Subject: Niagara Agriculture Profile

Report to: Planning and Economic Development Committee

Report date: Wednesday, September 13, 2023

Recommendations

1. That this report **BE RECEIVED** for information.

Key Facts

- This report provides a high-level summary of the Niagara Agriculture Profile which is a detailed report on agricultural characteristics and economic impact in Niagara.
- In 2021, there were 1,651 farms operating in Niagara generating $1.71 billion in Gross Domestic Product (GDP) and supporting 24,073 jobs.
- There were fewer farms and less farmland in production in 2021 than in 2016 however agricultural GDP impact in Niagara grew substantially by 21%.

Financial Considerations

The activities described in this report are within the Council approved 2023 Economic Development operating budget.

Analysis

The economic and cultural importance of agriculture in Niagara has long been established. Although characteristics of the sector change with time, the importance of the sector to the economic health of the region remains constant.

This Niagara Agriculture Profile provides an update on the key agricultural characteristics of the sector using data from Statistics Canada 2021 Census of Agriculture. This update builds on previous reports by the Golden Horseshoe Food and Farming Alliance published in October 2014, and the Niagara Agriculture Profile published by the Niagara Region Economic Development in May 2018.

This report is a summary of the Niagara Agriculture Profile. It includes key information on farms and farmland area, farm capital and revenue, farm operations, and agricultural economic impact for Niagara. It also addresses agricultural land use planning considerations.

Farms and Farmland Area

In 2021, there were 1,651 farms operating in Niagara. This was a decrease of 176 (10%) from 1,827 farms in 2016. There was also a decrease in farmland area. In 2021, there were 208,414 acres of farmland area. This was a decrease of 9,837 acres (5%) from 218,251 acres in 2016.

Although Niagara experienced a decrease in farms and farmland area, average farm size got larger. In 2021, the average farm size was 126.2 acres, which was 6.8 acres more (5.7%) than 119.5 acres in 2016. This indicates a level of farm consolidation that occurred.

The number of greenhouses in use in Niagara also decreased. In 2021, Niagara had 163 greenhouses. This was a decrease of 24 greenhouses in use (13%) over 2016. Greenhouse area in use decreased at a much lower rate than the number of greenhouses. In 2021, there was 21.4 million square feet of greenhouse in use, which was a decrease of over 500,000 square feet (2%) from 21.9 million square feet in 2016. However, average greenhouse size grew substantially by 14,185 square feet (12%) from 117,262 square feet in 2016 to 131,448 square feet in 2021. This also indicates a level of consolidation in the greenhouse industry.

In 2021, there were fewer farms in Niagara, but they were larger in size on average across all farm types.

Farm Capital and Revenue

In 2021, total farm capital in Niagara was $5.6 billion. Most of the value (92%) was in land and buildings. Of this, 72% was owned by the operator while 20% was rented or leased. Total farm machinery and equipment was valued at $373.4 million, and livestock and poultry were valued at $64.5 million. Average farm capital was $3.4 million.

Although there were fewer farms operating in 2021, total farm revenue increased substantially by $176.2 million (21%) from $838.1 million in 2016 to $1.0 billion in 2021.

Average farm revenue also increased substantially by $155,611 (34%) from $458,738 in 2016 to $614,349 in 2021.

Also, as farm revenue increased in 2021, farm expenses increased at a higher rate. Total farm expenses increased by $154.0 million (22%) from $706.7 million in 2016 to $860.7 million in 2021. Average farm expenses increased by $134,522 (35%) from $386,794 in 2016 to $521,316 in 2021.

Farms in Niagara have generated more revenue; however, the cost of farming has got more expensive and the increase in expenses outpaced increases in revenue.

Farm Operations

Farms in Niagara have a variety of different operating arrangements. Of the 1,651 farms that reported their operating arrangements in 2021, 42% were sole proprietorships, 28% were family-owned corporations, 27% were partnerships, and 4% were non-family corporations. This indicates that most farms are still small businesses and/or family enterprises.

