

Introduction

In February 2024, the National Agricultural Statistics Service (NASS) released the 2022 Census of Agriculture. The Census of Agriculture provides agricultural data at the national, state, and county levels to show the value and importance of the agricultural industry. The data covered nearly two million farm operations in the U.S., 49,000 (3 percent) of which were located in Pennsylvania. This fact sheet analyzes key findings from the 2022 Census of Agriculture for Pennsylvania and compares them to trends at the national and county levels, as well as prior-year Censuses. For definitions used throughout the report and additional background information, see the Methods and Definitions section in the Appendix.

Key Findings

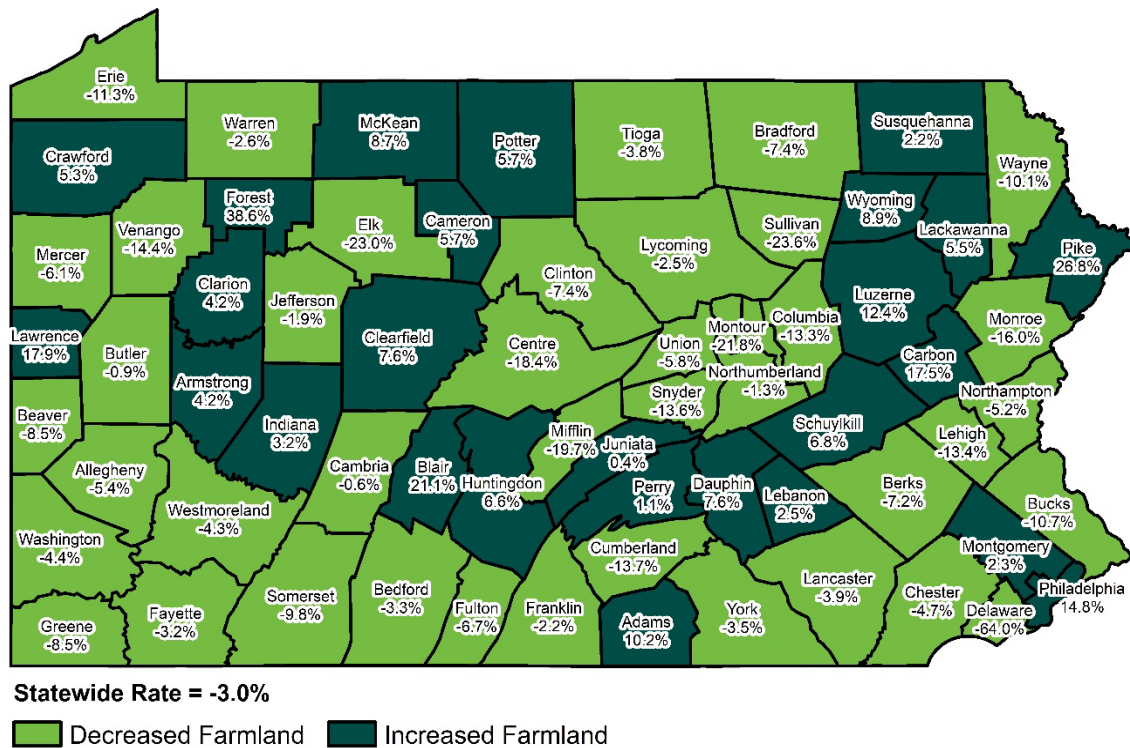
- Since 2017, the total acres of farmland and the number of farm operations have decreased by 3 percent and 8 percent, respectively. However, the average farm size increased by roughly 5 percent.
- The majority (62 percent) of Pennsylvania farm operations spanned less than 100 acres. These smaller operations were concentrated in the southeastern part of the Commonwealth.
- Farms that spanned less than 100 acres each recorded over \$100,000 in sales on average in 2022. These smaller farms comprised 31 percent of all agricultural sales in Pennsylvania, double the U.S. average (15 percent).
- Egg sales increased in 2022 from \$682 million to over \$1 billion, an increase of 61 percent, since the 2017 Census of Agriculture. This was due to inflation and an increase in the number of egg-producing operations.
- In 2022, there was a 31-percent decline in acres of Christmas trees harvested. This is the largest single-Census-year drop to date.
- Most farm producers are male, between the ages of 35 and 64, and white. Organic producers tend to be younger.
- The share of farm producers who are age 65 and older increased by four percentage points from 2017 to 2022, and the average age ticked up as a result (54.8 to 55.4).
- Fewer operations utilized unpaid family labor in 2022 than in 2017.
- Nearly three-quarters of producers have been working at their current operation for 10 years or more. Under 5 percent of producers have been at their current operation for less than three years.

Overview of Agriculture in Pennsylvania

In 2022, there were a little over 49,000 farm operations in Pennsylvania, spanning approximately seven million acres. The average Pennsylvania farm was about 144 acres

in size, which was notably smaller than the average U.S. farm size (463 acres). However, since 2017, the average farm size in the Commonwealth grew by approximately seven acres (5 percent), relatively in line with the U.S. (22 acres, 5 percent). Figure 1 is a map of counties where farmland increased or decreased from 2017 to 2022 and includes the percent change in the total farmland acres. Forty-one counties (61 percent) recorded declines in farmland, with Centre (27,600 acres, 18 percent), Cumberland (23,300 acres, 14 percent), and Bradford (22,500 acres, 7 percent) counties contributing the most to the overall statewide reduction.

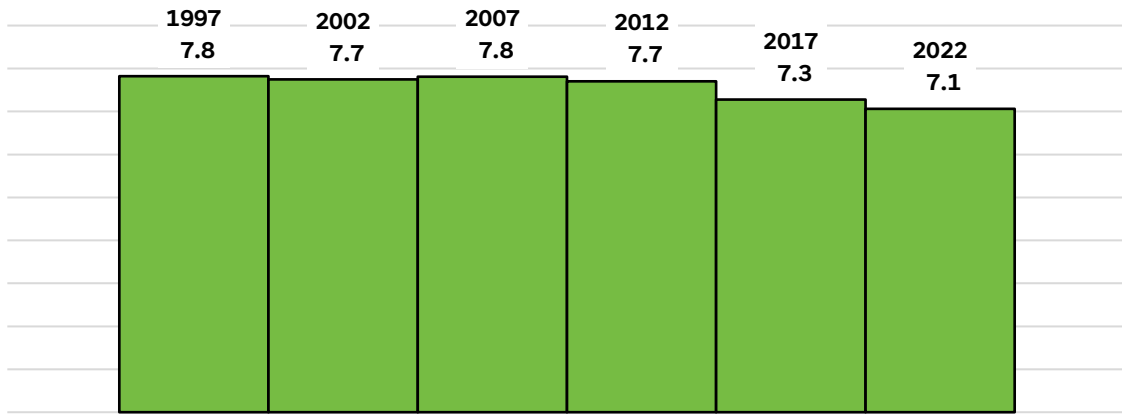
Figure 1: Percent Change in Acres of Farmland by County, 2017 to 2022



Source: U.S. Census of Agriculture, NASS.

Figure 2 displays the total acreage of farmland from 1997 to 2022. Prior to 2012, the amount of farmland remained relatively stable, only declining by 115,200 acres (1 percent) from 1997 to 2012. In 2017, farmland declined from the 2012 Census year by 425,800 acres (6 percent), and that trend appears to continue for 2022, albeit at a slightly slower pace (220,300 acres, 3 percent).

