

California farmers are turning to nonfarm employers to fill lower wage seasonal jobs

In 2023, California had 894,000 workers filling an average of 412,000 full-time equivalent jobs, a ratio of 2.2 workers per job.

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How many workers are employed for wages in California agriculture and who employs them? Answering this question is challenging, as different surveys collect data that are not directly comparable. For example, farm employers report the earnings and hours worked of their directly hired employees during the week that includes the 12th of the month to the U.S. Department of Agriculture Farm Labor Survey (FLS). However, farm and nonfarm employers covered by unemployment insurance (UI) report the number of employees and their combined earnings for the payroll period that includes the 12th of the month, which may be for two weeks or a month, and these data are summarized in the U.S. Department of Labor's Quarterly Census of Employment and Wages (QCEW). Most farmworkers are paid weekly, so both databases miss workers who are employed during other weeks and payroll periods each month.

Abstract

California's agricultural employers hired an average 414,000 workers between 2018 and 2023 and reported an average 886,000 unique farmworkers each year, a ratio of 2.1 workers for each average or full-time equivalent (FTE) job. The ratio of two workers for each FTE job is stable, but a rising share of workers are brought to farms by nonfarm crop support firms, including farm labor contractors (FLCs). Farmers outsource seasonal and specialized tasks to crop support firms to save money by paying for labor and other services when they are needed. FLCs account for two-thirds of average crop support employment, which highlights the challenge of regulating the intermediaries whose average employment is about the same as for workers hired directly by crop farmers.

Workers harvest chili peppers at a UC Cooperative Extension test plot in Santa Clara County. A new analysis of agricultural employment data shows that the number of workers whose highest earnings were with farm labor contractors jumped by 77,000 between 2018 and 2023. Photo: Evett Kilmartin.

This article fills the data gap between farmworker employment during one payroll period and the total number of workers employed in agriculture sometime during the year. The QCEW data for California act as a census of farmworkers since they include (1) workers who are hired directly by farmers and (2) workers who are brought to farms by farm labor contractors (FLCs) and other nonfarm employers (EDD 2025a; EDD 2025b). Employers report the names and Social Security Numbers (SSNs) of their employees, including undocumented individuals and H-2A guest workers, when paying UI taxes (California requires all employers who pay \$100 or more in wages to enroll in the state's UI system to pay taxes that cover the cost of UI benefits for laid-off workers). The QCEW divides monthly employment numbers by 12 to generate average or full-time equivalent (FTE) employment.

We extracted employment and earnings data on all California SSNs reported by California agricultural employers (NAICS 11) during *all* payroll periods, not just the payroll period that includes the 12th of the month. Next, we cleaned these unpublished data to remove SSNs reported by 50 or more employers in a quarter and other anomalies. We compiled the farm and nonfarm jobs and earnings of each SSN, and

defined primary farmworkers as those whose highest-earning job was reported by a California agricultural employer. For a worker with multiple jobs, we assigned the worker to the North American Industry Classification System (NAICS) code or sector of the employer where the worker had his or her highest earnings. For example, a worker who had jobs with both vegetable and strawberry farms was assigned to vegetables if the worker's highest earning job was in vegetables.

California agricultural employment (NAICS 11) averaged 412,000 workers in 2023, ranging from a high of 485,000 in June to a low of 316,000 in January. However, agricultural employers reported a total of 893,645 workers in 2023, a ratio of 2.2 unique workers per FTE job and very similar to previous ratios. In this article, we update and highlight the growing importance of the nonfarm crop support businesses that account for most of the average employment on California crop farms (Martin et al. 2019).

Primary farmworkers

We found 2.1 farmworkers per year-round farm job before, during, and after the COVID-19 pandemic (table 1 and fig. 1). Most farmworkers had only one job, although 40% had two or more California farm and nonfarm jobs.

We distinguish between all workers with at least one farm job, 893,645 in 2023, and primary farmworkers, the 764,000 workers whose highest-earning job was with a California farm employer.

