

FARM LABOR SHORTAGE

THE LARGE-SCALE IMPACT OF WORKER SHORTAGE ON THE
NATION'S AGRICULTURE INDUSTRY AND GLOBAL FOOD SUPPLY



AGAMERICA[®]
LENDING

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THE CRITICAL IMPACT OF LABOR SHORTAGE ON THE NATION'S AGRICULTURE AND FOOD INDUSTRY

21.6 MILLION

FULL- AND PART-TIME JOBS RELATED TO THE AGRICULTURAL AND FOOD SECTORS

PAID & UNPAID AGRICULTURAL WORK BY TYPE OF WORKER



For the average farmer their workday starts before dawn and continues well past dusk. Although advancements in agritech have helped reduce some of the physical demand of farming over the last decade, farm operators continue to rely heavily on hired farm workers to carryout daily operations to support the planting and harvesting seasons.

Since the late 1950s, the American agricultural workforce has witnessed major shifts in the composition of the farm worker population. For decades, United States (U.S.) farms relied on a combination of self-employed principal operators, family members, and hired workers, as well as seasonal, part-time, and full-time workers to perform daily agricultural tasks ranging from working in fields and caring for livestock to maintaining farm machinery. The farm labor population as a whole has been on a long-term decline, placing significant pressure on primary operators to find alternative solutions to keep up with production, and avoid losing the investments that they've made during planting season. As a nation, we are at a point in the agricultural industry where the slightest changes to trade agreements or immigration policies can have substantial and long-term impacts on the livelihood of the American farmer.

In this overview of the labor shortage, we're taking a deeper look into the historical trends, current challenges, and future expectations to help increase awareness of what industry experts call the "farm labor crisis".

THE SHRINKING U.S. AGRICULTURAL WORKFORCE

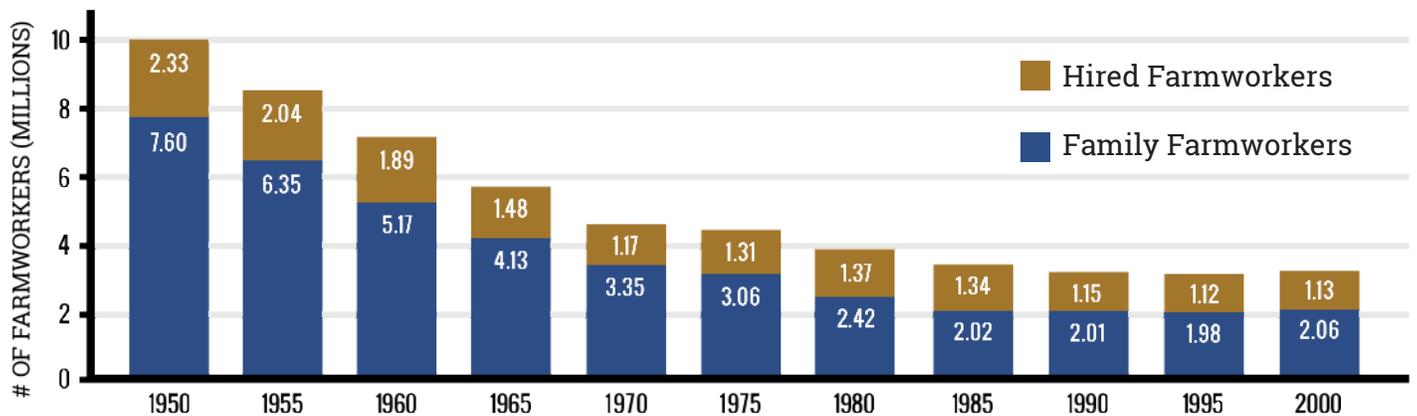
According to data from the National Agricultural Statistical Service’s (NASS) Farm Labor Survey (FLS), the number of self-employed and family farmworkers dropped from 7.6 million in 1950 to 2.1 million in 2000—resulting in a 73 percent decline of family-farm workers. During the same period, hired farm hands fell by 52 percent resulting in a total of 1.3 million workers.

