A Profile of Agriculture

Selected Geographies:

Madison County, NY

United States

Comparison Geographies:

U.S.

Produced by
Headwaters Economics'
Economic Profile System (EPS)
https://headwaterseconomics.org/eps
December 5, 2022

Agriculture

Madison County, NY

About the Economic Profile System (EPS)

EPS is a free web tool created by Headwaters Economics to build customized socioeconomic reports of U.S. counties, states, and regions. Reports can be easily created to compare or aggregate different areas. EPS uses published statistics from federal data sources, including the U.S. Census Bureau, Bureau of Economic Analysis, and Bureau of Labor Statistics.

The Bureau of Land Management and Forest Service have made significant financial and intellectual contributions to the operation and content of EPS.

See https://headwaterseconomics.org/eps for more information about the capabilities of EPS. For technical questions, contact Patty Hernandez Gude at eps@headwaterseconomics.org or telephone 406-599-7425.

HEADWATERS ECONOMICS

headwaterseconomics.org

Headwaters Economics is an independent, nonprofit research group. Our mission is to improve community development and land management decisions.

NATIONAL SYSTEM OF PUBLIC LANDS
U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

www.blm.gov

The Bureau of Land Management, an agency within the U.S. Department of Interior, administers 249.8 million acres of America's public lands, located primarily in western states. It is the mission of the Bureau of Land Management to sustain the health, diversity, and productivity of public lands for the use and enjoyment of present and future generations.

FOREST SERVICE
US
DEPARTMENT OF AGRICULTURE

www.fs.fed.us

The Forest Service, an agency of the U.S. Department of Agriculture, administers national forests and grasslands encompassing 193 million acres. The Forest Service's mission is to sustain the health, diversity, and productivity of the nation's forests and grasslands to meet the needs of present and future generations.

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Table of Contents

*The term "farm" in this report describes all forms of agricultural production, including livestock operations.

Note to Users:

This is one of 14 reports that can be created and downloaded from EPS. Topics include land use, demographics, specific industry sectors, the role of non-labor income, the wildland-urban interface, the role of amenities in economic development, and payments to county governments from federal lands. The EPS reports are downloadable as Excel or PDF documents. See https://headwaterseconomics.org/eps.

Agriculture

Madison County, NY

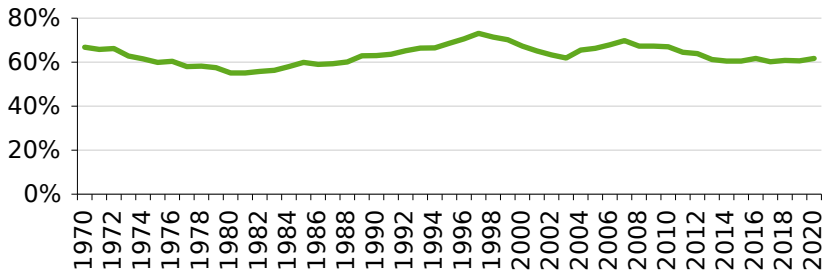
Farm Employment

	Madison County, NY	United States
Total Employment, 2020	28,450	190,776,800
Farm Employment	1,190	2,591,000
Farm Proprietors Employment	734	1,782,000
Non-Farm Employment	27,260	188,185,800
Percent of Total		
Farm Employment	4.2%	1.4%
Farm Proprietors Employment	2.6%	0.9%
Non-Farm Employment	95.8%	98.6%

All employment data on this page are reported by place of work.

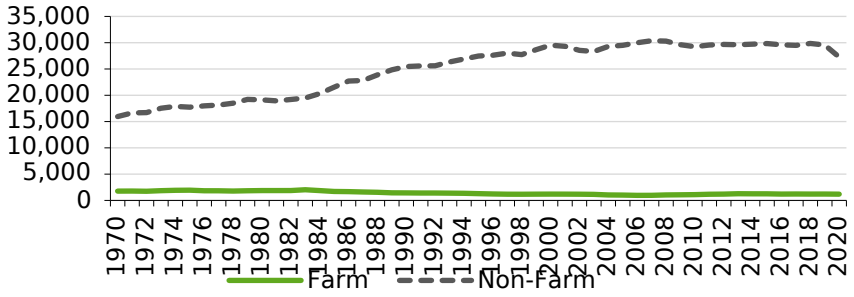
- In 1970, farm proprietors represented 66.8 percent of all farm employment. By 2020, farm proprietors represented 61.7 percent of all farm employment.

Farm Proprietors as a Percent of Farm Jobs, Madison County, NY



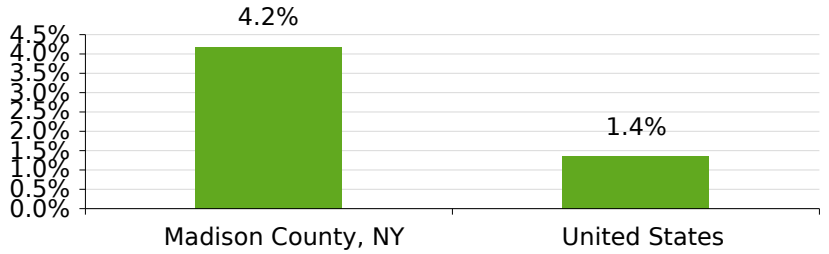
- From 1970 to 2020, farm employment shrank from 1,770 to 1,190 jobs, a 32.8 percent decrease.
- From 1970 to 2020, non-farm employment grew from 15,952 to 27,260 jobs, a 70.9 percent increase.

Farm and Non-Farm Jobs, Madison County, NY



- In 2020, Madison County, NY had the largest percent of total farm employment (4.18%), and United States had the smallest (1.36%).

Farm Jobs as a Percent of Total Employment, 2020



Data Sources: U.S. Department of Commerce. 2021. Bureau of Economic Analysis, Regional Economic Accounts, Washington, D.C.

Farm Employment

What do we measure on this page?

This page describes the number of farm jobs (full- and part-time), including proprietors, and farm jobs as a share of total employment for the selected location(s). It also shows long-term trends for farm proprietors as a share of all farm jobs, and for farm versus non-farm jobs.[1, 2]

Farm: Refers to all forms of agricultural production, including livestock operations.

Total Employment: Full- and part-time workers, wage and salary jobs (employees), and proprietors (the self-employed).

Farm Employment: The number of workers (full- and part-time) engaged in the production of agricultural commodities. It includes sole proprietors, partners, and hired laborers.

Farm Proprietors: Those who are self-employed (full- and part-time) as non-corporate farm operators. They can be sole proprietors or partners. For the purpose of defining "farm" proprietors, a farm is an establishment that produces or normally would be expected to produce at least $1,000 worth of farm products in a typical year.

Non-Farm Employment: Full- and part-time non-farm wage and salary employment and non-farm self-employment.

Data on this page are from the U.S. Bureau of Economic Analysis. These data portray long-term trends in employment and personal income of people employed in farming. This source also provides data on long-term trends in production expenses, different sources of crop and livestock income, and net profits, which are presented later in this report. The Census of Agriculture also provides employment information, but does so only every five years. The Census of Agriculture is used elsewhere in this report because of its detailed information on the size and number of farms by type.

Why is it important?

Farming and ranching can be a significant portion of the landscape and the local economy.