These primary farmworkers earned a total of \$14 billion in 2023, including 99% from agricultural employers. Of the 760,000 workers whose highest earning job was in crops, animals, or crop support:

- 218,000 were in crops, where average earnings were \$26,700 and 69% had only one farm job in crops in 2023; therefore, 31% also had jobs with animal, crop support, or nonfarm employers;
- 33,300 were in animal agriculture, where average earnings were \$41,200 and 75% of workers had only one farm job in animal agriculture;

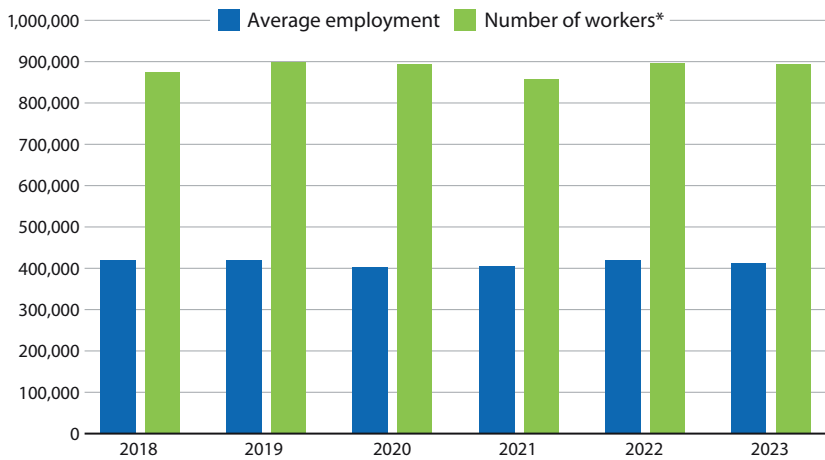


FIG. 1. Farmworkers and jobs, 2018–23. * Number of workers reported by a California farm employer (NAICS 11).

TABLE 1. Primary farmworkers and jobs, 2018–2023

| | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | Average 2018–2023 |
|---|---------|---------|---------|---------|---------|---------|-------------------|
| Annual average employment in the agriculture sector | 419,800 | 420,100 | 404,300 | 407,800 | 419,812 | 411,664 | 413,913 |
| Number of workers* | 874,314 | 900,279 | 894,691 | 858,690 | 895,196 | 893,645 | 886,136 |
| Ratio of workers to employment | 2.1 | 2.1 | 2.2 | 2.1 | 2.1 | 2.2 | 2 |
| One job per worker [†] | 514,021 | 542,793 | 551,449 | 544,049 | 487,327 | 495,872 | 522,585 |
| Two jobs per worker [†] | 218,475 | 220,499 | 213,924 | 198,340 | 196,706 | 196,277 | 207,370 |
| Three or more jobs per worker [†] | 141,818 | 136,987 | 129,318 | 116,301 | 211,163 | 201,496 | 156,181 |

*Based upon tabulations of EDD data. May not sum due to rounding.

[†]May not sum due to rounding.

Source: Quarterly Census of Employment and Wages.

- 509,200 were in support for farm activities, where average earnings for workers whose highest-earning job was in support activities were \$13,200, and 63% of workers had only one farm job in support activities. Support (NAICS 115) employment averaged 225,000 in 2023, including 220,000 for crop support (NAICS 1151). The average employment of FLCs was 152,000 (NAICS 115115), followed by 39,000 for postharvest crop activities (NAICS 115114), 12,000 for farm management services (NAICS 115116), and 11,000 for soil preparation and planting (NAICS 115112).

There were two outsourced or support farmworkers in 2023 for each crop or animal worker who was hired directly. Support workers earned half as much as directly hired crop workers and one-third as much as animal workers (table 2).

There are 11 crop subsectors with 5,000 or more primary workers, led by the 42,600 workers whose highest

earning job was in strawberries (table 3). Workers who were primarily employed in fruit have the lowest average earnings among crop workers, while workers primarily employed in crops grown under cover such as greenhouse tomatoes have the highest earnings. Note that earnings include the value of overtime, incentive pay, and bonuses, but not the value of free employer-provided housing that employers must provide to H-2A workers.

- The 42,600 primary strawberry workers (NAICS 111333) had the lowest average earnings among direct-hire crop workers of \$15,000 in 2023, and 61% had one strawberry employer in 2023.
- The 35,800 primary vegetable and melon workers (NAICS 111219) had average earnings of \$35,030 in 2023, and 76% had one vegetable employer during 2023.
- The 27,600 primary grape workers (NAICS 111332) had average earnings of \$25,000 in 2023, and 63% had only one grape employer during 2023.

TABLE 2. California farm employment and jobs, 2023

| NAICS code | Sector | Primary workers | Earnings (\$) | Average earnings* (\$) | Only farm job [†] | Share [‡] |
|------------|----------------------------------|-----------------|------------------|------------------------|----------------------------|--------------------|
| 111 | Crop production | 217,831 | \$5,819,197,529 | \$26,714 | 149,271 | 68.5% |
| 112 | Animal production | 33,297 | \$1,372,500,906 | \$41,220 | 24,937 | 74.9% |
| 115 | Support activities (agriculture) | 509,236 | \$6,699,498,630 | \$13,156 | 318,320 | 62.5% |
| Total | | 760,364 | \$13,891,197,065 | | 492,528 | |
| | Nonfarm | 129,535 | \$4,475,764,826 | \$34,552.55 | | |

* Average earnings are total earnings in this NAICS by these workers divided by the number of primary workers (workers whose highest earnings were in this NAICS).

