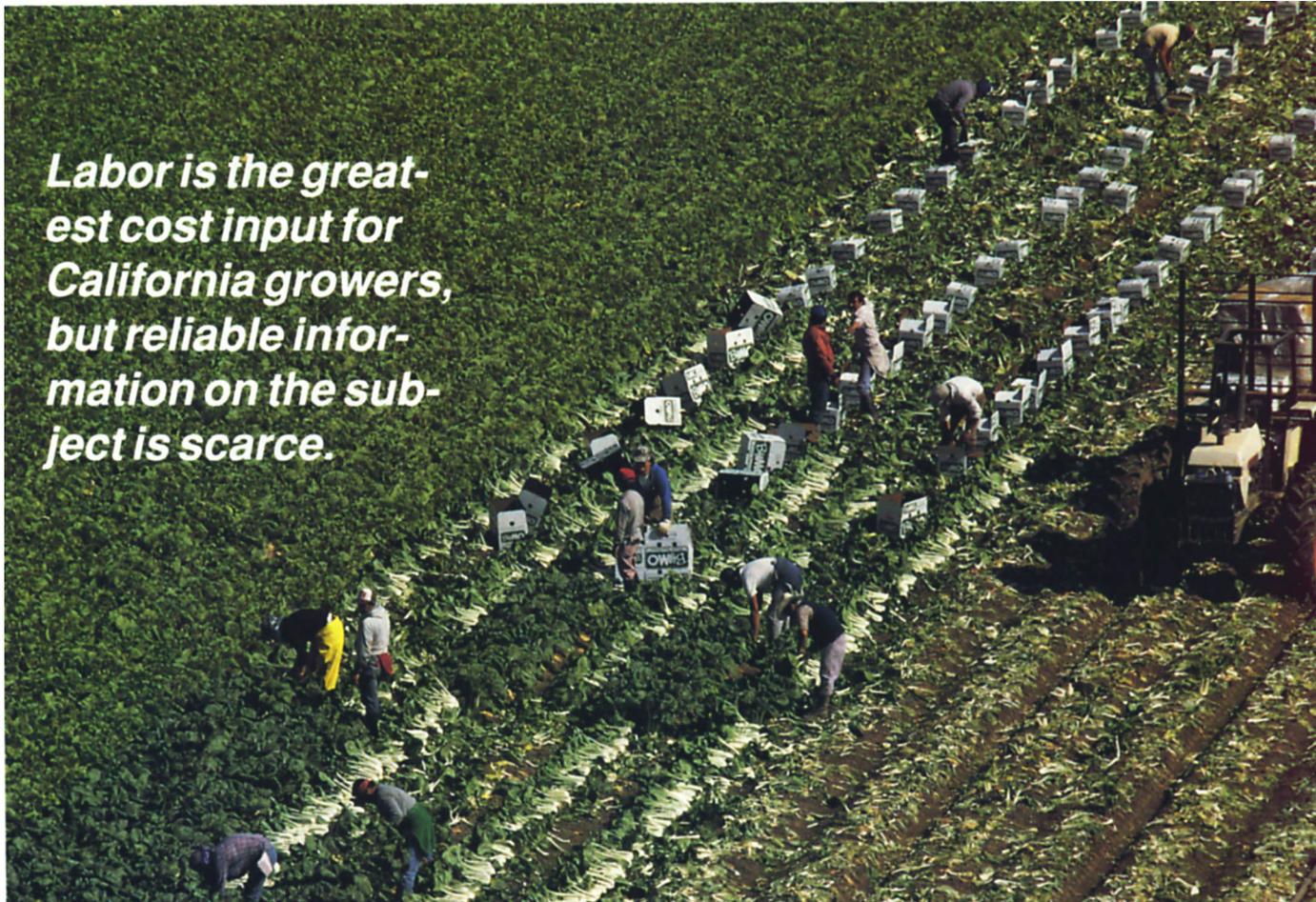


*Labor is the greatest cost input for California growers, but reliable information on the subject is scarce.*



Jack Kelly Clark

## California farm employment and wages in 1984

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**F**arm labor presents complex and often controversial issues for California agriculture, in part because of the scarcity of reliable data on farm employers and workers. As a result, there is considerable confusion over such basic questions as how many farmers employ workers, what total wages are paid, and how wages vary by commodity. Answers to these questions will become even more important as the Immigration Reform and Control Act of 1986 begins to affect agriculture in the state.

