At least 50 percent of US farm workers are unauthorized. Immigration reform may provide a path to legal status for some currently unauthorized farm workers and make it easier for farm employers to employ legal guest workers under a revised H-2A temporary worker program. It may also affect immigration flows and integration patterns in rural and agricultural America.
On May 8-9, 2008, researchers met with Congressional and industry, union, and community leaders in Washington DC to discuss:

1. Trends in the number of unauthorized foreigners, immigration reform proposals pending in Congress, and the reform goals of employers, workers, and communities
2. The impacts of immigrant farm workers on agriculture in particular states and commodities
3. The impacts of immigrant settlement on communities in agricultural areas

This report provides background and summarizes the discussion. It was distributed to but not approved by participants. We are grateful for the support of the Farm and Giannini Foundations; additional support was received from the Southern Rural Development Center and the Institute for the Study of International Migration.

Immigration Reform

Rep Howard Berman (D-CA) explained why it is so difficult for Congress to enact immigration reforms. Immigration divides both the Democrats and the Republicans in Congress. Most Democrats back comprehensive immigration reform with a path to citizenship for the unauthorized, but there are factions within the party. The Hispanic caucus wants a path to citizenship for the unauthorized, and opposes incremental reforms that they would otherwise support if the result may decrease support for legalization. However, some newly elected Democrats from swing districts, including Rep Heath Schuler (D-NC), favor the enforcement-first approach endorsed by the House when it was under Republican control in December 2005.

Republicans are also divided. Presumptive presidential candidate Senator John McCain (R-AZ) favors more enforcement as well as legalization, but many Republicans oppose any bill that includes a path to legalization. Congressional Republicans are likely to be more unified in opposition to legalization if a Democratic president proposes comprehensive immigration reform, but many would oppose “amnesty” even if proposed by a Republican president. As a result, there may be a deadlock in Congress in 2009 regardless of who is elected president in 2008.

1 Until 2004, seminars examining the “changing face” of rural America were held in areas attracting immigrants to fill farm jobs. These changing face seminars brought researchers together with farm employers, community leaders, and migrant advocates and included field trips that followed the pattern of workers from fields to settlement, beginning with employers, turning next to the mayors, police chiefs and teachers who act as bridges between established residents and newcomers, and concluding with migrants and migrant advocates. On two occasions, March 1998 and April 2002, seminars in Washington DC allowed researchers to report the findings to policy makers, who in turn discussed the issues on which they wanted information and analysis. The 2006 and 2007 seminars were held in Washington DC.
Mark Krikorian of CIS believes that state and local government laws cracking down on unauthorized migration signify a grass-roots restrictionist trend that will eventually be reflected in Congress. As a result, there could be tougher federal enforcement of immigration and labor laws and an exodus of some of the unauthorized in the US. Eventually, restrictionists believe there could be legalization for some of the remaining unauthorized foreigners in exchange for lower levels of legal immigration.\(^2\) Krikorian, author of The New Case Against Immigration: Both Legal and Illegal, expects a political fight over whether to relieve labor-shortage claims with guest worker programs.

Frank Sharry of New American Voices believes that markets overrule laws, and that the US government cannot prevent migrants from being hired by US employers. Sharry believes that most Americans will eventually agree that an immigration policy developed in the 20th century is inadequate for the 21st century, and that modernizing US immigration policy will include expanding channels for admitting the workers the US economy “needs.” If enforcement succeeds in requiring employers to verify newly hired workers immediately, so-called electronic E-Verify, admissionists believe that business pressure will lead to new guest worker programs, legalization of unauthorized workers, and more legal immigrants and guest workers.

Berman is a co-sponsor of the Agricultural Job Opportunity, Benefits and Security Act (S340/H371), which would allow up to 1.5 million unauthorized farm workers to "earn" a legal immigrant status by continuing to do farm work for five years and revise the existing H-2A program to make it easier for farm employers to hire guest workers.

AgJOBS, which was expected to be attached to the Senate version of the Farm Bill in October 2007, drew opposition from those opposed to amnesty as well as from those who considered the Farm Bill too controversial in its own right to include an immigration issue. Senator Dianne Feinstein (D-CA), a leading AgJOBS proponent, on November 5, 2007 said: "I had every intention of offering [AgJOBS] as an amendment on the farm bill...[but] we have decided not to endanger the broad support for AgJOBS by taking a non-representative vote on [it as an amendment to] the Farm Bill."

Feinstein in Spring 2008 proposed an emergency version of AgJOBS, The Emergency Agricultural Relief Act, that would give five-years of legal status to unauthorized farm workers who did at least 150 days, 863 hours, or had earnings of at least $7,000 in the 48 months ending December 31, 2007. Up to 1.35 million legalized workers could be legalized by paying a $250 fee, and they would have to do at least 100 days of farm work a year for the next five years. The H-2A program would change by allowing farm

\(^2\) Krikorian notes that during WWII, firms wanting federal government contracts had to pledge not to discriminate against Blacks, and that the bar against discrimination spread to throughout the economy after the war. He expects E-Verify to spread in a similar fashion.
employers to offer housing vouchers instead of housing and freeze the AEWR at 2007 levels for three years.

**AgJOBS Legalization**

The pending version of AgJOBS would allow up to 1.5 million unauthorized farm workers who did at least 150 days or 863 hours of farm work in the 24-month period ending December 31, 2006 to apply for Z-A probationary status during an 18-month sign-up period (this period is likely to be moved forward to the 24-month period before AgJOBS is enacted). H-2A workers who did sufficient qualifying work could qualify for Z-A visas, but not H-2A workers admitted after the enactment of AgJOBS.

Unauthorized farm workers could apply for Z-A visas through a government-approved qualified designated entity, a licensed attorney, or an immigration practitioner recognized by the Board of Immigration Appeals (legal aid programs funded by the federal government could also aid applicants). Workers without payroll records could submit evidence of their qualifying work by obtaining affidavits from contractors or fellow workers that, “by a preponderance of the evidence” demonstrate they did sufficient qualifying farm work. Applicants must pay an application fee as well as a $100 fine.

Z-A visas, valid for four years and renewable, would allow their holders to work and travel freely within the US and enter and leave the US. Family members of Z-A visa holders in the US could apply for work permits that would not require them to do farm work.

Z-A visa holders could earn an immigrant status for themselves and their families by continuing to do farm work. There are three continued farm work options, performing: (1) at least 150 days (a day is at least 5.75 hours) of farm work a year during each of the first three years after enactment; (2) at least 100 days of farm work a year during the first five years; or (3) at least 150 days in any three years, plus 100 days in a fourth year (for workers who do not do 150 days in the first three years). Z-A visa holders are eligible for earned benefits such as unemployment insurance and the earned income tax credit, but not means-tested benefits such as Food Stamps.

Z-A visa holders could receive credit for days not worked if they were fired without “just cause” by farm employers, and receive credit for days not worked because of injuries incurred doing farm work. Administrative mechanisms would be established so that injured and unjustly fired workers could receive appropriate work credit.

After proving that sufficient farm work was done and that income taxes were paid, Z-A visa holders could pay $400 plus an application fee to receive immigrant visas for themselves and their immediate family members. Z-A visa holders would become immigrants by traveling to their countries of origin and applying at a US consulate, the so-called touchback requirement (their family members would not need to touch back). At the US consulate in their country of origin, Z-A visa holders would have to prove that they filed US tax returns and pass an
English proficiency test. The conversion of Z-A visas to immigrant visas would not begin until the backlog of applications awaiting visas is cleared, an estimated eight years.

**H-2A Reform**
The H-2A program allows farm employers to request certification from the US Department of Labor to have foreign workers admitted “temporarily to the United States to perform agricultural labor…of a temporary or seasonal nature.” DOL certified almost 77,000 farm jobs to be filled with foreign workers in FY07, the most ever, and expects to certify over 80,000 farm jobs in FY08.

There were about three million jobs, including 2.1 million or 70 percent lasting less than 150 days on the reporting farm, for workers hired directly by farmers in the 2002 Census of Agriculture (COA), plus 500,000 to one million additional jobs on farms filled by workers brought to farms by intermediaries. With 2.5 to 3 million seasonal jobs on US farms, if 100,000 are certified to be filled with H-2A workers, the H-2A share of US farm jobs is four percent.

AgJOBS would rename the H-2A program the Z-A program and make it easier for US farm employers to employ guest workers. The changes would begin one year after the enactment of AgJOBS, except for the AEWR change, which would be effective immediately. The expectation is that the number of jobs certified to be filled by H-2A/Z-A workers will not increase quickly because Z-A visa holders will continue to do farm work.

The H-2A program would change in three major ways under AgJOBS. First, attestation would replace certification, effectively shifting control of the border gate to employers, who would make assertions (assurances) to the US Department of Labor that they have vacant jobs, are paying at least the minimum or prevailing wage, and will comply with other H-2A requirements. Employer job offers, to be filed at least 28 days before workers are needed, would be posted on the internet and no longer circulated via the interstate clearance system, as is done presently. Not more than 14 days before the employer-specified starting date, the employer must advertise for US workers.

Under AgJOBS, DOL would review employer assurances for "completeness and obvious inaccuracies" and approve them within seven days of receipt. Foreign H-2A workers would arrive and go to work, and DOL enforcement of employer assurances would respond to complaints of violations of H-2A regulations, such as guaranteeing work for at least three-fourths of the work period specified by the employer, hiring local workers (including Z-A visa holders) who apply for jobs until 50 percent of the work period stated by the employer is completed, and reimbursing 100 percent of the transportation costs of workers who complete the job. Under AgJOBS, there must be mandatory mediation to try to resolve disputes before suits are filed.
Second, farm employers could pay a housing allowance of $1 to $2 an hour to employ H-2A workers, depending on local costs to rent two-bedroom units that are assumed to house four workers, rather than provide free housing to H-2A and out-of-area US workers as currently required. The state's governor would have to certify that there is sufficient rental housing for the guest workers in the area where they will be employed in order for H-2A employers to pay a housing allowance rather than provide free housing.

Third, the Adverse Effect Wage Rate, the minimum wage that must be paid to legal guest workers, would be frozen at its 2002 levels and studied. In California, the AEWR would be reduced from $9.20 an hour in 2007 to $8.02 an hour, 15 percent, and there would be similar reductions in other states. If Congress failed to enact a new AEWR within three years, the AEWR would be adjusted on the basis of the three-year change in the Consumer Price Index and eventually rise with the CPI by up to four percent a year.

