

CALIFORNIA'S AGRICULTURAL DILEMMA: HIGHER PRODUCTION AND LOWER WAGES



BY

*Don Villarejo
and
Dave Runsten*

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"Francisco and Jovita are a newly married couple who recently arrived in Madera from their home in Oaxaca, Mexico. Both are undocumented migrants who crossed the border in Tijuana after paying two hundred dollars each for the assistance of a coyote who dropped them off somewhere in the hills of north San Diego County. They lived in a cave near Julian for a few days with some fellow villagers from Oaxaca until they were able to negotiate a ride to the Central Valley with a labor contractor who was looking for workers to pick the tomato harvest. They have been in Madera for over a month, and live in a 1975 Ford station wagon that has a broken fan belt and no back window. A neighbor from back home, who also lives in Madera, charges them fifteen dollars a week to park in front of his house and use his water spigot. Francisco goes to work every day at three-thirty in the morning, riding out to the tomato fields on the labor contractor's bus with the other workers for five dollars a day. Jovita cannot find work. She says that no one will hire her since she is eight months pregnant. She has never been to a medical clinic in her life, and plans to give birth to the child in the back of the car with the aid of her friend, Reyna, who is from her hometown. She waits all day for Francisco to return, often making bracelets of colored yarn to sell to people in the K-Mart parking lot in the afternoon. When Francisco returns from work, they both ride down to the San Joaquin River to bathe. Francisco is careful to wash the agricultural chemicals from his body. They hope to save enough money to rent a room from the labor contractor for twenty-five dollars a week so that Jovita might have the convenience of a bathroom when the baby comes."

Bonnie Bade

Migrant Farm Worker Needs Assessment, 1990
University of California Cooperative Extension

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Executive Summary

California's annual production of fruits, vegetables and horticultural crops has grown significantly in recent years. Increases in the supply have out-stripped demand for some crops which, in turn, has led to financial instability within some firms, mainly vegetable and wine grape producers.

Production growth also has increased labor requirements. It is estimated that labor demand in California agriculture has risen by twenty percent over the past fifteen years.

At the same time, the farm worker population has expanded in number, largely as a result of new immigration. The Immigration Reform and Control Act of 1986 clearly stimulated a substantial influx of immigrants, both authorized and unauthorized. Today more than nine out of every ten California farm workers are foreign-born; most are from Mexico. Just eight out of one hundred workers are U.S.-born.

This new immigration has both broadened and deepened among the peoples of Mexico and increasingly, Central America. A large population of indigenous migrants now can be found working in California's fields.

As the number of farmers and unpaid family members working in agriculture steadily decrease, and California's farms become increasingly dominated by large businesses, our state's agriculture becomes more and more dependent on hired workers. Today, at least eighty percent of all the work on California farms is performed by hired labor.

The single most important recent development in farm employment is the growing use of farm labor contractors. At least one in three California farm workers is employed by a labor contractor during the year. At peak season, a majority of San Joaquin Valley farm workers in fruits and vegetables works for a labor contractor.

The number of workers in California agriculture is difficult to estimate, but wage reports submitted by employers identify some 881,000 different people (actually Social Security numbers) employed in agricultural jobs each year. Annual average employment is quite a bit lower since most workers experience long periods of unemployment between jobs.

Most agricultural work — some ninety percent — is performed by people who piece together a series of jobs, usually interspersed with periods of no work.

Very little work is done by people who enter the labor force for only a short period during the peak of the season. The notion of the "seasonal worker" is largely a myth.

Roughly four of ten California farm workers migrate to find employment. Most are young, have an average of just six years of formal education, earn about \$6,500 per year, and do not make much use of government-supported services.

Finally, evidence strongly supports the existence of a substantial labor surplus in California agriculture. Correlated with this is a significant decline in wage rates and an even larger drop in annual earnings.

Unions and other organizations directly representing *current* farm workers have seen their numbers and influence decline. The large labor surplus, combined with continuing immigration, form daunting obstacles to organizing efforts.

Trends in Agricultural Production

California's agricultural industry is larger than that of any other state, producing two-thirds more than second-ranked Texas (measured in farm cash receipts). Despite six consecutive years of drought, the devastating impact of the December 1990 freeze, the pressures of urbanization displacing prime farm land, and various pest plagues, California's share of national crop production is greater today than ever before.

With just three percent of the nation's crop land, the state's crop farm cash receipts amount to seventeen percent of the national total. This reflects California agriculture's reliance on crops with a high value per acre, such as vegetables, fruits and ornamental nursery crops. Other leading agricultural states rely more on commodities with a lower value per acre, such as wheat, feed grains, soybeans and livestock.

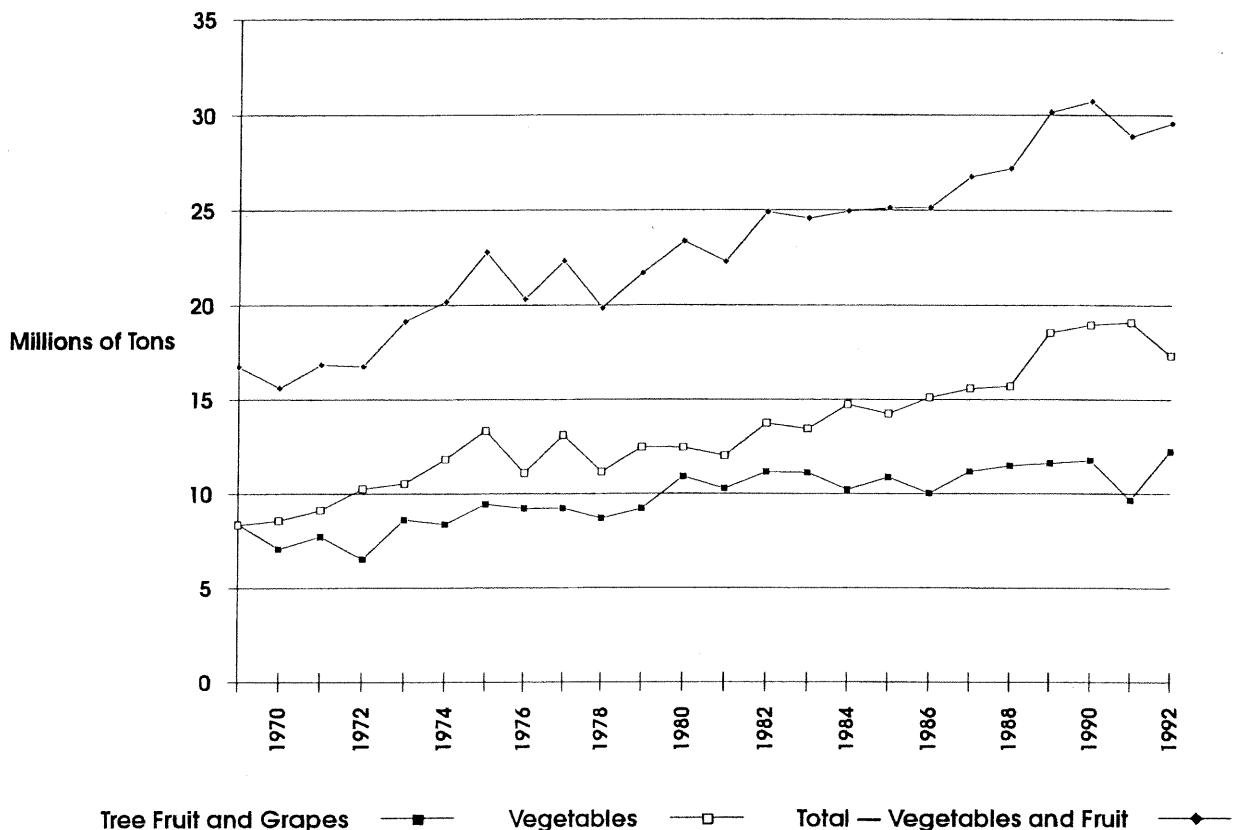
Over the past twenty years, the most important changes in the pattern of crop production in California have been in the amounts and types of crops produced. Total production for all California fruits and vegetables reached a record level of 30 million tons in 1990, and then declined somewhat in 1991 and 1992. If we focus attention just on those commodities which require significant amounts of labor, the following are noteworthy trends:

- vegetable output has doubled;¹
- tree fruit volume has grown by two-fifths;²
- grape output has increased by four-fifths;³
- nursery crop production has grown by at least one-third;⁴
- exports of California fruit and vegetables have steadily increased after declining in the mid-1980s, reaching a new record high of \$1.7 billion in 1991.⁵

Figure 1 presents California's 22-year production record for all fruits and vegetables, and, separately, for vegetables and for tree fruit and grapes. Despite some significant year-to-year swings — due mainly to variations in weather, water supply and pest problems — annual tonnage for these crops clearly increased during this period.

California now produces 52 percent of all the principal fresh vegetable crops grown in the U.S.⁶ Equally significant, the state also accounts for 62 percent of all

Figure 1
California Fruit and Vegetable Production



Source: California Vegetable Crops and California Fruit and Nut Statistics (California Agricultural Statistics Service)

processing vegetable output, which consists mainly of tomatoes, cucumbers, broccoli and cauliflower.⁷ California's share of national fruit and nut production is 54 percent.⁸ The state also grows 23 percent of the country's nursery and greenhouse crops.⁹

Much of the expanded production described above developed in response to growing consumer demand for fresh fruit, fresh vegetables and ornamental horticultural products. U.S. residents, on a per capita basis, now consume much greater amounts of fresh fruits and vegetables than they did a generation ago. Even fast food outlets typically provide salad bars with fresh fruit in addition to the high-fat products usually associated with the industry. In 1989, U.S. per capita consumption of fresh vegetables numbered approximately 101 pounds per year, a 50 percent increase from 72 pounds per year just 20 years earlier. Per capita consumption of fresh fruits registered similar increases. While processed fruit consumption is lower today than it was a generation ago, processed vegetable consumption, mostly of tomato products and potatoes, has risen.

Exports increased sharply in the 1980s

A less recognized factor driving production upward is the great success California producers have enjoyed in marketing their products overseas. Agricultural production and distribution, like the automobile industry, have become globalized in the past two decades.

Some produce industry experts argue that the key component to future business success lies in the global marketing of high-value commodities to affluent customers. Asia and Europe present great potential as markets for California produce. For example, the European Common Market is now both larger and wealthier than the U.S. (350 million people versus 250 million).

Industry leader Sun World International, Inc. exports 85 percent of its Valencia oranges, 65 percent of its grapefruit, 50 percent of its lemons, 40 percent of its grapes and 45 percent of its tomatoes. According to Doug Barker, executive vice-president of Sun World, "If you're not shipping 30 percent of your product overseas, you're depending too heavily on the domestic market."¹⁰

The globalization of the fresh fruit and vegetable industries was the subject of an international meeting at the University of California, Santa Cruz, in December 1991 — the first gathering of its kind to focus on this topic. Papers presented at the meeting demonstrated that globalization of the produce industry is proceeding at a very rapid pace and is leading to intense competition between nations.¹¹

To illustrate the tremendous growth of California produce exports over the past several years, consider the recent trend in table grapes. Between 1984 and 1991, exports of California table grapes have *tripled*, to about 7.6 million lugs (23 pound equivalents).¹² Exports now represent 14 percent of all table grape shipments. Today, Hong Kong is the third most important destination for California table grapes, ranking behind only Los Angeles and New York in terms of volume.

A number of factors figure into the expansion of fresh fruit and vegetable exports. First, annual per capita consumption of fresh fruits and vegetables is much greater in other nations than it is in the U.S. In both Japan and France, for example, annual per capita fresh vegetable consumption is twice that of the U.S. Even Mexico has a higher per capita consumption than this country.

The dollar's decline relative to other currencies in recent years has also contributed to the rise in exports. It now takes much less of a given foreign currency to buy one U.S. dollar or the equivalent amount of goods, making U.S. exports less ex-

pensive and thus more competitive in the international marketplace.

Finally, the federal government, through the U.S. Department of Agriculture, appropriates large sums of money to commodity organizations for the promotion of U.S. food exports. Over one six-year period in the 1980s, the California Walnut Commission received a total of \$36 million in federal funds to promote walnut consumption in more than a half-dozen foreign nations. The substantial increase in walnut exports to these countries testifies to the effectiveness of this effort.

Other factors in crop trends

By examining acreage and production data together, it is possible to show that roughly half of the 20-year growth in vegetable production is due to expanded acreage, and half is due to increased crop yields (quantity per acre harvested).¹³ Because farmers in the Golden State have successfully increased both the amount of land devoted to the production of fruit, vegetables and ornamental horticultural products, and the per-acre yield of these crops, California's share of national crop production has improved continuously.

However, not all of California's crops have experienced growth in production volume. There has been a pronounced shift away from field crops and toward more intensive crops, which generally require greater amounts of labor. Field crop acreage, especially irrigated pasture, barley and oat hay, has declined substantially in recent years. California's yearly output of major field crops dropped from 28.3 million tons (three-year average for 1980-82) to 23.7 million tons (three-year average for 1989-91), amounting to a 16 percent decline in just the past eleven years.¹⁴

The drop-off in field crop production appears to correspond with two interrelated factors. First, continuing low world market prices for these crops lead farmers to look for better alternatives. Second, the six-year-long drought in California and the accompanying reduction in available irrigation water forced many farmers to cut back on their planted acreage. Growers now look to reduce their overall water requirement by planting a smaller acreage with vegetables or fruit crops, which have a much higher cash return per acre than field crops.

California has also continued to develop its livestock industry in new directions, mainly by shifting away from grazing and toward intensive dairy, poultry and egg production. In 1993, California's fluid milk production surpassed that of Wisconsin, the longtime dairy leader. While Wisconsin still produces more dairy products (especially cheese), it might very well be displaced by California as the nation's leading dairy state before the end of this decade.