Nationwide trends indicate that, with gains in production efficiency, fewer people are working in farming. The land in farms is valuable for a number of reasons including the production of food and the preservation of rural communities, open space, scenic vistas, and wildlife habitat.

The growth or decline in the number of farm proprietors could indicate new agricultural entrepreneurs and/or the consolidation of agricultural enterprises.

Agriculture

Madison County, NY

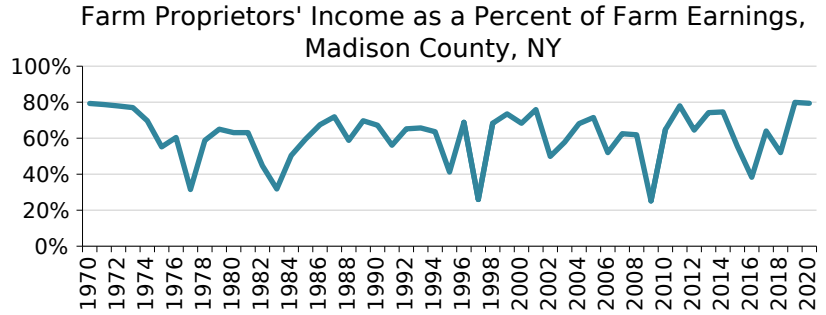
Farm Income*

	Madison County, NY	United States
Earnings by Place of Work ($1000), 2020	1,564,845	13,822,991,992
Farm Earnings	52,291	113,473,865
Farm Proprietors' Income	41,545	83,042,809
Non-Farm Earnings	1,512,554	13,709,518,127
Percent of Total		
Farm Earnings	3.3%	0.8%
Farm Proprietors' Income	2.7%	0.6%
Non-Farm Earnings	96.7%	99.2%

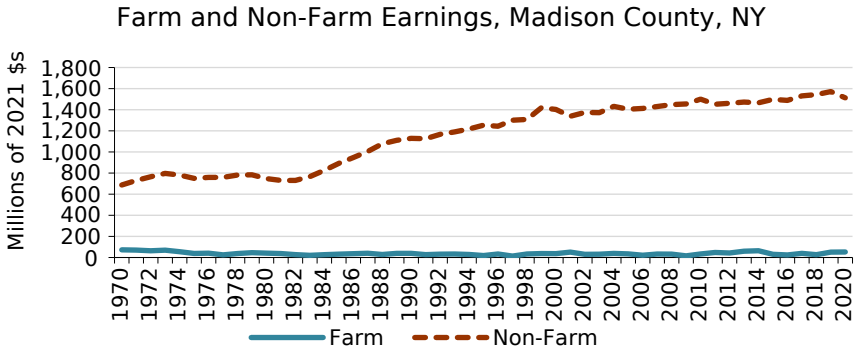
Farm business income shown here is different than farm personal income shown on the previous page.

* Thousands of 2021 $s

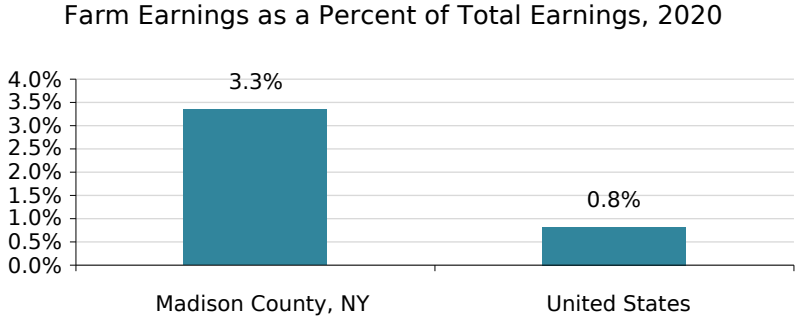
- In 1970, farm proprietors' income represented 79.3 percent of all farm earnings. By 2020, farm proprietors' income represented 79.4 percent of all farm earnings.



- From 1970 to 2020, farm earnings shrank from $72.7 million to $52.3 million, a 28.1 percent decrease.
- From 1970 to 2020, non-farm earnings grew from $687.0 million to $1,512.6 million, a 120.2 percent increase.



- In 2020, Madison County, NY had the largest percent of total earnings from farm earnings (3.34%), and United States had the smallest (0.82%).



Data Sources: U.S. Department of Commerce. 2021. Bureau of Economic Analysis, Regional Economic Accounts, Washington, D.C.

Farm Income

What do we measure on this page?

This page describes earnings (in real terms and by place of work) derived from farm employment, and farm earnings as a share of all labor earnings. It also shows long-term trends in farm proprietors' income as a share of all farm earnings, and farm versus non-farm earnings.[1, 3]

Farm: All forms of agricultural production, including livestock operations.

Earnings by Place of Work: The sum of wage and salary disbursements, supplements to wages and salaries, and proprietors' income (farm and non-farm). It does not include non-labor sources of income. Non-labor sources include Dividends, Interest and Rent, as well as Transfer Payments (e.g., Social Security, Medicare). For some farm owners, Rent may represent a significant source of income—for example, renting land to a neighboring farm, or rental income in the form of leasing subsurface rights, such as for oil and gas development. For more information on non-labor income, run an EPS Non-Labor report at https://headwaterseconomics.org/eps.

Farm Earnings: Net income from sole proprietors, partners, and hired laborers arising directly from the production of agricultural commodities, either livestock or crops. It includes net farm proprietors' income, wages and salaries, pay-in-kind, and supplements to wages and salaries of hired farm laborers. It specifically excludes income from non-family-farm corporations.

Farm Proprietors' Income: Income received by sole proprietorships and partnerships in the operation of farms. It excludes income that is received by corporate farms.

Non-Farm Earnings: The sum of wage and salary disbursements, supplements to wages and salaries, and proprietors' income for all industries, excluding farms.

The personal income information on this page does not include income received by corporate farms. The U.S. Department of Commerce provides farm "business" income data on corporations, in terms of production expenses, sources of income, and net profits. These data are presented in the next section of this report.

Why is it important?

The farm earnings trends shown on this page can be viewed alongside the employment trends on the previous page of this report. In some cases, farm earnings may decline (in absolute or relative terms) while farm employment stays the same or increases. In other cases, farm earnings may increase (in absolute or relative terms) while farm employment stays the same or declines. The same trends apply to farm proprietors and their income and point to declining or improving farm wages. For more information on earnings, see the Wages portion of this report.

