

MIGRANT LABOR AND US AGRICULTURE

The second in a three-part series.

**An NPG Forum Paper
by Dr. Philip Martin**

SUMMARY

About 80 percent of the 2.5 million hired farm workers who are employed in US agriculture were born in Mexico, and over 40 percent are not authorized to work in the US. Alternatives to Mexican-born farm workers include machines and imported fresh fruits and vegetables.

US FARM WORKERS

The US Department of Labor has a National Agricultural Worker Survey (NAWS) that interviews 1,500 to 3,000 workers employed on US crop farms each year and is the best-known source of farm worker data.¹ The NAWS finds that 70 percent of crop workers were born in Mexico, and that 70 percent of Mexican-born workers are unauthorized, making half of US crop workers unauthorized. These workers, many of whom arrived illegally in the 1990s and early 2000s in their 20s and 30s, are now in their 40s and 50s and settled in one place. Their US-educated children generally shun the seasonal farm jobs that brought their parents from Mexico.

The NAWS was launched to understand the impacts of the Immigration Reform and Control Act (IRCA) of 1986 on the farm labor market. IRCA included the grand bargain that remains at the heart of agricultural immigration reform proposals: legalize unauthorized farm workers and make it easier for farm employers to hire temporary migrant workers.

IRCA failed to produce a legal farm workforce. IRCA had two amnesty programs: a general amnesty for unauthorized foreigners who had lived in the US since 1982, and a Special Agricultural Workers (SAW) program for unauthorized farm workers who did at least 90 days of farm work in 1985-86. Some 1.7 million foreigners were legalized under the

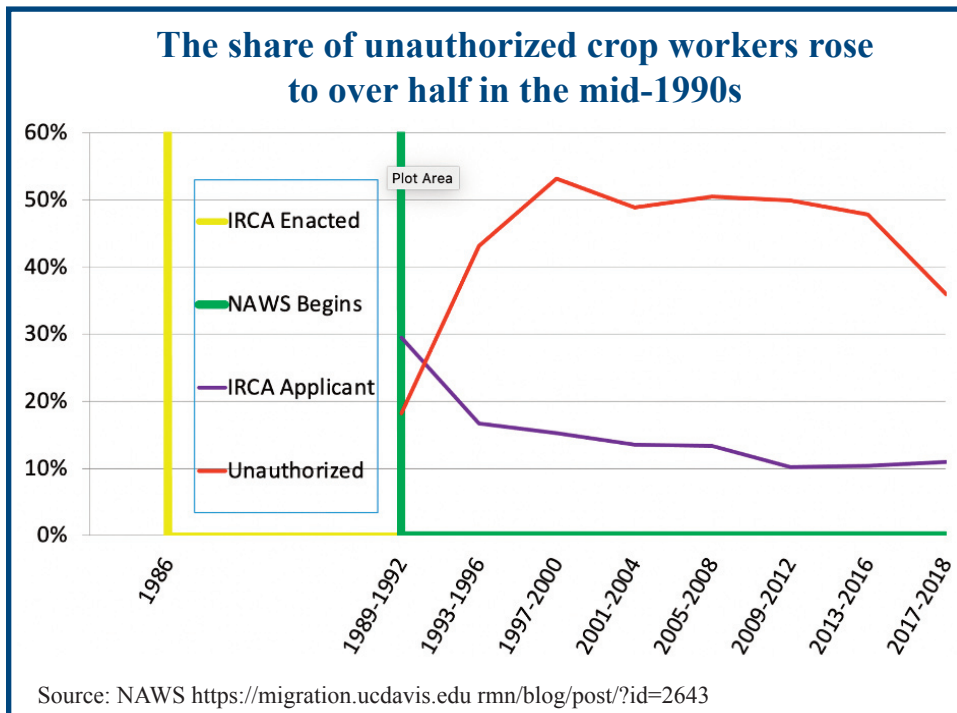
general program and 1.1 million under the SAW program; 85 percent were Mexicans.

The SAW program turned into “one of the most extensive immigration frauds ever perpetrated against the United States government.”² During the debates before IRCA was enacted, it was widely asserted that few farm workers had documentation of their farm work, so the SAW program allowed applicants to provide one-sentence affidavits from a labor contractor or a fellow worker that said: “Juan Morales picked tomatoes for 92 days in 1985-86 in Fresno County.” Applicants were assumed to be truthful, so the burden of proof was placed on the government to prove that the SAW applicant was lying. The government had few mechanisms to check SAW work histories, and approved over 1.1 million of the 1.3 million applications, legalizing up to 700,000 foreigners who did not do 90 days of farm work (Martin et al 1988).

The unauthorized foreigners who became US immigrants under the SAW program without doing the qualifying farm work continued to live in urban areas, but now as legal immigrants. About 30 percent of workers interviewed by the NAWS in the early 1990s were legalized SAWs, but they quickly left agriculture and were replaced by newly arrived unauthorized workers who usually purchased false drivers’ licenses and immigrant visas that allowed workers and employers to satisfy I-9 employment

eligibility verification. The share of unauthorized farm workers reached 50 percent by the mid-1990s, and only began to fall in recent years as the H-2A program expanded.

documents to the unauthorized Mexicans who continued to arrive. Food processing firms and construction and service businesses began to hire legalized SAWs and their unauthorized friends and relatives who provided false documents. What began as an effort to legalize seasonal farm workers and ensure that US farm workers were legal wound up spreading unauthorized Mexicans throughout agricultural and urban America.⁴



SAW fraud and continued illegal immigration were not the only unexpected effects of IRCA. Before immigration reform, many analysts argued that illegal Mexican farm workers simply wanted to work in the US and spend their higher US earnings at home in lower cost Mexico, meaning that Mexicans were sojourners in the US rather than settlers (Chavez, 1988). This notion that Mexicans were and wanted to remain “circular migrants” and were in the US only when work was available led to the legalization of only illegal farm workers and not their family members.