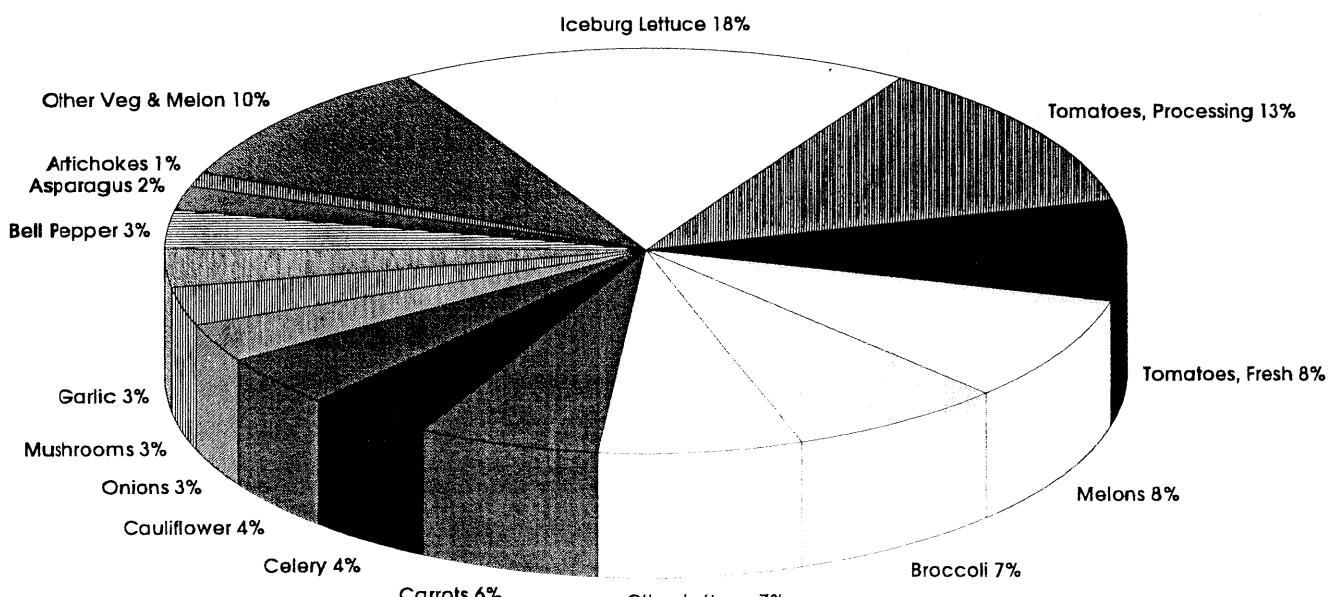
Vegetable production

Figure 2 identifies California's leading vegetable crop in 1992 as iceberg lettuce (with one-sixth of the total vegetable cash receipts), followed by processing tomatoes. Fresh market tomatoes rank third, with melons and broccoli not far behind.

In the case of lettuce, Figure 3, the evidence shows that there was a significant decline in production during most of the 1980s. However, a strong recovery began to take hold in 1987 and, despite a recent downturn, California lettuce production now exceeds the level of the late 1970s.

Production data for California processing tomatoes shows a great deal of fluctuation from year to year. However, as shown in Figure 4, output increased dramatically from 1989 to 1991. This upswing is attributable to cannery operators' decision to build up their stocks of tomato products such as catsup, pizza sauce and tomato sauce in response to consumer demand. California has also benefitted from the mechanization of the processing tomato harvest, which makes it far more economical to produce catsup here and ship the finished product elsewhere, shifting production from other states to California.¹⁵

Figure 2
California Vegetables and Melons
Percent of Total Value of Production 1992*



*Excludes potatoes and sweet potatoes

Figure 3
California Iceburg Lettuce Production

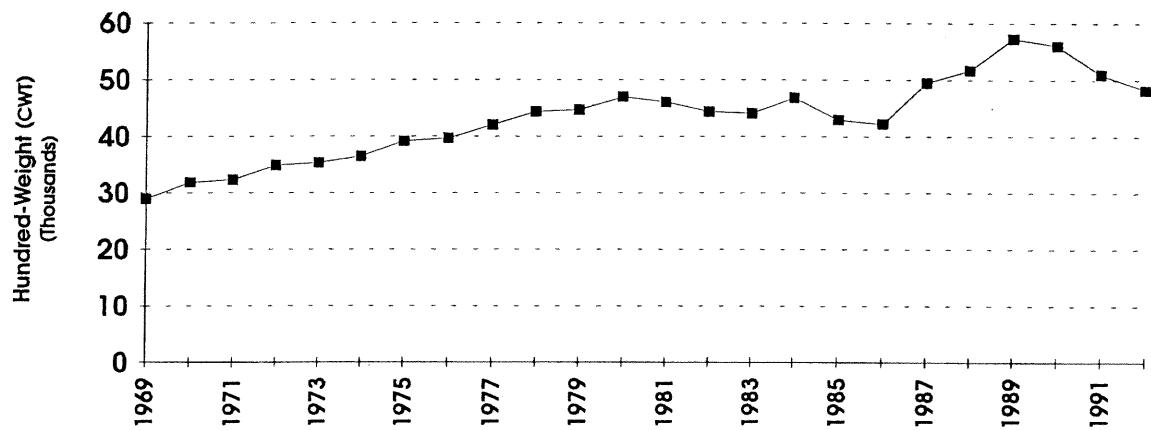
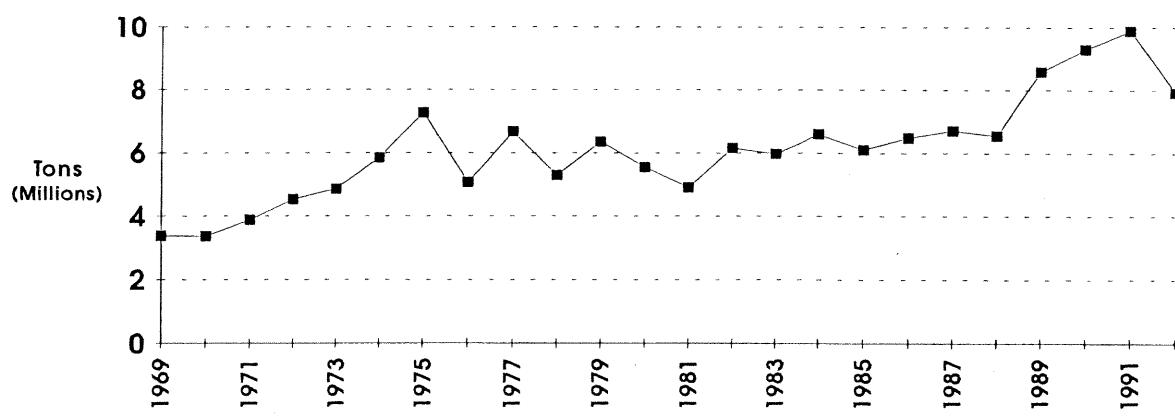


Figure 4
California Processing Tomato Production



Source: California Vegetable Crops
(California Agricultural Statistics Service)

Nursery and greenhouse crops

While we have focused a great deal of attention on vegetable production, the cut flower and ornamental plant industry is the most rapidly expanding segment of California farm output. Also referred to as nursery or greenhouse crops (which include both ornamental horticultural production as well as crops grown under cover, e.g., mushrooms), this sector is novel in that relatively little land is needed, and cash receipts per acre are extremely large. Farm cash receipts from the sale of U.S.-grown ornamental horticultural products now bring American farmers more revenue than does all of U.S. wheat or cotton production.¹⁶

Ornamental horticulture also appears to be the highest form of agricultural land use, both in terms of production value per acre, and as the culmination of various forms of production. Analysis of historical data for California shows a clear long-term pattern. Initially, most agricultural land was used as dry-land range for cattle grazing, then dry-land cultivation was introduced to provide grain for flour production. Irrigated farming first developed to grow alfalfa for livestock feed and to grow food grains, but later expanded to enable vegetable production and a broad range of field crops. When irrigation supplies became secure and reliable — as a result of water project development — permanent crops, such as orchards and vineyards, were introduced. Finally, as population densities increased, nursery and greenhouse production began to take over land that was once used for these earlier purposes. In a sense, nursery crop production can be thought of as the "ultimate" use of crop land.

These successive stages of crop land development are most readily apparent in San Diego County where nursery crop production has expanded rapidly in recent years, replacing vegetable crops as the leading agricultural commodity. In 1991, San Diego County reported that its agricultural production exceeded \$1 billion in total value for the first time, increasing 9 percent over the 1990 level.¹⁷ Nursery and flower products were the number-one crop for the third year in a row. It is one of the paradoxes of California that San Diego County is also one of the largest and most rapidly urbanizing counties in the state. Ironically, the displacement of traditional rural activities, such as livestock and field crop production, by urban settlements has brought increased demand for ornamental horticultural products.

With growth in production came a leap in labor demand in the nursery crop industry — annual average employment has now reached 36,000. Although jobs in this sector are usually of much longer duration than other types of agricultural

work, most pay at or slightly above the legal minimum wage.

As a measure of its significance, the annual labor requirement for nursery crops is roughly the same as that of California raisin, table and wine grapes. While much attention is properly focused on grape workers as symbolic of the prevailing conditions in California's fields, the state's nursery crop industry is just as important a job site for workers.

Crop production shifts to Mexico

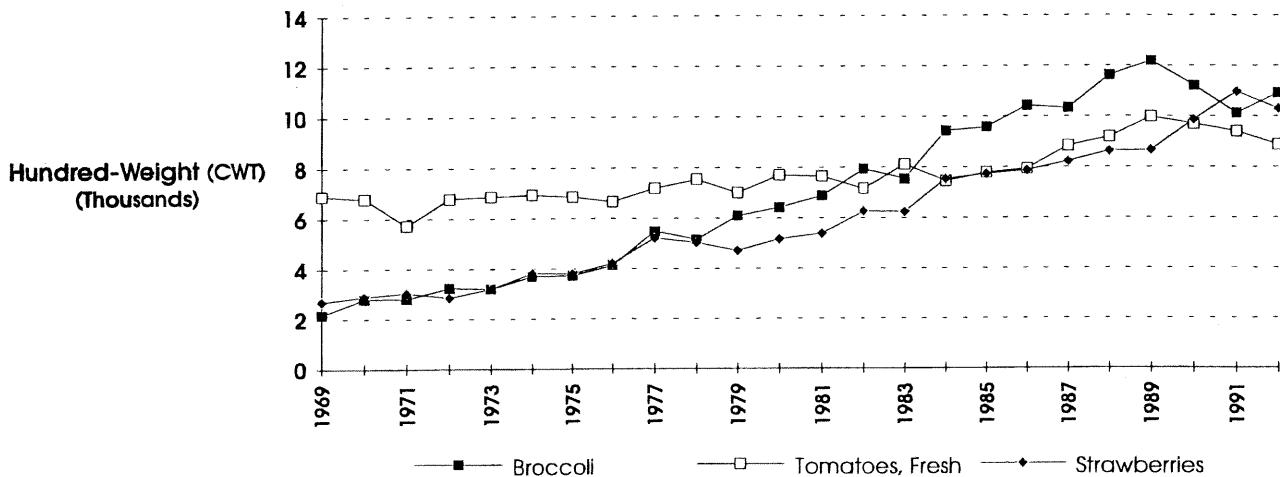
Some U.S. companies have shifted much of their production of certain important crops to Mexico in recent years, largely in the belief that lower Mexican wages will provide them with a significant advantage in production costs. This has especially affected the frozen broccoli and cauliflower industry, as well as the vine-ripe tomato industry.

Largely unrecognized is the fact that growers on both sides of the border have benefitted simultaneously from the recent upsurge in output. For example, while Mexico exported substantial amounts of its broccoli, fresh tomato and strawberry crops to the U.S. during the past dozen years, California's production volume of each of these crops increased *at the same time*.¹⁸ In the case of broccoli and strawberries, the magnitude of this increase exceeded 400 percent over the past 20 years. However, frozen broccoli and cauliflower production has experienced a significant shift to Mexico during this same period.¹⁹ Figure 5 shows California's 23-year production record for these crops.

Greater reliance on Mexican fresh tomato production by some U.S. shippers accompanied another important shift in the type of tomatoes produced in California. In the past 15 years, approximately 10,000 acres of pole tomatoes were developed in Baja California. Pole tomatoes entail a great deal of labor since each tomato is picked when fully ripe on the vine, requiring repeated harvest sweeps by crews of workers. Bush tomatoes, which consist mainly of the so-called "green mature" variety, demand much less labor because they are picked while still green or light pink, and then are artificially reddened by gassing with natural ripening agents. Because bush tomatoes are less susceptible to damage in handling and have a much longer storage life, they are now preferred by supermarkets and have largely displaced vine ripe tomatoes. As a result, California has recaptured a cost advantage by primarily producing bush tomatoes, which have roughly one-third the production cost per acre compared to the pole variety.

In the case of both broccoli and strawberries, production in California has lit-

Figure 5
California Fresh Tomato, Broccoli and Strawberry Production



Source: California Vegetable Crops and Fruit and Nut Statistics (California Agricultural Statistics Service)

erally exploded (See Figure 5). While the industry has expanded, processed broccoli production has experienced a significant shift to Mexico, as most poignantly symbolized by the recent closing of the Watsonville Green Giant plant.

If U.S. demand increases rapidly enough, production on both sides of the border may increase simultaneously. This seeming paradox can be understood if one realizes that the U.S. market for these crops expanded so rapidly in the past 20 years that there was ample opportunity for both U.S.-based and Mexican production to share in the benefits.