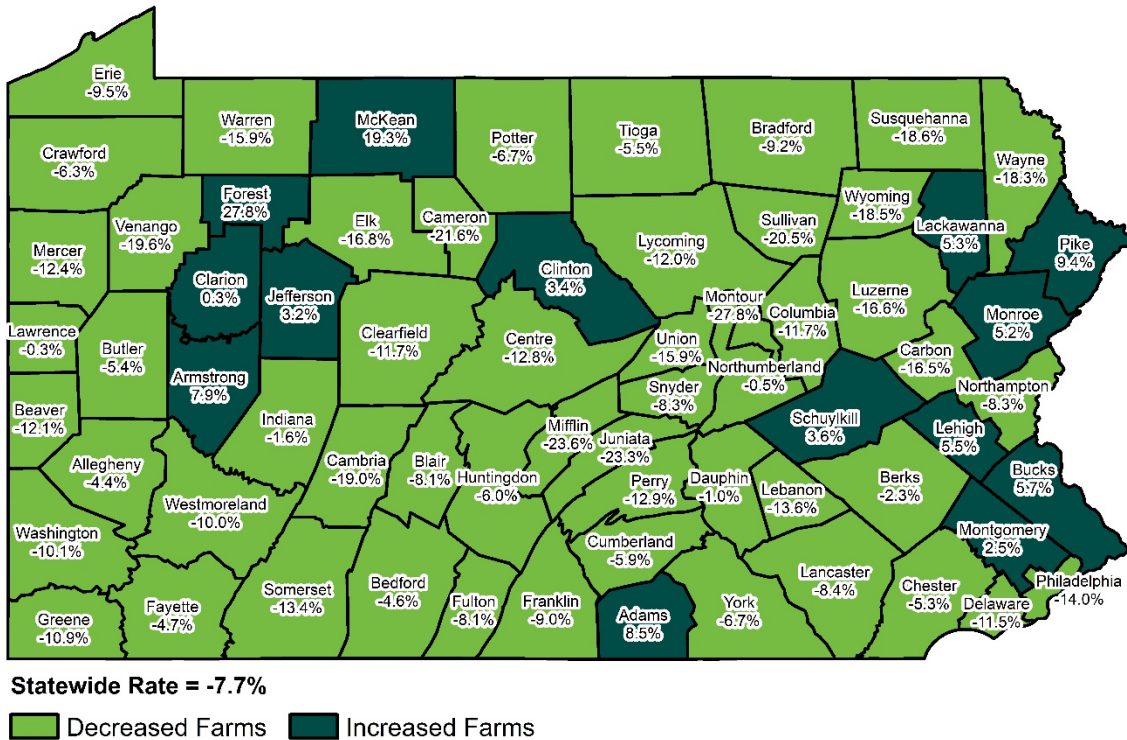
Figure 2: Total Acres of Pennsylvania Farmland (Millions of Acres), 1997 to 2022



Source: U.S. Census of Agriculture, NASS.

Like the acreage of farmland, the number of farm operations has also been in decline. Figure 3 presents a map of counties that gained or lost farm operations from 2017 to 2022, and it includes the percent change in the number of those operations. In total, Pennsylvania lost a little over 4,100 farm operations from 2017 to 2022. The main contributors were Lancaster (428 farms, 8 percent), Washington (177 farms, 10 percent), and Susquehanna (169 farms, 19 percent) counties. Notably, Montour County was the only county to lose over a quarter (99 farms, 28 percent) of the farms it had in 2017.

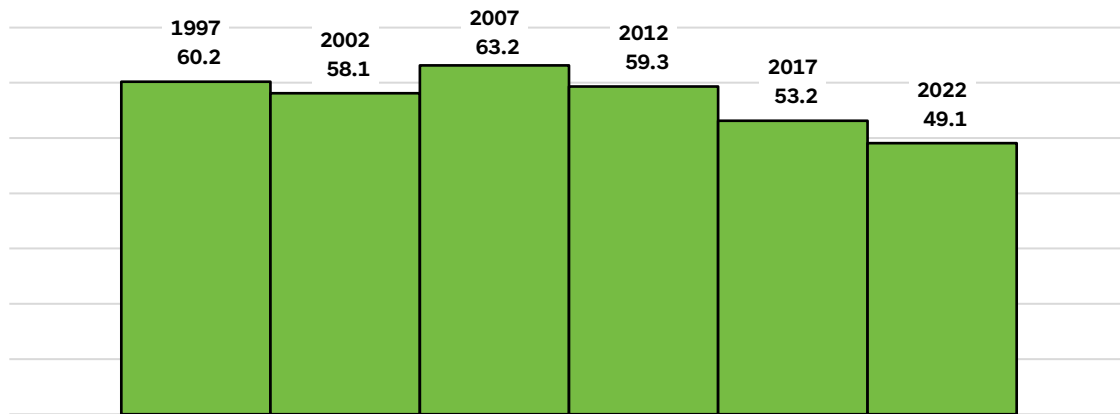
Figure 3: Percent Change in Number of Farms by County, 2017 to 2022



Source: U.S. Census of Agriculture, NASS.

Figure 4 displays the number of farms from 1997 to 2022. The most significant decline between Census years occurred from 2012 to 2017, when almost 6,200 farms were lost, a decline of over 10 percent. Since that period, the number of farms has continued to fall, and over the past 25 years, the number of farms has declined about 1 percent annually on average.

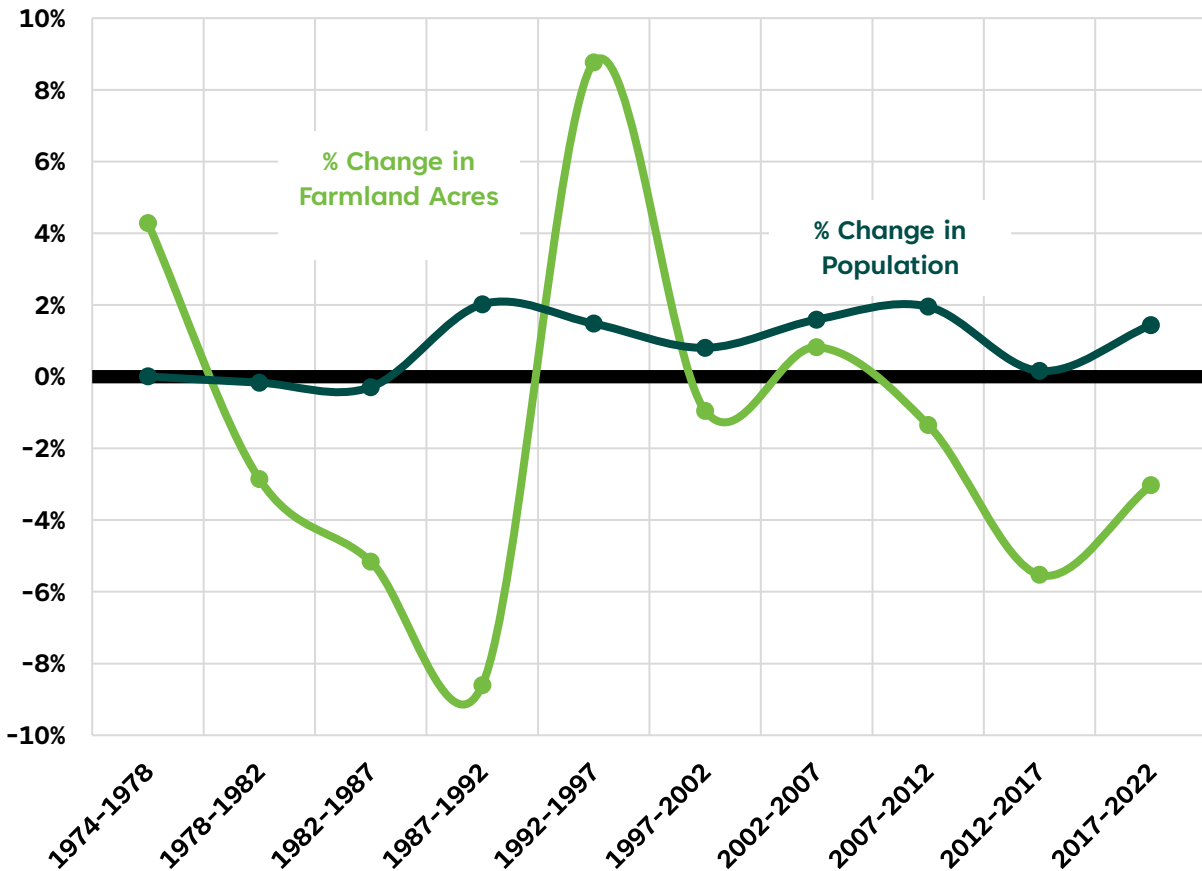
Figure 4: Number of Pennsylvania Farms (Thousands of Operations), 1997 to 2022



Source: U.S. Census of Agriculture, NASS.

While the statewide population has grown relatively slowly over time, farmland has undergone more significant changes. Figure 5 tracks the growth rates between Census years for population and acres of farmland in the Commonwealth. From 1974 to 2022, the population of Pennsylvania grew by 9 percent. However, over that same period, farmland declined by nearly 14 percent.

