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Profile of Hired Farmworkers, A 2008 Update

William Kandel



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William Kandel

Abstract

Hired farmworkers make up a third of the total agricultural labor force and are critical to U.S. agricultural production, particularly in labor-intensive sectors such as fruits and vegetables. The hired farmworker labor market is unique because it includes a large population of relatively disadvantaged and often unauthorized workers, a portion of whom migrate to, and within, the United States. Recent economic and demographic trends, such as changing agricultural production methods that permit year-round employment, expanding immigrant populations in nonmetropolitan counties, and growing concerns over U.S. immigration policies, have elicited increased interest in hired farmworkers. This 2008 profile serves as an update to the 2000 Economic Research Service analysis of the 1998 Current Population Survey using current data with expanded sections on legal status, poverty, housing, and use of social services.

Keywords

Hired farmworkers, farm labor, agriculture, migrant, immigrant, farm structure, demography, legal status, employment, poverty, housing, social services, health

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Summary

Current estimates indicate that more than 1 million hired farmworkers are employed in U.S. agriculture. Economic and demographic trends have elicited an increased interest in hired farmworkers, including the impact they have on U.S. agricultural production. While productivity gains have gradually reduced the total agricultural labor force, hired farmworkers continue to play an important role in this industry.

What Is the Issue?

Hired farmworkers make up a third of the total agricultural labor force and are critical to U.S. agricultural production, particularly for labor-intensive sectors such as fruits and vegetables. The hired-farmworker labor market is unique because it includes a relatively disadvantaged and sometimes mobile workforce, a large proportion of whom lack authorization to work in the United States. Although agriculture employs less than 2 percent of the U.S. labor force, recent economic and demographic trends such as agricultural production methods that permit year-round employment, expanding immigrant populations in nonmetropolitan counties, and growing concerns over U.S. immigration policies have increased interest in hired farmworkers.

What Did the Study Find?

- In 2006, an average 1.01 million hired farmworkers made up a third of the estimated 3 million people employed in agriculture. The other 2.05 million included self-employed farmers and their unpaid family members.
- Productivity gains have gradually reduced the total agricultural labor force and the number of hired farmworkers within it.
- Expanding nonfarm economic opportunities for farmers and their family members have increased farmers' reliance on hired farm labor.
- Despite new patterns of Hispanic population settlement in rural areas, the geographic distribution of farmworkers has not changed significantly in the past decade. California, Florida, Texas, Washington, Oregon, and North Carolina account for half of all hired and contracted farmworkers.
- Hired farmworkers are disadvantaged in the labor market relative to most other U.S. wage and salary workers. On average, hired farmworkers are younger, less educated, more likely to be foreign-born, less likely to speak English, and less likely to be U.S. citizens or to have a legally authorized work permit.
- According to the National Agricultural Workers Survey (NAWS), which offers the most precise data available on farmworker legal status, half of all hired crop farmworkers lack legal authorization to work in the United States.
- Farmworker unemployment rates are double those of all wage and salary workers, but vary considerably by individual characteristics. Those working in field crops have twice the unemployment rate of livestock workers.

- Hired farmworkers earn less than other workers. Median weekly earnings of full-time farmworkers are 59 percent of those for all wage and salary workers. Poverty among farmworkers is more than double that of all wage and salary employees.
- Hired farmworkers who migrate between work locations are disadvantaged in the labor market and earn less than settled farmworkers. Disadvantages include poorer health and challenges to migrant children attending school.
- Housing conditions of farmworkers have historically been substandard because of crowding, poor sanitation, poor housing quality, proximity to pesticides, and lax inspection and enforcement of housing regulations.
- Agricultural work is among the most hazardous occupations in the United States, and farmworker health remains a considerable occupational concern. Farmworkers face exposure to pesticides, risk of heat exhaustion and heat stroke, inadequate sanitary facilities, and obstacles in obtaining health care due to high costs and language barriers.
- Hired farmworkers use select social services, such as Food Stamps, Women, Infants, and Children (WIC) Nutrition Program, Medicaid, and free school lunches, at higher rates than other wage and salary employees. Within the noncitizen crop farmworker population, authorized workers use those services at higher rates than unauthorized workers. Citizen farmworkers, whose poverty rates are a third those of noncitizen farmworkers, use such programs less than authorized noncitizen workers.

How Was the Study Conducted?

Principal data sources for this study include the Current Population Survey (CPS) March Supplement and Earnings File, NAWS, and the Census of Agriculture. Empirical support came from extensive research literature on hired farmworkers, including a previous Economic Research Service study that served as a baseline for elements of this report. CPS data allow for comparisons between hired farmworkers and workers in other occupations. This report used all other wage and salary workers as a reference group in order to compare the status of hired farmworkers relative to the total employed U.S. population (excluding farmworkers). In certain cases, hired farmworkers were compared with other occupations of similar skill levels.

Within each of the two groups consisting of farmworkers and other wage and salary employees as a group, CPS data also permit comparisons between workers with and without citizenship. Such comparisons are not equivalent to comparing authorized and unauthorized workers, but because legal status is such a critical socioeconomic characteristic, the citizen/noncitizen comparisons offer additional insight. NAWS data distinguished how hired crop farmworkers differ by unauthorized, authorized, and citizen legal status. Finally, data from the Census of Agriculture and the Agricultural Resource Management Survey place farm labor within the broader context of the agricultural sector.

Introduction

Hired farmworkers make up an estimated third of the total U.S. agricultural labor force and are critical to U.S. agricultural production, especially for labor-intensive agricultural sectors such as fruits and vegetables. A steadily increasing U.S. population, growing demand for labor-intensive crops, and a continually consolidating farm sector have stabilized the demand for hired farm labor in the past decade.

Changing geographic patterns of immigrant settlement in rural areas have increased the visibility of immigrants (Kandel and Cromartie, 2004). Changing production methods now permit year-round production for some farm enterprises, which has helped increasing numbers of formerly migratory workers settle permanently in nonmetropolitan counties.

The hired-farmworker labor market is unique in several respects:

1. Many farmworkers are mobile, traversing State and national boundaries. However, only an estimated 12 percent are “follow-the-crop” farmworkers who follow well-established migrant streams corresponding to agricultural production cycles.
2. Roughly half of all hired farmworkers in the United States lack legal authorization according to the U.S. Department of Labor, making their employment status tenuous and work circumstances and conditions more difficult.
3. Hired farmworkers face a challenging work environment that may include hazardous work conditions, low pay, and substandard housing conditions.

Consequently, while critical to many agricultural sectors, hired farmworkers remain among the most economically disadvantaged working groups in the United States. This relative position within the U.S. occupational structure has changed little over time (McWilliams, 1935; Griffith and Kissam, 1995). Safety improvements notwithstanding, agriculture remains one of the most hazardous industries in the Nation, and farmworkers encounter relatively unique risks from pesticides as well as conventional hazards from heavy equipment operation and physically strenuous labor (U.S. Department of Health and Human Services, 1998). Moreover, unauthorized workers fail to qualify for some social programs or choose not to use them for fear of deportation.

Total Estimates of Hired Farmworkers

In 2006, an average of 1.01 million hired farmworkers made up a third of the estimated 3 million people employed in agriculture. The other 2.05 million included self-employed farmers and their unpaid family members.¹ This report focuses exclusively on the characteristics and well-being of hired farmworkers. The 1.01 million figure is one of several cross-sectional estimates—ranging from 691,000 to as much as 1.4 million depending on the data source (see Appendix 2)—for the average number of hired farmworkers employed at any point throughout the year. Depending on the month or agricultural cycle, such estimates can change substantially. Moreover, high employment turnover means that an estimated 2.0 to 2.5 unique workers fill each farmworker job slot over the course of a year (Khan et al., 2003).

USDA's Farm Labor Survey remains the most accurate source of data on total counts of hired farmworkers. Other data sources and estimates yield different total counts of hired farmworkers (see Appendix 1), and each offers useful statistics on the characteristics and well-being of hired farmworkers. Current Population Survey (CPS) data, either from the 12-month Earnings File or the March Supplement, provide information on demographic and labor market characteristics and earnings. CPS data allow for comparisons between hired farmworkers and all wage and salary workers. Within each of these two employee subsets, CPS data also allow comparisons between workers with citizenship and those without. Such comparisons are not equivalent to comparing authorized and unauthorized workers, but because legal status is a critical socioeconomic characteristic, the citizen versus noncitizen comparison offers useful insights. The National Agricultural Workers Survey (NAWS) data provide more detailed information on legal status, but are limited to hired crop farmworkers and exclude hired livestock farmworkers. Census of Agriculture data and information from the Agricultural Resource Management Survey (ARMS) offer total labor costs per farm and information on farm structure.

¹The 1.01 million figure is a rounded average of the four quarterly 2006 Farm Labor Report figures for hired farmworkers produced by the USDA's National Agricultural Statistics Service (NASS). This figure is comprised of two groups: farmworkers hired directly by farm operators (752,000) and agricultural service workers hired on a contract or fee basis (256,000) (see Glossary). The 3.06 million figure represents the sum of the 1.01 million figure plus a simple linear extrapolation to 2006 from the last available annual figures for self-employed and nonpaid family farmworkers collected by NASS from 2000 to 2002. NASS no longer collects data on this group of farmworkers, only hired farmworkers. Despite this limitation, we use the NASS data series because it provides historical context since 1950. See Appendixes 1 and 2 for more information on estimates of the total number of people employed in the agricultural sector.

Farm Structure and Labor Demand

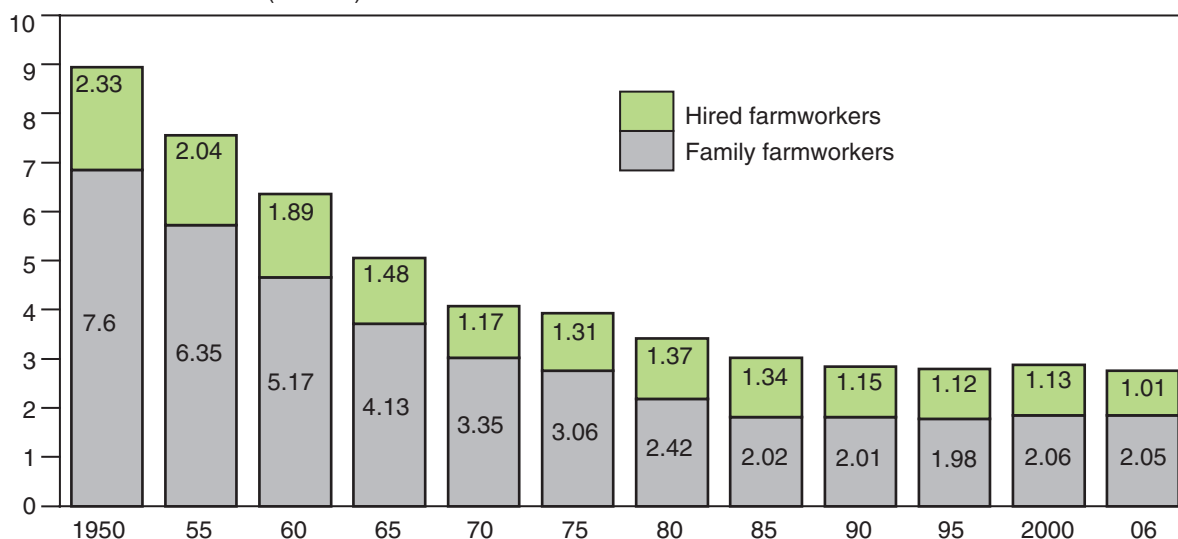
Demand for hired farmworkers reflects structural changes in agricultural production and food consumption of an ever-growing U.S. and world population. Post World War II American agriculture has been characterized by increases in labor productivity, brought about through technological innovation (Dimitri et al., 2005; Fuglie et al., 2007). As a result, agricultural production now occurs on fewer and often larger farms. Data from the Census of Agriculture indicate that between 1950 and 2002 average farm size more than doubled, from 216 to 444 acres, while the total number of farms declined from 5.5 to 2.1 million (Hoppe and Korb, 2005). Small farms, defined as those with sales of less than \$250,000 annually, still account for over 90 percent of all farms, but produce less than 30 percent of all agricultural output.

Declining farm employment reflects these trends (fig. 1). In 1950, the Census of Agriculture recorded almost 10 million people working on farms, including over 7.6 million farmers and their family members and 2.3 million hired farmworkers. Since that time, the number of family members and hired farmworkers has declined consistently to a total of just over 3 million in 2006. This corresponds to a drop in the proportion of the U.S. labor force employed in the agricultural sector from 12.5 percent in 1950 to less than 1.5 percent in 2006 (U.S. Census Bureau, 2007).

While declines in total farmworkers have leveled off since 1985, two unmistakable farm labor trends during the 20th century include a gradual decline in the use of labor inputs in general, and, for labor inputs used, a growing reliance on nonfamily hired farm labor (fig. 2). From 1950 to 2006, according

Figure 1
Total family and hired farmworkers on U.S. farms, 1950-2006

Number of farmworkers (millions)



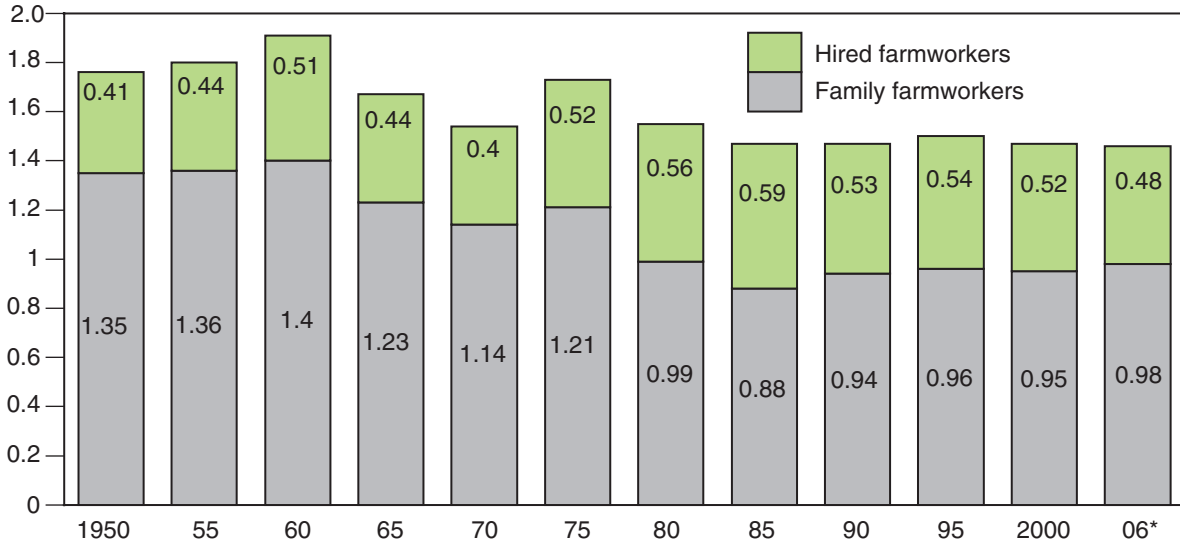
Notes: Family farmworkers include self-employed farmers and unpaid family members. Hired farmworkers include direct hires and agricultural service workers who are often hired through labor contractors. The 2006 family farmworkers figure of 2.05 million is estimated from a simple linear extrapolation from the last available annual figures for self-employed and nonpaid family farmworkers collected by NASS from 2000 to 2002.

Source: Farm Labor Survey, National Agricultural Statistics Service, USDA.

Figure 2

Average number of family and hired farmworkers per farm, 1950-2006

Number of farmworkers per farm



* Based on linear projection of earlier trends.

Notes: Family farmworkers include self-employed farmers and unpaid family members. Hired farmworkers include direct hires and agricultural service workers who are often hired through labor contractors.

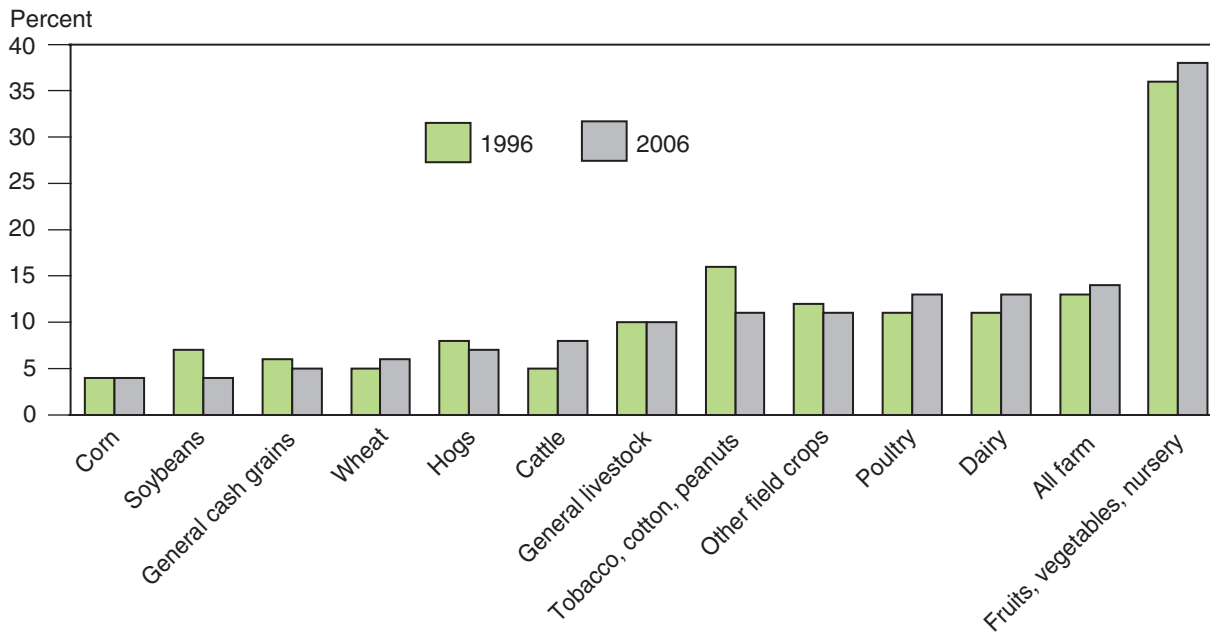
Source: Farm Labor Survey, National Agricultural Statistics Service, USDA.

to the Farm Labor Survey (FLS), the average number of family farmworkers per farm declined 27 percent, from 1.35 to 0.98, while the average number of hired farmworkers per farm increased from 0.41 to 0.59, between 1950 and 1985, before declining to 0.48 in 2006. As a consequence, the ratio of hired farmworkers to total farmworkers has increased from roughly 1 in 4 in 1950 to 1 in 3 in 2006. Moreover, because the FLS is a cross-section estimate at various points during the year and hired farmworkers are often seasonal workers, notwithstanding the recent increase in year-round workers, the total number of hired farmworkers over the course of a year is likely to be significantly higher than the FLS estimates.