Agricultural business failures increasing

Agriculture, unlike other industries, is especially sensitive to over-production in the short term. When the amount of product reaching market outstrips demand, prices plummet by very large factors and returns to farmers suffer. A bountiful harvest may lead to economic ruin within the same year.

The most recent national data show that agriculture appears to be suffering more than any other industry from the current period of economic stagnation. According to Dun and Bradstreet, the nation's leading credit service business, in 1992, bankruptcies in the agriculture-crop farm industry were up by 54.5 percent over 1991. For all industries, including manufacturing and services, the corresponding

figure was 9.9 percent.²⁰ In contrast, California business failures for all industries increased by 34.4 percent during this same period.²¹ Industry-by-industry data show that California agricultural businesses suffered more bankruptcies than did those of any other state.²²

There are significant indicators that production increases have out-stripped demand for several California commodities. During spring 1991, lettuce prices fell by a factor of three compared to spring 1990 figures. While price swings this large are considered normal over a period of years, it appears that many vegetable producers have lost money recently, and some have shut down their operations.²³

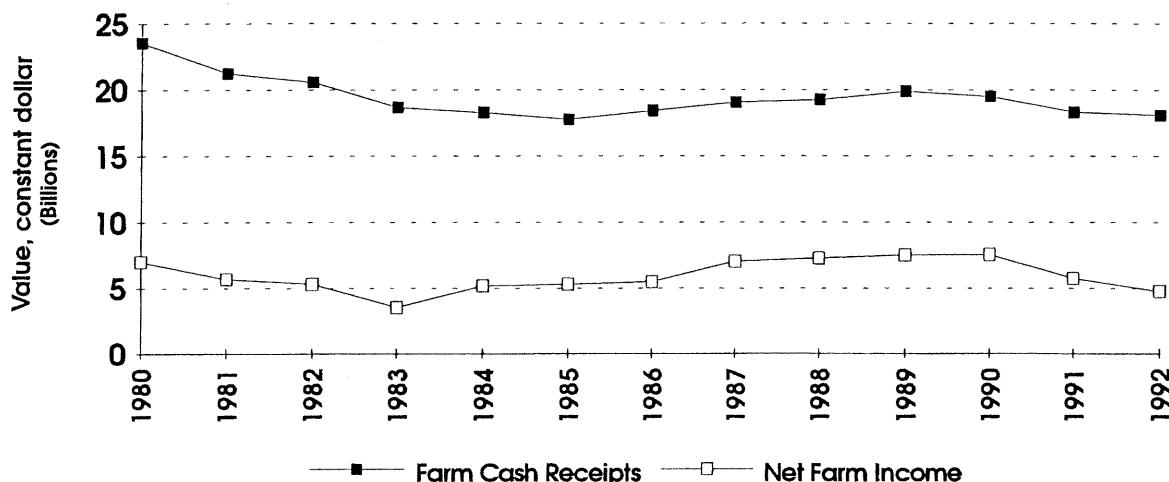
These developments have contributed to a new wave of business failures, consolidations, mergers and farm restructuring within the California farming sector. A number of major vegetable companies, such as J.R. Norton Farms, have closed and sold off their properties.

Over the past five years, shipments of California wine have fallen from 424 million gallons per year to just 375 million gallons.²⁴ The latter effect appears to be a result of lower per capita wine and spirits consumption in the U.S. At the same time, there is evidence that the wine grape industry over-expanded with large new plantings in the San Joaquin Valley, often ordered by absentee investors with little direct knowledge of industry conditions. More than a few North Coast wineries are now being offered for sale.

In early spring 1992, San Joaquin Farming, Inc., a 2,734 acre wine grape ranch in Stanislaus County, laid off all 400 employees, who had been working under union contract (United Farm Workers of America, AFL-CIO). The land owner, John Hancock Mutual Life Insurance Co. of Boston, decided to sell the property, possibly as a result of the weakness in the California wine grape business mentioned above. Another farm operating company, Michael Hat Farming Company, took over operations in spring 1992 and replaced all of the laid-off workers.

While there are many sectors within California agriculture that are performing well and are highly profitable, it is important to realize that others are experiencing significant economic difficulty. It is anticipated that the next several years will see additional farm failures and consolidations, particularly in fresh vegetables and wine grapes, which, in turn, will threaten the economic security of these firms' employees.

Figure 6
Farm Cash Receipts and Net Farm Income, California
(Corrected for Inflation, GDP Deflator)



Source: USDA, ECIFS, *State Financial Summary*, 1991 and earlier (Net Farm Income)
CDFA, *California Agriculture, Statistical Summary*, 1992 and earlier (Farm Cash Receipts)

Farm profits

Figure 6 summarizes California's farm cash receipts and net farm income for each year since 1980 (corrected for inflation). After falling during the national farm depression of the mid-1980s, receipts recovered, but then experienced another downturn, most likely attributable to the December 1990 freeze and prolonged drought.

Profits in agriculture are difficult to identify because most farm operators are self-employed and off-farm earnings of family members are usually included in determinations of "farm income" (such as that shown in Figure 6). We do know, however, that California's farms had a net cash return of \$2.9 billion on \$13.9 billion in cash receipts from the sale of agricultural commodities during 1987, the last year for which data is available.²⁵ The latter figures exclude the off-farm earnings of farmers and family members. It is believed that, with the exception of a few crop regions in certain years of freeze and drought, operating profits increased in the years before 1991. This inference is based on the 32 percent increase in California net farm income (which includes off-farm income of farm operator family members) between 1986 and 1990 shown in Figure 6.²⁶

To appreciate the relative size of 1987's net cash return of \$2.9 billion, it should be noted that it was twice as great as the combined net profits of all California banks in that year.²⁷ Farming in California is highly profitable for many operators.

Farm Structure and the California Farm Labor Market

Although California agriculture is dominated by large companies, the overwhelming majority of the state's farms are quite small. Of 82,000 farms, the 2,816 biggest account for more than two-thirds of all production, and are described as "large farms" in the discussion that follows.²⁸ In contrast, the 66,000 smallest farms, each producing less than \$100,000 worth of farm products per year, account for less than one-twentieth of overall production.²⁹ This means three-fourths of the state's farms are so small that, taken together, they produce a negligible share (five percent) of the state's farm products.

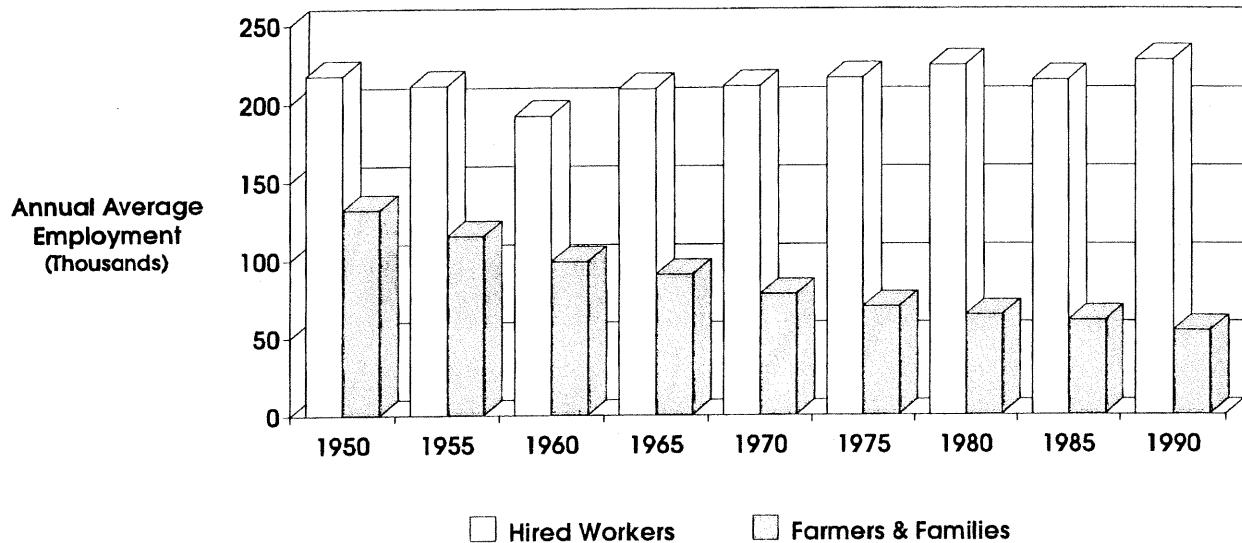
Each of the farms classified as "large" in the above discussion reports annual cash receipts of at least \$1 million from agricultural commodity sales, and all but 61 of the 2,816 need hired labor to run their operations.³⁰ All of the 61 who do *not* hire labor are livestock ranches, not crop farms.

What is less obvious is that many small farms also require hired labor. This is because just one-half of California farms are operated by *farmers*.³¹ The other half are run by people whose principal occupation is something other than farming, and these non-farmers report that they work on their places on a limited basis only, creating a dependence on hired labor.

The agricultural crisis of the 1980s saw a great many medium and small family-operated farms go out of business. Although the Midwestern states were hardest hit, a significant number of California farms also went under. The decline of the family farm has meant that many full-time agricultural workers — farmers and their family members — have left the fields forever. In many cases their place has been taken by individuals hired by the large companies who have succeeded the family farmers.

Taking these factors into account, it is not surprising to discover that the amount of agricultural labor contributed by farmers and unpaid family members has steadily declined since 1950.³² Figure 7 shows the estimated annual average for both direct-hire employment, and "farmer and unpaid family member" self-employment in California agriculture for these years.³³ The data represent the number of full-time equivalent employed persons, not the actual number of individuals. This is because many agricultural jobs are short-term, and the average farm employee is

Figure 7
California Farm Employment, Farmers and Hired Workers



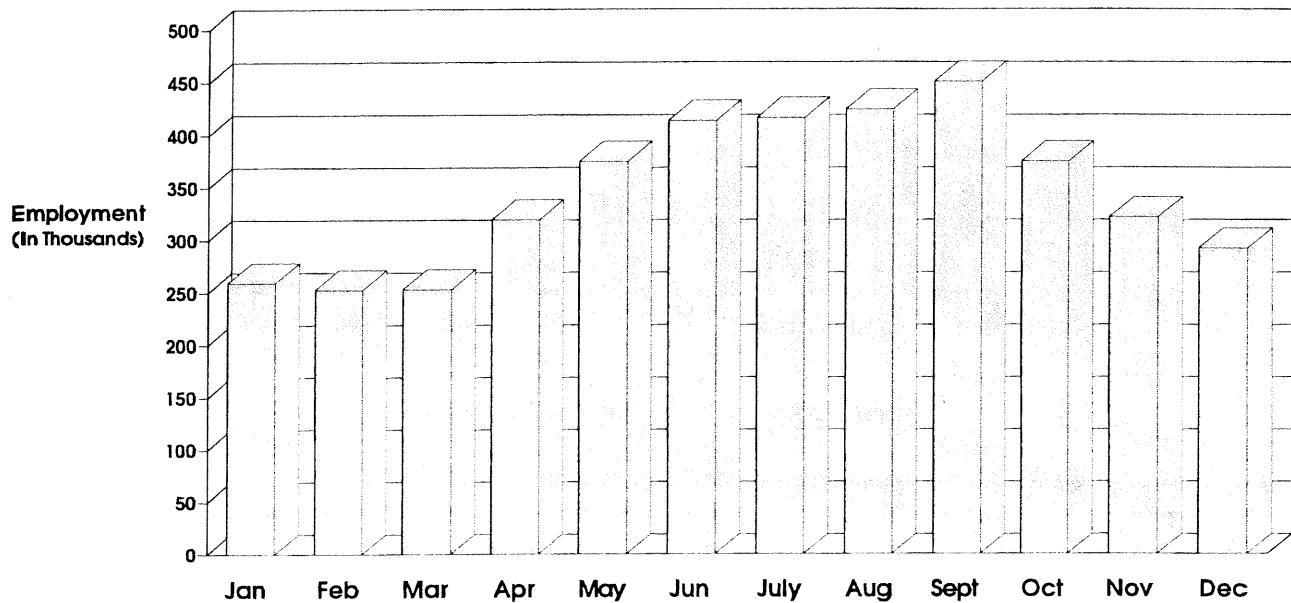
Source: California Employment Development Department, Report 881-X

able to find work for only part of the year. Thus, one full-time equivalent corresponds to several individuals; the true number of hired farm workers is substantially larger.

The striking point about the data shown in Figure 7 is that directly hired workers account for *at least 80 percent* of all the work performed on California farms today. It is likely that the proportion of all work performed by hired laborers is even larger because this data does not take proper account of persons hired by non-farm companies who provide agricultural services, such as field packers, crop service firms and farm labor contractors. California agriculture is more dependent on hired workers today than at any other time during this century.

Measures of the actual level of farm employment are difficult to obtain. The state's Employment Development Department (EDD) publishes monthly totals of employment in the agricultural sector based on payroll and employment reports submitted to EDD by employers in conjunction with payroll tax payments. EDD requires all employers to file quarterly reports which include the number of persons on the payroll during the pay period that encompasses the twelfth day of the month for each of the three months of the calendar quarter. Each employer is classified ac-

Figure 8
Monthly Farm Employment, California, 1991



Source: *Agricultural Employment, Report 882-A,*
 Employment Development Department, State of California

cording to their primary business activity, so those categorized as agricultural may be separately enumerated. There are limitations inherent in using these wage reports to infer employment levels in such a highly seasonal business. Some workers may either drop off the payroll before the end of the month, or may be dropped before the next "pay period which includes the twelfth day of the month" rolls around. Nevertheless, these EDD UI monthly wage reports do provide a useful summary of reported agricultural employment and assist in identifying patterns.

