



# Immigration Policy and Agriculture: Possible Directions for the Future

Philip Martin  
*University of California, Davis*

## Executive Summary

Presidential candidate Trump in 2016 promised to prevent unauthorized migration and deport unauthorized foreigners in the United States, and President Trump issued executive orders after taking office in January 2017 that could lead to a 2,000-mile wall on the Mexico-US border and the removal of many of the 11 million unauthorized foreigners, including one million who work in US agriculture. This paper emphasizes that, especially agriculture in the western United States, has long relied on newcomers to fill seasonal farm jobs. The slowdown in Mexico-US migration since 2008-09 means that there are fewer flexible newcomers to supplement the current workforce, which is aging and settled. Farm employers are responding by offering bonuses to satisfy current workers, stretching them with productivity-increasing tools, substituting machines for workers, and supplementing current workforces with legal H-2A guest workers.

Immigration policy will influence the choice between mechanization, guest workers, and imports. Several factors suggest that the United States may be poised to embark on another large-scale guest worker program for agriculture. If it does, farmers should begin to pay Social Security and Unemployment Insurance (UI) taxes on the wages of H-2A workers to foster mechanization and development in the workers' communities of origin by dividing these payroll taxes equally between workers as they depart and commodity-specific boards. Worker departure bonuses could be matched by governments in migrant-sending areas to promote development, and commodity-specific boards could spend monies to reduce dependence on hand labor over time. The economic incentives provided by payroll taxes could help to usher in a new and better era of farm labor.

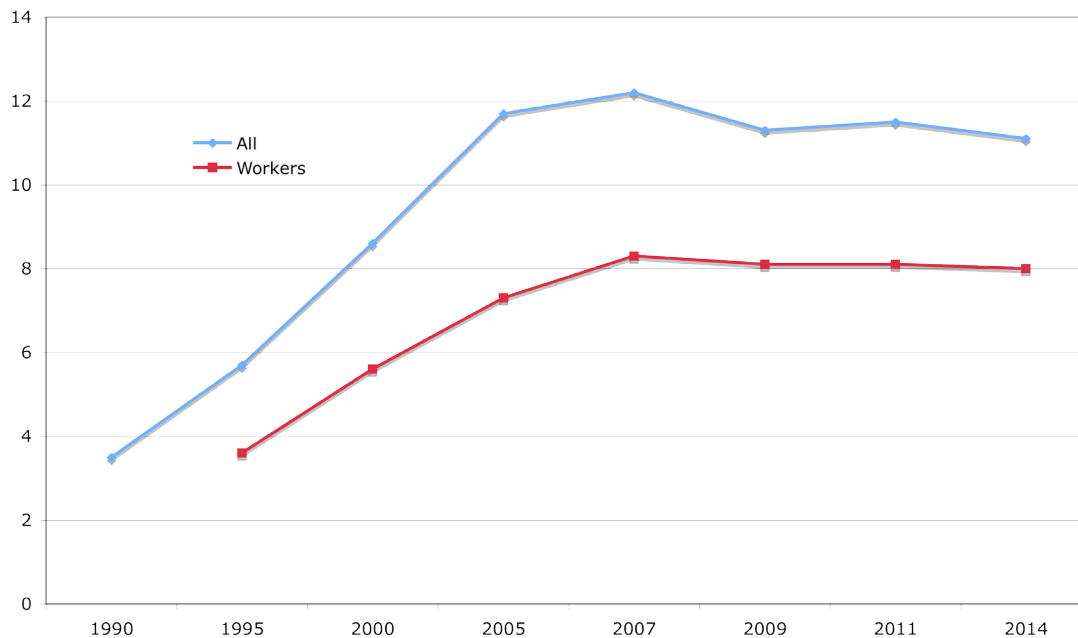
## Immigration and Unauthorized Foreigners

The United States is *the* country of immigration, with 20 percent of the world's international migrants and perhaps half of the unauthorized foreigners in industrial countries. The 43 million foreign-born US residents in 2014 were almost one-seventh of the 320 million Americans (Brown and Stepler 2016). Half of these migrants were Hispanic, including 28 percent who were born in Mexico and five percent each born in China, India, and the

Philippines (*ibid.*). A quarter of the residents of California and New York are migrants (*ibid.*). Miami is over half migrants, and Los Angeles has 40 percent migrants among its residents (*ibid.*).

