

Canadian Agriculture at a Glance

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by Zong Jia Chen and Justin Clark

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Canada's farms were more profitable in 2020 than in 2015

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Canada's farms must always adapt quickly to various challenges, such as trade disputes and fluctuating prices. The COVID-19 pandemic added to these challenges in the form of labour shortages, disruptions in the food supply chain and rising input prices.

In particular, crop farms benefited from large increases in product prices in the second half of the 2020 calendar year, in part because of [high-quality crops](#), [increased global demand](#), and lower oil and fertilizer prices. These factors contributed to higher profit margins in the Prairie provinces in 2020 compared with 2015. Meanwhile, livestock farms faced [slaughter](#)

[delays because of COVID-19 outbreaks at processing facilities](#), which negatively influenced Canada's livestock prices.

Despite the numerous challenges, farms in Canada were 4.0 cents per dollar more profitable on average in 2020 than in 2015. Data from the 2021 Census of Agriculture show that the expense-to-revenue ratio for farms in Canada averaged 82.9 cents per dollar in 2020, down from 86.9 cents per dollar in 2015. In other words, for every dollar of revenues earned in 2020, 17.1 cents were profit, up from 13.1 cents in 2015.

All estimates related to 2015 operating revenues and expenses in this article have been adjusted to 2020 constant dollars using the Farm Product Price Index and the Farm Input Price Index, respectively. The lower the expense-to-revenue ratio, the higher the profit margin. Net operating income is the difference between total operating revenues and total operating expenses.

In Canada, 189,874 farms were counted, reporting a total of \$87.0 billion in operating revenues and \$72.2 billion in operating expenses in 2020. On average, the operating revenues and expenses per farm reached \$458,458 and \$380,175, respectively.

Information on farm operating revenues and expenses help paint a portrait of Canada's agricultural businesses. This article sheds light on farm profitability (by revenue class, operating arrangement, total farm area and farm type) and some potential driving forces behind the profitability trends observed.

Farms with revenues of \$2,000,000 and over account for over half of Canada's total farm revenues

In 2020, over half (51.5%) of Canada's total farm operating revenues came from just 4.1% (7,746) of farms, all of which belonged to the \$2,000,000 and

over revenue class. By comparison, in 2015, this revenue class provided 41.5% of Canada's total operating revenues and comprised 2.7% (5,236) of farms.

Furthermore, farms in the top three revenue classes (\$500,000 to \$999,999, \$1,000,000 to \$1,999,999, and \$2,000,000 and over) accounted for 83.2% of total operating revenues in 2020. By comparison, farms in these three revenue classes represented over three-quarters (76.6%) of total operating revenues in 2015 (Table 1).

Table 1
Percentage of total operating revenues and expenses by revenue class, Canada, 2015 and 2020

Revenue class	Total operating revenues		Total operating expenses	
	2015	2020	2015	2020
	percent			
Less than \$100,000	4.7	3.4	5.6	4.5
\$100,000 to \$249,999	7.2	5.2	7.1	5.3
\$250,000 to \$499,999	11.5	8.1	11.0	7.9
\$500,000 to \$999,999	17.1	14.1	16.4	13.5
\$1,000,000 to \$1,999,999	18.0	17.6	17.3	16.6
\$2,000,000 and over	41.5	51.5	42.6	52.1

Note: The sum of each column equals 100%.

Sources: Statistics Canada, Census of Agriculture, 2016 and 2021 (3438).