Labor occupies a prominent place as the third largest production expense (considering all cash and noncash expenses, such as capital depreciation), behind feed and capital depreciation for the agricultural sector as a whole (fig. 3). For 2007, employee compensation for hired labor is forecast to be \$22.8 billion. After declining for decades, labor’s share of U.S. farm expenses began increasing in the mid-1980s. Consequently, any factors affecting the farm labor supply—such as minimum wage increases, changes in labor demand from other industries employing low-skilled workers (e.g., construction, manufacturing), or new immigration policies—will alter farm profitability and viability among agricultural sectors heavily reliant on farm labor. Growers who specialize in vegetables, fruits and nuts, and horticultural products, for which labor costs range from 30 to 40 percent of total expenses, are especially sensitive to fluctuations in the cost and availability of labor.

Growing reliance on foreign-born, hired farmworkers became firmly institutionalized at the outset of World War II with the Bracero Program, an immigration-related farm labor policy that allowed agricultural growers to hire Mexican workers to make up for war-induced labor shortfalls. This program lasted 22 years, from 1942 until 1964, when several factors including public

Figure 3
Labor's share of total cash expenses, by agricultural product, 1996 and 2006



Source: ERS analysis of 1996 and 2006 ARMS data.

concern over abusive labor practices, the rising use of unauthorized labor, and the growing farm labor movement convinced Congress to terminate it (Martin, 2003; Massey et al., 2002). During the Bracero Program and following its demise, unauthorized immigration to the United States grew, becoming an established trend by the 1980s. The Immigration Reform and Control Act of 1986 (IRCA), which was intended to reduce unauthorized immigration, regularized the legal status of over 1 million hired farmworkers between 1986 and 1989, but also increased penalties to employers who hired unauthorized workers. Nevertheless, after a brief respite, unauthorized immigration increased and continues to occur in substantial numbers.

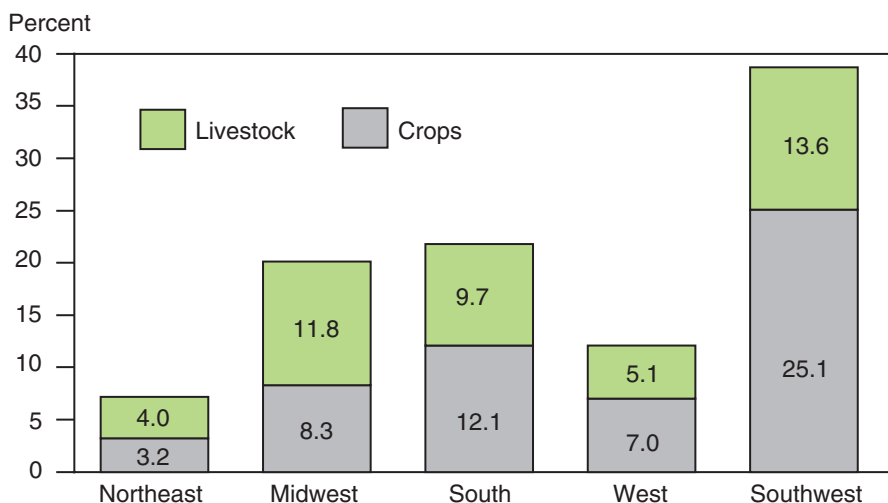
Agricultural producers have become accustomed to having a large pool of hired farmworkers available, and they continue to utilize a largely immigrant workforce that includes many who lack authorization to work in the United States. Despite increased border and employer enforcement policies, close to half of all farmworkers are unauthorized. While agricultural tasks for some crops have been automated, some growers contend that the expense of mechanization for other, currently labor-intensive products such as tree fruit and horticulture would prevent them from remaining competitive with foreign producers (American Farm Bureau Federation, 2006). Other research suggests that growers could adjust to smaller workforces with labor-efficient technologies and management practices (Martin, 2007). Both arguments remain untested because growers have relied upon a relatively ample labor supply (Levine, 2007)

Geography of Farm Labor

The geographic distribution of the hired farm labor force reflects the total quantity of agricultural production and the kind of crops grown in an area (fig. 4). Certain crops are more labor intensive. One way to put this in context is to compare labor expenses to cash receipts. For the United States, the total farm labor expense in 2006 was \$24.4 billion—amounting to 10.2 percent of total agricultural commodity cash receipts. But, in California, which has the highest cash receipts of any State and produces many labor-intensive products (such as dairy, grapes, and greenhouse/nursery), total farm labor expense amounted to 22.3 percent of the total value of agricultural cash receipts for 2006. In contrast, in Iowa, farm labor expense totaled 2.5 percent of cash receipts. Iowa has the third highest total cash receipts, but grows primarily non-labor-intensive agricultural commodities (such as corn, hogs, and soybeans).

Since 1980, the geographic distribution of farmworkers has shifted, with proportions declining in both the South and Midwest and increasing in the West and Southwest. Roughly 60 percent of all hired farmworkers currently work in crops and 40 percent work in livestock. Most hired crop farmworkers are located disproportionately in the Southwest, with California and Texas accounting for almost a third of the \$22 billion spent on hired farm and contract farm labor expenses in the United States in 2002 (fig. 5).

Figure 4
Hired farmworkers by geographic region and product type, 2006

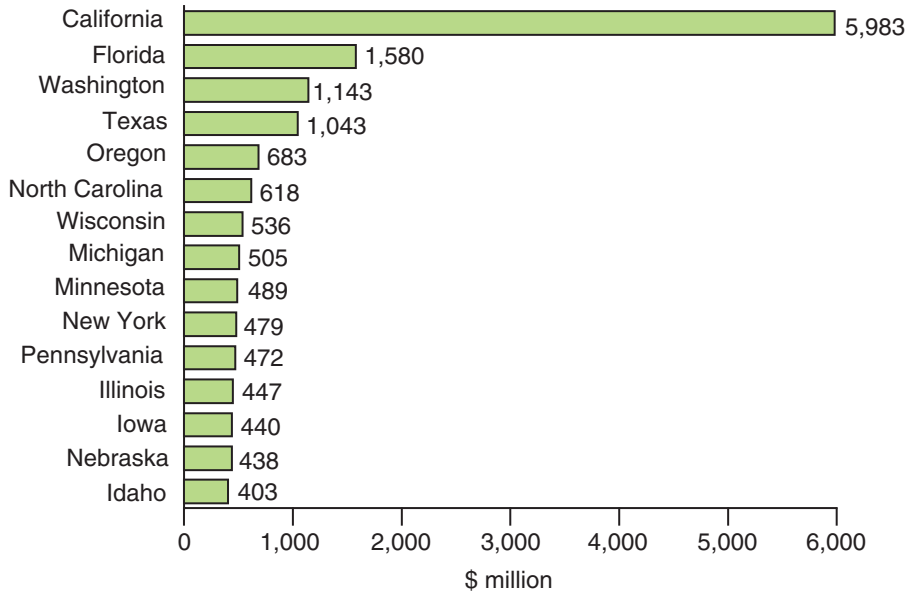


Notes: The sum of all figures equals 100 percent. We altered the four standard Census regions (Northeast, Midwest, South, and West) by identifying a 5-state Southwest region, extracted from the West and South regions, that includes Arizona, California, Colorado, New Mexico, and Texas (see Glossary). The percentages of farmworkers in each geographic region from the 2006 CPS Earnings File in this chart match, within 1 percent, the same geographic distribution of farm labor expenses found in the 2002 Census of Agriculture.

Source: ERS analysis of annual averages from 2006 Current Population Survey Earnings.

Figure 5

Top 15 States for hired farm and contract farm labor expenses, 2002



Source: ERS analysis of 2002 Census of Agriculture data.

Demographic Characteristics

The demographic profile of hired farmworkers contributes to their economic disadvantage relative to most other wage and salary workers in the United States (table 1). On average, they are younger, less educated, more likely to be foreign-born, and less likely to be citizens or authorized to work in the United States. The extent of this disadvantage depends on which data are used to represent the hired-farmworker population (Larson et al., 2002). We used CPS data to compare hired farmworkers with all wage and salary workers, but these data reflect characteristics of more established residents willing to respond to formal, repeated home-based interviews. To obtain an additional measure of relative disadvantage among unauthorized farmworkers, we present figures for each group by citizenship status. Presenting characteristics by citizenship status is not equivalent to presenting them by legal status, because many noncitizens possess legal authorization to work in the United States. Nevertheless, given the lack of complete legal status information, citizenship status roughly approximates the degree to which differences in authorized versus unauthorized status differentiate the farmworker population.

Hired farmworkers differ from other wage and salary workers, as a group, due to the gender imbalance of the hired farm workforce. Obstacles to international migration and the close living and working conditions of most U.S. farmworkers often present difficult or untenable circumstances for potential female migrants and their families. Hence, most hired farmworkers are men. Approximately 1 of every 5 hired farmworkers is female, compared with gender parity found among wage and salary workers in general.

Farm labor is physically demanding, and hired farmworkers tend to be younger than other wage and salary workers, in general. Visible differences between these two groups appear at the ends of the age distribution: the proportion of farmworkers in the youngest age group exceeds that of wage and salary workers in general, while the proportion in the oldest age group trails that of other wage and salary workers. Despite youth and gender imbalance, over half of all farmworkers are married, and in this respect they closely resemble all wage and salary workers (see box, “Children in Agricultural Labor”).

The racial and ethnic makeup of the hired farm labor force has changed significantly in recent decades, the most consequential transformation being the increasing proportion of Hispanic farmworkers.² According to 2006 CPS data, 43 percent of all hired farmworkers are Hispanic: for hired crop and hired livestock workers, the figures are 56 and 26 percent Hispanic, respectively (data not shown). Almost all noncitizen farmworkers are Hispanic. Yet, since noncitizens comprise only about a third of all farmworkers, the total CPS figure of 43 percent continues to differ substantially from the 2006 NAWS figure of over 80 percent for hired crop farmworkers. Survey methodology explains the discrepancy between these two national data sets. CPS data are collected from households each month over a 16-month period and, therefore, reflect characteristics of more established residents. NAWS data, on the other hand, are collected at the worksite and are therefore more likely to capture persons who have less stable living arrangements and who tend

²“Hispanic” is a pan-ethnic term that encompasses people whose origins include Mexico, Central America, South America, and the Caribbean. People who self-identify as Hispanic or Latino may be of any race. Hispanic farmworkers in the CPS are overwhelmingly of Mexican origin (94.5 percent) and Central and South American origin (3.4 percent). According to the CPS data, 84 percent of Hispanic hired farmworkers were born in Mexico. In contrast, 94 percent of non-Hispanic hired farmworkers were born in the United States.

Table 1

Demographic characteristics of hired farmworkers and all wage and salary workers as a group, by citizenship status, 2006

	Hired farmworkers			Wage & salary workers		
	Noncitizen	Citizen	Total	Noncitizen	Citizen	Total
	<i>Percent</i>					
Citizenship status	37.6	62.4	100.0	9.2	90.8	100.0
Sex						
Male	82.7	79.9	80.9	63.6	50.7	52.1
Female	17.3	20.1	19.1	36.4	49.3	47.9
Median age (years)	34	34	34	34	40	40
Age distribution						
Between ages 15-21	4.2	21.7	15.1	4.9	7.0	6.9
Between ages 21-44	74.0	46.4	56.4	72.9	52.9	54.7
Over age 44	21.8	31.9	28.1	22.3	40.1	38.4
Hispanic ethnicity	94.6	12.0	43.0	61.8	9.1	13.7
Race						
White	94.3	90.2	91.7	73.4	82.4	81.6
Black	0.6	6.0	4.0	8.3	12.4	11.9
Native American	2.1	1.0	1.4	0.9	0.7	0.7
Asian	3.0	2.9	2.9	17.5	4.6	5.7
Educational attainment						
Less than 9th grade	63.4	9.9	30.0	22.2	1.4	3.5
9-12 yrs, no diploma	15.4	24.5	21.1	15.6	7.8	8.6
High school graduate	15.9	35.7	28.2	26.2	30.0	29.6
Some college	5.4	30.0	20.7	36.0	60.8	58.3
Country of birth						
Mexico	90.3	5.3	37.3	41.2	1.2	5.1
All other countries	9.7	2.0	4.9	58.8	6.6	11.3
United States	0.0	92.6	57.8	0.0	92.2	83.6
Year entered U.S. (for foreign born)						
Before 1986	17.5	72.5	23.5	15.7	60.4	35.5
1986-1995	29.2	21.1	28.3	29.6	28.6	29.1
1996-2005	53.3	6.4	48.2	54.7	11.0	35.3
Spanish only household	64.0	4.1	26.7	30.7	1.3	4.0
Marital status						
Married	62.5	46.9	52.7	60.3	55.3	55.7
Div./wid./sep.	8.2	9.7	9.1	8.9	15.3	14.7
Never married	29.3	43.4	38.1	30.8	29.4	29.6
Children under 18 in household	46.7	29.2	35.8	42.4	34.5	35.2

Source: ERS analysis of annual averages from 2006 Current Population Survey Earnings File data.

to avoid participation in more formal data collection efforts (Mehta et al., 2000).

Hispanic ethnicity is particularly important. Because of the large proportion of foreign-born Hispanic farmworkers, many of whom originate from poor rural Latin American communities, measuring Hispanic ethnicity is critical for accurately profiling this workforce. NAWS data illustrate how hired crop farmworkers increasingly originate from Mexico, a trend that became especially pronounced during the 1990s when a growing service sector created plentiful alternatives to farm labor employment for low-skilled, native-born workers (fig. 6).

Other racial and ethnic changes also merit attention. Data from the 1987 CPS (not shown) indicate that non-Hispanic Blacks, mostly in the South, made up 8 percent of the hired-farmworker population (Oliveira and Cox, 1990). That figure has since declined to 4 percent (table 1). The small Native American and Asian populations of hired farmworkers did not change significantly in 2006.

The education gap between Hispanics and non-Hispanics is due largely to the high proportion of recently arrived, foreign-born Hispanics, many of whom originate from rural communities with limited education and work opportunities. The average educational attainment in such communities is 9 years of

Children in Agricultural Labor

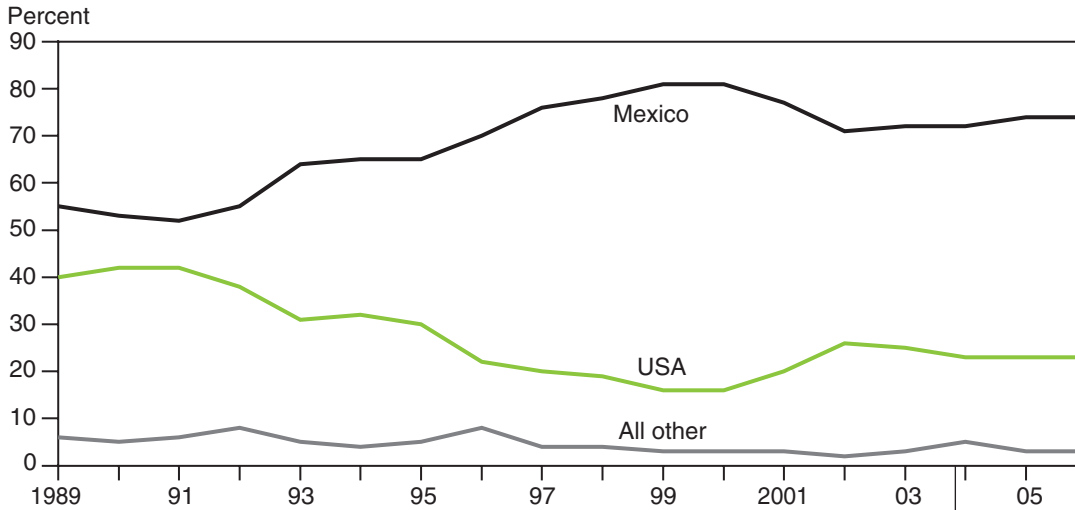
The youth portion of the farm labor force is notable. NAWS data indicate that between 1989 and 2006, on average, children under age 18 made up 5.5 percent of the hired crop farmworker labor force. These children were equally divided by gender as well as by legal status. NAWS data indicate fluctuations in the proportion of child farmworkers and an overall decline since 1995.

Farmwork provides opportunities for young people to earn money while in school or during the summer, and children under age 18 often work on their parents' farms. The median weeks per year worked by children (11.1) is about a third that of adults (29.9), according to NAWS data for 1989-2006. Nevertheless, several studies indicate a lack of safeguards to fully protect children (Edid, 1994; Rothenberg, 1998; NIOSH, 2003).

In several comprehensive reports, the U.S. Government Accountability Office (GAO, 1998; 2002) detailed the prevalence of agricultural child labor legislative protections and their enforcement, and Federal educational assistance programs for children in migrant and seasonal agriculture. The GAO reports raise several concerns, including lack of accurate head counts due to incomplete data; lack of legal protections for children working in agriculture compared with other industries; lack of labor regulation enforcement; and lack of information to assess the effectiveness of education and labor programs for children in agriculture.