The family component was also strong among agricultural workers. In 2021, 474 farms reported they employed 7,794 workers. 348 farms reported that they employed 1,078 family members (3 on average); 350 farms reported that they employed 2,475 full-time year-round workers (7 on average); 204 farms reported that they employed 1,022 part-time year-round workers (5 on average); and 290 farms reported that they employed 4,296 seasonal or temporary workers (15 on average).

Demographic characteristics of farm operators is also an important consideration. In 2021, 68% reported being male and 32% reported being female, and the average age of a farm operator was 57.3, which was an increased from 56 in 2016, and 55.2 in 2011.

The increasing age of farm operators is a concern. Not only is the average farm operator aging, but succession planning has also not been where it needs to be to ensure future sustainability of farm operations. For instance, of the 1,651 farms in Niagara, 1,056 farms reported having no succession plan, 381 farms reported having a verbal succession plan only, and only 213 farms reported having a written succession plan. Moreover, 207 farms reported having a succession plan that includes one or more family members, and only 11 farms have reported having a succession plan that includes one or more non-family members.

Technology adoption across the sector is also a concern. Farm operators have been slow to adopt next generation technology such as robotics and drones. For instance, of 1,651 farms, 485 farms have adopted soil sample testing, 436 farms have adopted slow-release fertilizer, 302 farms have adopted variable-rate input applications, 206 farms have adopted auto-steer, 200 have adopted Geographic Information System (GIS) mapping, 33 have adopted robotic greenhouse equipment, 30 have adopted drones, and 9 have adopted robotic milkers.

Renewable energy is a form of technology being adopted by farms in Niagara. In 2021, 279 farms reported adopting renewable energy technology. 196 farms reported selling the energy, while 92 farms reported using the energy on-farm. Solar had the highest adoption at 193 farms, followed by wind turbines at 36, geothermal at 34, and bioenergy at 27.

Economic Impact

The agriculture sector in Niagara provides a substantial economic impact. In 2021, agriculture contributed $1.71 billion to regional GDP. This was $296.3 million (21%) more than in 2016. The top agriculture industries by GDP impact included greenhouse, nursery, and floriculture (49% of total); fruit and tree nut (21% of total); and poultry and egg (12% of total). This accounted for 82% of total agriculture GDP impact in Niagara.

In regard to employment, in 2021 agriculture in Niagara supported 24,073 jobs. This is across the entire agriculture value chain from on-farm work, to transportation, farm services, and other value-added activities. This was an increase of 4,181 jobs over 19,892 in 2016.

Lastly, Niagara is an agriculture powerhouse in the Golden Horseshoe region of Ontario. In 2021, Niagara generated 41% of the total agriculture GDP impact in the Golden Horseshoe, which includes Niagara Region, Durham Region, York Region, Hamilton, Halton Region, and Peel Region.

Agricultural Land-Use Planning Considerations

The Niagara Official Plan (NOP) implements an Agricultural System approach, which includes protection of the agricultural land-base and the agri-food network, helping enable the agri-food sector to thrive. In 2018, the Ontario Ministry of Agriculture, Food, and Rural Affairs proposed updated agricultural land-base mapping for the greater golden horseshoe. Agricultural land-base mapping identifies specialty crop lands, prime

agricultural areas and rural lands, which together create a continuous productive land-base for agriculture and related uses to occur. Specialty crop lands are afforded the highest level of protection through land-use policies, followed by prime agricultural areas and rural lands.