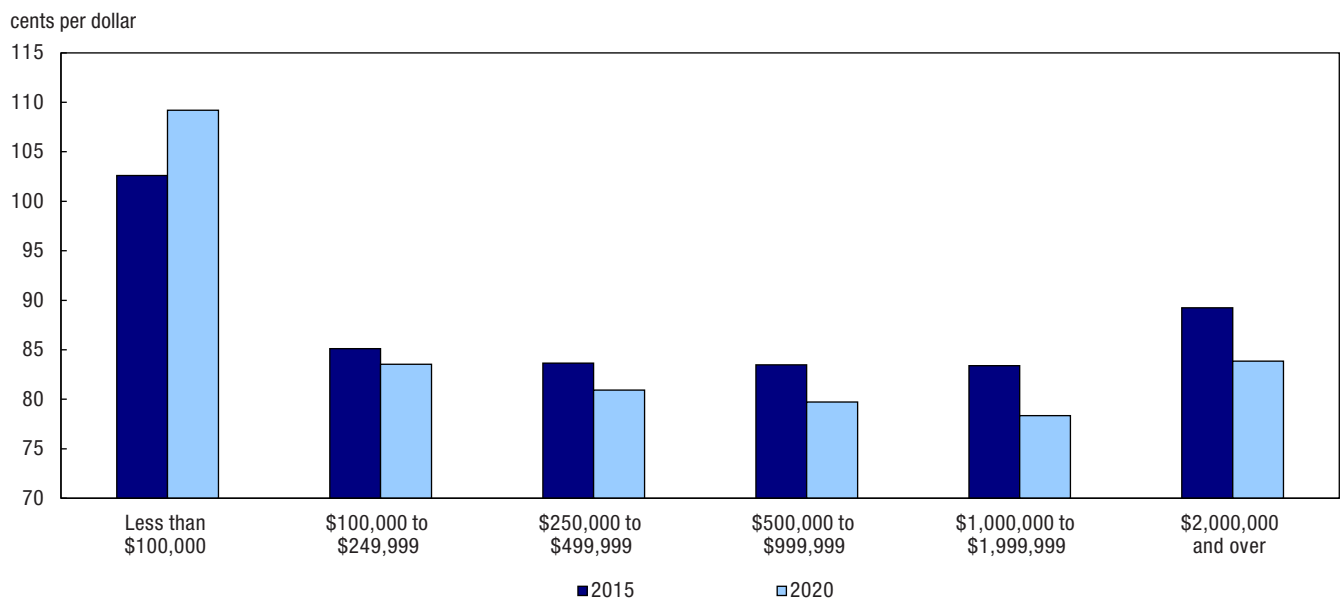
Farms with revenues of \$100,000 and over are more profitable than five years ago

Farms in Canada with revenues of \$100,000 and over reported improved expense-to-revenue ratios in 2020 compared with 2015. The magnitude of the improvement was largest for farms with revenues of \$2,000,000 and over (-5.3 cents per dollar), followed by farms with revenues from \$1,000,000 to \$1,999,999 (-5.0 cents per dollar) (Chart 1).

Farms with revenues of less than \$100,000 are not as profitable as they were five years ago

Meanwhile, farms in Canada with revenues of less than \$100,000 produced profitability ratios in 2020 that were below the 2015 ratios for that same revenue class, indicating that profit margins shrank over time. This lower profitability for smaller farms could act as an entrance barrier for new farmers (Chart 1).

Chart 1
Expense-to-revenue ratio by revenue class, Canada, 2015 and 2020



Sources: Statistics Canada, Census of Agriculture, 2016 and 2021 (3438).

Table 2
Total operating revenues and expenses by operating arrangement, Canada, 2020

Operating arrangement	Total operating revenues	Total operating expenses	Average net operating income	Expense-to-revenue ratio
		dollars		cents per dollar
Sole proprietorship	12,940,582,542	11,057,960,503	19,468	85.5
Partnership	11,044,233,367	9,371,222,025	37,129	84.9
Family corporation	54,581,051,580	44,817,123,274	225,844	82.1
Non-family corporation	8,204,400,086	6,706,474,196	326,274	81.7
Other operating arrangements	278,964,933	232,543,406	160,628	83.4

Source: Statistics Canada, Census of Agriculture, 2021 (3438).

Non-family corporations are the most profitable farm operating arrangement

The most common farm operating arrangement reported is sole proprietorship, accounting for over half of farms in Canada (50.9%; 96,702 farms). In 2020, these farms reported \$12.9 billion in operating revenues, \$11.1 billion in operating expenses and averaged \$19,468 in net operating income, with an expense-to-revenue ratio of 85.5 cents per dollar.

Conversely, non-family corporations made up 2.4% (4,591) of total farms in Canada but reported \$8.2 billion and \$6.7 billion in operating revenues and expenses, respectively, in 2020. As a result, non-family corporations had the lowest expense-to-revenue ratio of 81.7 cents per dollar and had the highest average net operating income of \$326,274 per farm. Non-family corporations generated nearly three-quarters (74.3%) of the amount of operating revenues that partnerships reported. However, the number of farms classified as non-family corporations were one tenth (10.2%) of the number of farms classified as partnerships (Table 2).

