

Rural Migration News

Blog 269

MARCH 2022

Changes in U.S. Farm Labor: 1948–2017

Human history is the story of ever-fewer people producing ever-more food. Rising agricultural productivity enabled the development of cities and nonfarm activities that now employ three-fourths of the world's 3.6 billion workers and generate over 90 percent of the world's \$85 trillion GDP.

Countries with higher incomes per capita have a smaller share of their workforces employed in agriculture. Most countries with more

than 40 percent of their workforces employed in agriculture are in Africa and have per capita incomes of less than \$5,000.

In the US, the share of employment in agriculture fell from a third in 1910 to two percent by 2017, while the population rose from 92 million to 325 million. The value of US farm output, adjusted for inflation, tripled between 1948 and 2017, while employment in agriculture fell by 75 percent, a huge increase in produc-

tivity made possible by machines, biological innovations, and irrigation as well as farmers purchasing more materials and services from off-farm suppliers.

Labor

Employment in US agriculture includes farmers and their unpaid family members and hired workers. The average employment of farmers and their unpaid family members fell from 7.4 million to 0.9 million between 1948 and 2017, while the average employment of hired workers fell from 2.3 million to 0.8 million. More unique individuals work for wages on farms each year due to seasonality and the turnover of hired workers; the ratio of unique workers to average employment ranges from two to three, suggesting 1.6 million to 2.4 million unique farm workers.

Within the farm workforce, the share of hours worked by farmers and their unpaid family members fell from 70 percent in 1938 to 50 percent in 2017. Many farm operators have nonfarm jobs, and some unpaid family members work only seasonally on farms, while hired farm workers work an average of

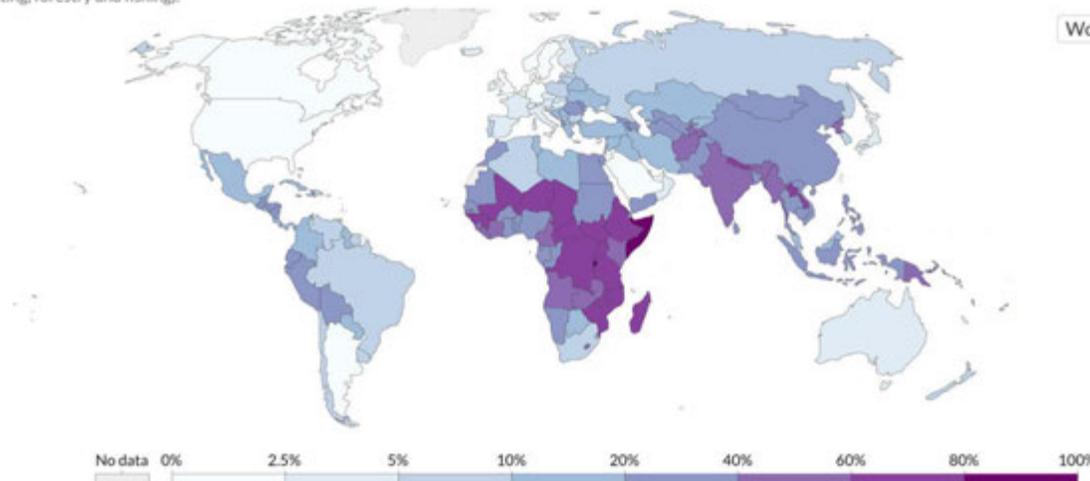
The Share of Workers Employed in Agriculture Falls as Incomes Rise

Share of the labor force employed in agriculture, 2019

Share of people of working age who were engaged in any activity to produce goods or provide services for pay or profit in the agriculture sector (agriculture, hunting, forestry and fishing).