In this article, we summarize data from California farm employers, 35,000 of whom reported paying \$4 billion to farmworkers in 1984. The "average" farm employer paid \$115,000 to the equivalent of 11 year-round workers. (A year-round equivalent job or worker would be, for example, one worker employed six months, another four, and a third two months.) A year-round equivalent job on a California farm generated an average \$10,700 in wages for the two to four workers who filled it. Wages and employment vary a great deal across commodities, however, so such "averages" can be deceptive.

This report describes the data base from which the wage and employment information has been drawn and examines wage and employment patterns by commodity. (Another paper, which examines worker earnings and migration patterns, is planned; a complete report will be available in 1988 and may be obtained by writing to the senior author.)

### Unemployment insurance data

Since 1978, virtually all farm employers have been required to report to the Employment Development Department (EDD) the names, social security numbers, weeks worked, and wages earned by employees on their payrolls. These employees include fieldworkers, office workers, mechanics, and professionals employed by firms that produce crops or livestock or provide agricultural services to farms.

Farmers also report total employment during the pay period in the week that includes the 12th day of the month, permitting the calculation of average monthly and average annual employment. Farmers supply basic information on their primary commodity, location,

and type of business when they obtain their required reporting numbers.

The unemployment insurance (UI) information is a convenient "census" of a hard-to-survey population, since it covers all persons who paid or received wages for farmwork in a particular year. However, the information also has several shortcomings. It is collected to administer the unemployment insurance program, not to develop a profile of farm employers and workers, so important data such as hours worked are not available. Farmers and UI clerks may make errors in recording employee data that remain undiscovered unless the worker affected files a claim for unemployment insurance benefits. Farmers report worker wage and employment information in order to be assessed a 3 to 6 percent tax on the first \$7,000 earned by their employees; some employers may have an incentive not to report or to underreport workers and wages. Seasonal farmworkers, on the other hand, may have an incentive to use different social security numbers with different employers to obtain several UI benefit payments, thus inflating the number of farmworkers reported. Anecdotal

evidence suggests that some employers and workers do violate the regulations, but enforcement experience indicates that noncompliance is not widespread.

## Employment and wages

Employment and wage information is available for 50 "commodities" ranging from grapes to dairy to lawn and garden services (table 1). These commodities are grouped into two-, three-, and four-digit codes of progressively greater detail (for example, 01 is crops, 017 is fruits and nuts, 0172 is grapes). EDD has assigned each employer to the four-digit code from the Standard Industrial Classification Manual (SIC) that represents the commodity or commodities from which the farm derives 50 percent or more of its farm sales or production. There are 20 crop, 15 livestock, and 15 agricultural service categories.

Over half of all farm employers, wages, and employment were associated with growing crops: field crops such as cotton; fruits and vegetables; or nursery products. Farms producing fruits and nuts made up 57 percent of all crop employers in 1984. The category of general crop farms, reflecting the diversity of California agriculture, included 3,300 employers whose crops accounted for over 50 percent of total sales but had no single

commodity or commodity group that represented 50 percent of total sales.

The wages in the crop farm categories were paid primarily by fruit and nut growers (32 percent), vegetable growers (23 percent), horticultural farms (18 percent), and general crop farms (18 percent). Fruit, vegetable, and horticultural farm employers paid almost three-fourths of all crop wages.

The average farm size and labor needs vary by commodity. Employers who grow vegetables and melons had average annual wage bills of \$389,000, followed by farm labor contractors and farm managers (FLC & mgt.) with \$333,000. The lowest average wage bills were on animal specialty farms (\$44,000) and cash grain farms (\$53,000).

Since employers only report the number employed during one week of the month, average annual employment is simply the average of 12 monthly employment "snapshots." Average annual employment is considered the number of year-round equivalent jobs for each type of farm, although there is no assurance that a worker employed during the survey period will also be employed during other weeks of the months. Average annual employment was highest in fruits and nuts, which offered 85,300 year-round equivalent jobs in 1984; fruit, vege-

table, and horticultural farms accounted for three-fourths of all year-round equivalent jobs in crops.

The number of year-round equivalent jobs can be divided by the number of employers to calculate the average number of year-round equivalent jobs per farm and then the average annual wages workers could expect if they filled such jobs. Differences in computed annual wages across commodities reflect differences in hourly wages and hours worked; for example, horticultural specialty earnings may be higher than fruit and nut earnings because hourly wages are higher or because such workers work more hours each year, or both. The average year-round crop worker would earn \$10,600 in a year-round equivalent job.

The livestock sector is dominated by one type of employer—dairy farms. The 2,100 dairies that employed workers in 1984 made up 43 percent of the employers, paid 45 percent of the wages, and accounted for 40 percent of year-round equivalent jobs in livestock production. Dairy farms paid an average of \$83,000 to six year-round equivalent workers, or \$14,300 each.