The assumption that Mexican farm workers were “homing pigeons” was wrong. Most legalized SAWs brought their family members to the US despite the worst California recession in memory in the early 1990s. The influx of more unauthorized foreigners strained schools and health care and led to the approval of Proposition 187 in 1994.³

The SAW program allowed now legal Mexicans to disperse throughout the US, first filling farm jobs and later farm-related jobs. The false documents industry that emerged to provide documents to SAW applicants quickly pivoted to selling false work-authorization

and have children who were educated in the US. These US-educated children usually shun the seasonal farm jobs held by their parents.

The NAWS portrays a crop workforce that resembles other low-wage workforces. Almost all crop workers commute to the farm where they work by car or carpool and return to housing that is rented from nonfarm landlords or owned by workers at the end of the workday. Over 80 percent of the workers interviewed by the NAWS are employed in fruit, vegetable, and horticultural specialty farms including nurseries, but only a quarter were harvesting crops when they were interviewed. NAWS interviewers, who must obtain the employer’s permission to interview workers at work, may be obtaining data from a subset of all crop workers, those who are employed almost year-round in non-harvesting jobs, missing harvest workers who are employed on a particular farm for a few weeks.⁵

The NAWS generates data on the characteristics but not the number of farm workers. During the 1980s, the monthly Current Population Survey (CPS) included a December supplement that asked if anyone

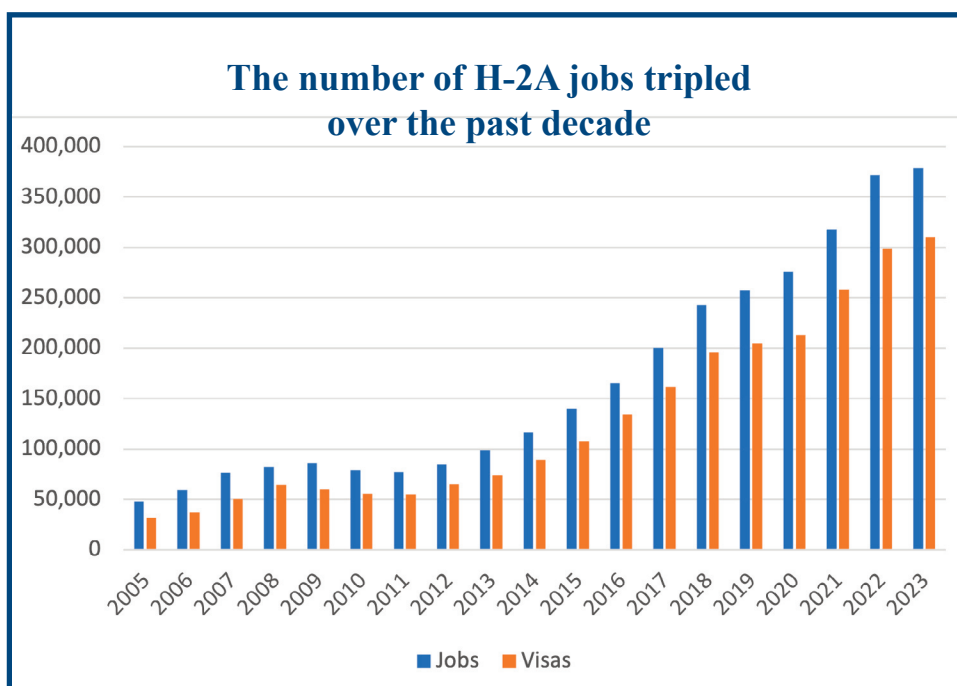
in the household had worked for wages on farms. These hired farm workforce reports found that 2.5 million workers filled the average 1.1 million year-round equivalent jobs in US agriculture during the 1980s, suggesting that one year-round job was created by three workers each employed for four months.⁶

The CPS ended the December supplement on farm labor in the late 1980s, but data available only for California suggest that there is still a two-to-one ratio between unique farm workers and jobs in a state where crops are 75 percent of farm sales. US agriculture is a 50-50 sector, meaning that crops and animal commodities each contribute about half of total farm sales. This means that California has an unusually high ratio of workers to full-time equivalent jobs, so that some 2.5 million individuals are employed for wages on US farms sometime during a typical year.⁷ The NAWS generates data on 1.7 million of these farm workers, including 850,000 who are unauthorized and 850,000 who are legal immigrants and US citizens.

There are also two other groups of farm workers who are not interviewed by the NAWS: H-2A guest workers and animal agriculture workers. H-2A workers are legal foreign workers who can be employed for up to 10 months on US crop farms. They now account for about 15 percent of year-round equivalent workers on US crop farms.⁸ The H-2A program allows US farmers to recruit and employ guest workers to fill seasonal farm jobs *if* they can demonstrate to the US Department of Labor (DOL) that US workers are not available at a DOL-set Adverse Effect Wage Rate and that the presence of their H-2A guest workers will not adversely affect similar US workers. US farmers must pay the recruitment, visa, and travel expenses of H-2A workers and provide them free and approved housing while they are employed in the US.