Farms with larger total land area have greater profit margins

In 2020, farms with a total land area of 2,240 acres and over accounted for less than one tenth (8.9%) of the total number of farms in Canada and contributed 37.3% (\$32.5 billion) of Canada's total operating revenues and 36.5% (\$26.3 billion) of total operating expenses. The expense-to-revenue ratio for these farms was 81.1 cents per dollar.

In contrast, farms with a total land area of less than 240 acres accounted for over half (52.3%) of the total farms in Canada and contributed around one-quarter of Canada's total operating revenues (24.9%; \$21.6 billion) and expenses (26.0%; \$18.8 billion). The expense-to-revenue ratio for these farms was 86.8 cents per dollar. The profit margin for farms under 240 acres was lower than farms with larger acreages (Table 3).

Table 3
Total operating revenues and expenses by total farm area, Canada, 2020

Total farm area	Total operating revenues	Total operating expenses	Expense-to-revenue ratio
	dollars	dollars	cents per dollar
Under 240.00 acres	21,636,617,040	18,784,665,494	86.8
240.00 to 399.99 acres	6,430,958,287	5,441,902,088	84.6
400.00 to 559.99 acres	4,939,950,169	4,088,498,669	82.8
560.00 to 759.99 acres	4,281,835,757	3,503,103,168	81.8
760.00 to 1,119.99 acres	6,197,107,645	5,064,386,781	81.7
1,120.00 to 1,599.99 acres	5,219,405,202	4,232,471,975	81.1
1,600.00 to 2,239.99 acres	5,873,126,277	4,744,735,458	80.8
2,240.00 acres and over	32,470,232,131	26,325,559,771	81.1

Source: Statistics Canada, Census of Agriculture, 2021 (3438).

Table 4
Total operating revenues and expenses by farm type, Canada, 2015 and 2020

Farm type	2020			2020	2015
	Total operating revenues	Total operating expenses	Net operating income	Expense-to-revenue ratio	
	dollars			cents per dollar	
Oilseed and grain farming	33,613,839,952	25,634,868,496	7,978,971,456	76.3	85.4
Vegetable and melon farming	3,830,129,023	3,099,656,460	730,472,563	80.9	83.6
Fruit and tree nut farming	1,928,709,598	1,612,736,001	315,973,597	83.6	84.3
Greenhouse, nursery and floriculture production	5,903,520,432	4,837,454,253	1,066,066,179	81.9	84.9
Other crop farming	3,881,597,625	3,294,032,038	587,565,587	84.9	85.3
Beef cattle ranching and farming, including feedlots	14,336,665,493	13,525,965,002	810,700,491	94.3	95.5
Dairy cattle and milk production	8,507,629,402	6,833,453,315	1,674,176,087	80.3	77.2
Hog and pig farming	5,703,062,950	5,227,063,665	475,999,285	91.7	92.4
Poultry and egg production	6,215,010,866	5,286,035,573	928,975,293	85.1	84.2
Sheep and goat farming	333,112,723	322,042,960	11,069,763	96.7	96.5
Other animal production	2,795,954,444	2,512,015,641	283,938,803	89.8	91.8

Sources: Statistics Canada, Census of Agriculture, 2016 and 2021 (3438).

Oilseed and grain farms are the largest and most profitable farms

Oilseed and grain farms accounted for over one-third (34.3%) of the total number of farms in Canada and led all other farm types in average farm area. In 2020, oilseed and grain farms contributed 38.6% (\$33.6 billion) of the total operating revenues and 35.5% (\$25.6 billion) of the total operating expenses reported by farms in Canada. Moreover, oilseed and grain farms accounted for over half (53.7%; \$8.0 billion) of Canada's total net operating income.

From 2015 to 2020, oilseed and grain farms surpassed dairy and milk farms to become the most profitable farm type in Canada, with an average expense-to-revenue ratio of 76.3 cents per dollar in 2020. This was largely because of [increased crop product prices, high export demand and above-average yields resulting from favourable weather conditions](#). Conversely, sheep and goat farms continued to be on the lower end of profitability, with an expense-to-revenue ratio of 96.7 cents per dollar in 2020 (Table 4).

Overall farm profitability in the Prairie provinces is aided by oilseed and grain farms

Oilseed and grain farms in the Prairie provinces benefited greatly from the increase in crop prices and in the international demand for their products.

Farms in the Prairie provinces were able to leverage [lower fuel prices](#) to improve profit margins. In 2021, 63.1% of Canada's oilseed and grain farms were in Saskatchewan, Manitoba and Alberta.

