer" workers were in the same three sectors:

- 281,000 or 57% were in NAICS 1151 crop support
- 104,000 or 21% were in NAICS 1113 fruits and nuts
- 32,000 or 6% were in NAICS 1112 vegetables and melons.

Table 2. Workers with Farm and Nonfarm Jobs, 2012

	2 Ag Earners	Share	1 Ag, 1 Nonag	2 Ag, 1 Nonag
Primary Ag Workers	99,247	15%	61,467	23,316
1111 Oilseed/Grain Farming	645	14%	542	139
1112 Vegetable/Melon Farming	9,153	19%	3,816	2,035
1113 Fruit/Tree Nut Farming	30,607	20%	11,757	6,470
1114 Greenhouse/Nursery Production	2,969	8%	4,028	817
1119 Other Crop Farming	2,799	15%	1,534	587
1121 Cattle Ranching/Farming	1,788	7%	2,603	543
1123 Poultry/Egg Production	144	5%	494	70
1129 Other Animal Production	228	8%	348	59
1151 Support Crop Production	50,416	13%	35,493	12,445

There were 99,247 unique SSNs with maximum earnings from ag employers and with two or more ag employers.

A closer look at workers whose maximum earnings were with farm employers finds that two-thirds of directly hired fruit and vegetable workers were employed by one fruit or vegetable establishment, and three-fourths of crop support workers were employed by one crop support firm. Over three-fourths of workers in livestock production were employed by one livestock establishment.

Third, there were 99,000 primary farm workers, one-sixth of those whose maximum earnings were from agricultural establishments, with at least two farm employers in 2012. Of primary farm workers with at least two farm employers, one-half had their maximum earnings from NAICS 1151 crop support establishments, but only one-seventh of crop support workers had two farm employers. About 20% of those whose maximum earnings were from fruit and vegetable farmers had at least two farm employers, as did one-eighth of those with maximum earnings from crop support establishments.

Over 61,000 farm workers had at least one farm and at least one nonfarm employer, and over 60% of these farm and nonfarm workers had their maximum earnings from NAICS 1151 crop support establishments, followed by 20% whose maximum earnings were from fruit farmers. The most

common nonfarm jobs were in waste management and manufacturing.

There were 23,000 primary farm workers with at least two farm employers and at least one nonfarm employer. Half of these workers had their maximum earnings in crop support services and a quarter in fruit and tree nut farming. Their nonfarm employers were in waste management, manufacturing, and trade.