Our World in Data

World

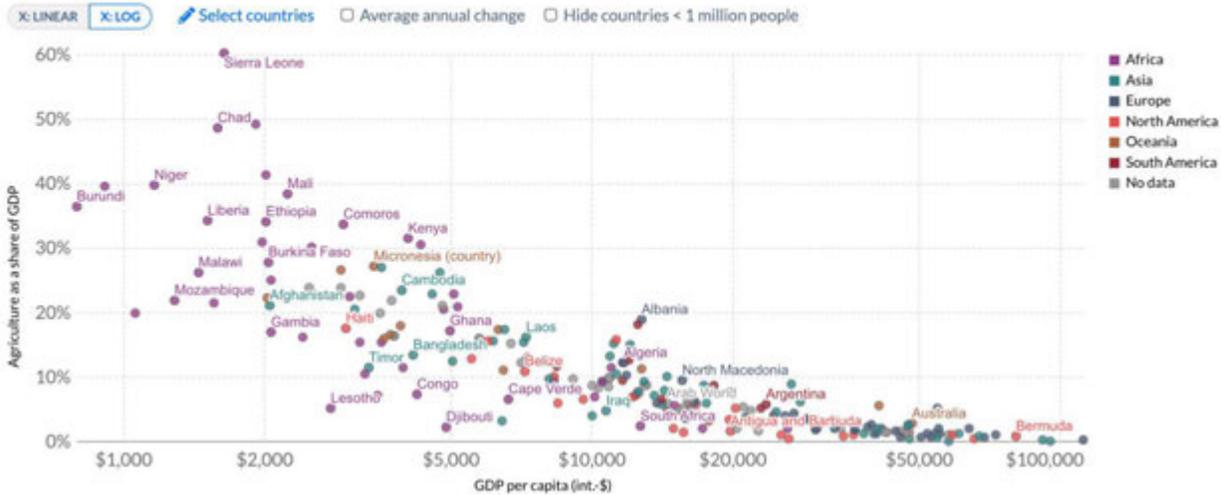


The Share of Agriculture in GDP Declines as Per Capita Incomes Increase

Share of agriculture in GDP vs GDP per capita, 2017

Agriculture includes the cultivation of crops and livestock production, as well as forestry, hunting, and fishing. Value added is the net output of the sector after adding up all outputs and subtracting intermediate inputs.

Our World in Data



1,500 hours a year. By 2017, the average 900,000 farmers and their unpaid family members worked as many hours on farms as the 800,000 hired farm workers.

Reliance on hired labor varies by commodity, area, and size of farm. Large farms that produce fruits and vegetables in California and other western states and in Florida and other eastern states are most reliant on hired farm workers.

Fewer and larger farms account for most US farm output, and the principal operators of farms are better educated. A higher share of principal farm operators had college degrees in 2016 than all US household heads, and a higher share had some college. Among farm operators, levels of education rise with farm size, so that the higher the farm's sales, the more likely the farm operator has a college education.

Most farm work is done by young men. However, the share of all hours worked on US farms by men fell from 90 percent to 80 percent between 1950 and 2017, and the share contributed by men aged

18 to 44 fell from 47 percent to 35 percent.

The NAWS, which interviews only non-H-2A hired workers employed on US crop farms, finds similar trends, viz, an aging and more experienced workforce that includes a third women and is half unauthorized. During the 1990s, young and unauthorized Mexican men replaced US-born crop workers. The arrival of unauthorized Mexican newcomer men slowed after the 2008-09 recession, which explains why the non-H-2A crop

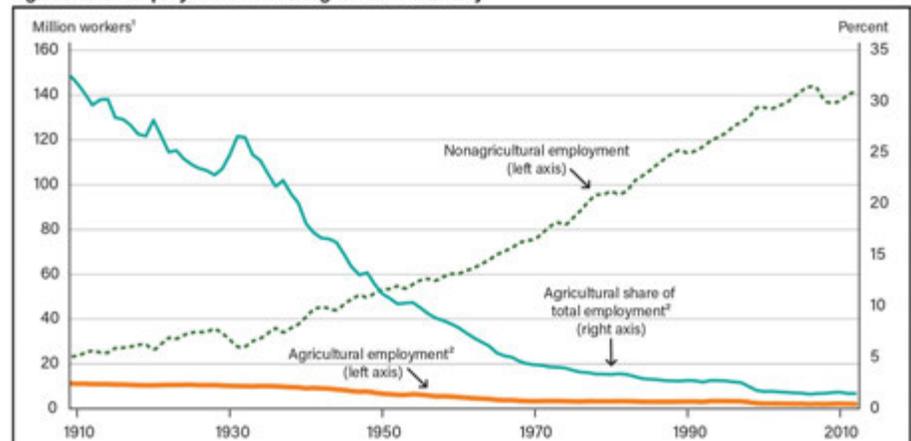
workforce is getting older, includes more women, and has more US farm work experience.

A quarter of US crop workers were born in the US, while three-fourths were born abroad. Almost all foreign-born crop workers were born in Mexico, and almost all H-2A workers were born in Mexico.

Foreign-born crop workers have relatively little education, an average seven years. Education levels of US-born crop workers rose by two years since 2000, while years

The Share of U.S. Employment in Agriculture Fell From 33% to 2% in the 20th Century

Figure 1
Agricultural employment fell during the 20th century



of schooling for foreign-born crop workers rose by one year.