A quarter of migrants, some 11 million, are unauthorized, and their fate has been intensively debated for more than a decade. The number of unauthorized foreigners rose rapidly in the late 1990s and again after recovery from the 2000-01 recession, peaking at over 12 million in 2007, and declining since (Passel and Cohn 2016a). About 55 percent of unauthorized foreigners are Mexicans (*ibid.*).

**Figure 1. Unauthorized Foreigners and Workers in the US, 1990-2014 (mils)**



Source: Pew Research Center.

Some eight million unauthorized foreigners were in the US labor force in 2014, comprising five percent of the 160 million-strong workforce that also includes 20 million lawful foreign-born workers (Passel and Cohn 2016b). The number of unauthorized foreigners fell nine percent since its peak in 2007, while the number of unauthorized workers fell four percent, suggesting that mostly non-workers left the United States during and after the 2008-09 recession (*ibid.*).

Workers can be categorized by industry or occupation. Using national household survey data, Passel and Cohn (2016b) estimated that 17 percent of those employed in the agriculture industry were unauthorized in 2014, followed by 13 percent unauthorized workers in construction and nine percent in hospitality. By occupation, 26 percent of those with farming occupations were unauthorized, followed by 15 percent in construction and nine percent each in production and service occupations (*ibid.*).

The US Department of Labor's National Agricultural Worker Survey (NAWS), which interviews workers employed on crop farms, but not H-2A guest workers,<sup>1</sup> has found a higher share of unauthorized workers. The NAWS estimated that 70 percent of the 1.8 million workers employed sometime during a typical year on crop farms were born in Mexico, and that 70 percent of foreign-born crop workers are unauthorized, so that half of US crop workers are unauthorized (DOL 2017). There are no statistical data on the characteristics of the estimated 700,000 workers employed on livestock farms, but they too are believed to include many Mexican-born and unauthorized (Rural Migration News 2011).

These data suggest that if new enforcement measures slow the entry of unauthorized foreigners and remove those in the United States, US agriculture could be among the first industries to be affected. Agriculture has faced labor supply crises in the past, and usually responded with a combination of labor-saving mechanization and a new source of foreign workers.

## **Newcomers and Seasonal Farm Jobs**

The United States developed three major farming and farm labor systems. In most of the United States, family farms produced crops and livestock with family workers until mechanization in the 20th century allowed many farmers to work off the farm and the remaining farms to become large and specialized. Plantations in the South relied on slaves and later sharecroppers to produce cotton and tobacco for distant markets, while fruit and vegetable farms in the West relied on newcomers for whom seasonal agriculture offered jobs rather than careers (Martin 2003, chapter 2).

Agriculture in the arid western states evolved differently. In most of the United States and in most countries, agricultural development involves the consolidation of small farms into fewer and larger farms. In the western states, Spanish and Mexican land grants and speculators assembled large tracts, often 50,000 or more acres (the average size of a US farm is 435 acres). These large farms were expected to be broken into family-sized units when the transcontinental railroad was completed in 1869, and falling transportation costs justified producing dried and canned fruit in the West's Mediterranean climate. These crops were labor-intensive, and it was thought that only large farm families would be able to provide the seasonal labor needed to operate small fruit farms successfully (Martin 2003, chapter 2).

However, large farms were not broken up because another source of seasonal labor was found. The Chinese who had been recruited to build the Transcontinental Railroad through the California mountains were driven out of western cities in the 1870s, and many became migrant and seasonal farmworkers. Economist Varden Fuller (1991) explained that the low wages paid to Chinese workers who picked fruit were soon capitalized into higher land

<sup>1</sup> The H-2A program allows US farmers anticipating labor shortages to have their need for guest workers certified by the US Department of Labor and approved by US Citizenship and Immigration Services so that the US Department of State can issue H-2A visas to the foreign workers that employers recruit. Most H-2A workers can remain in the United States up to 10 months to fill seasonal farm job. There is no cap on the number of H-2A visas available (Martin 2014).

prices, so that aspiring family farmers who arrived on the railroad had to pay high prices for land but found the value of their own labor equivalent to the low wages paid to Chinese who had no other US job options because of the discrimination they faced in cities.<sup>2</sup> As a result, relatively few of the southern and eastern Europeans who flooded into the United States between the 1880s and 1914 became family farmers in the western states.