Agriculture

Madison County, NY

Farm Business Income*

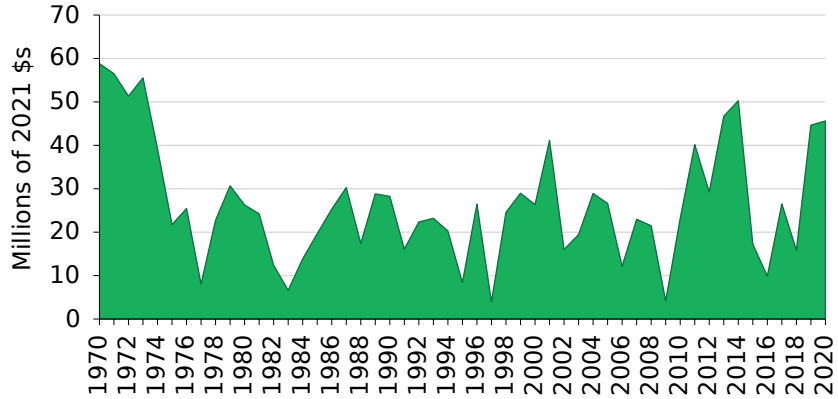
	Madison County, NY	United States
Total Cash Receipts & Other Income ($1000), 2020	151,577	490,861,383
Cash Receipts from Marketing	123,385	407,831,906
Livestock & Products	93,069	193,944,046
Crops	30,316	213,887,861
Other Income	28,193	83,029,477
Government Payments	14,840	47,421,030
Imputed Rent & Misc. Income	13,352	35,608,447
Total Production Expenses	102,307	378,768,150
Net Income: Receipts - Expenses	49,271	112,093,233
Value of Inventory Change	-3,667	-6,242,762
Total Net Income Including Corp. Farms	45,604	105,850,471
Ratio: Total Cash Receipts & Other Income/Total Production Expenses	1.48	1.30

Farm business income shown here is different than farm personal income shown on the previous page.

* Thousands of 2021 $s

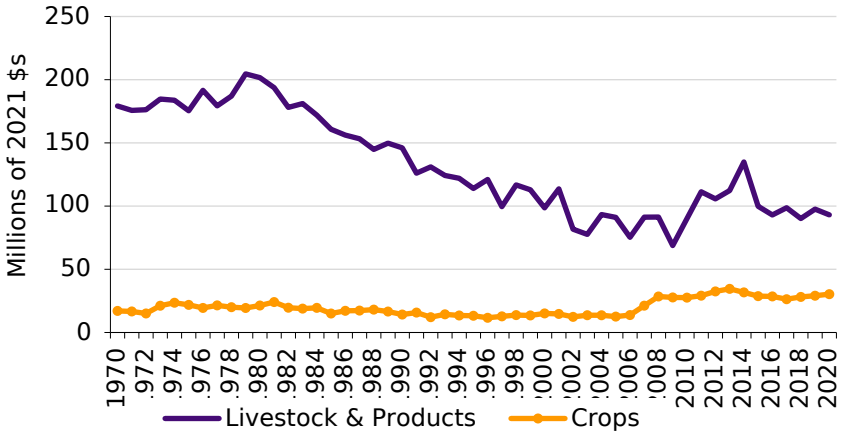
Total Net Income Including Corporate Farms, Madison County, NY

- From 1970 to 2020, net income including corporate farms shrank from $58.8 million to $45.6 million, a 22.5 percent decrease.



Cash Receipts from Marketings, Madison County, NY

- From 1970 to 2020, cash receipts from livestock and products shrank from $179.2 million to $93.1 million, a 48.1 percent decrease.
- From 1970 to 2020, cash receipts from crops grew from $17.1 million to $30.3 million, a 77.6 percent increase.



Data Sources: U.S. Department of Commerce. 2021. Bureau of Economic Analysis, Regional Economic Accounts, Washington, D.C.

Farm Business Income

What do we measure on this page?

This page describes components of farm business income and expenses (in real terms), and shows a ratio of gross income to production expenses as a measure of profitability. It also shows trends in net farm business income and cash receipts.[1] The farm data on this page are for all forms of agricultural production, including livestock operations. The farm business income reported on this page represents business revenues minus expenses and operating costs. This is a different form of income than farm labor earnings, which are the wages and salaries of farm employees.

Total Cash Receipts & Other Income: The gross cash receipts of all farms. It consists of: the cash receipts from farm marketing of crops and livestock; the cash receipts from other farm-related activities, including recreational services, sales of forest products, and custom-feeding services performed by farm operators; the payments to farmers under several federal government farm subsidy programs; the imputed value of home consumption, which is the value of the farm products produced and consumed on farms; and the imputed gross rental value of farm dwellings.

Total Production Expenses: Expenditures incurred by farm operators in the production of agricultural commodities, including livestock and crops. The major categories of production expenses are intermediate product expenses, which provide inputs to the production process (feed, livestock and poultry, seed, fertilizer, etc.), labor expenses (cash wages, employer contributions to Social Security, perquisites, and contract labor expenses), and other expenses (interest, net rent paid to non-operator landlords, capital consumption, property taxes, etc.).

Value of Inventory Change: The estimated value of net change in the farm inventories of livestock and crops that are held for sale during a given calendar year. This estimate is added to the estimate of realized net income so that the estimate of farm proprietors' income for a given year will include only the farm income from production during that year, or from "current" production. This estimate is added to Realized Net Income to calculate Total Net Income Including Corporate Farms.

Total Net Income Including Corporate Farms: The net income received by the sole proprietorships, partnerships, and corporations that operate farms. It is Realized Net Income plus the Value of Inventory Change.

Ratio (Total Cash Receipts & Other Income divided by Total Production Expenses): This is not an official Bureau of Economic Analysis calculation, but is another measure of farm business profitability.

The datasource for this page (U.S. Dept. of Commerce) was selected due of the high level of detail and long-term trends.[4]

Why is it important?

These data help answer important questions concerning the long-term health of the farm economy. In some places, farm business profits have been highly volatile and rising expenses and/or declining cash receipts have narrowed profitability. In other places, despite the volatility present in commodities markets, farming remains highly profitable.

In the early 1970s a period of high profitability in the agricultural sector was followed by a period of rapid decline—partly due to global economically and politically induced market volatility during that time. For example, the 1973 oil crisis, coupled with the 1973–1974 stock market crash, led to a major recession. The U.S. grain embargo against the Soviet Union in 1980 also negatively impacted farm profits. Since the mid-1980s, farm profits have generally increased.

Trends in livestock and crop production also closely follow commodity prices, which are available from the U.S. Department of Commerce.[5] Additional insights on agriculture are available from the Economic Research Service of the U.S. Department of Agriculture, including data, charts, and maps showing trends.[6]

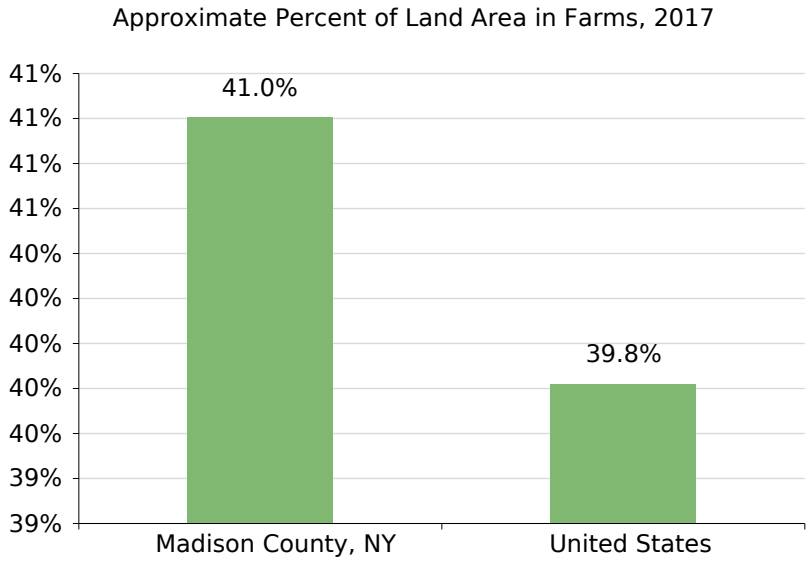
Agriculture

Madison County, NY

Number and Size of Farms

	Madison County, NY	United States
Number of Farms, 2017	691	2,042,220
Land in Farms (Acres), 2017	171,865	900,217,576
Average Farm Size (Acres)	249	441
Approximate Land Area (Acres)	419,114	2,260,681,965
Approximate Percent of Land Area in Farms	41.0%	39.8%

- In 2017, Madison County, NY had the largest percent of land area in farms (41.0067427955163%), and United States had the smallest (39.8206200578948%).