† Only farm job means that this worker had only one job in this NAICS. ‡ Share is the share of primary workers with only one farm job.

TABLE 3. Primary workers, average earnings, and only jobs in 2023

| NAICS code | Sector | Primary workers | Earnings (\$) | Average earnings (\$) | Only farm job | Share* |
|------------|--|-----------------|-----------------|-----------------------|---------------|--------|
| 111219 | Other vegetable and melon farming | 35,758 | \$1,252,595,601 | \$35,030 | 27,064 | 75.7% |
| 111332 | Grape vineyards | 27,551 | \$686,978,695 | \$24,935 | 17,281 | 62.7% |
| 111333 | Strawberry farming | 42,590 | \$639,645,466 | \$15,019 | 25,941 | 60.9% |
| 111334 | Non-strawberry farming | 14,181 | \$259,418,050 | \$18,293 | 8,804 | 62.1% |
| 111335 | Tree nut farming | 17,761 | \$600,918,501 | \$33,834 | 12,500 | 70.4% |
| 111336 | Fruit and tree nut combination farming | 5,488 | \$151,415,969 | \$27,590 | 3,798 | 69.2% |
| 111339 | Other noncitrus fruit farming | 13,594 | \$266,122,559 | \$19,576 | 8,498 | 62.5% |
| 111419 | Other food crops grown under cover | 5,225 | \$204,994,057 | \$39,233 | 3,695 | 70.7% |
| 111421 | Nursery and tree production | 18,595 | \$614,804,584 | \$33,063 | 14,436 | 77.6% |
| 111422 | Floriculture production | 6,821 | \$242,495,914 | \$35,551 | 5,153 | 75.5% |
| 111998 | All other miscellaneous crop farming | 7,996 | \$228,953,375 | \$28,633 | 5,764 | 72.1% |
| 112 | Animal production | 33,297 | \$1,372,500,906 | \$41,220 | 24,937 | 74.9% |
| 112111 | Beef cattle ranching & feedlots | 4,905 | \$189,158,296 | \$38,564 | 3,889 | 79.3% |
| 112120 | Dairy milk production | 19,041 | \$804,721,304 | \$42,263 | 14,017 | 73.6% |
| 112310 | Chicken egg production | 1,746 | \$65,874,215 | \$37,729 | 1,270 | 72.7% |
| 112320 | Broilers | 1,473 | \$60,561,847 | \$41,115 | 1,080 | 73.3% |
| 112410 | Sheep farming | 255 | \$9,090,742 | \$35,650 | 223 | 87.5% |
| 112420 | Goat farming | 156 | \$4,565,143 | \$29,264 | 128 | 82.1% |

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TABLE 3. Primary workers, average earnings, and only jobs in 2023, *continued from previous page*

| NAICS code | Sector | Primary workers | Earnings (\$) | Average earnings (\$) | Only farm job | Share* |
|------------|-----------------------------|-----------------|-----------------|-----------------------|---------------|--------|
| 112920 | Horses | 448 | \$16,935,765 | \$37,803 | 357 | 79.7% |
| 112990 | Other animals | 1,200 | \$62,788,158 | \$52,323 | 915 | 76.3% |
| 113 | Forestry and logging | 2,906 | \$115,492,387 | \$39,743 | 2,290 | 78.8% |
| 114 | Fishing & hunting | 840 | \$29,721,204 | \$35,382 | 673 | 80.1% |
| 115 | Ag support activities | 509,236 | \$6,699,498,630 | \$13,156 | 318,320 | 62.5% |
| 115112 | Soil preparation | 17,541 | \$450,354,184 | \$25,674 | 11,025 | 62.9% |
| 115113 | Crop harvesting | 11,418 | \$207,030,225 | \$18,132 | 7,314 | 64.1% |
| 115114 | Postharvest crop activities | 60,763 | \$1,822,019,006 | \$29,986 | 45,332 | 74.6% |
| 115115 | Farm labor contractors | 394,074 | \$3,422,667,806 | \$8,685 | 237,092 | 60.2% |
| 115116 | Farm management services | 18,286 | \$537,974,486 | \$29,420 | 12,060 | 66.0% |

* Share is the share of primary workers with only one farm job.