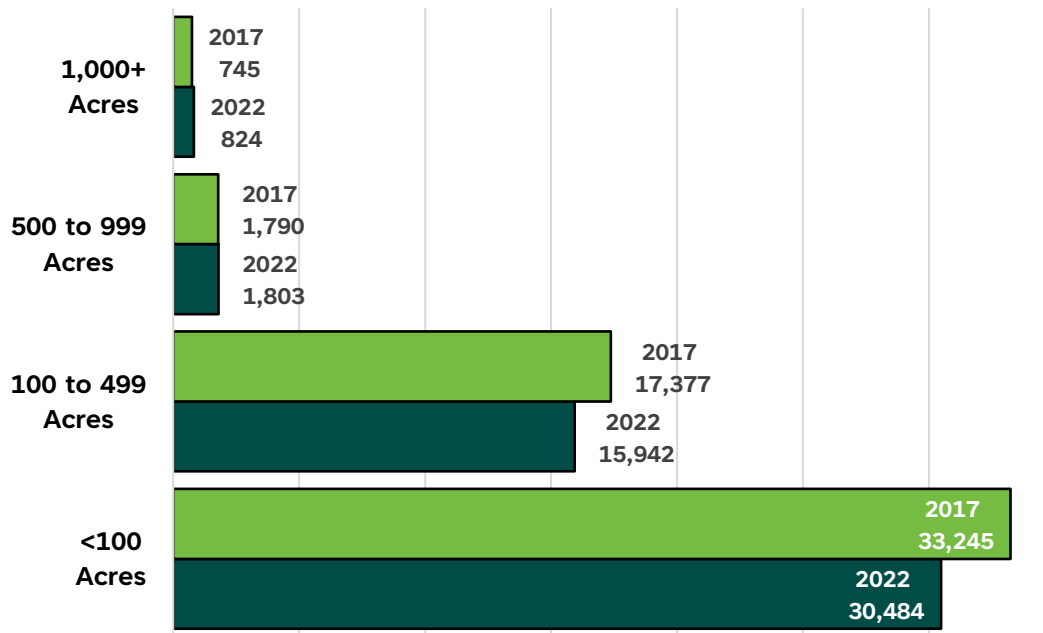
Figure 5: Percent Change Since Prior Census in Acres of Farmland and Population in Pennsylvania, 1974 to 2022



Source: U.S. Census of Agriculture, NASS.

Figure 6 displays the distribution of farms by their acreage and indicates the majority (62 percent) of Pennsylvania farm operations spanned less than 100 acres in 2022. However, those farms drove the overall decline in the number of total farm operations in the Commonwealth, with the number of farms that spanned greater than 500 acres increasing by a little over 90 operations from 2017 to 2022. For 2022, these larger farms comprised about 5 percent of all agricultural operations in Pennsylvania.

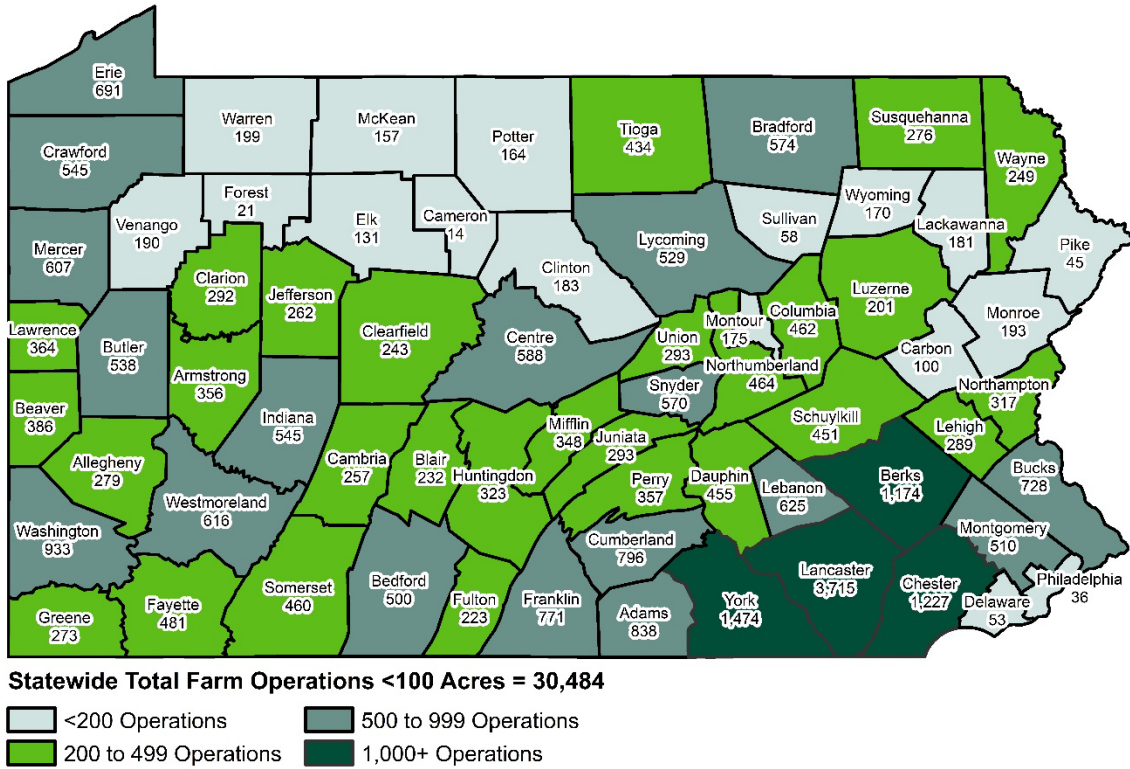
Figure 6: Number of Pennsylvania Farm Operations by Acreage, 2017 and 2022



Source: U.S. Census of Agriculture, NASS.

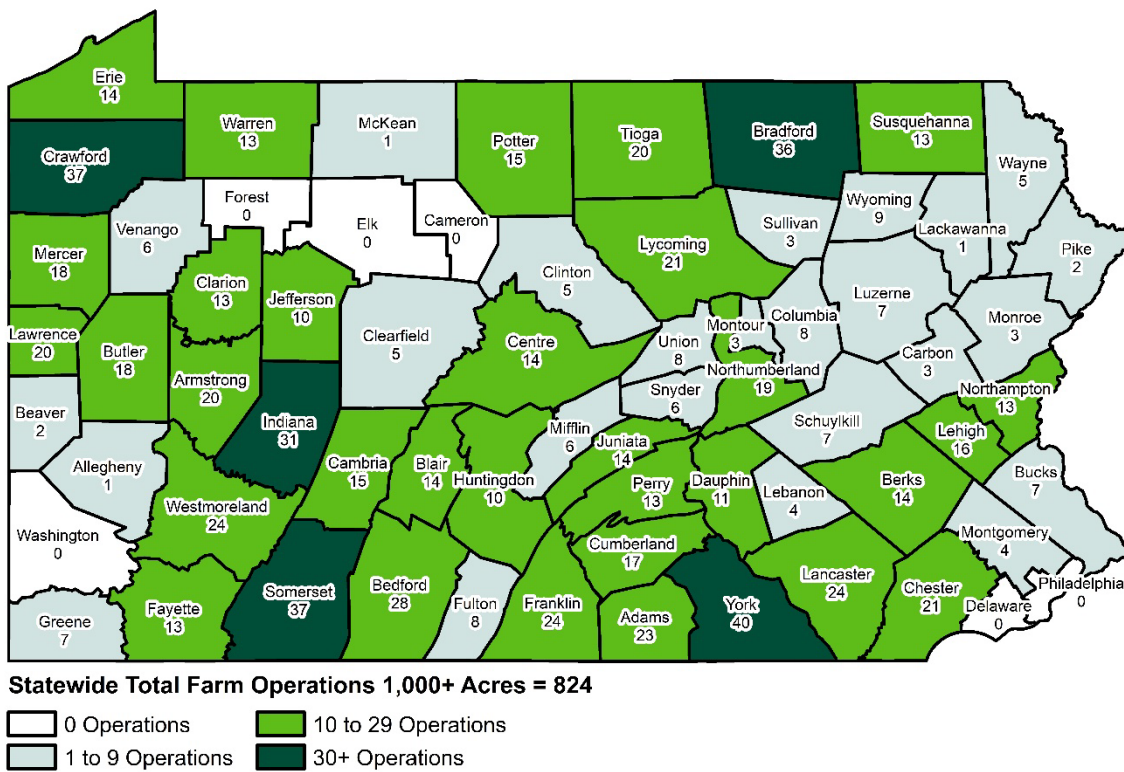
Regionally, farm operations that spanned less than 100 acres were primarily located in and around the south-central region (see Figure 7). By comparison, operations that spanned 1,000 acres or more were generally more spread out across the state (see Figure 8), with the highest number of farms spanning 1,000 acres or more located in York (40 farms), Somerset (37 farms), Crawford (37 farms), and Bradford (36 farms) counties.