Data Sources: U.S. Department of Agriculture. 2019. National Agricultural Statistics Service, Census of Agriculture, Washington, D.C.

Number and Size of Farms

What do we measure on this page?

This page describes the number of farms, acres in farms, average farm size, total acres, and percent of total acres in farms.

Farm: All forms of agricultural production, including livestock operations. These data exclude leased public land from total land in farms.

Information on this page comes from the U.S. Department of Agriculture's Census of Agriculture[7], which is conducted every five years. The advantage of the Census of Agriculture is that it provides a high level of detail that makes it possible to see the role that farms play in the local economy and landscape, and to compare differences between locations. The disadvantages of this data source are that, like all forms of census, the accuracy of the data depends on the survey methods and the quality of the responses. Also, with this data source it is not possible to display continuous long-term trends.

Why is it important?

Even when agriculture is a small component of the economy, the industry can represent a large portion of the land base.

In many areas private agricultural lands are being converted to other uses, including residential development. The conversion of farm and ranch land is important for a number of reasons including the loss of food production and open space, the decline of rural communities, the change in demand on water resources, the spread of development in wildfire-prone areas, the loss of access to lands for recreation and hunting, and the loss of wildlife habitat.

To see how land is being converted to residential development, create an EPS Land Use report at https://headwaterseconomics.org/eps.

Farms and ranches continue to be important even as they increasingly operate alongside a larger, non-agricultural economy.[8] They contribute to local economic diversity, the scenery they provide can be part of the mix of amenities that attract and retain people and businesses across a range of industries, and they contribute an important part of local culture and community vitality.

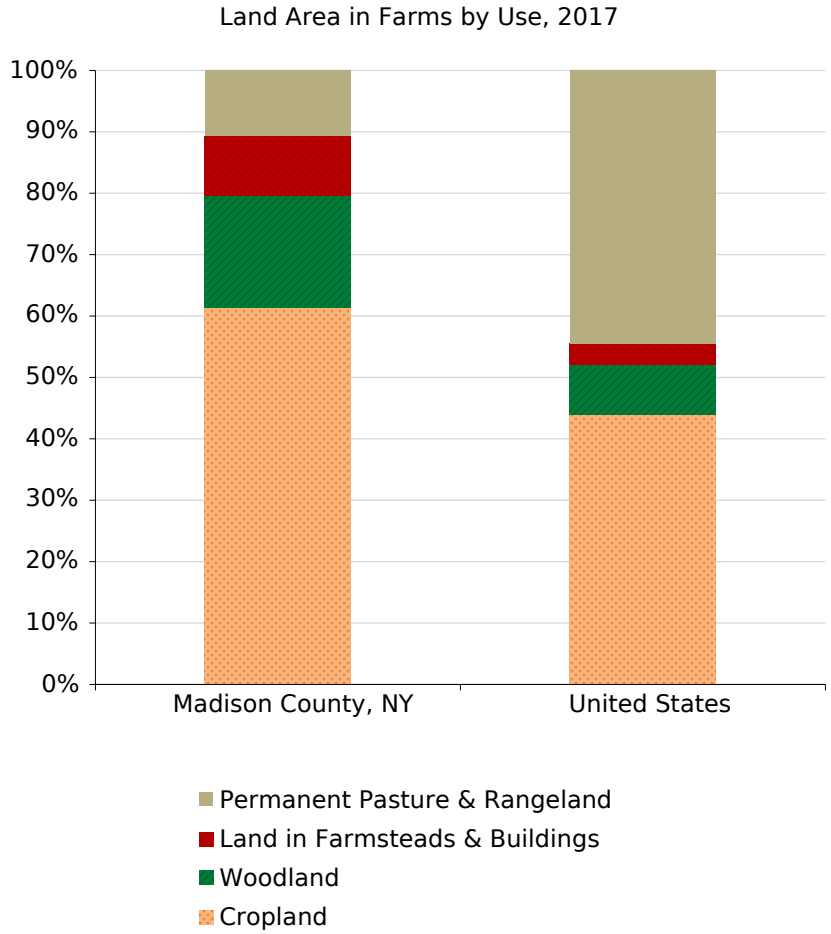
Agriculture

Madison County, NY

Acres of Farm Land

	Madison County, NY	United States
Land in Farms (Acres), 2017	171,865	900,217,576
Cropland	105,455	396,433,817
Woodland	31,276	73,092,054
Land in Farmsteads & Buildings	16,702	29,920,527
Permanent Pasture & Rangeland	18,432	400,771,178
Percent of Total		
Cropland	61.4%	44.0%
Woodland	18.2%	8.1%
Land in Farmsteads & Buildings	9.7%	3.3%
Permanent Pasture & Rangeland	10.7%	44.5%

- In 2017, Madison County, NY had the largest percent of land area in cropland (61.4%), and United States had the smallest (44%).
- In 2017, Madison County, NY had the largest percent of land area in woodland (18.2%), and United States had the smallest (8.1%).
- In 2017, Madison County, NY had the largest percent of land area in farmsteads and buildings (9.7%), and United States had the smallest (3.3%).
- In 2017, United States had the largest percent of land area in permanent pasture and rangeland (44.5%), and Madison County, NY had the smallest (10.7%).



Data Sources: U.S. Department of Agriculture. 2019. National Agricultural Statistics Service, Census of Agriculture, Washington, D.C.

Agriculture

Madison County, NY

Acres of Farm Land

What do we measure on this page?

This page describes how much farm land (in acres) is used for different production purposes.[9] The data were obtained from the U.S. Department of Agriculture's Census of Agriculture, which is conducted every five years.

The four categories of farm land use are cropland, woodland, farmsteads and buildings, and permanent pastureland.

Farm: All forms of agricultural production, including livestock operations. These data exclude leased public land from total land in farms.

Cropland: Includes harvested cropland, cropland used only for pasture and grazing, and "other cropland" (i.e., idled cropland or cropland used for cover crops or soil improvement).

Woodland: Includes natural or planted woodlots or timber tracts, for wood products and woodland pasture.

Farmsteads and Buildings: Includes livestock facilities, ponds, roads (private access roads and driveways but not public roads), and wasteland (e.g., ditches).

Permanent Pastureland and Rangeland: Includes permanent pasture and rangeland, other than cropland and woodland, and encompasses grazable land that does not qualify as woodland pasture or cropland pasture.

Why is it important?

Even when agriculture is a small component of the economy in terms of jobs, the industry can represent a large portion of the land base.