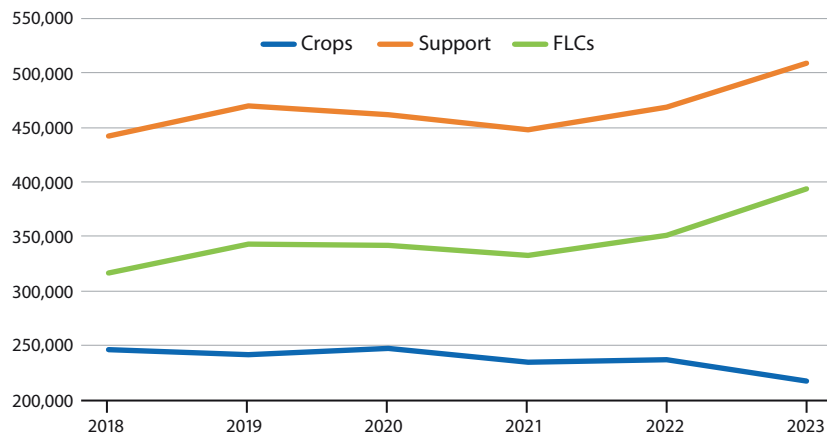


FIG. 2. Between 2018 and 2023, direct hire crop employment declined, while employment in crop support and FLCs increased.

- The 18,600 primary nursery workers (NAICS 111421) had average earnings of \$33,100 in 2023, and 78% had only one nursery employer during 2023.

Animal production, forestry, and fishing involve fewer workers than crop farming. Almost 60% of the 33,300 primary animal workers are employed by dairy farms, where average earnings were \$42,300 in 2023, and three-fourths of dairy workers had only one dairy employer. There were almost 5,000 beef cattle workers who averaged \$38,600 in 2023, and almost 80% had only one beef cattle employer.

The highest shares of only-one-employer workers were in sheep and goat farming. The 255 primary sheep workers had average earnings of \$35,700, and 88% had only one sheep farm employer in 2023. The 155 primary goat workers had average earnings of \$29,300, and 82% had only one goat farm employer in 2023.

The 2,900 primary forestry workers and 840 primary fishing workers had average earnings of \$39,700 and \$35,400, respectively, and 80% had only one employer in 2023.

The 509,000 primary workers employed by nonfarm support services were two-thirds of workers whose highest earning job was in crops. These support workers had the lowest average earnings and the lowest share of workers with only one farm employer in 2023:

- The 60,800 workers employed in postharvest crop activities (NAICS 115114) such as packing citrus for the farm that grew it or processing a farm’s vegetables had the highest average earnings of \$30,000. Almost 75% of these workers had only one employer.
- The 394,000 FLC workers (NAICS 115115) had the lowest average earnings, \$8,700. Some 60% of primary FLC employees had only one FLC employer in 2023.

There are more workers whose highest earning job was with FLCs, 394,000, than who had their highest earnings with crop or animal employers, 251,000.

Statewide trends, 2018–2023

The major changes between 2018 and 2023 include the decline in direct hire crop workers, stable employment in animal agriculture, and rising employment in support activities, especially FLCs (fig. 2). The number of workers whose highest earnings were with FLCs jumped by 77,000 between 2018 and 2023.

The largest declines in primary workers between 2018 and 2023 were in four direct-hire crop sectors, tree nuts, grapes, vegetables and melons, and noncitrus fruit farming, and one crop support sector, post-harvest crop handling and processing (including packing sheds and salad plants). Each of these five sectors lost over 5,000 primary workers in six years (table 4).

By contrast, the five sectors that gained the most primary workers were dominated by FLCs, up 77,000, followed by strawberry farms, 4,300, and food crops under cover and miscellaneous crops, each up 2,000. The fastest growth in primary workers was in the lowest-average-earnings sectors.

Between 2018 and 2023, California’s minimum wage (for employers with 26 or more employees) rose by 38%,

TABLE 4. NAICS or commodities with the largest changes in primary workers, 2018–2023

| NAICS code | Sector | Primary workers (2018) | Primary workers (2019) | Primary workers (2020) | Primary workers (2021) | Primary workers (2022) | Primary workers (2023) | 2018–2023 change |
|------------|-------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------|
| 111335 | Tree nut farming | 27,560 | 27,266 | 27,569 | 26,766 | 23,946 | 17,761 | -9,799 |
| 111332 | Grape vineyards | 36,269 | 31,120 | 28,174 | 25,555 | 27,184 | 27,551 | -8,718 |
| 115114 | Postharvest crops | 68,838 | 69,606 | 61,353 | 58,914 | 62,106 | 60,763 | -8,075 |
| 111219 | Vegetable and melon | 43,146 | 41,380 | 40,613 | 38,614 | 38,671 | 35,758 | -7,388 |
| 111339 | Noncitrus fruit farming | 19,446 | 19,216 | 24,554 | 23,552 | 19,105 | 13,594 | -5,852 |
| 115116 | Farm mgt services | 16,547 | 17,369 | 17,927 | 17,297 | 17,296 | 18,286 | 1,739 |
| 111998 | Misc crop farming | 5,950 | 6,668 | 7,890 | 7,803 | 7,943 | 7,996 | 2,046 |
| 111419 | Food crops under cover | 3,151 | 3,747 | 4,612 | 4,853 | 6,286 | 5,225 | 2,074 |
| 111333 | Strawberry farming | 38,274 | 39,911 | 40,523 | 39,471 | 42,379 | 42,590 | 4,316 |
| 115115 | Farm labor contractors | 316,846 | 342,705 | 342,246 | 332,996 | 351,075 | 394,074 | 77,228 |