The NASS’s annual reports continue to demonstrate a steady year-over-year decline; November 2018’s

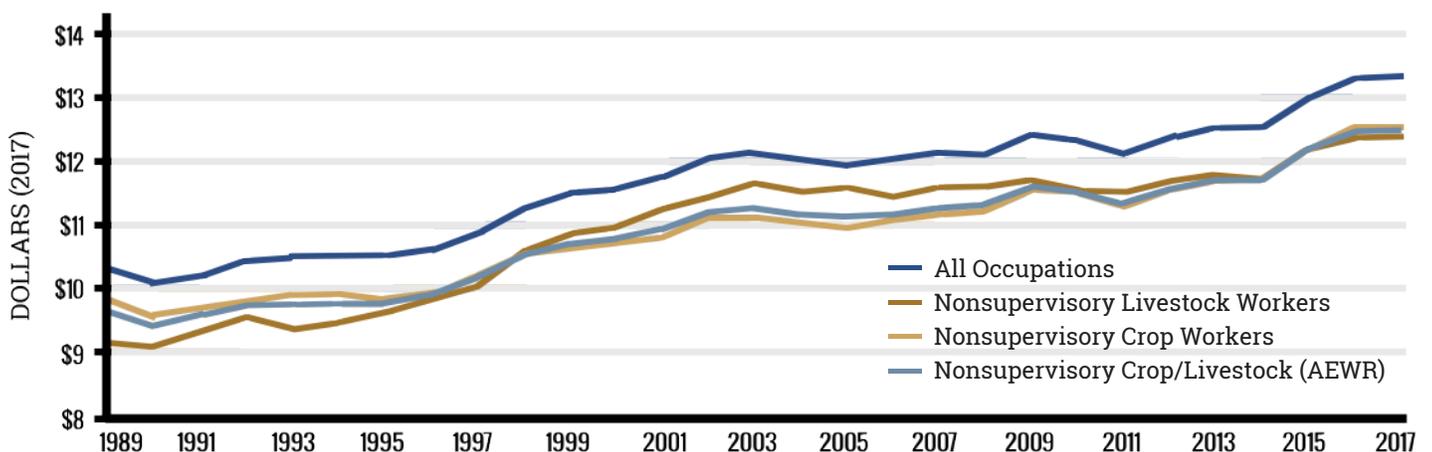
report illustrated a seven percent decline in hired workers and an eight percent increase in farm labor wages. On average, farm operators paid hired farm hands an average wage of \$14.47 in October 2018 compared to \$13.74 per hour in October 2017. The Southeast region (Alabama, Georgia, and South Carolina) was the hardest hit by the decline of hired farm labor in 2018, with a 29 percent reduction.

Despite rising wages, agriculture continues to struggle to attract farm workers. Historically, the agricultural