The EDD UI wage reports show that statewide farm employment peaks in September at about 450,000 and drops off to about 253,000 in February.³⁴ Figure 8 shows these monthly farm employment data for 1991, including all reported employment by crop and livestock farms, farm labor contractors, farm management companies, and certain crop service companies.³⁵ From these data we can infer that at least 450,000 persons were employed in California agriculture during 1991, since this corresponds to the actual number of individuals employers reported they paid during the pay period that included September 12.

Table I**Peak-season Farm Employment, by Crop Region, 1991**

Crop Region	Peak Employment	Month
North Coast	19,078	September
Sacramento Valley	43,654	October
San Joaquin Valley	242,653	September
Central Coast	74,009	July
South Coast	70,263	May
Desert	51,736	June

Source: *Agricultural Employment, 1991, Report 882-A, Department of Employment Development, State of CA, April, 1993.* EDD Agricultural Region definitions have been used together with regionwide farm employment (SIC 01xx, 02xx, 0721, 0722, 0723, 0761, 0762) for each month to determine the month with peak reported employment.

Peak seasons vary considerably among crop regions in California. For example, peak farm employment in Imperial County, the state's center of winter vegetable production, occurs during February when *statewide* employment bottoms out. Table I presents peak season farm employment for all six of California's agricultural regions, including reported farm direct-hire, farm labor contractor and farm management company employment.

Expanded Crop Production and Increased Labor Demand

With shifting patterns of agricultural production come changes in labor needs. In this context, it is important to realize that an increase in production does not necessarily correspond to an increase in labor demand.

It is well known that in recent years certain commodities have experienced productivity boosts associated with technological improvements; such changes may actually *reduce* labor demand even while increasing overall production. Mechanization of the processing tomato harvest, for instance, is one case where aggregate labor demand decreased despite a large increase in production.

In contrast, production of broccoli, cauliflower and head lettuce has expanded by such large amounts that the introduction of labor-saving field packing has not decreased the sum demand for labor. This is because the labor required by much larger plantings is greater than the reductions in labor demand associated with improvements in productivity.

Table II shows estimates of seasonal hand-labor requirements for California specialty crops. The harvested acreage and the observed number of hours of seasonal hand-labor per acre are determined, and then are multiplied together to produce the estimated hours of seasonal hand-labor needed for the crop.³⁶

In 1976, Runsten and LeVeen determined the total seasonal hand-labor requirement for these same crops to be 167,292,000 hours.³⁷ Comparison of their results with the results in Table II shows that the seasonal hand-labor demand increased by 21 percent in the past 13 years.

From Table II it is clear that wine grapes, lettuce and raisin grapes require the largest amounts of temporary hand-labor, more than 20 million hours for each crop. (For simplicity in visualization, 20 million hours of labor can be thought of as equivalent to 40,000 persons working full-time for three months). Next in order of total labor demand come strawberries, table grapes and plums. Surprisingly, processing tomatoes require a greater aggregate amount of temporary labor than fresh tomatoes, even though the labor requirement for each acre of fresh tomatoes is much greater than that required by processing tomatoes. This is due to the very large acreage of the former (276,500 acres) compared with the latter (38,400 acres).

Table II
Seasonal Hand-Labor Requirement, California Specialty Crops, 1989

Crop	Harvested Acres	Labor (hr./acre)	Total Hours
Almonds	409,000	13.65	5,583,000
Apricots	17,400	141.07	2,455,000
Cherries	10,200	245.50	2,504,000
Grapes, raisin	271,000	81.50	22,086,000
Grapes, table	80,700	192.72	15,552,000
Grapes, wine	290,000	81.72	23,700,000
Lemons	48,400	120.00	5,808,000
Oranges, navel/misc.	108,000	80.05	8,645,000
Oranges, valencia	69,500	93.50	6,498,000
Peaches, cling	27,600	123.90	3,420,000
Peaches, freestone	26,900	330.00	8,877,000
Pear	23,000	134.88	3,102,000
Plums	40,600	352.00	14,291,000
Prunes	76,90	21.67	1,666,000
Walnuts	177,000	N/A	N/A
Asparagus	37,500	61.80	2,318,000
Carrots	57,600	9.44	544,000
Celery	21,800	104.13	2,270,000
Lettuce	168,400	132.39	22,294,000
Cantaloupes	82,200	132.73	10,910,000
Tomatoes, processing	276,500	33.66	9,307,000
Tomatoes, fresh-green	34,700	63.00	2,186,000
Tomatoes, fresh-pole	3,700	700.00	2,590,000
Strawberries	19,900	889.62	17,703,000
Cotton	1,059,000	2.62	2,775,000
Sugar beets	180,000	24.00	4,320,000
Total hours			201,404,000

Source: a.) *California Agriculture, Statistical Review 1989*, California Department of Food and Agriculture, Sept. 1990; b.) John W. Mamer and Alexa Wilkie, *Seasonal Labor in California Agriculture: Labor Inputs for California Crops*, California Agricultural Studies, No. 90-6, EDD, State of California, Dec. 1990; c.) For asparagus, Mamer and Wilkie's labor co-efficient for Riverside County was used; for fresh tomatoes, which Mamer and Wilkie did not report, David Runsten and CIRS estimates were used.

Farm Worker Population and the New Immigration

Both farm worker leaders and organizations that represent farmers agree that the supply of agricultural labor has grown substantially in recent years, especially subsequent to the passage of the Immigration Reform and Control Act of 1986 (IRCA). According to the U.S. Commission on Agricultural Workers, which was created by Congress to assess the impact of IRCA, "Despite an expanding perishable crop industry, the national supply of agricultural labor has been more than adequate for the past several years."³⁸ Labor supply refers to the total pool of hours of labor available by individuals able to perform work.

New immigration from Mexico and Central America has been the most important contributor to this inflated labor supply. Today more than 92 percent of California crop workers report that they were born outside of the U.S., most in Mexico or Latin America.³⁹ Runsten has pointed out that as recently as 1965, only about one-half of the California farm labor force was foreign-born. Today's figure represents the largest fraction of foreign-born workers in the California farm labor force ever reported in survey research.⁴⁰ In some crops and areas, such as the San Joaquin Valley raisin grape harvest, virtually all workers are now foreign-born.⁴¹

There is an important conclusion to be drawn from this data: California agriculture is now more dependent on foreign-born workers than at any time in this century.

The relative importance of IRCA as a stimulant of new immigration is difficult to gauge compared to the role of "push" factors, such as the decline of the Mexican economy during the mid-1980s. It is known that undocumented workers constituted a significant presence in U.S. agriculture during the period immediately preceding enactment of IRCA. In fact, this large population of undocumented workers played a major role in the crafting of IRCA's agricultural provisions. Survey research reported by Mines and Martin indicates that in 1983 approximately 20 percent of California farm workers were undocumented.⁴² Some unpublished estimates placed the number of unauthorized farm workers as high as 40 percent just prior to the passage of IRCA.⁴³

No one expected the enormous number of applications submitted by undocumented workers for permanent residence visas under IRCA's agricultural provisions. Anticipating about 360,000 workers would qualify for permanent residency under

the Special Agricultural Worker (SAW) visa program of IRCA, the Immigration and Naturalization Service (INS) printed up 800,000 sets of application forms.⁴⁴ In reality, the SAW program received 1,277,514 applications, with 700,000 reporting a California address. As of August 15, 1992, 1,076,650 of these applications had been approved.⁴⁵

California's economic decline during the late 1980s and early 1990s has contributed to soaring unemployment rates in California's agricultural regions, as some of the urban unemployed move to less expensive rural areas. For July 1993, the officially reported unemployment rate in the eight San Joaquin Valley counties was 15.07 percent, compared with a rate of 9.8 percent for the state as a whole.⁴⁶ Interviews with farm workers in the San Joaquin Valley conducted in 1989 indicated that the average amount of full-time work they were able to obtain in the previous year was just 4.6 months; 82 percent of workers interviewed stated that they experienced lengthy periods of unemployment "... when the season ends".⁴⁷ Chronic under-employment characterizes the work experience of most agricultural workers.

The ethnic and national composition of the new immigration differs in major ways from what it was even as recently as ten years ago. Not only are more immigrants arriving each year, but increasingly they are indigenous people from southern Mexico (Oaxaca) and Central America. In some commodities and regions, the California farm labor force is now dominated by indigenous immigrants.⁴⁸

It is also clear that the fraction of undocumented workers in the farm labor force is growing. The National Agricultural Workers Survey (NAWS) reports that twelve percent of all U.S. workers performing seasonal agricultural services are undocumented.⁴⁹ The NAWS found the corresponding figure for California to be nine percent.⁵⁰ However, case studies of California citrus, raisin and fresh market tomato workers found that the share of persons who admitted to being undocumented varied from eight to 35 percent.⁵¹

While the Special Agricultural Worker (SAW) visa program of IRCA has provided legal resident status for some 521,817 agricultural workers in California, there is compelling evidence that large-scale unauthorized immigration continues.⁵² Unofficial estimates from knowledgeable government sources place the net flow of unauthorized Mexican immigrants into the U.S. at about 200,000 per year, with perhaps as many as one-half seeking work in California.

Among the most recently immigrated farm workers the proportion of those who are undocumented is quite high. For example, surveys of indigenous Mixtec

immigrants find that 40 percent of those working in California agriculture are undocumented.⁵³ Equally significant, the same surveys show that these workers represent more than 140 Mexican villages.⁵⁴ Since immigration follows a "beach-head" pattern, with the earliest arrivals from a particular village providing the linkage for others who follow later, a large influx of people from the Mixteca region of southern Mexico can be expected in the near future.

IRCA accomplished two important goals: legalization of millions of previously undocumented people living and working in the U.S., and the securing of a large labor force to work in U.S. agriculture. Less understood is that IRCA also sent a message throughout Mexico: "If you want to have a chance to become a legal resident of the U.S. the place to be living and working is the U.S., not Mexico." This conclusion is based on the widespread knowledge that people could qualify for U.S. residency visas under either the General Amnesty provision or the Special Agricultural Worker provision of IRCA by demonstrating periods of unauthorized work or residency in the U.S. Today, thousands of new, undocumented immigrants are entering California to join family members who came earlier in the hope of becoming legal residents at some time in the future based upon their ability to establish a continuous period of unauthorized U.S. residency.⁵⁵

Another aspect of this immigration issue requires special attention. Surveys of U.S.-born children of foreign-born agricultural workers in California demonstrate that as few as three percent have any plans to work in agriculture.⁵⁶ This means that future agricultural workers will continue to be born outside of the United States. As far into the future as we can see, the California farm labor force will be replicated in Mexico and Central America, not in the U.S. This implies that immigration policy debate will be largely irrelevant unless it directly addresses this reality of the farm workplace.

Who Are Today's Farm Workers?

As recently as five years ago, most published information about farm workers was obtained from administrative reports submitted by employers, such as the EDD UI wage reports. These reports convey information about wages, earnings, employment and related matters, but do not provide even basic demographic data such as age, gender, education, family size and place of birth — let alone information about work patterns and occupational health status. Today, thanks to the National Agricultural Workers Survey (NAWS), an interview-based survey of people performing seasonal agricultural jobs, we have a much more accurate picture of who is doing hired farm work.⁵⁷

The most striking feature of what we have learned is the considerable — and increasing — diversity of the farm worker population. The new immigrants, only briefly described above, include thousands of indigenous migrants from southern Mexico (Oaxaca) and Central America.

Many of the new indigenous migrants prefer to speak their own dialect and are not fluent nor literate in Spanish. Because of their distinctive appearance, stature and culture, Mixteco and other indigenous migrants (Zapotec, Triqui) frequently experience discrimination while working in agriculture, most often from non-Hispanic white employers and supervisors, but in some instances at the hands of mestizo Mexicans or Chicanos. Repeatedly, we have heard firsthand reports of such cases, including some involving farm worker service agencies.

Today's California farm worker population is estimated at 881,000.⁵⁸ Most workers are young (median age is 32 years), three out of four are men, two out of three are married, a majority have been in the U.S. for nine or fewer years, and as many as one in ten foreign-born farm laborers admits to being undocumented.⁵⁹

It is likely that the true number of undocumented workers is much higher. Recently published case studies from the Commission on Agricultural Workers uncovered data for a limited number of specific crops and/or regions within California. In each instance, the proportion of farm workers who reported that they were not documented exceeded the proportion found in the NAWS interviews cited above.⁶⁰ Figures for various crops were 31 percent (citrus), 35 percent (raisins) and 8-27 percent (fresh tomatoes).

At least nine of every ten hours of seasonal farm work is performed by workers who try to make a living by piecing together a series of short-term jobs throughout the year.⁶¹ Less than ten percent of seasonal farm work is done by workers who are in the labor force for only part of the year, people who could be described accurately as "seasonal workers".

This latter point is quite important. What it means is although most farm work is seasonal, only a small number of workers enter the labor force temporarily to perform these jobs and then leave the labor force when the job has ended. The conception that most farm workers are only casually attached to the labor force is largely a myth, as is the notion of the "seasonal worker".

Empirical evidence on farm worker job patterns comes from the NAWS, which has conducted thousands of interviews with farm workers throughout the U.S. (including hundreds of interviews in California) over the past five years. The NAWS records a two-year retrospective job history as provided by each worker, including location, crop, task, hours, job duration and earnings. What these job histories show is *at least 89 percent* of seasonal hired farm work (measured by the number of hours of work performed) is done by people who are in the labor force year-round and who attempt to string together a series of short-term jobs — mostly in agriculture, but also in other industries — to earn a livelihood.

The NAWS also found that about four out of ten farm workers migrate, for at least part of the year, in order to obtain work.⁶² Three of ten workers are "shuttle migrants" between Mexico and the U.S., while one in ten workers "follows the crops".