In 2021, Saskatchewan was home to nearly one-third (31.4%) of Canada's oilseed and grain farms, and these farms contributed 80.8% of the province's total farm operating revenues. Oilseed and grain farms in Saskatchewan are the main factor behind the province having the lowest expense-to-revenue ratio (75.6 cents per dollar) among all provinces. The 2020 ratio reflected a sizable improvement of 14.2 cents per dollar over Saskatchewan's 2015 ratio (89.8 cents per dollar). Furthermore, oilseed and grain farms enabled Saskatchewan to generate the largest total net farm operating income (\$4.1 billion; 27.6% of Canada's total) and the largest average net operating income per farm (\$120,123) in Canada.

Manitoba's average net operating income was \$83,998 per farm in 2020. Manitoba's oilseed and grain farms generated over half (52.4%) of the province's total farm operating revenues in 2020, contributing to a provincial expense-to-revenue ratio of 85.1 cents per dollar.

Meanwhile, Alberta reported the highest total farm operating revenues among the Prairie provinces in 2020, with 40.4% of its operating revenues coming from oilseed and grain farms. Alberta farms reported an expense-to-revenue ratio of 85.5 cents per dollar, which is an improvement from the 90.8 cents per dollar ratio in 2015. This resulted in Alberta reporting an average net operating income of \$77,480 per farm (Table 5).

Table 5
Total operating revenues and expenses by geography, 2015 and 2020

Geography	2020			2020	2015
	Total operating revenues	Total operating expenses	Net operating income	Expense-to-revenue ratio	
	dollars			cents per dollar	
Newfoundland and Labrador	153,577,942	129,368,431	24,209,511	84.2	88.6
Prince Edward Island	681,856,517	561,311,461	120,545,056	82.3	84.1
Nova Scotia	724,120,473	638,237,733	85,882,740	88.1	92.6
New Brunswick	727,984,646	630,886,674	97,097,972	86.7	80.1
Quebec	13,046,605,255	10,901,330,972	2,145,274,283	83.6	83.9
Ontario	19,719,296,233	16,454,681,272	3,264,614,961	83.4	83.2
Manitoba	8,211,011,330	6,989,428,657	1,221,582,673	85.1	86.9
Saskatchewan	16,772,920,365	12,673,364,913	4,099,555,452	75.6	89.8
Alberta	22,217,129,159	19,001,323,036	3,215,806,123	85.5	90.8
British Columbia	4,794,730,588	4,205,390,255	589,340,333	87.7	85.8
Canada	87,049,232,508	72,185,323,404	14,863,909,104	82.9	86.9

Sources: Statistics Canada, Census of Agriculture, 2016 and 2021 (3438).

Dairy cattle and milk farms report the highest profit margin and average net operating income among livestock farms

On average, dairy cattle and milk farms in Canada reported operating revenues of \$904,778 and operating expenses of \$726,731 in 2020. This resulted in an expense-to-revenue ratio of 80.3 cents per dollar, suggesting that for every dollar of revenue earned, 19.7 cents were profit. Notably, the profit margin for dairy cattle and milk farms has decreased since 2015 by 3.1 cents per dollar, suggesting that these farms may be becoming more expensive to operate. While oilseed and grain farms benefited from increased

crop prices, livestock farms faced increased feed costs that may have negatively impacted their profit margins. However, despite the increased feed costs, the average net operating income of dairy cattle and milk farms in 2020 was \$178,047 per farm, the second highest among all farm types in Canada (Table 6).

Hog and pig farms report the largest average operating revenues

In 2020, hog and pig farms produced the largest average operating revenues among all farm types in Canada, with \$1.9 million. However, farms with the highest operating revenues do not always end up with the highest net operating income.

Table 6
Average operating revenues and expenses per farm by farm type, Canada, 2020

Farm type	Average operating revenues	Average operating expenses	Average net operating income
	dollars		
Oilseed and grain farming	516,064	393,565	122,499
Vegetable and melon farming	754,557	610,649	143,907
Fruit and tree nut farming	271,611	227,114	44,497
Greenhouse, nursery and floriculture production	1,123,196	920,368	202,828
Other crop farming	127,224	107,966	19,258
Beef cattle ranching and farming, including feedlots	361,736	341,280	20,455
Dairy cattle and milk production	904,778	726,731	178,047
Hog and pig farming	1,890,936	1,733,111	157,825
Poultry and egg production	1,173,529	998,118	175,411
Sheep and goat farming	93,178	90,082	3,096
Other animal production	176,145	158,257	17,888

Source: Statistics Canada, Census of Agriculture, 2021 (3438).