The US certifies almost 400,000 H-2A jobs a year, and 80 percent of these certifications result in guest

workers arriving in the US.⁹ H-2A workers, over 90 percent of whom are from Mexico, reside in the US for about six months, and typically work 125 days, earning \$16 an hour, \$130 a day, or \$16,250 in total. The costs of transportation and housing add about \$5,000 to the cost of an H-2A worker in the US for six months.



Why do US farmers spend \$5,000 to recruit, transport, and house each H-2A guest worker, expenses that they would not incur if they hired US workers? Farmers say they hire H-2A workers because US workers are not available. However, a closer look reveals several items that reduce the cost gap between H-2A and US workers. First, the earnings of H-2A workers are exempt from social security and other payroll taxes of eight to 12 percent,¹⁰ saving about \$1,600 of the additional \$5,000 cost of H-2A workers for a guest worker who earns \$16,000.

Second, H-2A workers are young Mexican men who are earning five to 10 times more than they would earn in Mexico, so they work hard and are 20 to 30 percent more productive than older and more diverse US farm workers, including the unauthorized Mexican men who arrived in the 1990s and early 2000s. Third, most H-2As are employed to produce perishable crops, so farmers -- who want to ensure that workers are available when the weather is right to harvest their

crops -- are willing to pay the H-2A related costs to have a guaranteed workforce. The combination of payroll tax savings, productive workers, and labor insurance ensures that, once an employer turns to H-2A workers, they rarely revert to US workers.

Animal agriculture workers are not included in the NAWS (and a comparatively smaller number of H-2A workers are employed in animal agriculture) because most jobs on dairies and livestock farms are not seasonal. The government surveys that cover all US households, the American Community Survey (ACS) and the Current Population Survey (CPS), find farm workers who are whiter and younger than the farm workers found in the NAWS, supporting the assumption that many farm families pay children and relatives in order to shift farm earnings into lower tax brackets. In short, the NAWS interviews crop workers employed for one employer most of the year, while the ACS and CPS interview workers employed on both crop and livestock farms, including some paid members of farm families.

The Quarterly Census of Employment and Wages (QCEW) collects data from farm employers when they pay taxes that provide unemployment insurance benefits to laid off farm workers. It finds an average 265,000 animal agriculture workers, less than a quarter of average employment in crops and crop support services. About 40 percent of average employment in animal agriculture is in dairies, where there is usually one worker for each 80 to 100 cows, so that a 2,000-cow dairy may have 20 to 25 hired workers. Many dairy workers are unauthorized Mexicans who use false documents to satisfy employment eligibility requirements.

All data sources agree that, for most workers employed on crop and livestock farms, farm work is the best option to earn money for workers who lack the language, contacts, legal status, and other attributes needed to find nonfarm jobs. A few mothers may dream of their children growing up to be cowboys, but most farm worker parents hope that their children will acquire the education and skills needed to avoid following them into the fields.

Eminent agricultural economist Varden Fuller, reflecting on a lifetime of farm labor research that

ranged from Dust Bowl migrants in the 1930s through the Bracero program between 1942 and 1964 and farm worker union activities in the 1960s and 1970s, concluded that the US government cooperated with farmers to ensure that an excess supply of “residual workers” was available to fill seasonal farm jobs. There were several long-term effects of having people with no other job options available when they were needed to fill seasonal farm jobs. First, farm workers and their children learned that climbing the US job ladder required both occupational and geographic mobility, which meant leaving agricultural areas for cities and nonfarm jobs. Farmers accepted such worker exits. Most farmers argue that, because they are price takers in competitive markets for the commodities they sell, they are unable to raise wages. If Americans shun farm jobs, farmers want the government to allow them to hire newcomers from abroad.

Second, the low farm wages accepted by workers with no other job options were capitalized into higher land prices, benefiting landowners, their bankers, and their food packing partners. To this day, farm land remains an attractive long-term investment that generates income and increases in value over time, explaining why many pension funds, insurers, and wealthy individuals have large landholdings.¹¹ Third, an ample supply of seasonal farm workers maintains low farm wages and enables large agribusinesses to replace family farmers - who do their own farm work - with hired workers. Fuller thought that the best hope for farm workers was to eliminate farm jobs via mechanization or imports, reasoning that farm worker jobs could never be improved to provide good jobs for farm workers and their families.

ALTERNATIVES

Mechanization and imports are the major alternatives to hand labor in agriculture. Mechanization is being spurred by rapidly rising farm labor costs and the reduced cost of robotics and artificial intelligence. The US imports 60 percent of its fresh fruit and 40 percent of its fresh vegetables, making most of the avocados and tomatoes consumed by Americans a product of Mexico. Should the US embrace more machines, more H-2A migrants, or more imports?

MECHANIZATION

Human history is the story of productivity; improvements in agriculture that allowed fewer farmers to feed more people, setting the stage for the emergence of cities and ruling elites. Rising nonfarm wages draw workers out of agriculture, while biological and engineering innovations enable machines to replace workers.

Most hand workers help to produce fresh fruits, vegetables and horticultural (FVH) specialty crops. Within the FVH sector, a handful of commodities account for most hand work, including apples, oranges, strawberries, lettuce, melons, and tomatoes. Mechanizing this kind of farm job is hard because the work is outdoors in unpredictable settings.

Mechanizing hand-harvest farm tasks is easiest for crops that are harvested once and for crops that are processed. Harvesting an annual plant during one pass through the field allows the machine to destroy the plant. Most root vegetables such as potatoes are harvested by machines that dig the crop from the soil, remove the dirt, and convey the harvested crop to a truck. For example, processing tomatoes used to make sauces are harvested by machines that cut the plants, shake off the tomatoes, and convey them to accompanying trucks.