Figure 7: Number of Farm Operations <100 Acres by Pennsylvania County, 2022



Source: U.S. Census of Agriculture, NASS.

Figure 8: Number of Farm Operations 1,000+ Acres by Pennsylvania County, 2022

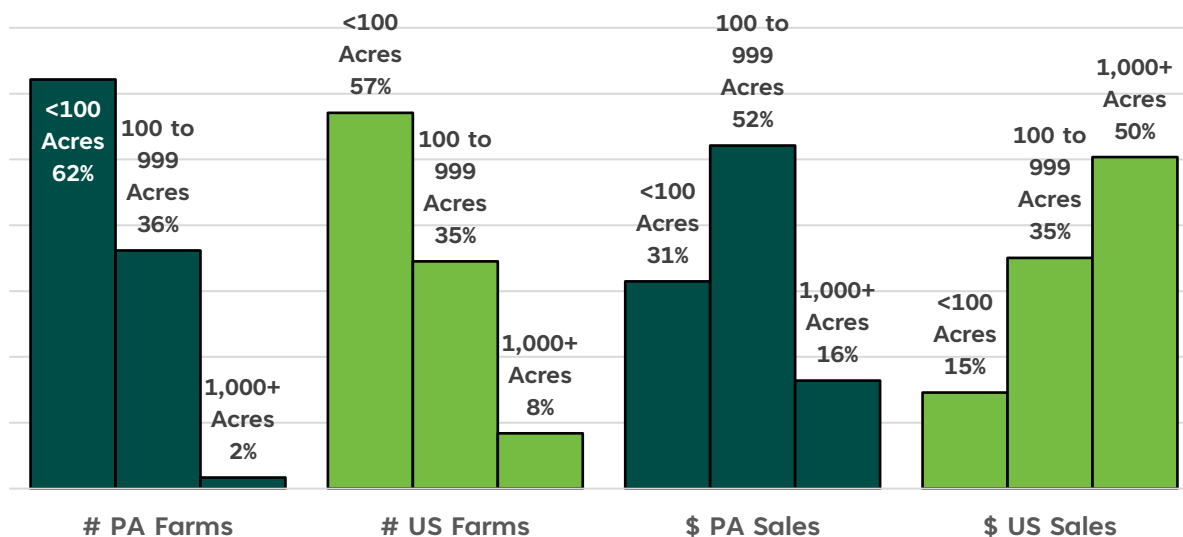


Source: U.S. Census of Agriculture, NASS.

Small is Beautiful

Although Pennsylvania is mostly comprised of farms that span less than 100 acres, this is not an indication that the agriculture industry is a small part of the overall economy. In fact, for Pennsylvania, each of these smaller farms recorded over \$100,000 in sales on average in 2022, compared to the U.S. average of \$73,000 per farm that ranged less than 100 acres. Figure 9 compares the 2022 distribution of the number of farms and the total sales by acreage for Pennsylvania and the U.S.

Figure 9: Share of Total Farms and Commodity Sales by Farm Acreage, 2022



Source: U.S. Census of Agriculture, NASS.

In 2022, 62 percent of Pennsylvania farms spanned less than 100 acres. By comparison, 57 percent of all farms in the U.S. spanned less than 100 acres. However, for the U.S., half of all agricultural sales were from farms that spanned at least 1,000 acres, with the small farms that spanned less than 100 acres only comprising 15 percent of commodity sales. For the Commonwealth, the trend is very different. While the majority of sales were from Pennsylvania farms that ranged from 100 to 999 acres (53 percent), the amount of sales from operations less than 100 acres was double the U.S. share.

Moreover, on the regional level, the top three counties for agricultural sales were all urban counties with the highest concentrations of farms spanning less than 100 acres: (1) Lancaster (\$2 billion, 18 percent), (2) Chester (\$736 million, 7 percent), and (3) Berks (\$701 million, 7 percent). Rural counties, where larger farms are more common, grossed nearly \$5 billion in agricultural sales in 2022, which comprised 48 percent of the statewide total for Pennsylvania. These points highlight how small Pennsylvania farms are important drivers for the entire agricultural industry.

Operation Finances

Revenues

Total agricultural sales for 2022 exceeded \$10 billion, an increase of 33 percent from the previous Census year. Table 1 displays the share of these sales by the type of agricultural industry and the average sales per farm within these industries. It should be noted that these data represent a snapshot in time based on the market value of products sold. Prices for agricultural commodities fluctuate throughout the year, so it is possible these trends in sales may not represent the full picture of what occurred throughout the year. However, as far as overarching trends go, these data show that the Commonwealth primarily produces and sells dairy, poultry, and eggs. Dairy continues to be a significant portion of the agricultural industry, comprising roughly 27 percent of all product sales. However, the number of dairy farms declined substantially by 2,600 operations (46 percent) since 2017, which resulted in a large increase (122 percent) in the average sales per dairy farm as the remaining operations continued to meet demand.

The poultry and egg production industry has been steadily growing in Pennsylvania since the early 2000s. However, from 2017 to 2022, egg sales increased from \$682 million to over \$1 billion, an increase of 61 percent from the prior Census year. This change was entirely due to (1) inflation and (2) an increase in the number of egg-producing farms (approximately 1,000 farms). As a result of more farms, the average sales per farm were relatively unchanged from the prior Census year. However, when adjusted for inflation, the average sales per farm has declined by 13 percent, and total poultry and egg sales only increased by 34 percent from 2017 to 2022.

Other notable industries include hog and pig farming, apiculture (bee and honey production), and aquaculture. Hog and pig farming showed notable productivity gains as the relatively same number of farms from 2017 increased sales by 36 percent in 2022 (19 percent when adjusted for inflation). Similarly, apiculture, equine production, and aquaculture experienced significant growth in sales, which resulted in a 35-percent increase in the average sales per farm for the Other Animal Production category.

Table 1: Share of Total Pennsylvania Agricultural Sales and Average Sales per Farm by Industry, 2017 and 2022

Industry Type	Share of Total Sales		Avg. Sales per Farm	
	2017	2022	2017	2022
Dairy Cattle and Milk Production	31%	28%	\$416,700	\$925,400
Poultry and Egg Production	23%	27%	\$930,600	\$928,300
Oilseed and Grain Farming	9%	11%	\$106,900	\$157,200
Greenhouse, Nursery, and Floriculture	13%	11%	\$417,200	\$452,500
Other Crop Farming	9%	8%	\$36,000	\$50,600
Hog and Pig Farming	8%	8%	\$777,300	\$1,057,500
Other Animal Production	7%	7%	\$34,200	\$46,300