Additional Chinese were excluded from immigrating in 1882. As the Chinese workforce aged, state officials warned large farmers that they “could not expect white laborers to spring out of the ground when the Chinese influx ceased,” and would have to raise wages and offer year-round work to attract and retain white farmworkers (Martin 2003, chapter 2). Farmers found another source of seasonal workers in Japan, which legalized emigration in 1886 (*ibid.*). Some Japanese workers were able to make the transition from hired hand to farmer by working for a share of the crop, gaining experience selling vegetables to consumers, and buying marginal farm land. This unwelcome competition led to a 1907 “Gentlemen’s Agreement” that stopped Japanese emigration to the United States and prompted California to enact laws in 1913 and 1919 to prohibit non-US citizens from buying farm land (*ibid.*).<sup>3</sup>

The next newcomers were South Asian Punjabis, and they were followed by Mexican guest workers between 1917 and 1921 in the first Bracero Program during World War I (*ibid.*). Filipinos from what was then an American colony were the most important group of newcomers during 1920s, and Dust Bowl migrants arrived in the 1930s during one of the largest internal desperation migrations in US history. Over 1.3 million people from other states moved to California during the 1930s, a state with less than six million residents in 1930 (*ibid.*).

Dust Bowl Okies and Arkies soon dominated the farmwork workforce, the only time in California’s farm labor history that a majority of seasonal workers were white US citizens. The accessibility of farmworkers in federal farm labor camps led to reports that condemned the system of large farms relying on seasonal workers to appear when needed and then fend for themselves, including John Steinbeck’s *The Grapes of Wrath*. However, farm labor reforms were divided between idealists such as economist Paul Taylor, the husband of photographer Dorothea Lange who wanted to turn farmworkers into small farmers, and realists such as Carey McWilliams, whose *Factories in the Fields* argued that large farms dependent on armies of seasonal workers were inevitable in irrigated and labor-intensive agriculture, but the workers employed on large farms should have the same labor protections and union organizing rights as nonfarm factory workers (McWilliams [1939] 2000).

Divided farm labor reformers and the exigencies of World War II allowed farm employers to persuade the US government to permit the recruitment of Mexican *braceros* again. During World War II, fewer than 75,000 a year entered the United States, but in the mid-1950s, the number of *braceros* increased to over 450,000 a year (Martin 2003, chapter 2). A government study in 1959 concluded that the availability of *braceros* held down farm

2 Fuller (1991, vii) noted that large fruit farmers had become accustomed to Chinese workers: “With no particular effort on the part of the employer, a farm labor force would emerge when needed, do its work, and then disappear — accepting the terms and conditions offered, without question.”

3 These state laws prompted many Issei, or first-generation Japanese immigrants, to naturalize or to buy farmland in the names of their US-born and thus US-citizen children, the Nisei.

wages and encouraged Mexican-Americans to move from agricultural areas to cities where they did not face competition from *braceros* (Rural Migration News 2003).

The Bracero Program was ended in 1964. Unions and churches argued that the Bracero Program was a government policy that slowed the upward mobility of Mexican Americans, just as government-sanctioned discrimination held back Blacks. Growers countered that they needed *braceros* because American workers would not do seasonal farm work, and that the availability of *braceros* kept agriculture competitive and food prices low.

In the mid-1960s, farm wages jumped and there was a wave of labor-saving mechanization. Processing tomatoes were rebred to ripen uniformly, and a machine was developed to pick them in one pass through fields, increasing production, lowering prices to consumers, and helping to fuel the fast food revolution. This labor-saving mechanization was controversial, since government funds were used to displace farmworkers and small farmers (Martin and Olmsted 1985). Similarly controversial was the United Farm Workers (UFW) union, which won 40 percent wage increases in table grape contracts in 1966 largely because *bracero* workers were not available (Martin 2003, chapter 2).