Processing tomatoes: from Braceros to machines in the 1960s



<https://www.plantsciences.ucdavis.edu/news/how-mechanical-tomato-harvester-prompted-food-movement>

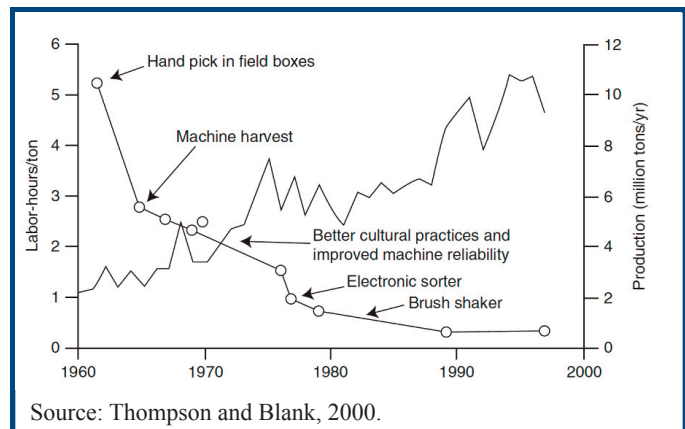
Harvesting fruit trees poses more challenges because the fruits may not all ripen at once. Humans

can distinguish mature and immature fruits and vegetables much more efficiently than machines, which need cameras to detect ripe apples, grasp them, and convey them to bins without damaging the tree or nearby immature apples. There are robotic apple, orange, and strawberry harvesters in development, but the current technologies miss 30 to 40 percent of the ripe fruit, so hand workers must follow the robots. Robots are improving, and a combination of rising costs of hand labor and falling robot costs are likely to see most apples, oranges, and strawberries picked by machine within a decade.

Past predictions that machines cannot replace hand workers have been proven false. President Kennedy tried to end the Bracero program in the early 1960s as a form of civil rights for Mexican-Americans, prompting farmers and others to testify in Congressional hearings that the tomatoes used to make catsup could not be picked by machine for at least a decade, so that ending the Bracero program in the early 1960s would make catsup a luxury good.¹² The similar argument today is that without H-2A workers, Americans would not have US-grown fresh produce.

Nonetheless, the Bracero program was ended and, despite contrary predictions, the tomato harvest was mechanized quickly. Ever-improving machines increased the production of processing tomatoes.

Processing tomato production rose as machines improved



Replacing farm workers with machines is not always easy (Calvin et al, 2022). Farmers receive a third of the retail price of fresh fruit and a quarter of the retail price of fresh vegetables: they receive more for produce that is sold fresh rather than processed.¹³

However, at the time a crop is harvested, farmers may not know what will happen to their crop, so many insist on hand-harvesting even if the crop winds up being processed.

Another issue involves “waste.” Fresh fruit and vegetable production is rife with overproduction. Consider pack out rates, the share of fresh fruits and vegetables that are picked and sent to supermarkets. Hand workers fill bins, buckets, or trays with apples and tomatoes that are taken to packing sheds where 10 to 20 percent of the produce is discarded, making the pack out rate 80 to 90 percent. Robots have lower pack out rates, perhaps 70 to 75 percent, and some growers focus on the higher share of apples that are discarded rather than the lower costs of using robots to pick apples.

Farmers overproduce many commodities. For example, large lettuce farms may have contracts that require them to provide supermarkets and food service firms with fixed quantities of lettuce each week or pay penalties. Under these circumstances, it is profitable to plant extra lettuce in several places, including in Mexico, to ensure that the farm can provide lettuce as promised regardless of weather, pests and other factors that could affect lettuce availability. The number of fresh vegetable acres planted regularly exceeds the number of fresh vegetable acres harvested by five percent or more to ensure that farmers can fulfill their contracts.

GUEST WORKERS

Instead of machines replacing workers, fresh fruits and vegetables are produced in the US by relying on guest workers from lower wage countries. When borders were generally closed during COVID-19 lockdowns, exceptions were made to allow H-2A guest workers to enter the US and fill farm jobs.

The H-2A program was created in 1952¹⁴ to allow farmers to be certified by DOL to employ guest workers if they try and fail to recruit enough US workers and the H-2A workers have no adverse effects on US workers. DOL enforces this no-adverse-effects requirement by establishing a higher-than-minimum wage called the Adverse Effect Wage Rate (AEWR) that must be paid to H-2A workers and any US workers employed alongside them. AEWRs in 2024, which are the average hourly earnings of

workers from the year before, range from under \$15 to almost \$20 across states.¹⁵

The H-2A program is controversial. Farmers say that it is too complex, forcing them to jump through hoops to search for US workers that they “know” do not exist, and H-2A workers are costly due to the AEWR. Farm worker advocates, on the other hand, say that H-2A workers who are tied to their US employer by contracts are vulnerable to exploitation because they want to keep their jobs and be invited to return next season.