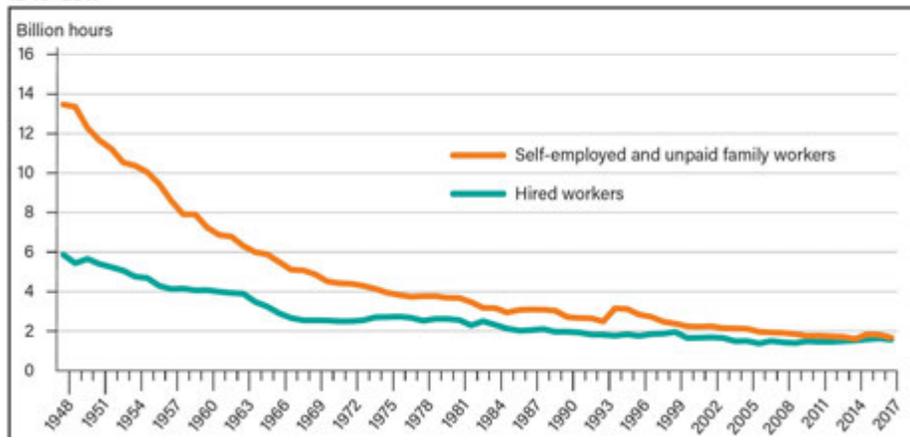
Farm operators are buying more nonfarm services, including contracted labor. When a nonfarm labor contractor brings workers to farms, USDA considers payments to the contractor to be purchasing contract services. USDA surveys only farm operators, not nonfarm businesses that bring workers to farms, which means that USDA collects data on what farmers pay for contract labor, but not on contract labor businesses and their employees.

Farm wages are lower than nonfarm wages. The ratio of the average annual wages and salaries of hired farm to nonfarm workers was less than 40 percent in the 1950s, when 20 percent of US farm workers were Mexican Braceros, rose to 55 percent during the 2008-09 recession when many nonfarm workers accepted wage cuts to retain their jobs and health and other benefits, and has fluctuated between 55 and 60 percent since.

Farm operators, in contrast to hired workers, have household incomes that are higher than those of non-farm households.

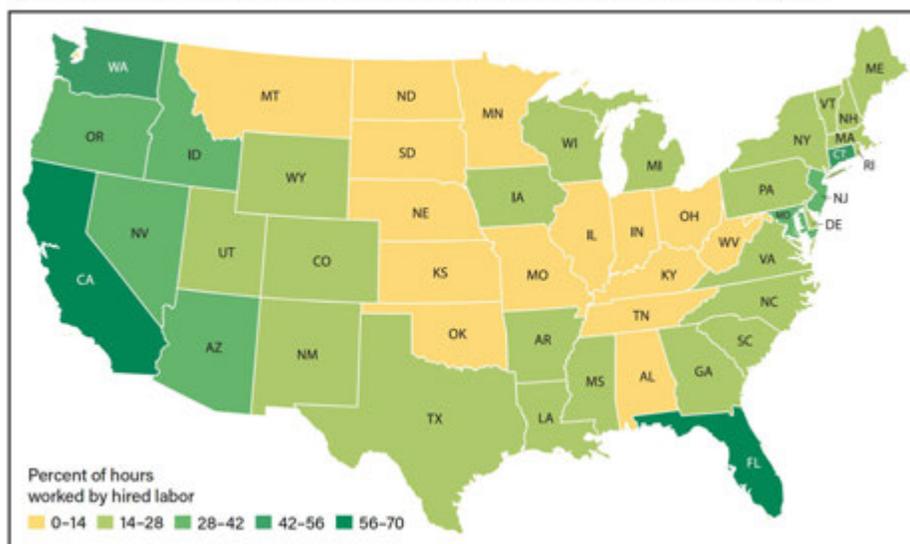
Hired Workers and Farmers and Their Families Each Contributed Half of All Farm Hours Worked in 2017

Figure 2
Self-employed/unpaid worker hours declined more than hired labor hours in the U.S. farm sector, 1948-2017



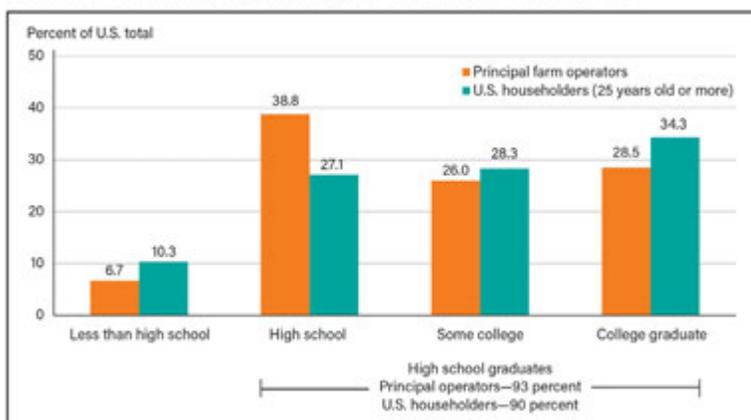
Hired Workers Contribute Over Half of the Hours Worked in California, Florida, and Washington Ag