Poultry producers had the most year-round livestock jobs per farm—an average of 19 workers each. Beef and hog farms employed an average of five year-

TABLE 1. California farm employment and wages in 1984

Commodity	SIC code	Total ERS*	Avg. ERS*	Total annual wages (millions)†	Percent of crops	Annual wages per ER‡	Avg. annual employ§	Avg. year-long per ER¶	Avg. annual wages per job¶
				\$		\$			\$
Cash grains	11	923	785	48,894	2	52,972	4,513	5.8	10,834
Field crops	13	1,475	1,300	157,913	7	107,060	13,128	10.1	12,029
Veg. & melons	16	1,308	1,148	508,502	23	388,763	38,545	33.6	13,192
Fruits & nuts	17	11,349	9,301	695,227	32	61,259	85,321	9.2	8,148
Hort. specialty	18	1,532	1,417	400,041	18	261,123	30,338	21.4	13,186
Gen. crop farm	19	3,270	2,942	388,521	18	118,814	34,888	11.9	11,136
TOTAL CROPS	1	19,857	16,891	2,199,098	100	110,747	206,733	12.2	10,637
Beef, hogs	21	1,548	1,376	72,475	19	46,818	6,570	4.8	11,031
Dairy	24	2,098	1,996	173,528	45	82,711	12,119	6.1	14,319
Poultry	25	413	385	99,437	26	240,768	7,512	19.5	13,237
Anim. specialty	27	510	440	22,513	6	44,144	2,057	4.7	10,945
Gen. Livestock	29	280	255	16,053	4	57,331	1,307	5.1	12,282
TOTAL LIVESTOCK	2	4,849	4,452	384,006	100	79,193	29,565	6.6	12,989
CROPS & LIVESTOCK	—	24,706	21,344	2,583,104	64	104,554	236,298	11.1	10,932
Soil prep. serv.	71	191	171	16,446	1	86,103	1,055	6.2	15,588
Crop serv.	72	1,819	1,525	458,418	31	252,016	32,732	21.5	14,005
Vet. serv.	74	1,794	1,707	142,899	10	79,654	10,750	6.3	13,293
Livestock serv.	75	1,108	973	65,769	4	59,359	6,022	6.2	10,922
FLC & mgt.	76	1,239	1,021	412,643	28	333,045	60,446	59.2	6,827
Lawn etc.	78	4,557	3,897	380,048	26	83,399	29,220	7.5	13,006
TOTAL AG. SERV.	7	10,708	9,294	1,476,223	100	137,862	140,225	15.1	10,528
QALS** FARM LABOR	—	3,384	2,837	908,421	22	268,446	95,645	33.7	9,498
CA AGRICULTURE	—	35,414	30,638	4,059,327	—	114,625	376,523	12.3	10,781

SOURCE: California Employment Development Department, 1984.

\* These are reporting units. One employer with, for example, separate grape and dairy operations, may appear as two "ERS" in these data; reporting units are classified in the commodity group from which they derive 50% or more of their farm sales.

† Discrepancies may occur in totals because of rounding.

‡ Total wages paid by employers who primarily produce this commodity, divided by total number of employers who primarily produce this commodity.

§ Average monthly employment during the payroll period that includes the 12 day of each month.

¶ Number of year-round equivalent jobs per farm and average annual wage of each such job; a year-round-equivalent job may be created by, for example, three seasonal workers each employed 4 months. Differences in annual wages between commodities may reflect variance in hourly wages or hours worked.

\*\* Ag. service workers are defined in the USDA Quarterly Agricultural Labor Survey (QALS) as those employed in soil preparation (071), crop services (072), livestock veterinary (0741) and other livestock (0751) services, and labor and management services (076).

round equivalent workers at \$11,000 each. In 1984, California had 500 animal specialty farms that employed 2,100 year-round equivalent workers, or four workers each. Among farms that employed workers, there were more that raised horses (260) than there were egg ranches (200).

Agricultural service firms are often overlooked as farm employers. The Census of Agriculture does not always survey agricultural service firms, but the U.S. Department of Agriculture (USDA) Quarterly Agricultural Labor Survey (QALS) includes selected agricultural service classification codes in its agricultural services survey of employment and wages. The survey samples employers who provide soil preparation services (0711), general crop services (072), livestock veterinary services (0741), other livestock services (0751), and farm labor and management services (076).

About 10,700 agricultural service employers paid \$1.5 billion to 143,500 year-round equivalent workers in 1984; 3,400 of these were QALS employers who paid \$908 million to 96,000 year-round equivalent workers. Over 40 percent of all agricultural service employers were lawn and garden firms that employed an average of seven year-round equivalent workers at an average annual wage of \$13,000. The category with the highest average annual earnings was landscape planning (0781), which paid an average of \$19,400 per year-round job.