During consultations for the NOP, the farming community and broader public, indicated a desire to see more agricultural lands designated and protected, in order to facilitate a long-term investment in continuous agricultural production. Working with local municipal planners, Regional staff refined the land-base to better reflect where agricultural land uses were occurring and enhance the continuity of the land base. Through approval of the NOP, a net total of 2,750.3 acres of specialty crop and prime agricultural area were added across Wainfleet, Port Colborne, Fort Erie, Niagara Falls, Welland, Pelham and Thorold. A net increase of designated agricultural land across Niagara supports the goal of ensuring adequate protected lands are available for agricultural production for the long-term. This framework increases opportunities to utilize lands actively for agricultural production and supports a reversal to the trend of declining farmland acres in production (as measured annually). Niagara Region is one of the few municipalities in the Greater Golden Horseshoe to produce a net increase in protected agricultural lands through refinement and implementation of the updated provincial mapping.

Conclusion

The Niagara Agriculture Profile presents an updated overview of the agricultural sector's characteristics and economic impact in the region. Despite changes in the sector over time, the significance of agriculture to Niagara's economic health has remained constant and the recent approval of the Niagara Official Plan has ensured agriculturally designated lands will continue to be protected through policy. While the economic impact of agriculture has increased, there are areas of concern such as a rising cost of doing business, an aging farm operator population, and the need for proactive succession planning and technology adoption to ensure the sector's sustainability. Niagara's agricultural sector continues to be a key driver of regional GDP and employment, solidifying its position as an agriculture powerhouse within Ontario.

Alternatives Reviewed

All activities describe in this report are key functions of Regional Economic Development and the tactics being used are consistent with accepted economic development practices.

Relationship to Council Strategic Priorities

This report supports the following Council Strategic Priorities:

- Prosperous Region
- Green and Resilient Region

Other Pertinent Reports

There are no other reports that are applicable.

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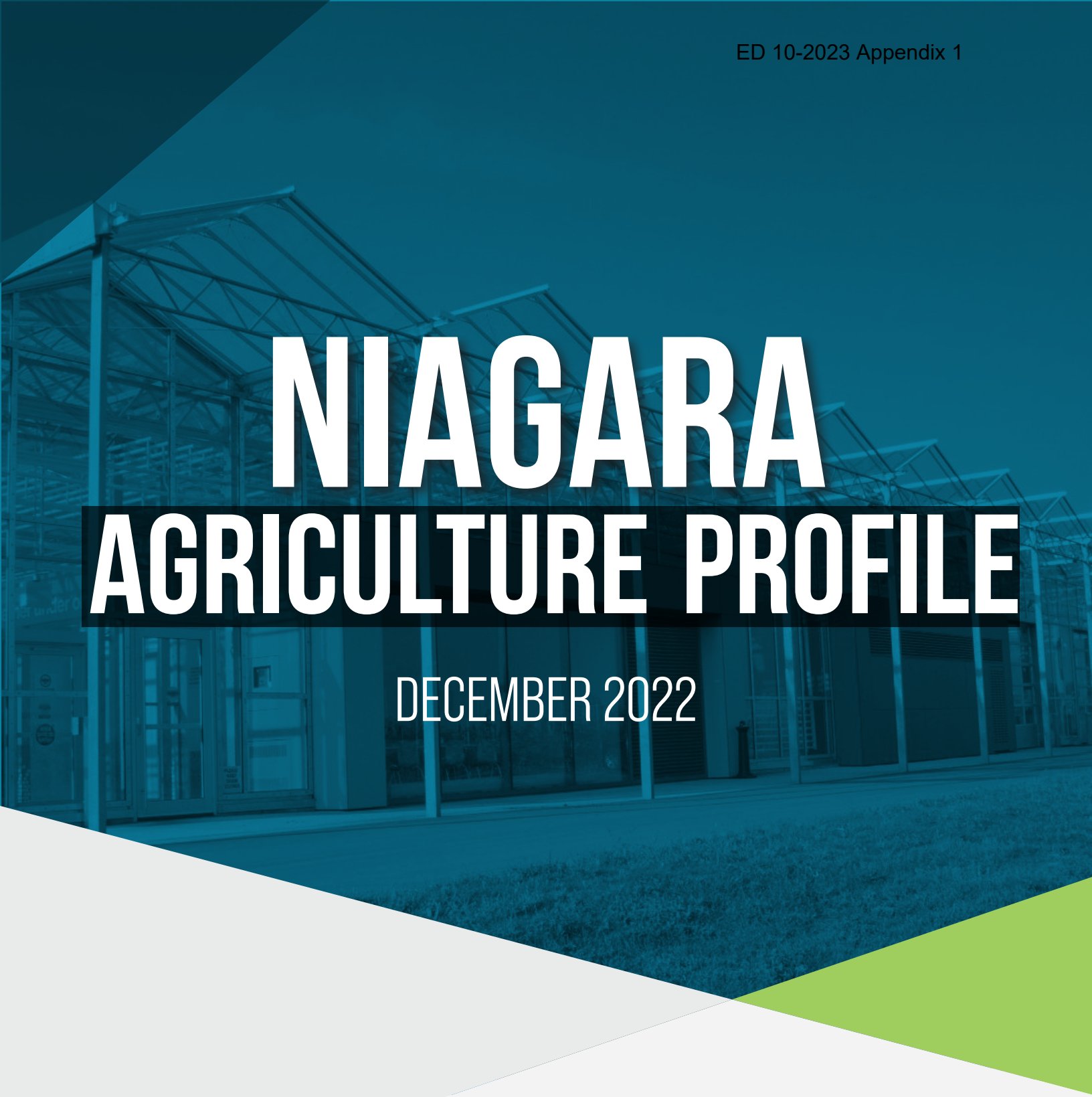
Appendices