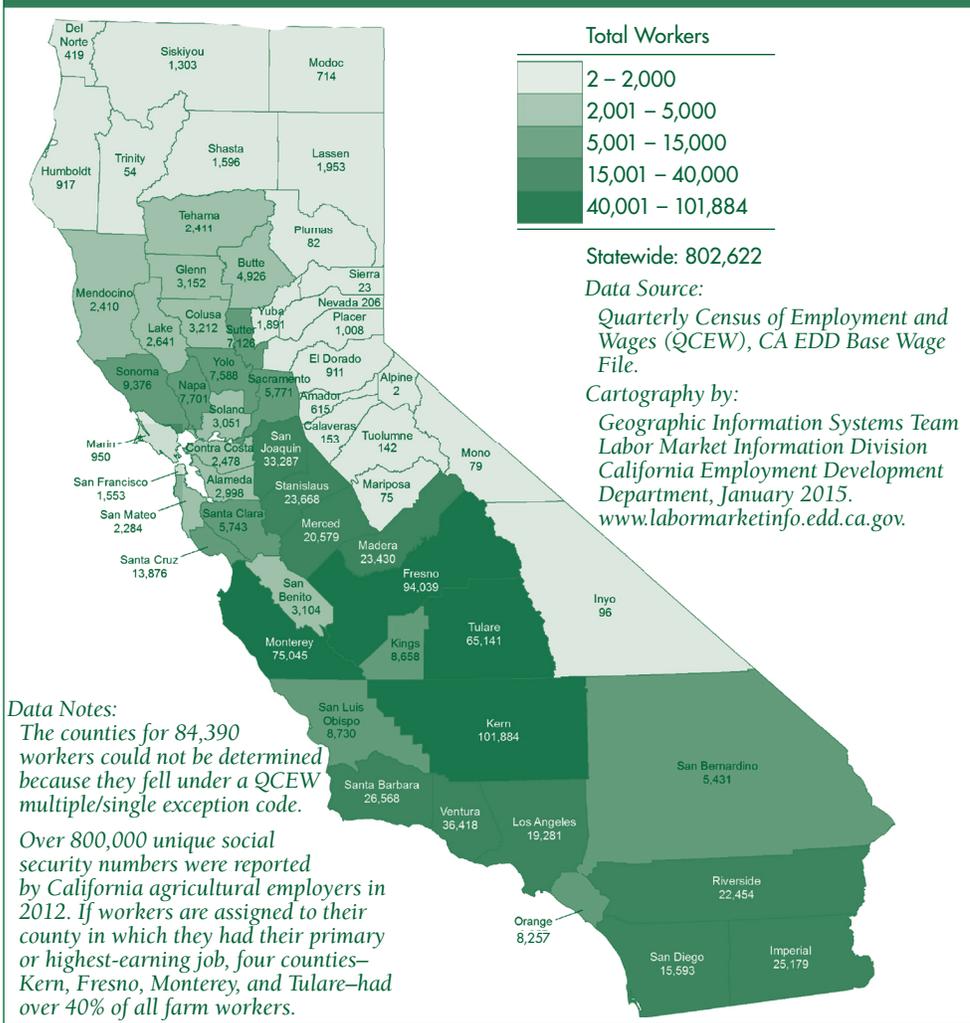
Earnings of Farm Workers: 2012

The average earnings of primary farm workers varied by NAICS or commodity, and median earnings were significantly lower than mean earnings, reflecting high-paid supervisors and managers included in the data. The highest average earnings in sectors with at least 1,000 workers were the \$27,600 in cattle ranching and farming (NAICS 1121).

Mean annual earnings were generally higher in animal than in crop agriculture, likely reflecting more hours of work each year. Indeed, if mean earnings are divided by average hourly earnings in 2012, as determined by a separate survey of agricultural employers, workers whose maximum earnings were in animal agriculture generally averaged close to 2,000 hours a year, compared with 500 to 1,500 hours in most crop activities.

There was a wide variance in average

Figure 3. Where Workers' Primary Jobs Are Located, 2012



earnings; the standard deviation was generally larger than mean earnings. If workers are ranked by their earnings from lowest to highest, the 25th percentile marks the earnings, \$1,125, at the top of the lowest quarter of workers earners, meaning that one-fourth of those employed by labor contractors in 2012 earned less than \$1,125. Similarly, a quarter of workers in fruit and nut farming earned less than \$3,700. The 75th percentile marks the earnings of three-fourths of workers ranked from low to high, so that a quarter of FLC employees earned more than \$12,700 and a quarter of fruit and nut farming employees earned more than \$20,700 in 2012.

Conclusions

Average monthly employment of hired workers in California agriculture rose

10% over the past decade, reaching almost 412,000 in 2013. Analysis of the unique social security numbers (SSNs) reported by agricultural establishments in 2007 and 2012 suggests that there were an average two workers for each year-round equivalent job, making the total farm workforce twice the average employment or about 800,000.

Of these 800,000 farm workers:

- Three-fourths had their maximum earnings with an agricultural employer, and these primary farm workers earned an average \$15,000 in 2012.
- Over 85% of the 675,000 primary farm workers were employed by crop support firms (often labor contractors), fruit and nut farms, and vegetable and melon farms.
- Three-fourths of the primary farm workers, 490,000, had only

one farm employer in 2012 and fewer than 100,000 had two or more farm employers.

- Four counties—Kern, Fresno, Monterey, and Tulare—had over 40% of all primary farm workers.

These data suggest a more stable workforce than is sometimes assumed, with most farm workers attached to one farm employer, often a labor contractor.

Three-fourths of farm workers had their primary or maximum earnings from agricultural employers, and one sector, crop support services, accounted for 56% of the 675,000 primary farm workers. In 2012 three-fourths of workers in crop support services were hired by farm labor contractors.

An earlier study reported almost three workers for each year-round farm job in the 1990s, and more workers with more than one farm job. The reduction from three to two farm workers per average job in California agriculture could reflect fewer false SSNs, more stability in worker-employer relationships, or a combination of both.

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For additional information, the authors recommend:

Khan, A., P.L. Martin and P. Hardiman. "Expanded Production of Labor-intensive Crops Increases Agricultural Employment." *California Agriculture*. Jan-Mar. 2004: 35-39. <http://californiaagriculture.ucanr.org/landingpage.cfm?article=ca.v058n01p35&fulltext=yes>