FAMILY & HIRED FARMWORKERS ON U.S. FARMS



REAL HOURLY WAGES FOR HIRED FARMWORKERS, ALL AGRICULTURAL WORKERS, AND AEW

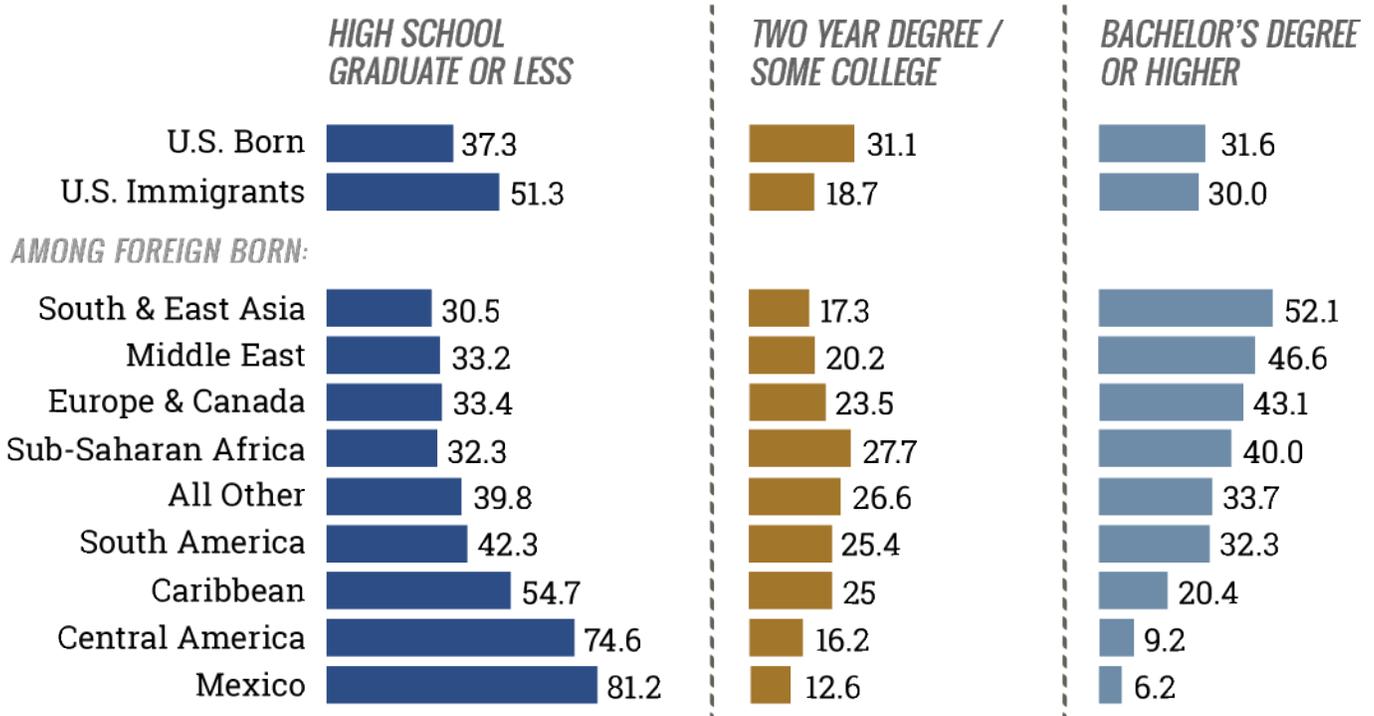


workforce has been comprised of immigrant workers with little to no formal education. Since the 1960s, there has been a notable increase in the share of immigrant workers who've attained postgraduate degrees. According to research performed by Pew Research Center, in 2016, 12.8 percent of immigrants ages 25 and older have graduated with a post graduate degree, while 17.2 percent have received a bachelor's degree.

Global literacy rates also grew from 56 percent in 1980 to 85 percent in 2014. As education levels

improve, it becomes increasingly difficult for the agriculture industry to compete with other trade and corporate industries. According to an article in the magazine Successful Farming, the global evolution of today's workforce has made it "harder to find local people who want to do farm work" because "traditional farm laborers like Hispanics are moving on to higher paying jobs in other industries" and "Mexican workers are finding new opportunities at home or often are restricted by immigration policies".

U.S. IMMIGRANTS AGES 25 & OLDER (2016) EDUCATION LEVELS BY REGION OF ORIGIN



56%
GLOBAL LITERACY RATES IN 1980



85%
GLOBAL LITERACY RATES IN 2014



02

FACTORS CONTRIBUTING TO THE FARM LABOR SHORTAGE

The chronic farm labor shortage continues to gain momentum while impacting all sectors of the agriculture industry.

A common perception has been that immigration policies are at the center of the labor crisis, and while they are a factor, there are several other contributing issues that have led to today's labor problem, including:



Declining interest in agriculture



Inefficient agriculture labor programs



Declining birth rates in Mexico



Aging farm operators

As noted earlier, nearly half of all farm workers are undocumented immigrants — 25 percent being of Mexican descent. Since 2007, the Economic Research Service (ERS) has recorded a decline in young Mexican workers — who have historically held a majority of agriculture jobs.

Additionally, rising opportunities in Mexico's education system has helped their citizens obtain higher paying jobs that require far less physical labor than that of farming. Furthermore, opportunities within Mexico's farm industry have substantially increased over the last decade.

Heightened border security by the U.S. has also increased the risk to immigrant workers that attempt to cross the border illegally, serving as a major deterrent of illegal immigration. Over the last decade, immigration reform has produced more stringent deportation rules and stronger enforcement of border control.

How has this affected the overall population of immigrant farmworkers? From 2007 to 2015, there's been a 19 percent decrease in undocumented Mexican immigrants living in the U.S. Sadly, the risks associated with illegally immigrating to the U.S. no longer outweigh the potential benefits.