The lowest annual wages were paid by the 1,200 farm labor contractors and farm management services. Contractors had the highest average number of year-round jobs (56) and the lowest annual wages (\$5,900). An average of 51,200 workers were employed by contractors each month, over one-third of total agricultural service employment.

The 1,800 crop service employers included firms providing insect and weed control, machine-harvesting, cotton ginning, and sorting, grading, cooling, baling, drying, or shelling of field crops, fruits, and vegetables. (Firms are considered providers of crop services if they do not change the commodity by freezing, cooking, or blending it.) Such firms employed an average of 33,000 workers in 1984, or 22 workers each. The largest firms were those preparing crops for market by grading, drying, and the like, but cotton gins paid the highest average wages per year-round equivalent worker.

Unemployment insurance wage figures permit the tabulation of wages as a share of the farm value of selected commodities. In 1984, UI-reported wages were 26 percent of the farm value of California fruits and nuts as reported by the

California Crop and Livestock Reporting Service, 16 percent of vegetables, 15 percent of eggs, 9 percent of milk and cream sales, 7 percent of turkey and field crop sales, 6 percent of broiler sales, and 3 percent of livestock sales. For specific commodities within these categories, wages can be a larger factor: wages were one-third of the \$848 million received by grape growers in 1984.

### Employment fluctuations

Agricultural employment is seasonal, and the UI data permit the calculation of employment peaks and troughs by commodity. Agricultural employment was highest in September 1984, when 488,000 workers were on employer payrolls, and lowest in February, when 302,000 workers were employed, for a peak-trough ratio of 1.6. Peak-trough ratios were highest for crops (1.8) and lowest for livestock (1.1). The ratio for crops, for example, means that almost two workers were employed in September for every one employed in February.

Peak-trough ratios vary by commodity. They were highest in berries and grapes, deciduous tree fruits, and cotton gins; in each of these commodities, three or four workers were employed during the peak month for every worker employed during the trough month. Peak-trough ratios exceeded two for 60 percent of the crop categories, for none of the livestock categories, and for 13 percent of the agricultural service categories. In other words, 36 percent of all average annual employment was in commodities in which peak employment was at least twice trough employment.

Employment in the crop, livestock, and agricultural service sectors is dominated by a few commodities in most months. In crops, fruit and nut employment ranged from 37 to 51 percent of total crop employment over the year, and fruits and vegetables combined ranged from 57 to 67 percent. In livestock, dairies accounted for 40 to 42 percent of total livestock employment, and dairies and poultry farms together made up two-thirds of livestock employment during the year. Farm labor contractor employment ranged from 27 to 44 percent of agricultural service employment, and farm labor and management services plus crop service employment was 65 to 75 percent of agricultural service employment.

### Conclusions

California farm employers paid an average of \$115,000 to 12 year-round equivalent workers, or about \$10,700 per year-round equivalent job in 1984. In contrast, the average (farm and nonfarm) unemployment-insurance-covered employer

in California employed almost 16 year-round equivalent workers at an average annual wage of \$19,000 in 1984. This difference in annual wages reflects differences in hourly wages and hours worked.

It is often reported that California agriculture employs about 220,000 workers. This is close to the "annual average employment" estimate contained in the state's Employment Development Department Report 881-X. The 881 report does not define agriculture and does not generate farmworker employment estimates for several counties, but its estimate is close to the 236,000 average annual employment of California crop and livestock employers in the unemployment insurance data.

Another employment estimate is the 173,000 annual average reported by the USDA's Quarterly Agricultural Labor Survey for July 1984 to April 1985. This survey obtains employment information four times annually from a sample of 1,200 farm employers who produce or sell at least \$1,000 worth of farm products. Hired farmworkers in the QALS survey include paid family workers. The UI data indicate that during these same four months in 1984, an average 229,096 hired workers were employed on California farms, or one-third more than the QALS estimate. (The QALS survey was not conducted in January and April 1984).

The QALS report also estimates the employment of agricultural service firms such as crop preparation services and farm labor contractors. For 1984-85, QALS estimated an average of 47,500 agricultural service workers in California, but agricultural service employers paid UI taxes for an average of 92,813, or 95 percent more agricultural service workers during the four comparable months of 1984.

Labor is the most costly input for California agriculture, but there is little reliable farm labor information. The UI data approximate a census of all persons who did farmwork in California, and it indicates that average employment is higher than is reported by several surveys.

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