Employer job orders become contracts that H-2A and US workers can sue to enforce. Currently, H-2A workers can sue to enforce these contracts in state courts; under AgJOBS, they could sue in federal courts. AgJOBS requires DOL to establish an office to which H-2A workers could complain. If this office failed to resolve disputes, either party could insist on free non-binding mediation to delay the litigation for up to 90 days. H-2A workers would continue to be excluded from the protections offered by MSPA of 1983, which requires disclosure of wages and working conditions at the time and place of recruitment and requires farmers to use only federally licensed FLCs.

Many requirements of the H-2A program would continue under AgJOBS. These including having employers reimburse H-2A (and US workers from beyond commuting distance) for their transportation and subsistence costs if they complete their work contracts, requiring employers to continue to hire US workers until half of the work contract period is completed, and guaranteeing work to H-2A and US workers for at least ¾ of the contract period.

**DOL TEGL and Regulations**

DOL issued a TEGL (Training and Employment Guidance Letter) on November 6, 2007 reducing the recruitment required of employers, asked State Workforce Agencies to verify the legal status of US workers they refer to fill jobs for whom H-2A workers are sought, and instructed SWAs to inspect the housing employers are required to offer as early in the application process as possible. DOL proposed regulations on February 7, 2008 to modify the H-2A program as proposed by AgJOBS.

Employers file requests for labor certification with one of two US Department of Labor National Processing Centers, which review and accept them, direct State Workforce Agencies (SWAs) to "clear" the employer's job order by posting it on job banks in the state and other states with workers, receive employer reports on their efforts to recruit
US workers, and issue or deny the certification sought to employ H-2A workers at least 30 days before the employer’s need date.

SWAs refer workers to employers and monitor their recruitment, inspect the housing offered to US and H-2A workers, and conduct the prevailing wage and practice studies that are used to determine whether the employer's job order satisfies minimum regulations. SWAs are reimbursed for these activities by DOL via an annual grant.

DOL’s November 2007 TEGL seemed to end the requirement that the employer advertise for workers outside the immediate area in which the H-2A workers will be employed. The TEGL also required SWAs to refer only "eligible" US workers to jobs for which the employer seeks certification to use H-2A workers, and "strongly recommends" that SWAs use the E-verify system to check the legal status of workers seeking referrals to H-2A jobs as well as send proof of the worker's legal status to the employer. Finally, the TEGL instructs SWAs to avoid referring US workers to fill jobs on farms where H-2A workers have departed for the US or are already employed, since the H-2A workers could be displaced to make room for the US worker.

The regulations proposed in February 2008 would convert the H-2A program from certification to attestation, switch the basis of the AEWR from a USDA survey of farm employers to a DOL survey of employers, and adjust regulations aimed at protecting US and H-2A workers.

Under the proposed attestation procedure, farm employers would attest or assert via the internet that they tried to find US workers, beginning at least 75 days before their anticipated need date, and had acceptable housing for the guest workers. DOL would approve or certify their need for H-2A workers based on these assertions, and audit at least some employers to check that they fulfilled their assertions. SWAs would continue to post employer job orders on job banks, but would no longer supervise employer recruitment of US workers.

Currently, farm employers must offer and pay the higher of three wage rates to US and H-2A workers, the federal or state minimum wage, the prevailing wage, or the adverse effect wage rate (AEWR), the average hourly earnings reported by farm employers to USDA for field and crop workers the year before (the AEWR is usually the highest of the three wages). DOL proposed that the AEWR be based on Occupational Employment Survey data (www.bls.gov/oes), which are available for over 800 occupations and 530 areas.

For each occupation, there are four wage levels listed in the Foreign Labor Certification Data Center; Level 1 is the average of the lowest one-third of workers surveyed in the OES, while Level 3 is the mean wage reported in the OES.
However, the OES appears to survey only employers providing agricultural support services such as labor contractors, not farmers who hire workers directly. The May 2007 OES data for NAICS 115, support activities for agriculture and forestry, reported that 325,450 workers were employed at a median hourly wage of $8.50 an hour and a mean wage of $10.41. Most of the workers in NAICS 115, 236,160, had farming occupations, including 180,530 in SOC 45-2092, farm workers and laborers; these workers earned a median $8 an hour and a mean $8.47.

The proposed changes to worker protections explicitly instruct US farm employers not to charge H-2A workers for their cost of obtaining visas, a regulation that may be hard to enforce since such charges are usually incurred outside the US. US labor contractors who bring H-2A workers into the US would have to post a bond to cover the wages owed to their foreign workers. Fines for employers who displace US workers to hire H-2A workers would be $15,000, and fines for violating H-2A contracts would be $5,000. DOL also proposed to allow employers to offer out-of-area US workers and H-2A workers vouchers for housing rather than provide them with housing if the governor of a state "certified" that there is sufficient local housing.

**Immigration: Urban and Rural**

**Foreign-born in 2006**

The 37 million foreign-born residents in 2006 were 12.5 percent of the US population of 299 million, according to the American Community Survey of 2006. The number of foreign-born US residents rose by 6.3 million between 2000 and 2006, while the number of US-born residents rose by 11.6 million, meaning that immigration contributes directly 35 percent of US population growth.

There has been enormous growth in the US foreign-born population. In 1970, the 10 million immigrants were five percent of US residents; by 2010, the 40 million immigrants are likely to be 13 percent of US residents. In 1970, when Mexico’s population was about 50 million, there were about 750,000 Mexican-born US residents. By 2010, when Mexico will have 110 million residents, there are likely to be 13 million Mexican-born US residents.

Of the foreign-born in 2006, 11.5 million or 31 percent were born in Mexico, 8.9 million or a quarter were born in Asia, and 8.5 million or almost a quarter were born in the Caribbean, Central and South America; almost 30 percent of the Mexicans arrived after 2000. There were over 11.5 million US residents born in Mexico, 1.6 million born in the

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3 This section draws on tabulations from the ACS made by the Pew Hispanic Center (http://pewhispanic.org/reports/foreignborn)
Philippines, 1.5 million born in India, 1.5 million, 1.4 million born in China, 1.1 million born in Vietnam, and a million each born in El Salvador and Korea.

The median age of US-born residents in 2006 was 35; the median age of foreign-born residents was 39, and 34 for those born in Mexico. Almost 10 million foreign-born US residents were in CA, where they were 27 percent of residents, followed by 4.2 million in NY, where they were 22 percent of residents, and 3.7 million in TX, where they were 16 percent of residents. CA had 4.4 million Mexican-born US residents, 38 percent of the total, followed by TX, which had 2.3 million or 20 percent.

There were 4.1 million births in 2006, including 20 percent to foreign-born mothers. Mexicans were 31 percent of the foreign-born, but accounted for 42 percent of the births to foreign-born women. Over 38 percent of the US-born women giving birth in 2006 were not married, versus 26 percent of the foreign-born women.

There were 196 million US residents 25 and older in 2006, including 16 percent who were foreign-born. Among the 165 million US-born adults, 13 percent did not complete high school, and 27 percent had a college degree. Among the 31 million foreign-born adults, 32 percent did not complete high school, and 27 percent had a college degree. There was a sharp contrast in the education levels of Mexicans and Asians. Among Mexican-born adults, 60 percent did not complete high school, and five percent had a college degree. Among Asian-born adults, 16 percent did not complete high school, and 49 percent had a college degree.

The ACS obtains data on persons 16 and older who worked any time in the past five years. There were 181 million persons with work experience, more than the 2006 labor force of 153 million.

These work-experience residents were divided into 15 occupational categories, from management to food preparation to farming. The largest occupation groups for the US-born were office support, 15 percent, management, 13 percent, and sales, 12 percent—six percent of US-born workers were in construction, and 0.6 percent in farming. For foreign-born workers, 13 percent were in production occupations, and 10 percent each in office support, management, and construction; two percent were in farming. For the Mexican-born, 19 percent were in construction, 15 percent were in production, and 13 percent in janitorial services; six percent (almost 500,000 persons) were in farming occupations.4

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4 According to the ACS, 88 percent of the 563,000 foreign-born with work experience in the occupation farming between 2000 and 2005 were born in Mexico. By industry, 82 percent of the 677,000 foreign-born with work experience in the industry between 2000 and 2005 agriculture were born in Mexico.
There were about 163 million persons with earnings in 2006, including 138 million US-born and 25 million foreign-born. About 37 percent of the US born earned less than $20,000, 51 million people, as did 41 percent of the foreign-born and 55 percent of the Mexican born. A quarter of the US born earned over $50,000, as did 20 percent of the foreign born and six percent of the Mexican born.

The median earnings of all US born workers were $28,000 in 2006, $24,000 for the foreign born, and $18,000 for Mexican born. For full-time workers (at least 48 weeks and 35 hours a week), median earnings were $39,000 for US-born, $30,000 for foreign born, and $22,000 for the Mexican born.

Unauthorized Foreigners and Hispanics

Passel estimated there were 11.5 to 12 million unauthorized foreigners in the US in March 2007 (http://pewhispanic.org/reports/report.php?ReportID=61), making unauthorized foreigners almost a third of the 37 million foreign-born residents. The number of unauthorized foreigners increased by 850,000 a year between 2000 and 2005, helping to explain why 40 percent of the unauthorized had been in the US less than five years by 2005, and two-thirds less than 10 years. The number of unauthorized is continuing to increase, but it is not clear how fast.

About 55 percent of the unauthorized were born in Mexico; about 10 percent of persons born in Mexico have settled in the US. Almost half of the unauthorized were adult men, 35 percent were adult women, and 16 percent were children.

An estimated 7.2 million unauthorized foreigners, 65 percent, were employed in March 2005, meaning that 4.9 percent of the 147 million employed workers at the time were unauthorized. The largest single occupation of the unauthorized was services, which employed 31 percent of the unauthorized and 16 percent of US-born workers, followed by construction, 19 percent of the unauthorized and six percent of the US born, and farming, four percent of the unauthorized and 0.5 percent of the US born. As a share of workers, the unauthorized were 24 percent of workers employed in farming occupations, 17 percent of workers in cleaning, 14 percent in construction, and 12 percent in food preparation.

