
The California Farm Labor Force Overview and Trends from the National Agricultural Workers Survey



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The California Farm Labor Force: Overview and Trends from the National Agricultural Workers Survey

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The authors are grateful to the 2,344 farmworkers in California who graciously participated in the survey during 2003-2004, and to their agricultural employers for helping survey staff reach these workers.

The report was initiated as a result of a collaboration between the California Office of Binational Border Health (COBBH), California-Mexico Health Initiative (CMHI), California Program on Access to Care (CPAC) and the U.S. Environmental Protection Agency Region 9 (USEPA Region 9).

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Executive Summary

The Environmental Protection Agency Region 9 Pesticide Program commissioned this report to help EPA and other Federal and State agencies and nonprofit organizations in their efforts to protect the health of farmworkers. The report was initiated as a result of "The Farmworker Health Issues in California" meeting held in San Diego on January 31, 2005, a collaborative effort of the California Office of Binational Border Health (COBBH), California-Mexico Health Initiative (CMHI), California Program on Access to Care (CPAC) and the US Environmental Protection Agency Region 9 (USEPA Region 9). This meeting highlighted the need for current demographic, occupational and health information on California's farmworker population. The purpose of this report is to provide agencies and organizations the most current demographic information collected through the National Agriculture Worker Survey (NAWS). The majority of the findings are based on NAWS data from fiscal years 2003 and 2004. In addition, data dating back to fiscal year 1989 is used to study trends over time.

This report is the third report on California farmworkers based on NAWS data. It follows up on two previous reports, the first based on data from fiscal years 1990-1991¹ and the second on data from fiscal years 1995-1997.²

Farm Labor Force

An estimated 36 percent of the nation's farmworkers were employed in California. Nearly two-thirds of them (63%) were employed by the growers themselves rather than by farm labor contractors. They worked mostly in fruit and nut crops (46%) and vegetables (40%), and the majority performed pre-harvest (21%) or harvest (38%) tasks. On average, farmworkers in California had spent 11 years in agricultural employment.

For the most part, the workers interviewed were the sole members of their family units who worked in the fields; nearly three quarters of farmworkers (71%) reported that no other members of their immediate family, currently living in their household, did crop work.

Place of Origin and Migration Patterns

Almost all farmworkers interviewed in California were Hispanic (99%) and born outside the U.S. (95%), primarily in Mexico (96%). Foreign-born farmworkers had spent an average of 11 years in the U.S. Eighteen percent of California farmworkers were newcomers, i.e., those living in the U.S. less than two years.

¹ *California Findings from the National Agricultural Workers Survey: A Demographic and Employment Profile of Perishable Crop Farm Workers*. U.S. Department of Labor, Office of the Assistant Secretary for Policy, Office of Program Economics, Research Report No. 3. 1993. Available at: <http://are.berkeley.edu/APMP/pubs/Cal-Naws/cal-NAWS.pdf#search='Findings%20National%20Agricultural%20Worker%20Survey%20California>

² *Who Works on California Farms? Demographic and Employment Findings From The National Agricultural Workers Survey*. U.S. Department of Labor, Office of the Assistant Secretary for Policy, Office of Program Economics, NAWS Report No. 7. 1998.

More than half of the farmworkers in California had no work authorization (57%), 10 percent were U.S. citizens and 33 percent were legal permanent residents. One-third (33%) of all California farmworkers were migrant, having traveled more than 75 miles to obtain a job in U.S. agriculture. Among foreign-born workers, more than a third (35%) were migrant.

Demographic and Family Characteristics

Sixty-one percent of California farmworkers had seasonal employment while 20 percent were employed year-round. Nineteen percent of farmworkers did not know whether their current job was year-round or seasonal.

Farmworkers in California were relatively young; more than four in ten (45%) were aged 30 years or younger. Their median age was 32. Youth workers aged 14 to 20 years comprised 13 percent of the California farmworker population. The vast majority of farmworkers were men (73%). Women comprised 27 percent of California farmworkers.

While most farmworkers in California were married (64%), more than a quarter (28%) of them did not have their spouse living in the household. Fifty-four percent of workers were parents, 26 percent of whom resided apart from their children. The median age of farmworker parents in California was 36 and the median number of children per household was two.

For nearly all farmworkers in California, Spanish was the primary language (96%). More than half of farmworkers reported they could not speak (53%) or read (57%) any English. The median highest grade completed by California farmworkers was the 6th grade. Only one-fifth (20%) of workers had attended any adult education. The most commonly attended classes among those who took adult education were English language (13%) and high school equivalency (5%).

Forty-three percent of all individual farmworkers and 30 percent of farmworker families earned less than \$10,000 per year. Twenty-two percent of California farmworkers had annual incomes below the federal poverty level, which was \$9,573 for an individual. Despite their low incomes, less than one-third of workers made use of needs-based services (30%). Contribution-based services were also not highly utilized. Thirty-seven percent of California farmworkers and/or their families collected unemployment insurance and only one percent collected either social security or disability. The type of dwellings in which nearly two-thirds of farmworkers (62%) resided were single family homes and almost all workers (96%) lived off-farm in properties not owned or administered by their employer.

Occupational Health and Health Care

Among all farmworkers interviewed, nearly 9 out of 10 (86%) said they had received training or instruction in the safe use of pesticides in the past 12 months while working for their current employer. Only five percent of farmworkers in California reported they had loaded, mixed, or applied pesticides during the same timeframe.³

³ The NAWS questions on pesticide safety training and sanitation do not necessarily ensure compliance with State or Federal regulations. Please refer to Chapter 4 where results are discussed in more detail.

Nearly all workers reported their employers provided clean drinking water and disposable cups (96%), toilets (99%) and water for washing hands (99%) every day. The NAWS questions do not necessarily ensure compliance with federal or state regulations. Please refer to the body of the text where results are discussed in more detail. According to Cal/OSHA, compliance with California's Field Sanitation Standard has continued to increase since the regulation was first implemented and enforced in 1992.

In reporting on injuries related to their work in the fields, 24 percent of California farmworkers suffered from at least one musculoskeletal problem in the 12 months prior to their interview, 12 percent stated they experienced at least one skin problem, and, apart from those times when they were suffering from colds, 16 percent of workers experienced watery or itchy eyes and 14 percent had runny or stuffy noses.

Nine percent of California farmworkers reported that, at some point in their lifetime, they had been told by a doctor or nurse that they suffered from a significant health condition such as diabetes, high blood pressure, tuberculosis, heart disease, a urinary tract infection, or asthma. Most (88%) of those with health conditions reported they had seen a doctor or nurse about their illness in the past 12 months. A fifth (20%) of workers reported they were current or former smokers, having smoked at least 100 cigarettes in their lives.

Only 30 percent of California farmworkers had health insurance, 41 percent of married workers reported that their spouse had health insurance, and 79 percent of workers with children said their children had health insurance. Half (50%) of insured workers reported that their health insurance was provided by their employer. The most common sources of health insurance among spouses and children were government programs (44% and 76% respectively).

Nearly half (49%) of California farmworkers said they used some type of health care service, whether from doctors, nurses, dentists or hospitals, in the U.S. at least once in the two years prior to their interview. The majority of workers who sought health care (51%) went to a private doctor's office or private clinic and only seven percent visited a migrant health clinic. Nearly two-thirds paid most of the bill out of their own pocket or used MediCal (41% and 21% respectively). The greatest barrier California farmworkers faced in getting the health care was the cost; 83 percent said that health care is too expensive.

Introduction

Farmworkers in the United States perform numerous important tasks necessary for cultivating and harvesting a large share of the nation's food supply. This report was initiated as a result of "The Farmworker Health Issues in California" meeting held in San Diego on January 31, 2005, a collaboration between the California Office of Binational Border Health (COBBH), California-Mexico Health Initiative (CMHI), California Program on Access to Care (CPAC) and the US Environmental Protection Agency Region 9 (USEPA Region 9). This meeting highlighted the need for updated demographic and health information on California's farmworker population. This report presents current information on the characteristics and work patterns of those who perform crop work in California. It is intended to provide data for policy makers, researchers, agricultural producers/employers, employer associations, and organizations providing services to farmworkers.

The National Agricultural Workers Survey (NAWS) is a survey of farmworkers in crop agriculture. The NAWS collects extensive data from this population concerning basic demographics, education, family size and household composition, access to care, wages and working conditions in farm jobs, and participation in the U.S. labor force. Information for this report was obtained from 2,344 interviews with farmworkers in California during fiscal years 2003-2004.

Initially, the NAWS was commissioned by the Department of Labor (DOL) as part of its response to the Immigration Reform and Control Act of 1986 (IRCA). The original purposes were to monitor turnover of seasonal agricultural service workers in order to identify emerging shortages between 1990 and 1993 and to monitor seasonal agricultural wages and working conditions. Since that time, several other federal agencies have participated in the development of the NAWS questionnaire by contributing questions to assist them in better serving their farmworker constituencies.

The NAWS interviews farmworkers performing crop agriculture.⁴ The definition of crop work by the U.S. Department of Agriculture (USDA) includes field work in the vast majority of nursery products, cash grains, and field crops, as well as in all fruits and vegetables. Crop agriculture also includes the production of silage and other animal fodder. The population sampled by NAWS consists of nearly all farmworkers in crop agriculture, including field packers and supervisors, and even those simultaneously holding non-farm jobs. However, the sample excludes secretaries, mechanics, and H-2A temporary farmworkers. The NAWS does not sample unemployed agricultural workers. To be eligible for interview, a worker has to have worked at least one day in the previous 15 days.

⁴ All crops included in the North American Industry Classification System (NAICS) code 111.

Topics Covered

This report is organized into five chapters. Chapter 1 provides information about the farm labor force in California and gives an overview of worker participation in California crop work. It outlines the characteristics of farm jobs held by workers surveyed, including crop and task, type of employer, and farm work experience.

Chapter 2 presents information about workers' migration patterns. It covers national origin, authorization to work in the U.S., and patterns of international and intra-state migration. Chapter 3 describes the farmworkers themselves, including demographic characteristics, family composition, education, language proficiency, and income characteristics.

Chapters 4 and 5 discuss topics related to farmworkers' health. Chapter 4 covers occupational health issues such as pesticide use and training, field sanitation, and work-related injuries. Chapter 5 contains information about farmworkers' health history, health care access and utilization, and barriers to health care.

The text and figures summarize worker responses to interview questions, in some cases aggregated by important subgroups of the population. Results are presented only when a minimum of 50 interviewees provided a response to the survey item being discussed. If there were fewer than 50 responses, the information was not considered dependable. An appendix describes statistical conventions followed in analyzing the NAWS data.

Survey Method

During fiscal years 2003-2004, the NAWS randomly selected and interviewed more than 2,344 farmworkers in California. The multi-stage sampling procedure is designed to account for seasonal and regional fluctuations in the level of farm employment. The NAWS is designed to obtain a nationally representative sample of farmworkers.

Seasonal fluctuations in the agricultural work force are captured by three interviewing cycles lasting 10 to 12 weeks each. Cycles begin in February, June, and October. The number of interviews conducted during a cycle is proportional to the amount of crop activity at that time of the year.

The amount of crop activity during each season of the year is approximated using administrative data from the Bureau of Labor Statistics and the Census of Agriculture. All states in the continental U.S. are divided into 12 regions, aggregated from the 17 agricultural regions used by the USDA.

A second level of stratification is the Farm Labor Area (FLA). FLAs are aggregations of counties within states that have approximately the same number of

farmworkers as well as similar cropping patterns. Within the 12 regions, a roster of 80 Farm Labor Areas containing 395 counties was selected.

Multi-stage sampling is used to choose respondents in each cycle. The number of sites selected is also proportional to the amount of farm work being done during the cycle. The NAWS makes 120 visits to FLAs each year, surveying in approximately 40 FLAs each cycle. For each cycle, no fewer than two FLAs were selected randomly in each region. The likelihood of a given site being selected varies with the size of its seasonal agricultural payroll. Because some states such as California and Florida have relatively high agricultural payrolls throughout the year, several FLAs in these states are selected for interviews during each cycle. Within each FLA, a county is selected at random.

Farm employers within each of the selected counties are chosen randomly from public agency records. Principle among these records are lists maintained by the Bureau of Labor Statistics and various lists from federal, state, and local agencies. The availability of these data varies by state. NAWS staff review and update these lists annually in the field.

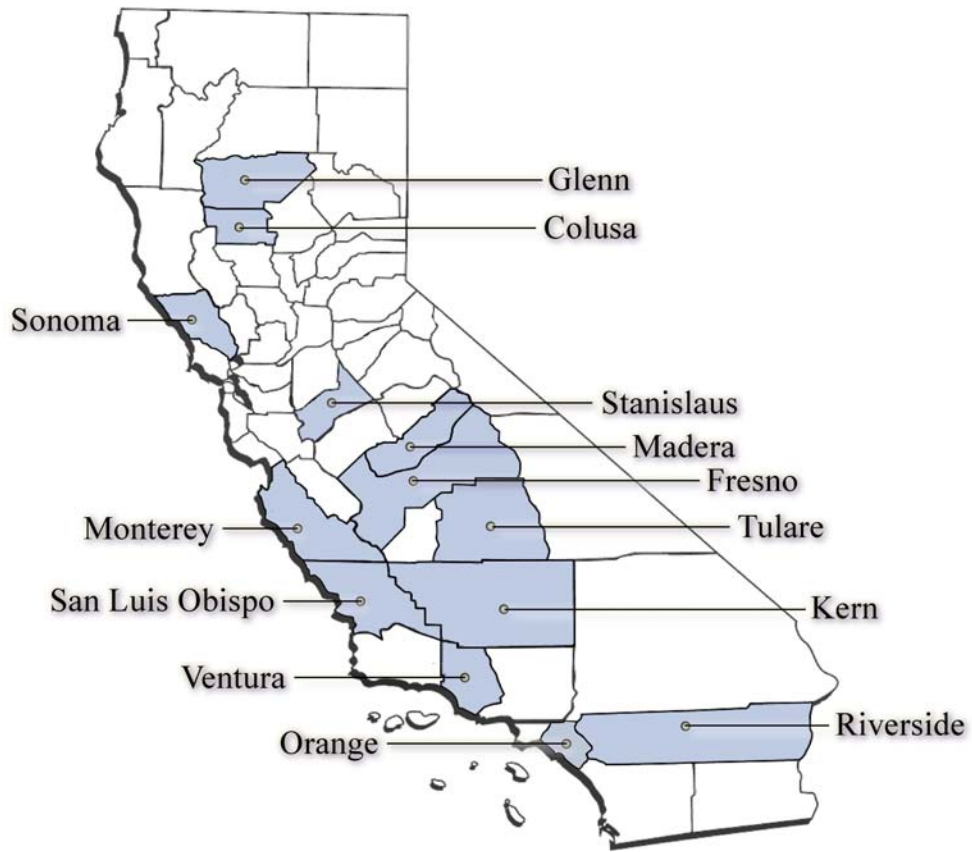
Once the sample is drawn, NAWS interviewers contact the selected agricultural employers, explain the purpose of the survey, and obtain access to the work site in order to schedule interviews. Interviewers then go to the farm, ranch, or nursery, explain the purpose of the survey to workers, and ask a random sample of them to participate. Interviews are conducted in the workers' home or at another location of the worker's choice. Interviews are administered in Spanish for those whose primary language is Spanish. Translators are used when the interview cannot be completed in either Spanish or English.

The 2,344 personal interviews on which this report is based were conducted in 13 counties in California between October 1, 2002 and September 30, 2004. Counties sampled included Colusa, Fresno, Glenn, Kern, Madera, Monterey, Orange, Riverside, San Luis Obispo, Sonoma, Stanislaus, Tulare, and Ventura. (See Exhibit 1.)

In 2003-2004, 55 percent of the growers who were eligible, i.e., who employed crop workers when they were contacted by an interviewer, agreed to participate in the survey and 92 percent of the approached workers agreed to be interviewed.