Violations of US labor laws are found in most investigations of farms that employ guest workers, in part because there are few investigators and guest workers are reluctant to complain (Costa et al, 2022). Operation Blooming Onion led to the arrest of 28 people in South Georgia who forced 700 Central American H-2A workers to pay for their jobs and work long hours between 2015 and 2021 for lower-than-promised wages while living in poor housing. Most of the human traffickers were crew supervisors who returned to home communities to recruit workers who were eager to migrate for US jobs that paid 10 times more than local wages.¹⁶

H-2A workers are vulnerable to crude and sophisticated manipulations. A sophisticated example is the Florida sugar cane industry, which expanded in the Everglades Agricultural Area after the US halted imports of Cuban sugar in 1961. Sugar cane is a perennial grass that reaches 8 to 12 feet and produces crops for several years. Florida cane is grown on muck soil, and the mills prefer hand-cut cane because harvesting machines can pull up the plant’s roots, reducing yields in subsequent harvests. Some 10,000 Jamaican H-2As hand cut sugar cane in Florida throughout the 1980s.¹⁷

Cutting sugar cane is hard work. The sugar is in stalks that weigh three pounds each and yield 0.3 pounds of refined sugar. Cane fields are burned to remove the leaves, and cane cutters wearing arm and shin guards use machetes to cut the cane. Most sugar cane is grown in developing countries, where cutters average a half ton an hour. The Florida mills wanted cutters to cut three times more, 1.5 tons an hour, and developed a clever way to enforce faster cutting despite telling prospective cutters that they would be satisfactory workers if they cut a ton an hour.

Hand cutting sugar cane



Source: <https://www.floridamemory.com/items/show/332891>

The mills set what they called a task rate rather than the more usual piece rate, such as \$30 to pick a 925-pound bin of apples. The mills, but not the cutters, knew how many tons of cane were in each field.¹⁸ By requiring cutters to cut a certain number of feet of cane per hour to keep their jobs, the mills could enforce a productivity standard of more than a ton an hour by checking out or firing cutters who cut more than a ton of cane an hour, but not the expected 1.5 tons an hour (Martin, 2021).

The AEW was \$5.30 an hour in the late 1980s and early 1990s for cutting Florida cane. Class-action suits filed by workers argued that they should have received \$5.30 per ton of cane cut, not the \$3.75 a ton that was budgeted and paid by the mills. A Florida state judge agreed, and in August 1992 ordered the mills to pay each cutter \$1,000 to \$1,500 in back wages, a total of \$100 million with interest. The mills appealed, eventually avoiding paying additional wages to the Jamaican cane cutters but quickly mechanizing the harvest with balloon tires so that the machines did not sink in the muck or pull up cane roots. The Florida story was made into a podcast in 2023.¹⁹

The vulnerability of the H-2A workers makes the program controversial. Farmers want the government to make it easier and cheaper for them to employ guest workers, while worker advocates want

Cane Cutter
check-out card

FORM 424 - 8-85 5m P&R PRINTING, INC.

Sugar Cane Growers Cooperative of Fla.

CHECK OUT CARD

DATE 11-12-90

NUMBER 526697 NAME E. PARSONS

Checked Out 46 MN-13N with 1245 6HR

FIELD NO. _____ TIME _____ HOURS _____

REASON check out for slow

582260 (Use back of card if necessary)

Foreman's No. OK Foreman's Signature P. TO

This man should cut 480 FT 6 HRS and He only cut 318 FT

(Std)

unauthorized farm workers to be legalized and the H-2A program kept small (Martin and Rutledge, 2021). However, the Farm Workforce Modernization Act (FWMA) that was approved by the House in 2019 and 2021 would simply repeat the IRCA grand bargain: the legalization of unauthorized workers desired by worker advocates, and guest worker reforms for farmers, without encouraging alternatives to hand labor such as mechanization and imports.²⁰

The FWMA would allow unauthorized foreigners who did at least 180 days of farm work over the previous two years to become Certified Agricultural Workers (CAWs). The spouses and minor children of CAWs who are in the US could receive work and residence visas and, instead of being required to do farm work, CAW family members could work in any industry and their children could attend K-12 schools. After CAWs complete four to eight more years of farm work, the CAW and his or her family members could receive immigrant visas.

The result of the CAW program could be the legalization of perhaps 750,000 unauthorized farm workers and 1.5 million to two million CAW family members.

The FWMA would also make it easier for farmers to employ guest workers. First, H-2A visas would be valid for up to three years rather than the current maximum 10-months. Second, up to 20,000 H-2A workers a year could be employed in year-round jobs on dairies and other livestock farms, so that there could be 60,000 H-2A workers in year-round farm jobs within three years. Third, AEWRs would be set by job title rather than having one AEWR per state, and frozen while DOL and USDA studied the need for and effects of AEWRs.

As with IRCA's SAW program, the unanticipated effects of the FWMA could prove significant. Would CAW workers do the required additional farm work or simply buy documents attesting that they continued to do farm work, as many SAW applicants did? Would CAWs send for family members in Mexico because of the promise of work permits and K-12 schooling, fueling unauthorized migration? Finally, would the availability of H-2A workers in animal agriculture slow the spread of robotic milking systems and other labor-saving changes?