For detailed occupations, the largest single group of unauthorized were cooks—the 436,000 unauthorized cooks were 20 percent of the total 2.2 million. Similarly, the 400,000 construction laborers were a quarter of the 1.6 million construction laborers, and the 342,000 maids and cleaners were 22 percent of the 1.5 million total. There were about 840,000 agricultural workers in March 2005, and 250,000 or 30 percent were unauthorized.

Passel emphasized that the share of unauthorized in traditional immigration states such as California has been decreasing, even as the number of unauthorized continues to rise.
However, the major unauthorized story is that the sharp increase in unauthorized foreigners in new destination states of the southeast, Midwest, and mountain regions. States with fast-rising Hispanic and immigrant populations, such as Nevada and North Carolina, have higher-than-average shares of unauthorized Hispanics and foreigners.

Kandel reported that Hispanics were 16 percent of the US metro population in 2005, but only six percent of the 52-million nonmetro population. The Hispanic population increased 20 percent in metro areas between 2000 and 2005, and 18 percent in nonmetro areas.

In some rural or nonmetro areas, there were sharp jumps in Hispanic residents. In 12 states led by NC and DE, the Hispanic population of nonmetro areas increased almost 500 percent between 1990 and 2000; in another 12 states in the south and Midwest, the nonmetro Hispanic population more than doubled in the 1990s. Hispanic population growth continued between 2000 and 2005, as both large (PA and VA) and small (NH and SD) states experienced nonmetro Hispanic population increases of over 50 percent.

There are four major explanations for the rapid growth of the Hispanic population in rural America. The first is IRCA, which legalized about 2.3 million Mexicans in 1987-88. A second explanation notes that farmers as well as meatpackers and poultry processors recruited Hispanic migrants because of their strong “work ethic” to fill jobs, especially on second-shifts in small towns that had few residents and workers. Third, after pioneer migrants were established, networks encouraged friends and relatives to move and take year-round jobs in areas with relatively low living costs. Finally, a service economy developed that allowed some established migrants to serve newcomers.

Hispanics are unlike other workers in the Midwest because their share of employment in manufacturing is twice the average for all workers (43 versus 21 percent in 2000). Hispanics are unlike other workers in the southeast and northwest because a much higher share are employed in agriculture (18 versus six percent in the northwest in 2000).

The key industries encouraging the Latinization of the nonmetro Midwest, southeast, and northwest are agriculture and meat and poultry processing. By 2000, over 60 percent of all workers in meat processing were in rural America, up from less than half in 1980. The shift to rural areas helped to keep the real labor costs of meat labor flat at about $20,000 a year (1994 dollars) and encouraged meatpackers to prepare more cut up and semi-prepared meat products in often large meatpacking facilities.5

5 Kandel reported that 75 to 90 percent of US meat comes from plants with at least 400 employees. Some of these plants are very large, with up to 5,000 employees working on two shifts.
Just as seasonal agriculture was a port of entry for rural Mexicans in California and the southwest, so meatpacking is serving as a port of entry for Hispanics in nonmetro areas in the Midwest and south. The Hispanic share of the nonmetro meatpacking work force more than tripled between 1990 and 2005, from less than 10 percent to 36 percent. Over 80 percent of the Hispanics employed in meatpacking in 2005 were foreign born, two-thirds had less than a high-school education, and their earnings averaged $15,600 (2000 dollars).

**Industry and Worker Perspectives**

O’Brien repeated ten points about farm labor, including that future farm workers are growing up today somewhere outside the US, that average farm earnings exceed the minimum wage, and that the H-2A program is not flexible enough to provide workers for diverse US agriculture. However, he believes it may be difficult to win an acceptable immigration reform for agriculture because of the Legacy of Shame associated with farm workers.

O’Brien prepared a study for the American Farm Bureau Federation in January 2006 that estimated the effects of an enforcement-only approach to immigration reform, concluding that enforcement-only could reduce farm sales by up to five percent. According to the AFBF, US farms with sales of at least $500,000 a year accounted for a 85 percent of farm sales and farm workers hired. Farm labor supply and demand were considered "in balance" in 2005, and the study projected the impacts of removing 50 percent of farm workers believed to be unauthorized.

The AFBF study put average farm labor "wages" at $9.50 an hour, more than the $6.60 an hour of food preparation workers and the $11 of cleaning workers and $14.35 of construction laborers. A key assumption was that, since farm wages were higher than food preparation wages, food workers could not be attracted to do farm work (if they could, they would already have been attracted), and cleaners or laborers could be recruited only at higher wages. However, with 10 percent of FVH producers "financially vulnerable" at $9.50 an hour wages, the AFBF projects that raising farm wages 51 percent to $14.35 an hour would double the share of vulnerable producers to 20 percent.

The AFBF concluded that higher farm wages would lead to more imports but not much additional mechanization, at least in the short term. Instead, AFBF calls for a guest worker program that allows the entry and employment of 500,000 workers a year, compared to about 35,000 under the current H-2A program and allows "the open market to determine wages and benefits" rather than "arbitrary guidelines to protect American workers." The AFBF used the study to criticize current H-2A regulations, which it said "raise wages and benefits for foreign farm workers above market-clearing levels without leading to an increase in Americans seeking farm jobs."
Nicholson, the director of guest worker programs for the UFW, explained that more guest workers in US agriculture seems inevitable, prompting the UFW to develop agreements with labor contractors and foreign governments to protect these workers. He noted that the number of countries from which H-2A workers came to the US rose from 19 in 1997 to 56 in 2006, with South Africa second to Mexico.

By working with US consulates abroad, the UFW has been able to prevent some worker exploitation in the US, as when the US consulate in Thailand refused to issue visas to some Thai workers who had paid $10,000 for US farm jobs, making them likely immigrants and thus not entitled to temporary work visas. The experience of Thais in Israeli agriculture helped some to switch from rice to vegetables upon their return, increasing their Thai incomes.

The UFW has an agreement with Global Horizons, an LA-based labor contractor that was prohibited in 2006 from bringing additional H-2A workers into the US after violating H-2A regulations in WA and other states. In April 2006, the UFW and Global negotiated a three-year agreement under which the H-2A workers Global brings into the US would be paid two percent more than the AEWR and receive UFW health care coverage while in the US.

During a trial in Yakima, WA in September 2007, Global's Mordechai Orian testified that he preferred to send Thai H-2A workers rather than US workers to US farms because "they work really hard" and were less likely to "abscend" or leave the employers to whom they were assigned. Yakima-area apple growers Valley Fruit and Green Acre Farms paid Global $2 million in 2004 for farm workers.

Global lost its FLC license in Washington in 2006, and was ordered to pay $317,000, including $17,000 in compensatory damages to three US farm workers and $300,000 in punitive damages to hundreds of other US workers who alleged that they were not hired because Global preferred Thai H-2A workers. Global promised to appeal, saying that the US workers suing "quit or were terminated for cause" and that suits against H-2A employers were "driving the entire agricultural industry overseas." Global alleged that some of the US workers suing were unauthorized, but the court blocked discovery of the workers' legal status.

Goldstein emphasized the importance of approving AgJOBS, noting that many current unauthorized farm workers cannot become H-2A workers because they have been illegally in the US, which prevents them from receiving visas. He criticized DOL efforts to make the H-2A program more employer friendly, emphasizing that the OES wage data may be inappropriate because (1) wages can be lower than a state’s minimum wage, especially for level one of the four-categories and (2) the wage data can be up to two years old.
Goldstein noted that worker advocates were not satisfied with many of the provisions of AgJOBS, but accepted them to achieve a workable compromise that legalized farm workers. He emphasized that, if there is a collective bargaining agreement at a particular farm, wages, benefits and many of the other job-related items spelled out in the law for guest workers admitted under the revised H-2A program in AgJOBS could be negotiated by the union and the employer. That is, is flexibility when a farm has a union, and rules spelled out in law when there is no union.

Research Perspectives
The changing face of rural and agricultural America is visible in the commodities and communities attracting newcomers from abroad. However, several national trends can be gleaned from the variety of local impacts. First, the hired farm work force on crop farms consists primarily Mexican-born men, most of whom are unauthorized, and most of whom earn about half the average US hourly wage of $17 an hour. Seasonal work and low wages combine to produce high turnover; the NAWS reports that up to a fifth of the workers interviewed are in their first year of US farm work.

Immigration reform may increase farm wages. The impact of rising wages is more likely to reduce the demand for farm workers rather than to increase the supply. Because most farm commodities are packed or processed, coordination between growers and handlers is often required to speed labor-saving changes. Government played such a coordinating role in the mechanization of the processing tomato harvest in the 1960s, and could speed mechanization again in the 21st century by promoting labor-saving change.

Migrants are more than workers. As they settle in the communities in which they work, they change the “face” of their communities while generating new challenges and opportunities. Children from poor families who do not speak English are often a challenge for local schools, as are workers and families who lack health insurance. On the other hand, newcomers that maintain the viability of meat or other plants in small towns can preserve what might otherwise shrink, the diversify or depopulate challenge.

The US has two programs under which US employers anticipating shortages of workers to fill seasonal jobs can receive permission to employ foreign workers. There is no ceiling on the number of jobs that can be filled by farm workers with H-2A visas, but there is a 66,000 a year ceiling on H-2B visas. The H-2A program is expanding, and there are pressures to expand the number of H-2B visas available because employers want to fill more than 66,000 jobs with H-2B workers.

The US is not the only country grappling with demographic changes in agricultural areas due to an influx of foreign farm workers. Spain has had one of the industrial world’s fastest economic growth rates and a very high rate of immigration over the past decade, as newcomers arrived to fill jobs in construction, export-oriented fruit and vegetable agriculture, and services. Managing this migration has proved challenging.
Labor Supply and Demand

Since 1989, the US Department of Labor’s National Agricultural Workers Survey (NAWS) has been interviewing farm workers. The NAWS was originally designed to determine the supply or availability of farm workers, since IRCA required monitoring the farm labor market to assess the extent of farm labor shortages. There were no farm labor shortages during the 1989-93 period for which the NAWS was mandated, but the NAWS continued to interview workers employed on US crop farms and today generates the most comprehensive socioeconomic data on workers employed on US crop farms.

Carroll and Saltz reported that 74 percent of the 3,700 workers interviewed while working on US crop farms between 2005 and 2007 were born in Mexico. Almost half of the Mexican-born farm workers were from west-central Mexico, led by Michoacan and Guanajuato, and a fifth were from southern Mexico, led by Oaxaca. Most foreign-born workers who were interviewed arrived a decade earlier, but this 10-year average is obscured by the fact that 40 percent of those interviewed first arrived in the US a year before being interviewed, and 45 percent arrived at least a decade earlier.