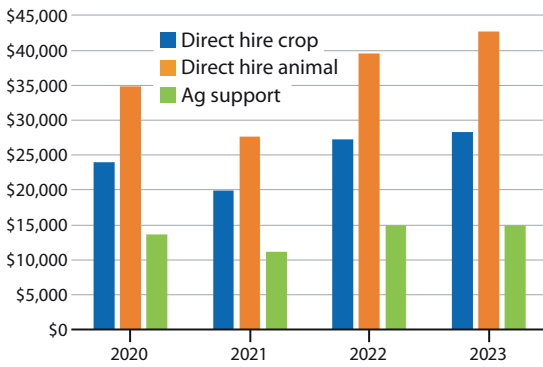


FIG. 3. Direct hire animal and crop wages rose faster than ag support wages from 2020 to 2023.

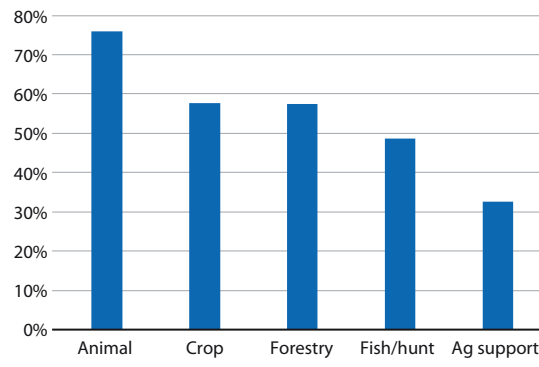


FIG. 4. Average earnings relative to QCEW FTE earnings.

while the average hourly earnings of California crop and livestock workers rose by 42% (fig. 3). Wages rose more slowly in the major farm sectors as follows:

- primary crop workers earnings rose by 23%,
- animal worker earnings rose by 33%,
- support worker earnings rose 3%.

These are the average earnings (not total income) from all jobs of workers who had their highest-earning job in each NAICS. Workers could have additional income from the Earned Income Tax Credit, unemployment insurance, or other sources.

Within detailed commodities, sheep primary earnings rose the most, 74%, while broiler, food under cover, and tree nut earnings rose by 60% or more (table 5).

Average primary strawberry worker earnings fell by 7%, crop harvesting earnings fell 4%, and FLC earnings were flat between 2018 and 2023. Dairy and goat earnings rose in lockstep with the minimum wage.

The earnings of primary workers are affected by wage rates and hours worked. Almost all farmworkers earn at least the minimum wage, but some may be working fewer hours as farm employers seek to avoid paying overtime wages (Hill and Tanabe 2023). We compared the earnings of workers whose highest-wage jobs was in crops, animals, or support with what a

FTE worker would have earned if employed in crops, animals, or support, and found that animal workers earned 76% as much as an FTE worker would have earned, crop workers 58%, and support workers 33% (table 6).

FTE earnings in a particular NAICS code are what a worker would have earned at the average weekly wage if employed in that NAICS code for 52 weeks a year. FTE earnings for a particular NAICS code are total earnings divided by average employment.

More detailed data show that six major commodities had average earnings that were less than half of what a full-time worker would have earned. FLC employees earned an average of \$8,700 in 2023, a quarter of the \$33,300 that an FLC employee would have earned if employed full time (table 7). There are several likely reasons for the low earnings of primary FLC employees. Many earn the minimum wage, but they may not work many days or weeks.

The highest ratios of average earnings to FTE earnings were in animal agriculture and mushrooms, where primary workers earned 75% to 85% of FTE earnings. Average earnings in crop, animal, and forestry were more than half of what an FTE worker would have earned (fig. 4).