Throughout the report, unless noted otherwise, the analysis excludes missing values such as "Don't know", "No answer", or "Not applicable."

Exhibit 1. California Counties Surveyed in the 2003-2004 NAWS



Chapter 1: Overview of and Trends in the California Farm Labor Force

Summary of Findings

Thirty-six percent of all farmworkers in the U.S. worked on California farms. More than four in ten farmworkers who worked in fruit, vegetable, or horticultural crops was employed in California (44%).

Among California farmworkers:

- *Approximately six in ten workers were employed directly by growers (63%).*
- *Most farmworkers worked in fruit and nuts and vegetables (86%) and performed pre-harvest and harvest-related tasks (59%).*
- *Farmworkers spent an average of 11 years doing farmwork and 79% believed they would continue in farmwork for at least another 6 years.*
- *Twenty-eight percent of workers lived with a family member who also did farmwork.*
- *Half the farmworkers owned a vehicle (51%) and two-thirds (67%) either drove themselves to work or shared rides with others.*
- *Three out of ten workers used “raiteros” or the labor bus, and most of them had to pay for rides (49%) or at least for gas (38%).*

Farm Labor Force

The state of California plays an important role in the nation’s agriculture. According to the 2002 USDA Census of Agriculture, the market value of agricultural crops sold in California totaled \$19,152,722,000, or 20 percent of the nation’s total.⁵ California has a huge demand for crop labor, and thus employs a significant proportion of the total U.S. farm labor force. Data from the NAWS indicates that in fiscal years 2003-2004, California farmworkers comprised 36 percent of the nation’s farmworkers.⁶ Thirty-six percent translates roughly into 648,000 individuals working on California farms each year.⁷

⁵ The market value of agricultural products sold in the United States was \$95,151,954,000.

⁶ All figures on the percent of farmworkers in specific states or regions are based on the following method. An artifact of the NAWS sampling and weighting procedures are estimates of the proportion of farmworkers resident in each sampling area. The USDA Quarterly Agricultural Labor Survey provides information on the number of hired and contract workers employed in each of the NAWS regions for each quarter. NAWS interviews are allocated proportionally to this. Since farmworkers may be counted in more than one quarter, these quarterly numbers are then adjusted for duplication using the work histories of the NAWS sample members. The result is that the NAWS weights provide an estimate of the proportion of unique farmworkers in each sampling region. California and Florida are the only two states that are also NAWS sampling regions. The complete explanation of the NAWS post-sampling weighting procedure can be found in the document titled *Statistical Methods of the National Agricultural Workers Survey*, available at: <http://www.dol.gov/asp/programs/agworker/statmethods.htm>

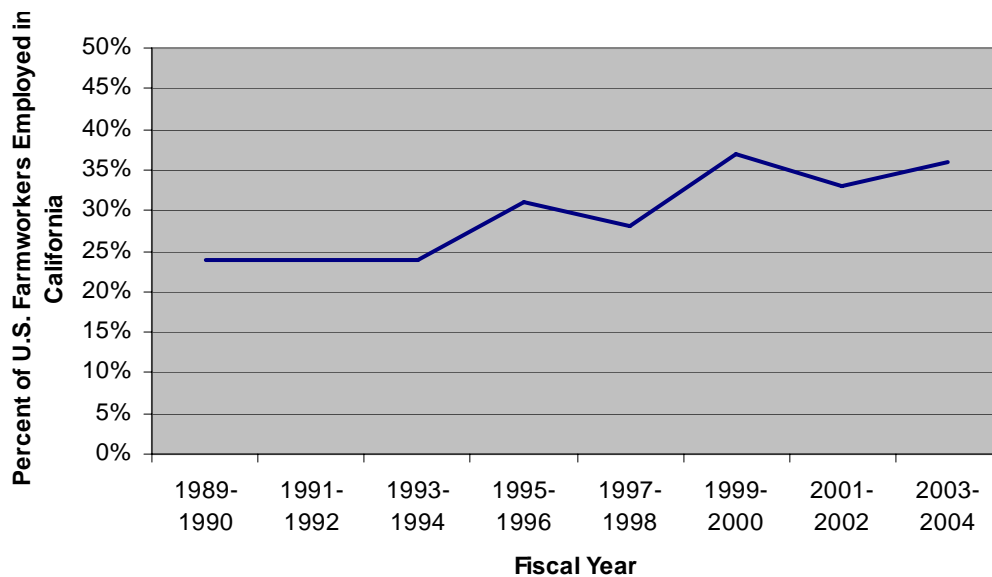
⁷ Thirty-six percent multiplied by the estimated 1.8 million farmworkers per year (In 1992, the U.S. Commission on Agricultural Workers estimated that there were 2.5 million farmworkers. According to the 1997 Census of Agriculture, crop works make up 72% of farm payroll. Multiplying the two together resulted in the commonly used figure of 1.8 million farmworkers nationwide).

To get an idea of how significant the farm labor force in California is, the next largest proportion of farmworkers (11%) was not employed in a single state but, rather, in a region consisting of nine states including Illinois, Indiana, Ohio, Iowa, Missouri, Kansas, Nebraska, North Dakota, and South Dakota. Washington and Oregon employ far fewer workers than does California. According to the NAWS, eight percent of the nation's farmworkers were employed in Washington and one percent was in Oregon.

California's demand for farmworkers is driven by the labor-intensive nature of the crops it produces. Among the most labor-intensive of all agricultural crops are fruits, vegetables, and horticultural products. In 2003-2004, 44 percent of farmworkers who worked in fruits, vegetables, or horticulture were employed in California, more than four times that of any other region in the nation.

The proportion of farmworkers employed in California has increased 12 percentage points in the last 10 years. Currently at 36 percent, it is up from less than a quarter (24%) ten years ago. Exhibit 2 shows the growth in California's agricultural employment since the NAWS began collecting data in 1989.

Exhibit 2. Trend in California Agricultural Employment, 1989-2004



Crops and Tasks

Nearly half of all California farmworkers (46%) worked in fruit and nut crops and another 40 percent worked in vegetables. The remainder worked on field crops (5%), in horticulture (8%), or with other crops (1%).

Over a third of farmworkers in California took part in harvest tasks (38%). Twenty-one percent of workers engaged in pre-harvest tasks such as hoeing, thinning, and transplanting; 11 percent performed post-harvest tasks such as field packing, sorting, or grading; and nearly a fifth (19%) did semi-skilled or skilled technical production tasks

such as irrigating, operating machinery, and pruning. The remaining 11 percent of workers performed other miscellaneous or multiple agricultural tasks. Exhibit 3 and Exhibit 4 display the distributions of crops and tasks in which California farmworkers were employed.

Exhibit 3. Crops Worked by California Farmworkers, 2003-2004

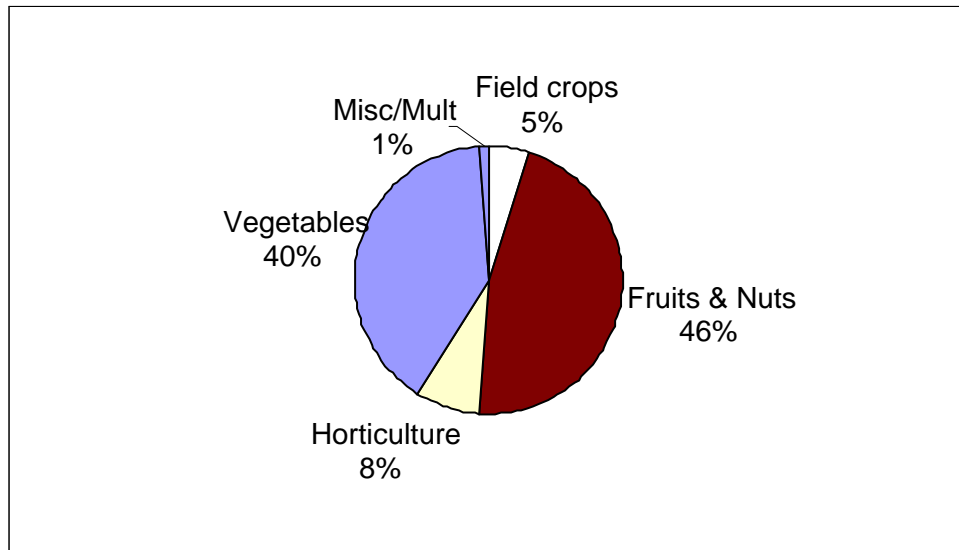
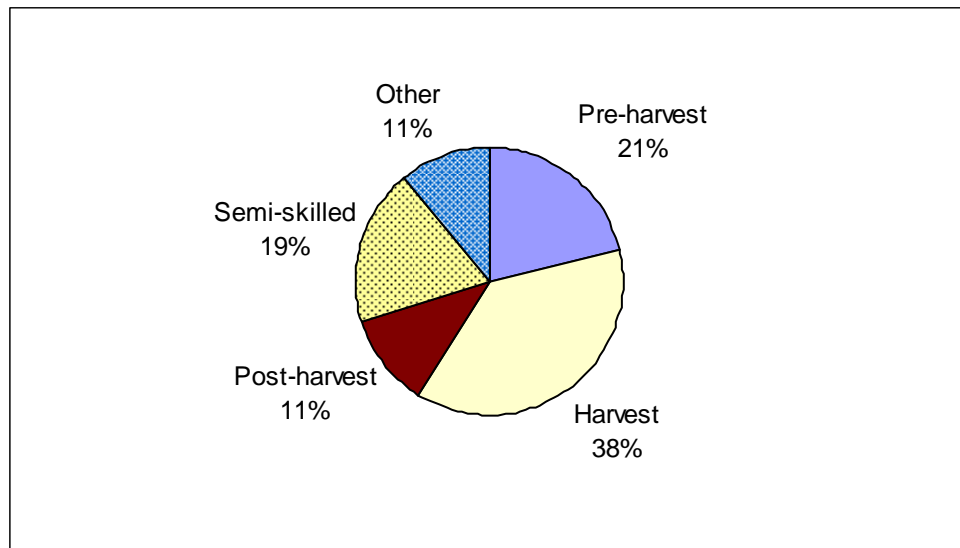


Exhibit 4. Tasks Performed by California Farmworkers, 2003-2004



Employers

In 2003-2004, almost two-thirds of farmworkers interviewed in California were hired directly by agricultural employers or farmers (63%). The remaining 37 percent

were hired by Farm Labor Contractors (FLCs). Farm labor contractors serve as intermediaries, often hiring, firing, and supervising in the workers' native language. Farmworkers in California were more than twice as likely as farmworkers in the U.S. in general to be employed by FLCs. In the nation as a whole, 18 percent of crop workers were hired by FLCs, while the vast majority (82%) was hired directly by employers.

Farmworkers employed by FLCs were much more likely than those employed directly by growers to work in fruit and nut crops (62% and 37% respectively). On the other hand, workers employed by growers worked in field crops, horticulture, and vegetables with much greater frequency than did workers employed by FLCs.⁸

Farm Work Experience

California farmworkers interviewed in fiscal years 2003-2004 had worked an average number of 11 years in farmwork. Sixty-four percent of farmworkers in California worked in agriculture before coming to the U.S. In reporting their plans to continue in farmwork, nearly three-fourths of workers stated they would continue for as long as they were able (72%). For those who have a specific time horizon for remaining in agriculture, 20 percent expected they would do farm work for five years or less, and five percent intended to continue in farm work for more than five years.

Types of Non-farm Work

During periods when workers are looking for farmwork or waiting for recall, some seek employment in non-farm jobs to supplement their income in the meantime. California farmworkers participated in a number of different types of non-farm work in the year prior to their interview. The types of jobs most commonly held by farmworkers during periods of non-farm work were service jobs (i.e., janitorial, house cleaning, or car washes), construction work, livestock and poultry work, and food production

Family Members Doing Farm Work

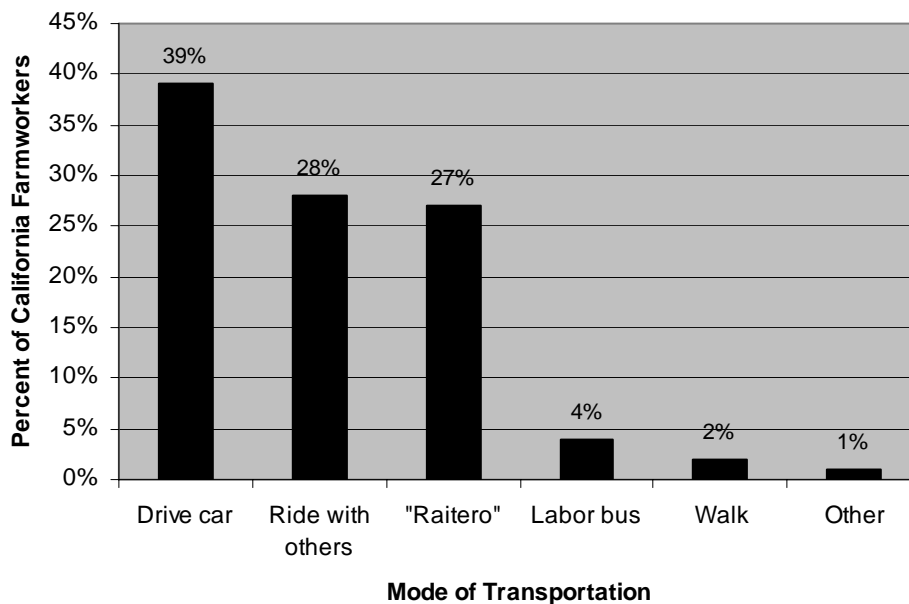
The overwhelming majority of California farmworkers reported that none of their family members did farmwork (71%). The remaining 29 percent said there were between one and three additional farmworkers in their family. In almost all cases where other members of the worker's family also did farmwork, it was their spouse (98%). In another one percent of farmworker families, the spouse and at least one child under the age of 18 were farmworkers. In the remaining one percent of households where other family members also did farmwork, those workers were minor children and not the spouse.

⁸ Among farmworkers employed directly by growers, 7 percent worked in field crops, 10 percent worked in horticulture, and 44 percent worked in vegetable crops. Among those employed by FLCs, 2 percent worked in field crops, 3 percent worked in horticulture, and 33 percent worked in vegetable crops.

Transportation

Fifty-one percent of farmworkers in California owned a vehicle (car or truck). When asked how they usually get to work, 39 percent of workers said they drove themselves and 28 percent shared rides with others. Nearly a third of the workers stated they got rides from “raiteros” or rode a labor bus (27% and 4% respectively). The remaining three percent walked to work or used some other form of transportation. Exhibit 5 highlights the distribution of workers’ modes of transportation to work.

Exhibit 5. California Farmworkers’ Mode of Transportation to Work, 2003-2004



Among workers who stated they rode to work with others, with a “raitero”, or on a labor bus, 49 percent said they paid a fee for their rides and 38 percent said they paid only for gas. Fourteen percent of them reported they did not have to pay for rides to work. When asked how much they paid per week for their rides, a fifth of California farmworkers said they paid 30 dollars or more (20%). To put the amount of money workers spend per week on rides to work into perspective, thirty dollars over a five-day work week is equivalent to six dollars a day. At 2004 prices, six dollars would buy enough gasoline to drive approximately 40 miles a day. Another forty-three percent of California farmworkers reported they paid 20 to 29 dollars a week for rides to work, a third paid 10 to 19 dollars (33%), and five percent paid less than 10 dollars.