Unauthorized Mexico-US migration began to increase in the late 1970s, as farm employers turned to labor contractors who recruited rural Mexicans to replace UFW workers who went on strike for higher wages and benefits. Unauthorized Mexico-US migration rose with peso devaluations in the early 1980s and, with no penalties on US employers who knowingly hired unauthorized workers, their hiring spread to more commodities and areas.

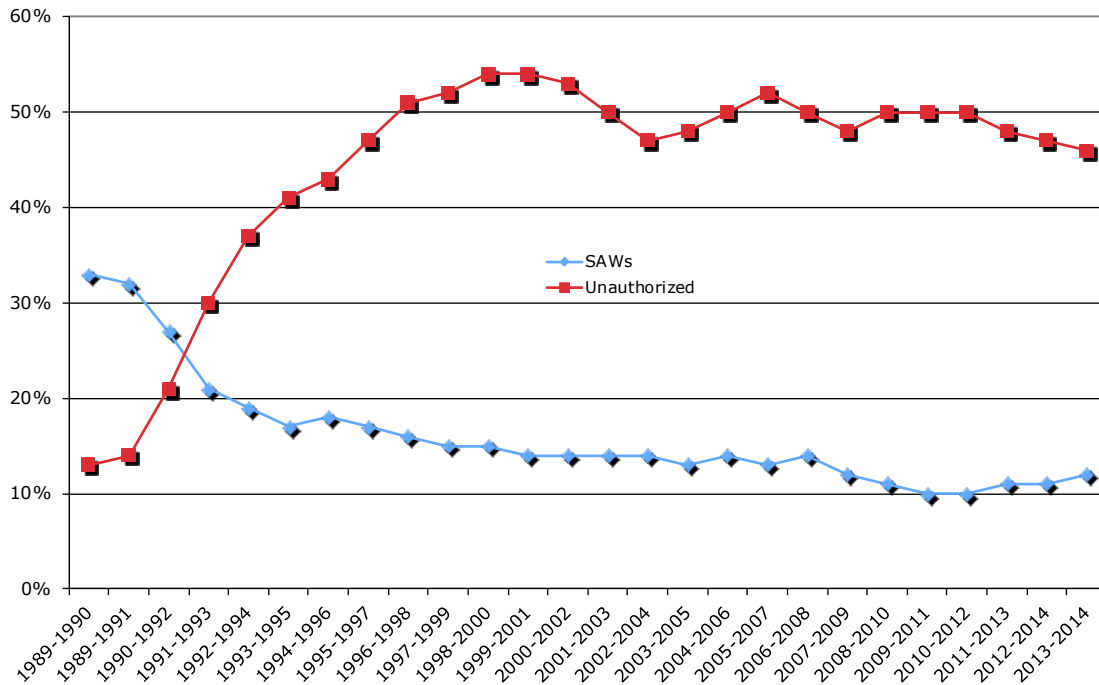
The Immigration Reform and Control Act of 1986 (IRCA) imposed the first federal sanctions on employers who hired unauthorized workers and legalized over 1.1 million unauthorized farmworkers who had completed at least 90 days of farm work in 1985-86. These now legal workers spread throughout the United States, and those leaving agriculture were replaced by unauthorized newcomers from Mexico. The share of unauthorized farmworkers was less than 10 percent in 1990, after over 1.1 million unauthorized foreigners were legalized under the IRCA's Special Agricultural Worker (SAW) program and the unauthorized share has hovered around 50 percent since the mid-1990s (DOL 2017).

## Immigrants in Agriculture

Today, most hired farmworkers are Mexican-born men. The NAWS found that the foreign-born share of US crop workers was 55 percent in 1989-90, peaked at 83 percent in 1999-00, and is now 70 percent (*ibid.*). The remaining 30 percent of crop workers were born in the United States (*ibid.*).