Not all agricultural land is used in the same manner. How farm and ranch lands are used can have important economic, environmental, and policy implications. For example, cropland may require water from surrounding lands; woodland can provide important habitat and store water; and pasturelands may be associated with public lands grazing and can provide open vistas that are important for attracting tourists and new migrants. Some lands may be less valuable (e.g., pastureland) and therefore more vulnerable to conversion for urban and suburban uses than other lands (e.g., cropland).

Farms and ranches continue to be important even as they increasingly operate alongside a larger, non-agricultural economy.[8] They contribute to local economic diversity, the scenery they provide can be part of the mix of amenities that attract and retain people and businesses across a range of industries, and they contribute an important part of local culture and community vitality.

Agriculture

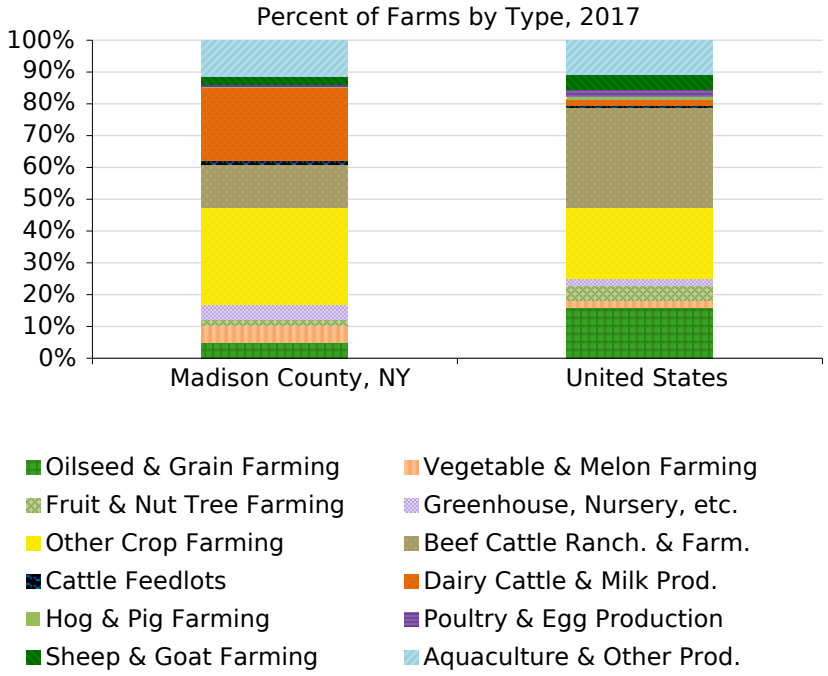
Madison County, NY

Types of Farms

	Madison County, NY	United States
All Farms, 2017	691	2,042,220
Oilseed & Grain Farming	34	325,033
Vegetable & Melon Farming	38	45,165
Fruit & Nut Tree Farming	13	95,441
Greenhouse, Nursery, etc.	32	45,477
Other Crop Farming	211	455,974
Beef Cattle Ranch. & Farm.	93	641,496
Cattle Feedlots	9	13,379
Dairy Cattle & Milk Prod.	160	37,750
Hog & Pig Farming	2	23,048
Poultry & Egg Production	3	44,260
Sheep & Goat Farming	18	92,974
Animal Aquaculture & Other Animal Prod.	78	222,223
Percent of Total		
Oilseed & Grain Farming	4.9%	15.9%
Vegetable & Melon Farming	5.5%	2.2%
Fruit & Nut Tree Farming	1.9%	4.7%
Greenhouse, Nursery, etc.	4.6%	2.2%
Other Crop Farming	30.5%	22.3%
Beef Cattle Ranch. & Farm.	13.5%	31.4%
Cattle Feedlots	1.3%	0.7%
Dairy Cattle & Milk Prod.	23.2%	1.8%
Hog & Pig Farming	0.3%	1.1%
Poultry & Egg Production	0.4%	2.2%
Sheep & Goat Farming	2.6%	4.6%
Aquaculture & Other Prod.	11.3%	10.9%

- In 2017, United States had the largest percent of oilseed and grain farming (15.9%), and Madison County, NY had the smallest (4.9%).

- In 2017, United States had the largest percent of beef cattle ranching and farming (31.4%), and Madison County, NY had the smallest (13.5%).



Data Sources: U.S. Department of Agriculture. 2019. National Agricultural Statistics Service, Census of Agriculture, Washington, D.C.

Types of Farms

What do we measure on this page?

This page describes the number and percent of all farms according to what they produce.

Farm: All forms of agricultural production, including livestock operations. These data exclude leased public land from total land in farms.

Other Crop Farming (NAICS code 1119): Establishments primarily engaged in (1) growing crops (except oilseed and/or grain; vegetable and/or melon; fruit and tree nut; and greenhouse, nursery, and/or floriculture products). These establishments grow crops, such as tobacco, cotton, sugarcane, hay, sugar beets, peanuts, agave, herbs and spices, and hay and grass seeds; or (2) growing a combination of crops (except a combination of oilseed(s) and grain(s) and a combination of fruit(s) and tree nut(s)).

Beef Cattle Ranching & Farming (NAICS code 112111): Establishments primarily engaged in raising cattle (including cattle for dairy herd replacements).

Aquaculture & Other Animal Production (NAICS codes 11251 & 1129): Aquaculture establishments are primarily engaged in the farm-raising and production of aquatic animals or plants in controlled or selected aquatic environments. Establishments classified as Other Animal Production are primarily engaged in raising animals and insects (except cattle, hogs and pigs, poultry, sheep and goats, and aquaculture) for sale or product production. These establishments are primarily engaged in one of the following: bees, horses and other equine, rabbits and other fur-bearing animals, etc., and producing products such as honey and other bee products. Establishments primarily engaged in raising a combination of animals with no one animal or family of animals accounting for one-half of the establishment's agricultural production are included in this industry group.

The Census of Agriculture data on farms by type are only reported by the number of farms. They are not reported by employment, income, or acreage.[10]

Why is it important?

Not all agricultural land is used in the same manner. Different types of farms have different economic potential and relationships with other natural resources including water and wildlife. Some lands may be less valuable (e.g., pastureland) and therefore more vulnerable to conversion for urban and suburban uses than other lands (e.g., cropland).

To see how land is being converted to residential development, create an EPS Land Use report at https://headwaterseconomics.org/eps.

Agriculture

Madison County, NY

Wages and Employment

Wages*, 2021	Madison County, NY	United States
Total Private & Public, (2021 $s)	$48,234	$67,610
Total Private	$46,535	$68,029
Farm	$42,212	$41,532
Crop Production	$48,401	$40,116
Animal Production	$35,220	$44,463
Non-Farm	$46,659	$68,205

Percent of Employment*, 2021	Madison County, NY	United States
Total Private	79.6%	85.4%
Farm	2.2%	0.6%
Crop Production	1.2%	0.4%
Animal Production	1.0%	0.2%
Non-Farm	77.4%	84.8%

* These tables show data from the Bureau of Labor Statistics, which does not report data for proprietors or the value of benefits and uses slightly different industry categories than those shown on previous pages of this report.

Data Sources: U.S. Department of Labor. 2022. Bureau of Labor Statistics, Quarterly Census of Employment and Wages, Washington, D.C.