Chapter 2. Place of Origin and Migration Patterns

Summary of Findings

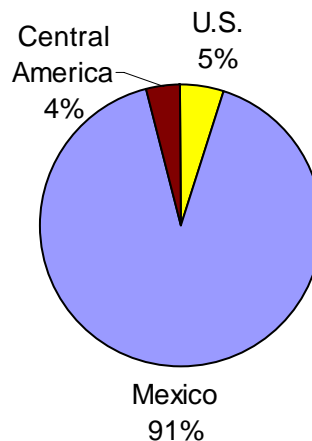
Among California farmworkers:

- *Nearly all were Hispanic (99%).*
- *Ninety-one percent of workers were born in Mexico, 4% in Central America and 5% in the U.S.*
- *Workers typically had lived in the U.S. an average of 11 years.*
- *Nearly a fifth of workers had been in the U.S. less than 2 years (18%).*
- *Nearly six in ten California farmworkers were unauthorized (57%) and one in ten was a U.S. citizen (10%).*
- *A third of workers were migrant (33%), and 86% of migrant workers were international shuttle migrants.*
- *The percentage of workers of indigenous origin is growing rapidly and this population is often considered the fastest growing farmworker population in California.*

Place of Birth

Almost all farmworkers were Hispanic (99%) and 95 percent were foreign-born. Of these, the vast majority were born in Mexico (96%). The remaining four percent of foreign-born farmworkers were from other parts of Latin America. Exhibit 6 shows the distribution of place of birth for California farmworkers in 2003-2004.

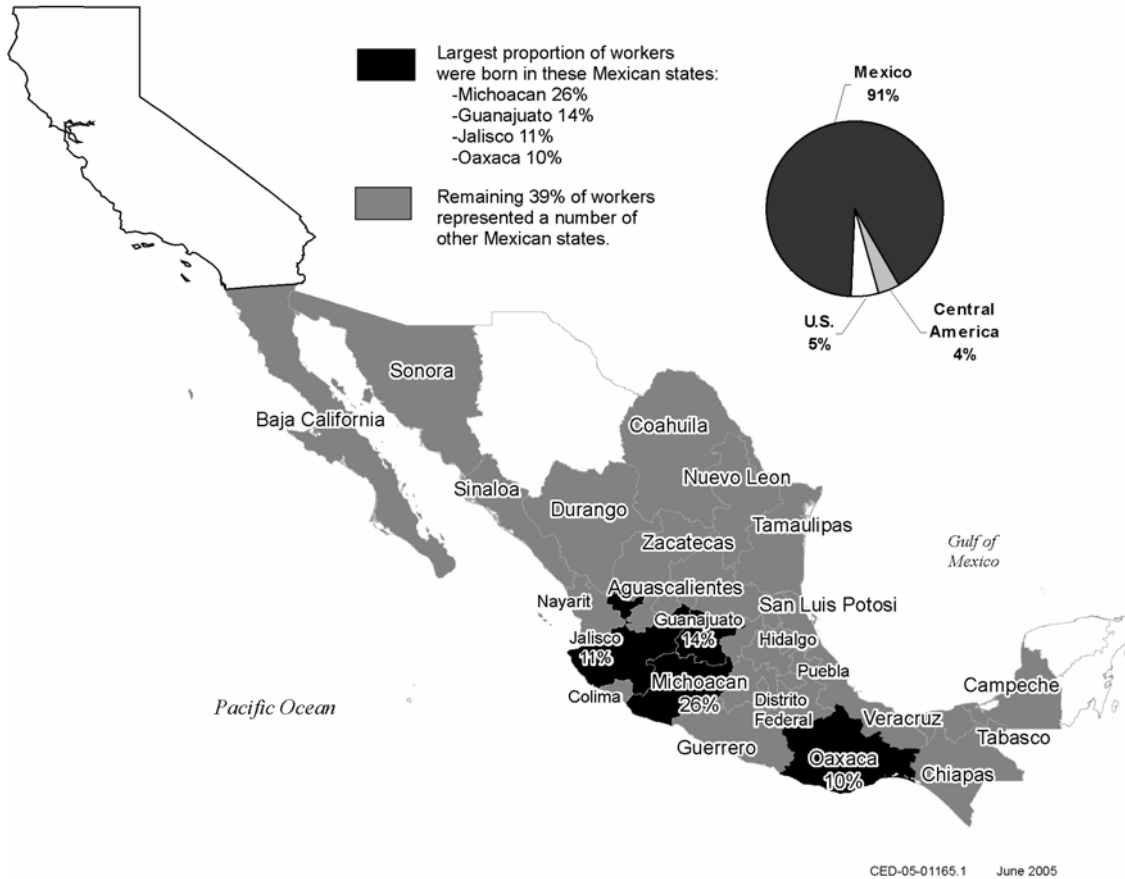
Exhibit 6. Birthplace of California Farmworkers, 2003-2004



For most workers of Mexican origin, the state in which they lived before coming to the U.S. was the same as the state in which they were born (96%). The largest proportions of Mexican farmworkers were born in Michoacán (26%), Guanajuato (14%), Jalisco (11%) and Oaxaca (10%). The remaining 39 percent represented a number of

other states.⁹ Exhibit 7 illustrates the states in which California farmworkers of Mexican origin were born.

Exhibit 7. Birthplace of California Farmworkers of Mexican Origin , 2003-2004



Indigenous Workers

While most farmworkers have been Mexican immigrants for many years, there have been important changes in the ethnic composition of Mexican-born farmworkers. Since the mid-1990s, the number of Mexicans from indigenous communities doing U.S. farmwork has increased. These farmworkers provide a challenge to both farmworker

⁹ Aguascalientes, Baja California, Campeche, Chiapas, Coahuila, Colima, Mexico Distrito Federal, Durango, Estado de Mexico, Guerrero, Hidalgo, Morelos, Nayarit, Nuevo Leon, Puebla, Queretaro, San Luis Potosi, Sinaloa, Sonora, Tabasco, Tamaulipas, Tlaxcala, Veracruz, and Zacatecas.

service providers and survey researchers used to working with mestizos from Mexico. Indigenous Mexicans are the survivors of the pre-Columbian populations of Mexico. There are descendants of Mayan, Aztec and other indigenous groups that generally live in rural areas of Mexico. There are at least 60 indigenous languages and each group has distinct cultural heritage and traditions.

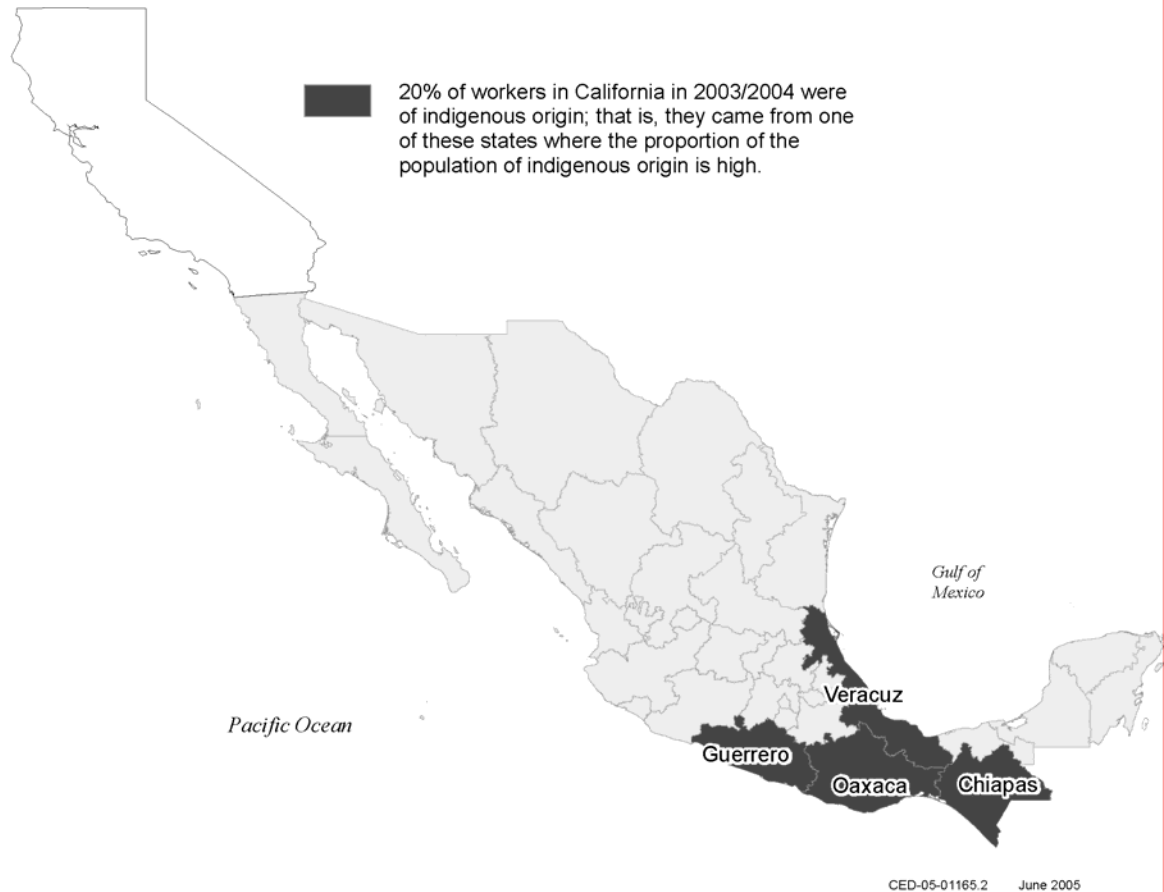
It is hard to get a handle on the number of indigenous Mexicans doing farmwork in the United States. The NAWS shows very small numbers of indigenous Mexicans when asking about native language. It is believed that many indigenous Mexicans report that they are Spanish speakers on surveys such as the NAWS.¹⁰ In Mexico, indigenous peoples are officially identified by language and may not self report. Only two percent of farmworkers in California identify as indigenous language speakers. Within that two percent, workers reported speaking Amuzgo, Chatino, Mazateco, Mixteco, Nahuatl, Triqui, and Zapoteco

In making estimates of the indigenous population, this report looks at California farmworkers that came from sending states where the proportion of the population of indigenous origin is high, including Chiapas, Oaxaca, Guerrero, and Veracruz (see Exhibit 8). By this method, the indigenous farmworker population of California is 20 percent, or approximately 128,000 farmworkers. A more conservative approach would be to count all of the farmworkers from Chiapas and Oaxaca and only half of the workers from Veracruz and Guerrero. By this estimate, 16 percent, or approximately 100,000 farmworkers, are of indigenous origin. For the purposes of looking at characteristics, this report used the broader estimate of 20 percent.

The indigenous worker population deserves consideration for a number of reasons. While still only a fraction of the agricultural workforce in California, the percentage of workers of indigenous origin is growing rapidly and this population is often considered the fastest growing farmworker population in California. Workers from states with high indigenous populations have characteristics that differ from other farmworkers, including a higher percentage of newcomers, migrants and with lack of authorization to work in the U.S. This report will highlight some key differences between the emerging indigenous population and the farmworker population overall.

¹⁰ In 2005, the NAWS changed its language of origin questions to better identify indigenous language speakers.

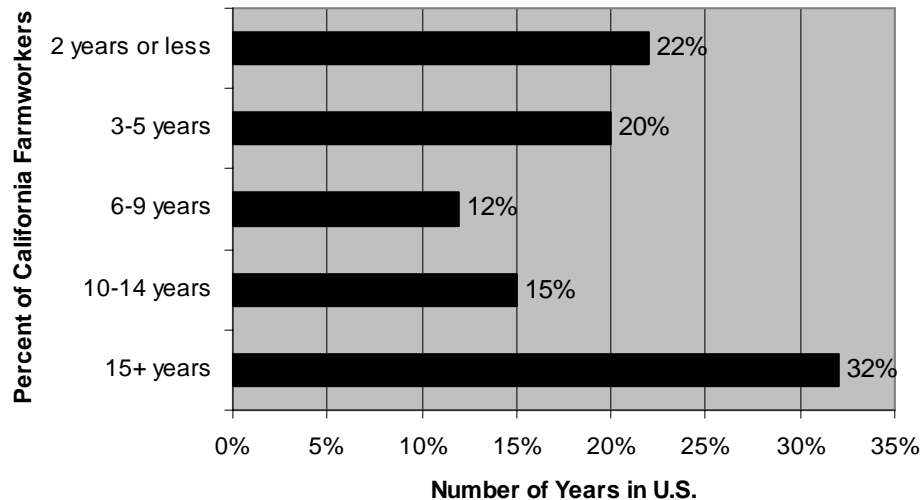
Exhibit 8. Mexican Sending States with High Indigenous Populations



Number of Years in the United States

Foreign-born farmworkers in California in 2003-2004 had spent an average of 11 years in the United States at the time of the interview. Nearly a quarter (22%) of these workers had arrived in the U.S. within the last two years and more than one-half (53%) of the foreign-born workforce in California was comprised of farmworkers who had resided in the U.S. for less than 10 years (see Exhibit 9). Similar results were seen in fiscal years 2001 and 2002; 53 percent of California farmworkers had lived in the U.S. for less than 10 years. However, this reflects a 10 percent decrease from 1999-2000 when 63 percent of the farm labor force in California was comprised of farmworkers who had been in the U.S. for less than 10 years.

Exhibit 9. Number of Years California Foreign-born Farmworkers Have Lived in U.S., 2003-2004



Since 1999-2000, there has been an increase in the number of California farmworkers who resided in the U.S. for 10 years or more. In 1999-2000, 37 percent of farmworkers in California had lived in the U.S. for at least 10 years. This proportion increased to 47 percent in 2001-2002 and remained the same in 2003-2004.

Recent arrivals, or newcomers, are defined as those living in the United States less than two years. These workers comprised 18 percent of the total farmworker population in California in 2003-2004. This reflects a decrease of six percent from 2001-2002 when 24 percent of farmworkers were newcomers, and a decrease of 11 percent since 1999-2000 when newcomers comprised 29 percent of the California farmworker population. In contrast to the decrease that has occurred in recent years, the proportion of California farmworkers comprised of newcomers has increased greatly since 1989-1990 when just two percent of workers had been in the United States less than two years.

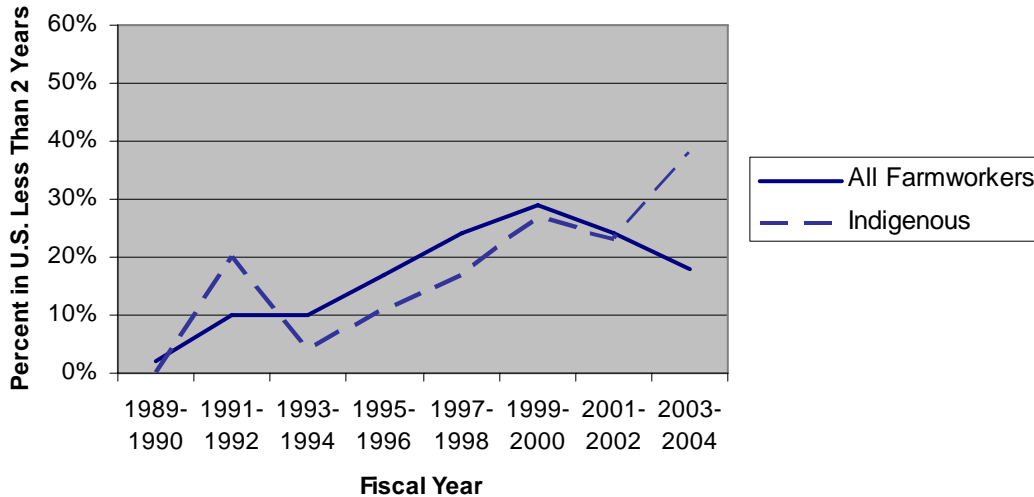
Newcomers are relatively young, with nearly two-thirds (63%) aged 25 years or younger in 2003-2004. Their median age was 24. Newcomers were slightly younger in 1999-2000 and 2001-2002 when their median ages were 22 and 21, respectively.

Throughout all years, the overwhelming majority of the arrivals have been from Mexico. In 2003-2004, all (100%) newcomers to crop work came from Mexico and 38 percent were of indigenous origin. In years prior to 2003, a fraction of newcomers were of Central American origin (3% from Guatemala in 2001-2002 and 1% from El Salvador in 1999-2000). However, most had come from Mexico (97% in 2001-2002 and 99% in 1999-2000).