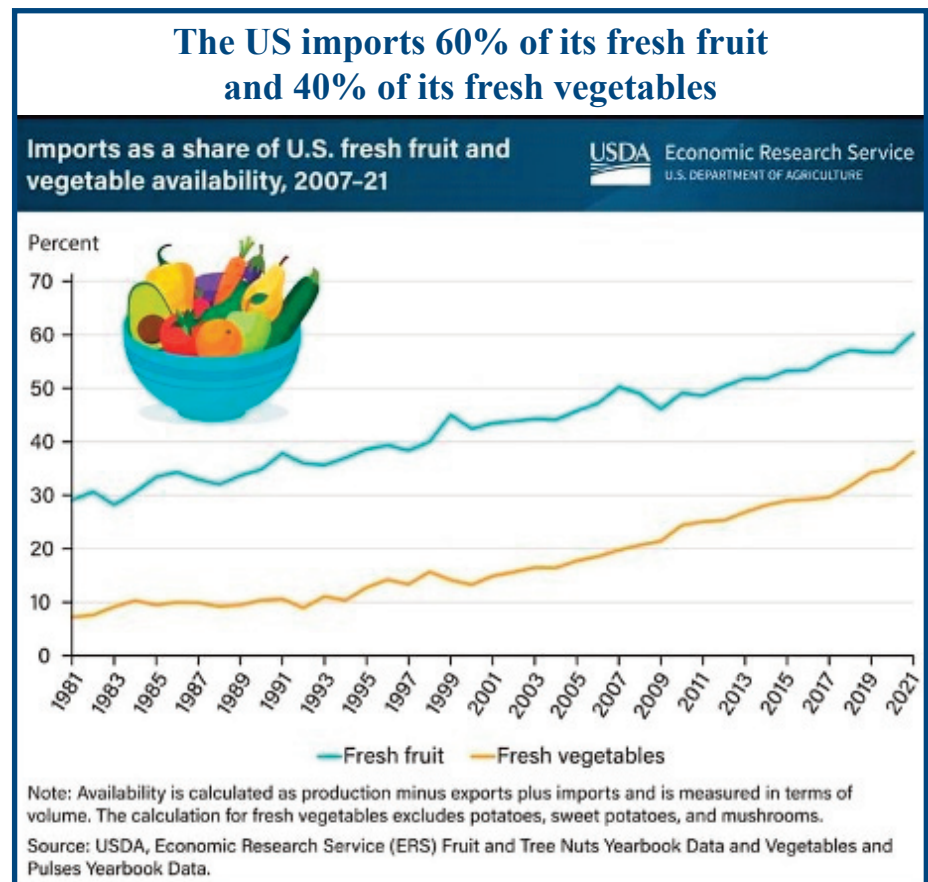
IMPORTS

The third way to provide Americans with labor-intensive fresh fruits and vegetables is to import the produce from Mexico and other lower wage countries. The US already imports 60 percent of its fresh fruit and 40 percent of its fresh vegetables, including almost all of its tropical fruit such as bananas and pineapples as well as an increasing share of avocados, berries, tomatoes, and melons.

Should the US import tomatoes picked by hand workers abroad or import migrant workers to pick US-grown tomatoes? The major objections to foreign produce are food safety and security. Food safety is a legitimate concern, and there are regular reports of food illnesses linked to contaminated US-grown and

imported produce.²¹ However, imported fresh produce is no more likely to be contaminated than US produce,²² and may be safer because of economic risks to foreign farmers who invest to grow fruits and vegetables for the US market and would lose money if their produce is rejected during inspections or found to be contaminated.

The other issue is food security. All governments want to ensure that their residents have access to safe and affordable food. Economists advocate free trade and comparative advantage, urging countries to specialize and produce the goods and services that they can produce relatively cheaper than other countries and trade for other goods. This means that a manufacturing and services hub such as Singapore



<https://migration.ucdavis.edu/rmn/blog/post/?id=2900>

would export goods and financial services and import food rather than building greenhouses to produce its own food. Similarly, countries such as Canada and the US, which have a comparative advantage in producing grains and meat, export some of these agricultural commodities and import fresh produce.

NAFTA reduced barriers to trade in North America after 1994. After the development of infrastructure ranging from improved irrigation systems to better roads, local and foreign investment created modern farms in northern and western Mexico that export most of the fruits and vegetables they grow to the US. These farms produce commodities primarily for Americans rather than Mexicans, as is evident in the fact that most of the cucumbers, asparagus, and broccoli produced in Mexico are exported to the US, where buyers are willing to pay higher prices than in Mexico.

The production of labor-intensive commodities in Mexico for local consumption and exports is likely to increase despite problems in Mexico that range from security issues to the need to import farm inputs including fertilizer, equipment, and seeds and plants. Mexico’s major comparative advantage is climate, the ability to produce fresh fruits and vegetables when most US farmers except those in Florida and the southeastern states are not producing. New plant varieties and the expansion of CEA structures is making Mexico an almost year-round fruit and vegetable exporter.

Some Mexican fruits and vegetables are produced mostly for Americans

Share of output destined for U.S. market

Product	2006-08	2016-18	Change	Product	2006-08	2016-18	Change
	Percent		Percentage points		Percent		Percentage points
Cucumbers	77.9	74.0	-3.9	Onions	14.5	21.9	7.3
Asparagus	95.3	60.7	-34.6	Mangoes	12.4	20.9	8.5
Broccoli	88.5	69.3	-19.1	Oranges	8.2	17.7	9.4
Strawberries	62.1	42.9	-19.2	Bananas & plantains	2.2	16.5	14.3
Tomatoes	42.4	46.9	4.5	Papayas	11.6	16.1	4.5
Lettuce	25.5	46.3	20.8	Pineapples	5.5	8.9	3.4
Watermelons	34.4	46.2	11.8	Sweet corn	4.5	5.6	1.1
Avocados	19.9	44.4	24.5	Lemons	2.7	3.1	0.4
Peppers	28.7	36.0	7.3	Apples	2.6	0.4	-2.2
Blackberries	27.7	29.6	2.0	Nopalitos	0.2	0.3	0.1

Source: <https://migration.ucdavis.edu/rmn/blog/post/?id=2436>

One reason for rising Mexican exports is the expansion of controlled environment agriculture (CEA), greenhouses and other structures that protect plants from weather and pests. Many of the tomatoes and other vegetables exported from Mexico are grown in or under CEA structures, which increases yields, reduces insect and weed pressures, and facilitates organic production.