Although there are many urban Mexican residents in the current farm labor force, most are from rural areas. The average level of education for these migrants is six years of school (in Mexico), though some have completed high school.⁶³ Mixteco immigrants average just two years of school.⁶⁴

Wages and Working Conditions

The most basic concerns of farm workers today are wages, earnings and related employment conditions. The available data demonstrates that real wages and earnings in California agriculture declined by a significant amount (15 percent) during the 1980s. Some farm operators who paid good wages in the 1970s are now paying much lower amounts (measured in real terms). Many employers have eliminated employer-paid benefits such as health insurance, and a large number no longer provide housing.

Other findings:

- At least half of all farm worker families live in poverty, as determined by their median family income and the family-size standards defined by the federal government.⁶⁵
- Median annual earnings for farm workers fall between \$5,000 and \$7,499.⁶⁶
- Among the Mixteco immigrants, annual earnings average about \$4,500.⁶⁷
- Undocumented farm workers earn even less, between \$2,500 and \$4,999 annually.⁶⁸
- Persons hired directly by growers earn about one-fifth more than persons employed by labor contractors.⁶⁹
- One out of seven direct-hire employees receives employer-paid health insurance benefits, but no employees of labor contractors reported receiving any.⁷⁰
- One out of three Mixteco immigrants reports having worked at a job in the last year in which the pay fell below the minimum wage rate.⁷¹
- It is not unusual to find indigenous workers earning \$15 to \$25 for a full day's work.⁷²
- About four of ten workers employed by labor contractors report being required to pay for rides to the job, tools, or other necessities as a condition of work.⁷³
- One in eight workers reports that their work site lacks either toilets, drink water or wash water.⁷⁴

There is compelling evidence that real wages are declining. For the California fresh tomato and raisin grape harvests, reported real wage rates dropped more than 40 percent in the past 20 years.⁷⁵ In part, this wage decline corresponds to the general decline in wages and earnings experienced by all U.S. workers over the past 15 years.

The U.S. Department of Agriculture publication, *Farm Labor*, summarizes wage rates reported in an ongoing national survey of farm employers. Figure 9 shows the trend in agricultural wages, expressed in constant (1992) dollars, for California field workers.⁷⁶ For the years indicated in the data, there is a more than one-sixth decline.

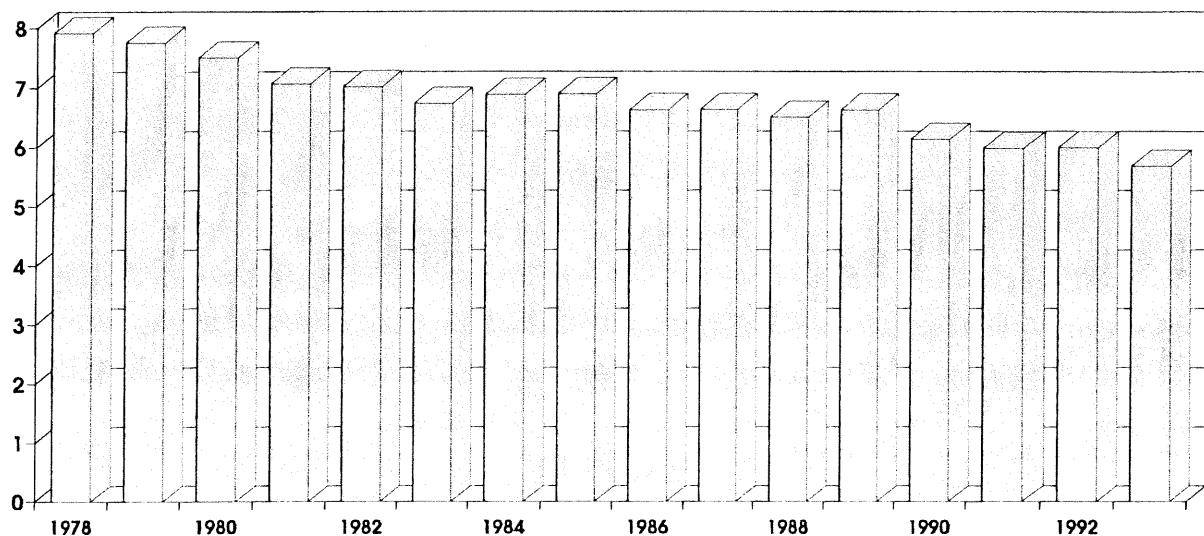
This sharp drop is greater among California agricultural workers than other types of employees. We compared the reported wage rates for food processing workers in California with the data shown in Figure 9, and found that farm wage rates declined 50 percent faster than manufacturing ones during the 1980s.⁷⁷

It is important to distinguish wage rate trends from trends in annual earnings, particularly in agriculture.⁷⁸ In conditions of surplus labor, agricultural employers can readily expand their crew size to more rapidly complete the harvest of a perishable crop. For a fixed acreage of a particular crop, each worker in the enlarged crew will have a smaller share of the total work (measured in hours), resulting in lower individual earnings. This effect will not surface in wage rate data, but will appear only in reported earnings. In both the 1991 California fresh tomato and raisin grape harvests, direct observation and worker interviews reflected evidence of this effect.⁷⁹ EDD staff conducting a wage rate survey in the 1988 Fresno County grape harvest witnessed individuals joining a crew without being hired, in the hope of being allowed to work. According to eyewitnesses: "Seeing a vineyard full of workers, an individual would enter the field, join the crew and report his presence later to the owner or foreman hoping that he would be allowed to remain. Sometimes this would work, and other times it would not."⁸⁰

On a national level, there has been a 25 percent decline in reported annual average individual earnings (in constant dollars) among employees of labor contractors over the past three years alone.⁸¹ Most likely, the decline in wages and deterioration of working conditions reflect employers' ability to take advantage of the large labor surplus associated with the enormous immigration influx of the past decade. According to economic theory, when supply exceeds demand the price of a good — in this case, labor — will decline.

Figure 9

**Wage Rates for California Field Workers
(In Constant Dollars, Corrected for Inflation)**



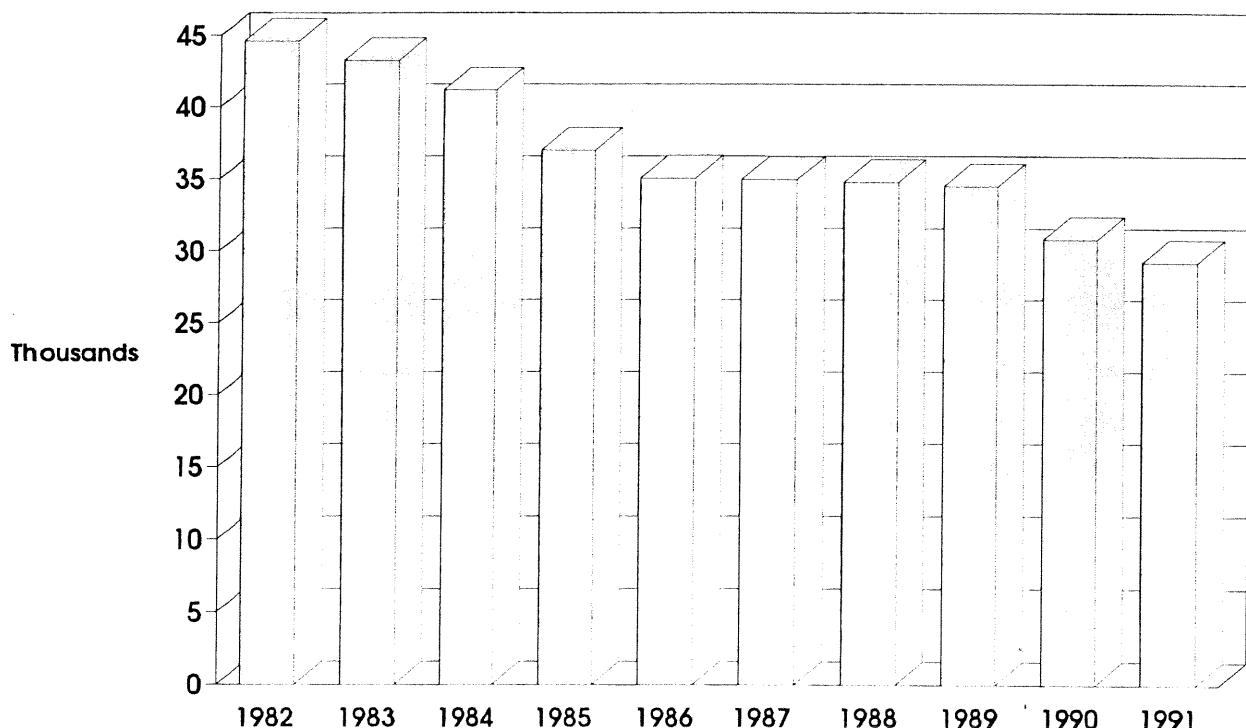
Source: Farm Labor, USDA

Labor Contractors in California Agriculture

The most significant development in agricultural employment during the last decade has been the rise of labor contractors. At peak season, at least 122,000 individuals out of a total of 450,000 — or one out of four — report being employed by labor contractors.⁸² One of three farm workers reports working for a labor contractor for at least part of the year.⁸³ During peak season in the San Joaquin Valley (July-September), a majority of the work in both fruit and vegetables is now performed by persons employed by labor contractors instead of the growers themselves.⁸⁴ In Fresno County alone, 25,000 people reportedly work for labor contractors during the September raisin harvest.

Detailed examination of the EDD UI employment data discloses that in vegetable farm work there has been a significant shift away from direct-hire employment and toward the use of labor contractors. Reported annual average employment by

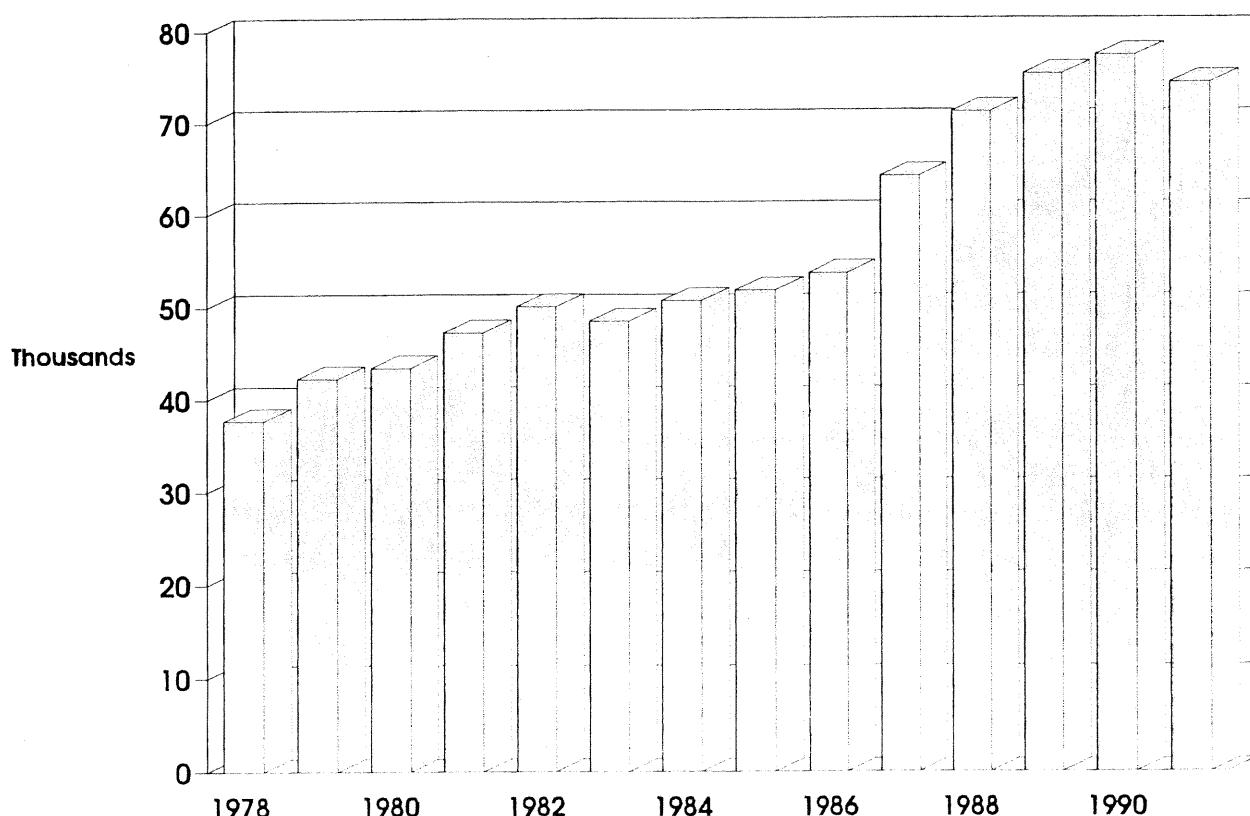
Figure 10
California Vegetable Farm Employment, Direct Hire



vegetable farms (Standard Industrial Code - SIC - 0161) has declined substantially during this period, from roughly 45,000 in 1982 to about 29,000 in 1991.⁸⁵ This drop is illustrated in Figure 10 where the term "direct hire" is used to stress that the data refer only to persons directly hired by a vegetable farm operator. Earlier in this report it was shown that vegetable production is considerably greater today than it was even ten years ago, and taking proper account of productivity changes, labor demand in vegetables has also risen. If direct-hire vegetable farm employment has decreased while labor demand increased, who is now doing the work?

As shown in Figure 11, employment reported by farm labor contractors doubled during this same period, dramatic evidence of the extent to which vegetable farm operators, among others, have shifted away from direct-hire employment to the use of labor contractors. The magnitude of the increase in labor contractor employment is quite striking, rising from a reported annual average of 38,000 in 1978 to about 78,000 in 1990.⁸⁶

Figure 11
California Farm Labor Contractor Employment



While labor contractors have always played an important role in California agriculture, their increased prominence in recent years has been something of a surprise to most observers. Many thought that the emergence of state sanctioned labor relations in agriculture would be the death knell of the labor contractor. This assumption was reinforced by the language of the Agricultural Labor Relations Act in which "employer" was defined as the farm operator, and not an intermediary such as a labor contractor. Presumably, this meant that labor contractors could no longer be used as a shield against labor organizing.