TABLE 5. Primary worker earnings by 6-digit NAICS, 2018–2023

| NAICS code | Sector | Average earnings (2018) | Average earnings (2019) | Average earnings (2020) | Average earnings (2021) | Average earnings (2022) | Average earnings (2023) | 2018–2023 percent change |
|------------|---|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|--------------------------|
| 111 | Crop production | \$21,776 | \$22,781 | \$23,922 | \$19,956 | \$27,200 | \$26,714 | 23% |
| 111219 | Other vegetable and melon farming | \$26,623 | \$28,148 | \$30,485 | \$24,793 | \$34,649 | \$35,030 | 32% |
| 111332 | Grape vineyards | \$19,953 | \$21,968 | \$23,719 | \$18,875 | \$24,349 | \$24,935 | 25% |
| 111333 | Strawberry farming | \$16,099 | \$15,894 | \$16,099 | \$13,582 | \$16,726 | \$15,019 | –7% |
| 111334 | Other berry farming | \$16,314 | \$16,599 | \$18,244 | \$15,246 | \$19,871 | \$18,293 | 12% |
| 111335 | Tree nut farming | \$21,341 | \$22,836 | \$25,006 | \$19,816 | \$29,006 | \$33,834 | 59% |
| 111339 | Noncitrus fruit | \$17,004 | \$16,185 | \$16,648 | \$13,672 | \$20,028 | \$19,576 | 15% |
| 111411 | Mushroom production | \$33,263 | \$34,120 | \$36,268 | \$30,338 | \$40,744 | \$40,550 | 22% |
| 111419 | Food crops under cover | \$24,282 | \$25,838 | \$31,336 | \$26,577 | \$51,139 | \$39,233 | 62% |
| 111421 | Nursery and tree production | \$26,233 | \$27,882 | \$29,095 | \$24,704 | \$32,149 | \$33,063 | 26% |
| 111422 | Floriculture production | \$28,939 | \$29,993 | \$30,151 | \$26,788 | \$35,767 | \$35,551 | 23% |
| 111998 | Misc crop farming | \$23,479 | \$25,164 | \$23,775 | \$19,927 | \$29,215 | \$28,633 | 22% |
| 112 | Animal production | \$30,928 | \$32,458 | \$34,862 | \$27,688 | \$39,602 | \$41,220 | 33% |
| 112111 | Beef farming | \$30,616 | \$29,786 | \$31,295 | \$24,845 | \$36,496 | \$38,564 | 26% |
| 112120 | Dairy | \$31,006 | \$32,488 | \$35,034 | \$26,864 | \$40,118 | \$42,263 | 36% |
| 112210 | Hog and pig farming | \$31,848 | \$37,492 | \$40,694 | \$33,776 | \$41,971 | \$37,991 | 19% |
| 112310 | Chicken egg production | \$29,879 | \$31,739 | \$36,329 | \$29,785 | \$36,444 | \$37,729 | 26% |
| 112320 | Broilers | \$24,424 | \$28,120 | \$22,342 | \$21,451 | \$17,088 | \$41,115 | 68% |
| 112410 | Sheep farming | \$20,492 | \$20,930 | \$23,392 | \$20,901 | \$31,667 | \$35,650 | 74% |
| 112420 | Goat farming | \$20,870 | \$24,412 | \$22,901 | \$19,261 | \$27,390 | \$29,264 | 40% |
| 112920 | Horses | \$30,896 | \$32,506 | \$34,200 | \$33,779 | \$37,482 | \$37,803 | 22% |
| 112990 | Other animals | \$35,045 | \$38,223 | \$41,719 | \$43,349 | \$53,247 | \$52,323 | 49% |
| 113 | Forestry and logging | \$34,852 | \$33,673 | \$39,459 | \$36,520 | \$45,587 | \$39,743 | 14% |
| 114 | Fishing | \$36,430 | \$30,755 | \$27,989 | \$27,377 | \$38,582 | \$35,382 | –3% |
| 115 | Support activities | \$12,712 | \$12,876 | \$13,643 | \$11,161 | \$14,986 | \$13,156 | 3% |
| 115112 | Soil preparation | \$20,293 | \$20,986 | \$25,105 | \$18,669 | \$28,612 | \$25,674 | 27% |
| 115113 | Crop harvesting | \$18,840 | \$18,222 | \$18,852 | \$14,629 | \$20,147 | \$18,132 | –4% |
| 115114 | Postharvest crop activities | \$22,888 | \$24,126 | \$26,947 | \$22,557 | \$29,258 | \$29,986 | 31% |
| 115115 | Farm labor contractors | \$8,664 | \$8,778 | \$9,220 | \$7,620 | \$10,300 | \$8,685 | 0% |
| 115116 | Farm management services | \$27,860 | \$28,511 | \$28,362 | \$23,474 | \$31,418 | \$29,420 | 6% |
| | Calif. minimum wage (26 or more employees) | \$11.00 | | | | | \$15.15 | 38% |
| | USDA CA Farm Labor Survey earnings of Calif. crop & livestock workers | \$13.92 | | | | | \$19.75 | 42% |