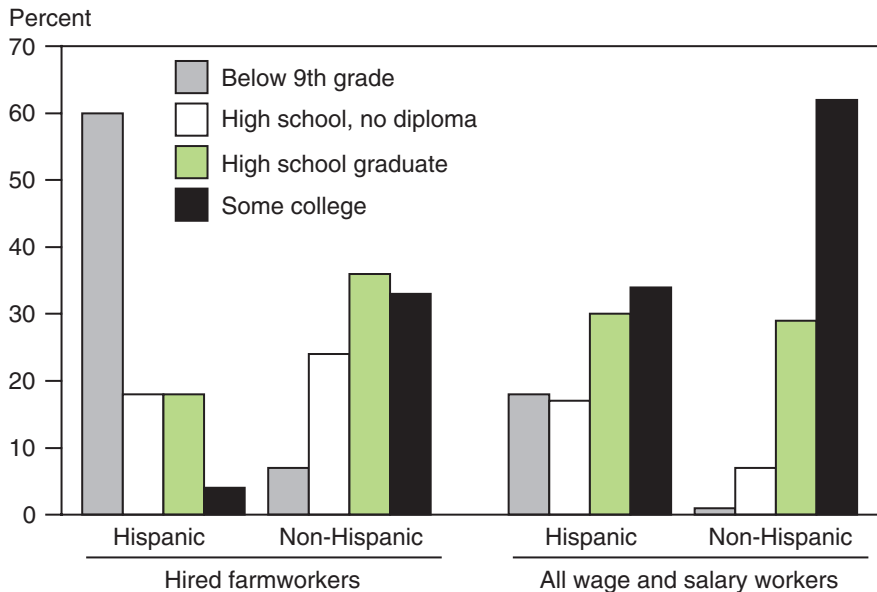
education, the equivalent of U.S. middle school. The education gap is particularly pronounced for “entry-level” occupations, like farmwork, which attract the newest immigrants. It becomes less pronounced and occurs farther down the education continuum for all wage and salary workers who include large proportions of native-born Hispanics (fig. 7). Results displayed by Hispanic ethnicity closely resemble those by citizenship status (table 1).

Figure 6
Nationality of crop farmworker population, 1989-2006



Source: ERS analysis of National Agricultural Workers Survey data, 1989-2006

Figure 7
Educational attainment by Hispanic ethnicity, 2006



Source: ERS analysis of annual averages from 2006 Current Population Survey Earnings File data.

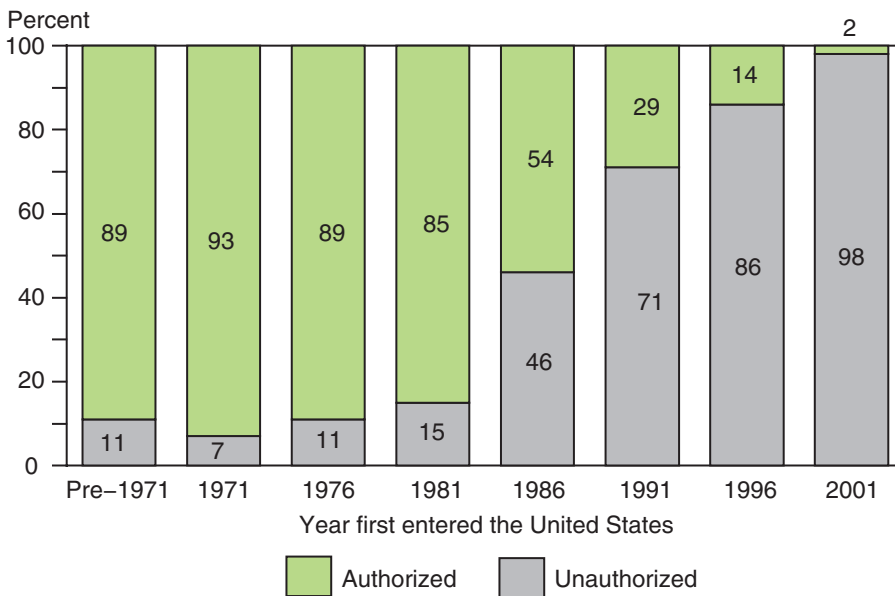
Legal Status

Legal status influences economic and social well-being through its impact on outcomes ranging from social service eligibility, employment, residential mobility, working conditions, and wages (Isé and Perloff, 1995; Rivera-Batiz, 1999; Kossoudji and Cobb-Clark, 2000). Legal status is a perpetual concern for farmworkers and growers alike. For farmworkers, unauthorized status means facing a greater likelihood of unfair labor practices and deportation (Rothenberg, 1998; Martin, 2003). Growers, in turn, are concerned about having sufficient numbers of workers during critical work periods as well as complying with Federal and State administrative requirements to ensure workers are authorized to work in the United States.

While CPS data do not distinguish between authorized and unauthorized status among those lacking U.S. citizenship, they provide some sense of relative scale. Roughly 40 percent of all hired farmworkers are noncitizens compared with 10 percent of all wage and salary workers. The NAWS contacts a higher proportion of unauthorized workers than the CPS and distinguishes their status from legally authorized workers or citizens (fig. 8). According to NAWS data for 2004-2006, roughly 50 percent of all hired crop farmworkers lacked authorized status. This higher rate also reflects a higher proportion of Hispanic workers in the NAWS than in the CPS.

Like most unauthorized immigrants, unauthorized farmworkers rely on changes in U.S. immigration policies for opportunities to obtain legal status. For instance, the Immigration Reform and Control Act (IRCA), which included the Special Agricultural Worker (SAW) legalization provision, regularized the status of over 1 million unauthorized farmworkers at the

Figure 8
Legal composition of recent hired crop farmworkers, by year of entry into the United States



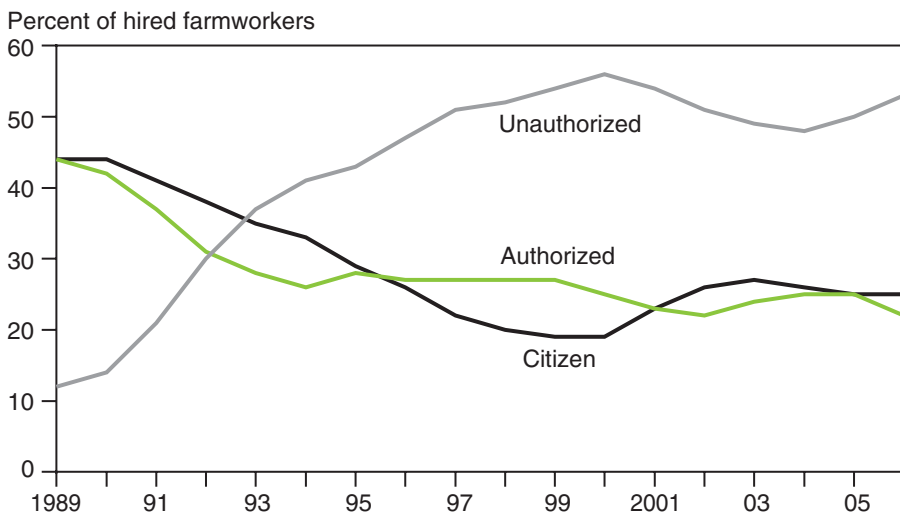
Note: The three most current years of data are used to increase the precision of these estimates by reflecting the most recently surveyed hired crop farmworkers.

Source: ERS analysis of National Agricultural Workers Survey data, 2004-2006.

end of the 1980s (Massey et al., 2002). Applicants who could prove they had worked in the United States between 1985 and 1986 were granted legal status. Since then, however, unauthorized farmworkers have not been offered special provisions to obtain legal status, and the majority who entered since 1990 remain unauthorized (fig. 9) (see box, “The H-2A Visa Program for Temporary Agricultural Workers”).

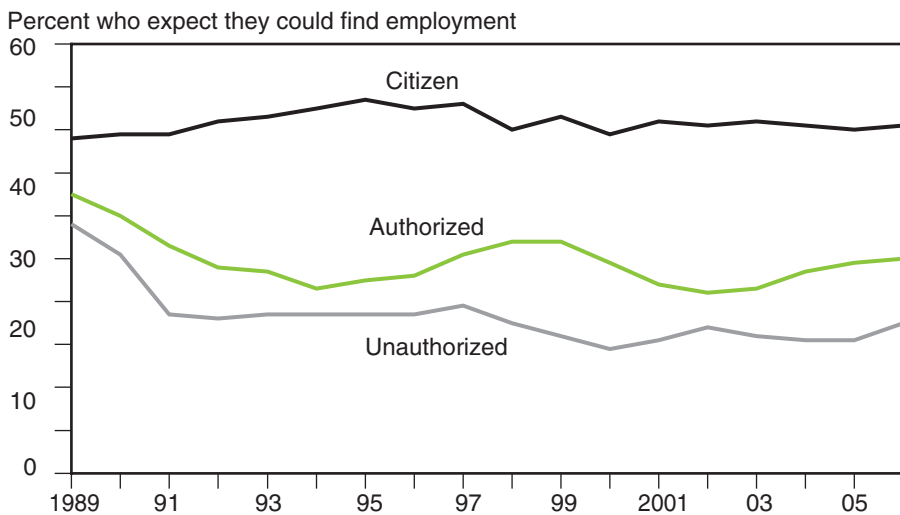
The unauthorized proportion of foreign-born workers tends to be higher in agriculture than in other industries because agriculture has served as a point-of-entry into the U.S. labor market for unauthorized immigrants. A review of hired crop farmworker legal status from the end of IRCA’s legalization provisions in 1989 to the present shows that as the older cohorts of

Figure 9
Legal status of hired crop farmworkers, 1989-2006



Source: ERS analysis of National Agricultural Workers Survey data, 1989-2006.

Figure 10
Hired crop farmworkers’ expectations of obtaining nonfarm U.S. employment within a month, by legal status, 1989-2006



Note: Values are averaged over 3 years to smooth fluctuations.
Source: ERS analysis of National Agricultural Workers Survey data, 1989-2006.

The H-2A Visa Program for Temporary Agricultural Workers

The H-2A visa program, operated cooperatively by the U.S. Department of Labor (DOL) and the U.S. Citizenship and Immigration Services Division of the Department of Homeland Security (DHS), processed over 64,000 agricultural worker applications in 2006 (DOL, 2007). This class of nonimmigrant admission that originated in 1943 was converted into a specific Federal legal provision in 1952, revised by IRCA, and amended by subsequent legislation. It permits employers to hire temporary foreign-born workers for up to 1 year with possible extensions for up to 3 years. H-2A visa holders are considered nonimmigrants because they are admitted temporarily to perform work; immigrants by contrast are admitted to the United States as legal permanent residents.

To hire these workers, employers must demonstrate they lack a sufficient and timely supply of locally available qualified U.S. workers, and that using foreign workers would not adversely affect wages and working conditions of comparably employed U.S. workers. H-2A workers must earn the higher of the prevailing industry wage, the Federal or State minimum wage, or an Adverse Effect Wage Rate (AEWR) which is an average hourly wage rate based on data collected by USDA, and employers must provide them with detailed earnings statements when paid.

Employers are required to provide H-2A workers with a series of benefits, including housing that meets Federal standards for noncommuting workers, transportation for commuting workers, transportation to workers' home countries or next employment locations, either food preparation facilities or three meals per day, and workers' compensation insurance. U.S. workers must be offered the same benefits as H-2A workers.

Employers must apply to the DOL and their State Workforce Agency 45 days prior to hiring. After employers have met certain working condition stipulations, the DOL "certifies" within 7 days that there are not enough U.S. workers to fill these positions through State and employer recruitment during this period and that the presence of H-2A workers will not adversely affect local wages. Once filed, over 90 percent of employer applications are approved for

most of the jobs requested. Following successful certification, the employer next petitions the Citizenship and Immigration Services Division of DHS. Approved petitions are sent to the appropriate consulates where workers apply for visas. At the port of entry, a Customs and Border Protection officer authorizes a traveler's admission into the United States and the period of time that the individual bearer of the nonimmigrant visa is allowed to remain in the United States for that visit.

Although less than 5 percent of all hired farmworkers are hired through the program, it remains controversial. Obstacles for farm operators wishing to use the H-2A visa program include:

- Complicated paperwork;
- Requirements to try domestic worker recruitment before utilizing the program;
- Requirements to anticipate future labor demand;
- The requirement to pay the higher of the prevailing industry wage, the Federal or State minimum wage, or the AEWR; and
- Unwanted attention from advocacy groups and unions reviewing publicly accessible H-2A requests.

Farmworker advocates and unions have also been critical of the program, arguing that it lacks fundamental protections to prevent foreign workers from being mistreated and exploited (GAO, 1997; Griffith, 2006; Southern Poverty Law Center, 2007).

At the time this report was written, Congress was considering the Agricultural Job Opportunities, Benefits and Security Act legislation known as AgJobs that includes three major changes to the H-2A program. These include:

1. Allowing farmers to assert, rather than certify, that they have unfilled worker positions;
2. Allowing farmers to pay a housing allowance rather than provide actual housing; and
3. Eliminating or freezing the AEWR (Martin, 2007).

farmworkers cycle out of agriculture and obtain jobs in other industries, the remaining workers are recent arrivals who lack legal status.

Unauthorized workers have fewer avenues for economic mobility outside of agricultural work, and their own perceptions of the U.S. labor market reflect these circumstances (fig. 10). Initially, after IRCA, 58 percent of all unauthorized hired crop farmworkers felt they could obtain a nonfarm job within a month, a proportion 7 percentage points lower than that of authorized workers. By 2006, the gap between the two groups had widened to 15 percentage points despite a recent upsurge in both groups' expectations. While trend-lines fluctuated similarly for both groups from 1989 to 2006, the diverging outcomes indicate a growing rift of economic prospects between those with authorized legal status and those without it.

Employment

In addition to describing populations, demographic characteristics effectively predict economic outcomes. Age, educational attainment, employment experience, English language ability, and legal status all strongly influence earnings and occupational mobility. The disadvantaged demographic profile described earlier for hired farmworkers relative to all wage and salary workers in the U.S. labor force often translates into less favorable employment characteristics (table 2).

Farmworkers typically have more gaps in employment than nonfarm wage and salary workers and fewer opportunities to earn additional compensation. They are twice as likely to have schedules that either vary or exceed 50 hours per week, corresponding to sudden requirements of agricultural production. Yet among farmworkers, noncitizens are more likely to be employed 40 hours per week and less likely to have more flexible or more demanding work schedules. Noncitizen farmworkers are also more likely to be employed full-time. Part-time farmworkers who are citizens have a median age (18) that is half that of noncitizen part-time farmworkers (37), suggesting a greater presence of high-school or college-age workers among part-time workers with citizenship.

Table 2

Select employment characteristics of hired farmworkers and all other wage and salary workers as a group, by citizenship status, 2006

	Hired farmworkers			Wage and salary workers		
	Noncitizen	Citizen	Total	Noncitizen	Citizen	Total
	<i>Percent</i>					
Hours worked prior week						
Hours vary	13.6	22.0	18.8	7.1	8.1	8.0
Less than 35 hours	5.4	18.6	13.6	10.6	14.9	14.5
Between 40-50 hours	70.7	41.0	52.2	76.7	69.5	70.1
More than 50 hours	10.3	18.4	15.4	5.6	7.6	7.4
Employment status						
Full-time	93.7	75.0	82.4	88.1	83.0	83.5
Part-time	6.3	25.0	17.6	11.9	17.0	16.5
Salary status ¹						
Hourly wage worker	75.9	55.7	63.1	68.3	58.8	59.7
Nonhourly worker ¹	24.1	44.3	36.9	31.7	41.2	40.3
Have more than one job	0.3	7.1	4.5	2.9	5.6	5.3
Receive overtime pay, tips, commissions	7.0	5.1	5.8	9.9	14.9	14.3
Union membership	1.7	2.2	2.0	6.3	12.6	12.0

¹For wage and salary workers, nonhourly worker status usually refers to salaries. For hired farmworkers, it refers to both salaries and piece-rate earnings. The latter are often significantly lower. Source: ERS analysis of annual averages from 2006 Current Population Survey Earnings File data.

Farmworkers are about as likely as other wage and salary workers to earn hourly wages and, despite low earnings, are also about as likely to have only one job at any given time. Yet, because of the seasonal nature of farmwork, they are more likely to have a succession of jobs over a given time period. Hired farmworkers are less likely to earn overtime pay, tips, or commissions, or to join labor unions. NAWs data (not shown) also indicate a low proportion of union coverage for hired farmworkers.

CPS data indicate that when farmworkers are employed, they have relatively stable work schedules. However, due to the seasonal nature of their work, hired farmworkers, on average, experience rates of unemployment double those of wage and salary workers, in general, a difference that varies by demographic and economic characteristics (table 3). For instance, the unemployment rate of female farmworkers exceeds by threefold that of all female wage and salary workers. This relative disadvantage also accrues to workers who are over age 44, Hispanic, noncitizen, and foreign-born. Farmworkers with at least 9 years of schooling, on the other hand, experience unemployment rates that are comparable to those of all wage and salary workers. A number of these characteristics overlap. Recent international migrants, who are also likely to be younger, Hispanic, less educated, and unauthorized, face the greatest challenges obtaining employment.

Among hired farmworkers, unemployment rates also vary by sector and occupation. Those working in field crops have average unemployment rates more than quadruple those of livestock workers, owing to the more seasonal nature of field crop work. Nonsupervisory farmworkers have 2.5 times the unemployment rate of managers and supervisors.

Unemployment characteristics also reflect greater employment instability over the course of a year (table 4). Hired farmworkers are more likely to have terminated employment due to layoffs or the conclusion of a temporary job and less likely to have quit or previously been employed full-time prior to searching for work.

Lower unemployment durations of farmworkers reflect several factors, including low barriers to entry for farm labor and the inability of hired farmworkers to remain unemployed for extended periods. Longer unemployment spells among hired farmworkers, many of whom are foreign-born, increase the chance that some of these workers will return to their countries of origin. When that occurs, such workers effectively remove themselves from the pool of potential survey respondents and, consequently, any and all resulting official statistics.