In 1990, the crop workforce included 35 percent SAW beneficiaries and 13 percent unauthorized workers; the rest were US citizens and other legal immigrant workers (*ibid.*). As SAWs left agriculture, they were replaced by unauthorized workers, so that there were fewer than 20 percent SAWs and more than 50 percent unauthorized in the mid-1990s (*ibid.*). Today, the share of SAWs has stabilized at 10 percent, another 10 percent of crop workers are legal via family unification visas or another route, 30 percent are US citizens, and half are unauthorized (*ibid.*).

**Figure 2. SAWs and Unauthorized Crop Workers, 1989-2014**



Source: Pew Research Center.

The Commission on Agricultural Workers reported that, before IRCA introduced sanctions on employers who knowingly hired unauthorized workers in 1986, such workers were concentrated on fruit-growing operations in California and Texas and in farm labor contractor crews that pruned, hoed, and performed other seasonal tasks on western farms (CAW 1992). The distribution of unauthorized workers before IRCA reflected the risk of producer losses if the Border Patrol removed them during inspections. There was a higher share of unauthorized workers in winter citrus pre-IRCA because oranges can remain on trees for several weeks if necessary until new workers are recruited, than in more perishable summer vegetables, where a sudden loss of workers may result in loss of the crop.

IRCA changed enforcement in agriculture from a people chase to a paper chase. Instead of the Border Patrol driving into fields and attempting to apprehend workers who ran away, IRCA meant that most workplace enforcement involved audits of the I-9 forms completed by newly hired workers and their employers. If suspected unauthorized workers were found during audits, employers informed them that they needed to provide work authorization documents or risk termination. Audits ended the sudden loss of workers associated with workplace raids, and encouraged even producers of very perishable commodities to risk hiring unauthorized workers.

In the early 1990s, first SAWs and then unauthorized workers spread to all commodities and areas, as pioneers in Florida orange groves, North Carolina vegetable farms, and mid-western detasseling and fruit-picking crews told friends and relatives of opportunities. Farmers benefitted from this network recruitment, since current workers brought only qualified friends and relatives into crews and trained them.

Since 2000, the share of unauthorized workers has been about 50 percent in all commodities and areas, according to the NAWs (DOL 2017). Some commodities and areas rely largely on *legal* H-2A guest workers, including Florida citrus, North Carolina tobacco and vegetables, and New England and Washington apples.

## Trump and Agriculture

President Trump issued three executive orders during his first week in office, setting in motion plans to build a wall on the Mexico-US border, increase deportations, punish sanctuary cities that refuse to cooperate with the Department of Homeland Security, and reduce refugee admissions. The border memo envisions a \$21 billion wall and the addition of 5,000 Border Patrol agents to the current 21,000.<sup>4</sup> The interior enforcement memo lays out plans to double the number of Immigration and Customs Enforcement agents from 10,000 to 20,000 and prioritizes the detection and removal of unauthorized foreigners convicted of US crimes, but makes almost all unauthorized foreigners subject to deportation.<sup>5</sup>

The refugee executive order that received the most media attention would ban the entry of nationals of seven countries: Syria, Iran, Iraq, Somalia, Sudan, Libya and Yemen, and reduce refugee admissions to 50,000 a year.<sup>6</sup> Parts of this executive order were blocked by federal courts, and the order was effectively re-issued with some modifications in March 2017 and blocked again as unconstitutional religious discrimination.<sup>7</sup> Trump is expected to issue more executive orders dealing with workplace enforcement and guest workers.

US agriculture employs a higher share of unauthorized workers than any other industry. Current farmworkers are aging and settling, increasing worries about who will replace those who find nonfarm jobs. Agriculture may serve as the canary in the coal mine to indicate how industries reliant on unauthorized workers adjust to fewer newcomers and higher wages.

Farmers are responding to fewer unauthorized newcomers with 4-S strategies: satisfy, stretch, substitute, and supplement. By **satisfying** current workers, employers hope to retain them longer. Most farmers believe that the supply of labor inside US borders is fixed or inelastic, so that higher wages will not attract more farmworkers and instead will move them from lower to higher wage farms. Some are offering benefits such as low-cost health care to employees and their families or end-of-season bonuses to increase the loyalty of current workers. Some are improving the training of first-level supervisors to reduce favoritism and harassment.