FARMERS AGING OUT WHILE NEW GENERATION SEEK OTHER OPPORTUNITIES

As illustrated by the 2017 Census of Agriculture, the age of the primary farm operator continues to rise. The rate at which younger farmers are entering the workforce is occurring at an inadequate pace to sustain the number of farmers who are aging out of the agriculture industry.

Farmers are among America's oldest workers. The average age of an American farmer has steadily increased over the last 30 years. Still, the industry struggles to attract and hire incoming generations.

Experts believe that the declining interest in agriculture among younger generations is primarily driven by the following factors:



High real estate & land prices



Steep upfront investment cost for machinery & technology



Volatile commodity pricing



Unpredictable weather changes



Unequal work-life balance



Heavy physical demand

For this reason, farmers are increasingly turning to foreign labor resources like the H-2A program to fill their positions on their farm.

59.4

AVERAGE AGE OF PRINCIPAL OPERATOR

PRODUCERS AGES 35 & YOUNGER ACCOUNT FOR

9%

OF FARMERS

INEFFICIENCIES WITHIN THE H-2A PROGRAM CREATE CHALLENGES FOR FARMERS

According to USDA's ERS, "over the last decade, wages for hired farmworkers have risen, the gap between agricultural and nonagricultural compensation has narrowed, and use of the H-2A program has more than doubled". Yet, the H-2A Temporary Agriculture Workers program is frowned upon by most farm operators because of its many inefficiencies that often create more challenges than solutions for farmers.

The concept of a temporary worker program was first introduced in the Immigration and Nationality Act of 1952. The Act was the first to create a category for unskilled workers—it would later be subdivided into the two categories H-2A and H-2B by the Immigration Reform and Control Act of 1986.

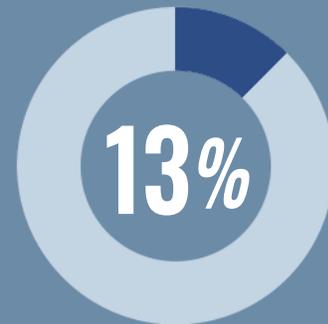
H-2A

TEMPORARY AGRICULTURE
WORKERS

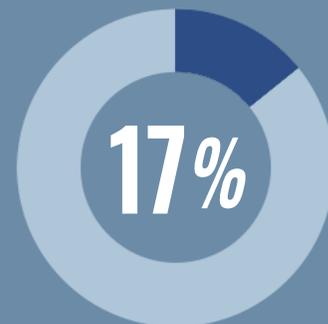
H-2B

TEMPORARY WORKERS
OUTSIDE OF THE
AGRICULTURE INDUSTRY

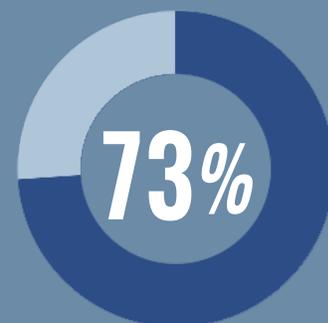
IMMIGRANTS ACCOUNT FOR:



U.S. Population



Total U.S. Workforce

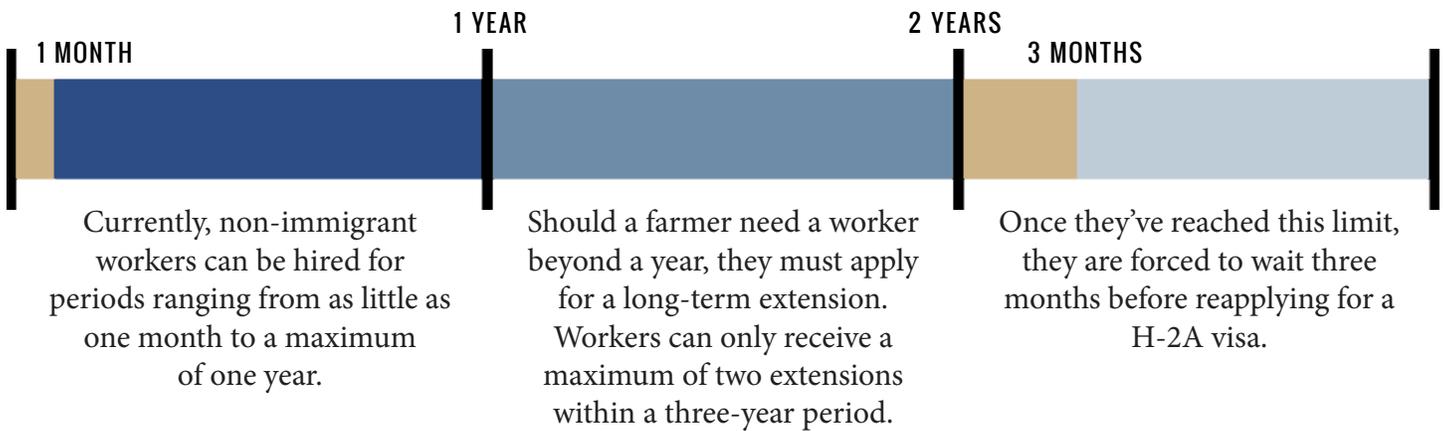


Agriculture Labor Force

Since 1997, the total number of H-2A visas has grown from just over 16,000 to more than 89,000. The steep decline in family-farm workers has fueled the rising demand for H-2A workers. Unfortunately, many farmers still seek alternative solutions because of the program's stringent

requirements. For instance, when farm operators have a labor shortage and turn to the program for assistance, they must submit their request 60 to 75 days ahead of their "date of need". Once approved, it can take more than 30 days for the worker's visa to be approved.

ANOTHER MAJOR DRAWBACK OF THE PROGRAM IS THAT IT FAILS TO ACCOMMODATE FARMERS' NEED FOR YEAR-ROUND GUEST WORKERS.



This is problematic and costly for farmers because it requires them to dedicate more resources to training workers; increases their labor expenses; and places more pressure on their operation to perform while understaffed.

As stated best by vegetable grower Javier Zamura, "The (workers) who are here are just not enough for what we need to harvest. This political instability has made our region suffer a lot when it comes to harvesting the food that we eat".



Perhaps the biggest challenge of all is the high cost of the H-2A program. For each H-2A worker, a farmer must cover the cost of transportation from the worker's home country to the work site, which can range from \$400 or more depending on the country of origin.

Once the worker has arrived, the farmer is responsible for their housing and daily meals. The total cost of hiring one worker will often exceed \$10,000, and this figure does not include wage expenses.