The unemployment rate for hired farmworkers (fig. 11) was among the highest for all major occupations in 2006 and stems mainly from farmwork's seasonality. When employed, hired farmworkers work for roughly the same number of hours per week as other workers, yet total employment levels for hired farmworkers vary according to season. For example, NASS data for 2006 indicate that 1,195,000 hired farmworkers were employed in mid-July, compared with 796,000 in mid-January.

Hired farmworkers have historically earned relatively low wages (Griffith and Kissam, 1995; Rothenberg, 1998; Martin, 2003; Martin et al., 2006).

Table 3

Unemployment rate by economic and demographic characteristics of hired farmworkers and all wage and salary workers, by citizenship status, 2006

	Hired farmworkers			Wage and salary workers		
	Noncitizen	Citizen	Total	Noncitizen	Citizen	Total
	<i>Percent</i>					
All workers	9.9	7.7	8.5	4.3	4.5	4.5
Sex						
Female	17.6	11.6	13.7	5.1	4.3	4.4
Male	8.1	6.6	7.2	3.8	4.7	4.6
Age distribution						
Between ages 15-21	14.3	10.8	11.2	7.0	9.7	9.6
Between ages 21-44	8.3	8.8	8.3	4.0	4.8	4.7
Over age 44	14.3	4.5	7.6	4.6	3.2	3.3
Hispanic ethnicity						
Hispanic	9.5	15.0	10.5	4.4	4.9	4.8
Non-Hispanic	17.3	6.6	7.0	4.1	4.5	4.5
Race						
White	9.6	7.5	8.3	4.3	3.9	4.0
Black	I/C	9.8	10.9	6.1	8.3	8.1
Native American	0.0	13.0	6.1	5.8	8.0	7.7
Asian	21.5	7.6	13.6	3.2	3.6	3.5
Educational attainment						
Less than 9th grade	12.0	11.7	12.0	5.1	5.7	5.7
9-12 years, no diploma	9.6	9.3	9.4	5.6	10.1	9.4
High school graduate	4.2	7.5	6.8	4.0	5.6	5.5
Some college	0.5	5.1	4.7	3.3	3.2	3.2
Year entered U.S. (for foreign-born)						
Before 1986	13.3	10.3	12.3	4.9	3.0	3.6
1986-1995	13.0	11.2	12.8	4.3	3.2	4.0
1996-2005	7.0	5.4	6.9	4.1	4.0	4.1
Marital status						
Married	8.5	5.0	6.6	3.9	2.7	2.8
Div./wid./sep.	11.3	9.3	10.0	5.1	5.2	5.2
Never married	12.4	10.1	10.7	4.8	7.4	7.1
Industrial sector						
Crops	12.8	12.1	12.4	N/A	N/A	N/A
Livestock	1.1	3.7	3.1	N/A	N/A	N/A
Occupation						
Farmworkers	10.5	8.6	9.4	N/A	N/A	N/A
Managers/supervisors	2.1	4.1	3.7	N/A	N/A	N/A

Notes: N/A – not applicable. I/C – insufficient cases.

Source: ERS analysis of annual averages from 2006 Current Population Survey Earnings File data.

Table 4

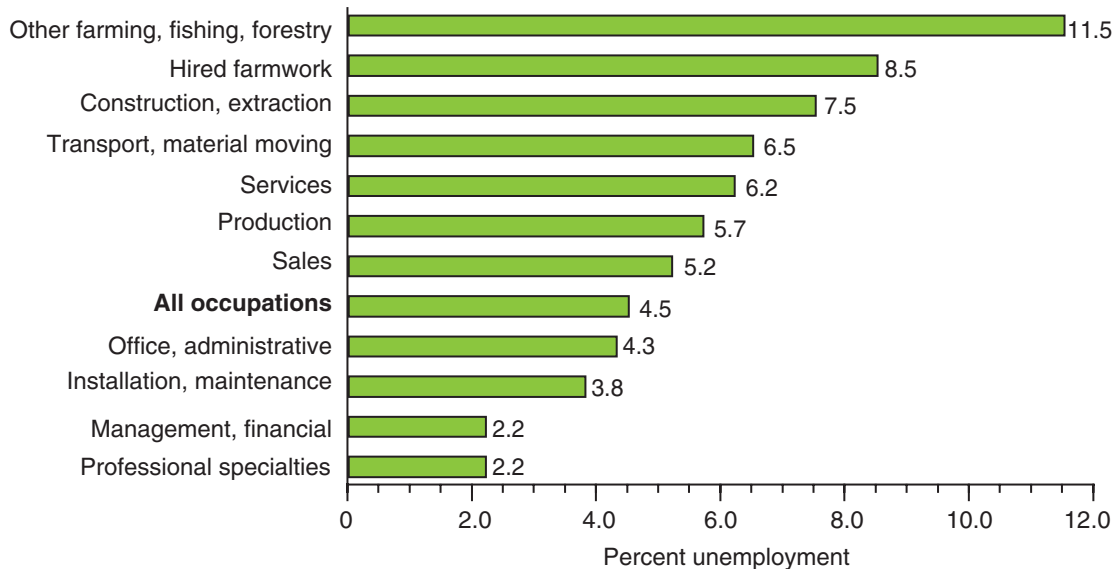
Reasons for unemployment and duration of unemployment, 2006

	Hired farmworkers			Wage and salary workers		
	Noncitizen	Citizen	Total	Noncitizen	Citizen	Total
<i>Percent</i>						
Reasons for unemployment						
Lost job—laid off	47.2	32.3	38.9	17.0	14.0	14.5
Lost job—other reason	1.3	12.8	7.7	25.0	27.3	26.9
Temporary job ended	31.4	17.5	23.7	13.8	10.0	10.5
Quit	3.4	2.4	2.9	9.9	13.6	13.2
Job re-entrants ¹	16.7	35.0	26.9	34.3	35.1	34.9
Total	100.0	100.0	100.0	100.0	100.0	100.0
Duration of unemployment						
0-3 months	27.9	36.5	32.7	30.1	25.5	26.0
4-6 months	18.4	20.2	19.4	17.7	17.3	17.4
7-12 months	19.0	13.9	16.2	20.7	21.3	21.2
13+ months	34.6	29.4	31.7	31.6	35.9	35.5
Total	100.0	100.0	100.0	100.0	100.0	100.0
Median (months)	8	4	6	7	8	8

¹“People who previously worked at a full-time job lasting 2 weeks or longer, but are out of the labor force prior to beginning to look for work” (U.S. Department of Commerce, 2005).

Source: ERS analysis of annual averages from 2006 Current Population Survey Earnings File data.

Figure 11

Unemployment rates by occupation, 2006

Source: ERS analysis of annual averages from 2006 Current Population Survey Earnings File data.

Table 5

**Median weekly earnings by employment characteristic
for full-time hired farmworkers, by citizenship status, 2006**

	Hired farmworkers			Wage and salary workers		
	Noncitizen	Citizen	Total	Noncitizen	Citizen	Total
	<i>Dollars</i>					
All workers	340	470	400	480	700	673
Industrial sector						
Crops	318	462	360	N/A	N/A	N/A
Livestock	400	480	448	N/A	N/A	N/A
Occupation						
Farmworkers	338	440	382	N/A	N/A	N/A
Managers/supervisors	408	625	598	N/A	N/A	N/A
Full-time status						
Full-time	340	470	400	480	700	673
Part-time	270	150	150	213	204	204
Geographic region						
Northeast	280	475	420	538	769	750
Midwest	384	525	500	500	692	680
South	320	433	385	470	654	635
West	353	462	390	480	704	686
Southwest	350	466	384	440	731	673
Hourly wage						
Median	7.50	10.00	8.00	10.00	13.00	13.00
Mean	7.84	10.43	8.95	11.95	15.25	14.82

Note: N/A – not applicable.

Source: ERS analysis of annual averages from 2006 Current Population Survey Earnings File data.

According to CPS data, median weekly earnings of full-time farmworkers are 59 percent of those for all wage and salary workers (table 5). The earnings gap between the two groups is smaller in the Midwest where farmworker earnings exceed the national farmworker median. The gap is greater for farmworkers in the Northeast whose earnings trail the national farmworker median, while those of all wage and salary workers exceed the national median. Within the farmworker population, supervisory and managerial personnel earn 57 percent more than nonsupervisory workers, and livestock workers, who often have more stable employment, earn roughly 24 percent more than crop workers.³

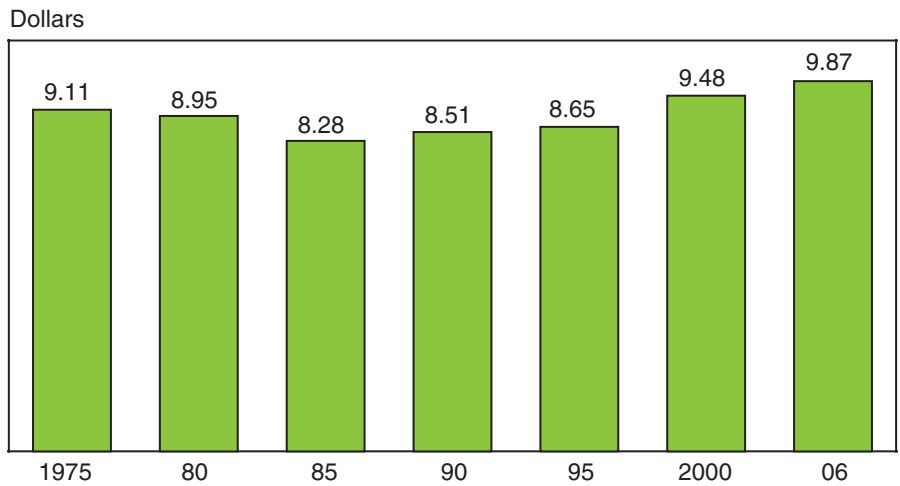
Over time, wages and earnings of hired farmworkers vary as immigration policies tighten or loosen the labor supply (fig. 12). Between the end of the Bracero Program in 1964 and passage of IRCA in 1986, unauthorized migration steadily increased and hired farmworker real wages either stabilized or dropped in response (Massey et al., 2002). Following IRCA, real wages increased only slightly until increased border enforcement policies in the mid-1990s restricted the flow of unauthorized workers. Average real wages increased 10 percent between 1995 and 2000. Since the events of 9/11, real wages have continued to increase as the number of hired farmworkers

³Reconciling the national agricultural labor expenditure reported in the ARMS and that based on median weekly earnings reported in the Current Population Survey multiplied by the total number of farmworkers is complicated by several issues. Farmers reporting their labor expenses in the ARMS include payroll taxes not paid to workers and contract labor expense. In addition, published reports using ARMS data often report labor expenses that include a measure of the opportunity costs of unpaid/family farmworkers. Removing these supplemental expenses yields a figure that coincides with the weekly earnings figures reported in this report from the Current Population Survey Earnings File data.

declined. Hired-farmworker hourly wages, which are measured in NASS's Farm Labor Survey, the CPS, and the NAWS, would be substantially higher if they did not include a large proportion of unauthorized workers whose average wages are lower than those of authorized workers.

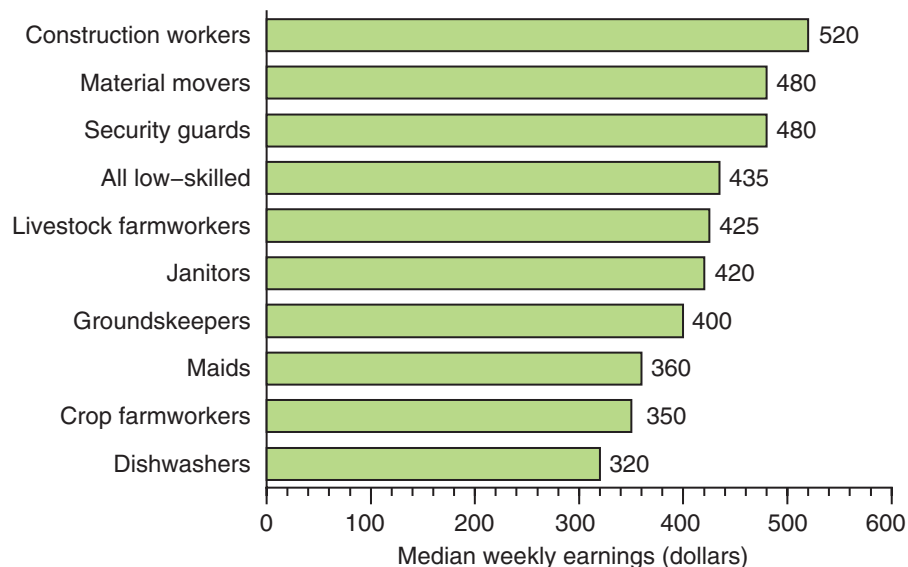
Hired farmworkers not only earn less, on average, than wage and salary workers as a group, but crop farmworkers also earn less than workers in similar low-skill occupations (fig. 13). Wages remain low in spite of the fact that labor analysts consider farmwork among the most arduous and

Figure 12
Real hourly wages (2005) for all hired farmworkers, 1975-2006



Notes: Figures reflect wages paid to hired crop and hired livestock farmworkers, as well as supervisory and nonsupervisory workers. Nominal dollars were converted to real dollars using the Consumer Price Index (CPI).
 Source: National Agriculture Statistics Service, USDA.

Figure 13
Median weekly earnings across select low-skill occupations, 2006



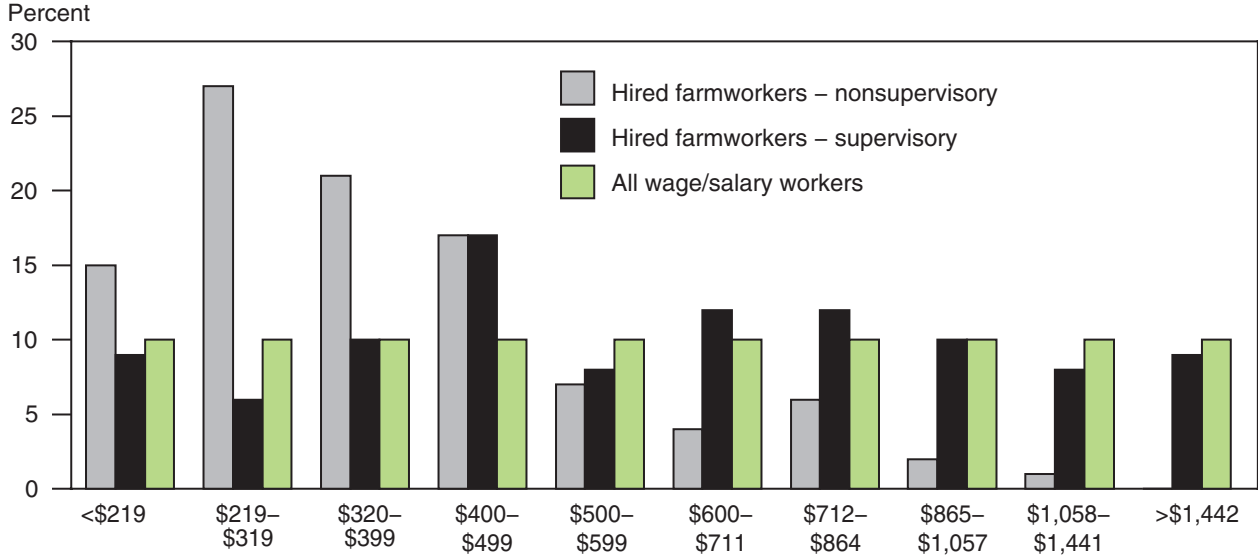
Note: Weekly earnings include wages, bonuses, overtime pay, tips, and other forms of monetary compensation.
 Source: ERS analysis of annual averages from 2006 Current Population Survey Earnings File data.

hazardous occupations. Factors accounting for the relatively low earnings of farmworkers, include: a high proportion of unauthorized workers who have fewer options to seek employment in other industries; the use of farm labor contractors who reduce the hourly pay of hired farmworkers in exchange for arranging employment with growers; and, in the case of small farms, exemption from Federal minimum wage laws.

Demographic characteristics also influence hired-farmworker earnings and their relative difference compared to earnings of other wage and salary workers (table 6). The earnings gap shrinks for people who are similarly disadvantaged, namely the youngest, least-educated, and unauthorized workers. Otherwise, the average earnings gap does not vary substantially across most demographic characteristics. Based on the characteristics of race and ethnicity, Hispanics incur the smallest wage differences and Asians the largest for farm versus nonfarm employment.

Another way to compare hired-farmworker earnings with the rest of the U.S. labor force is to place them in the context of an earnings distribution (fig. 14). The range of earnings for all wage and salary employees, divided into 10 even deciles, serves as the baseline for this comparison. If the distribution of hired-farmworkers' earnings is then superimposed over that of all wage and salary workers, we can see that while supervisory farmworker earnings roughly mimic those of all wage and salary workers, nonsupervisory farmworker earnings concentrate at the lower end, with over 80 percent falling within the first four deciles of the U.S. workforce.

Figure 14
Distribution of hired farmworkers and all wage and salary workers, by average weekly earnings decile



Source: ERS analysis of annual averages from 2006 Current Population Survey Earnings File data.