The evidence now suggests that contractors are the most efficient labor market brokers active today, especially for serving the needs of the new immigrants. Mines has pointed out that the most recently arrived immigrants working in agriculture tend to enter the U.S. labor market through labor contractors.⁸⁷ This makes sense, especially when considering how difficult it must be for a new immigrant, who typically does not read or speak English, to even find an employer — let alone a job — in a crowded labor market. Labor contractors provide a vital link for them in locating hard-to-find jobs.⁸⁸

National wage rate data on labor contractors suggest that contractors also play a key role in inserting low-paid labor into established labor markets with the effect of undermining prevailing wage scales. Examination of piece-rate wages for the three-year period 1989-91 — a time when use of labor contractors became more widespread — shows a dramatic fall-off in wage rates. Nationally, reported real piece-rate hourly earnings (corrected for inflation) for employees of farm labor contractors fell from \$7.11 in 1989 to \$6.08 in 1990, and then again to \$5.01 in 1991.⁸⁹ While these data are not specific to California, they are heavily weighted by the large number of labor contractor employees located there.

A recent study of California farm labor contractors (FLCs) disclosed previously unrecognized facts about the business.⁹⁰ First, most FLCs are relatively small. According to wage reports filed with EDD, about 60 percent of farm labor contractors report annual payrolls of less than \$250,000 and are referred to as "small FLCs". On the other hand, about one out of seven FLCs report annual payrolls of \$1 million or more, and are termed "large" labor contractors.

Figure 12 shows the number of California farm labor contractors aggregated by size of reported annual payroll. As indicated above, most FLCs have small annual payrolls, with only a fraction reporting an annual payroll of \$1 million or more.

Figure 13 illustrates a major finding of this new study: large labor contractors

Figure 12
California Farm Labor Contractors, 1990
By Size of Payroll

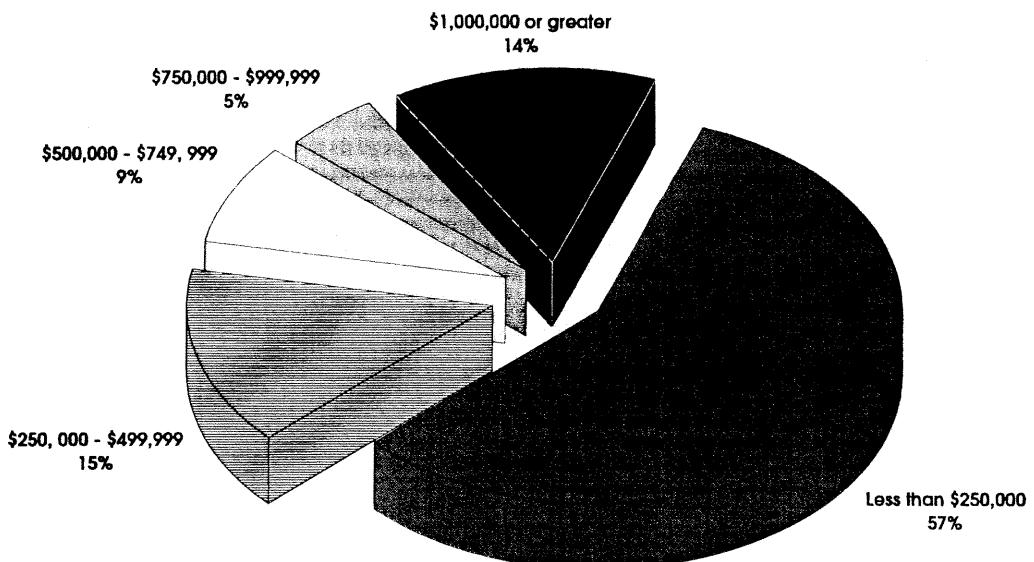
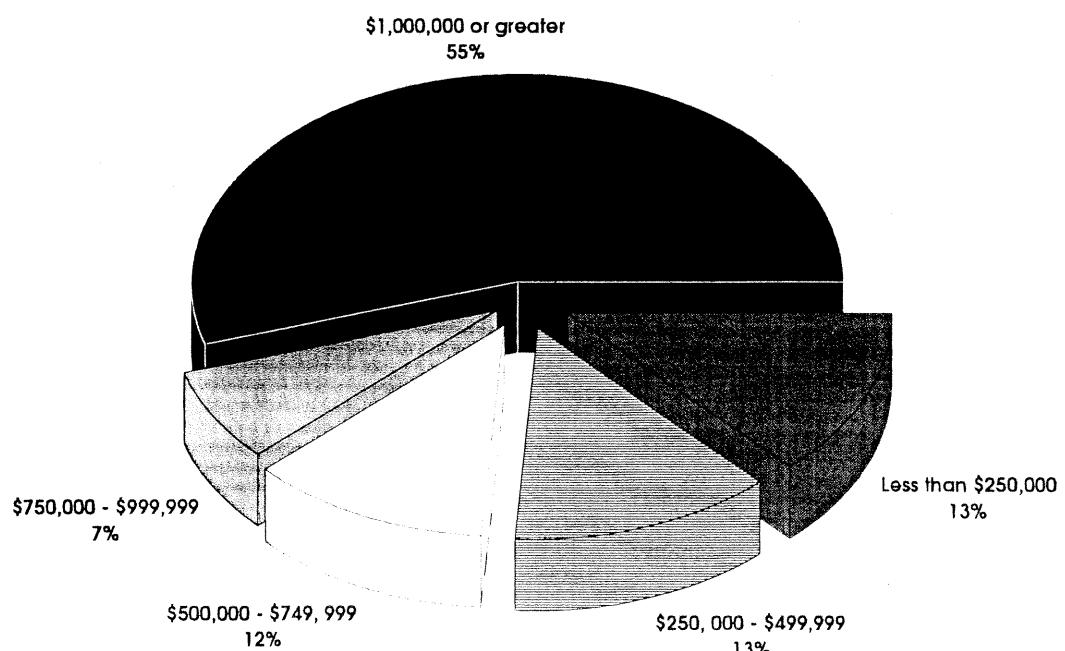


Figure 13
Aggregate Employment, California FLCs, 1990
By Size of Payroll



Source: California Institute for Rural Studies

account for the majority (55 percent) of aggregate FLC employment. Small FLCs account for little more than ten percent of FLC employment.

Equally significant, the "average" California FLC has eight foremen, one field supervisor, three office staff, and 280 field workers (at peak season), and employs some 1,027 different people during the course of a year.⁹¹ Large FLCs usually hire numerous field supervisors and dozens of mayordomos (foremen) who have actual day-to-day responsibility for overseeing the work performed by their employees. One FLC who was interviewed for this survey reported having 62 foremen, nine field supervisors, seven office staff and 2,500 workers at peak season.⁹²

One of the most important conclusions of this study is that with the large FLCs, foremen (mayordomos) typically have full responsibility for hiring, training, supervising and disciplining workers in their crews. In fact, field workers often describe themselves as "belonging" to the mayordomo's crew and, in many cases, have little direct contact with the FLC. The "crew boss" system which is widespread in Mexico has clearly accompanied the Mexicanization of California agriculture.

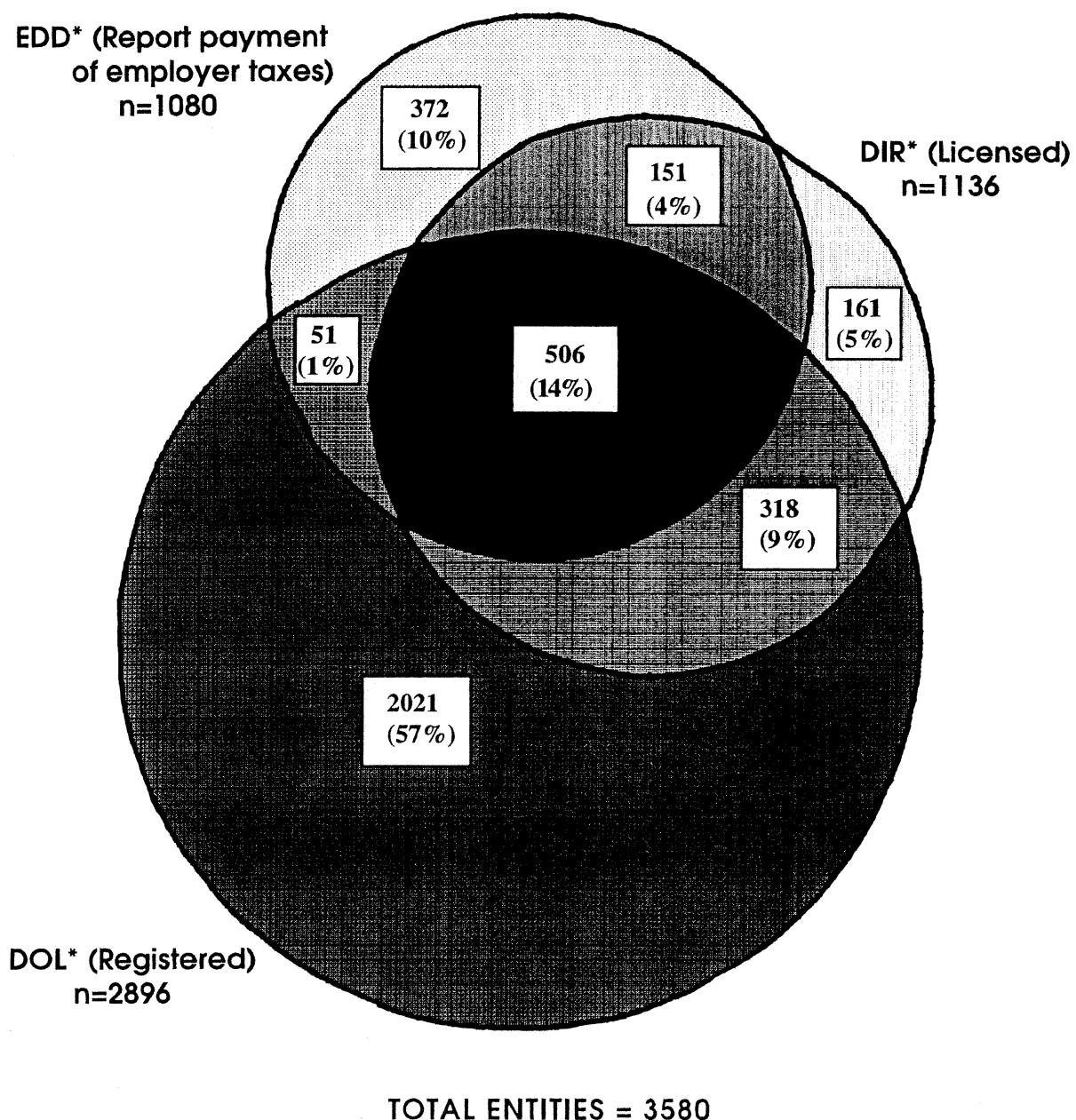
Quite a number of cases were found in which the foremen, not the FLC, provided transportation and other services for which workers were charged fees. In the case of one large FLC, the practices differed from one mayordomo to the other: one provided water and toilets and charged for rides, while another furnished toilets but not water, and did not charge for rides.

While FLC practices vary widely by crop and region, many individuals characterized as operators of large FLC businesses confine their responsibilities to dealing with the growers, packing houses or packer/shippers for whom they work, and to administration of the overall operation. The hiring of individual workers and responsibility for field activities is typically delegated to crew leaders.

According to the study, very few crew leaders are currently licensed as labor contractors with the Department of Industrial Relations (DIR), although many are registered with the U.S. Department of Labor (DoL), as required by the Migrant and Seasonal Farm Worker Protection Act. In 1990, a detailed comparison of DIR license holders and registrants was conducted as part of the FLC study. These data were supplemented by lists of FLCs who had submitted employer payroll tax reports to EDD that same year.

Figure 14 shows the results of this comprehensive comparison. Of an unduplicated total of 3,580 California FLCs and crew leaders, only 506 were on all

Figure 14
California Labor Contractors: Registered,
Licensed, and Paying Employer Taxes



Source: California Institute for Rural Studies

* EDD: Employment Development Department, State of CA

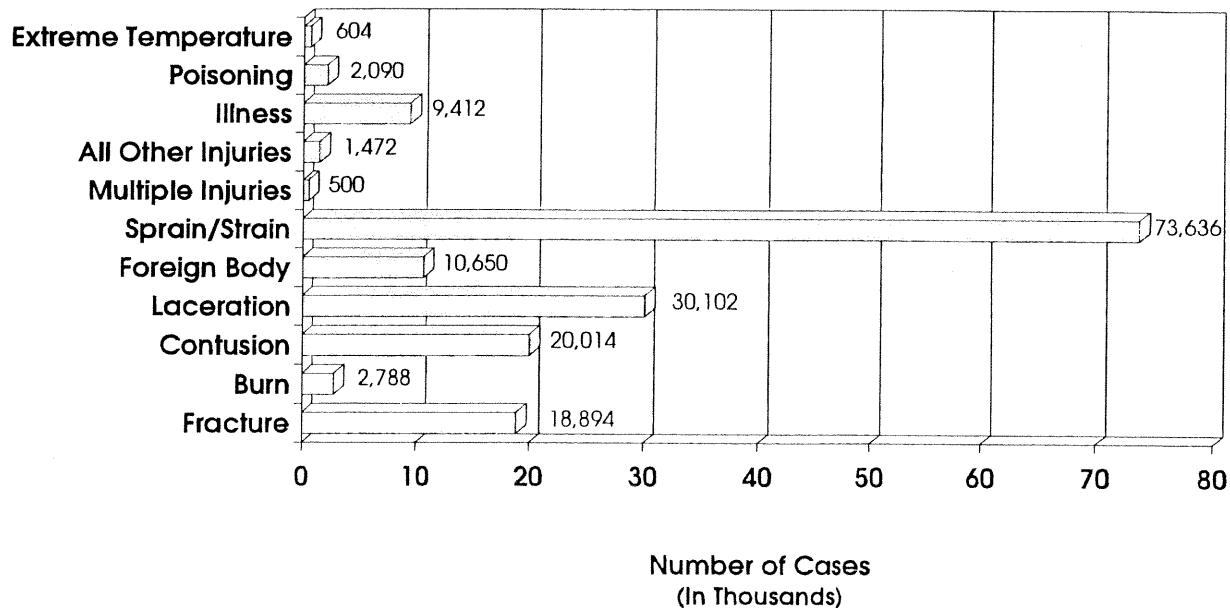
DIR: Labor Commissioner, Department of Industrial Relations, State of CA

DOL: US Department of Labor

three lists.⁹³ This means that a substantial share of persons performing labor contractor functions are either not properly licensed or registered, or they may not be paying required employer taxes. Unlicensed labor contractors identified by research project field staff most often, upon investigation, actually turned out to be foremen who worked for a licensed FLC.