Figure 3
U.S. farm sector hired labor's share in total hours worked varied from State to State, 2016



Principal Operators of Farms were Better Educated than All U.S. Household Heads in 2016

Figure 6
Educational attainment of principal farm operators and all U.S. householders, 2016



The Share of Farm Work Hours Contributed by Workers 45 and Older is Increasing

Table 3

Total hours-worked shares by gender and age groups (in percent), 1950 and 2017

Year	Gender	Age groups								Total
		14-15	16-17	18-24	25-34	35-44	45-54	55-64	65 and older	
1950	Male	1.30	2.30	13.40	15.80	17.50	16.70	14.40	8.20	89.70
	Female	0.10	0.30	0.90	1.70	2.60	2.20	1.70	0.80	10.30
2017	Male	0.00	0.40	6.40	14.20	15.40	17.00	17.80	9.80	81.00
	Female	0.00	0.20	1.90	3.30	4.10	4.20	3.80	1.60	19.00

The NAWS Finds an Aging, Unauthorized, and Mostly Mexican-Born Male Hired Crop Workforce

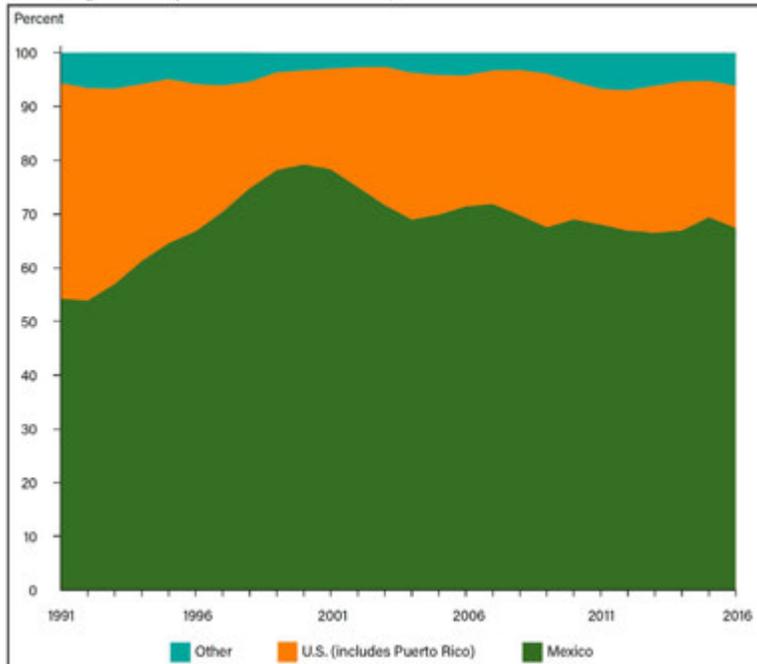
Table 4

Demographic characteristics of hired/contracted crop farm workers in National Agricultural Workers Survey, 1989-2016

	FY1989-91	FY2001-03	FY2014-16
Unweighted sample size	7,244	10,057	8,165
Average age	33	33	38
Percent 14-20	16	15	8
Percent 21-44	66	67	59
Percent 45+	18	19	33
Percent female	27	24	32
Average years of farmwork experience	10	10	14
Percent 0-2	18	29	18
Percent 3-15	62	47	46
Percent 16+	21	24	36
Average years of education	7.7	7.4	8.4
Percent less than 9th grade	53	57	46
Percent 9-12th	41	37	43
Percent > high school	6	6	11
Legal status ¹			
Percent U.S. born	41	26	27
Percent foreign born - SAW	28	9	8
Percent foreign born - other authorized	17	15	18
Percent foreign born - unauthorized	14	50	48
Country of birth ²			
Percent U.S. (including Puerto Rico)	40	26	26
Percent Mexico	54	72	67
Percent other	6	3	6
Immigrated to U.S. less than 2 years ago (for immigrants only)	4	16	3