Table 6

**Median weekly earnings, by demographic characteristic
for full-time hired farmworkers, by citizenship status, 2006**

	Hired farmworkers			Wage and salary workers			Ratio
	Noncitizen	Citizen	Total	Noncitizen	Citizen	Total	
	<i>Dollars</i>						
All workers	340	470	448	480	700	788	0.57
Sex							
Female	290	420	350	420	613	600	0.58
Male	350	480	400	490	794	750	0.53
Age distribution							
Between ages 15-21	280	350	312	340	355	350	0.89
Between ages 21-44	340	480	400	480	673	640	0.63
Over age 44	360	481	442	500	783	769	0.57
Hispanic ethnicity							
Hispanic	340	414	350	400	576	480	0.73
Non-Hispanic	360	481	475	680	720	720	0.66
Race							
White	340	485	400	440	728	692	0.58
Black	I/C	360	360	480	568	560	0.64
Native American	330	385	330	420	557	531	0.62
Asian	400	413	400	748	769	760	0.53
Marital status							
Married	350	500	404	500	784	760	0.53
Div./wid./sep.	338	542	438	450	670	650	0.67
Never married	320	400	369	415	560	538	0.69
Educational attainment							
Less than 9th grade	336	322	336	394	440	400	0.84
9-12 years, no dipl.	350	440	400	400	425	406	0.99
High school grad	384	500	462	450	577	560	0.83
Some college	350	560	500	750	823	808	0.62
Country of birth							
Mexico	340	430	350	400	520	405	0.86
All other countries	350	507	360	560	748	646	0.56
United States	N/A	475	475	N/A	700	700	0.68
Year entered U.S. (for foreign-born)							
Before 1986	346	432	360	506	730	673	0.53
1986-1995	350	485	350	480	650	543	0.64
1996-2006	336	I/C	338	460	537	480	0.70

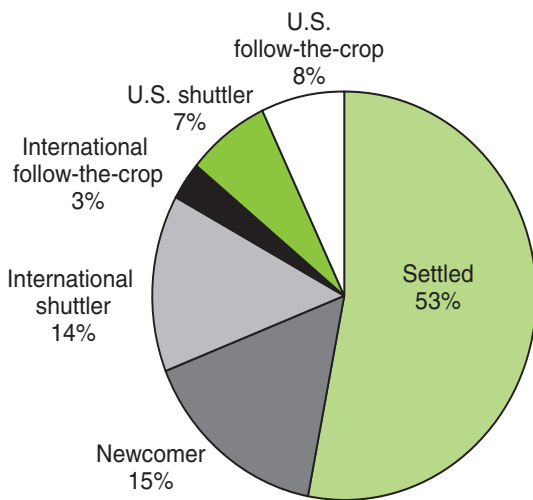
Note: N/A= not applicable. I/C = insufficient cases.

Source: ERS analysis of annual averages from 2006 Current Population Survey Earnings File data.

Migration Patterns

Hired farmworkers further differentiate themselves from most other wage and salary workers because they include large numbers of mobile or migrant workers. The NAWS data set includes information on migration patterns of hired crop farmworkers, and it distinguishes between six different migrant types based on settlement, international orientation, and number of work locations (fig. 15).

Figure 15
Hired crop farmworkers by migrant type, 1989-2006 averages



Notes: The National Agricultural Workers Survey does not survey hired livestock workers.
 Source: ERS analysis of National Agricultural Workers Survey data, 1989-2006.

Settled workers, the largest group of hired crop farmworkers, represent nonmigratory hired farmworkers. Shuttler migrants migrate between their homes and a single location. To qualify as shuttler migrants, they must travel at least 75 miles to reach their location and must work only within a 75-mile radius of that location. NAWS further distinguishes between shuttler migrants within the United States and international shuttler migrants who have crossed an international border within 12 months since they were surveyed.

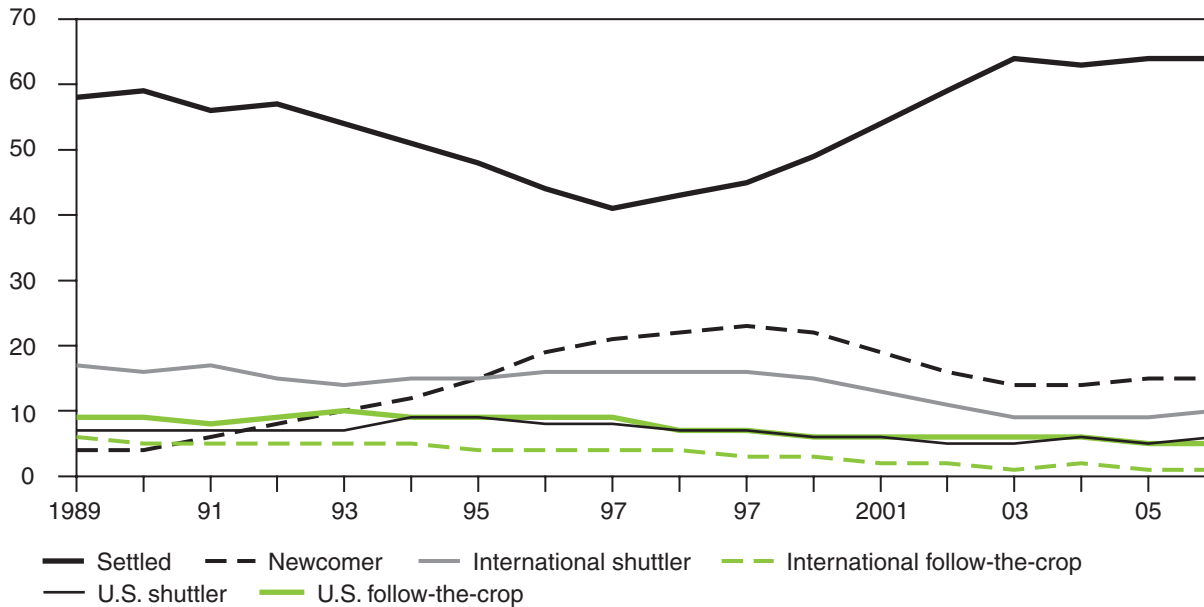
Thus, workers who have homes near Philadelphia but travel to Lancaster County in central Pennsylvania for 3 months to harvest vegetables are classified as U.S. shuttler migrants.

Although follow-the-crop migrants embody the popular conception of hired farmworkers, they actually comprise less than 12 percent of this workforce. Follow-the-crop workers travel to multiple U.S. farm locations for work, frequently migrating in consistent geographic patterns according to agricultural season requirements. Like shuttler migrants, follow-the-crop migrants travel more than 75 miles to a work location, but unlike shuttler migrants, they travel to *multiple* U.S. farm locations. NAWS also distinguishes between U.S. and international follow-the-crop migrants. Finally, newcomers, which NAWS classifies as international migrants, are foreign-born farmworkers residing in the United States less than 1 year and whose shuttler or follow-the-crop migration patterns remain undetermined at the time of the NAWS survey.

After 1989, the proportion of migrant crop farmworkers increased following the passage of IRCA and then declined in the late 1990s (fig. 16). IRCA effectively legalized large numbers of hired farmworkers, who consequently

Figure 16
**Hired crop farmworkers by migrant type, trends,
 and 3-year moving average, 1989-2006**

Percent of all hired farmworkers



Note: Values are averaged over 3 years to smooth fluctuations.
 Source: ERS analysis of National Agricultural Workers Survey data, 1989-2006.

gained sectoral and geographic mobility to seek better paying jobs. Yet, increasing use of year-round production techniques and greater border enforcement starting in the mid-1990s have reduced the proportion of migrating farmworkers.

Migrating hired farmworkers exhibit different demographic and employment profiles from settled farmworkers: they are younger, more likely to be male, and more often Hispanic (table 7). Disadvantages in the U.S. labor market include fewer years of education, less U.S. experience, less knowledge of English, and greater likelihood of being unauthorized (66 percent versus 27 percent). In addition, migrant farmworkers are twice as likely to work for labor contractors, who, in turn, must be reimbursed (Taylor and Thilmany, 1993; Rothenberg, 1998; Martin, 2003). Migrant farmworkers consequently earn less than settled farmworkers. In 2006, the most recent year for which NAWS data are available, average hourly wages for migrant and nonmigrant crop farmworkers were \$7.52 and \$8.53, respectively, a 13-percent difference.⁴ Low wages of migrant farmworkers are compounded by an annual work schedule that includes half as many workweeks as for settled farmworkers.

Farmworker poverty, like low wages, has been documented extensively. According to the U.S. Bureau of Labor Statistics (BLS, 2006), the poverty rate for farming, fishing, and forestry exceeds that of all other general occupation categories (fig. 17). This is the case for both men and women, as well as across four racial and ethnic categories (White, Black, Asian, and Hispanic, not shown).

⁴Note that wages for 2006 differ from those recorded in table 7 which represents data from 1989 to 2006. Note also that NAWS data represent only hired crop farmworkers, and not crop and livestock farmworkers, as does the CPS.

Table 7

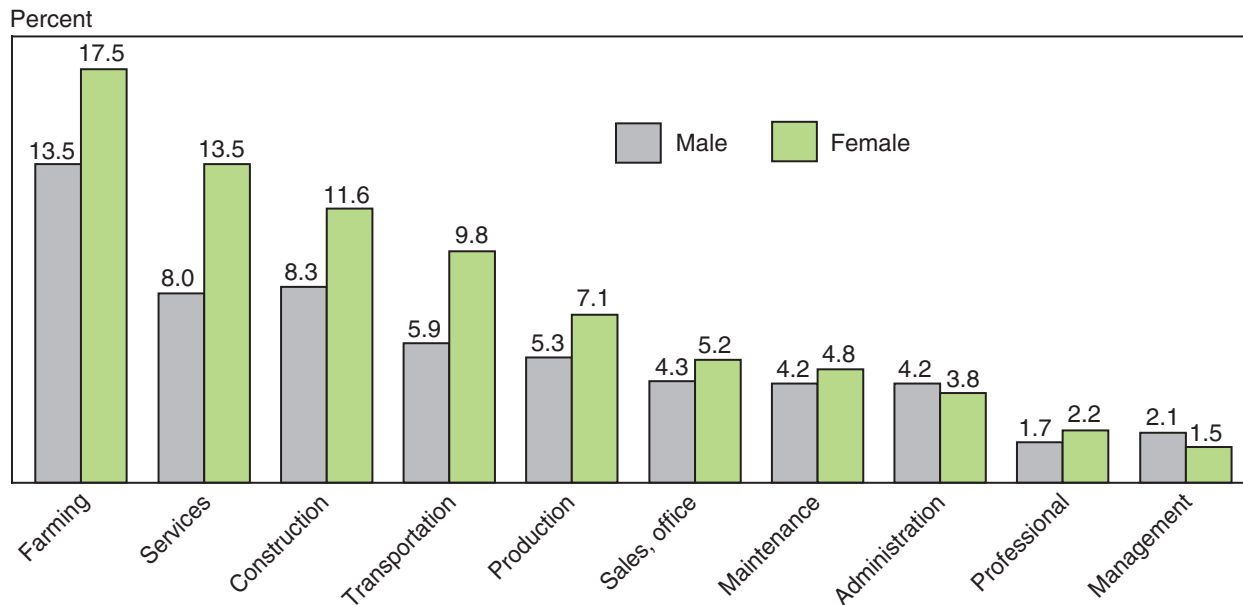
Select demographic, employment, and health characteristics of hired crop farmworkers, by migrant status, 1989-2006 averages

	Migrants	Nonmigrants
Demographic characteristics		
Median age	27	32
Percent female	14.0	29.3
Percent married	52.3	57.1
Percent Hispanic	95.3	68.1
Number children 17 and younger doing farmwork	0.57	0.17
Employment characteristics		
Median years of education	6	9
Median years of U.S. experience	3	8
Percent with no knowledge of English	66.9	33.1
Percent unauthorized	66.2	27.1
Percent employed by labor contractors	25.9	14.2
Mean wage	\$6.05	\$6.55
Median wage	\$5.55	\$6.00
Median number of weeks worked previous year	19.6	38.9
Health characteristics		
Percent with health insurance	9.1	35.3
Percent who have used health services in past 2 years	29.1	60.9
Percent reporting health condition in past 2 years	9.7	19.8

Source: ERS analysis of National Agricultural Workers Survey data, 1989-2006.

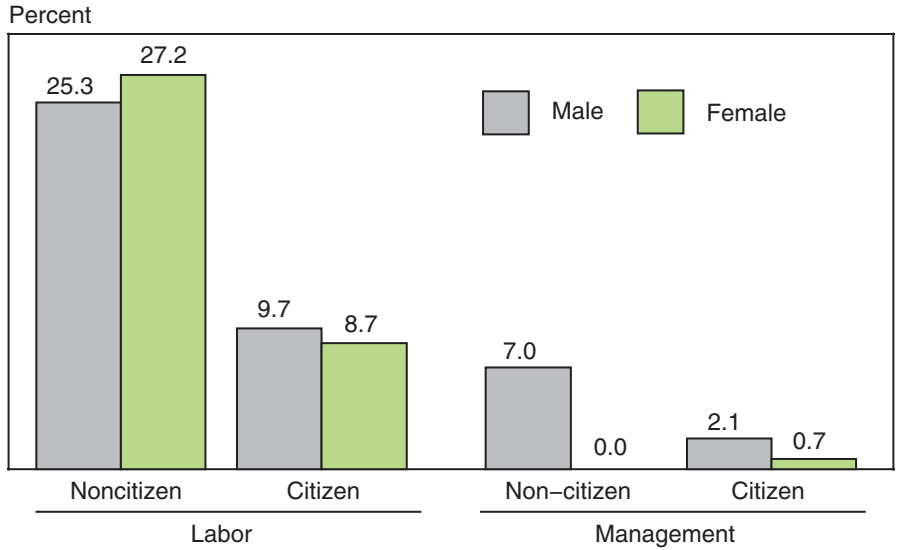
Figure 17

Poverty rates by general occupational category, by sex, 2004



Source: "A Profile of the Working Poor," U.S. Bureau of Labor Statistics (2006).

Figure 18
Poverty status for hired farmworkers, by citizenship status, occupation category, and sex, 2006



Note: Current Population Survey data are aggregated to increase statistical reliability.
 Source: ERS analysis of 2005, 2006, and 2007 Current Population Survey March Supplement data.

Moreover, when this poverty rate is disaggregated by occupation category and citizenship status, the rate for noncitizen hired farm laborers jumps to 25.3 percent and 27.2 percent for men and women, respectively, compared with 9.7 percent and 8.7 percent for citizen male and female farm laborers (fig. 18).

Disadvantages from migrant status extend beyond monetary compensation to health vulnerability. Less than a tenth of migrant farmworkers have health insurance, which partly explains low health service utilization rates compared with settled migrants. Another reason for lower rates may be that fewer migrant farmworkers report health problems—about half the percentage of settled migrants—owing to their relative youth and fewer years of farm labor experience.

Children of migrant workers also face numerous challenges. In addition to growing up in households with higher rates of poverty and substandard housing, they are also much more likely than the average child to move from their home schools to new schools with different curricula, testing requirements, and credit accrual rates (Baca, 2004). Migrant children must constantly adjust to new environments, and American schools do not use a viable national system for transferring records (Government Accountability Office (GAO), 1998). Despite over 30 years of concerted investment by the U.S. Department of Education’s Office of Migrant Education, which facilitates educational attainment for this target population, rural migrant students continue to confront some of the most daunting learning challenges of any student population in the Nation (Salinas and Franquíz, 2004).

Housing Conditions

Many studies have documented substandard housing conditions for hired farmworkers (McWilliams, 1935; GAO, 1971; GAO, 1989; Griffith and Kissam, 1995; Rothenberg, 1998; Martin, 2003). Farmworkers earn relatively little and either cannot afford or choose not to purchase more expensive temporary housing, relying on what is provided for them by farm operators and Federal and State government agencies. They often confront substandard housing quality, crowding, deficient sanitation, proximity to pesticides (which is especially harmful for children), and lack of inspection and enforcement (GAO, 2000; National Center for Farmworker Health, 2001; Housing Assistance Council, 2001; Quandt et al., 2004; USDA, 2004; Early et al., 2006; Lu et al., 2006; Bradman et al., 2007; Gentry et al., 2007).

CPS data indicate that housing for hired farmworkers differs from that of all workers as a group (table 8). Because hired farmworkers earn less, work shorter periods, and move frequently, they are more likely to live in crowded conditions, less likely to own their own homes, more likely to receive free housing, and more likely to live in mobile homes. Differences in housing tenure by citizenship status are particularly striking.

Farmworker housing studies that capture unauthorized workers more accurately portray more substantial differences (National Center for Farmworker Health, 2001). For example, data from a national survey of 4,600 housing units by the Housing Assistance Council (2001), a nonprofit housing research and advocacy organization, records aspects of housing conditions that affect

Table 8

Select household and housing characteristics for hired farmworkers and all U.S. households, 2005-2007

	Hired farmworkers			All U.S. households		
	Noncitizen	Citizen	Total	Noncitizen	Citizen	Total
<i>Number</i>						
Household composition						
Average people in household	4.7	3.4	3.9	3.9	3.0	3.1
Average families in household	1.8	1.2	1.4	1.5	1.2	1.2
<i>Percent</i>						
Housing tenure						
Own housing	24.0	69.2	52.6	40.7	74.3	71.2
Rent housing	61.8	17.6	33.9	57.1	23.6	26.8
Rent housing – no cash	12.7	12.5	12.6	0.8	0.9	0.9
Public housing	1.4	0.7	0.9	1.4	1.1	1.1
Housing type						
House or apartment	80.6	88.7	85.7	96.6	95.6	95.7
Mobile home, trailer, other	19.4	11.3	14.3	3.4	4.4	4.3

Note: Current Population Survey data are aggregated to increase statistical reliability.

Source: ERS analysis of 2005, 2006, and 2007 Current Population Survey March Supplement data.

Table 9

Select statistics on housing conditions

Characteristic of housing unit	Migrants	Nonmigrants
	<i>Percent</i>	
Overcrowded	52	3
Lacks stove	10	1
Directly adjacent to pesticide application	26	N/A

Note: N/A—not available.

Source: Housing Assistance Council 2001.

hired farmworkers, but are not captured by other datasets, such as residential exposure to pesticides (table 9).

Because of lower earnings and a greater likelihood of remitting earnings to family members in their countries of origin, unauthorized workers are more likely to conserve earnings by living in overcrowded housing. Housing Assistance Council data suggest that half of all hired crop farmworkers live in overcrowded conditions⁵ compared with 3 percent of all wage and salary workers. The data also indicate that the prevalence and degree (number of people sharing a room) of overcrowding vary according to legal status, with unauthorized workers experiencing higher rates than authorized and citizen workers (data not shown).

A limited housing supply hinders those wishing to purchase homes, particularly in rural agricultural areas and where large groups of farmworkers have settled with their families to become year-round residents. Migrant workers may be unable to meet credit checks, provide requested deposits, or engage in extended contracts. Landlords may be reluctant to rent to hired farmworkers out of fear that they may overcrowd rental units as an economic strategy. In some cases, housing may be in such short supply that hired farmworkers must remain homeless for extended periods, obtaining shelter wherever they can—including in fields, in cars, or under bridges (GAO, 1989; USDA, 2004).