Appendix 1 Niagara Agriculture Profile, 2022



NIAGARA AGRICULTURE PROFILE

DECEMBER 2022

Niagara Region

NIAGARA ECONOMIC DEVELOPMENT

NIAGARA AGRICULTURE

Niagara is an agriculture powerhouse, showing diversity, high value outputs and impressive growth Statistic Canada Census of Agriculture, 2016 compared to 2011.

Top 3 Farm Types (by revenue)

Greenhouse

$492 Million

Fruit

$218 Million

Poultry

$124 Million

Number of Farms: 1,651

Average Farm Size: 126.2 acres

Farmland Area: 208,414 acres

Total Revenue	Total Expenses	Total Capital
$1.01 Billion	$861 Million	$5.59 Billion

Land in Crops: 179,404 acres

GDP Impact
$1.71 Billion

Employment Impact
24,073 jobs

GDP Growth: 21%
(2016-2021)

163 Greenhouses

Total Greenhouse area in use:
21.4 Million ft²

NIAGARA CANADA

niagaracanada.com

INTRODUCTION

The economic and cultural importance of agriculture in Niagara has long been established. Although characteristics of the sector have changed over the years, the importance of the sector to the economic health of the region has remained constant. This is why it is important to understand the changing nature of agriculture in Niagara including the economic impact characteristics.

This Niagara Agriculture Profile seeks to provide an update on the key agricultural characteristics and economic impact of the sector using data from Statistics Canada 2021 Census of Agriculture. This update builds on previous updates including a report by the Golden Horseshoe Food and Farming Alliance published in October 2014 using 2011 Census of Agriculture data, and the Niagara Agriculture Profile and Niagara Agriculture Economic Impact reports published by the Niagara Region Economic Development division in May 2018 using 2016 Census of Agriculture data.

The report below includes information on number of farms, farmland area, average farm size, farm type, land type, greenhouses characteristics, land tenure, farm capital, farm revenue and expenses, operating arrangements, paid agricultural workers, farm operators, operator sex and age, succession planning, technology adoption, renewable energy adoption, and economic impact characteristics.

FARMS AND FARMLAND AREA

This section covers information on number of farms, farmland area, farms by type, average farm size, land tenure, and greenhouse characteristics.