Micro and high tunnels protect tomatoes and other growing plants



Source: <https://migration.ucdavis.edu/rmn/blog/post/?id=2436>

Rising Mexican fruit and vegetable exports have generated a backlash in Florida and other southeastern states. Florida’s winter vegetable industry expanded after the embargo of Cuba in the 1960s, giving rise to a tomato-growing industry in the southwestern corner of the state that specializes in mature-green tomatoes, the large tomatoes that are picked while green and ripened with ethylene and favored by the fast-food industry. Mexico specializes in the vine-ripe tomatoes preferred by Americans in supermarkets and supplies almost 60 percent of US supermarket tomatoes. Florida is a political swing state, and

Florida growers regularly charge Mexican producers with dumping their tomatoes in the US at low prices.²³

CONCLUSIONS

The US has an agricultural sector that feeds 336 million US residents and millions of consumers abroad. One subsector of US agriculture, the production of fresh fruits and vegetables, depends on legal and unauthorized Mexican-born workers to fill seasonal jobs at relatively low wages. Farmers often say that US workers do not want the seasonal jobs they offer, and that the US government should make it easy for them to employ workers from lower-wage countries.

For most of the last four decades, farmers got their

wish, employing the young and unauthorized rural Mexican men who slipped across the Mexico-US border to earn wages up to 10 times higher than at home. Unauthorized migration over the Mexico-US border has surged in the past decade, but the Central American and other families applying for asylum mostly move to US cities and seek year-round jobs rather than move to agricultural areas and fill seasonal farm jobs. Instead of unauthorized newcomers, farmers are increasingly hiring legal H-2A guest workers.

Reduced unauthorized migration into agricultural areas over the past decade means increased farm labor costs that put labor-intensive agriculture at a crossroads. Producing fresh fruits and vegetables will require ever-more investment, raising the question of whether this investment should be in machines to replace workers, housing and other infrastructure for guest workers, or moving production abroad?

The uniform response to rising labor costs is to invest and save on hand workers, but the exact mix of machines, guest worker housing, and production abroad varies by farmer and commodity and is influenced by policies. A commodity such as fresh apples, where the US is a net exporter and is developing new varieties desired by consumers, is investing in machines and housing to maintain US production, while a commodity such as open-field tomatoes aims to hire guest workers and reduce production costs to stave off the greenhouse tomatoes that Americans prefer.

Immigration and trade policies affect agricultural investment decisions. If policy changes make it easier to employ guest workers and harder to import fresh produce, there is likely to be more US production based on guest workers. A more restrictive immigration and guest worker policy coupled with free trade would reduce agriculture's long-time dependence on newcomers with few other US job options.

NOTES:

1. The NAWS does not interview H-2A workers employed on crop farms. The H-2A program is an uncapped non-immigrant or guest worker program that permits farm employers unable to recruit sufficient US seasonal farm workers to be certified to employ foreign workers with H-2A visas. The number of jobs certified to be filled by H-2A workers almost quadrupled from less than 100,000 in FY13 to almost 400,000 in FY23.
2. Roberto Suro, "Migrants' False Claims: Fraud on a Huge Scale," *New York Times*, November 12, 1989. <https://www.nytimes.com/1989/11/12/us/migrants-false-claims-fraud-on-a-huge-scale.html> See also: <https://migration.ucdavis.edu/rmn/more.php?id=406>
3. <https://migration.ucdavis.edu/mn/more.php?id=492>
4. <https://migration.ucdavis.edu/rmn/more.php?id=190>
5. The NAWS obtains permission from employers to interview currently employed crop workers. In FY19-20, about 12 percent of the NAWS workers interviewed were employed by FLCs, and 20 percent were performing harvesting jobs when interviewed, down from a peak 27 percent in FY98-00 employed by FLCs and 29 percent harvesting. In California, 25 percent of the NAWS workers interviewed were employed by FLCs, down from 45 percent in FY98-00, and 20 percent were harvesting, down from 30 percent in FY98-00. One reason for the low share of FLCs and harvesting jobs may lie in the expansion of the H-2A program. Farms seeking to avoid raising wages for US workers in lockstep with AEWI increases may hire long-season and year-round workers directly to perform non-harvest jobs and rely on FLCs to perform harvest jobs. Nonfarm employers who bring workers to crop farms (NAICS 1151) account for 40 percent of direct-hire and crop support employment across the US, and 60
6. <https://migration.ucdavis.edu/rmn/blog/post/?id=2442>
7. <https://migration.ucdavis.edu/rmn/blog/post/?id=2435>
8. There are several thousand H-2A workers who fill seasonal jobs in animal agriculture such as shearing sheep, and a long-standing exception allows primarily shepherds from Peru to watch flocks of 1,000 to 2,000 sheep on western lands year-round.
9. Some farmers do not follow through and employ H-2A workers and some H-2A migrants fill two or

more jobs while they are in the US.