As already noted, the proportion of recent arrivals in 2003-2004 that was of indigenous origin was 38 percent. This was a jump of more than 10 percentage points

over each of the two-year periods preceding 2003, as workers of indigenous origin comprised 27 percent of newcomers in 1999-2000 and 23 percent of newcomers in 2001-2002. Exhibit 10 demonstrates the trend over time of the proportions of all California farmworkers and those of indigenous origin who had been in the U.S. less than two years at the time they were interviewed.

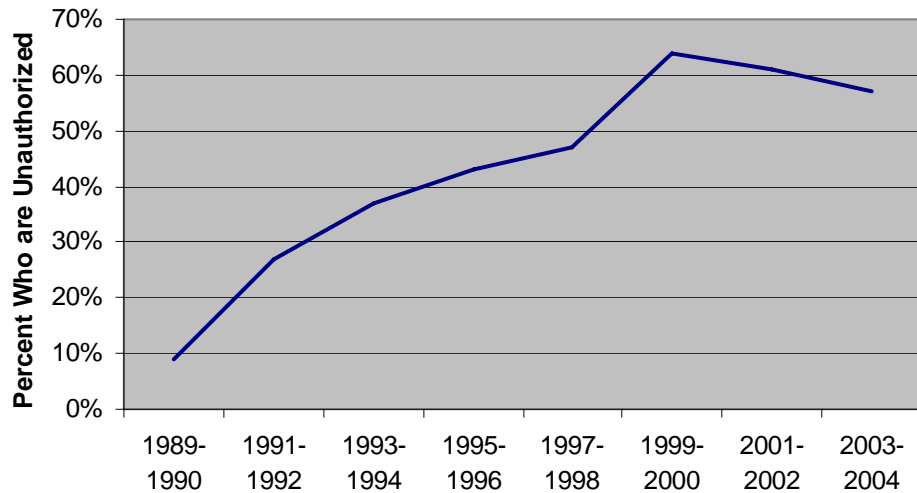
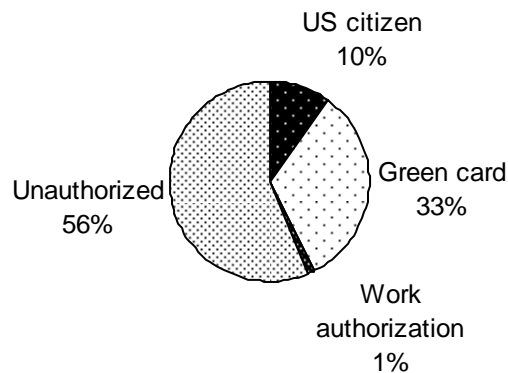
Exhibit 10. California Farmworkers in U.S. Less Than Two Years, 1989-2004



Authorization to Work in the United States

In 2003-2004, more than half (57%) of farmworkers in California had no work authorization. The percent of those lacking work authorization rose steadily from 9 percent in 1989-1990, just after the legalization period of the Immigration Reform and Control Act of 1986 (IRCA), to a high of 64 percent in 1999-2000. The number began to decline to 61 percent in 2001-2002 and further declined in 2003-2004 (see Exhibit 11). Among recently-arrived farmworkers and workers of indigenous origin, the proportion of unauthorized workers in California was much greater than California farmworkers as a whole. Nearly all newcomers in 2003-2004 lacked work authorization (99%) as did more than four-fifths of those of indigenous origin (85%).

Ten percent of California farmworkers in 2003-2004 reported they were U.S. citizens, an increase of three percent since 2001-2002 and four percent since 1999-2000. Of the remaining 34 percent of workers in California in 2003-2004, 33 percent were legal permanent residents and 1 percent had temporary work permits (see Exhibit 12). Among workers of indigenous origin, 14 percent had permanent U.S. residency.

Exhibit 11. California Farmworkers Lacking Work Authorization, 1989-2004**Exhibit 12. Immigration Status of California Farmworkers, 2003-2004**

Migration

One-third (33%) of farmworkers surveyed in California were migrant farmworkers, that is, they traveled more than 75 miles to obtain a job in U.S. agriculture.¹¹ The remaining 67 percent of settled farmworkers lived within 75 miles of their agricultural job sites. Among recently arrived farmworkers living in the U.S. for less than two years, almost all were migrant (98%).

¹¹ This definition, as used by the NAWS, is discussed in more detail in *Migrant Farmworkers: Pursuing Security in an Unstable Labor Market*. Research Report 5. U.S. Department of Labor, Office of the Assistant Secretary for Policy, Office of Program Economics (1994).

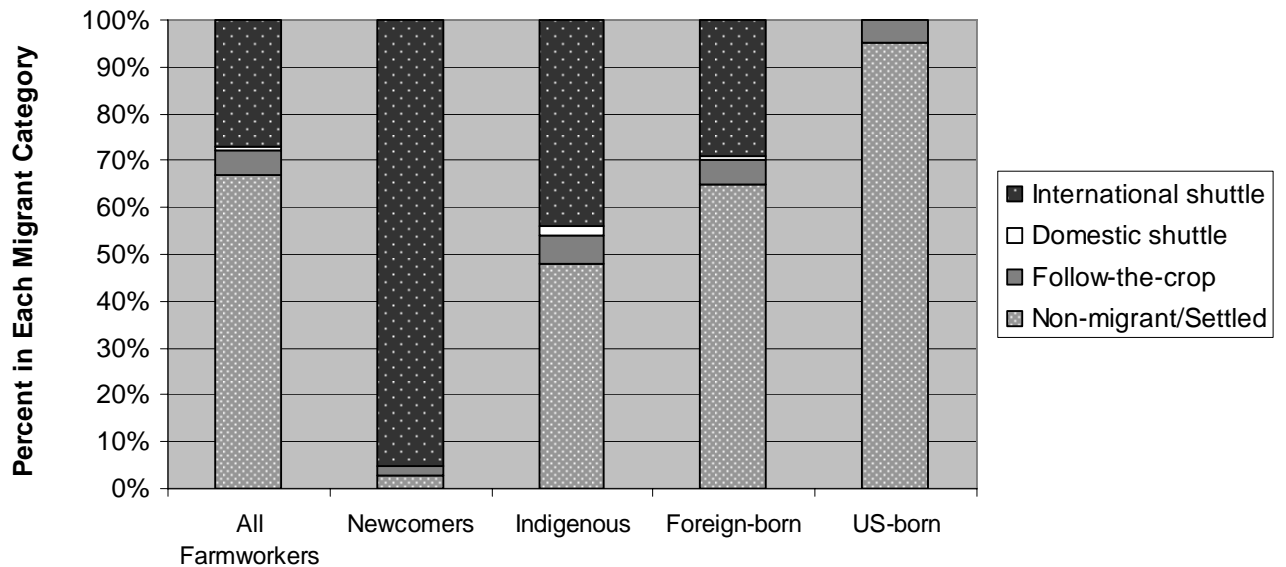
The percent migrant has dropped 22 percentage points from the high of 55 percent in 1997-1998. The number dropped to 51 percent in 1999-2000 declining rapidly to 42 percent in 2001-2002 and then again to 33 percent in 2003-2004. This reversed a trend of steadily increasing migration from a low of 40 percent in 1989-1990 to a high of 55 percent in 1997-1998.

Migrant farmworkers are categorized into two groups: follow-the-crop migrants and shuttle migrants. Follow-the-crop migrants are those who have at least two farmwork locations, following the crops as they become ready for harvest. Shuttle migrants are single-destination migrants. They have a home base where they do not do farmwork and then they shuttle, sometimes internationally, to a single location for farmwork. Among migrant farmworkers in California in 2003-2004, 85 percent were shuttle migrants and 15 percent followed the crops.

Place of birth appears to influence the likelihood that a farmworker will migrate for employment. More than a third (35%) of all foreign-born farmworkers were migrants, while only five percent of workers born in the U.S. were migrant. More than half (52%) of Mexican-born workers of indigenous origin were migrant.

Among all farmworkers in California in 2003-2004, 29 percent were international shuttle migrants, maintaining their home outside the U.S. and shuttling between countries to do farm work. Of those farmworkers defined as migrant, almost nine in ten (86%) were international shuttle migrants. The inclination to shuttle between countries seems to diminish the longer a worker lives in the U.S. Nearly all (97%) recently arrived California farmworkers reported being international shuttle migrants, compared to 13 percent of those residing in the U.S. three years or more.¹¹ Exhibit 13 illustrates the migrant status of all California farmworkers, those who are newcomers, and those of indigenous origin.

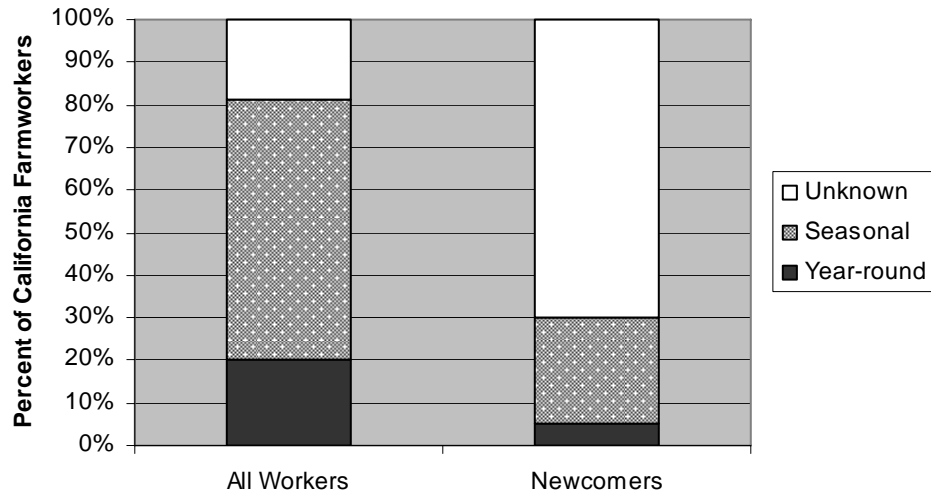
¹¹ Cross border commuters are not considered migrants.

Exhibit 13. Migrant Status of California Farmworkers, 2003-2004

Year-round versus Seasonal Employment

Nearly two-thirds (61%) of California farmworkers in 2003-2004 reported they worked for their current employer on a seasonal basis, 20 percent said they were employed year-round, and 19 percent did not know whether their current job was year-round or seasonal. For the majority of recent arrivals it was not clear whether their current employment was year-round or seasonal. While a quarter (25%) of these workers said they were seasonal workers and five percent said they were employed year-round, fully 70 percent did not know whether they were currently employed on a seasonal or year-round basis (see Exhibit 14).

Exhibit 14. Type of Employment of California Farmworkers, 2003-2004



Chapter 3: Demographic and Family Characteristics

Summary of Findings

Among California farmworkers:

- The median age was 32 years.
- The majority of workers were male (73%).
- Sixty-four percent of farmworkers were married and 54% were parents.
- Nearly half the workers lived with no immediate family members (49%).
- Almost all farmworkers spoke Spanish (96%).
- Fewer than one in ten farmworkers spoke or read English fluently.
- Farmworkers typically had completed 6 years of education.
- A fifth of workers had taken some type of adult education class (21%).
- Three quarters of all individual farmworkers earned less than \$15,000 a year.
- Nearly two-thirds (62%) of farmworkers resided in single family homes and nearly all workers (96%) lived off-farm in properties not owned or administered by their employer.

Age

Most farmworkers in California in 2003-2004 were relatively young; forty-five percent of the population was aged 30 years or younger. More than three-fifths (81%) of California farmworkers were between the ages of 18 and 44 (see Exhibit 15). Youth workers, i.e., those aged 14 to 20 years, comprised 13 percent of the California farmworker population, down slightly from 16 percent in 2001-2002 and 15 percent in 1999-2000 (see Exhibit 16). The median age of California farmworkers in 2003-2004 was 32 years and their median age at the time they entered into the U.S. was 20 years.

Exhibit 15. Age Distribution of California Farmworkers, 2003-2004

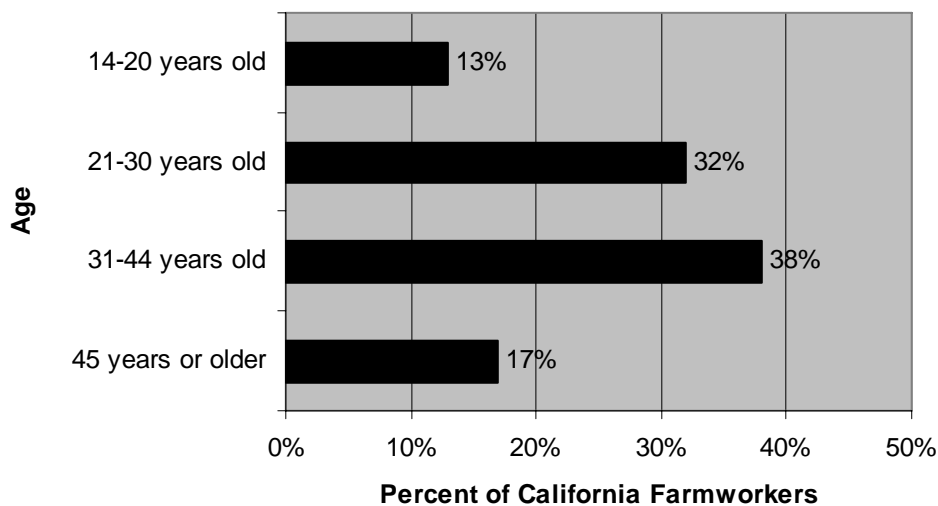
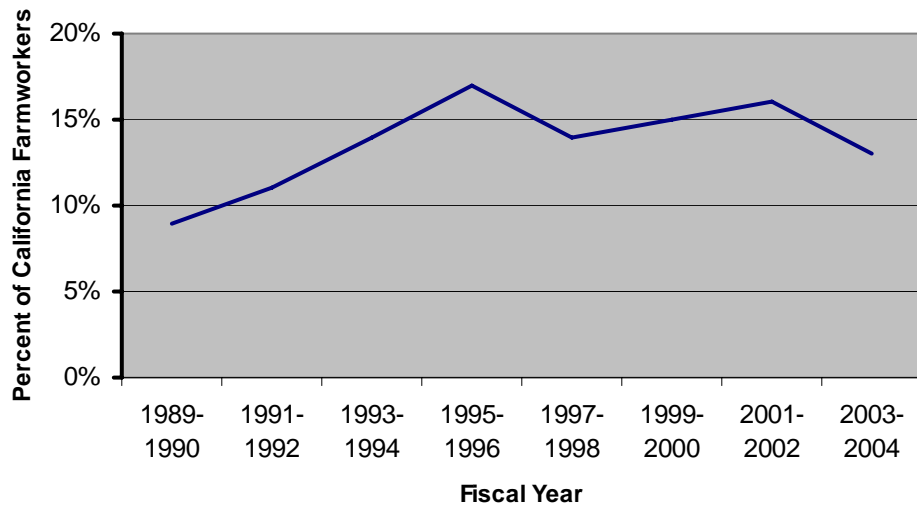


Exhibit 16. California Farmworkers Aged 14 to 20, 1989-2004

Gender

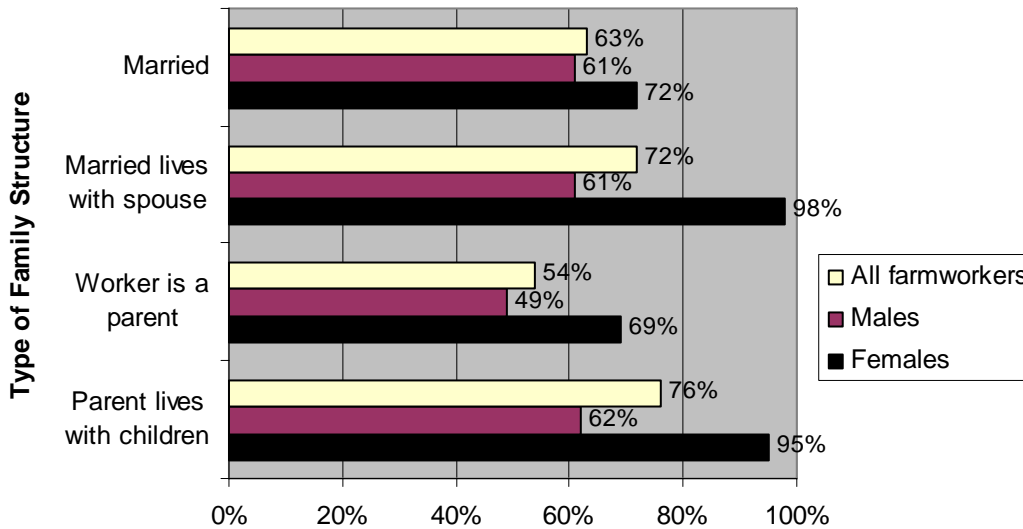
Just 27 percent of California farmworkers in 2003-2004 were women. All of these women (100%) were Hispanic and nearly all were foreign-born (94%). Like their male counterparts, the median age among female farmworkers in California was 32. Seventy-two percent of these women were married and 69 percent were parents.