TABLE 6. Primary worker and QCEW earnings, 2023

| | Primary earnings (2023) | FTE earnings (QCEW) | Percent |
|--------------------|-------------------------|---------------------|---------|
| Crop production | \$26,714 | \$46,304 | 58% |
| Animal production | \$41,220 | \$54,257 | 76% |
| Support activities | \$13,156 | \$40,214 | 33% |

TABLE 7. Primary worker and QCEW earnings, 2023

| | Average earnings (2023) | Annual earnings (QCEW) | Average 2023 earnings share of QCEW |
|-----------------------------|-------------------------|------------------------|-------------------------------------|
| Farm labor contractors | \$8,685 | \$33,257 | 26% |
| Vegetable and melon farming | \$16,471 | \$45,568 | 36% |
| Crop harvesting | \$18,132 | \$46,827 | 39% |
| Strawberry farming | \$15,019 | \$35,867 | 42% |
| Soil preparation | \$25,674 | \$52,846 | 49% |
| Noncitrus fruit | \$19,576 | \$39,549 | 49% |
| Sheep farming | \$35,650 | \$46,083 | 77% |
| Beef cattle ranching | \$38,564 | \$49,740 | 78% |
| Dairy | \$42,263 | \$54,459 | 78% |

TABLE 8. Primary workers by county, 2018–2023 average

| County | Average employment 2018–2023 |
|---------------|------------------------------|
| Kern | 133,598 |
| Monterey | 96,619 |
| Fresno | 91,188 |
| Tulare | 73,629 |
| Santa Barbara | 42,427 |
| Los Angeles | 36,376 |
| Ventura | 35,100 |
| San Joaquin | 33,010 |
| Madera | 32,051 |
| Merced | 27,181 |

The average number of workers whose highest earning job was in agriculture (NAICS 111) and employed by a farm employer in this county.

County trends, 2018–2023

We assigned primary workers to the agricultural employer where they had their highest earnings. An average 134,000 workers had their highest earning farm job with a Kern employer between 2018 and 2023, followed by 97,000 in Monterey, 91,000 in Fresno, 74,000 in Tulare, and 42,000 in Santa Barbara (table 8 and fig. 5). Half of the primary farmworkers were in these top five counties, followed by 18% in the next top five counties: Los Angeles, Ventura, San Joaquin, Madera, and Riverside.

Between 2018 and 2023, the number of primary farmworkers fell in Southern California counties including Riverside, Imperial, and Orange, and rose in Central Valley and coastal counties such as Fresno, Kings, and Kern, and Monterey, San Luis Obispo, and Santa Barbara (fig. 5).

Given the growing importance of FLCs, it would be interesting to know in which counties FLCs provide workers. However, FLC employee earnings are assigned to the county in which the FLC is located, so that all of the earnings of FLC employees are assigned to this county, even if the FLC employees never worked in the county where the FLC is located.

Conclusions

There has been remarkable stability in average agricultural employment and the number of unique farmworkers over the past decade: some 850,000 workers fill an average 425,000 FTE jobs (one FTE job is created when two workers are each employed for six months or three workers are each employed for four months). Almost 60% of farmworkers have only one California farm job, and almost half of these one-farm-job workers were employed by FLCs in 2023.

Our analysis of California farmworkers and their employers emphasizes that (1) half of the state’s farmworkers are in five counties, led by Kern, with little change over the past six years; (2) the largest and fastest-growing employers of farmworkers are FLCs; and (3) FLC employees have the lowest earnings, less than \$9,000 a year, which likely reflects relatively short periods of work.

California agriculture is a pioneer in many areas of farming and is the only state in which the average employment of crop support workers exceeds the employment of crop workers who are hired directly by farm operators. FLCs account for 70% of average crop support employment, over 150,000 a year, about the same as the average employment of workers hired directly by farm operators.

What are the implications of farm operators relying on nonfarm crop support services firms to bring workers to their farms? A higher share of FLCs employees are not legally authorized to work than workers who are hired directly by crop farm operators, and FLC employees have lower average earnings.