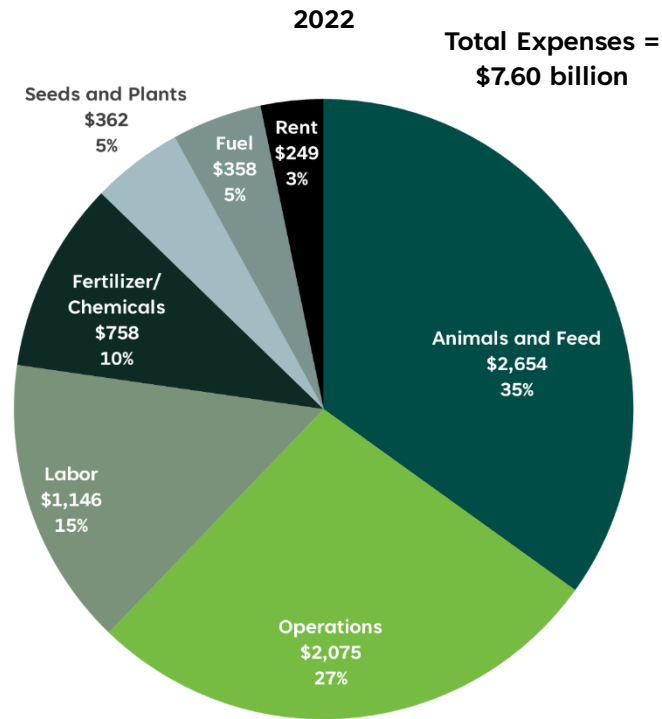
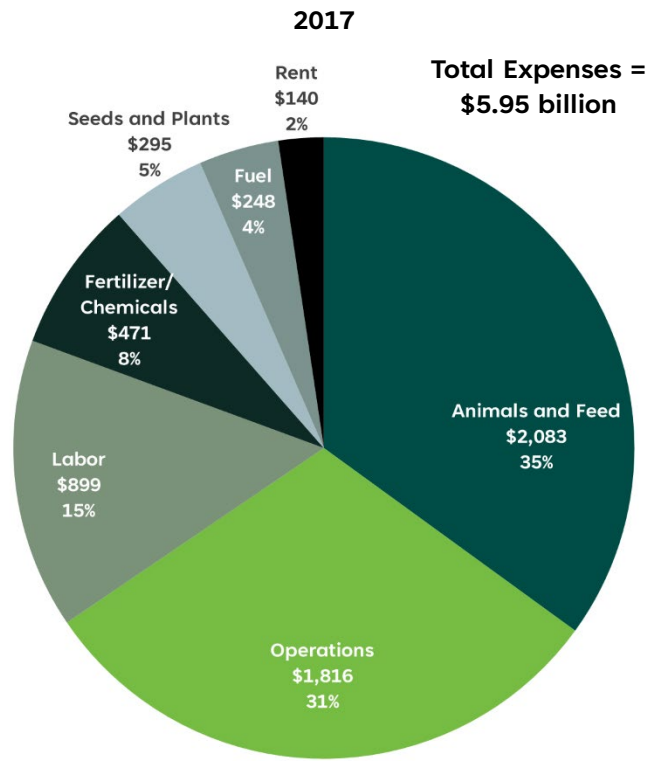
Note: Sales dollars are not adjusted for inflation.

Source: U.S. Census of Agriculture, NASS.

Expenses

With regard to operating expenses (excluding capital, depreciation, and ownership expenses), the total amount for 2022 was nearly \$8 billion. This was an increase of just about \$2 billion (28 percent) from what was recorded in the 2017 Census, the largest increase in operating expenses in a single Census year since 2007. The main driver of this uptick was the Animals and Feed category, which contributed almost \$600 million. Figure 10 displays two pie charts, which itemize the types of expenses incurred by farm operations in 2017 and 2022. For both years, animals and feed comprised the largest share of expenses (35 percent), with feed and breeding being the main contributors. The operations category also comprised a sizable share of expenses. This category includes items like supplies and repairs, taxes and interest, and other services necessary to maintain the farming operation. Additionally, notable increases were in rent (78 percent), fertilizer (65 percent), and fuel (44 percent).

Figure 10: Share of Pennsylvania Farm Operation Expenses, 2017 and 2022

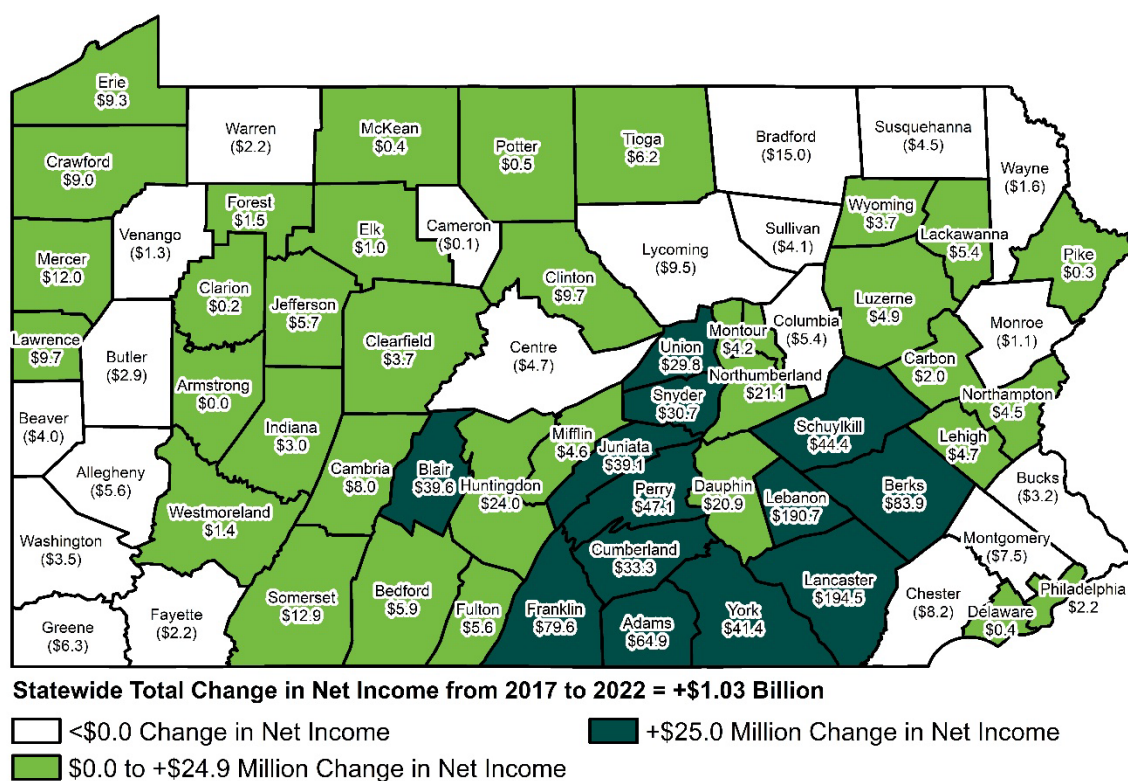


Note: Dollar amounts in millions.
 Source: U.S. Census of Agriculture, NASS.

Net Income

Net cash farm income measures the financial condition of farm operations and is derived by taking total farm expenses (including capital and ownership expenses) and subtracting total sales, government payments, and other farm-related income. This results in an overall net gain (positive net cash farm income) or loss (negative net cash farm income). Figure 11 presents the total net income for all farm operations located in each county. The counties with the most growth in net income were Lancaster (\$194,500), Lebanon (\$190,700), and Berks (\$83,900) counties. Twenty counties recorded declines in net income, led by Chester (\$8,200), Lycoming (\$9,500), and Bradford (\$15,000) counties.

Figure 11: Change in Net Income by Pennsylvania County (\$ Millions), 2017 to 2022