Family Structure

Nearly two-thirds (64%) of all farmworkers in California in 2003-2004 were married, but more than a quarter (28%) of them did not have their spouse living in the household. Female farmworkers were 11 percent more likely than males to be married (72% versus 61%). Furthermore, while nearly all (98%) of married women lived with their spouses, the same was true for less than two-thirds (61%) of married men.

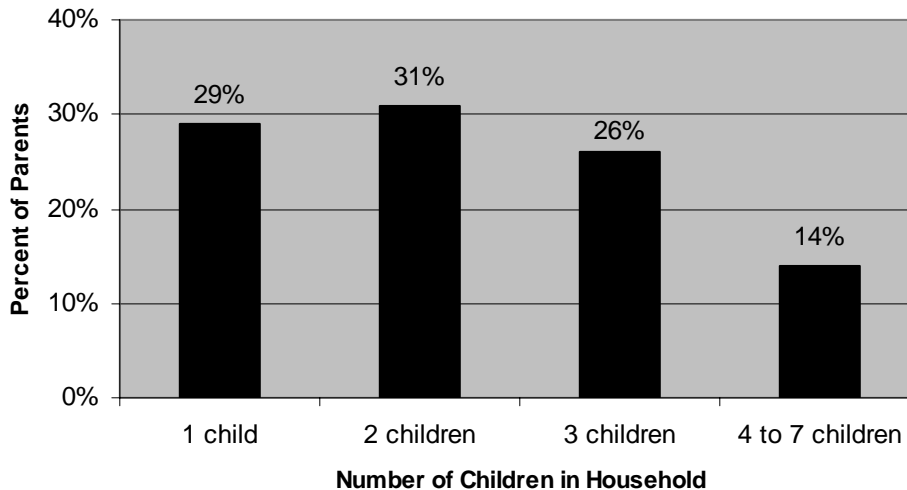
Just more than half (54%) of California farmworkers had children. Seventy-four percent of farmworker parents resided with their children while 26 percent had children who lived elsewhere. Ninety-five percent of mothers, as compared with 62 percent of fathers, lived with their children. Exhibit 17 illustrates the family structures of California farmworkers interviewed in 2003-2004.

Exhibit 17. Family Structures of California Farmworkers, 2003-2004



Sixty percent of farmworker parents had one or two children living in the home and 40 percent had from three to seven children in the household (see Exhibit 18). The median number of children per household was two. The median age of farmworker parents in California was 36 years.

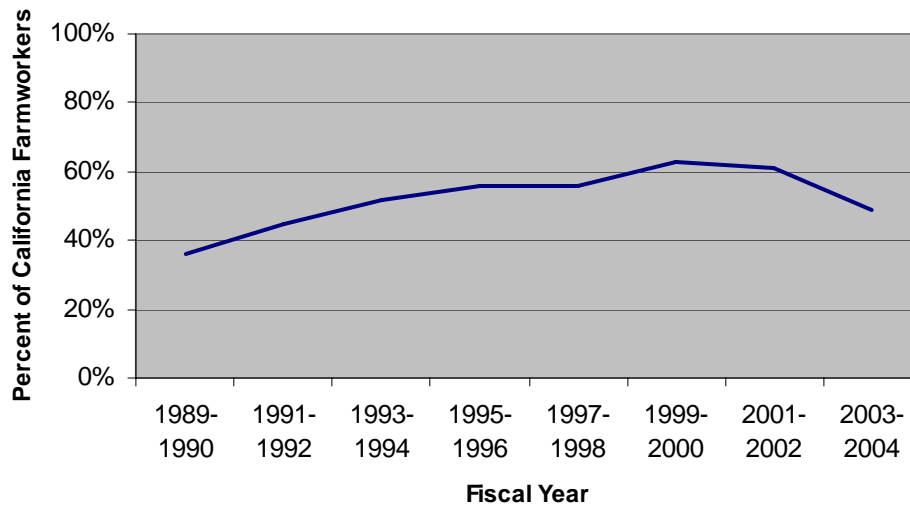
Exhibit 18. Number of Children Living with California Farmworkers, 2003-2004



Nearly half (49%) of the farmworkers interviewed in California in 2003-2004 did not live with their nuclear family. The proportion of those living without any immediate

family members rose steadily through the year 2000, to a height of nearly two thirds (63%) of farmworkers in California. Since then, however, the number of unaccompanied farmworkers has declined, as demonstrated by Exhibit 19. Males are much more likely to migrate without their nuclear families than are females. Among male farmworkers in California in 2003-2004, fully 60 percent were living without any members of their immediate family, while only 18 percent of female workers were unaccompanied. Fewer than three in ten (28%) married farmworkers were living without their families.

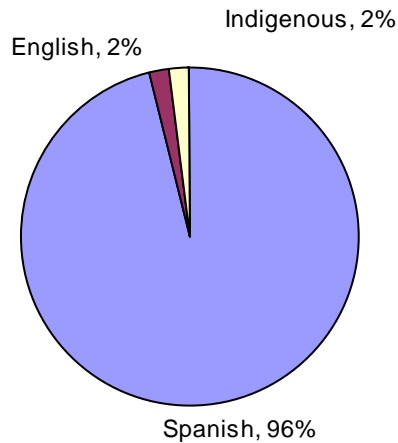
Exhibit 19. California Farmworkers Unaccompanied by Nuclear Family, 1989-2004



Primary Language

Spanish was the primary language spoken by nearly all California farmworkers in 2003-2004 (96%). Only two percent identified themselves as native speakers of indigenous languages¹² and the remaining two percent as native English speakers (see Exhibit 20).

¹² Amuzgo, Chatino, Mazateco, Mixteco, Nahuatl, Triqui, and Zapoteco.

Exhibit 20. Primary Languages Spoken by California Farmworkers, 2003-2004

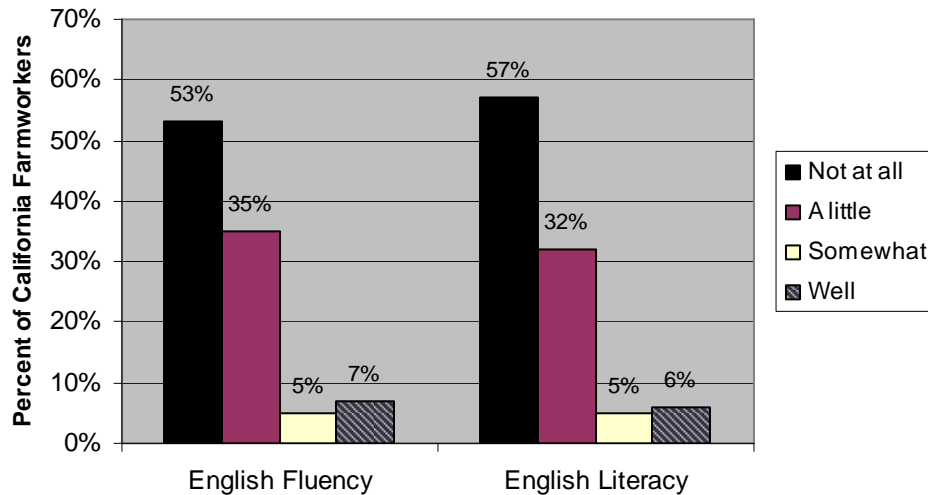
Workers were asked to report how well they could read in their native language. Fifty-seven percent stated they could read “well,” 28 percent said they could read “somewhat,” 13 percent reported they read “a little,” and three percent said they could not read at all in their native languages. It is necessary to note that some indigenous languages are not written.

English Language Ability

Farmworkers were also asked to rate their English fluency and English literacy skills. The majority (53%) of them reported they could not speak any English and 35 percent could speak English only “a little.” In other words, nearly 9 in 10 farmworkers in California do not have the skills necessary for minimal communication in English. Five percent of farmworkers stated that they spoke English “somewhat” and seven percent said they spoke English “well.”

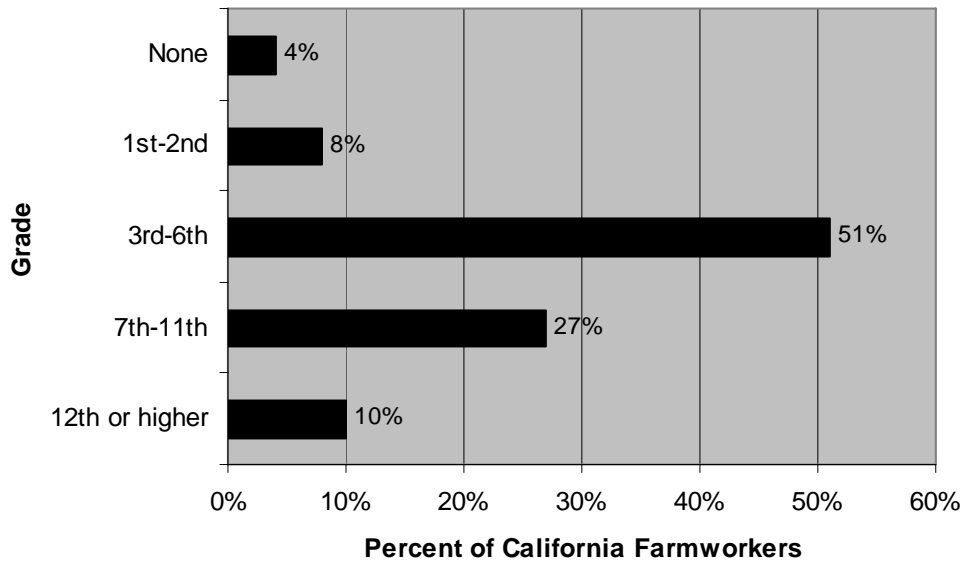
The 2003-2004 numbers show a decline of nine percentage points since 2001-2002 when 62 percent of workers reported they spoke no English. This marks a change in a trend of steadily increasing proportions of farmworkers who spoke no English, starting at 41 percent in 1989-1990 and rising to its peak of 62 percent in 2001-2002.

Similar results were seen for workers’ self-ratings of English literacy skills. More than half (57%) said they could not read English at all, nearly a third (32%) stated they could read English only “a little,” and the remaining 11 percent reported they could read English “somewhat” or “well” (5% and 6% respectively). Exhibit 21 shows the distribution of California farmworkers’ ratings of their English fluency and English literacy skills.

Exhibit 21. California Farmworkers' Ability to Speak and Read English, 2003-2004

Education

The median highest grade of schooling completed by farmworkers interviewed in California in 2003-2004 was 6th grade, a figure that has remained unchanged in the past decade. Twelve percent of farmworkers had completed less than three years of school and 10 percent completed 12 years or more (see Exhibit 22). Most workers received their last year of schooling in Mexico (88%), a decrease of four percent since both 2001-2002 and 1999-2000. While still only a fraction of the farm labor force in California, those who completed their highest grade in the U.S. increased two percent over each of the two-year periods covering 1999-2000 and 2001-2002, from six percent in those years to eight percent in 2003-2004.

Exhibit 22. Highest Grade Completed by California Farmworkers, 2003-2004

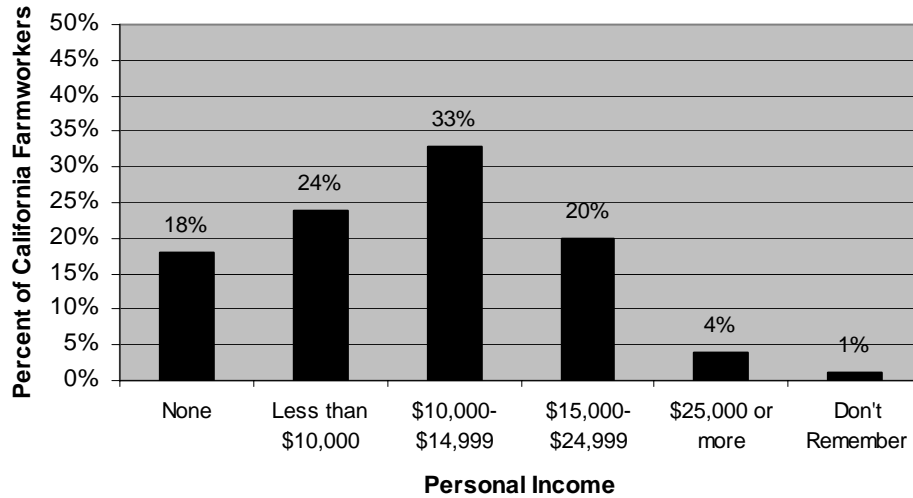
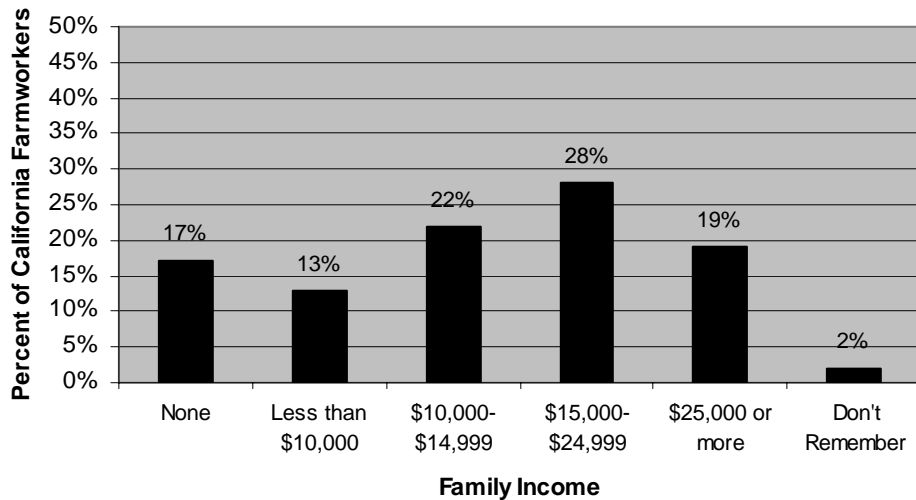
California farmworkers interviewed in 2003-2004 who completed their last year of schooling abroad reported a significantly lower median level of education than those who completed their schooling in the United States (6th vs. 12th grade). Among workers who received their education abroad, just over a third (35%) attended school until the 6th grade, another 58 percent completed the 6th through 9th grades, and eight percent attended school at least through the 10th grade, some higher. Of the farmworkers educated in the U.S., nearly a third (30%) attended school through the 10th grade, 64 percent completed the 12th grade, and six percent attended beyond high school.