Migrant housing is regulated under the Migrant and Seasonal Agricultural Worker Protection Act (MSPA), whose rules are enforced by the Wage and Hour Division of the U.S. Department of Labor's (DOL) Employment Standards Administration. States also have their own housing laws, and farm operators must abide by the more stringent of the laws. Farm operators are not required to provide farmworker housing, but if they do, they are required to ensure that their housing complies with substantive Federal and State safety and health standards. Yet, according to these same regulations, such protections apply only to farmworkers hired directly by farm operators, not to individuals hired through labor contractors.

From the farm operator perspective, migrant housing represents a considerable capital investment to meet temporary housing demands during labor-intensive processes such as planting or harvesting. Farmers are more likely to make such investments for year-round workers. In one government survey, growers cited the H2-A visa program's housing provision requirement for their lack of program participation (GAO, 1989). Farmworker housing, therefore, remains a contentious issue, encompassing ongoing challenges for both

⁵NAWS data on hired crop farmworkers from 1989 to 2006 indicate this figure stands at 85 percent.

farm operators—who may invest in it and are required to meet Federal and State farmworker housing guidelines if they do—and farmworkers and their advocates, who contend that much of it is substandard.

USDA administers a well-established Federal program known as the Section 514/516 Farm Labor Housing Program which provides funding to buy, build, improve, or repair housing for farm laborers (USDA, 2004; Housing Assistance Council, 2006). In addition, some States with the largest populations of hired farmworkers, such as Florida and California, have created model programs and led efforts to provide affordable housing and workable housing code enforcement (National Center for Farmworker Health, 2001). Assessments of farmworker housing in agricultural areas offer thorough descriptions of local conditions and policy recommendations for improvements (Housing Assistance Council, 1997; Washington State Housing Finance Commission (WSHFC), 2006; Strohlic et al., 2007).

Health

Agriculture is among the more hazardous industries in the United States, and farmworker health remains a considerable occupational concern for this sector (National Institute for Occupational Safety and Health (NIOSH), 1992; Pratt and Hard, 1998; Loh and Richardson, 2004). While farmworkers face workplace hazards similar to those found in other industrial settings, such as working with heavy machinery and hard physical labor, they also confront factors more common to agricultural production such as pesticide exposure, sun exposure, inadequate sanitary facilities, and crowded and/or substandard housing. Young farmworkers face greater risks of agricultural industry accidents because of their lack of experience.

A number of Federal and State programs serving the general public and/or farmworkers provide medical care as well as financial support for disabled workers. These include Medicaid, Social Security, State farmworker housing programs, and the Migrant Health Program. Yet, inadequate enforcement of Federal regulations and lack of program participation put farmworkers, particularly migrant farmworkers, at greater health risk (Sakala, 1987; GAO, 1992; Reeves and Schafer, 2003; Shipp et al., 2005). Apart from government programs, hired farmworkers typically cannot afford quality health care and often work in locations with limited access to medical facilities.

Two key indicators measuring occupational health risk include fatalities and the incidence of injuries and illnesses.⁶ Data from the 1996 and 2006 Department of Labor's Census of Fatal Occupational Injuries indicate that in many industrial sectors, fatalities have declined following general improvements in occupational safety. The data, however, do not indicate the same degree of improvement for the agricultural sector, where fatality rates have increased (fig. 19).⁷ This outcome is consistent with other government research on fatalities among foreign-born workers, whose increasing incidence of occupational fatalities exceeds their increasing proportion in the U.S. labor force (Dong and Platner, 2004; Loh and Richardson, 2004; Richardson et al., 2004). As a result, between 1996 and 2001, the agriculture, forestry, and fishing sector, which employed less than 2 percent of the U.S. workforce, accounted for a disproportionate 13 percent of all fatal occupational injuries (Loh and Richardson, 2004).

The agricultural sector also exhibits some of the highest rates of occupational injuries and illnesses of all industrial sectors (fig. 20). These incidents have declined consistently over time, following similar patterns in other industrial sectors.

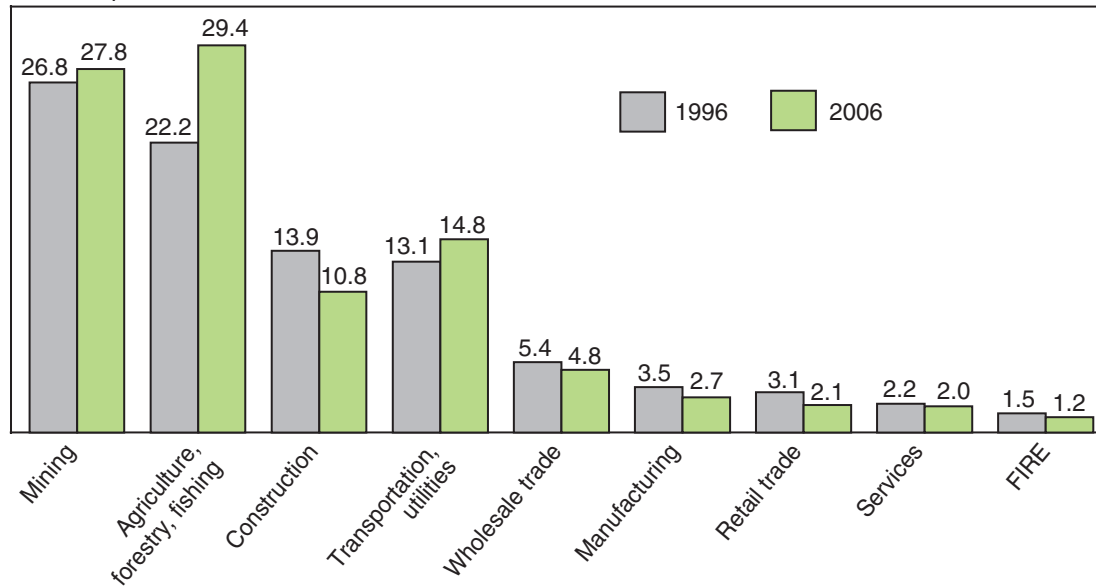
Data from NAWS illustrate the pervasiveness of some physical ailments (table 10), although comparisons are complicated by the lack of data for the U.S. employed population. Some rates, such as 8 percent of respondents reporting skin problems or 20 percent reporting musculoskeletal problems within the past year, are above national averages (Villarejo and Baron, 1999). Twelve percent of all farmworkers responding to the survey indicated they had worked with pesticides in the previous 12 months. Even relatively low levels of incidents, such as treatment for pesticide exposure, have considerable implications for long-term health (GAO, 1992). About 3 percent of

⁶In order to present incident and fatality rate data across the most recent 10-year period, this section focuses on statistics by industry rather than by occupation. Within the agriculture industry sector, fatality rates vary substantially by subsector. In 2006, both forestry (85.6), and fishing and hunting (95.9) displayed significantly higher fatality rates than crop production (33.0), animal production (16.2), or support activities (26.3). The two former subsectors, however, account for less than 10 percent of all employment within the agricultural sector. Moreover, within the agricultural sector are numerous occupations for which fatality and injury rates can differ considerably. Forestry, fishing, and hunting occupations have much higher rates that reflect industry differences noted above. In addition, ranchers, farmers, and managers have a combined rate (29.6) that is notably higher than that of miscellaneous farmworkers (21.7).

⁷While changes between 2 selected years may reflect random fluctuation, the trend between these points across all 10 years does not reflect a clear trend downward or upward. Note that between 2002 and 2003, the BLS revised its industrial classifications from the SIC to the NAICS typology. Such a change does not significantly hamper comparisons across time at the level of industrial sector aggregation presented. The two agricultural subsectors of crop and livestock agriculture presented were not affected by the change in classification systems.

Figure 19
Fatality rates, by industrial sector, 1996 and 2006

Fatalities per 100,000 FTE workers

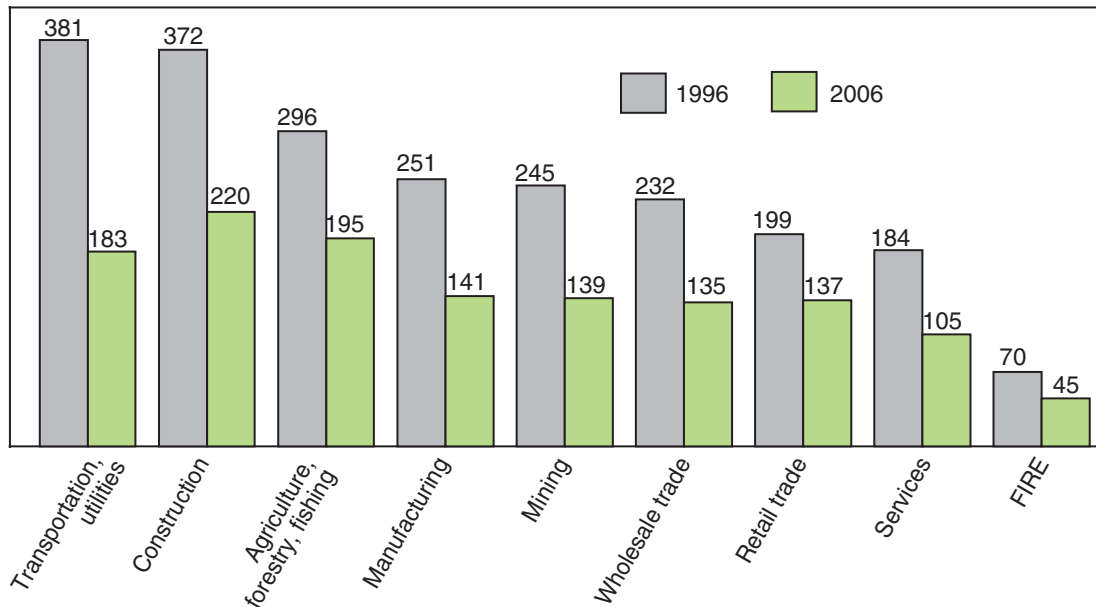


Note: FTE=full-time equivalent.

Source: Bureau of Labor Statistics, U.S. Department of Labor, Survey of Occupational Injuries, 1996-2006.

Figure 20
Incidences of injuries and illnesses involving days away from work, by industrial sector, 1996 and 2006

Injuries and illnesses per 100,000 FTE workers



Note: FTE=full-time equivalent. Estimates for the agricultural sector exclude farms with fewer than 11 employees and include injuries for farm operators as well as all farm labor.

Source: Bureau of Labor Statistics, U.S. Department of Labor, Survey of Occupational Injuries and Illnesses in cooperation with participating State agencies.

those using pesticides were under age 18, making the consequences of such occupational hazards longer lasting over the course of these workers' lives (GAO,2000).

The absence of adequate plumbing facilities at agricultural worksites poses health hazards for workers who constantly work in soiled conditions, particularly those who work with pesticides (fig. 21). Lack of drinking water poses a significant health threat to farmworkers who face hazards of dehydration and heat stroke. When NAWS data were first collected, 15 percent of all workers cited a lack of toilets and 20 percent a lack of washing water. Those rates have declined significantly in subsequent years. While 1 in 4 workers complained about the lack of at least one of the three sanitary facilities noted in 1989, the figure had fallen to 1 in 10 by 2006. NAWS data also indicate that workers lacking legal status are about 50 percent more likely to lack access to a sanitary facility than workers with legal status (data not shown).

NAWS data also report what crop farmworkers cited as obstacles to their obtaining health care (table 11). Two-thirds of all farmworkers cited costs, and almost a third cited language barriers to explain their inability to obtain

Table 10
Select health indicators for hired crop farmworkers

	Unauthorized	Authorized	Citizen	All
	<i>Percent</i>			
Physical ailments¹				
Had any work-related injury or accident in past 12 months	1.4	2.3	2.2	1.8
Experienced wheezing or whistling in chest at any time	4.9	5.9	6.1	5.4
Had any skin problem in past 12 months	7.9	7.7	9.0	8.1
Had any musculoskeletal problem in past 12 months	17.8	21.6	21.9	19.7
Pesticide application²				
Used (loaded, mixed, or applied pesticides) in past 12 months	5.9	12.6	5.9	12.3
Under age 21; used pesticides in past 12 months	7.6	0.3	6.2	5.5
Under age 18; used pesticides in past 12 months	I/C	I/C	I/C	2.8
Treated for pesticide exposure in past 12 months (1999-2003)	0.9	0.6	1.3	0.9
Pesticide training³				
Received training in safe use of pesticides in last 12 months (2002-2006)	65.1	77.2	71.1	69.4
Used pesticides in past 12 months and received training during same period	87.8	92.7	95.8	93.1

¹1999-2004.

²1999-2006.

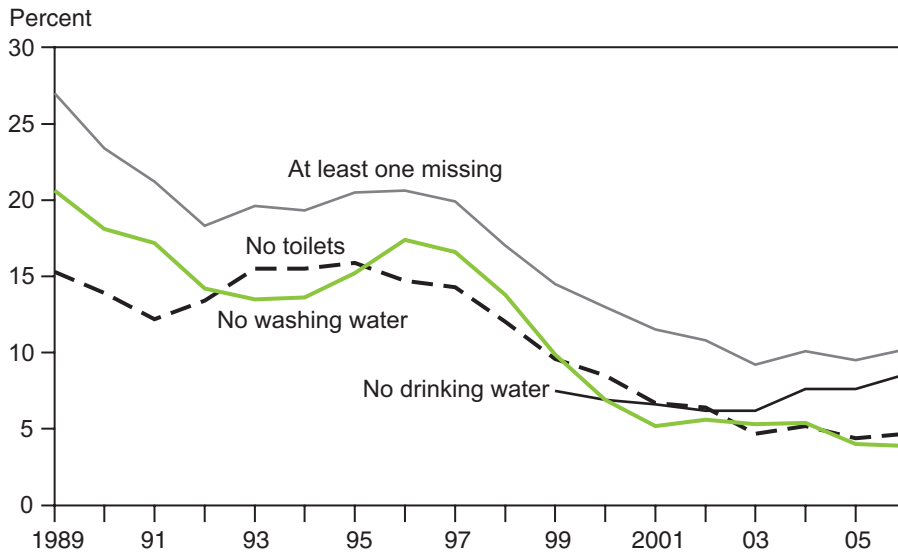
³1994-2004 except last question, 2002-2006.

Note: I/C— insufficient cases.

Source: National Agricultural Workers Survey, 1989-2006.

health care when needed. Within the hired crop farmworker population, unauthorized workers were almost twice as likely as authorized workers and three times as likely as citizen workers to report such obstacles.

Figure 21
Unsanitary conditions for hired crop farmworkers, 1989-2006



Note: Values are averaged over 3 years to smooth fluctuations. Questions on drinking water availability did not appear on National Agricultural Workers Survey until 1999.
 Source: ERS analysis of National Agricultural Workers Survey data, 1989-2006.

Table 11
Reasons given by hired crop farmworkers for inaccessible health care

	Unauthorized	Authorized	Citizen	All
	<i>Percent</i>			
Too expensive	59	73	68	64
Don't speak my language	38	20	3	29
Other	22	23	26	23
Don't know where services located	14	3	4	10
I'm unauthorized and they don't treat me well	12	1	0	7
Transportation	8	4	6	7
Don't feel welcome	5	6	3	5
Don't understand my problems	4	4	2	4
Don't have services needed	2	2	5	2
Will lose my job	2	2	1	2
Health center not open when needed	2	1	2	2
Percent experiencing obstacles to health care access	42	24	14	29

Notes: The question on obstacles to health care access was not asked prior to 1993. Columns do not equal 100 percent because respondents could check off more than one reason.
 Source: National Agricultural Workers Survey, 1993-2006.

NAWS data indicate that almost three-quarters of crop farmworkers possess some type of health insurance in case of injury, and almost half receive some compensation from their employer while recuperating if injuries prevent them from working (table 12). Few workers receive health insurance for non-work-related injuries or illnesses. Access to programs varies according to legal status, a reflection of U.S. experience and the ability to obtain employment with firms that offer such benefits (table 13).

Health insurance benefits provided in case of an injury should be distinguished from general health insurance. Only a fourth of crop farmworkers surveyed by NAWS between 2000 and 2006 stated that they had general health insurance. Farmworkers estimated the health insurance coverage of their spouses at roughly the same proportion, and farmworkers' children, who are often eligible for government support, were twice as likely to have health insurance.

Other farmworker health concerns not addressed in this report include dental health, tuberculosis, and mental illness (Arcury and Quandt, 1998; Villarejo, 2003). Health practitioners also cite HIV/AIDS as a growing concern among the farmworker population that may have repercussions in countries of origin (Sanchez et al., 2004). Several studies indicate that farmworkers are less likely than other wage and salary employees to receive financial or disability support from the Social Security program when they retire or become disabled (GAO, 1992; Lacar, 2001).

Table 12

Employer financial support for injured farmworkers, by legal status

	Unauthorized	Authorized	Citizen	All
	<i>Percent</i>			
Health insurance if injured on the job and sick from work	67.0	76.7	78.7	73.5
Workers' compensation if injured on the job and sick from work	36.8	46.9	59.7	47.2
Health insurance if injured off the job and sick from work	4.5	11.8	16.0	9.5

Source: National Agricultural Workers Survey, 1989-2006.

Table 13

Health insurance coverage of farmworkers and their family members, by legal status

	Unauthorized	Authorized	Citizen	All
	<i>Percent</i>			
Farmworker has health insurance	9.8	29.4	51.7	24.5
Spouse has health insurance	11.0	31.5	58.0	28.7
Children have health insurance	36.4	58.3	76.3	52.7

Note: This particular health insurance question was not asked prior to 2000.

Source: National Agricultural Workers Survey, 2000-2006.