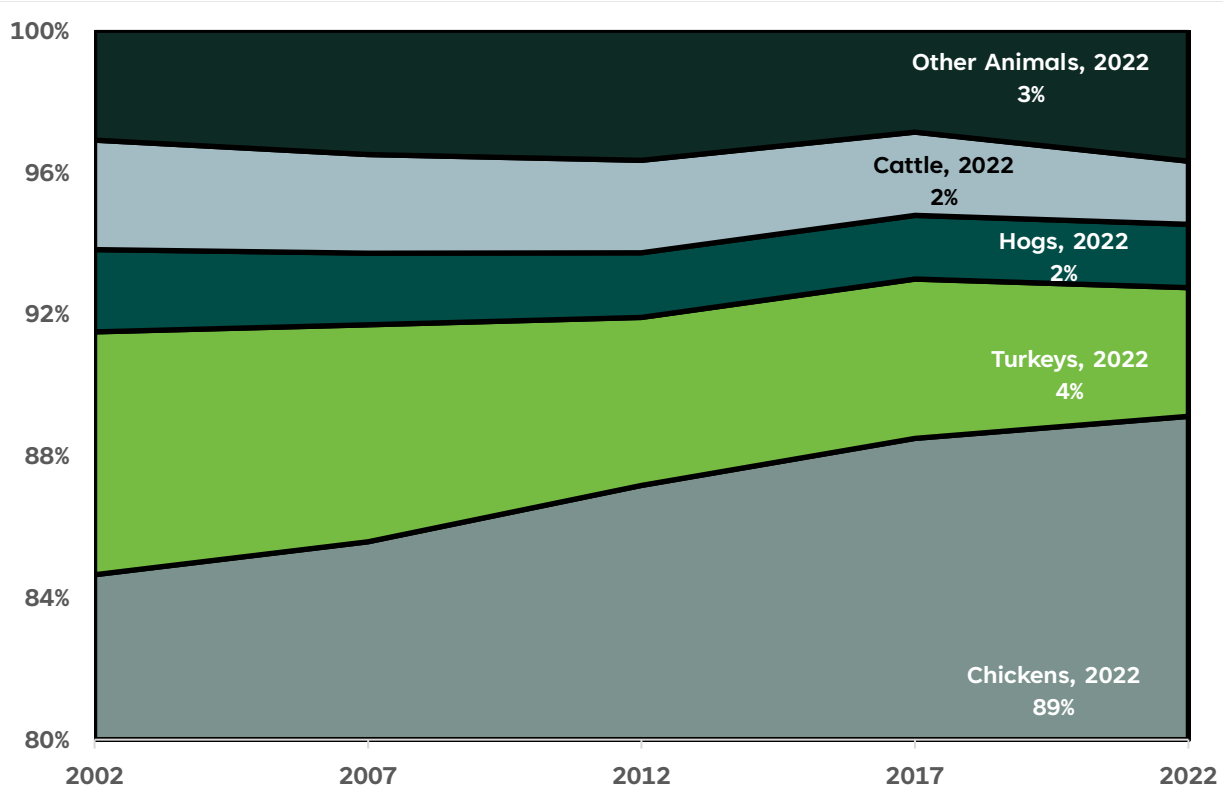
Source: U.S. Census of Agriculture, NASS.

Animal Inventories and Crops Harvested

Although the Commonwealth produces and sells mostly dairy products, cattle (including dairy cows) are not the main animals kept on farm operations. Figure 12 displays the inventory shares for the four most common farm animals in Pennsylvania since 2002. Chickens have generally been the most kept farm animals on operations. For 2022, almost 40 million broiler chickens (raised for meat) and another 27 million egg-laying chickens were reported in operation inventories, which together represented 89 percent of all agricultural animals in Pennsylvania. Turkeys have also been a sizable share of

total animal inventory, although their numbers have been in decline since 2007. Hogs and cattle have historically comprised roughly 5 percent of animal inventories. Notably, the category for other animals increased by 40 percent since 2017 due to increases in the numbers of ducks (366,000; 44 percent) and partridge birds called chukars (224,000; 82 percent).

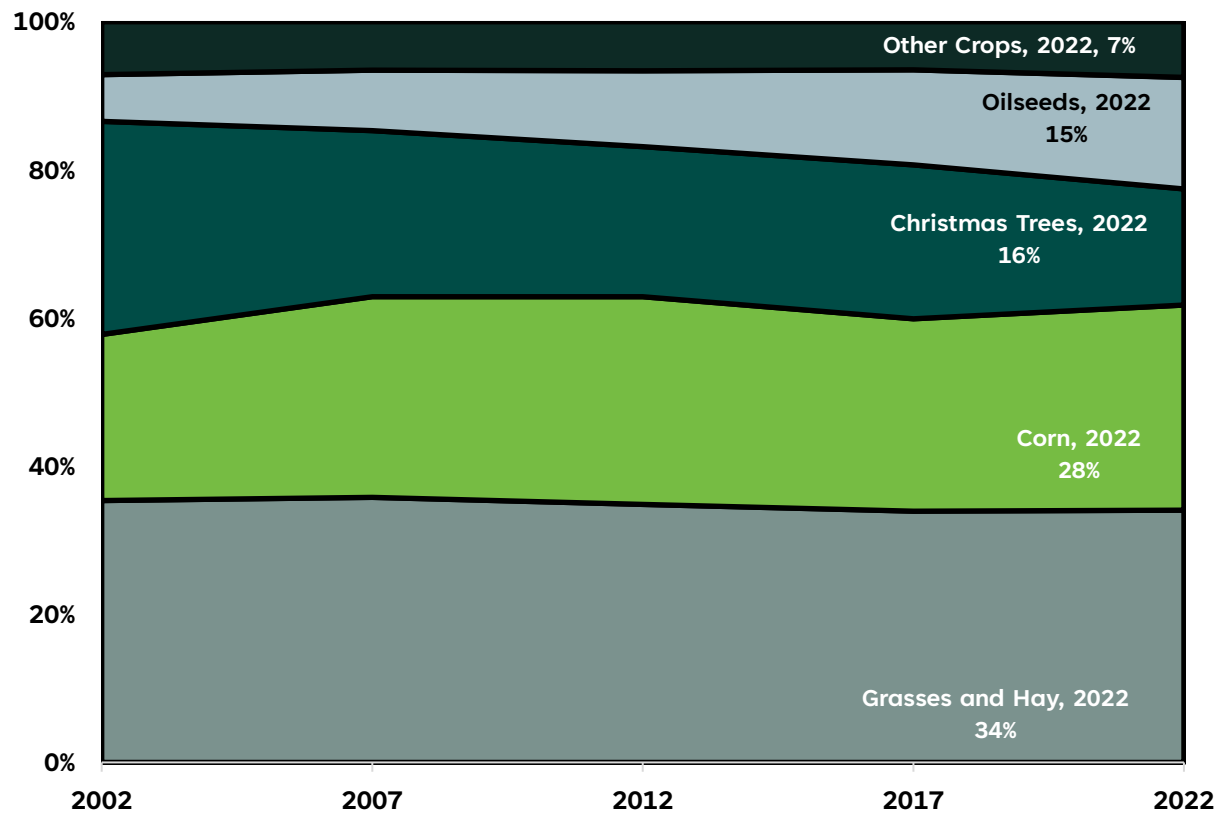
Figure 12: Percent of Farm Animal Inventory in Pennsylvania by Species, 2002 to 2022



Source: U.S. Census of Agriculture, NASS.

Figure 13 presents the types of field crops (excluding fruit and nut trees) by the share of the total farmland acreage dedicated to growing them. Grasses and hay tend to be the most frequently harvested, ranging from 34 percent to 36 percent of acres each Census year. Since 2017, though, there has been a slight increase in harvested acres for oilseeds, led by growth in soybean harvests (43,000 acres; 7 percent). Christmas tree harvests were down 31 percent, or 329,000 acres, from 2017. To date, this is the largest decline in a single Census year.

Figure 13: Percent of Field Crops Harvested in Pennsylvania by Type, 2002 to 2022