Adult Education

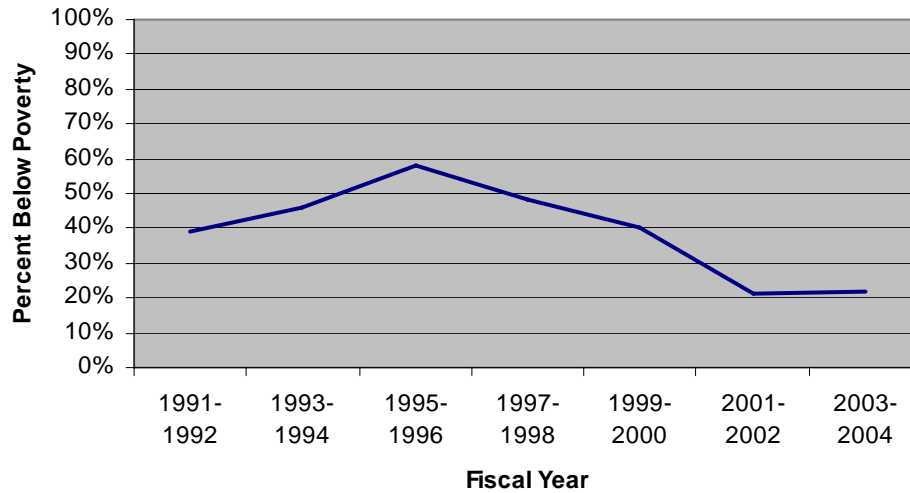
Only one-fifth (20%) of California farmworkers had taken at least one adult education class in the U.S. Of these, most attended English classes (13%) or high school equivalency (GED) classes (5%). A smaller number of workers had taken citizenship (4%) or other types of classes (3%).

Income

Incomes are coded categorically by the NAWS and it is not possible to report exact median incomes. However, it is clear that 75 percent of all individual farmworkers and 52 percent of all farmworker families earned less than \$15,000 per year (see Exhibits 23 and 24). Furthermore, an examination of the annual income figures reported by farmworkers in California in 2003-2004, shows that 43 percent of all individual farmworkers and 30 percent of all farmworker families earned less than \$10,000 per year. Eighteen percent of California farmworkers reported earning no income in the year prior to their interview. The majority (71%) of these workers had been in the country less than one year and likely had not yet begun to work in the U.S. until very recently.

Exhibit 23. Personal Annual Income for California Farmworkers, 2003-2004**Exhibit 24. Family Annual Income for California Farmworkers, 2003-2004**

Overall, 22 percent of farmworkers in California in 2003-2004 had incomes below the federal poverty level, which in 2003 was \$9,573 for an individual and \$14,680 for a family of three. Eighteen percent of single workers and nearly a quarter of families (24%) had below-poverty incomes. This reflects a slight increase over 2001-2002 when 21 percent of workers fell below the poverty level and a decrease since 1999-2000 when 40 percent had incomes below the federal poverty line. Exhibit 25 shows the trend in the percent of California farmworkers with incomes below the poverty level.

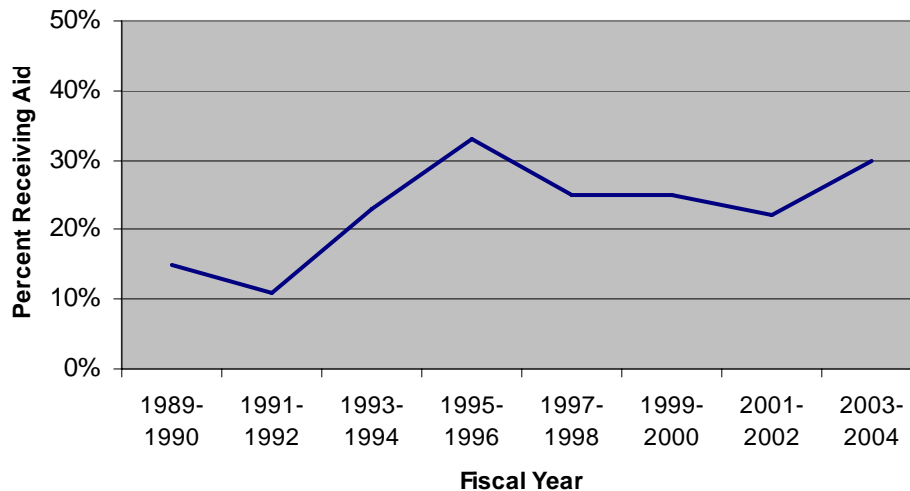
Exhibit 25. California Farmworkers Living Below Poverty Level, 1991-2004

Use of Services

Despite California farmworkers' low incomes, few of the workers interviewed in 2003-2004 reported using contribution-based services, such as unemployment insurance, disability insurance, or social security. The service most frequently used by farmworkers or their families was unemployment insurance (37%).

When asked about their families, at some point in the last two years thirty percent of California farmworker households made use of needs-based services pegged to income levels. While some services are available only to those with incomes below the poverty level, others are pegged to the poverty level. For example, Food Stamps are available to households whose incomes are up to 185% of the poverty level. Assistance received by farmworkers families include financial aid through programs such, as medical and nutritional assistance such as MediCal (26%), Food Stamps (4%), Women, Infants, and Children (WIC) (17%) or other social programs (3%). Use of needs-based social services is up over eight percent over 2001-2002 and a five percent increase over 1999-2000 (see Exhibit 26).

Exhibit 26. Farmworker Households in California Receiving Needs-Based Services, 1989-2004



Households of farmworkers of indigenous origin were 11 percent less likely than those not of indigenous origin (22% vs. 33%) to utilize needs-based services. Among indigenous workers and their families, the services most utilized were MediCal (19%), WIC (16%), Food Stamps (4%), community health clinics (1%), and other social programs.

Although unauthorized workers are not themselves eligible for most needs-based services, some of their family members may be because their legal status is different from that of the worker him/herself. Households of farmworkers lacking work authorization utilized needs-based services with much less frequency than did U.S. citizen workers and those with green cards or those authorized to work in the United States. Less than a quarter (23%) of unauthorized workers and their families used any needs-based services, compared to 39 percent of U.S. citizen workers, and 42 percent of workers with legal permanent residency. Eighteen percent of unauthorized farmworkers used MediCal, 16 percent used WIC, three percent used Food Stamps, one percent used public health clinics, and two percent used other social services. Exhibit 27 illustrates the rates of utilization of programs and services among all California farmworkers, those of indigenous origin, and by workers' immigration status.

**Exhibit 27. Frequency of Use of Services by California Farmworker Households,
2003-2004**

	All Farmworkers	Indigenous	US Citizen	Green Card	Unauthorized*
Unemployment Insurance	37%	12%	81%	80%	4%
Food Stamps	4%	4%	2%	5%	3%
MediCal/Medicare	26%	19%	36%	36%	18%
WIC	17%	16%	10%	19%	16%
Other social programs	3%	2%	3%	5%	2%

*Family members of unauthorized workers may have a different legal status than the worker and thus may be eligible for some services.

Living Quarters

The type of dwelling inhabited by the majority of California farmworkers in 2003-2004 was the single family home (62%). Another 29 percent lived in apartments, six percent occupied mobile homes, two percent roomed in dormitory or barracks-style housing, and one percent lived in duplexes or triplexes. Nearly all workers (96%) reported living off-farm in a property not owned or administered by their present employer. Of the remainder of workers, three percent said they resided on the farm of the grower they were working for and one percent said they lived off the farm but in a property owned or administered by their employer.

Workers of indigenous origin were less likely than California farmworkers as a whole to live in single family homes and more likely to live in apartment-type housing. Fifty-two percent of indigenous workers resided in single family homes and 43 percent occupied apartments. The remaining five percent said they stayed in mobile homes (4%) or in dormitories or barracks (1%). Except for the one percent of indigenous farmworkers who reported they lived on the farm of the grower they were working for at the time, almost all (99%) resided off the farm in housing not owned or administered by their current employer.

Similar to workers of indigenous origin, just more than half of unauthorized workers (54%) reported living in single family dwellings. This is in stark contrast to U.S. citizens and legal permanent residents, many more of whom resided in single family homes (86% and 68% respectively). Unauthorized workers were 15 percent more likely than those with green cards (37% versus 22%) and 29 percent more likely than those with citizen status (37% versus 8%) to reside in apartments. Exhibit 28 summarizes the type and location of workers' living quarters.

Exhibit 28. Type and Location of California Farmworkers' Living Quarters, 2003-2004

	All Farmworkers	Indigenous	US Citizen	Green Card	Unauthorized
<i>Type of Housing</i>					
Single Family Home	62%	52%	86%	68%	54%
Apartment	29%	43%	8%	22%	37%
Mobile Home	6%	4%	4%	7%	6%
Dormitory/Barracks	2%	1%	0%	2%	2%
Duplex/Triplex	1%	<1%	1%	1%	<1%
<i>Location of Housing</i>					
Off-farm (property not owned by employer)	96%	99%	94%	95%	97%
Off farm (property owned by employer)	1%	0%	1%	2%	1%
On farm of employer	3%	1%	5%	3%	2%

Chapter 4: Occupational Health

Summary of Findings

Among California farmworkers:

- *Only 5% of farmworkers had handled pesticides in the past year.*
- *Eighty-six percent of farmworkers reported receiving pesticide training.*
- *Almost all workers reported having drinking water and clean cups provided for them by their employers every day (96%).*
- *The rate of work-related musculoskeletal injuries, skin conditions, or respiratory problems was 25% or less.*
- *Twenty-four percent of workers suffered from musculoskeletal pain, 12% experienced skin conditions, and less than 20% had respiratory problems.*

Pesticide Safety Training and Pesticide Application

Employers are required to provide pesticide safety training to any worker entering an area that has been treated with pesticides in the last thirty days, whether or not they work directly with the pesticides (i.e., loading, mixing, or applying). This training is intended to help workers protect themselves from residue on plants or drift and it must be conducted in a manner that the worker can understand. Among the farmworkers interviewed in California in 2003-2004, 86 percent reported they had received training or instruction from their current employer in the safe use of pesticides in the past 12 months.¹³ This was up two percent since 2001-2002 when 84 percent of workers were given pesticide training, and up eight percent since 1999-2000 when 78 percent reportedly received training in the safe use of pesticides. Given that these proportions are so high, it is worth noting that the NAWS pesticide safety training question relies on workers' reports and does not necessarily ensure employer compliance with Federal or State regulations.

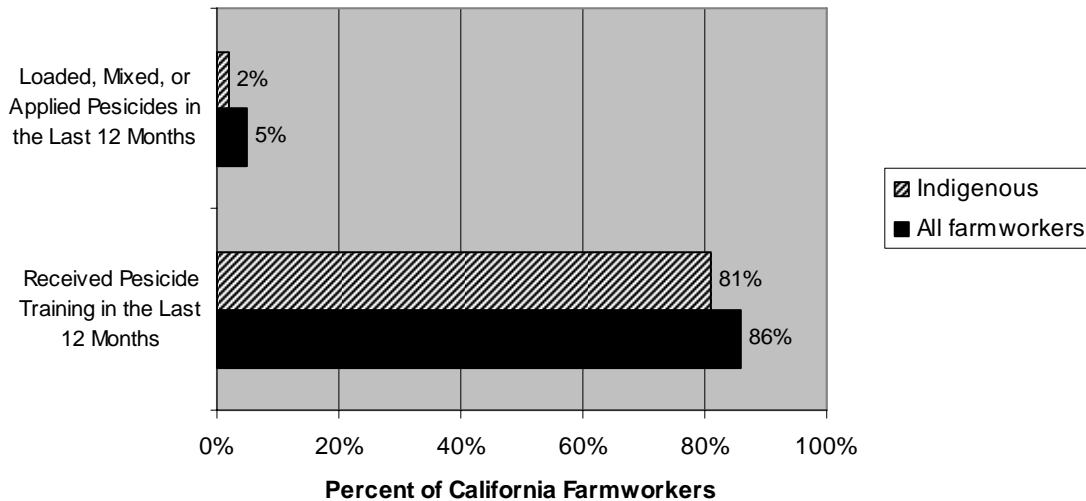
Only five percent of the farm labor force in California reported they had loaded, mixed, or applied pesticides in the past 12 months. This reflects a slight decrease since 2001-2002 when seven percent of California farmworkers said they had worked with pesticides in the 12 months prior to their interview. Among workers of indigenous origin, two percent stated in 2003-2004 that they had loaded, mixed, or applied pesticides for their current employer.

The frequency of workers of indigenous origin who said they had received pesticide training in the past 12 months was slightly lower than that of California farmworkers as a whole (81% vs. 86%). Why are indigenous workers less likely than those not of indigenous origin to report they had been trained in the safe use of pesticides? The lack of access to training materials in indigenous languages may be a factor. The effectiveness of pesticide-related training materials depends on workers' ability to understand them. Workers must be able to understand the materials used to

¹³ The NAWS survey asks, "In the past 12 months, with your current employer, has anyone given you training or instructions in the safe use of pesticides (through video, audio cassette, classroom lectures, written material, informal talks or by any other means)?"

teach them about pesticide safety, not only for their own health and well-being, but also to reduce the risk of exposing their families to pesticides. Exhibit 29 compares the rates of pesticide use and pesticide training among all California farmworkers to those of indigenous origin.

Exhibit 29. Pesticide Use and Pesticide Training Among California Farmworkers, 2003-2004



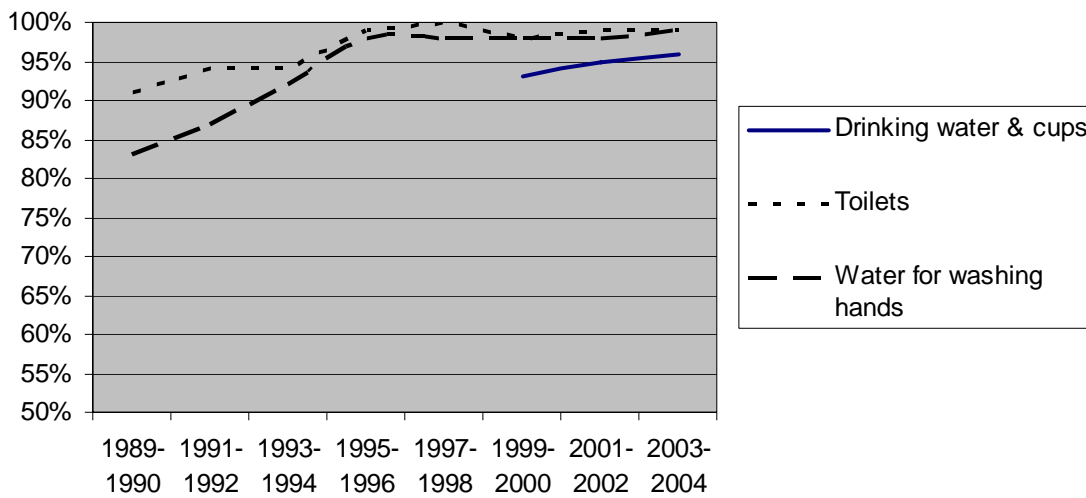
Sanitation

The proportion of California farmworkers who report that their employer provides clean drinking water and disposable cups for them while at work in the fields has increased each year since 1999, the first year the question was asked. In 2003-2004, 96 percent of workers said their employers provided drinking water and cups every day, up from 95 percent in 2001-2002 and 93 percent in 1999-2000. Nearly all (99%) California farmworkers in 2003-2004 reported their employers provided both toilets and water for washing hands, a marked increase from 1989-1990 when the question was first asked.

The NAWS field sanitation questions do not necessarily ensure compliance with State or Federal regulations. The NAWS asks only about facilities on the property, these results do not speak to the quality of them; that is, the condition of the toilets, whether they are used, whether there are enough toilets or enough water, or whether workers have to pay for use of the facilities, is not known. According to Cal/OSHA, Compliance with California's Field Sanitation Standard has continued to increase since the regulation was first implemented and enforced in 1992.