Work authorization is inferred from answers to a series of questions. Just over half of those interviewed were unauthorized, 25 percent were US citizens, and 21 percent were legal immigrants (the NAWS does not interview H-2A workers or livestock workers).

Migrants were defined as workers who moved at least 75 miles do farm work, and 36 percent of those interviewed between 2004-06 were migrants. About 45 percent of these migrants were newcomers to US farm work, that is, they arrived from another country during the previous year. Another 27 percent were international shuttle migrants, meaning that they had a usual home in Mexico and were interviewed doing US farm work. Only seven percent were domestic shuttles, meaning that they had e.g. a usual home in south Texas and were interviewed in CA or MI and 15 percent were follow-the-crop migrants with a home base in the US and at least two US farm jobs at least 75 miles apart.

The workers interviewed had a median seven years of education; 20 percent had at least a high-school diploma. US-born farm workers had more education, an average 11 years, than foreign-born workers, an average six years. About 80 percent of those interviewed spoke primarily Spanish.

About 90 percent of the workers interviewed had one (77 percent) or two (13 percent) farm employers during the preceding year. On average, those interviewed did US farm work for 38 weeks the previous year, plus three weeks of US nonfarm work; they were in US but not working eight weeks, accounting for a total 49 weeks. Workers averaged 189 days of farm work, an average five days a week. Excluding newcomer farm workers raises the average number of farm work days to 230, which is full employment (48 weeks x 5 days = 240 days).
Most workers were interviewed while employed on fruit, 29 percent, vegetable, 25 percent, and horticultural specialty operations such as nurseries, 25 percent. Most of the workers interviewed, 86 percent, were employed directly by the operators of the farms on which they worked. Foreign-born newcomers employed in fruits were most likely to be employed by labor contractors.

Workers were employed an average 44 hours a week; 22 percent worked 50 or more hours a week. Working 44 hours a week for an average 38 weeks means that those interviewed did 1,672 hours of farm work the previous year. At the average reported wage of $8 an hour, those interviewed averaged $13,400 a year from farm work. Only 10 percent were paid piece rates, and they earned an average $8.76 an hour, compared with $7.53 for the 83 percent of workers paid by the hour—the high wages of piece rate workers and salaried employees pulled the average for all workers up to $8 an hour.

The NAWS obtains data on individual and family income during the previous year. Over half of those interviewed reported that their total income was between $7,500 and $17,500 the previous year, with the largest single group, about 20 percent, reporting a total income of $12,500 to $15,000.

The NAWS presents a mixed picture of US crop workers. Most are foreign-born, unauthorized, and male. Crop workers have an average seven years education. By doing 38 weeks of farm work a year (almost 1,700 hours), they earn over $13,000 a year. Average farm worker earnings of $8 an hour were 50 percent more than the federal minimum wage between 2004 and 2006 (then $5.15 an hour), which may explain why 70 percent of those interviewed expected to be doing farm work for another five years.

However, the NAWS interviews 15 to 20 percent new workers each year, which suggests 100 percent turnover every five to six years. It is entirely possible that the US crop labor force, like work forces in other high-turnover industries such as fast food and meatpacking, consists of a core of more year-round and stable workers with long tenure, and a revolving door of new entrants who try farm work before moving on to nonfarm jobs. New hires often involve recruitment and training cost, while experienced workers expect higher wages and benefits, forcing employers to weigh the benefits and costs of reducing turnover. Many employers in high-turnover industries follow a two-tiered strategy, ensuring that their core workers are satisfied while tolerating high turnover among workers who handle seasonal surges.

Martin asked how farm labor markets are likely to adjust to the rising wages that may be set in motion by immigration reforms. The flexibility in low-wage labor markets such as agriculture is generally on the demand side of the labor market, not on the supply side, meaning that a sustained increase in wages of 20 or 30 percent is more likely to lead to labor-saving changes than more farm workers. However, mechanization in labor-intensive agriculture is often complicated by the fact that fruits and vegetables must be packed or
processed, requiring coordination between growers and handlers. Government played this coordinating role in the mechanization of the processing tomato industry.

The key insight of looking for the response to rising wages on the demand side of the labor market is that there can be sharp drops in employment at higher wages. This means that farmers may initially adjust to rising wages by picking and repicking fewer times, lowering quality standards, or providing tools and equipment that increase worker productivity. However, at some critical or threshold wage, there can be a sudden drop in the demand for labor as growers and handlers adopt labor-saving changes. The structure of the industry often changes as well, as there are generally fewer and larger producers after mechanization.

Communities and Guest Workers
Flora explored the effects of the Latinization in the Midwest, which attracted many newcomers because of meatpacking jobs amidst low unemployment rates. Towns that opened or expanded meatpacking plants soon attracted Hispanic newcomers to staff them. Interviews with workers and plant managers find most satisfied--the workers get the wages and a foothold on the American dream that they want, and employers get the workers they want.

Flora examined Columbus Junction, Iowa, a town of 2,000 whose population was transformed after Tyson re-opened a meatpacking plant and began recruiting workers along the Mexico–US border; 40 percent of residents are Hispanic. Town leaders are generally pleased with the changes brought by immigration, but many US-born adults cannot communicate with the newcomers because of language barriers. No Latinos sit on the City Council or the School Board, but there is political activism among second-generation bilingual Hispanics. Median household income is lower than the state average, as is the percentage of residents who have a college education.

Interviews with the immigrant workers find that most take pride in working, most had their best-ever jobs in Iowa, and "best jobs" include a chance to learn English. Tyson was praised for offering workers the opportunity to learn English and get high-school equivalence diplomas. Some of the workers interviewed wanted to maximize hourly wages, explaining that they detassel corn during summer months to earn extra money.

Immigrant workers cited several needs, including some type of public transportation system, facilities to learn English at the
workplace (which workers had to reach via various methods of car pooling), and medical attention in their own language in or near the workplace. The local housing stock includes a number of fix-up houses that were bought by immigrants and improved, often with their own work and credit extended by big-box home improvement stores. Some of the houses being improved are outside the city, where building codes and zoning laws do not apply.

Griffith outlined the essential features of the H-2A and H-2B programs, noting that both types of guest workers are tied to their US employer—if they lose their jobs, the workers lose their rights to be in the US. On the eastern seaboard, the locus of H-2A employment shifted from Caribbean workers cutting sugar cane in FL to Mexican workers harvesting tobacco in NC in the mid-1990s, and is today shifting back to FL, where Mexicans and Central Americans are employed to harvest citrus and vegetables. Caribbean governments were more involved in recruitment, and Mexican and Central American workers often pay 10 to 15 percent of what they expect to earn in recruitment costs.

In both the H-2A and H-2B programs, recruitment costs to workers can be high, guest workers aim to please their US employers, and guest workers have deductions from their wages for food and other items. Griffith reported that about 70 percent of the workers employed in flue-cured tobacco in the eastern part of NC were H-2A workers, as were half of the workers employed on smaller burley tobacco farms in western NC. Since the tobacco buy-out of 2004, employment of H-2A workers has declined with declining tobacco production. The H-2A program is shrinking while contractors employing unauthorized workers expand their share of the market; there is also an attempt to introduce “new” types of H-2A workers from Southeast Asia and elsewhere.

The crab industry along the Atlantic traditionally relied on Black women to pick/clean crab, but began to import Mexican women under the H-2B program in the late 1980s. There has been some settlement of Mexican H-2B workers via marriage etc. The towns of Belhaven, NC and Los Mochis in Mexico are linked by the migration of 300 H-2B crab pickers, with labor recruitment organized by a contractor who receives $0.05 a pound and remittances fueling growth in Los Mochis. Griffith emphasized that US employers preserve traditional businesses by importing workers, and create new hierarchies and family structures in Mexico because of migration.

Spanish Strawberries
World production of strawberries is about four million tons a year. The US produces a million tons of strawberries a year, a quarter of the total, including 250,000 tons for processing. China is the second-leading producer, about 800,000 tons a year, but almost all of China’s strawberries are consumed within the country.
Spain produces about 300,000 tons of strawberries a year, over 90 percent for the fresh market; 75 percent exported to Germany, France, the UK, and other countries. Japan is the fourth leading producer, about 200,000 tons a year, almost all of which are sold within the country. Poland is fifth, with about 160,000 tons a year but low yields and low prices are shrinking the industry. Mexico is sixth, with about 140,000 tons a year; its exports of 35,000 tons a year are double Polish exports.

Some 50,000 workers are employed in strawberry fields in Huelva in southwestern Spain, including 30,000 guest workers recruited under bilateral labor agreements with Morocco, Colombia, Ecuador, Poland, Romania, Bulgaria and Senegal (workers are also recruited in the Ukraine, but not under bilateral agreements; seasonal workers are not recruited in Colombia and Ecuador because of high transportation costs). There are few unauthorized workers in Huelva strawberry fields.

Employers must apply for certification that they need foreign workers at least 105 days before the expected work-start date, and most producers use one of five employer associations, Freshuelva, COAG, ASAJA, UPA-CORA, ACPH, to recruit foreign workers for them. Employers pay a fee to such organizations to them to negotiate the bureaucracy by ensuring that they complete applications for certification correctly, that is, not in a manner aimed at discouraging the employment of local workers. Employers do not pay a fee for certification to the government, and they must recruit at least 10 foreign workers, which favors the associations.

Provincial authorities (and growers) attempt to recruit Spanish workers for at least 15 days. This local recruitment typically does not produce many workers, since most local workers seeking farm jobs want to go to work right away, not in 100+ days. During the 15-day recruitment window, growers prefer to hire local workers who do not require housing. Workers from other Spanish provinces may require housing in Huelva, and many want to work only the 35 days necessary to qualify for 180 days of UI benefits (many Spanish workers work for cash wages while drawing these UI benefits).

Employers are certified to recruit foreign workers 90 days before their need date. This recruitment is normally done by agents of the employer associations in recruitment countries, so that recruited workers can arrive in Spain when they are needed. The Spanish government transmits the number of workers requested to labor-sending governments, which recruit at least twice that many workers to come to a central location to be interviewed for jobs in Spain (employers can also request guest workers by name). Selected foreign workers are issued personal identification numbers (NIE) by the Spanish Ministry of the Interior, which enables them to receive visas to enter Spain.