FLCs act as bilingual intermediaries between farmer clients who may not speak the language or understand the culture of farmworkers, and economic theory suggests that FLCs can be beneficial to farmers and workers. They allow farmers to concentrate on growing crops, and FLCs can arrange a series of seasonal jobs for workers more efficiently than the workers could on their own. However, FLCs may also serve as risk absorbers in a farm labor market rife with labor law violations, as farm operators avoid the risk of

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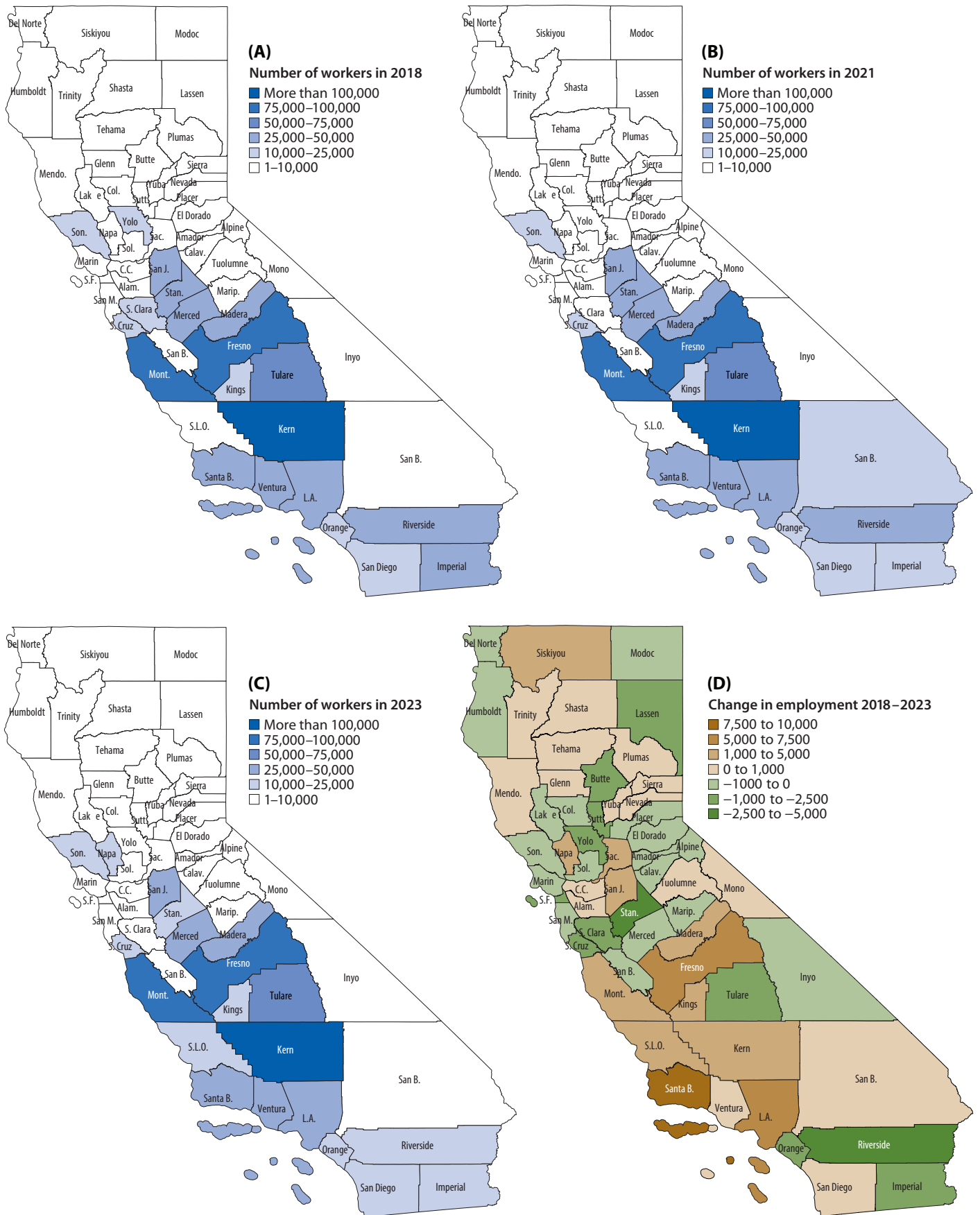


FIG. 5. Primary workers by county in (A) 2018, (B) 2021, and (C) 2023; change in employment from 2018 to 2023 (D).



Workers operate harvesting machinery in a pistachio orchard near Arbutle, California.
Photo: Evett Kilmartin.

labor and immigration enforcement (Costa et al. 2020; Thilmany 1996).

There are many private and public efforts to improve the FLC industry. Federal and state agencies provide education and enforce labor laws that, inter alia, require FLCs to obtain licenses, undergo background checks, and post bonds so that any back wages can be paid even if the FLC declares bankruptcy. Private efforts include certification schemes based on audits to certify that FLCs are in compliance with labor laws and other protocols to protect often vulnerable workers. **CA**

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