Wages and Employment

What do we measure on this page?

This page describes wages (in real terms) from farm employment compared to wages from non-farm employment. It also describes the percent of jobs in each category. These are shown together to illustrate the relative wage levels in farming (including sub-sectors) and how many people are employed in each sub-sector.

The primary purpose of this page is to compare the average annual wages between sectors, and to investigate the relative number of people employed in high- and low-wage sectors.

Farm: All forms of agricultural production, including livestock operations.[11]

The wage and employment data on this page are from the Bureau of Labor Statistics, which does not report data for proprietors or the value of benefits and uses slightly different industry categories than those shown on the initial pages of this report.[12, 13]

Some data are withheld by the federal government to avoid the disclosure of potentially confidential information. Estimates for data that were not disclosed are indicated with tildes (~).[15]

Why is it important?

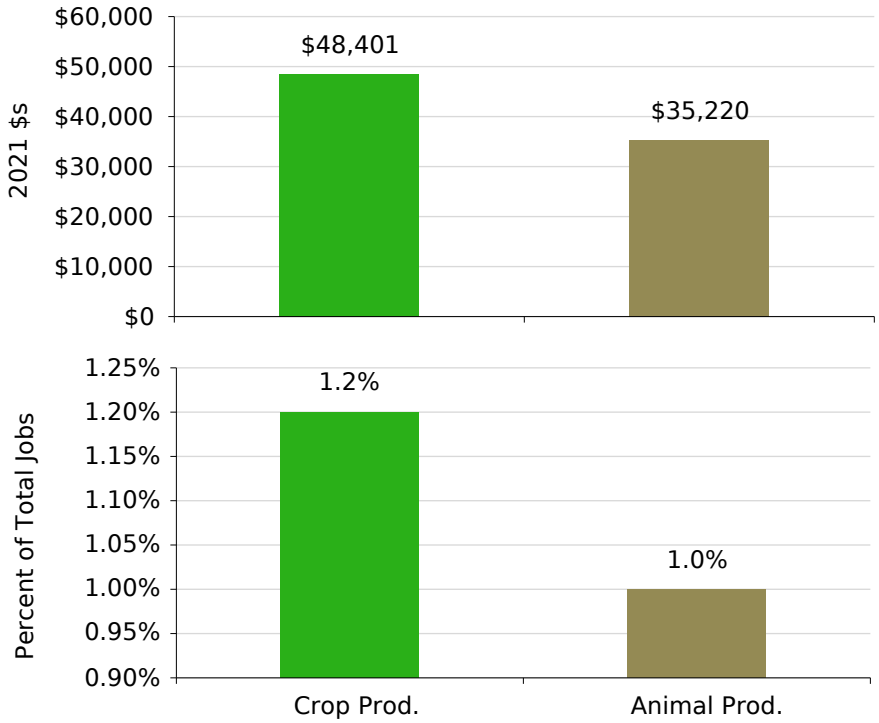
Farm employment often pays below-average wage rates, but this can vary by farm sub-sector and by location.[14] It is important to consider how farm industry wages compare to wages in other sectors, whether crop and animal production pay different wages, and whether there are significant wage differences between locations.

For more information on employment and wages in non-farm industries, create an EPS Socioeconomic Measures report at https://headwaterseconomics.org/eps.

Wages and Employment (cont.)

- In 2021, average annual wages in crop production were $48,401 and average annual wages in animal production were $35,220.

Avg. Annual Wages & Percent of Total Employment in Crop & Animal Production, Madison County, NY, 2021

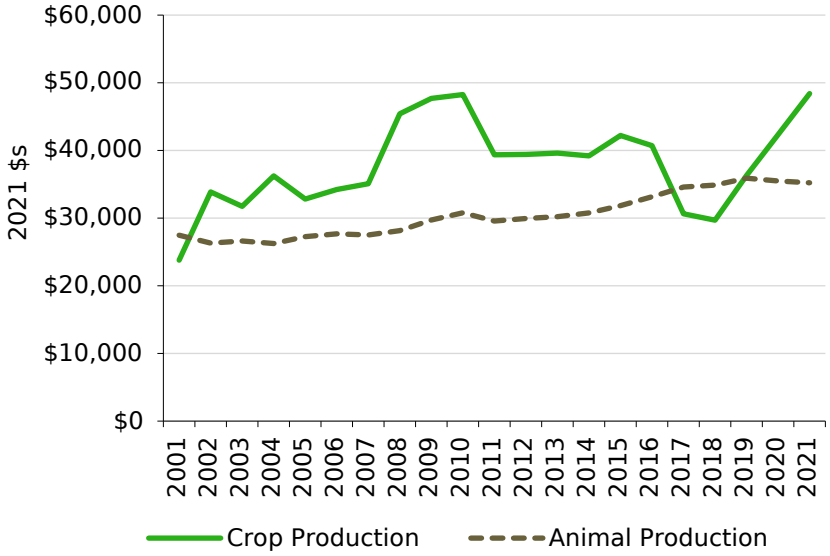


- In 2021, crop production jobs were 1.2 percent of total employment and animal production jobs were 1 percent of total employment.

- From 2001 to 2021, average annual wages in crop production grew from $23,786 to $48,401, a 103.5 percent increase.

- From 2001 to 2021, average annual wages in animal production grew from $27,472 to $35,220, a 28.2 percent increase.

Avg. Annual Wages in Crop & Animal Production, Madison County, NY



Data Sources: U.S. Department of Labor. 2022. Bureau of Labor Statistics, Quarterly Census of Employment and Wages, Washington, D.C.

Wages and Employment (cont.)

What do we measure on this page?

This page describes average wages (in real terms) and employment levels in crop and animal production. It also shows average wage trends (in real terms) for these farm sectors.

The chart *Avg. Annual Wages & Percent of Total Employment in Crop & Animal Production* is useful for describing how many people are working in relatively high- and low-wage farm sectors. The chart *Avg. Annual Wages in Crop & Animal Production* is useful for comparing wage trends by farm sector.

Farm: All forms of agricultural production, including livestock operations. The components of Farm on this page (NAICS 111 crop production and NAICS 112 animal production) do not include agricultural services (NAICS 115 support activities for agriculture and forestry) because this category mixes farm and non-farm services.

The wage and employment data on this page are from the Bureau of Labor Statistics, which does not report data for proprietors or the value of benefits and uses slightly different industry categories than those shown on the initial pages of this report.[12]

The chart *Avg. Annual Wages in Crop & Animal Production* starts in 2001 because that is the year the Quarterly Census of Employment and Wages shifted to using the North American Industrial Classification System (NAICS). Some data are withheld by the federal government to avoid the disclosure of potentially confidential information. Headwaters Economics provides estimates for these data gaps.[15]

Why is it important?

Not all components of the farm industry pay the same wages or employ the same number of people. It may be important to consider how farm industry wages compare to wages in other sectors, whether crop and animal production pay different wages, and whether there are significant wage differences between locations.

A significant increase in farm jobs that pay below the average for all industries will decrease overall average earnings per job. On the other hand, a significant increase in farm jobs that pay above the average for all industries will increase overall average earnings per job. A modest change in farm employment, especially when this industry is a small share of total employment, will not likely affect average earnings in a local area.