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6 Spain exports about 225,000 tons of fresh strawberries a year; the US about 100,000 tons.
On the one hand, Spain’s bilateral labor agreements reduce illegal migration and guarantee Spanish strawberry growers sufficient seasonal workers to harvest their crop. Nationals of Eastern European countries who have freedom of movement rights such as Poles may prefer year-round or higher-wage jobs in the UK or Ireland. Nationals of countries that have long sent seasonal workers to Spain, such as Morocco, may seek nonfarm jobs and settle in Spain, giving rise to new programs that seek to recruit e.g. only women who leave their children in Morocco. The agreement with Senegal is too new to evaluate, but one development in most new labor-sending countries is a proliferation of questionable contractors and others seeking to help local workers to find foreign jobs.

Immigration and Commodities

California Raisins

Raisin grapes are a commodity in which rising wages, uncertainty about the future availability of hand harvesters, and increasing competition from lower-cost commodities abroad are encouraging labor-saving mechanization. Grape varieties that mature earlier, allowing canes to be cut and grapes to dry into raisins while on the vine, the dried on the vine or DOV method of production, can be harvested mechanically with wine grape harvesters that have rotating fingers that knock the raisins from the vines and convey them to bins. About a third of CA raisin grapes were harvested with some type of mechanization in 2007.

Martin and Mason noted that in 2007, CA had 224,000 acres of raisin-type grapes, including 219,000 bearing acres (98 percent); 92 percent were Thompson seedless.7 About 65 percent of CA’s raisin grapes are in Fresno county, followed by 16 percent in Madera county and eight percent each in Tulare and Kern counties.8 Newly planted grapes require about four years to reach commercial yields, but it takes six to seven years after planting to achieve yields of 8-12 tons of green grapes or 2-3 tons of raisins per acre.

There are about 5,000 CA raisin growers with an average 50 acres each; many raisin growers are retired or mostly depend on off farm income (ERS, 2003). Raisin production has been rising, from an average 200,000 tons a year in the 1970s, 300,000 tons a year in the 1980s and 1990s, and 400,000 tons a year between 2000 and 2003; raisin production peaked at 484,000 tons in 2000.

A Federal Market Order has regulated the flow of raisins to the market since 1949. A Raisin Advisory Committee that includes producers and handlers determines how much

7 Accounting for unreported acreage, there were 233,000 acres of raisin-type grapes in 2007, according to NASS, 97 percent bearing. California also had 523,000 acres of wine grapes, 92 percent bearing, and 92,000 acres of table grapes, 89 percent bearing.
8 Data from CA Grape Acreage Reports.
8 www.nass.usda.gov/Statistics_by_State/California/Publications/Fruits_and_Nuts/index_gab.asp
of the crop will be marketed immediately as “free tonnage” and how much will be placed in the “reserve pool” and sold at concessionary prices to foreign buyers or the school lunch program. The price received by growers is the weighted average of the free and reserve prices, so that a grower price of $1,310 a ton, as was negotiated by the Raisin Bargaining Association for 2008-10, means about $800 a ton to growers on all their raisins if 60 percent of the raisin crop is free tonnage.

Raisin farmers in recent years have had gross revenues of about $350 million a year from 425,000 tons of raisins a year, an average of about $800 a ton. However, raisin prices have fluctuated over the past three decades between $200 and $1,250 a ton. In the late 1990s and between 2000 and 2002, there was a surplus of raisins due to high production and foreign competition, and only 56 percent of raisins were allotted to free tonnage. Between 1999 and 2000, prices dropped from $1,220 a ton to $569 a ton, and fell further to $377 a ton in 2002, largely as a consequence of reduced purchases of Thompson seedless grapes by wineries.

The harvesting of raisin grapes has traditionally been the most labor-intensive seasonal farm labor activity in North America, requiring 40,000 to 50,000 workers for the typical six-week harvest. Workers wielding a curved knife reach under the vines to cut bunches of green grapes, drop them in a plastic tub or pan, and dump the 20-pound tubs onto paper trays lying between the rows. The green grapes dry into raisins in the 100-degree plus heat.

Raisins are vulnerable to rain damage during the 2-3 weeks they are drying. There is always a labor shortage in the race between sugar and rain. Grapes are literally sugar balls, with twice as much sugar as sugar cane or sugar beets. Every August, farmers measure the rising sugar level of their grapes and, when they contain 22 or 23 percent sugar, most turn to contractors for harvesters. Farmers are required to have their raisins drying on the ground by a certain date, typically about September 20, to collect payments under their crop insurance policies in the event of rain. The longer farmers wait to begin the harvest, the more workers are needed. If the harvest begins 20 days before the “rain date,” twice as many workers are needed than if the harvest begins 40 days before the rain date.

Harvesters are paid piece rate wages of almost cent a pound or 25 cents for each 20-pound tray. Growers harvesting 10 tons of green grapes or 20,000 pounds an acre generate 1,000-20 pound trays, and harvesting them costs $250 in wages to workers plus $75 or 33 percent in overhead payments to contractors. If growers receive a net $800 a

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9 Fewer raisins were crushed for wine since the 1990s than in earlier years.
10 A 1991 survey reported that the average piece rate was $0.16 a tray, about the same rate that had been paid for the previous decade. In 1994, EDD found that the prevailing wage was $0.17 a tray, and rose to $0.19 a tray by 1997.
ton for 2.5 tons of raisins per acre, labor costs of $325 an acre are 16 percent of the $2,000 gross revenue per acre.

There is an labor-saving alternative to scanning the skies for rain clouds and complaining of labor shortages. Some grape varieties reach optimal sugar levels earlier, at the beginning rather than the end of August. A machine can cut the canes holding bunches of green grapes so they begin to dry into raisins while still on the vine, the so-called dried-on-the-vine (DOV) method of harvesting. Another machine with rotating fingers knocks the raisins from the vine and places them on a continuous paper tray in the vineyard for further drying or, if they have completely dried, conveys the raisins to a bin traveling alongside the harvester.

Mechanization eliminates 90 percent of the harvesting jobs as well as worries about rain-damaged raisins. Under DOV, the demand for labor shifts from August-September to the winter months for careful pruning that facilitates the hand or mechanical cutting of the canes that begins the drying process, when there is widespread unemployment among farm workers. Mechanization is spreading, and at least a third of California’s raisins were harvested with some type of mechanical assistance in 2007. To use machines, traditional vineyards must be retrofitted with stronger stakes and trellising at a cost of up to $2,000 an acre.

The major factors encouraging mechanization in the CA raisin industry are higher wages and labor uncertainty at a time of increased global competition. To remain competitive, CA producers must reduce their production costs, which is most easily achieved by reducing labor costs and increasing yields in DOV systems. Major obstacles to mechanization include the structure of the industry, large numbers of relatively small producers, and the availability of labor.

**Florida**

Florida was the nation’s ninth largest farm state in 2005, with farm sales of $7.8 billion, including 80 percent from crops. The leading crops were greenhouse and nursery commodities worth $1.9 billion, oranges worth $1 billion, and tomatoes worth $805 million.

Florida farmers reported farm labor expenses of $1.6 billion in the 2002 COA which, at average hourly earnings of $8.69, generated 90,000 year-round jobs. An average 81,000 workers employed by crop and crop support employers who were covered by Florida’s UI system in 2006. They were in four major sectors, vegetables and melons, where UI-covered employment averaged 18,000 in 2006, fruit farming, 9,600, greenhouses and nurseries, 24,300, and crop support activities (mostly labor contractors) 25,500.

About 50 Florida farmers have been certified to fill 2,000 jobs with H-2A workers in recent years, mostly in citrus. Employers may request that the Florida Employment
Service complete an I-9 form on each worker being referred to a job on their farms, and many do. In these cases, work authorization documents are presented to the ES office and copied, and a verification form is given to the worker to present to the employer. The employer must complete another I-9 form for the newly hired employee, and can use the E-Verify system to check on the validity of the documents presented.

Mechanical harvesting of processing oranges costs about $1.35 per 90 pound box, 16 percent cheaper than the $1.60 cost of hand harvesting. However, less than eight percent of Florida oranges were harvested mechanically in 2005/06. Emerson and Iwai re-examined the mechanization of the Florida sugar cane harvest, which occurred between the mid-1980s and mid-1990s, to explore why mechanization that appears to be economically rational is slow to diffuse.

In the early 1970s, half of the cost of producing sugar on a model 408-acre farm was for land, followed by $15,000 in overhead and another $15,000 for planting. Hand harvesting cane worth $11 a ton cost $2.40 a ton to the cutter, 22 percent, or $3.50 a ton with supervision and moving the cut cane to mills for grinding. Harvesting cane mechanically, on the other hand, cost less, $2.75 a ton. Emerson and Iwai found the net present value (NPV) less initial investment cost of mechanization ($319,815) exceeded the NPV for operation with hand cut harvesting ($181,014).

Given this cost and NPV advantage, why didn’t cane growers mechanize? Emerson and Iwai conclude that high volatility in annual rate of return from sugar cane was a major deterrent to investment and adoption: it increased the value of maintaining the flexibility option for investment in the future rather than investing immediately and killing the option of future investment. While these results apply specifically to the sugar cane experience in Florida, they are suggestive of the potential for large scale mechanization of processing citrus for which mechanical harvesting yields about 16 percent cost saving, yet the adoption is minimal. Interestingly, the grower price of oranges has risen from less than $3 a 90-pound box to more than $9 a box between 2003-04 and 2006-07. Whether this results in either a higher level of returns for oranges or a change in the volatility of returns, this would alter the option value for mechanization investment.

Florida’s farm work force is unusual in including 15 percent Central Americans. Between 1989-98 and 2002-04, real average hourly earnings for the state’s farm workers rose from $7.12 to $8.13 for all workers, but fell for unauthorized workers from $6.83 to $6.76. Two-thirds of the state’s harvest workers are believed to be unauthorized, and 70 percent of the harvesting crews were paid piece rate wages.

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11 Over the next 20 years, the cost of harvesting cane by hand rose very slowly, to about $3.75 a ton, while the CPI tripled, meaning that the real cost of harvesting cane by hand dropped significantly.
Labor agreements negotiated between fast-food chains such as Taco Bell and McDonald’s and tomato growers require growers to increase piece rates in order to sell to the chains. Most tomatoes are hand-picked for $0.40 per 32-pound bucket, and the agreements, which cover about five percent of the state’s tomatoes, generally require that piece rates be raised to $0.70 a bucket.