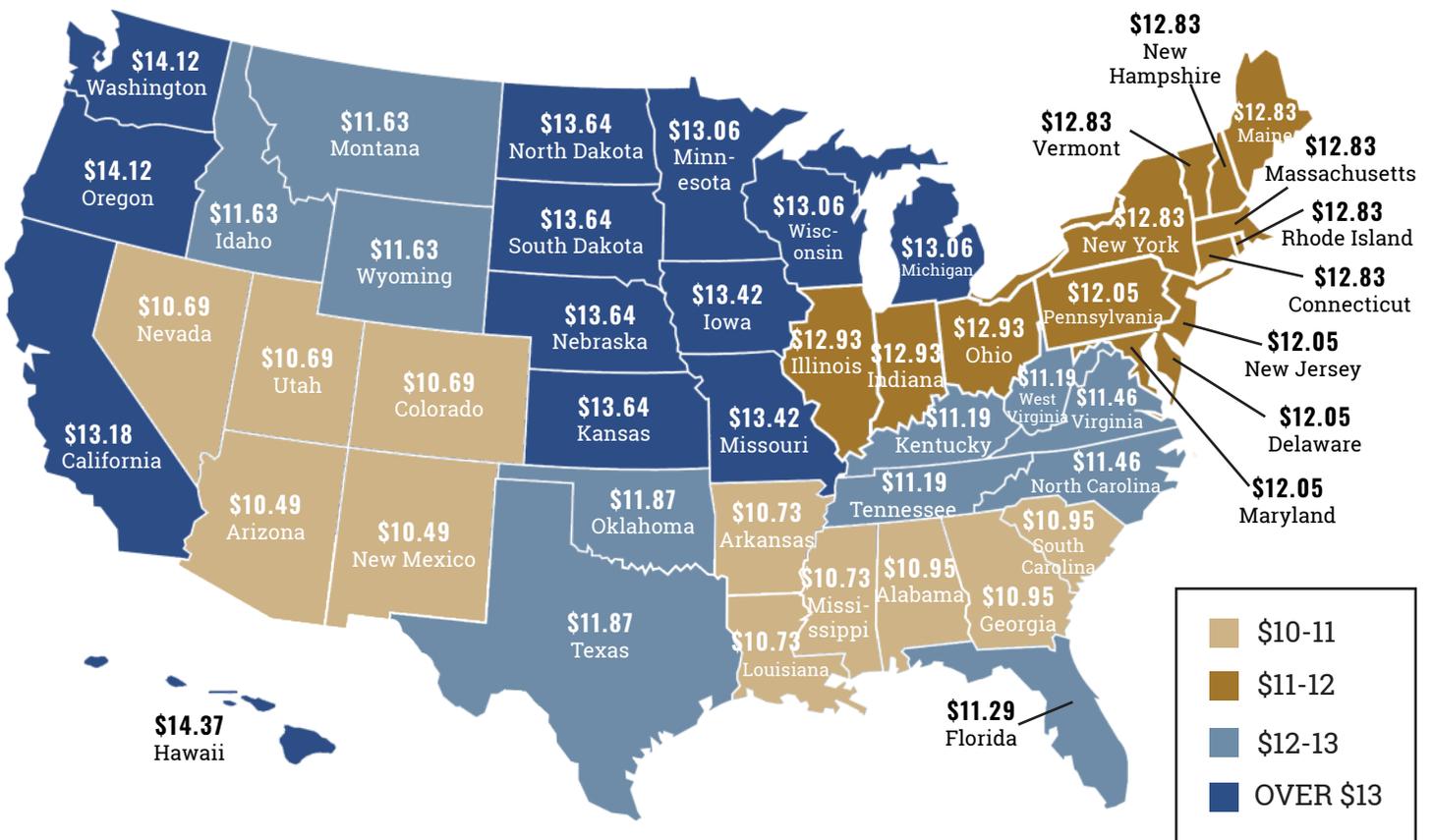
Furthermore, under the H-2A visa program U.S. farmers must provide compensation to the worker based on the federal or state minimum wage and the Adverse Effect Wage Rate (AEWR) terms, which also requires them to pay the highest prevailing hourly rate. In 2018, the lowest hourly rate dictated by AEWR was in New Mexico and Arizona at

\$10.46; whereas the highest rate reached \$14.37 per hour in Hawaii; in Oregon and Washington it topped out at \$14.12 per hour.

If a farmer chooses to pay an H-2A worker on a piece rate basis they must provide the highest prevailing piece rate as determined by the State Worker Agency (SWA). If under the piece rate pay schedule the worker's wages do not align with the average hourly pay rate that would have been due to them; the farmer must then provide financial supplementation.

In other words, farmers are responsible for paying H-2A workers the highest pay rate as determined by all regulatory bodies, which is often higher than the rate at which they pay domestic workers.

ADVERSE EFFECT WAGE RATES (AEWR), FISCAL 2018



HOW THE FARM LABOR SHORTAGE IMPACTS FARM PRODUCTION & THE U.S. ECONOMY

In a study conducted by New American Economy (formerly Partnership for a New American Economy), they found that between the time periods of 1998-2000 and 2010-2012, imports of fresh produce for Americans rose by 73.9 percent.

The study also discovered that Americans consumed 6.6 billion pounds more of fresh fruits and vegetables between 2010 and 2012.

As American farmers struggle to find adequate labor coverage for their operations, they begin to lose their competitive advantage. For years farmers have felt the growing pain of wasted produce—the NRDC reported that in 2012 nearly 20 percent of produce grown in the U.S. never left the farm due to a lack of farm workers, or because the labor expenses were higher than that of the potential revenue from the crops.

According to that same study, the labor shortage accounted for \$3.3 billion in missed GDP growth in 2012, as well as an additional \$1.3 billion in farm income.

The overall impact on the U.S. economy is significant and continues to grow as the number of domestic and foreign workers decline. Based on forecasting from the New American Economy's study, if U.S. farmers had continued to maintain the same production rates (as seen in 1998-2000) with an adequate workforce, the U.S. job market would have boasted more than 89,000 jobs in 2012 and would've generated an additional \$4.9 billion in annual farm revenue.