The second strategy is to **stretch** the current work force with mechanical aids and management changes that increase worker productivity and make farm work easier. Most

4 Border Security and Immigration Enforcement Improvements, Exec. Order No. 13767, 82 Fed. Reg. 8793 (Jan. 25, 2017).

5 Enhancing Public Safety in the Interior of the United States, Exec. Order No. 13768, 82 Fed. Reg. 8799 (Jan. 25, 2017).

6 Protecting the Nation from Foreign Terrorist Entry into the United States, Exec. Order No. 13769, 82 Fed. Reg. 8977 (Jan. 27, 2017).

7 Protecting the Nation from Foreign Terrorist Entry into the United States, Exec. Order No. 13780, 82 Fed. Reg. 13209 (March 6, 2017).

fruits and vegetables are over 90 percent water, and hand harvesters spend much of their time carrying harvested produce down ladders to bins or to the end of rows to receive credit for their work. Planting dwarf trees means smaller or no ladders and faster picking, and hydraulic platforms reduce the need to fill 50 to 60 pound bags of apples and oranges from ladders. Slow-moving conveyor belts that travel ahead of workers who harvest berries, broccoli, and other vegetables reduce the need to carry harvested produce, making workers more productive and harvesting jobs more appealing to older workers and women (Calvin and Martin 2010).

The third strategy is **substitution** or replacing workers with machines. Labor-saving mechanization is the story of agriculture, as the US went from 95 percent of US residents in agriculture in 1790 to less than two percent today. The production of the big-five crops — corn, soybeans, wheat, cotton, and rice — has been mechanized. There has also been enormous labor-saving change in livestock production, including, automatic feeders, sensors on cattle, and robotic milking systems. Most nuts are harvested mechanically, with machines shaking almonds and walnuts from trees and catching them or sweeping them into rows for pick up.

Fresh fruits and vegetables have defied mechanization for several reasons. Many are fragile, and human hands are gentler than mechanical fingers in picking grapes or peaches. Machines that shake apples or pears from trees damage a higher share of the fruit than hand harvesters, meaning a smaller share goes to market. Finally, machines are fixed costs and workers are variable costs: farmers must pay for a \$200,000 harvesting machine whether there are apples to pick or not, while they do not pay wages to workers if storms or disease destroy the apple crop.

The three decades from the 1980s to 2010 may have been an era of Mexican farm labor abundance that is coming to an end due to tougher US enforcement growth, work opportunities in Mexico, and likely a new wave of labor-saving mechanization in US agriculture. Machines are being developed to harvest a variety of crops, from apples to strawberries, but at current wages they are not competitive with hand harvesting. However, with labor costs continuing to rise, as suggested by the law that increases the California minimum wage from \$10 an hour in 2016 to \$15 by 2022, many private firms are rushing to develop harvesting machines.

The fourth adjustment to fewer unauthorized newcomers is to **supplement** the current workforce with H-2A guest workers. The H-2A program was created in 1952 and was used primarily by sugarcane growers in Florida and apple growers along the East Coast until the mid-1990s, when North Carolina tobacco farmers became the largest employers of legal guest workers (Rural Migration News 2017).

There is no cap on the number of H-2A visas that can be issued, but farm employers must obtain certification of their need for H-2A guest workers by satisfying three major criteria (ibid.). First, farmers must try to recruit US workers and provide reasons why any US worker who applies for a job is not hired. Second, farmers must provide free housing to H-2A guest workers and out-of-area US workers. Third, farmers must pay US and H-2A workers a super-minimum wage known as the Adverse Effect Wage Rate, which ranged from \$10.38 to \$13.79 an hour across states in 2017.



The H-2A program is expanding, doubling over the past decade to 165,700 farm jobs certified by the Department of Labor in FY 2016 on about 8,300 US farms (ibid.). Florida and North Carolina are the leading H-2A-using states, accounting for a quarter of all jobs certified, but Washington and California have had the fastest-growth in certifications, with the number of H-2A jobs certified doubling over the past five years (ibid.). Since California and Washington account for over 40 percent of US farmworkers, these states are likely to become the largest farm guest worker states if the H-2A program continues to expand (ibid.).