**Washington**

Stromsdorfer reported that WA farmers anticipated labor shortages in 2007 and raised wages. This was a defensive move in response to events in 2006, when a large and late cherry crop held workers who would normally have been available to harvest pears and thin apples. Wage increases in 2007 stabilized the supply of farm workers despite fewer new entrants to the WA farm work force due to stepped up border enforcement. There may also have been fewer exits from the farm work force because of the slowdown in construction.

Stromsdorfer noted that there is no official definition of labor shortage, and that the degree to which labor demand exceeds supply is often judged by what happens to real wages—they are expected to rise if the demand for labor exceeds the supply. It has been hard to determine whether labor shortage complaints in WA are due to fewer new-entrants or a rising demand for farm workers, as e.g. cherry production expands.

Across the US, the average hourly earnings of field workers, as reported by farmers to USDA’s NASS, rose 36 percent between 1997 and 2006, slightly more than the 34 percent increase in the average hourly earnings of nonfarm private-sector production workers. At $9.06 and $16.76 in 2006, field worker earnings were 54 percent of nonfarm earnings, a ratio that was unchanged for the previous decade.

Stromsdorfer compared NASS July field worker earnings in CA and WA-OR. CA traditionally has higher field worker earnings, but between July 2005 and July 2006, WA-OR field worker earnings rose $0.90 an hour to $9.50, exceeding the $8.90 in CA. Between July 2006 and July 2007, it was CA’s turn to have a wage increase of $0.90 an hour, while wages rose only slightly in WA-OR. Between July 2005 and July 2007, the increases in average hourly earnings were similar, about 12 percent, but the WA-OR jump came in 2006 while the CA jump came in 2007.

The WA-OR jump was traced to a late cherry harvest in 2006 that reduced the supply of workers for apple thinning. The CA jump may have been due to the rise in the state’s

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12 Piece rates for picking cherries, traditionally the highest average earnings in WA agriculture, rose 20 percent in 2006. Apple wages rose in order to draw workers from a late cherry harvest for thinning.
minimum wage, from $6.75 to $7.50 on January 1, 2007, an 11 percent increase (Arizona’s minimum wage rose to $6.75 on January 1, 2007).

For workers (SSNs) employed only in WA agriculture in 2006, median earnings were between $9 and $10 an hour, well above the state’s minimum wage of $7.63 an hour (WA’s AEWR was $9.77, excluding housing and two-way transportation benefits). In addition to paying the AEWR, employers of H-2A workers incur costs for transportation and housing that, depending on the number of hours worked, can add an estimated $2 an hour to labor costs.

The average hourly earnings of workers in apples, cherries and pears, WA’s three major tree fruits, are significantly above the state’s minimum wage. Earnings rose sharply for workers employed in cherries in 2006-07, up almost 20 percent in real terms, up about 15 percent in apples, and up almost six percent in pears. In real terms, average hourly earnings fell in 2004-05 and then rose sharply in 2006-07. Harvesting cherries generates the highest average hourly earnings for farm workers, and workers prefer picking cherries for piece rate wages to thinning apples for hourly wages.

Annual average farm employment in WA was about 95,000 in 2006 and 2007, including 32,000 seasonal workers, also stable between the two years. With the demand for farm workers increasing, and the supply stable, there was upward pressure on wage rates. In 2007, employers reported that they were 6–7 percent short of workers in June and September, the key harvest peaks for cherries (June) and apples and pears (September). The farm employers most likely to experience shortages were those who do not offer housing or end-of-season bonuses, those who have lower-yielding crops that generate lower piece rate earnings for workers, and those that have early or late harvests when workers can earn more elsewhere.

Colorado

Thilmany reported that Colorado’s green industry hired almost 35,000 workers and paid total wages of $1.2 billion in 2006, for annual earnings that averaged $35,000. The state’s meatpacking industry employed 6,500 workers in 2006, paying them $220 million or about $32,000 a year.

Colorado is an aggressive user of the H-2B program, which admits seasonal workers to fill nonfarm jobs, and a growing user of the H-2A program, 237 employers were certified to fill 1,925 jobs with H-2A workers in FY07.

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13 Employers selling for a common price may not want to raise piece rates, but workers employed at the same piece rate but in lower-yielding orchards have lower earnings.
14 Early or late harvests can provide extra or fewer workers, depending on the alternative job options for workers.
There have been repeated complaints of farm labor shortages, especially in the south central part of the state. In response, the state experimented with using prisoners as farm workers—in 2007, farm employers paid the Department of Corrections $9.60 an hour for the inmates (including payroll taxes), and the inmates got $1 to $4 a day.

In May 2008, the Colorado legislature approved HB 1325, creating a five-year Nonimmigrant Agricultural Seasonal Worker Pilot Program under which the Department of Labor and Employment would help farmers to receive DOL certification to employ H-2A workers. The state would help bring up to 1,000 H-2A workers into the state the first year, and expand the number by 1,000 a year to reach a maximum 5,000 in year five.

Under HB 1325, state agencies could contract with private agents to help farm employers complete their applications to DOL to receive certification to fill job vacancies with H-2A workers, and hire private agents in Mexico to help workers secure visas and travel to CO.

**New York**

New York is a dairy state: milk accounted for almost half of the state’s farm sales of $3.5 billion in 2006. Dairy farms were the largest employers of both regular (more than 150 days on the responding farm) and seasonal workers, accounting for 42 percent of the 24,500 regular worker “hires” in the 2002 COA and 26 percent of the 43,000 seasonal “hires” (a person employed on two farms is counted twice in these data).

The three labor-intensive sectors, fruits worth $265 million, vegetables worth $553 million, and horticultural specialties such as greenhouse and nursery crops worth $402 million, accounted for 80 percent of crop sales. Dairy farms accounted for 44 percent of the farm labor expenses in 2002, followed by 20 percent for greenhouses, 13 percent for vegetable farms, and 10 percent for fruit farms.

New York has more H-2A workers than any other state in the northeast. Over 200 farm employers were certified to fill 3,100 jobs with H-2A workers in FY06; about 80 percent of these jobs were in apples. According to the NY MSFW service plan, there were about 4,600 MSFWs employed in apples in 2006, followed bib 1,700 in nurseries and greenhouses and another 1,700 in vegetables.

Maloney reported that NY farmers have been complaining that stepped up enforcement from immigration agents stationed near the Canadian border that prompted some farm workers to flee, leaving them with insufficient workers for dairy, fruit, and vegetable farms. One response has been to keep farm workers on farms so that they are not as vulnerable to random checks in stores and other public places.
A 2008 survey of 1,245 farmers, almost half of whom produced vegetables, found that most farmers who hired Hispanic workers were concerned about lack of labor, and an even higher share thought it was important to reform US immigration policy.

However, only a third of those who hired Hispanics thought it was important that immigration reform include a path to citizenship, while two-thirds thought a guest worker program was important to their businesses. This may suggest that some farm employers fear that legalization that gives workers freedom in the US labor market could spur exits from the farm work force.

**Virginia**

Virginia is primarily a livestock state; crops are a third of the state’s farm sales. The major sectors generating farm labor expenses are greenhouse and nursery operations, tobacco farms, beef cattle operations and poultry production; vegetables (tomatoes) hire a large number of seasonal workers.

Virginia farmers reported labor expenses totaling $267 million in the 2002 COA. NASS reported that the average hourly earnings of all hired farm workers in Virginia were $8.58 an hour in 2002, suggesting 31 million hours worked by hired farm workers, or almost 15,000 full-time (2080-hour) equivalent jobs.\(^\text{15}\)

Acreage of labor-intensive flue-cured tobacco is down almost 50 percent over the past 15 years, to 23,000 acres (but may rise again as NC-based tobacco firms seek to diversify supplies), and apple acreage fell by a third, to about 20,000 acres. The most rapidly increasing demand for seasonal workers is in nurseries and turfgrass farms.

In FY06, 538 VA farm employers were certified to fill almost 4,100 jobs with H-2A workers. Traditionally, two-thirds of H-2A jobs were in tobacco, and they were 60 to 70 percent of the workers in flue-cured tobacco. Burley tobacco in the southwestern part of the state includes more family workers, and since the tobacco quota buyouts of 2004, more Southside VA growers have switched to burley tobacco and used H-2A workers to help produce it.

Tomato production on Virginia’s Eastern Shore (Northampton and Accomack Counties) is dominated by four Florida-based firms that operate along the eastern seaboard. The use of plastic mulch reduced the need for hired workers to weed, while the expanding tourist

\(^{15}\)NASS reported an average $7.71 for field workers and $7.98 for field and livestock workers in Virginia in 2002; the all hired wage was higher than earnings for the two worker subcategories because it includes the earnings of supervisors and other workers, including bookkeepers and mechanics. Average annual hourly earnings are calculated from reports of gross earnings and hours worked provided by farm employers for four survey weeks (January, April, July, and October). The annual average is calculated by weighting the number of hours worked during each of the four weeks, so that the July average has the greatest weight.
industry provided alternatives for Blacks who dominated the farm work force until the mid-1980s. Today, labor contractors organize Hispanic crews to pick the tomatoes in Georgia, the Carolinas, and Virginia.

**Arizona**

From a farm labor perspective, Arizona is a vegetable, nursery, and dairy state. These three sectors accounted for just over half of the jobs reported by farmers in the 2002 COA and ⅓ of the contract labor expenses. The largest employment sector was vegetables and melons, accounting for a third of workers hired and labor expenditures, nurseries, 20 percent of workers and labor expenditures, and dairies, an eighth of workers hired and a sixth of labor expenditures.

Traditionally, few Arizona farmers requested H-2A workers. For example, 42 farm employers were certified to fill 181 jobs with H-2A workers in FY05, over half sheepherder jobs. Employer requests rose in FY06, and the number of jobs that employers wanted to fill with H-2A workers increased over 10-fold to almost 3,000. Over half of these FY06 employer requests were rejected or were submitted by border-area vegetable growers who did not make required modifications to their applications, but the number of jobs certified to be filled with H-2A workers nonetheless jumped sevenfold, from fewer than 200 to over 1,400.