Exhibit 30 demonstrates the degree to which employers provide farmworkers with clean drinking water, toilets, and water to wash their hands while they are at work in the fields.

Exhibit 30. Frequency with Which Employers Provide Workplace Essentials, 1989-2004*



*The NAWS began collecting data on employer-provided drinking water and disposable cups in 1999.

Work-related Injuries

Workers interviewed for the NAWS are posed a series of questions about injuries related to their work in the fields, including musculoskeletal pain, skin conditions, and respiratory problems. In 2003-2004, nearly a quarter (24%) of farmworkers in California reported suffering from at least one musculoskeletal problem. This is four percent higher than in 2001-2002 and six percent higher than in 1999-2000.

Skin conditions were not common among California farmworkers in 2003-2004, as just 12 percent stated they experienced at least one skin problem in the 12 months prior to their interview. However, reports of skin conditions have increased over the past six years, up from six percent in 2001-2002 and eight percent in 1999-2000.

California farmworkers were asked to report any respiratory problems they experienced in the past 12 months, apart from those associated with having a cold. The most prevalent symptoms were watery or itchy eyes (16%) and runny or stuffy noses (14%). The proportions of workers who suffered from either of these two symptoms have increased since 1999. Among those who said they experienced watery or itchy eyes, more than two-thirds (69%) reported their symptoms were brought on or made worse by dust, dirt, or chemicals in the air while they were working in the fields. More than half (52%) of workers with runny or stuffy noses said the same. Exhibit 31 details the frequency of reports of musculoskeletal problems, skin conditions, and respiratory conditions in 2003-2004 and Exhibit 32 illustrates the occurrence of these conditions over the past 6 years.

Exhibit 31. Incidence of Work-Related Injuries in Previous 12 Months among California Farmworkers, 2003-2004¹⁴

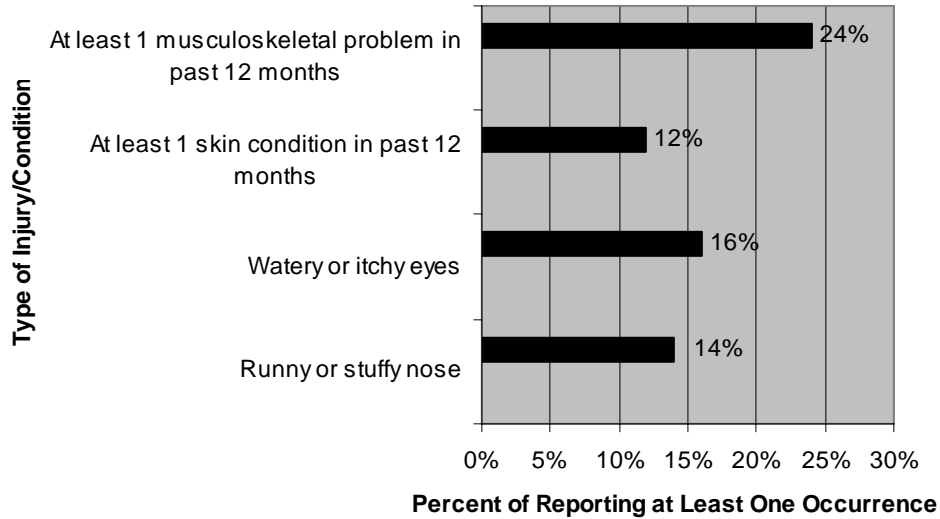
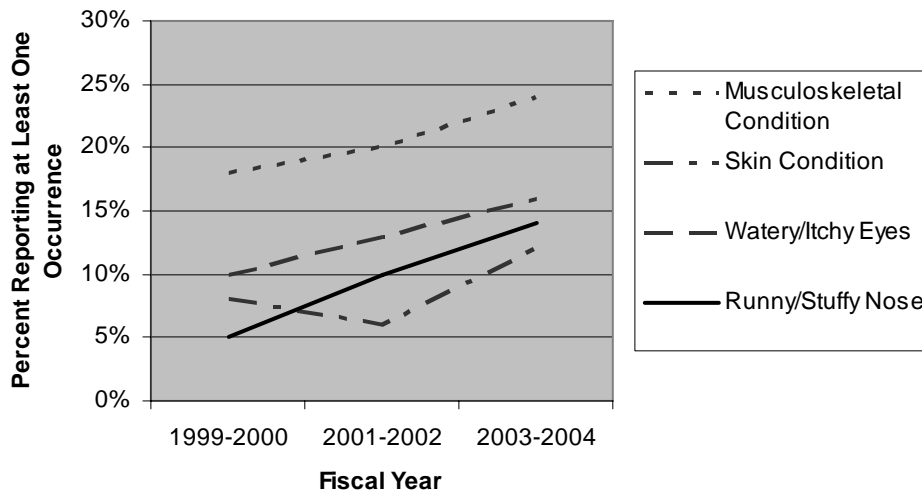


Exhibit 32. Incidence of Musculoskeletal, Skin, and Respiratory Conditions in Previous 12 Months among California Farmworkers, 1999-2004



¹⁴ 69 percent of workers with watery or itchy eyes and 52 percent with runny or stuffy noses said their symptoms were brought on or made worse by dust, dirt, or chemicals in the air while working in the fields.

Chapter 5: Health and Health Care

Summary of Findings

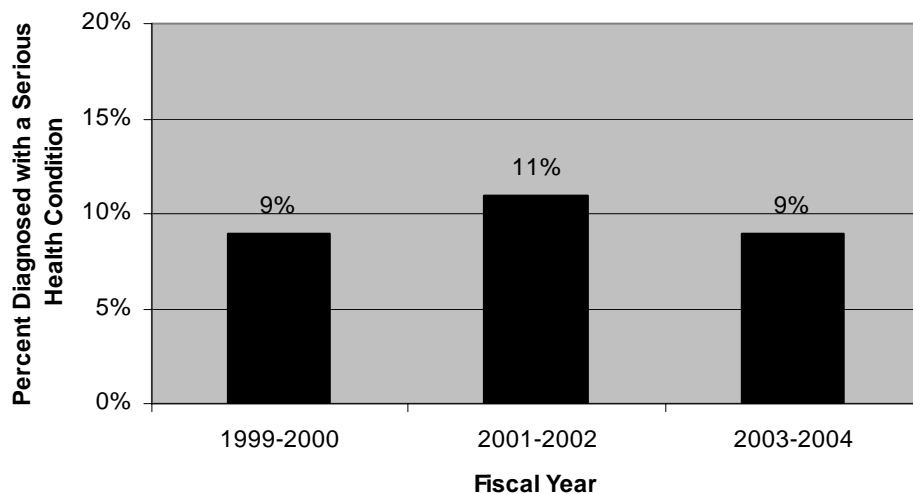
Among California farmworkers:

- Nine percent of California farmworkers had suffered a significant health problem in their lifetime.
- One fifth of workers were current or former smokers.
- The majority of farmworkers had no health insurance (70%); 65 percent were covered by Worker's Compensation.
- Forty-nine percent of workers sought services from a health care provider in the U.S. in the past two years, primarily from private doctors or private clinics (51%).
- The most significant barrier to accessing health care is cost.

Health History

In 2003-2004, nine percent of California farmworkers reported that, at some point in their lifetime, they had been told by a doctor or nurse that they suffered from a significant health condition such as diabetes, high blood pressure, tuberculosis, heart disease, a urinary tract infection, or asthma. The proportion of California farmworkers who say they have or once had one of these health conditions has remained fairly consistent over the past six years, at 11 percent in 2001-2002 and nine percent in 1999-2000 (see Exhibit 33). Most (88%) of those with health conditions reported they had seen a doctor or nurse about their illness in the past 12 months; 78 percent sought treatment in the U.S., five percent were treated abroad, and another five percent saw medical professionals both in the U.S. and abroad.

Exhibit 33. Lifetime Incidence of Six Health Conditions among California Farmworkers, 1999-2004*

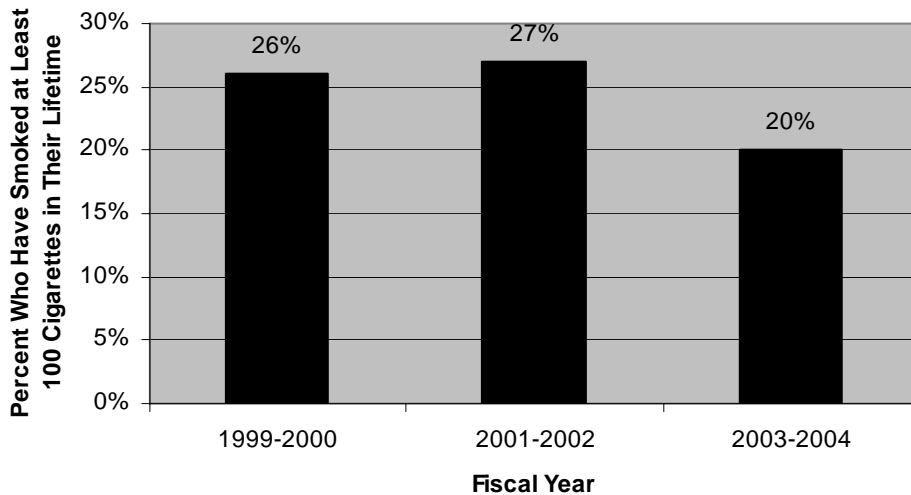


* Conditions include diabetes, high blood pressure, tuberculosis, heart disease, a urinary tract infection, and asthma.

Smoking

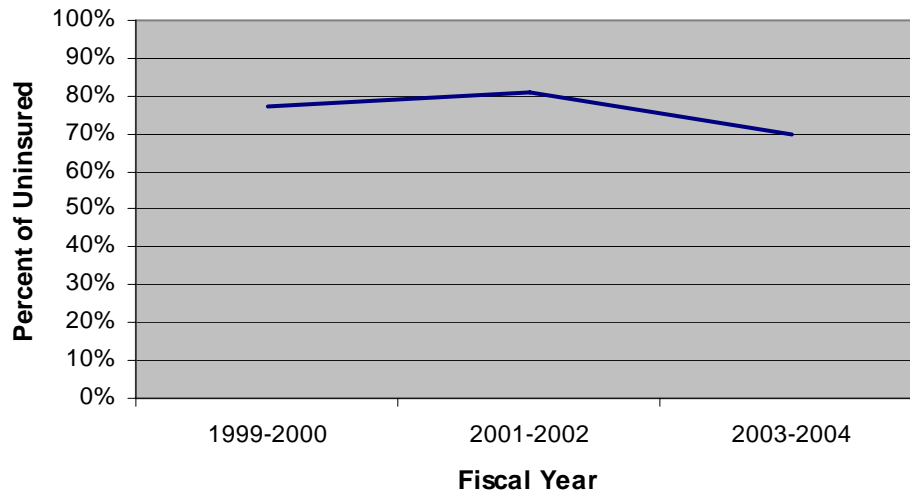
A fifth (20%) of farmworkers interviewed in California in 2003-2004 reported they were current or former smokers, having smoked at least 100 cigarettes in their lives. This is down from more than a quarter in 1999-2000 and 2001-2002 (26% and 27% respectively) (see Exhibit 34). Seventy-six percent of smokers in 2003-2004 said they smoked a median six cigarettes per day, six percent said they smoked less than one cigarette a day, and 18 percent stated they had not smoked in the past 12 months.

Exhibit 34. Smoking among California Farmworkers, 1999-2004



Health Insurance

Nearly three-quarters (70%) of farmworkers in California in 2003-2004 had no health insurance. Although the percentage of uninsured was high in these most recent years, it was down from 77 percent in 1999-2000 and 81 percent in 2001-2002 (see Exhibit 35).

Exhibit 35. California Farmworkers Lacking Health Insurance, 1999-2004

Among those workers who were insured in 2003-2004, half (50%) said it was provided by their employer, 35 percent were covered under a government program, 29 percent paid all or a portion of it themselves¹⁵, eight percent had health insurance through their spouse's employer, and two percent were insured some other way.¹⁶

Forty-one percent of all farmworkers with spouses in California reported that their spouse had health insurance. Forty-four percent of spouses received health insurance through a government program. Thirty percent of spouses were covered by the farmworkers' employer and 20 percent were covered by their own employer. Nineteen percent of farmworker families paid for all or a portion of the spouse's insurance and one percent were insured some other way.

Seventy-nine percent of California farmworkers with children said their children had health insurance, the vast majority (76%) through government programs. Thirteen percent of farmworkers insured their children through their own employer and five percent used insurance provided by their spouse's employer. A fraction (9%) of farmworker families paid for all or a portion of the children's health insurance and two percent insured their children through some other means.

Unauthorized workers were the most likely to be uninsured in 2003-2004, with 83 percent saying they were without health insurance. Among them, only 17 percent said they themselves had health insurance, 29 percent reported their spouses were covered, and 71 percent said their children were insured. Exhibit 36 shows the proportions of California farmworkers who had insurance for themselves and their family members in 2003-2004, and Exhibits 37, 38, and 39 show the distribution of the sources of their

¹⁵ Includes the farmworker and/or their spouse.

¹⁶ More than 1 insurance provider is possible for farmworkers, spouses, and children.

insurance (sources may sum to more than 100% as more than one insurance provider is possible).

Exhibit 36. Health Insurance Among California Farmworkers and Their Families, 2003-2004