## Moving Forward

Satisfying and stretching the current farm workforce are short-term strategies to get farmwork done, while labor-saving substitution and supplementing are longer-term strategies. Farmers are grappling with the optimal strategy, which is likely to be determined by nonfarm developments, including the speed with which costs fall and performance improves for labor-saving machinery, potential changes to trade policy that affect imports, and changes that make guest workers cheaper or more expensive.

Farming labor-intensive commodities requires a great deal of capital, since planting an acre of peaches or pears requires an investment of \$15,000 per acre (football field) to generate revenue of \$5,000 an acre after a several year wait (Agricultural and Resource Economics, UC Davis 2017). Farmers making such investments need to decide whether to plant crops whose prices could be affected by imports and whether to invest in housing to accommodate farmworkers or machines to harvest their crops. Juggling this triangle is difficult. The cost of labor-saving machinery is likely to fall and performance to improve, but early adopters of machines pay high prices and a lock in costs, since the machines must be paid for even if weather destroys the crop or imports make it uneconomic to pick.

Such uncertainty encourages many farmers to advocate for the labor status quo, with guest workers replacing current workers who leave. Many farmers delayed turning to guest workers because of the high cost of building housing in the urban areas where most fresh fruits and vegetables are grown (almost all of California's fresh fruits and vegetables are grown in metro counties). With the cost of new housing for H-2A guest workers \$10,000 a bed or more, many farmers hoped that the guest worker provisions of the Border Security, Economic Opportunity, and Immigration Modernization Act of 2013 ("S.744") would become law.<sup>8</sup>

S.744 would have replaced the H-2A program with new W-3 and W-4 programs and eliminated the need to provide housing for guest workers. The W-3 program would be like the current H-2A program and tie a foreign worker to a particular US farm employer and job for up to three years, while the W-4 "at will" program resembles the Replenishment Agricultural Worker program in IRCA that was never implemented. W-4 visa holders would need an initial job offer to enter the United States, but could then "float" from one farm employer to another and remain legal so long as they were not unemployed more than 60 days. Minimum wages that would have to be paid to W-3 and W-4 guest workers would be reduced by \$1 to \$2 an hour, and farmers would have to provide their W-3 and W-4 guest

<sup>8</sup> S.744, 113th Cong (2013).

workers with a housing allowance equivalent to \$1 to \$2 an hour, depending on the local cost of housing. Employees would be responsible for finding their own housing.

Making it easier to hire guest workers is likely to prolong the age-old quest for another group of newcomers willing to accept seasonal farm jobs. If the United States is about to embark on another era of guest workers for agriculture, a better strategy would be to use the Social Security and unemployment insurance taxes that farmers currently do not pay on the wages of H-2A workers, in order to foster mechanization in the United States and development in worker sending communities.

Farmers and guest workers should participate in the payroll tax system to level the playing field with other farmworkers. However, by giving guest workers special Social Security numbers and segregating their payroll taxes, the monies collected could be divided to help farmworkers and farmers. Guest workers could receive refunds as they left the United States, say \$1,500 each,<sup>9</sup> to promote development in their areas of origin, and these worker savings could be matched to spur development. The other half of the monies could be used by commodity-specific boards to increase the competitiveness of production, so that those closest to the fields decide whether to spend the money on machines, housing for guest workers, or something else.

Transforming a farm labor system that has depended on, in the words of Varden Fuller, poverty at home and misery abroad to provide a willing supply of newcomers to the seasonal farmwork workforce, is not easy (Fuller 1991). Regulatory changes alone have not transformed the farm labor system, and more tinkering promises a temporary fix followed by another labor supply crisis in the future. Introducing economic incentives to transform both worker areas of origin and methods of production in the United States could be the policy that helps to usher in a new era in farm labor.