The average operating expenses for hog and pig farms were \$1.7 million per farm in 2020. Their expense-to-revenue ratio was 91.7 cents per dollar, a profit margin of 8.3 cents. The resulting average net operating income was \$157,825 per farm (Table 6).

Greenhouse farms have the highest average net operating income

The greenhouse industry in Canada has been growing in recent years, and greenhouse, nursery and floriculture farms led all farm types in Canada in average net operating income. In 2020, these farms averaged \$202,828 in net operating income per farm, followed by dairy cattle and milk farms (\$178,047 per farm) and poultry and egg farms (\$175,411 per farm). Additionally, greenhouse, nursery and floriculture farms netted an average of \$1.1 million in operating revenues and \$920,368 in operating expenses, producing an expense-to-revenue ratio of 81.9 cents per dollar. This was an improvement from 2015's ratio of 84.9 cents per dollar.

In 2020, sheep and goat farms had the lowest net operating income among all farm types, averaging \$3,096 per farm. Sheep and goat farms had the smallest operating revenues in Canada compared with

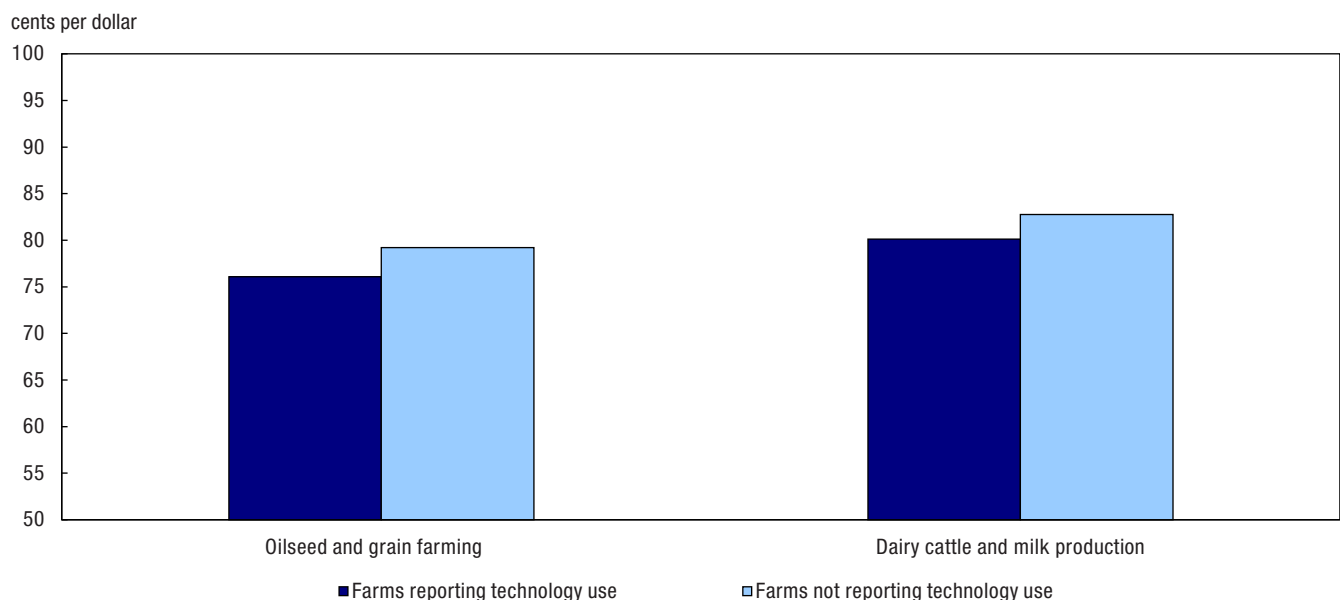
other livestock farms. On average, sheep and goat farms generated \$93,178 in operating revenues and \$90,082 in operating expenses, producing an expense-to-revenue ratio of 96.7 cents per dollar in 2020, which was on the lower end of profitability. This ratio left just 3.3 cents of profit for every dollar of revenue earned (Table 6).

Farm technology use correlates with higher profit margins

Farms use technology to reduce labour costs and improve farming efficiencies, which may increase profitability. This can be seen when comparing the expense-to-revenue ratios of farms with and without reported technology adoption. The 2021 Census of Agriculture asked farmers to report the use of the following technologies: automated guidance steering systems (auto-steer), Geographic Information System mapping (GIS), variable-rate input application, drones, soil sample test, slow-release fertilizer, fully robotic milkers and robotic greenhouse equipment.