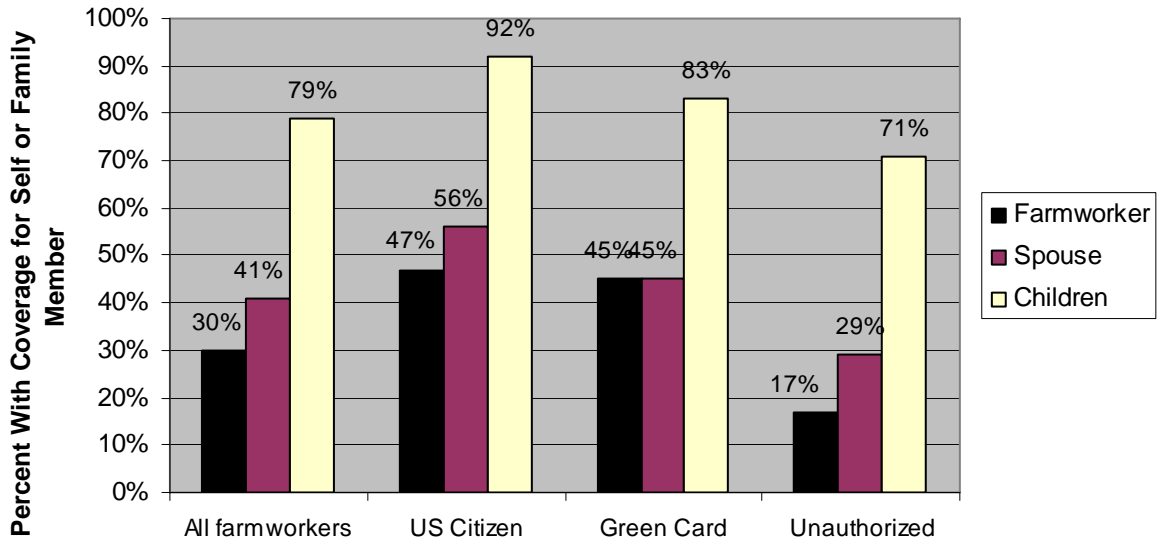


Exhibit 37. Source of Farmworkers' Health Insurance, 2003-2004

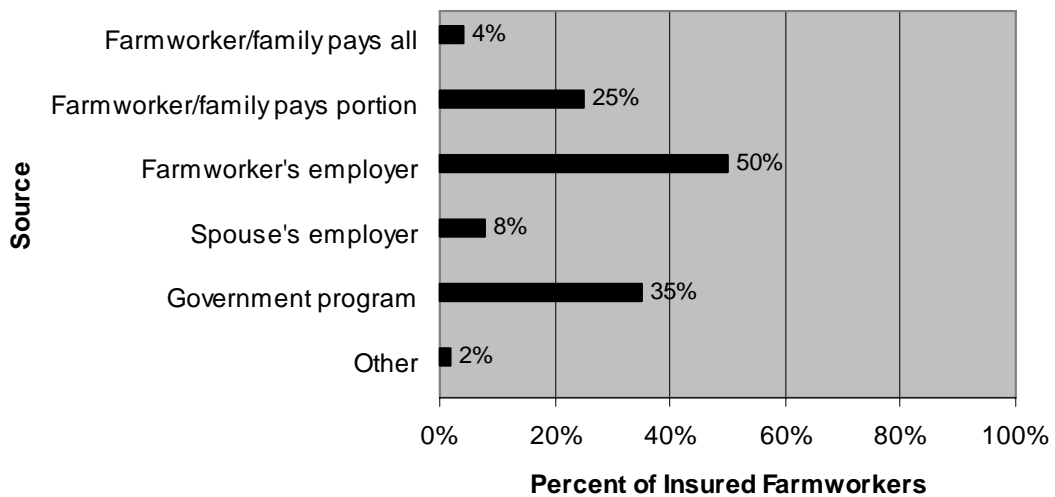
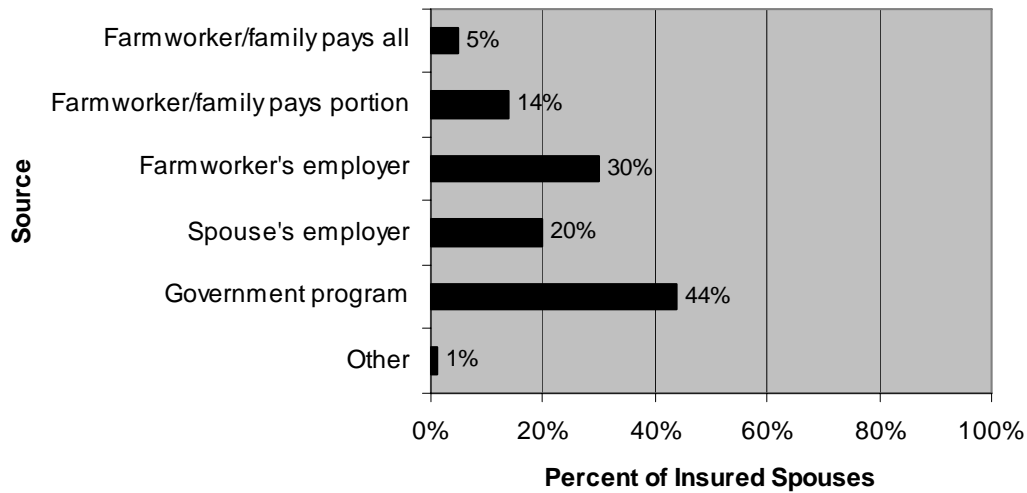
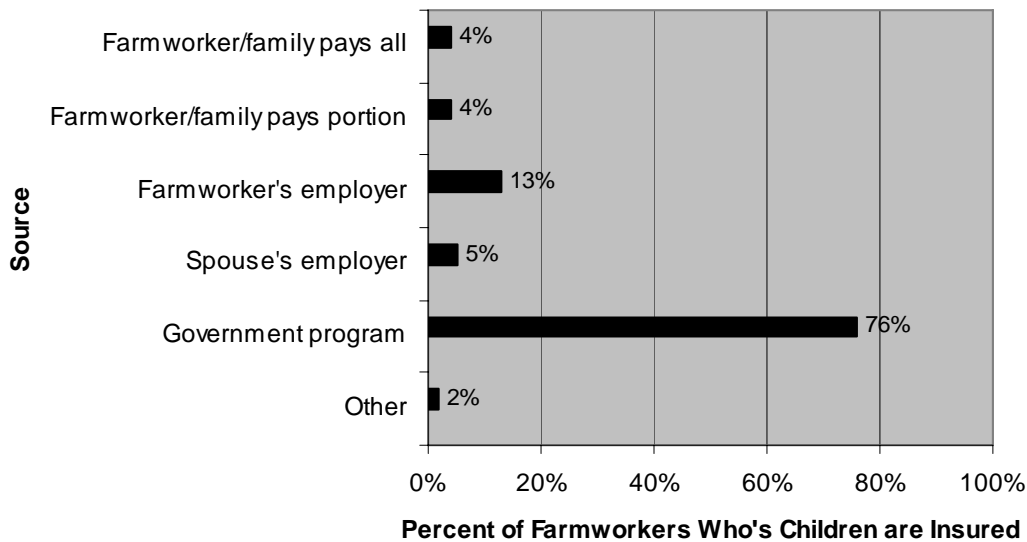


Exhibit 38. Source of Spouses' Health Insurance, 2003-2004**Exhibit 39. Source of Children's Health Insurance, 2003-2004**

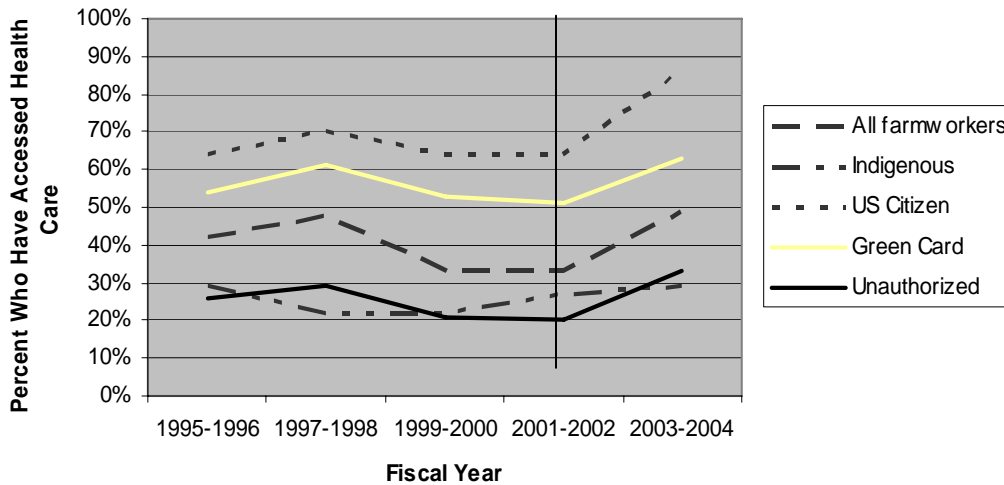
Workers' Compensation

In 2003-2004, only two-thirds of farmworkers in California believed they were covered by Workers' Compensation despite the fact that California has universal Workers' Compensation. In other words, when asked whether they would receive payment while recuperating from injuries sustained at work or illness resulting from their work, 65 percent responded "yes." Twelve percent of workers believed they did not have access to Workers' Compensation, and 23 percent did not know. Farmworkers were either unaware they had access to Workers' Compensation, or felt they would not qualify.

Health Care Utilization

Nearly half (49%) of California farmworkers in 2003-2004 said they used some type of health care service, whether from doctors, nurses, dentists, or hospitals, in the U.S. at least once in the two years prior to their interview. This reflects a 16 percent increase over each of the two-year periods covering 1999-2000 and 2001-2002. The frequency of health care visits among unauthorized individuals and those of indigenous origin was much lower than for California farmworkers in general, as only 29 percent of unauthorized workers and 33 percent of indigenous workers in 2003-2004 said they visited a health care professional in the U.S. in the past two years (see Exhibit 40). Female farmworkers were more than twice as likely as male farmworkers to seek health care (79% and 37% respectively).

Exhibit 40. California Farmworkers Who Have Accessed U.S. Health Care in Past Two Years

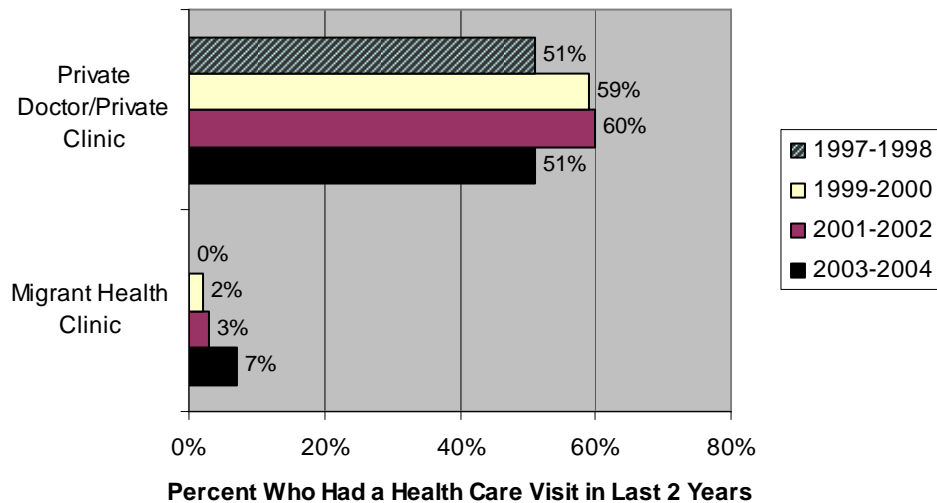


Fifty-one percent of workers who sought medical care in 2003-2004 went to a private doctor's office or private clinic, another quarter (25%) went to a community health center, hospital, or emergency room, 16 percent saw a dentist, seven percent visited a migrant health clinic, and one percent used some other type of health care provider (see Exhibit 41). In general, farmworker visits to private doctors' offices or clinics decreased eight percent since 1999-2000 while visits to migrant health clinics increased five percent during the same time period (see Exhibit 42).

Exhibit 41. Health Care Providers Visited by California Farmworkers in Past Two Years, 2003-2004

	All farmworkers	US Citizen	Green Card	Unauthorized
Private doctor/Private clinic	51%	67%	58%	36%
Migrant health clinic	7%	1%	6%	12%
Dentist	16%	20%	15%	15%
Other	1%	2%	0%	0%
Community health center/Hospital/ER	25%	11%	21%	36%

Exhibit 42. Frequency of Visits by California Farmworkers to Private Doctors or Private Clinics vs. Migrant Health Clinics, 1997-2004



Farmworkers' lack of health insurance became evident when they were asked who paid the majority of the cost of their last health care visit. Forty-one percent of workers paid most of the bill out of their own pocket. A fifth of California farmworkers used MediCal, 11 percent were covered under an employer-provided health plan, three percent of farmworkers and/or their families had individual health plans to pay for their last healthcare visit, and one percent were covered under Workers' Compensation. Seventeen percent of farmworkers paid their healthcare costs using some other type of plan (3%) or a combination of employer-provided, individual, and/or government health plans (14%). The remaining six percent of workers either went to a public clinic that did not charge (5%) or they were billed by the health care provider but did not pay (1%) (see Exhibit 43).

Exhibit 43. Who Paid Majority of Bill for California Farmworkers' Last Health Care Visit, 2003-2004

	All farmworkers	Indigenous	US Citizen	Green Card	Unauthorized
Paid bill out of own pocket	41%	35%	37%	38%	46%
MediCal/Medicare	21%	31%	27%	21%	19%
Public clinic, did not charge	5%	11%	1%	3%	10%
Employer-provided health plan	11%	7%	13%	12%	8%
Self/family bought individual health plan	3%	0%	5%	4%	1%
Other plan	3%	2%	3%	3%	2%
Combination of plans	14%	10%	12%	18%	11%
Billed, did not pay	1%	3%	0%	0%	2%
Workers' Compensation	1%	0%	1%	1%	1%

Barriers to Accessing Health Care

Farmworkers in California face a number of barriers to accessing health care in the U.S., several of which they spoke of when interviewed in 2003-2004. Predictably, workers' number-one barrier to getting the health care they need is that the costs are prohibitive; 83 percent said that health care is too expensive. Workers discussed a variety of other obstacles they encountered when they wanted to get health care, including poor treatment because they are undocumented (11%), language barriers (7%), feeling that providers do not understand their problems (5%) or make them feel unwelcome (3%), and other difficulties (10%) (see Exhibit 44).¹⁷

Exhibit 44. Barriers to Accessing Health Care Faced by California Farmworkers, 2003-2004

	All farmworkers	Indigenous	US Citizen	Green Card	Unauthorized
Too expensive	83%	66%	94%	91%	76%
I'm undocumented	11%	21%	1%	1%	19%
They don't speak my language	7%	13%	0%	4%	10%
They don't understand my problems	5%	5%	7%	2%	6%
I don't feel welcomed	3%	2%	0%	6%	3%
Other	10%	13%	13%	7%	11%

Interestingly, while more than nine out of ten California farmworkers with U.S. citizen or green card status named expense as a barrier to accessing health care (94% and 91% respectively), comparatively fewer unauthorized workers and those of indigenous origin stated the same (76% and 66% respectively). This may be due to the fact that

¹⁷ Multiple responses were possible.

fewer of these farmworkers have sought health care in the U.S. and thus may not know just how expensive it is. Lack of documentation and language barriers were much greater concerns among unauthorized and indigenous individuals than they were for U.S. citizens and legal permanent residents.

Appendix: Statistical Procedures

This section describes the statistical procedures used to analyze NAWS data for this report. Further details on the statistical procedures can be obtained from the National Agricultural Workers Survey Web site at

<http://www.dol.gov/dol/asp/public/programs/agworker/naws.htm>.

NAWS Weighting Procedure

According to the probability of inclusion, post-sampling weights are constructed taking into account the year, season and region in which the farmworker was sampled as well as the number of days per week worked by the farmworker.

Determining Confidence Intervals

The confidence interval is the range within which the true value of the population mean is likely to fall. There is only one true population value and the only way to obtain that value is to measure everyone in the population. While this is an impossible feat, it is possible to use a sample of the population to calculate the likely range of the true value.

“Likely” is usually defined as 95% of the time. A 95% confidence interval means that one can be 95% sure that the interval contains the true population value. The values at each end of the interval are called the confidence limits. For example, the median age of the NAWS sample of California farmworkers during 2003-2004 is 32 and the 95% confidence limits are 30 and 34. This means there is a 95% chance that the median age of *all* farmworkers in California falls between 30 and 34.

Because the NAWS has a complete sampling design, confidence intervals were estimated using both the SAS and SUDAAN software packages.

Table A 1. Means, Medians*, Proportions, and Confidence Intervals for Continuous and Categorical Variables, NAWs 2003-2004

Variable	Mean, Median, or Percentage	95% Confidence Interval	
		Lower Limit	Upper Limit
FARM LABOR IN CALIFORNIA			
California Farmworkers as Percent of U.S. Farm Labor Force	36%	20%	51%
California Farmworkers Employed in Fruits, Vegetables, or Horticulture as Percent of Nation	44%	28%	61%
CROP			
Field Crops	5%	3%	8%
Fruits and Nuts	46%	27%	66%
Horticulture	8%	2%	13%
Vegetables	40%	21%	58%
Other	1%	0%	2%
TASK			
Pre-harvest	21%	12%	29%
Harvest	38%	26%	51%
Post-harvest	11%	4%	18%
Semi-skilled	19%	11%	27%
Other	11%	7%	14%
EMPLOYER			
Grower	63%	55%	71%
Farm Labor Contractor	37%	29%	45%
FARMWORK EXPERIENCE			
Number of Years in Farmwork	10.9	10.3	11.4
Worked in Agriculture Before Coming to U.S.	64%	59%	70%
PLANS TO CONTINUE IN FARMWORK			
Less Than 1 Year	1%	0%	3%
One to Three Years	10%	7%	12%
Four to Five Years	8%	3%	12%
Over Five Years	5%	0%	11%
Over Five Years/As Long As I'm Able	72%	65%	80%
Other	4%	2%	6%
NUMBER OF OTHER FAMILY MEMBERS DOING FARMWORK			
None	71%	63%	79%
1	28%	20%	36%
2-3	1%	0%	1%

Medians are denoted with an asterisk ().