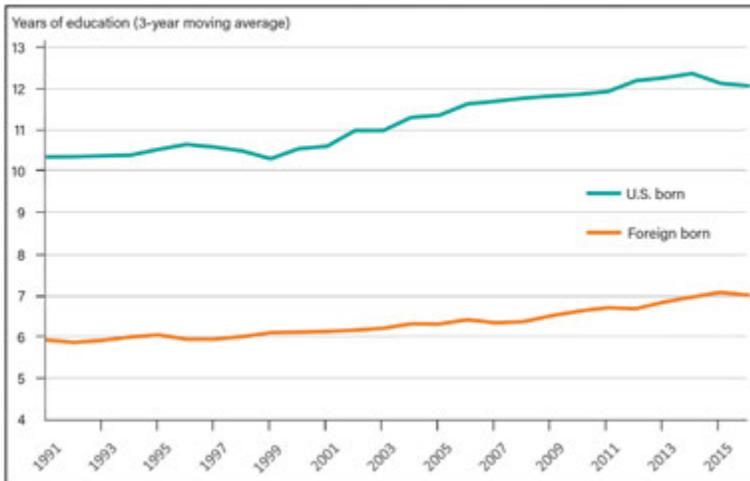
Over Two-Thirds of U.S. Crop Workers were Born in Mexico

Figure 8
Most foreign-born crop workers were from Mexico, 1991-2016

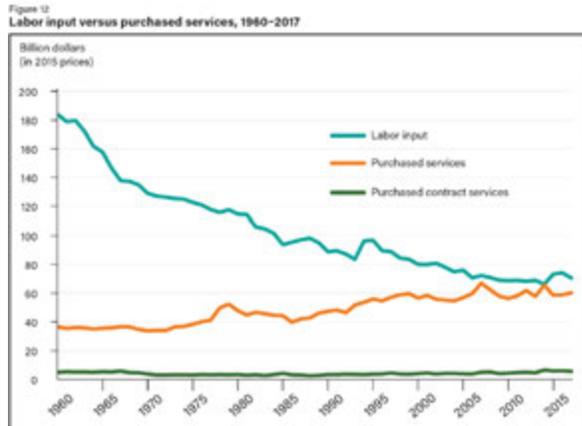


The Average Educational Level of Hired Crop Workers Rose Over the Past Two Decades, But More for U.S.-Born than for Mexican-Born Workers

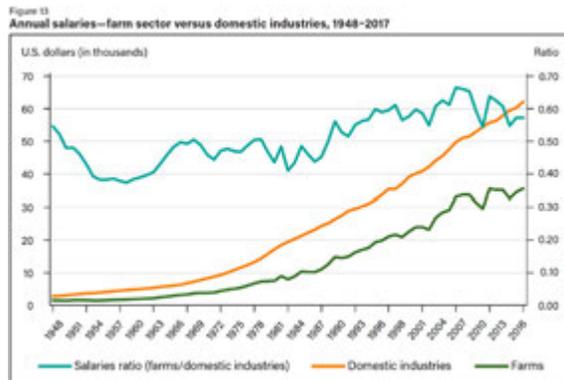
Figure 9
Educational attainment for U.S. crop farm workers: U.S. born versus foreign born, 1991-2016 (3-year moving average)



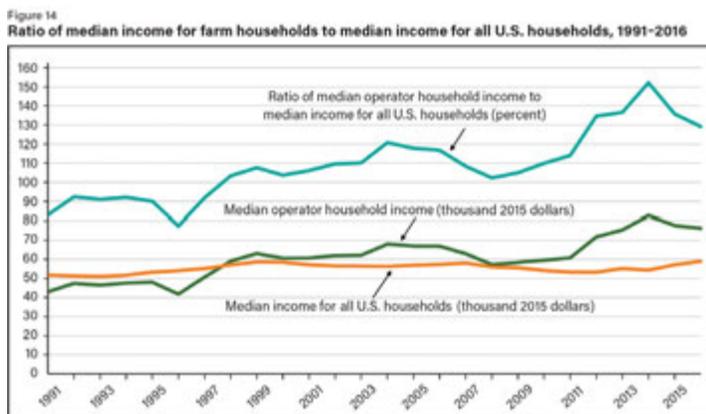
The Share of All Purchased Services Rose Over Time, and Contracted Labor Services were About 10 Percent of All Purchased Services.



The Ratio of Farm to Nonfarm Wages was Lowest in the 1950s and Peaked in 2008–09



Farm Household Incomes were 50% Higher than Nonfarm Household Incomes in 2013–14



References

Wang, Sun Ling, Robert Hoppe, Thomas Hertz, and Shicong Xu. 2022. Farm Labor, Human Capital, and Agricultural Productivity in the United States. ERS 302. https://www.ers.usda.gov/webdocs/publications/103267/err-302_summary.pdf?v=2162.6

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