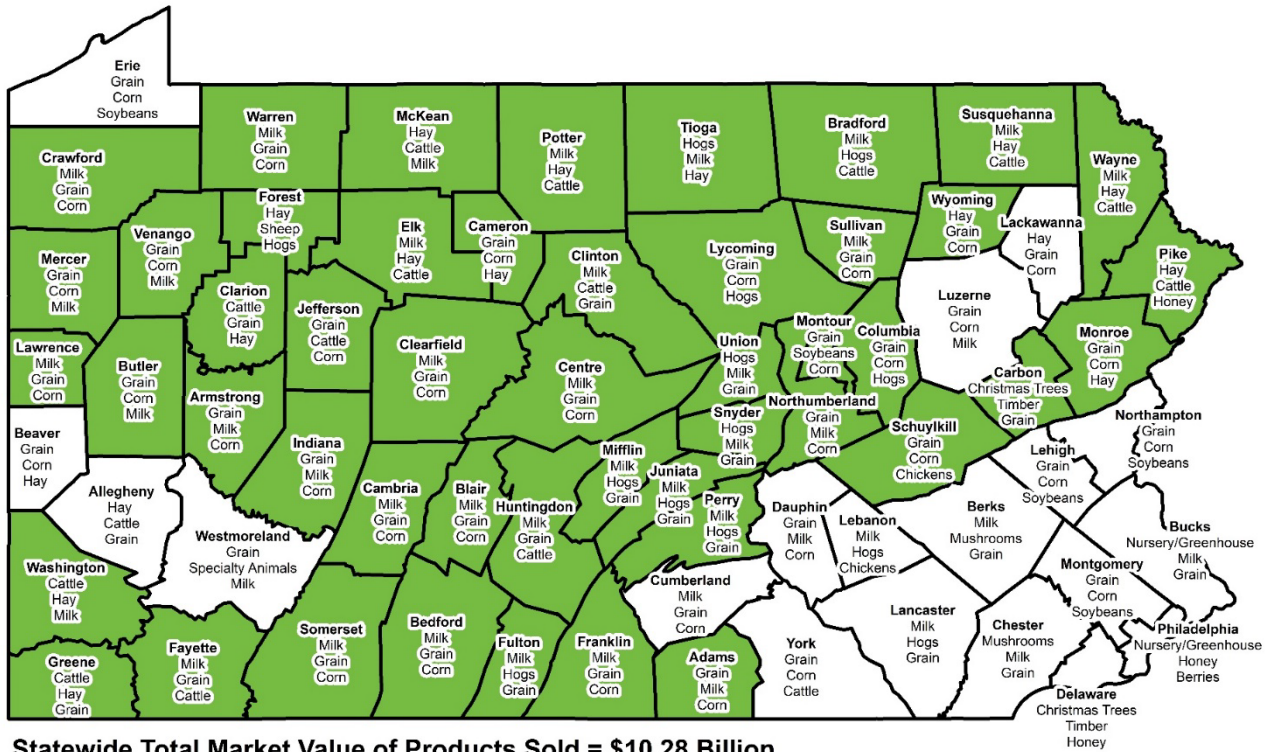


Source: U.S. Census of Agriculture, NASS.

In addition to animals and field crops, some farmland across the Commonwealth is used for fruit, nuts, and other plants grown for horticulture purposes. Approximately 47,000 acres were dedicated to fruit- and nut-bearing trees, with apple trees (47 percent of those acres) and grape vineyards (30 percent of those acres) being the most common ones. Less than 15,000 acres were used to grow plants for the purposes of horticulture, including garden seeds, bulbs, potted plants, and other nursery products.

Figure 14 presents the top three agricultural products produced and sold in each county. The most typical commodities were grain, milk, corn, and hay. However, some counties had notable specialties, like mushrooms in Chester and Berks Counties and honey in Delaware, Philadelphia, and Pike Counties.

Figure 14: Top Three Agricultural Products Sold by County, 2022



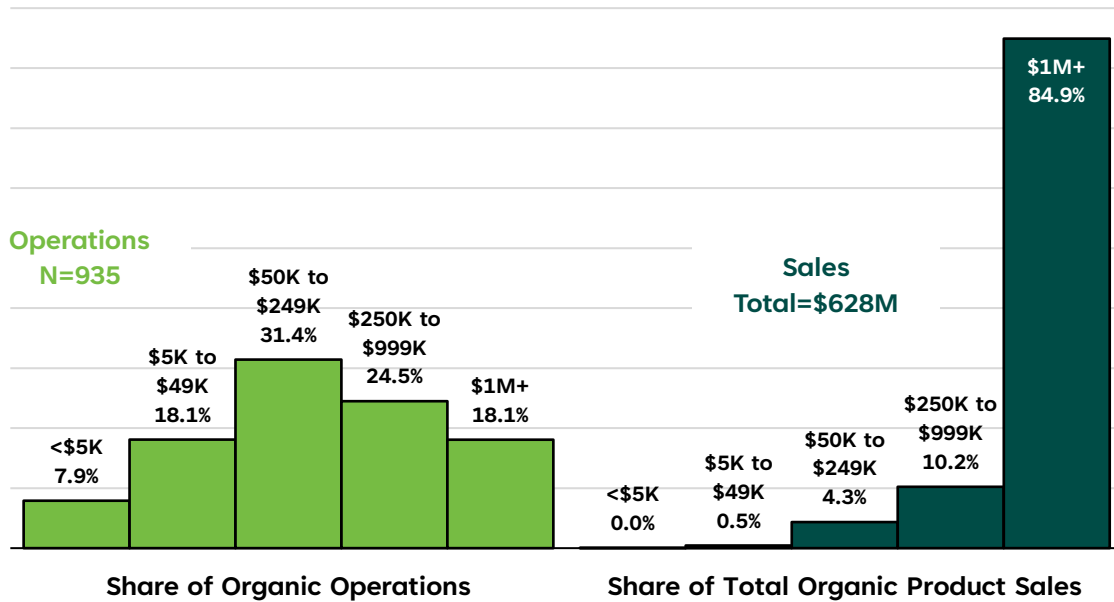
Source: U.S. Census of Agriculture, NASS.

Organic Agriculture

In 2022, there were 935 organic farm operations in Pennsylvania that sold \$628 million of certified organic agricultural products. An additional 50 operations were certified but did not report sales for any organic products that year. Organic agriculture comprises a relatively small portion of total agricultural production in the Commonwealth. However, these farm operations tend to have higher-than-average sales. Figure 15 displays an arrangement of organic operations according to their sales. The left portion of the chart shows the share of operations in each sales category, with most (31 percent) organic farms having made \$50,000 to \$249,000 in 2022. Operations that grossed over \$1 million in sales comprised 18 percent of the distribution.

On the right portion of the chart, the data show that farms that grossed over \$1 million in sales drive the organic market in Pennsylvania, with 85 percent of organic product sales coming from those operations. This would suggest that these operations are making significantly more than \$1 million in sales, outpacing even some of the larger, non-organic farms in Pennsylvania.

Figure 15: Number of Organic Operations and Commodities Sold by Sales Category, 2022



Source: U.S. Census of Agriculture, NASS.

Producer Demographics

In 2022, there were about 90,000 producers on the approximately 49,000 farms in Pennsylvania, a decrease of about 400 (<1 percent) from the 2017 Census year. On average, there were about two producers per farm operation and two members per producer household, which was about the same as in 2017. Table 2 displays select demographic characteristics for producers for the most recent Census year, including the ratio of males to females, age cohort, race, and service in the military.

In summary, the majority of producers are male, between the ages of 35 to 64, and white. Since the 2017 Census though, there has been an increase in the share of producers who are age 65 and older (4 percentage points), alongside an equal-sized decline in the share for those age 35 to 64. This suggests an aging population, as more producers age into later stages of life. As a result, the average age of producers in Pennsylvania slightly increased, though notably, organic producers tended to be younger, with an average age of 48 years old in 2022, compared to 55 for the statewide average. The rest of the demographic characteristics have remained unchanged since 2017. However, fewer farmers (2 percentage points) reported having served in the military (current or prior active-duty service).

Table 2: Change in Producer Demographics, 2017 to 2022

	2017	2022	Change
Sex			
Male	65%	65%	0%
Female	35%	35%	0%
Age			
<35	13%	13%	0%
35 to 64	59%	55%	-4%
65+	29%	33%	4%
Avg. Age	54.8	55.4	+0.6
Race			
White	99%	99%	0%
Other Race	1%	1%	0%
Military Service			
Active Duty or Veteran	8%	7%	-2%
Non-Military	92%	93%	2%

Source: U.S. Census of Agriculture, NASS.

Other Producer Characteristics

For 2022, 45 percent of producers considered farming their primary occupation, a small decline from 46 percent in 2017. A similar drop occurred in the share of producers who reported being involved in the day-to-day decisions of their operation (89 percent to 87 percent). However, there was a 12-percent increase in the number of producers who worked as hired managers, indicating perhaps that landowners or other producers may have needed more administrative or managerial assistance with their farm operations.

Further data could potentially provide an explanation. In 2022, there was a large decline (32 percent) in the number of unpaid laborers on farms. These unpaid laborers are usually family members who work on the operation alongside the main producer. In addition, labor expenses increased by 28 percent from 2017 to 2022 (see the Operations Finances section), despite the relatively same number of hired and migrant laborers being paid to work on farms (roughly 65,000 workers).

In terms of tenure, the majority of producers have been at their current operation for 10 years or longer. Figure 16 presents the number of producers by the number of years they have been operating at their present farm operation. While the number of producers with

operation tenures of 10 years or greater has declined by 3 percent since 2017, there has been a notable increase in the number of producers who have been in their current operation for five to nine years (21 percent). Additionally, the number of new and beginning producers (those who have been operating on any operation for 10 years or less) increased by 6 percent from 2017.