There have been complaints of labor shortages in the winter Yuma vegetable harvest; growers said they were 25 percent short of workers during the 2004-05 harvest season, which runs from November through March. A survey of 300 vegetable workers in 2006-07 found that only 40 percent would recommend their current job to friends or relatives seeking work. About two-thirds of the workers interviewed were men, 45 percent lived in Mexico and commuted daily to US jobs. Hourly earnings harvesting lettuce can be over $12 an hour but, if the 3-5 hours to cross the border and travel to the fields are included, the wage per hour is far less.

When asked what would make their jobs better, the largest group reported wanted more breaks followed by better pay and more benefits. Half of those interviewed said they did not expect to work in the fields for more than four more years; the largest single category expected to work less than an additional year. In light of the leafy green industry’s concern about food safety, it is noteworthy that 40 percent of workers would come to work sick.

The Arizona Republic on December 24, 2007 reported that lettuce growers were worried about labor shortages, but they also complained of overproduction of lettuce that has held down prices over the past five years. Most of the harvest workers employed in Yuma county vegetable fields live in San Luis, AZ or San Luis, Sonora. Local observers agree that the legal and experienced harvest work force is aging, and that younger unauthorized workers who enter the US do not remain in the Yuma area and risk arrest. One legal
worker interviewed said that harvesting crews contain unauthorized workers, and that their presence holds down wages.

To attract workers, some Arizona growers are offering $50 cash advances at the end of each work day— the payments are deducted from worker paychecks at the end of the week. The Yuma-based Independent Agricultural Worker's Center aims to help Mexican workers and US employers participate in the H-2A program, and reported 3,300 applications from workers and inquiries from 800 employers in November-December 2007. The H-2A workers are guaranteed the 2007 AEWR of $8.27 an hour, and the IAWC is housing H-2A workers in apartments, hotels or labor camps near Dateland.

**Impacts on Communities**

Immigration is the most important human resource change in rural and agricultural areas. Farmers who heeded the advice to switch to high-value and value-added commodities created a demand for labor that was satisfied in part by attracting immigrants. Most of the newcomers are from Mexico and Central America.

**Nebraska**

Gouveia emphasized that, in the wake of the mid-1980s farm crisis, many Midwestern communities welcomed meatpacking plants that promised good jobs for declining towns. However, the consolidation of the industry and new technologies led to a deskilling of work and lower wages. In some communities, refugees were recruited before networks that brought Hispanic newcomers were well established, adding to diversity.

Gouveia found that attitudes of immigrant-receiving communities varied over time, with Lexington becoming perhaps less welcoming over time and Grand Island more welcoming. Wages are now higher in Grand Island, there are more community amenities, and in both communities there are complex migration patterns, with people arriving, leaving and in transit. Low-incomes are the norm despite year-round work—two-thirds of the children in Lexington K-12 schools qualify for free or reduced price lunches.

Nebraska is joining rush of state legislatures to enact generally restrictionist immigration bills. According to the National Conference of State Legislatures, over 600 immigration-related bills were introduced in state legislatures in January-February 2008.

**Texas**

Texas has more farms and more cattle than any other state, and is the only state in which a quarter of farm labor expenses in 2002 were in beef cattle ranching. About 10 percent of the US farms reporting expenses for hiring workers in 2002 were in Texas; they reported hiring 166,000 workers sometime during the year, creating the equivalent of 72,000 year-round equivalent jobs (individuals hired on two farms are counted twice in the 166,000 number).
About 1,500 farm jobs a year have been certified to be filled with H-2A workers, half in custom combining of grains, 20 percent in cattle, and another 20 percent in vegetables and nurseries.

Saenz and Molina reported that the two major farm worker areas were the Rio Grande Valley, home to many farm workers and labor-intensive fruit and vegetable agriculture, and the panhandle, which has both vegetables and meatpacking. The number of Hispanic residents is increasing especially fast in the Rio Grande Valley even as agriculture shrinks, which is attributed to an economic boom associated with NAFTA. In the panhandle, total and Hispanic population growth is much slower and ag is shrinking in importance.

New York
Parra and Pfeffer reported on the spread of city ordinances dealing with immigration. There survey found 145 ordinances that could be classified as restrictive, and 22 that could be classified as supportive of immigrants, about a six to one difference. There were both restrictive and supportive ordinances in every section of the country, but almost 40 percent of the restrictive ordinances were in the south. The Empire poll in New York found widespread support for helping newcomers find affordable housing and learn English. Even in upstate New York, where only five percent of residents are immigrants, 10 percent of those polled support helping unauthorized foreigners to find affordable housing and 20 percent support English-language training. Settled white populations in upstate New York are aging, and the schools and churches in these communities often play key roles integrating immigrants.

Parra and Pfeffer stress the importance of learning English to help immigrants increase their earnings and facilitate integration; English seems to be the single most important integration indicator, both for immigrants and local residents.

Pennsylvania
Findeis and Larson reported a study examining youth with farm worker parents in PA. It proved difficult to find parents who migrated to do farm work—most of the parents and youth were settled in the areas in which the interviews were conducted. About two-thirds of the youth interviewed were born outside the US, usually in Mexico.

Most of the parents worked, but not necessarily in agriculture. About 90 percent of the youth reported that their fathers worked in the past year, including a third who worked in farm work; 80 percent reported that their mothers worked in the past year, and a third of them were employed in food processing. There were very few parents or youth interviewed who migrated to do farm work.
Most of the youth interviewed wanted to go to college, and few expected to work in agriculture. The survey makes clear that Hispanic children educated in the US tend to shun farm work.

**Oregon**

Oregon is a crop state dominated by the sale of nursery commodities. Nurseries accounted for almost half of Oregon’s farm labor expenses in 2002, and hired a third of the regular farm workers, those employed at least 150 days on the responding farm. Most of the state’s nurseries and farm workers are in the Willamette Valley, which also produces fruits, vegetables, and other commodities.

Kissam reviewed the evolution of one city in the Willamette Valley, Woodburn. During the 1950s and 1960s, migrant farm workers from south Texas supplemented the local farm labor force, but since the 1970s most new farm workers arrived from Mexico. Many of the Oaxacans recruited to pick strawberries in the late 1980s and early 1990s have made the transition to nursery work, and their children being educated in local schools are likely to shun farm work, explaining why farm employers have been strong supporters of immigration reform.

The city of Woodburn had 20,100 residents in 2000, according to the census; half were Hispanic. Among adults, 40 percent did not complete high school; 11 percent were college graduates. Over half of those five and older reported speaking English “less than very well,” and 90 percent of Woodburn’s K-12 children are in immigrant-headed households. Kissam found that 2/3 of the household heads in the city in 2003 were foreign born, and that one third were unauthorized; over 40 percent of the unauthorized household heads were employed in agriculture.

The 2000 census found that the labor force participation rate in Woodburn was lower than average, 56 percent vs. 63 percent for the US, reflecting in part the large share of young and retired residents. Only 12 percent of those employed in March 2000 were in agricultural occupations, and eight percent employing in the agricultural industry, even though most nurseries employ workers almost year-round. Woodburn’s per capita income of $13,000 a year was about half the Oregon average of $22,000, and twice the Mexican average.

**Mexico and Brazil**

**Rural Mexico**

Escobar’s notes emphasize that poverty and rural poverty peaked in Mexico in the mid-1990s, and has since fallen to about 20 percent based on “capabilities,” the cost of food, education and health; capabilities poverty affected 30 percent of Mexicans in the early 1990s. Rural poverty, at 25 percent today based on food costs, is significantly higher than urban poverty, about 10 percent.
Over the past decade, rural Mexico has been transformed by emigration and government transfers. With the emigration of especially men, many farm families are producing less of their own food, and switching from crops to livestock because they lack labor. Government transfers under Opportunidades, which target the rural poor, have been far more important than remittances in reducing rural poverty because these payments to poor women are far more widely spread. Perhaps five percent of rural Mexican households depend largely on remittances, but most rural Mexican households do not.

Despite emigration, Mexico still has a significant rural population, about 27 percent of the 106 million Mexicans. Despite emigration and smaller families, the size of the potential migrant stock has not diminished significantly raising the question of why so many people remain in rural Mexico. While up to 40 percent of men in their 20s leave, most stay, and many of the migrants return to retire. The rural Mexican men who do emigrate increasingly aim for urban jobs in the US or Mexico, which means that the supply of rural Mexicans to rural America may have peaked between 1995 and 2005.

Taylor reported that migration histories collected in villages in rural Mexico with fewer than 2,500 residents found a rising share of rural Mexicans migrating to the US, six percent 1980 and 16 percent in 2002. By 2002, almost 30 percent of rural Mexicans had left their villages, with half going to cities in Mexico and half to the US. There were about 23 million rural residents in Mexico in 1980, when the population was 81 million, and 25 million in 2002, when the Mexican population was 100 million.

Mexico’s rural economy is affected directly by migration, as families with migrants reduce their production of crops and increase production of less labor-intensive livestock. There are also indirect effects of migration, as remittances change rural economies. Taylor estimated that spending $1 in remittances generates multipliers of up to $3, as remittances are spent on housing and locally produced goods.

**Trade with Mexico**

Calvin and Stamps focused on factors affecting imports of labor-intensive commodities from Mexico, noting that climate (winter production) and labor costs were Mexico’s two competitive advantages. Technology, tariffs, and risk factors have also affected trade.

U.S. imports of Mexican fruit and vegetables have increased, for fruits from 700,000 million tons in 1990 to 1.8 million tons in 2007 and for vegetables from 1.2 million tons in 1990 to 3.2 million tons in 2007. The two leading vegetable imports from Mexico are tomatoes, which accounted for a third of vegetables imported from Mexico in 2007, and peppers, which accounted for 19 percent.

Mexican fresh vegetable imports are particularly important during the winter when U.S. field production of tomatoes and peppers is limited largely to Florida. But good weather
is not always enough. The Mexican tomato export industry, which was facing financial difficulties in the 1980s, rebounded after growers adopted Israeli tomato varieties that led to increased shelf life and improved profitability. While U.S. imports of Mexican tomatoes have increased, the Mexican share of U.S. consumption has declined due to increased tomato imports from Canada. The introduction of greenhouse technology in Canada has made the United States a net tomato importer from Canada.

Some commodities that are very labor intensive, including green onions and frozen broccoli, are increasingly produced in Mexico and exported to the United States. Green onions are especially labor intensive, and most of the green onions consumed in the United States are grown around Mexicali, Mexico. Mexican green onions were implicated in a food borne illness outbreak in the United States in 2003, but a concerted effort to reduce the risks of contamination resulted in the market returning to normal the following year. In contrast, imports of Mexican cantaloupes fell sharply after they were implicated in food borne illness outbreaks during three consecutive years.