75% OF GROWERS
REPORTED THAT WORKERS
ARRIVED ON AVERAGE

22 DAYS

AFTER THE "DATE OF NEEDED"



FARMERS' INNOVATIVE STRATEGIES FOR COPING WITH LABOR SHORTAGE

As the pressure builds to keep up with the global food demand, American farmers are forced to turn to alternative solutions to alleviate their operational burden and to improve their profit margins. Across the nation, farms of all sizes and specialties have started implementing advanced agriculture technology to cope with the lack of available labor.

With the adoption of the Internet of Things (IoT), the agritech industry has exploded, offering farmers access to several new smart farming technologies including:



Wireless sensors



Predictive forecasting models



Advanced automation



Robotics



Data analytics

Large farm operations have even begun designing their own agritech machinery to better manage field and crop work.

For example, Driscoll's, a California berries farm, has started to develop a robotic machine that enables precision picking of strawberries—a crop known for being labor intensive and costly. While this will help increase their productivity, there are

some technical pitfalls of moving towards robotic and artificial intelligence machinery.

For instance, the technology will only be able to accommodate certain crops in its infancy stage, which excludes nearly 200 specialty crops. Thus, forcing farmers to make the decision to consolidate their operations or transition their land to machine-serviceable crops.

Another major drawback is the high initial investment, especially for small to medium-size family farms, which have been most directly impacted by the labor shortage.

Despite these disadvantages, the benefits of farm robotics and agriculture technology frequently offset the overall limitations and allow farmers to continue working at full or almost-full capacity with fewer workers.

According to the American Farm Bureau, roughly 56 percent of U.S. farms have started using agritech machinery within the last five years (2014-2019)—more than half of those farms reported the labor shortage as the cause.

Experts believe that smart farming will continue to change the way agriculture is managed on and off the farm. As the agritech industry expands, farmers will have access to technology that enhances their crop quantities and quality through improved use of resources that allow for precision automation, pest control, and crop-health monitoring.

OPERATIONAL CHANGES HELPING FARMS WEATHER THE LABOR SHORTAGE

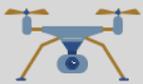
The overwhelming pressure of the labor shortage has pushed farmers to make major operational changes to accommodate the rising expenses and lower number of workers.

As California grower, Tom Deardorff told the NPR, “we’ve shifted away from the most labor-intensive crops—so things like vine-ripe tomatoes, we no longer grow anymore”. Tom Deardorff is just one of many farmers who have made the difficult decision to abandon certain crops.

Of all types of crops, fresh fruit and vegetables tend to be the most demanding of labor. Broccoli, lettuce, and strawberries are among some of the most difficult to harvest as they require greater precision which can only be achieved with hand-picking.

Farm operators have begun using these strategies to cope with the growing labor demand.

SOME OF THESE STRATEGIES INCLUDE:



Integrating ag technology to reduce some of the physical burden on their current farmworkers



Adopting crops that are easier to manage and require fewer laborers



Scaling back farm operation



Leasing a portion of their land



Placing a hold on farm expansion plans and reinvesting the capital into technology



Moving operations abroad



Extending guest workers year-round versus seasonally



Raising wages and improving benefit packages to attract new domestic workers and to retain current staff



Exiting farming altogether

WHAT THE FUTURE HOLDS FOR FARMERS & THE LABOR SHORTAGE

Many farmers feel that the labor shortage is impart due to decades of poor political decisions and lack of industry support.

In order to improve the industry, immigration reform and restructuring of the H-2A guest worker program will be necessary to create a more productive and effective system for farmers.

Currently, the American Farm Bureau is leading lobbyist efforts to encourage reform of the guest worker program. They are pushing for a system that allows for more flexible and efficient access to foreign agricultural workers, that also grants workers a more direct pathway to legalization.



Each season farmers and ranchers are faced with new obstacles that create operational challenges. In order to support our growing nation and an ever-expanding global population, we must find ways to improve productivity in order to keep pace with the rising demand for food and a declining workforce population. Working capital provides a financial cushion that helps endure the tougher farming seasons to stay on track with long-term business goals.

Learn how AgAmerica's land loan experts create custom land loans utilizing the land's equity in order to fund your operational upgrades, like new farm equipment, irrigation systems, or even precision technologies. Contact us today at info@agamerica.com or 855.905.1060 to speak with one of our land loan experts for more information.



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