In view of the important role played by labor contractors today, it is significant to note this study found that wage rates paid by labor contractors do not differ very much with size of the FLC operation; large FLCs typically pay wage rates equal to those offered by small FLCs. On the other hand, larger FLCs tend to provide longer jobs, or more numerous short jobs, than do smaller FLCs, thus total *earnings* per worker tend to be greater for the larger FLCs. No case was found in which FLCs paid for medical insurance or other benefits such as holiday or vacation pay, but a few provided free housing.

Figure 15
**Disabling Agricultural Injuries Reported to California
Dept. of Industrial Relations, 1981-1990**



Source: Division of Labor Statistics and Research (1981-1990): Work Related Injuries and Illnesses, CA. CA Dept. of Industrial Relations, San Francisco. (26,762 unknowns excluded from analysis)

Other Issues of Concern

Job safety

In California agriculture, more than 42,000 on-the-job injuries are reported through the Workers Compensation Insurance Rating Bureau every year, making agriculture one of the most — if not the most — dangerous occupations.⁹⁴ The injury rate for agriculture is roughly 15,500 per 100,000 FTE (Full Time Equivalent Employees) — 15 out of every 100 farm workers are compensated for an on-the-job injury each year.⁹⁵ Of those injuries, about 22,000 are disabling ones, causing an employee to miss at least one full day of work. Sprains and strains make up the largest number of reported injuries, followed by lacerations, contusions and fractures.⁹⁶ Figure 15 presents disabling injuries compensated under the Workers Compensation system classified according to their nature. Fewer than one in 20 disabling injuries reported is caused by toxic chemicals such as pesticides.

In all likelihood, only a portion of on-the-job injuries in agriculture are reported through the Workers Compensation system. Mines and Kearney found that Tulare County farm workers who suffered on-the-job injuries preferred to treat themselves instead of filing a workers compensation claim or, in a disturbing number of pesticide injury cases, chose to continue working without treatment if that was physically possible.⁹⁷ Immigration status and fear of losing income undoubtedly influence such individual decisions.

Recent legislation requires that all employers prepare a written job safety plan and inform their employees about safe job practices (SB198), and Cal-OSHA has targeted agriculture for enforcement efforts. The reinstatement of Cal-OSHA also provides a mechanism to seek redress, which was effectively utilized by the Fresh Fruit and Vegetable Workers Union at a Dole Citrus packing facility. In that case, many employees were suffering from carpal tunnel syndrome as a result of the repetitive wrist movements required by sorting and packing — tasks whose pace was dictated by the speed of the conveyor belt. Complaints to Cal-OSHA led to a surprise inspection, and ultimately, to significant changes in the workplace.

Many employers, whether labor contractors or growers, are paying very high workers compensation insurance premiums; some report paying annual insurance premiums equal to 20 percent of wages. Employers clearly have a strong financial incentive to address job safety issues.

Health status

Reliable reports on the health status of the current farm worker population do not exist. In the few instances in which physical examinations were administered to farm workers at the job site, most were found to be in excellent health. However, this exemplifies the so-called "healthy worker" effect in which both the injured and unhealthy usually do not work, while the most physically able tend to be attracted to the most demanding jobs.

In connection with the McFarland cancer cluster study, the Department of Health Services conducted a complete health screening of nearly all of the children in the community — more than 1,600 were given full physical examinations. (McFarland is a town in which the overwhelming majority of the population are hired as farm workers).⁹⁸ Seventy-one percent of the children needed a medical referral. One-quarter of the children were experiencing anemia as a result of malnutrition, fully one-third had never been to a dentist — even for an examination — and approximately four in ten were from families without any medical insurance of any type, including MediCal.

Social services

There are no objective measures of farm workers' access to and use of social services. Since many of these services are provided by private, nonprofit agencies who receive federal grant funds, reviews of how well the client communities are served tend to be done "in house". As a result, such measures of the extent and effectiveness of services are suspect, most often because they may be biased by an agency's desire for continued funding.

With that limitation in mind, a few observations can be made. First, the McFarland Children's Health Screening Project included questions about migrant clinic use, and found that only one family in six had ever visited the local clinic.⁹⁹ While there are no similar measures for other communities, there is no reason to doubt that this figure accurately reflects the broader situation.

Second, surveys of workers show that less than one in five ever uses government-provided services, even if they are fully eligible to receive them.¹⁰⁰ Food stamps are the most utilized program (16 percent of workers), but fewer than one in 30 uses AFDC, General Assistance or public housing. And roughly one in 100 workers reports receiving assistance from a private community-based organization.

Given the large number of farm workers and dependents in California (EDD

estimates 881,000 individual workers, with as many as two million dependents), the number who reportedly access federally funded programs illustrates the disparity between needs and available services. For example, 116,515 migrant or seasonal farm workers and dependents visited California migrant clinics in 1991.¹⁰¹ At the other extreme, Job Partnership Training Act agencies reported just 326 California migrant farm worker clients served in 1989.¹⁰² And the Migrant Head Start program in California enrolled only 4,266 children in 1991.¹⁰³

Housing

Employer-provided housing has decreased substantially, perhaps by as much as 75 percent over the past ten years. The addition of state-funded labor camps, such as the new facility in Blythe, meet only a very small part of the need. Together, these state camps provide less than 3,000 units.

Rising housing costs in California mean that farm workers are generally unable to obtain housing in the normal market. In the course of interviews with workers in Parlier, our staff found individuals living in garages, in tool sheds, underneath porches, in abandoned automobiles and in shanties of varied descriptions.¹⁰⁴

New efforts are needed in both the private and public sectors to generate necessary housing, and opportunities to cooperate with employers should be welcomed.

Gender discrimination

Evidence shows widespread gender discrimination affecting female agricultural workers in hiring, promotions and job assignments. Typically, women are restricted to the lowest paying agricultural jobs, such as packing and sorting, while the higher-paying realms of supervisor or equipment operator remain in the hands of men.

The recently published household survey of agricultural workers in Ventura County conducted by Vaupel and colleagues found substantial gender differences among crops and tasks.¹⁰⁵ The survey found that "No women were hired primarily as irrigators, truck drivers, mechanics, crew leaders (or foremen), or loaders..." Conversely, no men worked as sorters, and fewer men than women worked in packing houses and field packing.

The successful litigation of recent gender discrimination cases, including both the Saticoy Lemon Association and Oxnard Lemon cases, suggests that workers seeking real changes can build action around this issue.

Organization of workers

At the present time, fewer than 30,000 farm workers enjoy the benefits of a union contract and its accompanying protections — significantly less than was the case 15 years ago. The UFW states that it represents 20,000 members, but the available evidence suggests that fewer than 5,000 of them are protected by a union contract. The largest single contract providing union protection for farm workers is the Dole Fresh Vegetable (formerly Bud Antle) contract with Teamsters, Local 890 (Salinas) which covers approximately 4,500 workers. In total, Local 890 has 10,000 agricultural workers under contract, but other unions are much smaller.

In recent years the UFW has placed its main emphasis on a nationwide boycott of California table grapes. The successful widespread distribution of the video "The Wrath of Grapes", combined with speaking tours by UFW leaders, have brought the issues of pesticide injury and lack of union representation among farm workers to the attention of millions of Americans. At the same time, the available evidence suggests that table grape producers have responded to this challenge with new tactics and have enjoyed considerable success.

In response to the challenge presented by the boycott, the California table grape industry has put forth a major effort to expand overseas markets. As discussed earlier, exports of California table grapes have tripled since 1984 and represent about 14 percent of the total shipments today. Domestically, the California Table Grape Commission spends about \$6 million per year promoting sales of table grapes through direct advertising on radio and television. Also, the globalization of the produce industry has increased shipments of table grapes from Chile and other nations to the U.S., principally during the counter-cyclical winter season. Consumers can now purchase grapes on a year-round basis, which has led to a substantial increase in per capita grape consumption. The large volume of imports has blurred the focus of the boycott.

One would expect the grape boycott would impact the profit level of the major table grape companies by decreasing profits, or at least holding them stagnant. We find, however, that after-tax profits of the major table grape companies have increased sharply in the past several years. For example, Giumarra Vineyards Corp., the largest table grape producer, reported net profits of \$4.7 million for the year ending June 30, 1991, double the earnings reported three years earlier.¹⁰⁶ This represents a 12.6 percent return on invested capital for the 1991 fiscal year. Another example is that of Anton Caratan & Son (Caratan Ranch), which reported net income of \$2.0

million for the same year, nearly double the \$1.1 million reported three years earlier.¹⁰⁷ For Caratan, this represents a 13.8 percent return on invested capital for the year.

Despite the boycott campaign, California table grape shipments have actually *increased* significantly in recent years. Over the past 20 years, shipments of California table grapes are up by 26 percent.¹⁰⁸ Additionally, profits of table grape growers, packers and shippers appear to have reached record-high levels in the past several years.

Many of the community-based organizations of the past, whether Mexican-American Concilios or single-issue focused, have disappeared. Some immigrant farm workers, however, have been able to build small, fragile organizations. The Mixteco immigrants have been able to sustain several very small, volunteer-based efforts, including *Asociación Civica "Benito Juárez"*, which has affiliates in both Arvin and Fresno. *Organización del Pueblo Explotado y Oprimido* is another group, based in Livingston, and *Comité Cívico Popular Mixteco* operates out of Vista. The Mixteco groups appear to take root because their common survival is based on a collective, village-based strategy in which the distinctive Mixteco language and culture serve as a base for organizing.

Of course, organizing workers at the job site is especially difficult when labor is in surplus. On the other hand, the CIO and the major industrial unions were built during the 1930s in the midst of the largest depression this nation has ever known, when the official unemployment rate stood at 25 percent.

Conclusions

There is compelling evidence that farm worker wages, working conditions and living conditions have seriously eroded over the course of the past decade. In large measure, this is the result of employers' ability to take advantage of the vast surplus of workers seeking agricultural jobs, many of whom are relatively recent immigrants. Farm worker organizations have declined in importance, and there is no longer an effective political presence on behalf of agricultural workers in either state or federal political processes.

Laws enacted to protect farm workers are routinely flouted, in part because agencies responsible for enforcement do not have adequate resources. However, the success of the Targeted Industries Partnership Program (TIPP), a vigorous enforcement effort led by Labor Commissioner Victoria Bradshaw, has proven that violators of agricultural labor laws *can* be found and successfully prosecuted. At the same time, as consideration of traffic speed laws demonstrates, voluntary compliance is an essential component of any effective law. For very different reasons, both employers and workers have accommodated to existing conditions. Today it is not uncommon to find agricultural workers in California whose hourly earnings fall below the minimum wage.

Many agricultural employees are not aware of their rights as U.S. workers. Even fewer believe that they can truly exercise those rights. Until farm workers can organize effectively, there is little possibility of changing that reality.

Service providers have, to a greater extent than they realize, lost touch with many of the recent immigrant workers, especially the indigenous ones. Few agencies serving the farm worker community have any *current* farm workers on their client advisory boards, or on their boards of directors. While most agencies do vitally important work, this distance between the general farm worker population and the agency poses a long-term danger to the organization. As Ralph Abascal once said about California Rural Legal Assistance, one of the very best of the service providers, "You will most likely never see the prospective clients who have the greatest need." But the chances of serving those whose need is greatest is even less if current farm workers are not directly involved in shaping the agenda of an organization.

References

- ¹ *California Vegetable Crops: Acreage, Production and Value, 1981-90*, California Agricultural Statistics Service, California Department of Food and Agriculture, Agricultural Statistics Branch, Sacramento, CA, August 1992; and prior years. Comparing the three-year average production for 1970-72 with the three-year average production for 1990-92 shows an increase of 98.1%.
- ² *California Fruit & Nut Statistics, 1983-92*, California Agricultural Statistics Service, California Department of Food and Agriculture, Sacramento, CA, March 1993; and prior years. Comparison of the three-year production for 1970-72 with that for 1990-92 shows an increase of 42.7%.
- ³ Ibid. Comparing the three-year production record for 1990-72 with that for 1990-92 shows an increase of 82.9%.
- ⁴ *California Agriculture, Statistical Review, 1990*, California Department of Food and Agriculture, Sacramento, CA, August 1991; and prior years. This estimate is based on changes in the reported total value of nursery crop and flower and foliage production in constant (1990) dollars. It is not possible to estimate changes in the physical volume of production of these crops since none is reported. This absence of reported volume reflects the fact that some of these products are measured in such units as bunches, some in containers, others in flats, and still others in less familiar units.
- ⁵ *California Agricultural Exports, Annual Bulletin, 1990*, California Department of Food and Agriculture, Sacramento, CA, 1991; 1991 estimate based on CDFA press release issued 1992.
- ⁶ *California Vegetable Crops*, op. cit.
- ⁷ Ibid.
- ⁸ *Financial Indicators of the Farm Sector: State Financial Summary, 1990*, ECIFS 10-2, Economic Research Service, U.S. Department of Agriculture, Washington, DC 20005-4788, December 1991, Table 5, pp. 64 ff.