Use of Social Services

Given their health hazards and substantially lower wages, hired farmworkers would be expected to utilize public services at higher rates than nonagricultural wage and salary workers. However, roughly half of all crop farmworkers and an undetermined yet substantial proportion of livestock farmworkers lack legal authorization, which limits their access to certain Federal public services. States may have eligibility requirements for their programs that permit unauthorized resident participation or that differ significantly from those of Federal programs. In all cases, previous research shows that unauthorized U.S. residents utilize public services less than authorized residents or citizens because of concerns about possible deportation (Chavez, 1997; Berk and Schur, 2001; Kullgren, 2003).

Yet, according to CPS data, which capture only a small portion of the unauthorized population, utilization is more prevalent among hired farmworkers and their households than for all wage and salary workers (table 14). In addition, utilization is more prevalent among noncitizens than citizens for both groups of workers. Farmworker households, on average, have 50 percent more children under age 15, and those children are twice as likely to receive Medicaid and qualify for free/reduced-price school lunch. One benefit of the School Lunch Program is that farmworkers' children apparently enjoy the benefits of regular hot school meals at least as much as children of other wage and salary workers. Farmworker households do not appear to benefit more than the broader employed population from housing assistance programs and Medicare. They are far more likely to receive food stamps, WIC, and Medicaid owing, in part, to eligibility of citizen children for these programs. Receipt of unemployment, workers', and disability compensation is roughly 50 percent higher for hired farmworkers than for wage and salary employees in general.

One cannot make inferences about the utilization rates of unauthorized workers from CPS data because the noncitizen category includes authorized and unauthorized workers. NAWS data, however, provide evidence of clear differences in public service utilization by legal status (fig. 22). According to these data, which capture unauthorized, authorized, and citizen legal statuses, authorized crop farmworkers show above-average participation in five social welfare programs captured in the NAWS data compared with unauthorized workers who show below-average participation. Citizen farmworkers, whose poverty rates are a third of noncitizen farmworkers, utilize these programs less than authorized workers.

Table 14

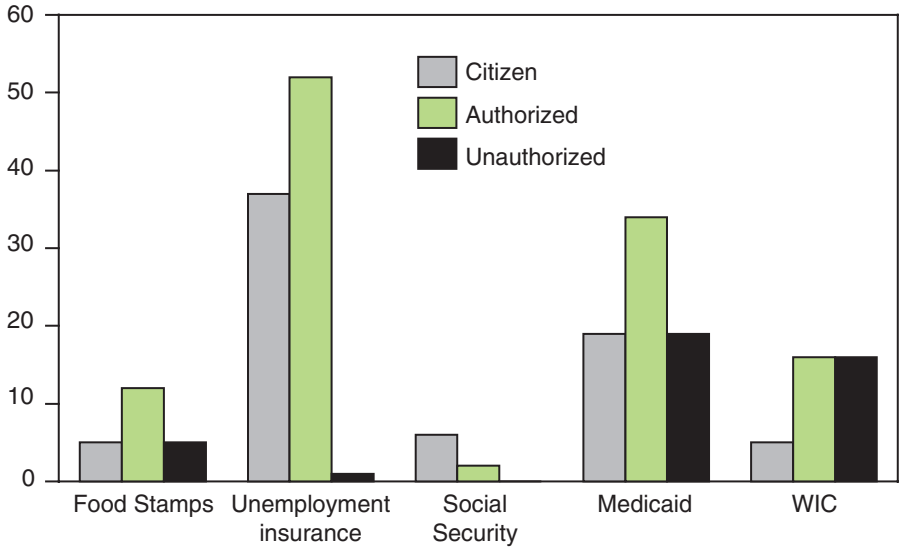
**Use of social services by child, household, employment,
and household structure category, 2005-2007**

	Hired farmworkers			All U.S. households		
	Noncitizen	Citizen	Total	Noncitizen	Citizen	Total
<i>Percent</i>						
Children						
Children in household covered by Medicaid	27.9	10.3	16.6	16.0	6.2	7.1
Children who qualify for free/reduced lunch	79.1	36.5	53.1	55.1	22.1	25.9
Children who usually eat a hot lunch	78.3	75.2	76.4	71.5	65.4	66.1
Households						
Renters living in public housing	2.0	2.3	2.1	2.4	4.2	3.9
Renters receiving govt. housing assistance	0.5	0.7	0.6	1.3	2.1	1.9
Anyone in household receives food stamps	10.2	4.5	6.5	4.6	3.4	3.5
Anyone in household receives WIC	21.2	7.6	14.2	10.4	7.0	7.4
Anyone in household covered by Medicare	4.3	13.1	10.0	6.0	9.8	9.4
Anyone in household covered by Medicaid	40.6	20.8	27.8	24.8	11.9	13.0
Employment						
Anyone in household receives unempl. comp.	8.4	9.0	8.8	3.9	5.9	5.7
Anyone in household receives workers' comp.	2.4	2.2	2.3	1.3	1.4	1.4
Anyone in household receives dis. benefits	1.6	1.3	1.4	0.7	1.0	1.0
<i>Number</i>						
Household structure						
Average number under age 15 per household	1.40	0.71	0.96	0.99	0.65	0.68
Average number of families in household	1.71	1.16	1.35	1.46	1.20	1.22

Note: Current Population Survey data are aggregated to increase statistical reliability.
Source: ERS analysis of 2005, 2006, and 2007 Current Population Survey March Supplement data.

Figure 22
**Social service utilization of crop farmworkers,
 by legal status, 2004-2006**

Percent



Notes: Social service utilization by farmworkers occurs within the 2 years before the interview. Unauthorized immigrants are eligible for WIC and citizen children of unauthorized immigrants are eligible for Food Stamps and Medicaid.

Source: ERS analysis of combined National Agricultural Workers Survey data, 2004-2006.

Findings and Implications

In the past several decades, the U.S. economy has undergone enormous changes, including broad-based industrial restructuring, service sector growth, technological innovation, and expanding globalization. Within the agricultural sector, technological change has increased productivity while reducing the use of farm labor. Future demand for hired farm labor depends on the relative weights of several opposing trends:

- Increased mechanization, technological advances, and growing acceptance and consumption of imported food, reducing the demand for hired farm labor; and
- Increased farm consolidation and greater consumer demand for year-round fresh fruits, vegetables, and more labor-intensive organic produce, maintaining or increasing the demand for hired farmworkers.

Contrasting these dynamic trends are the conditions and circumstances for hired agricultural workers who, as a group, remain among the most disadvantaged employees in the United States. Compared with workers in other sectors of the economy, a substantial proportion of farmworkers are foreign born and lack legal status, English language facility, and U.S. working or living experience. They are also younger and possess less education than most U.S. workers.

Agricultural work often serves as an entry point into the U.S. labor market and one from which significant numbers of workers exit when other more remunerative, less arduous, and more stable employment becomes available. Compared with many other wage and salary workers, hired farmworkers face more physically grueling and hazardous working conditions and substandard living conditions. Despite improvements in policy and labor enforcement, numerous studies demonstrate that farmworkers continue to be subjected to a range of unfair labor practices (Commission on Security and Cooperation in Europe, 1993; Edid, 1994; Griffith and Kissam, 1995; Rothenberg, 1998; Ruckelshaus and Goldstein, 2002; Martin, 2003; Southern Poverty Law Center, 2007). Hired farmworkers use social services at higher rates than other wage and salary workers, as a group, although access is limited by the unauthorized legal status of many.

Demands for changes to current immigration policies in the wake of a rapidly growing and geographically diverse foreign-born population, the events of 9/11, and discussions surrounding agricultural legislation such as the 2008 Farm Bill have increased the visibility of the hired-farm labor population among policymakers and the general public.

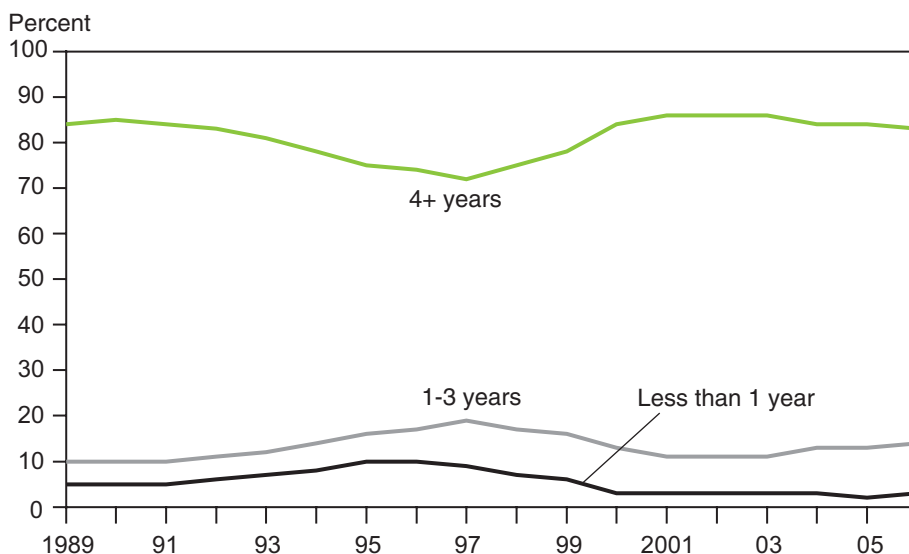
As of early 2008, several proposed immigration law reforms had been offered, notably AgJobs which is directly related to agricultural workers. Representing a compromise between growers, farm labor advocates, and Federal legislators, the AgJobs legislation would provide farmworkers with temporary citizenship status and the possibility of obtaining permanent legal residence in the United States.

AgJobs would also restructure the existing H-2A visa program to reduce administrative burdens for growers, while increasing legal protections for workers. The H-2A visa program, which in 2005 involved 64,000 workers out of an estimated 2.5 million engaged in hired farmwork (less than 2 percent), remains the only legally sanctioned guestworker program. According to both growers and worker advocates, however, the program remains flawed. Growers object to what they consider cumbersome administrative requirements, while farmworker advocates contend that the program invites pervasive abuses through a lack of regulatory enforcement. To address border security and immigration challenges, President Bush recently issued a directive to the Department of Labor to review H-2A program regulations and institute changes that tackle concerns of both growers and farm labor advocates.

Current legislative and public debates on immigration reform underscore the importance of unauthorized workers to certain sectors of the U.S. economy, particularly agriculture. Several studies based on the experience with IRCA estimate that if unauthorized workers were granted legal status, their agricultural wages would increase significantly, and they may be less likely to take seasonal agricultural production jobs (Taylor, 1992; Koussoudji and Cobb-Clark, 2000). Hence, those employing seasonal workers would face the greatest financial challenges resulting from labor market constriction due to immigration reform (American Farm Bureau Federation, 2006). Owner-operators are likely to adjust over time by acquiring additional capital equipment, switching commodities, or possibly ceasing agricultural production.

Hired crop farmworkers, on the other hand, display consistency regarding their expectations for future farmwork (fig. 23). NAWS data suggest that over 80 percent of all workers expect to continue doing farmwork for 4 or more years from the time they were surveyed. Except for a decline during 1995-2000, these expectations have remained stable over the entire 17-year

Figure 23
Expectations of future crop farm employment, 1989-2006



Note: Values are averaged over 3 years to smooth fluctuations.
 Source: ERS analysis of National Agricultural Workers Survey data, 1989-2006.

NAWS data collection span. This suggests that, while a portion of hired farmworkers cycle through agricultural employment, using farm labor as a stepping stone to other opportunities within the U.S. labor market, most expect to remain in the agricultural sector for the foreseeable future.

Implications for change in farm labor and immigration policy extend beyond U.S. borders. An estimated 8 of every 10 hired farmworkers are foreign-born. Many have families in their countries of origin that they support through remitted earnings. Consequently, changing employment conditions for farmworkers in the United States can have economic consequences for communities in other countries.

One important finding relates to the shift from seasonal to year-round agricultural employment. Results show that migrant hired farmworkers work half as many weeks per year as nonmigrant hired farmworkers. Current research and industry trends indicate a growing tendency to switch from seasonal to year-round workers, corresponding in part to growing year-round domestic demand for fresh fruits and vegetables. In turn, migrant workers are settling permanently in places where they previously worked temporarily (DOL, 2005).

As seasonal workers transition into year-round workers by performing other tasks, both farm operators and hired farmworkers benefit—the former from a more stable and available workforce and the latter from improved economic conditions. The Department of Labor reports a correlation between the number of years worked for a single employer and the likelihood of working year round. Year-round workers also report higher rates of pay and greater benefits (DOL, 2005).

While this report attempts to provide a reasonably broad overview of the hired-farmworker population, an exhaustive survey of all issues related to this population is beyond its scope (Goldstein et al., 2006). Topics not mentioned include farmworker mental health; food security of farmworker families; nutrition, given the pervasiveness of fast food diets among farmworkers (Poss and Pierce, 2003; Cason et al., 2003; Weigel, 2007); substance abuse, gangs, and sexually transmitted diseases in migrant farmworker communities; farmworker youth education and health outcomes; and State variation in workers' compensation coverage.

Six States – California, Florida, Washington, Texas, Oregon, and North Carolina – account for half of the Nation's expenditure on hired labor. Any innovative or "best practices" and regulations that these States develop regarding hired farmworkers may provide lessons and set standards and innovations for the rest of the country.

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Glossary

Agricultural service workers—Refers to farm-related services performed on a farm or ranch on a contract or fee arrangement. This mainly includes activities performed by contract workers on fruit, vegetable, or berry operations. It also includes custom work that might require specialized equipment, veterinarian work, sheep shearing, milk testing, or other farm-related activities performed on a farm or ranch on a fee rather than hourly basis.

Annual average number of hired farmworkers—The average number of hired farmworkers employed per week during 1998.

Contract labor—Refers to contract workers who are paid by a crew leader, contractor, cooperative, or other person with a formal agreement with a farmer or rancher. Examples include pruning, weeding, or harvesting fruit and vegetable crops.

Geographic regions—Five regions using the States of the four principal Census regions and creating a fifth Southwest region with States from the South and West:

Northeast—Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, and Vermont.

South—Alabama, Arkansas, Delaware, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Virginia, and West Virginia.

Midwest—Indiana, Illinois, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, and Wisconsin.

West—Alaska, Hawaii, Idaho, Montana, Nevada, Oregon, Utah, Washington, and Wyoming.

Southwest—Arizona, California, Colorado, New Mexico, and Texas.

Crops—Two general categories:

Field crops refer to wheat, rice, corn, soybeans, barley, dry beans, rye, sorghum, cotton, popcorn, tobacco, or similar crops.

Other crops refer to vegetables, melons, berry crops, grapes, tree nuts, citrus fruits, deciduous tree fruits, avocados, dates, figs, olives, nursery, or greenhouse crops. This category also includes potatoes, sugar crops, hay, peanuts, hops, mint, and maple syrup.

Full-time workers—Persons who usually work 35 hours or more per week. Persons working less than 35 hours per week are considered part-time.

Hired farmworkers—Employed persons who, during the survey week, did farmwork for cash wages or salary, or did not work but had farm jobs from which they were temporarily absent. Hired farmworkers include persons who manage farms for employers on a paid basis, supervisors of farmworkers, and farm and nursery workers.

Hispanic—A pan-ethnic term that encompasses people whose origins include Mexico, Central America, South America, and the Caribbean. People who self-identify as Hispanic or Latino may be of any race.

Industry—Hired farmworkers were classified according to the industry of the establishment where they worked:

Crop production—Establishments primarily engaged in producing crops, plants, vines, and trees (excluding forestry operations).

Livestock production—Establishments primarily engaged in the keeping, grazing, or feeding of livestock.

Other agricultural establishments—Establishments primarily engaged in agricultural services.

Legal status—Legal status is comprised of three categories: citizens, authorized or documented workers, and unauthorized or undocumented workers.

Citizens acquire their citizenship either by being born in the United States or by naturalizing, and thereby converting their citizenship to the United States from another country through legal processes.

Authorized workers acquire their legal status to work in the United States through legal channels such as the H-2A visa program, the Special Agricultural Workers (SAW) program, through amnesty programs such as the Immigration Reform and Control Act of 1986, as political refugees, and through other legal programs.

Unauthorized workers do not have the legal right to work in the United States, and unless they have valid tourist or student visas, they possess no right to live in the United States.

Livestock—Includes poultry, cattle, hogs, sheep, goats, and other animals raised for profit.

Median weekly earnings—The value that divides the earnings distribution into two equal parts, earnings above the median and earnings below the median. “Earnings” refers to weekly earnings the farmworker usually earns at a farm job, before deductions, and includes overtime pay or commissions.

Race—The Census Bureau defines race by dividing the population into the following groups: American Indian and Alaska Native; Asian; Black or African American; Native Hawaiian and Other Pacific Islander; and White. For the first time in 2000, the Bureau recorded numerous multi-racial categories. For the sake of brevity in this report, Native Hawaiian and Other Pacific Islanders were included in the Asian race category, and multi-racial categories were assigned their primary racial group. Race, which the Census Bureau describes as a “non-scientific socio-political construct” needs to be distinguished from ethnicity, which typically refers to “heritage, nationality group, lineage, or country of birth of the person or the person’s parents or ancestors before their arrival in the United States” (U.S. Census Bureau, 2002).

Unemployed—Persons 15 years of age and older who, during the survey week, were:

- 1) Unemployed--on layoff; or
- 2) Unemployed--looking for employment.

Wage and salary workers—Persons 15 years of age and older who, during the survey week:

- 1) Did any work as paid employees; or
- 2) Were not working, but had jobs or businesses from which they were temporarily absent because of illness, bad weather, vacation, labor-management disputes, or personal reasons, whether they were paid for the time off or were seeking other jobs.

Appendix 1: About the Data

No single source provides all the necessary detail for understanding farm labor supply, demand, wages, earnings, benefits, and characteristics at the national level. Consequently, the intent of this report is to construct a coherent profile of hired farmworkers using data from the following key sources of information.