10. The range reflects whether the state requires unemployment insurance taxes to be paid on H-2A earnings; CA does and FL does not.
11. The largest private US landowners are John Malone, with 2.2 million acres, and Ted Turner, with two million acres. Bill Gates is the largest owner of farm land, with 242,000 acres owned directly and via Cascade Investments, half in Louisiana and Arkansas. Wonderful Company cofounders Stewart and Lynda Resnick own 190,000 acres of farm land, as does the Offutt Family with 190,000 acres. The Fanjul family owns 160,000 acres of farm land, and the Boswell family 150,000 acres. <https://migration.ucdavis.edu/rmn/more.php?id=2591>
12. Charles Paul, California's Director of Agriculture, responding to a question in 1963 about what would happen to the price of processing tomato products without Braceros, said that the price "could double...triple...quadruple...and easily put the price of tomatoes out of the range of the average housewife." (p66). House Committee on Agriculture, Subcommittee on Equipment, Supplies, and Manpower. 1963. Mexican Farm Labor Program. March 27, 28, and 29.

Source: <https://babel.hathitrust.org/cgi/pt?id=umn.31951d008490765&view=1up&seq=3>
13. <https://www.ers.usda.gov/data-products/price-spreads-from-farm-to-consumer/>
14. The program was known as H-2 between 1952 and 1986, and changed in IRCA to H-2A.
15. AEWRs for crop workers for the current calendar year are the average hourly earnings of crop and livestock workers during the previous calendar year as estimated by USDA.
16. <https://migration.ucdavis.edu/rmn/more.php?id=2682>
17. <https://migration.ucdavis.edu/rmn/blog/post/?id=2567>
18. Cane is planted in rows five feet apart. There are 43,560 square feet in an acre, so a field yielding 43.56 tons an acre has one ton of cane in every 100 feet of two adjacent rows (the cut row) that covers 1,000 square feet. Setting a task rate that requires cutting 150 feet an hour is equivalent to setting a productivity standard of 1.5 tons an hour.
19. <https://www.pbs.org/newshour/show/new-podcast-examines-sugar-industrys-political-power-and-mistreatment-of-workers>
20. FWMA's legalization program would allow unauthorized foreigners who did at least 180 days of farm work over the previous two years to become Certified Agricultural Workers (CAWs), and their spouses and minor children could receive work and residence visas and work in any industry or attend US schools. After CAWs complete four to eight more years of farm work, the CAW and his or her family members could receive immigrant visas. The result could be the legalization of perhaps 750,000 unauthorized farm workers and 1.5 million to two million of their family members.

FWMA's easing of employer access to guest workers would begin with three-year rather than the current maximum 10-month H-2A visa and allow up to 20,000 H-2A workers a year to be employed in year-round jobs on dairies and other livestock farms, so that there could be 60,000 H-2A workers in year-round farm jobs within three years. AEWRs would be set by job title rather than having one AEWR per state and frozen for a year, after which any AEWR increases would be limited while DOL and USDA studied the need for and effects of AEWRs.
21. Note that many of the food safety cases handled by Bill Marler were for US produced foods including E. coli in meat: <https://billmarler.com/>
22. <https://are.ucdavis.edu/people/faculty/emeriti/roberta-cook/articles-and-presentations/imported-vs-domestically-produced-fruits-and-vegetables-there-di/>
23. Before a final resolution of these dumping cases, Florida growers usually agree to suspend their dumping charge if Mexican producers agree to sell tomatoes in the US for at least a minimum or reference price, which winds up strengthening Mexican producers by guaranteeing them a price. The first Mexico-US tomato suspension agreement was negotiated in 1996, and has been re-negotiated in 2002, 2008, 2013, and 2018.

BIBLIOGRAPHY

Calvin, Linda, Philip Martin and Skyler Simmitt. 2022. Adjusting to Higher Labor Costs in Selected U.S. Fresh Fruit and Vegetable Industries USDA ERS EIB 235. <https://www.ers.usda.gov/publications/pub-details/?pubid=104217>.

Chavez, Leo. 1988. Settlers and Sojourners: The Case of Mexicans in the United States. Human Organization. <https://www.jstor.org/stable/44126230>

Costa, Daniel, Philip Martin, and Zachariah Rutledge. 2020. Federal labor law enforcement in agriculture. EPI. <https://www.epi.org/publication/federal-labor-standards-enforcement-in-agriculture-data-reveal-the-biggest-violators-and-raise-new-questions-about-how-to-improve-and-target-efforts-to-protect-farmworkers/>

Escobar, Agustin, Philip Martin, Omar Starbridis. 2019. Farm Labor and Mexico's Export Produce Industry. Wilson Center. www.wilsoncenter.org/publication/farm-labor-and-mexicos-export-produce-industry

Martin, Philip. 2021a. The Prosperity Paradox: Fewer and More Vulnerable Farm Workers. Oxford University Press. <https://global.oup.com/academic/product/the-prosperity-paradox-9780198867845?lang=en&cc=us>

Martin, Philip and Zach Rutledge. 2021. Proposed changes to the H-2A program would affect labor costs in the United States and California. California Agriculture. Vol 75. No 3. <https://calag.ucanr.edu/archive/?article=ca.2021a0020>

Martin, Philip, Edward Taylor and Philip Hardiman. 1988. California farm workers and the SAW legalization program. California Agriculture. 4-6. <https://calag.ucanr.edu/archive/?type=pdf&article=ca.v042n06p4>

Rural Migration News. <https://migration.ucdavis.edu/rmn/>

Thompson, J and Blank, S. 2000. Harvest mechanization helps agriculture remain competitive. California Agriculture. <http://calag.ucanr.edu/Archive/?article=ca.v054n03p51>



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NOTE: The views expressed in this article are those of the author and do not necessarily represent the views of NPG, Inc.



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