### REFERENCES

- Agricultural and Resource Economics, UC Davis. 2017. "Cost and Returns Studies for Commodities." Davis, CA: Agricultural and Resource Economics, UC Davis. <https://coststudies.ucdavis.edu/current/>.
- Brown, Anna, and Renee Stepler. 2016. *Statistical Portrait of the Foreign-Born Population in the United States*. Washington, DC: Pew Research Center. [www.pewhispanic.org/2016/04/19/statistical-portrait-of-the-foreign-born-population-in-the-united-states/](http://www.pewhispanic.org/2016/04/19/statistical-portrait-of-the-foreign-born-population-in-the-united-states/).
- Calvin, Linda, and Philip Martin. 2010. *The US Produce Industry and Labor: Facing the Future in a Global Economy*. Economic Research Report No. (ERR-106). Washington, DC: US Department of Agriculture. <http://www.ers.usda.gov/Publications/ERR106/>.

<sup>9</sup> Based on guest workers earning an average \$1,500 a month or \$15,000 while employed in the United States for the current maximum of 10 months (Rural Migration News 2017). Social Security taxes are about 17 percent, with half paid by the worker and half by the employer, and Unemployment Insurance taxes range from three to six percent (ibid.).

- CAW (Commission on Agricultural Workers). 1992. *Report of the Commission on Agricultural Workers*. Washington, DC: CAW. <https://catalog.hathitrust.org/Record/008306631>.
- DOL (US Department of Labor). 2017. National Agricultural Worker Survey. Washington, DC: DOL. <https://www.doleta.gov/agworker/naws.cfm>.
- Fuller, Varden. 1991. *Hired Hands in California's Farm Fields: Collected Essays on California's Farm Labor History and Policy*. Berkeley, CA: Giannini Foundation.
- Martin, Philip. 2003. *Promise Unfulfilled: Unions, Immigration, and Farm Workers*. Ithaca, NY: Cornell University Press.
- . 2009. *Importing Poverty? Immigration and the Changing Face of Rural America*. New Haven, CT: Yale University Press.
- . 2014. "The H-2A Program; Evolution, Impacts, and Outlook." In *(Mis)managing Migration: Guestworkers' Experiences with North American Labor Markets*, edited by David Griffith, 33-62. Santa Fe, NM: School for Advanced Research Press.
- Martin, Philip, and Alan Olmstead. 1985. "The Agricultural Mechanization Controversy." *Science* 227(4687): 601-06. <https://doi.org/10.1126/science.227.4687.601>.
- McWilliams, Carey. (1939) 2000. *Factories in the Fields: The Story of Migratory Farm Labor in California*. Boston: Little, Brown. Reprint, Berkeley, CA: University of California Press.
- Passel, Jeffrey, and D'Vera Cohn. 2016a. *Overall Number of U.S. Unauthorized Immigrants Holds Steady Since 2009*. Washington, DC: Pew Research Center. [www.pewhispanic.org/2016/09/20/overall-number-of-u-s-unauthorized-immigrants-holds-steady-since-2009/](http://www.pewhispanic.org/2016/09/20/overall-number-of-u-s-unauthorized-immigrants-holds-steady-since-2009/).
- . 2016b. *Size of U.S. Unauthorized Immigrant Workforce Stable After the Great Recession Pew Hispanic*. Washington, DC: Pew Research Center. [www.pewhispanic.org/2016/11/03/size-of-u-s-unauthorized-immigrant-workforce-stable-after-the-great-recession/](http://www.pewhispanic.org/2016/11/03/size-of-u-s-unauthorized-immigrant-workforce-stable-after-the-great-recession/).
- Rural Migration News. 2003. "The Bracero Program." *Rural Migration News* 9(3). <https://migration.ucdavis.edu/rmn/more.php?id=10>.
- . 2011. "Midwest, Northeast." *Rural Migration News* 17(4). [http://migration.ucdavis.edu/rmn/comments.php?id=1639\\_0\\_3\\_0](http://migration.ucdavis.edu/rmn/comments.php?id=1639_0_3_0).
- . 2017. "H-2A; Braceros." *Rural Migration News* 23(2). <http://migration.ucdavis.edu/rmn/more.php?id=2044>.