Most tariffs on produce were quite low before NAFTA began on January 1, 1994, but tariffs on asparagus and cantaloupes were high and had long phase-out periods. Imports of Mexican asparagus have increased as the tariff declined, but imports from Peru, which enter duty free, have increased even faster. Peru supplies most U.S. fresh asparagus between August and December.

Beginning in 1993, the United States began reducing phytosanitary barriers which had kept Mexican avocados out of the U.S. market since 1914. Imports increased rapidly, and in 2005 Mexico overtook Chile to become the largest foreign supplier of avocados to the U.S. market.

Changes in the U.S. produce industry have also had impacts on imports from Mexico. US lettuce imports from Mexico total only about 2 percent of domestic consumption, but are growing rapidly. Bagged salads have become increasingly important to the lettuce industry, and many are supplied by firms under contracts that specify how much is to be delivered each week. U.S. producers contract with growers in Mexico as insurance in case of disruptions of their U.S. production.

**Brazil**

Brazil is an agricultural powerhouse, producing food and fiber for 185 million residents and exporting almost $30 billion worth of farm commodities. Brazil is the leading producer and exporter of a range of commodities including sugar, coffee, tobacco, and orange juice, and is among the top producers and exporters of beef, poultry, soybeans, and corn.

Brazil has planted a third of its potentially arable land, some 62 million hectares. Agricultural production was concentrated in the southeastern part of the country until the
1960s, when the government encouraged production in the center and western parts of the country. Larger farmers bought cheap land in Mato Grosso do Sul and Mato Gross, and began clearing it to produce crops such as soybeans with modern technology; much of what is produced in the center-west is exported.

Brazil produced 425 million tons of sugar cane from 19 million acres in 2006/07, most in the richer southeast, and turned much of it into ethanol, providing half of the fuel for the country’s 22 million cars. The 50,000 sugar cane producers employ 532,000 workers, and the 376 sugar mills and distilleries employ 567,000 workers.

Per capita income in the south central/eastern parts of the country are three times higher than in the Northeast. Issues involved in recruiting workers for hand-cutting sugar cane have led to rapid mechanization, so that in 2007/08, almost half of the sugar cane in Sao Paulo state was harvested by machine.

Most cane workers are poor and poorly educated—3/4 have less than four years of schooling, and almost 30 percent are illiterate. Brazil’s monthly minimum wage was $161 a month in 2006, when the average wage for sugar cane workers was $218 a month, but ranged from $160 a month in the northeast to over $300 a month in Sao Paulo.

**Bibliography and Agenda**


**Immigration Reform:**

**Implications for Farmers, Farm Workers, and Communities**

Meeting and Lodging: UC-DC ([www.ucdc.edu/](http://www.ucdc.edu/))
1608 Rhode Island Avenue, NW, Washington, DC 20036
Tel 202-974-6200 Fax: 202-974-6250
Thursday-Friday May 8-9, 2008

At least 50 percent of US farm workers are unauthorized. Immigration reform may provide a path to legal status for some currently unauthorized farm workers and make it easier for farm employers to employ legal guest workers under a revised H-2A temporary worker program.

The purpose of this conference is to assess the provisions of pending immigration reform proposals, the roles of legal and unauthorized farm workers in US agriculture and of MSFW programs in integrating migrants and their children, and the implications of continued immigration for rural communities. Presentations at past seminars are at: [http://migration.ucdavis.edu/cf/index.php](http://migration.ucdavis.edu/cf/index.php).
The conference is organized with the support of the Farm and Giannini Foundations, with additional support from the Southern Rural Development Center and the Institute for the Study of International Migration.

**Thursday, May 8, 2008**

7:45am Breakfast available in conference room on the ground floor

8:45am Welcome and Introductions, Philip Martin, UCD, and Bruce Cain, UC-DC

9am Immigration Reform and Agriculture: Where Congress Stands. Rep Howard Berman (D-CA)

9:45am Break

10am Immigration Patterns, 1986-2008, Jeff Passel, Pew Hispanic Center
What’s Driving Migration in Rural America? William Kandel, USDA

11am The Outlook for Immigration Reform, Chair, Susan Martin, ISIM
Mark Krikorian, Center for Immigration Studies
Frank Sharry, National Immigration Forum

12 Lunch

1:00 Industry and Worker Perspectives on Immigration Reform
Patrick O’Brien, American Farm Bureau Federation
Bruce Goldstein, Farmworker Justice Fund
Erik Nicholson, UFW

2:30 Break

3:00 Research Perspectives on Immigration, Agriculture, and Communities, Chair, Neil Conklin, Farm Foundation
The Changing Farm Work Force? Daniel Carroll, DOL
How do Labor Market Adjustments occur in Agriculture? Philip Martin, UC-Davis
How is Immigration Changing Rural Communities? Cornelia Flora, Iowa State University,
The H-2A and H-2B Programs: Impacts on Industries and Communities, David Griffith, E Carolina University
Migrants in Spanish Strawberries, Piotr Plewa, University of Delaware

5:00 Adjourn
7:15  Dinner, Logan Tavern, 1423 P St. NW, www.logantavern.com

Friday, May 9, 2008

7:30am Breakfast available in conference room on the ground floor

8:30  Farm Labor: Commodities and Areas, Chair, Philip Martin, UCD
     California and Raisins, Philip Martin, UCD and Bert Mason, CSUF
     Florida and Citrus/Tomatoes, Bob Emerson and Nobuyuki Iwai, U-Florida
     Washington and Apples and Cherries, Ernst W. Stromsdorfer
     Colorado, Dawn Thilmany, Colorado State
     New York and Dairies/Fruits and Vegetables, Tom Maloney, Cornell
     Virginia and Tobacco/Tomatoes, Jeff Alwang, VPI
     Arizona, JoAnn Warner, WSU, and Trent Teegerstrom, University of Arizona

10:45  Break

11  Farm Labor: Commodities and Areas II

11:30  Lunch

12:15  Immigrant and Communities, Chair, Cornelia Flora, Iowa State University
     Nebraska and the Midwest, Lourdes Gouveia, Uni of Nebraska-Omaha
     Carolinas, David Griffith, E Carolina University
     Texas, Rogelio Saenz and Hilario Molina, Texas A&M University
     New York, Max Pfeffer and Pilar Parra, Cornell University
     Pennsylvania, Jill Findeis and Janelle Larson, Penn State
     Oregon, Ed Kissam, JBS

2pm  Break

2:15  What’s Happening in Mexico and Brazil?
     Migration and Development in rural Mexico, Agustin Escobar, Ciesas Occidente
     Mexico-US Fruit and Vegetable Trade, Linda Calvin, USDA
     Migrant Farm Workers in Brazil, Marcia Azanha, University of São Paulo

3pm  Adjourn

Appendix. US Fruit and Vegetable Production

Fruits and vegetables, planted on 13 million acres of land (three percent of US crop land),
accounted for 29 percent of average crop cash receipts between 2002 and 2004 and 18
percent of US farm exports. The US has imported more fruits and vegetables than it exported since 1998. In 2005, the value of fruit and vegetable exports was $11 billion, and the value of imports $14 billion.

FVH production was about 100 million tons in 2005, including 24 million tons of fresh market vegetables, 16 million tons of processing vegetables, 21 million tons of potatoes, 11 million tons of citrus, 17 million tons of noncitrus (mostly processed) and 1.5 million tons of tree nuts.\(^{16}\) By value of sales, grapes, oranges, and apples are the most valuable fruits, and potatoes, lettuce and tomatoes the most valuable vegetables.

Americans consume an average 445 pounds of vegetables and 282 pounds of fruit and tree nuts a year. The vegetables include 135 pounds of potatoes, 90 pounds of tomatoes, 27 pounds of sweet corn, and 22 pounds each of lettuce and onions. The fruits include 81 pounds of oranges, 47 pounds of apples, 30 pounds of wine grapes (enough for 12 bottles of wine), 26 pounds of bananas, and 19 pounds of other grapes.

Transportation of fresh produce is becoming more costly. In October 2005, when head lettuce was worth an average $5.05 per 50-pound carton in Salinas, the cost of transporting a carton to New York was about $6.50.

About half of fresh fruits and vegetables are sold in supermarkets. Supermarket sales are being concentrated in fewer chains: the largest 20 food retailers accounted for 60 percent of grocery sales in 2001.

A sixth of the typical households food-at-home expenditures in 2004 were for fresh and processed fruits and vegetables, an average $560. Many commodities have additional convenience features, such as bagged salads, microwave ready corn, and broccoli florets. However, the farm value of retail fruit and vegetable prices is below 20 percent—an average 19 percent for fresh fruit and vegetables, and 16 percent for processed fruit and vegetables.

The 2002 COA included production data on 100 fruits and vegetables grown on about 114,000 orchard, 54,000 vegetable and 18,000 berry operations (these commodities accounted for more than 50 percent of the operation’s sales). Labor was the single largest variable cost on these farms in 2003, averaging 42 percent of the $153,000 average expenses per farm. However, only a sixth of these farms had sales of $250,000 a year or more.

\(^{16}\) Over half of these tons of fruits and vegetables were processed. Most producers of processed fruits and vegetables had contracts with the firms that froze, canned, or juiced the product. Contracts are spreading rapidly in the fresh market, as supermarkets seek year-round suppliers.
Most grapes, lettuce and celery are packed in the field, while onions, oranges, apples and tomatoes are typically packed in sheds.

Major issues facing the fruit and vegetable industry are food safety, labor costs and farm policy (interactions with commodities that receive federal price support). Sicknesses and deaths linked to fresh produce have led to more testing and traceability. More farmers are complaining of fewer workers, which can make timely completion of farm tasks difficult. Farmers producing crops such as corn and wheat and receiving government payments are not allowed to plant fruits and vegetables on their “flex acres,” a restriction that, if dropped, may increase supply.

California had 2.9 million acres of orchards in 2002, 36,000 acres of berries, 1.2 million acres of vegetables and melons, and 162,000 acres of potatoes and pulses. Florida had 895,000, 8,400, 220,000, and 45,000 acres, while Washington had 311,000, 17,000, 215,000, and 374,000 acres. The COA counts jobs on farms, and in 2002 CA accounted for 26 percent of the jobs in vegetables and melons and 47 percent of the jobs in fruits and nuts.