- ⁹ Ibid.
- ¹⁰ "Exports and New Varieties on the Rise," *The Packer*, September 26, 1992, p. 6B.
- ¹¹ For additional information on this meeting and on continuing activities of these scholars, contact the conference coordinator Prof. William H. Friedland, College Eight, University of California, Santa Cruz, Santa Cruz, CA 95064.
- ¹² *California Farmer*, July 11, 1992, California Grapes Supplement, p. 14.
- ¹³ Harvested vegetable acreage increased from approximately 730,000 acres (1969-1971 average) to 1,150,000 acres (1988-1990 average) in this period, a 58% increase. Since harvested vegetable tonnage increased by 107% in the same period, it is clear that roughly half of the production increase may be attributed to expanded acreage and half to increased average yields. Some of the increase in average vegetable yield may also be due to greater increases in the production of vegetables, such as processing tomatoes, which have higher mass density as compared to crops with lower mass density, such as lettuce.
- ¹⁴ See *California Agriculture, Statistical Review*, 1980-1991, op. cit.
- ¹⁵ For more discussion of this point see Paul Barnett, Katherine Bertolucci, Don Villarejo and Regan Weaver, *Labor's Dwindling Harvest*, California Institute for Rural Studies, 1978, pp. 149ff.
- ¹⁶ *Census of Agriculture*, 1987, Vol. 1, Part 51, United States Summary and State Data, U.S. Department of Commerce, Bureau of the Census, November 1989, Table 2, p. 9. Crop values are used for this comparison.
- ¹⁷ *Annual Crop Report*, 1991, Department of Agriculture, Weights and Measures, County of San Diego, p. 1.
- ¹⁸ Manuel Angel Gomez Cruz, *La Produccion de Hortalizas de Mexico y el Tratado de Libre Comercio Con E.U.A. y Canada*, Universidad Autónoma Chapingo, Noviembre de 1991.
- ¹⁹ See especially David Runsten and James Chalfant, "Introduction" in *Competitiveness at Home and Abroad*, Report of a 1986-87 Study Group on Marketing California Specialty Crops: Worldwide Competition and Constraints, Agricultural Issues Center, University of California, not dated.
- ²⁰ *Business Failure Record*, Dun & Bradstreet Corporation. Total bankruptcies in Agriculture-crops were 859 in 1991 and reached 1,327 in 1992. For all industries the figures

are 88,140 and 96,857, respectively.

²¹ Ibid.

²² Ibid. Bankruptcies in California's Agriculture, Fishing and Forestry industry amounted to 329 out of 2,863 nationally.

²³ See, for example, the discussion of 1991 vegetable crop production in *California Vegetable Crops: Acreage, Production and Value, 1982-91*, California Agricultural Statistics Service, California Department of Food and Agriculture, August 1992, p. 1.

²⁴ *Wines and Vines*, July 1992, p. 29.

²⁵ *Census of Agriculture 1987*, op. cit., Table 4, p. 12.

²⁶ *Economic Indicators of the Farm Sector: State Financial Summary, 1990*, Report ECIFS 10-2, Economic Research Service, U.S. Department of Agriculture, Washington, DC, December 1991.

²⁷ *California Statistical Abstract, 1989*, Department of Finance, State of California, Sacramento, CA, p. 55. We refer here only to the 610 banks reporting net income subject to state income tax in 1987.

²⁸ *Census of Agriculture 1987*, Volume 1, Part 5, California State and County Data, U.S. Department of Commerce, Bureau of the Census, Washington, DC, May 1989, Table 2, p. 9.

²⁹ Ibid.

³⁰ Ibid, Table 52, p. 106.

³¹ Ibid, Table 1, p. 7.

³² *Agricultural Employment Estimates, Annual Averages 1955-1989*, Report 881-X, Job Service Division, Employment Development Department, State of California, Sacramento, CA, February 1990.

³³ In this figure "annual average employment" refers to a twelve-month average of the estimated number of persons on farm payrolls (that is, the twelve individual monthly payroll figures are totalled and this sum is then divided by twelve). This definition of "annual average employment" is significant because during peak-season months the actual number of persons on the payroll can be several times larger than this average figure. Hence, in agriculture, the "annual average employment" will generally be much smaller than the peak-season value and

much larger than the off-season value.

- ³⁴ *Agricultural Employment 1990*, Report 882-A, Labor market Information Division, Employment Development Department, State of California.
- ³⁵ The following Standard Industrial Classification (SIC) codes are termed "farm employment": 01xx, 02xx, 0721, 0723, 0761, 0762. Other SIC categories of "agricultural employment" are excluded because the activity does not directly, or indirectly, result in production of an agricultural commodity for sale. Most significantly, Lawn and Gardening Services (0782) and Pet Veterinary Services (0742) are the two largest categories of agricultural employment which are clearly not "farm employment."
- ³⁶ Harvested acreage data were obtained from *California Agriculture, Statistical Review*, 1989, op. cit. Labor coefficients, expressed as "temporary" labor requirements, in hours per acre, were obtained from John W. Mamer and Alexa Wilkie, *Seasonal Labor in California Agriculture: Labor Inputs for California Crops*, California Agricultural Studies, No. 90-6, Employment Development Department, State of California, Sacramento, CA, December 1990. Mamer and Wilkie's data refer to observations made during the 1989 crop year.
- ³⁷ David Runsten and Phillip LeVeen, *Mechanization and Mexican Labor in California Agriculture*, Monographs in U.S.-Mexican Studies, #6, Center for U.S.-Mexican Studies, University of California, San Diego, 1981.
- ³⁸ U.S. Commission on Agricultural Workers, *Executive Summary of the Report of the Commission on Agricultural Workers*, Washington, DC, November 1992, p. 4.
- ³⁹ *California Findings from the National Agricultural Workers Survey*, Research Report No. 3, U.S. Department of Labor, Office of the Assistant Secretary for Policy, Office of Program Economics, 1993, p. 5.
- ⁴⁰ David Runsten, *Agricultural Labor Research Symposium Proceedings*, Employment Development Department, State of California, June 5-6, 1991, Napa, California.
- ⁴¹ Andrew J. Alvarado, personal communication, December 1991.
- ⁴² Richard Mines and Philip L. Martin, *A Profile of California Farm Workers*, Giannini Foundation of Agricultural Economics, Giannini Information Series No. 86-2, Division of Agriculture and Natural Resources, University of California, July 1986, p. 8.
- ⁴³ David Runsten, private communication.
- ⁴⁴ Aaron Bodin, U.S. Commission on Agricultural Workers, private communication,

December 1990.

- ⁴⁵ U.S. Commission on Agricultural Workers, *Report of the Commission on Agricultural Workers*, Washington, DC, November 1992, p. 52.
- ⁴⁶ *California Labor Market Bulletin*, June 1993, Labor Market Information Division, Employment Development Department, State of California, Table 5.
- ⁴⁷ Andrew J. Alvarado, Gary L. Riley and Herbert O. Mason, *Agricultural Workers in Central California in 1989*, California Agricultural Studies, No. 90-8, Department of Employment Development, State of California, Sacramento, CA, September 1990, Table 16, p. 15.
- ⁴⁸ Carol Zabin, Michael Kearney, Anna Garcia, David Runsten and Carol Nagengast, *Mixtec Migrants in California Agriculture*, California Institute for Rural Studies and Center for U.S.-Mexican Studies, University of California, San Diego, May 1993.
- ⁴⁹ *Findings From the National Agricultural Workers Survey (NAWS) 1990*, Research Report No. 1, Office of Economic Programs, Office of the Assistant Secretary for Policy, U.S. Department of Labor, Washington, DC, July 1991, p. 23.
- ⁵⁰ *California Findings from the National Agricultural Workers Survey*, op. cit., p. 10.
- ⁵¹ *Report of the Commission on Agricultural Workers*, op. cit., p. 74.
- ⁵² U.S. Immigration and Naturalization Service, February 13, 1992 Summary of SAWs Granted Status Under IRCA. INS reports also show a substantial increase in the number of border apprehensions in the past year and one-half, approaching the record levels of the mid-1980s.
- ⁵³ Carol Zabin et al., op. cit.
- ⁵⁴ David Runsten, Michael Kearney and Anna Garcia, *Census of Mixtec Immigrants in California Agriculture*, California Institute for Rural Studies, forthcoming (1994).
- ⁵⁵ Juan Vicente Palerm, *Farm Labor Needs and Farm Workers in California: 1970 to 1989*, California Agricultural Studies, No. 91-2, Department of Employment Development, State of California, April 1991.
- ⁵⁶ Ed Kissam and David Griffith, *The Farm Labor Supply Study: 1989-1990*, Volume 2, Case Studies, Parlier, California, December 30, 1991.
- ⁵⁷ See *Findings From the National Agricultural Workers Survey (NAWS) 1990*, op. cit.,

for a detailed description of survey methods and results.

⁵⁸ *Agricultural Employment Patterns Study: 1989*, op. cit., p. 1.

⁵⁹ See *California Findings From the National Agricultural Workers Survey (NAWS) 1993*, op. cit.

⁶⁰ Commission on Agricultural Workers, *Report of the Commission on Agricultural Workers*, Appendix I, Case Studies and Research Reports, 1993. See three case studies concerning California, fresh tomatoes, citrus and raisins.

⁶¹ Richard Mines, private communication, May 1992.

⁶² Richard Mines, private communication, May 1992.

⁶³ See *California Findings From the National Agricultural Workers Survey (NAWS) 1993*, op. cit.

⁶⁴ Carol Zabin et al., op. cit.

⁶⁵ Ibid.

⁶⁶ See *California Findings From the National Agricultural Workers Survey (NAWS) 1990*, op. cit.

⁶⁷ Carol Zabin et al., op. cit.

⁶⁸ Ibid.

⁶⁹ See *California Findings of the National Agricultural Workers Survey (NAWS) 1993*, op. cit., p. 37. Average earnings per hour are reportedly \$5.41 for all SAS jobs. Employees of labor contractors earn an average of \$4.45 per hour. The difference of \$0.96 per hour represents 22% of hourly earnings of labor contractor employees.

⁷⁰ See *Farm Employers Wage and Benefits Survey 1990*, Farm Employers Labor Service (California Farm Bureau), Sacramento, CA, 1991; CIRS Farm Labor Contractor Survey, unpublished data.

⁷¹ Carol Zabin et al., op. cit.

⁷² The author met a Mixteco worker in Fresno during February 1992 who had earned \$15 for a full day's work pruning peach trees.

⁷³ Richard Mines, private communication, May 1992.

⁷⁴ *Findings From the National Agricultural Workers Survey (NAWS) 1990*, op. cit.

- ⁷⁵ *Too Many Farm Workers?*, California Institute for Rural Studies, draft manuscript, August 1990.
- ⁷⁶ *Farm Labor*, U.S. Department of Agriculture, Washington, DC, Quarterly Wage Reports and Monthly Employment Reports. This publication is sometimes referred to by the acronym QALS (Quarterly Agricultural Labor Survey). Data are reported on a national basis and regional basis. Because of its special importance, California data is separately reported.
- ⁷⁷ *Too Many Farm Workers?*, op. cit.
- ⁷⁸ The author is grateful to Ed Kissam for pointing out the significance of this distinction.
- ⁷⁹ David Runsten and Anna Garcia, private communication, December 1991.
- ⁸⁰ "Fresno County Grape Harvest Wage Survey - 1988," Farm Wage Survey, Operations Reports Group, Employment Data & Research, Employment Development Department, 1989.
- ⁸¹ Richard Mines, private communication, May 1992.
- ⁸² *Agricultural Employment*, 1990, op. cit.
- ⁸³ *Agricultural Employment Pattern Study: 1989*, California Agricultural Studies, Report No. 92-1, Employment Development Department, State of California, Sacramento, CA, February 1992, Table 1, p. 42.
- ⁸⁴ This is based upon computations of the total agricultural employment by fruit or vegetable farms, together with farm labor contractors for the eight San Joaquin Valley counties (SIC codes 0161, 017x and 0761). Most labor contractors in this region work in fruit or vegetables during the third calendar quarter of the year.
- ⁸⁵ CIRS obtained full data sets from EDD to cover the period before publication of Report 882 (pre-1987).
- ⁸⁶ CIRS obtained UI wage report data sets directly from EDD for the SIC code 0761 for the period prior to publication of EDD Report 882 (pre-1987).
- ⁸⁷ Richard Mines, private communication, May 1992.
- ⁸⁸ Richard Mines has emphasized this point in a number of formal presentations, private communication, 1992. See also, J. Edward Taylor and Dawn Thilmany, "California Farmers Still Rely on New Immigrants for Field Labor," *California Agriculture*, September-October, 1992, Volume 46, Number 5, p. 4.

- ¹⁰⁵ Suzanne Vaupel, *A Study of Women Agricultural Workers in Ventura County*, Committee on Women in Agriculture (Ventura County), Job Training Policy Council, December 1991.
- ¹⁰⁶ Financial report of Giumarra Vineyards Corp., private communication, CIRS files.
- ¹⁰⁷ Financial statements, Anton Caratan & Son, private communication, CIRS files.
- ¹⁰⁸ See, for example, *California Fruit and Nut Statistics*, California Department of Food and Agriculture, various years.