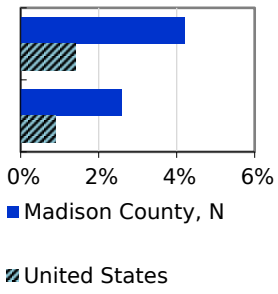
The Bureau of Labor Statistics' Quarterly Census of Employment and Wages data for industries is available at https://www.bls.gov/cew/; the Bureau of Labor Statistics' Occupational Outlook Handbook, which has detailed industry earnings and wages data at the national level, is available at https://www.bls.gov/ooh/; the U.S. Census Bureau's County Business Patterns database, which reports industry-level employment and payroll and can be used to estimate earnings, is available at https://www.census.gov/programs-surveys/cbp.html.

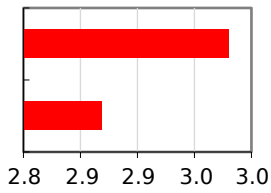
Agriculture

Madison County, NY

Comparisons

	Employment Share		Location Quotient	Employment Share	Location Quotient
	Madison County, NY	United States		Madison County, NY vs. United States	Madison County, NY vs. United States
Farm Employment, 2020	4.2%	1.4%	3.0		
Farm Proprietors Employment, 2020	2.6%	0.9%	2.9		





- In 2020, farm employment, 2020 had the highest location quotient score (3) and farm proprietors employment, 2020 had the lowest (2.9).

Agriculture

Madison County, NY

Comparisons

What do we measure on this page?

This page describes whether the region is specialized in farm employment.[1, 16] The chart illustrates the difference between the selected location(s) and the selected comparison area. (If no custom comparison area was selected, EPS defaults to comparing against the U.S.)

Location quotient[17]: A ratio that compares an industry's share of total employment in a region to the comparison area. More precisely, it is the percent of local employment in a sector divided by the percent employment in the same sector in the comparison area. In other words, it is a ratio that measures specialization using the comparison area for comparison. A location quotient of more than 1.0 means the local area is more specialized in that sector relative to the comparison area. A location quotient of less than 1.0 means it is less specialized.[18]

Another way to think about location quotients is as a measure of whether a place produces enough goods or services from an industry to satisfy local demand for those goods or services. Results above or below the 1.0 standard indicate the degree to which a place may import or export a good or service. Although there is no precise cutoff, location quotients above 2.0 indicate a strong industry concentration (and that an area is likely exporting goods or services) and those less than 0.5 indicate a weak industry concentration (and that an area is likely importing goods or services).

Farm: All forms of agricultural production, including livestock operations.

Why is it important?

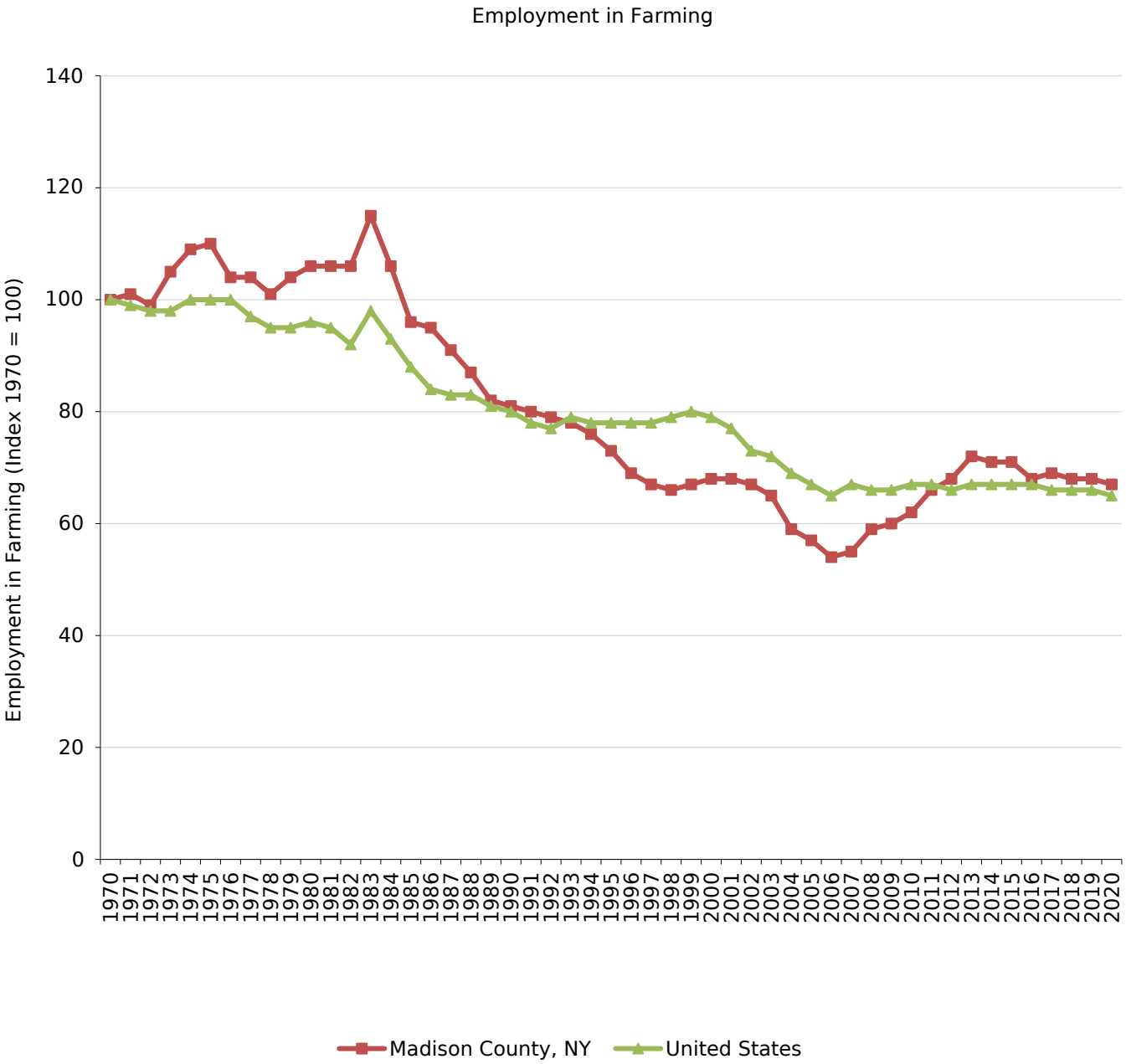
Agricultural employment in most parts of the U.S. has been declining, largely as a result of mechanization and other efficiencies of scale, for most of the last century. Nevertheless, it is still an important source of jobs in many places. This page shows a measure of importance (employment share) relative to the U.S.

A few caveats: (1) A large location quotient for a particular sector does not necessarily mean that sector is a significant contributor to the economy. (2) LQs greater than 1.0 only suggest potential export capacity when compared to the U.S. and do not take into account local demand. Local demand may be greater than a national average, and therefore all goods and services may be consumed locally (i.e., not exported). (3) LQs can change from year to year. (4) LQs can vary when one uses income or wage data rather than employment.

Agriculture

Madison County, NY

Comparisons Over Time



- From 1970 to 2020, Madison County, NY had the fastest rate of change in farm employment and Madison County, NY had the slowest.