Figure 16: Number of Years Producer Has Been Present on Pennsylvania Operation, 2017 and 2022

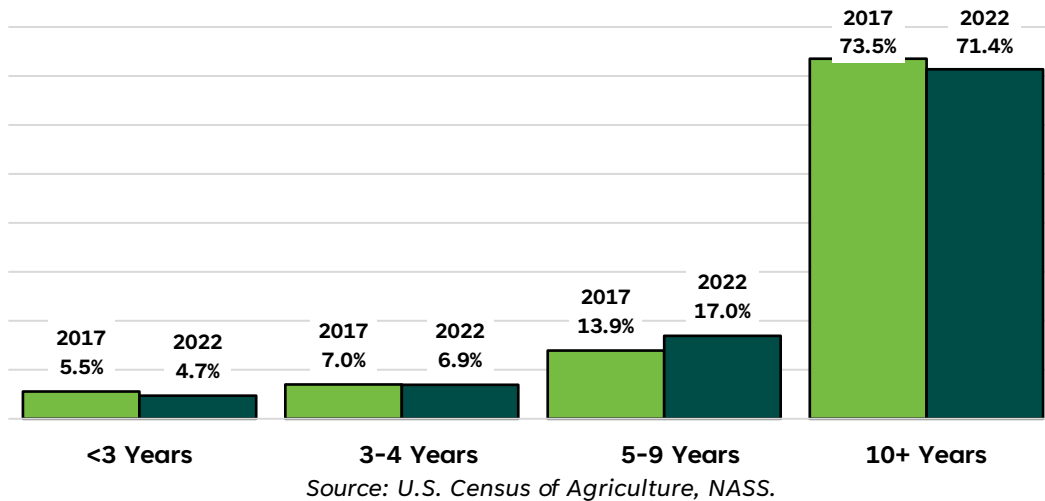
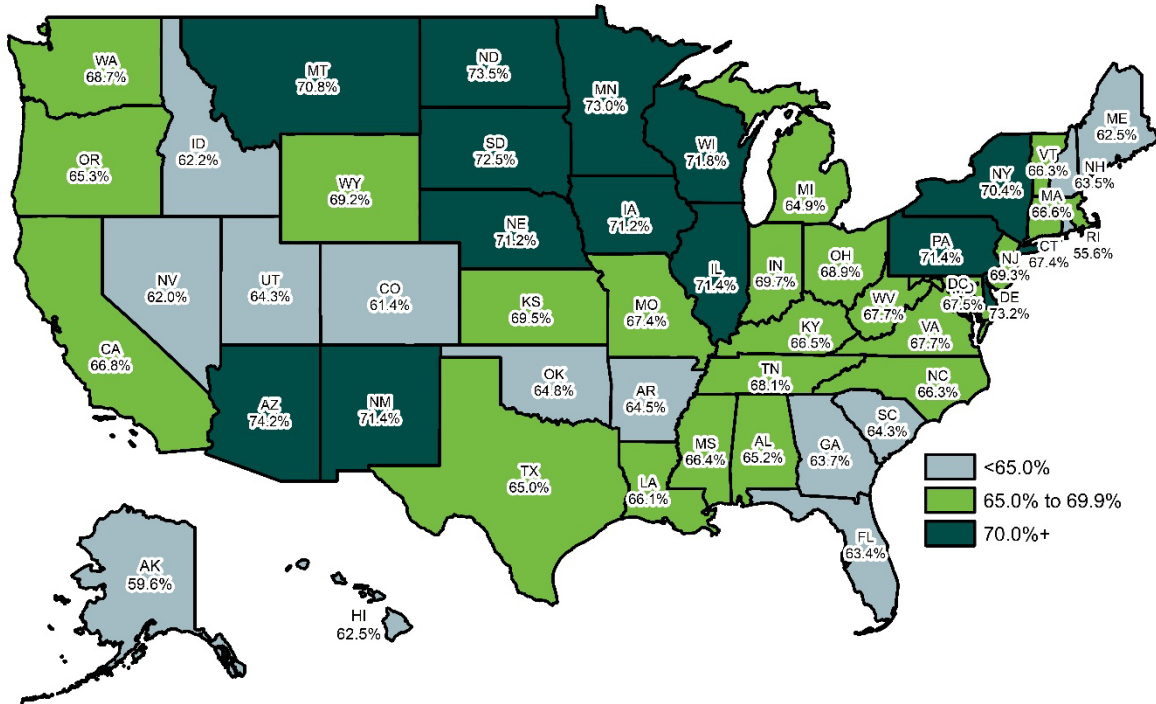


Figure 17 displays the shares of producers at their present operation for 10 years or more by U.S. state for 2022. Nationally, Pennsylvania ranked 7th in the share of producers who have been working on their present operation for 10 years or more, with Arizona (74 percent), North Dakota (74 percent), and Delaware (73 percent) having the highest shares. Regionally, the Commonwealth had the second highest share among border states. The states with the lowest shares were Colorado (61 percent), Alaska (60 percent), and Rhode Island (56 percent). These ranges suggest that, overall, over half of farmers across the country have been farming for over a decade.

Figure 17: Share of Producers Who Have Been at Present Operation for 10+ Years by State, 2022



Source: U.S. Census of Agriculture, NASS.

Conclusion

Agriculture is a major industry for the Commonwealth. Despite this, there were over 4,100 fewer farms in operation in 2022, compared to 2017, when the previous Census was released. This was driven by a loss in operations which spanned less than 500 acres. In comparison with other states, Pennsylvania has more of these smaller operations, and therefore, losing these smaller farms impacts the statewide industry significantly. The underlying data point to a possible demographic shift in producers running the farm operations, as more of them are reaching their retirement years and fewer family members are interested in providing unpaid labor to keep operations going. Further, just under 5 percent of producers had started work on their current operations less than three years ago, and only 13 percent of producers were under age 35, meaning not many young producers are entering the industry to replace the older ones.

In line with similar recent publications released by the Center, the agriculture industry appears to be significantly affected by shifting demographics. As projections through 2050 anticipate an overall decline in the rural population, particularly due to lower birth rates combined with an aging population, policymakers should consider the ramifications they may have for agriculture and, by extension, the population’s food supply and supply of other related raw materials.

In addition, population growth is anticipated to occur primarily in urban counties of the Commonwealth, including Lancaster, Berks, Chester, and York Counties. These same counties are also home to most of Pennsylvania's small farms. As developers look to support the growing population, aging farmers without heirs may be incentivized to sell their properties for the purposes of housing or other non-farmland development. Therefore, state officials, county planners, municipalities, and other land development stakeholders should consider the ramifications of these findings to ensure there is sufficient farmland, while also supporting future housing and other development needs in the Commonwealth.

Appendix

Methods and Definitions

The U.S. Census of Agriculture is conducted by the National Agricultural Statistics Service (NASS) every five years and is a complete count of U.S. farms and ranches and the people who operate them. The data produced from this Census examines land use and ownership, producer characteristics, production practices, income, and expenditures. For the 2022 Census of Agriculture, NASS mailed questionnaires to agricultural producers in November/December 2022 to collect data for the 2022 calendar year. Producers could respond online or return their completed questionnaires by mail through May 2023. NASS sent reminder notices to those who did not respond and attempted to contact those producers for a personal interview. Like the U.S. Decennial Census for resident population counts, responses to the Census of Agriculture are required by federal law. The Census of Agriculture employs the following important definitions, which will be used throughout this fact sheet:

- A **farm operation** is defined as any place from which \$1,000 or more of agricultural products were produced and sold, or normally would have been sold, during the Census year.
- **Producers** are individuals who are involved in making decisions for the farm operation. These may include decisions about planting, harvesting, livestock management, and marketing. Producers include owners, members of the owner's household, hired managers, tenants, renters, and sharecroppers. If a person rents land to others or has land worked on and shared by others, they are considered the producer only of the land that is retained for their own operation.
- The term **organic** is defined according to the U.S. Department of Agriculture's National Organic Program (NOP), which regulates the production and labeling of organic products. In general, organic products must be produced using agricultural practices that support biological processes that drive the recycling of nutrients, biomass, and water within production systems; promote ecological balance; maintain and improve soil and water quality; minimize the use of synthetic materials; and conserve biodiversity. These types of operations indicated whether their organic production was certified by the NOP or exempt from certification (typically smaller operations that grossed less than \$5,000 in annual income from organic sales).

In addition, sales and other financial data reflect commodity prices at the time the Census was taken and are not adjusted for inflation between Census years. This report uses the unadjusted values for all financial information.

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