In 2020, over half (50.4%) of farms in Canada reported using technology. Farms that reported technology use had an average expense-to-revenue ratio of 81.5 cents per dollar, which was lower than the 88.1 cents per dollar for farms that did not report technology use. This difference suggests that farms that have implemented

Chart 2
Expense-to-revenue ratio for selected farm types by technology status, Canada, 2020



Source: Statistics Canada, Census of Agriculture, 2021 (3438).

modern farming technologies may be directly benefiting from their investments through improved profitability ratios. Profitability was more noticeable for farms reporting technology use that had revenues of \$250,000 and over in 2020.

With respect to farm type, dairy cattle and milk farms were most likely to report technology use. In 2020, 84.1% of these farms reported using at least one type of technology, and they produced the second-highest profit margin (19.9 cents per dollar) among all farm types in Canada. Specifically, dairy cattle and milk farms that reported fully robotic milkers had better expense-to-revenue ratios than dairy cattle and milk farms that did not report using this technology.

Oilseed and grain farms were the second most likely farm type to report technology use (79.2%) in 2020, and they produced the highest profit margin (23.9 cents per dollar) among all farm types in Canada (Chart 2).

Specifically, in 2020, oilseed and grain farms that used automated guidance steering systems (auto-steer) had a better expense-to-revenue ratio than oilseed and grain farms that did not report using this technology.

Note to readers

The Census of Agriculture is conducted every five years.

All estimates presented in this article exclude data from cannabis operations and data from Canada's three territories.

All estimates presented in this article have not undergone random tabular adjustment.

Livestock farms include farms classified as beef cattle ranching and farming, including feedlots; dairy cattle and milk production; hog and pig farming; poultry and egg production; sheep and goat farming; and other animal production.

Definitions and concepts

Expense-to-revenue ratio

The farm expense-to-revenue ratio is the average amount of total operating expenses incurred for a dollar in total operating revenues. The 2015 ratio is calculated in 2020 constant dollars.

Farm definition

A significant conceptual change has been introduced for the 2021 Census of Agriculture: a "farm" or an "agricultural holding" (i.e., the census farm) now refers to a unit that produces agricultural products and reports revenues or expenses for tax purposes to the Canada Revenue Agency. Before 2021, a "farm" was defined as an agricultural operation that produced at least one agricultural product intended for sale.

Farm operating revenues

The Census of Agriculture collects total gross farm operating revenues (i.e., revenues before deducting expenses), in current dollars, for the calendar or accounting year before the census. Farm operating revenues include operating revenues from all agricultural products sold, program payments and custom work revenues.

The following items are not considered farm operating revenues: sales of forestry products (for example, firewood, pulpwood, logs, fence posts and pilings), sales of capital items (for example, quota, land and machinery) and revenues from the sale of any goods purchased only for retail sales.

Farm operating expenses

The Census of Agriculture collects total farm operating expenses, in current dollars, for the calendar or accounting year before the census. Farm operating expenses include any expenses associated with producing agricultural products (such as the cost of seed, feed, fuel and fertilizers).

The following items are not considered operating expenses: the purchase of land, buildings or equipment; depreciation; and capital cost allowance.

Farm type

The type of farm is established through a procedure that classifies each census farm according to the predominant type of production. This is done by estimating the potential revenues from the inventories of crops and livestock reported on the questionnaire and determining the product or group of products that makes up the majority of the estimated receipts. For example, a census farm with total potential revenues of 60% from hogs, 20% from beef cattle and 20%

from wheat would be classified as a hog and pig farm. The farm types presented in this document are derived based on the 2017 North American Industry Classification System.

Price indexes

Price indexes were used to obtain constant dollar estimates of operating revenues and expenses, to eliminate the impact of price change in year-to-year comparisons. All estimates related to 2015 operating revenues and expenses in this article have been adjusted to 2020 constant dollars based on the Farm Product Price Index and the Farm Input Price Index, respectively. Index data were accessed on May 11, 2022.

Total farm area

The total farm area is the total area of land owned or operated by an agricultural operation, and it includes cropland, summerfallow, improved and unimproved pasture, woodlands and wetlands, and all other land (including idle land and land on which farm buildings are located).