Data Sources: U.S. Department of Commerce. 2021. Bureau of Economic Analysis, Regional Economic Accounts, Washington, D.C.

Comparisons Over Time

What do we measure on this page?

This page describes the change in farm employment for all selected locations and the comparison area. The information is indexed (1970=100) so that data from locations with different-sized economies can be compared and to make it easier to understand the relative rate of growth or decline of farm employment over time.[1, 3]

Index: Indexed numbers are compared with a base value. In the line chart, employment in 1970 is the base value and is set to 100. The employment values for subsequent years are expressed as 100 times the ratio to the base value. The indexing used in the line chart enables easier comparisons between geographies over time. An indexed chart is used primarily to show relative rates of growth.

Farm: All forms of agricultural production, including livestock operations.

Why is it important?

Agricultural employment in most parts of the U.S. has been declining, largely as a result of mechanization and other efficiencies of scale, for most of the last century. However, this is not the case everywhere. In addition, not all locations have lost or attracted farm employment at the same rate.[19] An index makes it clear where the rate of farm decline or growth has been the fastest. Lines below 100 indicate absolute decline while those above 100 show absolute growth. The steeper the curve, the faster the rate of change.

It may be helpful to look for large year-to-year rises or dips in the lines to identify rapid employment changes. If the reasons behind these fluctuations are not evident, it may be helpful to talk with regional experts or local citizens to learn more about what caused abrupt changes.

Agriculture

Madison County, NY

Data Sources & Methods

This EPS Summary report uses national statistics from public government sources. All data used in EPS can be readily verified with the original sources:

- **Quarterly Census of Employment and Wages**
  Bureau of Labor Statistics, U.S. Department of Labor
  https://www.bls.gov/cew
  Contacts
  https://www.bls.gov/bls/contact.htm

- **BEA Regional Economic Accounts**
  Bureau of Economic Analysis, U.S. Department of Commerce
  https://www.bea.gov/regional/
  Contacts
  https://www.bea.gov/help/contact-us

- **Census of Agriculture**
  USDA National Agriculture Statistics Service
  http://www.agcensus.usda.gov
  Contacts
  https://www.agcensus.usda.gov/Contact_Us/

EPS core approaches
EPS is designed to focus on long-term trends across a range of important measures. Trend analysis provides a more comprehensive view of changes than spot data for select years. We encourage users to focus on major trends rather than absolute numbers. EPS displays detailed industry-level data to show changes in the composition of the economy over time and the mix of industries at points in time. EPS employs cross-sectional benchmarking – comparing smaller areas such as counties to larger regions, states, and the nation – to give a sense of relative performance. EPS allows users to aggregate data for multiple locations to allow for more sophisticated cross-sectional comparisons.

Adjusting dollar figures for inflation
Because a dollar in the past was worth more than a dollar today, data reported in current dollar terms should be adjusted for inflation. The U.S. Department of Commerce reports personal income figures in terms of current dollars. All income data in EPS are adjusted to real (or constant) dollars using the Consumer Price Index. Figures are adjusted to the latest date for which the annual Consumer Price Index is available.

Data gaps and estimation
Some data are withheld by the federal government to avoid the disclosure of potentially confidential information. Headwaters Economics uses supplemental data from the U.S. Department of Commerce to estimate these data gaps. These are indicated with tildes (~) in tables. Documentation explaining methods developed by Headwaters Economics for estimating disclosure gaps is available at https://headwaterseconomics.org/eps.

Endnotes

1 - The Economic Research Service of the U.S. Department of Agriculture provides a number of easy-to-use references on farm businesses, production, and employment: https://www.ers.usda.gov/Publications.

2 - Bureau of Economic Analysis data in this report describe only the employment and personal income of people working directly in agricultural operations and do not include the subcategory Forestry, Fishing, Related Activities, and Other (BEA line code 100). We do not include BEA line code 100 because it mixes farm-related categories (e.g., soil preparation) with non-farm-related categories (e.g., hunting). It is not possible to disaggregate BEA line code 100.

3 - For the Economic Research Service's outlook on farm commodities, see https://www.ers.usda.gov/topics/farm-economy/commodity-outlook.aspx.

4 - Detailed tables on farm income and expenses, such as how much is spent on hired farm labor, feed, fertilizer, and petroleum products, are available from the U.S. Department of Commerce at https://www.bea.gov/regional/.

5 - Long-term commodity prices can be found at the National Agricultural Statistics Service of the U.S. Department of Agriculture: https://www.nass.usda.gov/Charts_and_Maps/Agricultural_Prices/index.php.

6 - Economic Research Service, USDA: https://www.ers.usda.gov/.

7 - The Census of Agriculture can be viewed at https://www.agcensus.usda.gov/.

8 - The Economic Research Service of the U.S. Department of Agriculture provides a website on major land uses: https://www.ers.usda.gov/data-products/major-land-uses.aspx. To browse Economic Research Service publications by topic, see https://www.ers.usda.gov/topics.aspx.

9 - The Census of Agriculture can be viewed at https://www.agcensus.usda.gov/.

10 - A description of the form used in the 2012 Census of Agriculture, and definitions of terms, is available at https://agcensus.usda.gov/Publications/2012/Full_Report/Volume_1,_Chapter_1_US/usappxb.pdf.

11 - What we show as Farm in the tables on this page is the sum of the following NAICS codes: crop production (111) and animal production (112). It does not include NAICS code 115 (support activities for agriculture and forestry) because this category mixes farm and non-farm services.

12 - For an overview of how the Bureau of Labor Statistics treats employment, see https://www.bls.gov/bls/employment.htm. For an overview of how the Bureau of Labor Statistics treats pay and benefits, see https://www.bls.gov/bls/wages.htm.

Endnotes (cont.)

13 - Employment and wage estimates are also available from the Bureau of Labor Statistics for over 800 occupations. Looking at farming by occupation, rather than by sector or industry, is helpful since wages can vary dramatically across occupations. For more information on the most recent employment and wage estimates for Agriculture, Forestry, Fishing and Hunting (NAICS 11) by occupation, see https://www.bls.gov/oes/.

14- The Census of Agriculture website provides county-level farm data. See https://www.agcensus.usda.gov/.

15- Documentation explaining methods developed by Headwaters Economics for estimating disclosure gaps is available at https://headwaterseconomics.org/eps.

16- For a review of literature on economic diversity, see Sterling, Andrew. 1998. "On the Economics and Analysis of Diversity." Electronic Working Papers Series, University of Sussex, available at: sussex.ac.uk/Units/spru/publications/imprint/sewps/sewp28/sewp28.pdf; and Malizia EE and K Shanzai. 2006. "The Influence of Economic Diversity on Unemployment and Stability." Journal of Regional Science 33(2):221-235.

17- LQ = (ei/e) divided by (Ei/E)
Where: ei = Local employment in industry i; e = Total local employment; Ei = U.S. employment in industry i; E = Total U.S. employment.

18- A succinct definition of a location quotient is offered by Indiana Business Research Center at IU's Kelley School of Business. See http://www.incontext.indiana.edu/2006/march/1.asp.

19- The Bureau of Labor Statistics provides an overview and outlook for farm occupations: https://www.bls.gov/ooh/management/farmers-ranchers-and-other-agricultural-managers.htm.