The National Agricultural Workers Survey (NAWS) collects detailed information on individual farmworkers, including legal status, critical characteristics for researchers of immigrant workers as well as farm labor. Since 1989, it has been conducted annually in three cycles of 10 to 12 weeks under contract to the Department of Labor. Its information is made available to the public via periodic research reports and a public-use data set. NAWS provides the most detailed data on the social and economic characteristics of field workers working in crop (but not livestock) production. NAWS collects data from personal interviews with between 1,518 and 3,600 randomly selected crop field workers. It does not, however, collect data on livestock farmworkers who make up an estimated 40 percent of the hired-farmworker population. It provides demographic and employment characteristics of workers, including literacy and education, family composition, earnings, assets, use of social services, employment history, and job characteristics. NAWS also collects information on migrant farmworkers – defined as workers who traveled 75 miles or more from home while looking for work or from job-to-job during the year. Not all questions have been asked in all 17 years of NAWS data collection. For this report, ERS obtained access to restricted NAWS data from the U.S. Department of Labor, which permitted analysis through 2006 as well as analysis of data not available to the general public. NAWS data through 2006 are now available from the DOL web site.

The Current Population Survey (CPS) provides employment and demographic information on the entire U.S. workforce, allowing comparative analyses between farmworkers and other occupation and industry groups. It is conducted each month by the Census Bureau for the Bureau of Labor Statistics (BLS) using a probability sample of about 57,000 households designed to represent the U.S. civilian noninstitutional population. Once selected, a household is interviewed for 4 consecutive months, dropped from the survey for 8 months, and then interviewed for a final 4 months. A fourth of the sample changes monthly. This strategy allows the Census Bureau to obtain month-to-month and year-to-year comparisons with minimal inconvenience to any one household. Because it is conducted monthly for the same households over 16 months, the survey undercounts unauthorized and foreign-born persons who migrate frequently and are reluctant to participate in formal Government questionnaires. The Census Bureau has since improved the weights used in the CPS so that total population figures and proportions match those of the decennial census and annual estimates. While totals may agree, demographic characteristics bias toward more established Hispanics with legal status.

The CPS obtains data on different topics over the course of each year. The **CPS March Supplement** provides detailed information on the labor force, employment, unemployment, and demographic characteristics. The **CPS**

Earnings File contains additional information about hours worked per week and earnings collected from workers in about a quarter of CPS households (those in either their fourth or eighth month in the sample). The 2006 CPS earnings microdata file used in this report includes 12 months of data and consists of all records from the monthly samples of CPS households asked the additional questions during that time period. The data file contained information on 706,974 people, including 4,625 employed as hired farmworkers. Data comparisons in the analysis are based on differences significant at the 95 percent or higher level of confidence.

The Farm Labor Survey (FLS) provides total numbers of farmworkers obtained from farm establishments. Four times a year, the U.S. Department of Agriculture's National Agricultural Statistics Service (NASS) surveys about 14,500 farms in all States except Alaska. The survey provides quarterly estimates of the number of hired workers, the percentage of workers who are migrant, and average weekly hours worked. The FLS also provides average wage rates for hired workers by type (field, livestock, supervisor, and other) for 16 separate States and 15 regions. These figures are used by public and private entities to compute national wage indices and establish labor laws and regulations, including determining the number of replenishment workers admitted into the United States to offset domestic shortages and establishing minimum wage rates for agricultural workers.

It should be noted that "hired workers" refers to all types of workers on the farm, including bookkeepers, secretaries, and mechanics, as well as persons who pay themselves regular salaries, such as partners or corporate shareholders. Surveys answered by employers are far more likely to account for unauthorized workers than surveys administered to farmworkers themselves.

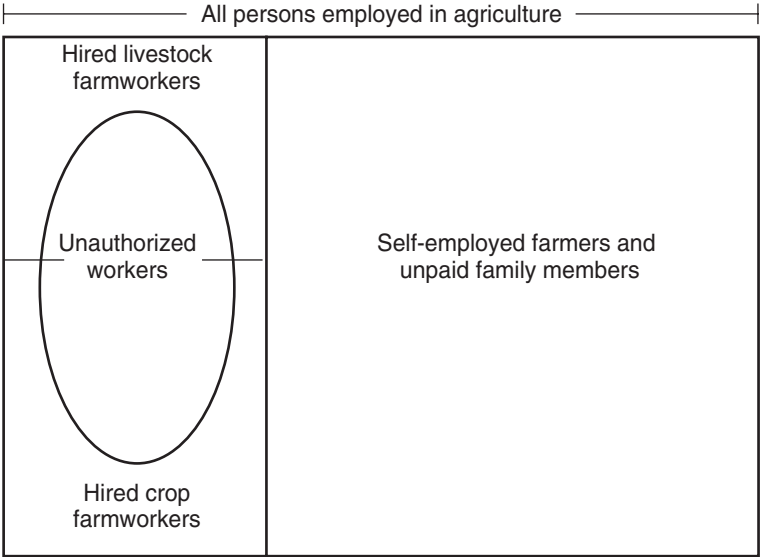
The Census of Agriculture offers the most complete geographic coverage of hired and contract farm labor use as measured by labor expenditures, and is currently the only national level data source that offers consistent farm labor information at the county and State level. Every 5 years, NASS sends a survey to U.S. farms and ranches. In 2002, the year of the most recent data available, 2.8 million questionnaires were mailed out to farms, defined as "any place from which \$1,000 or more of agricultural products were produced and sold, or normally would have been sold, during the census year." The Census of Agriculture provides separate estimates of expenses for hired workers, contract labor, and specialized "custom-hire" services at the national, State, and county level. Expenditure data are reported across several identifiers, including: 3-digit Standard Industrial Classification of farms, the value of agricultural products sold, the size of farms in acres, the type of organization, and select operator characteristics. The Census of Agriculture also reports the number of hired workers, separated by whether they worked less than 150 days or 150 days or more. As with the Farm Labor Survey, the data refer to all hired workers on the farm, including those generally not considered hired farmworkers.

Agricultural Resource Management Survey (ARMS)

Conducted annually since 1985 by the Economic Research Service (ERS) and NASS, ARMS collects data to measure the financial condition (farm income sources, expenses, assets, and debts) and operating characteristics

of farm businesses, the cost of producing agricultural commodities, and the well-being of farm operator households. The target population of the survey is operators associated with farm businesses representing agricultural production in the 48 contiguous States. Included in the farm operations data collected for each farm is information about cash wages paid to hired labor during the calendar year. ARMS data represent another source of information for corroborating statistics on the cost of hired farm labor across a range of farm characteristics.

Appendix figure 1
Venn diagram of persons working in agriculture



Note: Social service utilization by farmworkers occurs within 2 years of being interviewed. Unauthorized immigrants are eligible for WIC and citizen children of unauthorized immigrants are eligible for Food Stamps and Medicaid.
 Source: ERS analysis of combined National Agricultural Workers Survey data, 2004-2006.

These data sets provide information for different subgroups within the entire population of persons employed in agriculture (app. fig. 1). This latter population can be divided into two general groups: self-employed farm operators and their unpaid family members and hired farmworkers. Farmworkers may be divided according to crop and livestock production. A substantial proportion of workers in both sectors lack authorization to work in the United States.

Each of these data sources offer a different perspective on agricultural farmworkers, and it remains the challenge of researchers to synthesize this information for their specific objectives. The Census of Agriculture and FLS provide perhaps the most accurate figures on overall numbers of workers, while CPS and NAWS offer detailed characteristics of workers themselves. The latter data set includes information on legal status, while the former offers comparability with workers in other occupations.

Appendix 2: Estimating Total Numbers of Hired Farmworkers

Total estimates of hired farmworkers consist of two categories. The first is a cross-sectional estimate that describes, on average, the total number of hired farmworkers at any given point in time. Turnover in farmwork is considerable, and several persons may hold a single hired-farmworker position during a year. For instance, one crew of hired farmworkers planting a crop in the spring may differ from another crew of hired farmworkers harvesting that same crop in the autumn. The second category is an annual estimate of the total number of workers over the course of a year that did some type of farmwork. Cross-sectional estimates are usually derived directly from national-level survey data by Government agencies. Annual estimates, which often rely on such data, involve additional assumptions, take into account part-time work and contract labor, and are typically produced independently.

Cross-sectional national-level surveys may not accurately count hired farmworkers for several reasons. First, a substantial number of hired farmworkers are seasonal migrants who often fail to be recorded in cross-sectional surveys. Second, roughly half of all hired farmworkers are unauthorized workers according to the most reliable data available on the legal status of farmworkers. Workers without legal status fear deportation and, not surprisingly, have lower rates of participation in formal surveys (GAO, 2003). Third, surveys use different definitions of hired farmworkers. As a result, different national-level surveys yield different estimates of hired farmworkers (app. table 1).¹

Appendix table 1
Cross-sectional estimates of total hired farmworkers, by data source

Source	Estimate	Year
Current Population Survey, March 2006 Supplement	691,000	2005
Current Population Survey Earnings File, 2006	729,000	2005
Farm Labor Survey (NASS), 2006	1,009,000	2006
Estimate by Martin (2006)	1.0-1.4 million	2006

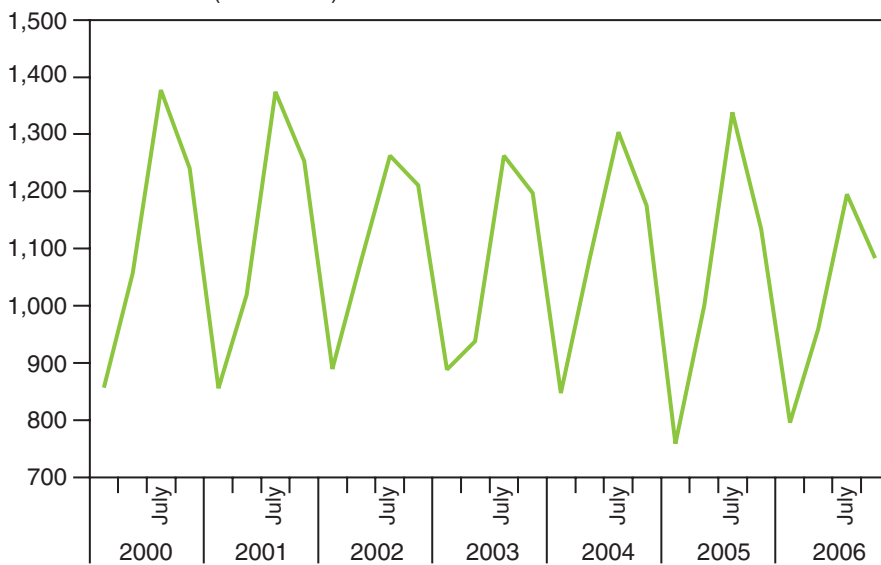
Data from the Farm Labor Survey illustrate the degree of seasonal variation in farmworker counts, with the highest numbers registering during agriculturally productive summer months and the lowest numbers registering during winter (app. fig. 2). Each annual figure from this data source represents an average of four quarterly estimates. Between 2000 and 2006, those quarterly figures ranged from a low of 759,000 (January 2005) to a high of 1,377,000 (July 2000).

Annual estimates of total hired farmworkers are typically computed using indirect methods. The Census of Agriculture, for example, reports farm labor expenditures for crop and livestock farms, but it does not provide data on the number of farm labor hours worked to allow the derivation of the number of

¹Hired farmworker figures from NASS’s Farm Labor Survey are comprised of two groups of employees: farmworkers hired directly by farm operators and agricultural service employees. The latter group consists primarily of contract workers as well as a smaller proportion of “fee-for-service” and custom work employees. In 2006, the 1,009,000 figure included 752,000 direct hire employees and 257,000 agricultural service employees.

Number of hired farmworkers, by quarter, 2000-2006

Hired farmworkers (thousands)



Source: Farm Labor Survey, National Agricultural Statistics Service, USDA, 2000-2006.

farmworkers (by dividing the former by the latter and assuming stable wage rates).

Martin (2006) has used mixed data approaches effectively. For example, by combining data from the Census of Agriculture, CPS, FLS, and NAWS, Martin estimates there were roughly 2.5 million hired farmworkers in 2002, 1.8 million of whom worked in crops and the other 700,000 in livestock. Given the consistent decline in cross-sectional averages over the past decade, this figure has probably diminished. Based on the 2.5 million total worker figure, Martin (2006) estimates the annual number of unauthorized agricultural workers in crops and livestock between 1 and 1.4 million.

Estimating the total number of persons employed in agriculture is similarly challenging. For instance, NASS, which continues to collect data on hired farmworkers through the FLS, discontinued counts of all other persons employed on farms (self-employed farmers and their unpaid help) in 2002. Yet in 2001, the last year it obtained quarterly data, it counted 2,047,000 self-employed farmers and their unpaid family members. The 2004 ARMS data, however, indicated 3,220,000 total farm operators, distributed among primary operators, secondary operators, spouses, and other employees (Hoppe et al., 2007). The 2002 Census of Agriculture indicated a total of 3,115,000 farm operators (Allen and Harris, 2005). Neither ARMS nor Census of Agriculture figures included hired farmworkers. The difference in estimates of total farm operators between the FLS and the other two estimates stem, in large part, from differences in measurement and definition. The Farm Labor Survey is a random-sample survey that captures, at four points each year, the number of persons employed on the farm, not all persons involved in farm production over the course of the year. Nonprimary farm operators, which according to the 2002 Census of Agriculture number about 925,000 persons, are less likely to be captured in surveys of farm oper-

ators on any given day because of their secondary role in farm operations. In contrast, the Census of Agriculture, conducted every 5 years, enumerates all farm operators who produce at least \$1,000 worth of agricultural products. Procedures for this objective are more extensive than those used for quarterly FLS. In addition, the 2002 Census of Agriculture was the first to ask about secondary operators, which consequently increased the total number of farm operators from 1,911,000 in 1997 to 3,115,000 in 2002. Clearly, expanding the scope of who is considered a farm operator explains why, after decades of declines, their number increased over this period (see box, “How Definitions Alter Estimates of Total U.S. Farmworkers”).

How Definitions Alter Estimates of Total U.S. Farmworkers

To illustrate how farmworker definitions can affect estimates, data from the 2006 CPS March Supplement was used to derive the 691,000 farmworkers noted. Farmworkers were defined using two criteria, one for occupation and another for industry. The March CPS data indicated that an estimated 932,000 persons held positions as managers, supervisors, or miscellaneous workers, and did so within the industries of crop production, animal production, and support activities for agriculture and forestry. This definition excludes technical occupations such as agricultural inspectors, graders, and sorters of agricultural products, and it also excludes industries such as fishing and logging.

Having narrowed occupation and industry definitions, the estimate was further refined using employment criteria. First, the calculation excluded unemployed workers and workers not in the labor force. This reduces the 932,000 figure by roughly 15 percent, to just under 800,000. Next, self-employed persons were excluded, such as farm operators, and only wage and salary workers were retained. This reduces the 800,000 figure by an additional 13 percent to yield a final total farmworkers count of 691,000. This figure differs substantially from the estimate by Passel (2006) of 839,000 agricultural workers that is based on less restrictive definitions and uses 2005 March CPS data. These differences illustrate the challenge of obtaining standard and comparable estimates on the number of farmworkers, even with the use of established national-scale surveys.

Appendix 3: A Brief History of Farm Labor

1860s-1880s: Farming becomes a large scale industry, particularly in California. Native Americans and later Chinese are recruited to work on U.S. farms to meet a growing national demand for fruit. By 1886 in California, 7 out of every 8 farmworkers are Chinese.

1890s: In California, growing numbers of Japanese workers are recruited for agricultural work, then gradually replaced with workers from Pakistan and India.

1917-1921: The first guestworker program admits 51,000 Mexican guestworkers during World War I.

1920s: In California, growing numbers of Filipino workers and a small number of Mexican workers are recruited for agricultural work.

1924: Border Patrol established between Mexico and the United States.

1930s: Numbers of white tenant farmers and share-croppers increase during the Great Depression after many sell their own farms and begin working as migrant farmworkers.

1938: The Fair Labor Standards Act creates standards applicable to all workers and governs minimum wages, maximum hours allowable without overtime pay, child labor, and recordkeeping. Agricultural employers using less than 500 man-days of agricultural labor during any calendar quarter (six or more workers each day of the week for 13 weeks; 79 percent of all farms in 1997) are exempt from minimum wage provisions, as are all range livestock producers.

1942-1964: The Bracero Program, initiated to help alleviate wartime labor shortages, allows agricultural producers to import 4.6 million Mexican workers over 22 years for seasonal farm work. The program continues after World War II at the request of producers, but is terminated in 1964 for a variety of reasons related to flaws in the program and broader societal trends.

1947: The Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) sets risk and benefit standards for pesticide use. It was amended by the Environmental Protection Agency in 1972, 1974, and 1992.

1960s-1970s: Union activity increases among farmworkers, as does unauthorized migration and use of labor contractors.

1963: Congress passes the first Federal law regulating farm labor contractors, the Farm Labor Contractor Registration Act (FLCRA). This Act was revised 10 years later and then replaced by the current law in 1983.

1970: The Occupational Safety and Health Act (OSHA) is enacted to ensure safe and healthful working conditions for all U.S. workers.

1970s-1990s: As African Americans move into other industries, immigrants primarily from Latin America migrate toward jobs in agriculture.

1983: The Migrant and Seasonal Agricultural Worker Protection Act is enacted to provide migrant and seasonal farmworkers with protections concerning transportation, housing, pay, and working conditions. The act also requires farm labor contractors to register with the U.S. Department of Labor. Farm operators employing less than 500 man-days under the Fair Labor Standards Act of 1938 are exempt.

1986-1989: Roughly 2.7 million unauthorized workers in the United States received legal amnesty through the Immigration Reform and Control Act (IRCA) of 1986 which included a Special Agricultural Workers (SAW) legalization program for persons able to demonstrate agricultural employment prior to 1985-86. Anticipated improvements in farmworker wages and benefits failed to materialize with a rebounding ample supply of unauthorized workers, prompting many agricultural workers to seek employment in nonagricultural industries in regions outside the Southwest.

1996: The Illegal Immigration Reform and Immigrant Responsibility Act (IIRIRA) sets new guidelines for border enforcement and controls to verify eligibility for employment and social services. Border control is increased substantially, benefits available to immigrants are reduced, and a pilot program is established allowing employers and public agencies to check applicant eligibility.

Sources: Griffith and Kissam, 1995; Runyan, 2000; Martin, 2003; Martin et al., 2006.