Table 1 shows number of farms by municipality. From 2016 to 2021 total number of farms in Niagara had a net declined of 176 farms (9.6%) from 1,827 to 1,651. Wainfleet experienced the largest decline with 216 farms (59.3%), followed by Welland/Thorold with 98 farms (60.9%), West Lincoln with 32 farms (8.2%), Port Colborne with 28 farms (38.9%), Niagara Falls with 19 farms (27.9%), and Fort Erie with 16 farms (21.9%). Lincoln, Grimsby, St. Catharines, Pelham and Niagara-on-the-Lake gained farms.

Table 1: Number of Farms by Municipality, 2016 and 2021

MUNICIPALITY	2016	2021	CHANGE	% CHANGE
NIAGARA REGION	1,827	1,651	-176	-9.6
WEST LINCOLN	391	359	-32	-8.2
WAINFLEET	364	148	-216	-59.3
LINCOLN	329	335	6	1.8
NIAGARA-ON-THE-LAKE	167	299	132	79.0
WELLAND/THOROLD	161	63	-98	-60.9
PELHAM	83	136	53	63.9
FORT ERIE	73	57	-16	-21.9
PORT COLBORNE	72	44	-28	-38.9
NIAGARA FALLS	68	49	-19	-27.9
GRIMSBY	61	76	15	24.6
ST. CATHARINES	58	85	27	46.6

Table 2 shows farmland area by municipality. From 2016 to 2021 total farmland area in Niagara declined by a net 9,837 acres (4.5%) from 218,251 acres to 208,414 acres. Welland/Thorold had the largest decline of farmland area by 138 acres (24.8%), followed by Wainfleet by 3,261 acres (8.3%), Port Colborne by 1,796 acres (17.1%), Pelham by 1,473 acres (9.0%), Niagara-on-the-Lake by 680 acres (3.5%), Grimsby by 423 acres (9.4%), Niagara Falls by 279 acres (5.2%), and Fort Erie by 160 acres (1.4%).

The following municipalities had an increase in farmland area. Lincoln increased by 529 acres (2.2%), St. Catharines by 621 acres (15.8%), and West Lincoln by 1,533 acres (2.3%).

Table 2: Farmland Area (Acres) by Municipality, 2016 and 2021

MUNICIPALITY	2016	2021	CHANGE	% CHANGE
NIAGARA REGION	218,251	208,414	-9,837	-4.5
WEST LINCOLN	66,588	68,121	1,533	2.3
WAINFLEET	39,211	35,950	-3,261	-8.3
LINCOLN	23,615	24,144	529	2.2
NIAGARA-ON-THE-LAKE	19,310	18,630	-680	-3.5
WELLAND/THOROLD	16,662	12,524	-4,138	-24.8
PELHAM	16,424	14,951	-1,473	-9.0
FORT ERIE	11,839	11,679	-160	-1.4
PORT COLBORNE	10,523	8,727	-1,796	-17.1
NIAGARA FALLS	5,322	5,043	-279	-5.2
GRIMSBY	4,516	4,093	-423	-9.4
ST. CATHARINES	3,931	4,552	621	15.8

Table 3 shows average farms size by municipality. From 2016 to 2021 average farm size in Niagara increased by 6.8 acres (5.7%) from 119.5 acres to 126.2 acres. Average farm size increased the most in Wainfleet by 135.2 acres (125.5%), followed by Welland/Thorold by 95.3 acres (92.1%), Port Colborne by 52.2 acres (35.7%), Fort Erie by 42.7 acres (26.3%), Niagara Falls by 24.7 acres (31.5%), West Lincoln by 19.5 acres (11.4%), and Lincoln by 0.3 acres (0.4%).

The following municipalities had a decrease in average farm size. Pelham decreased by 87.9 acres (44.4%), Niagara-on-the-Lake by 53.3 acres (46.1%), Grimsby by 20.2 acres (27.3%), and St. Catharines by 14.2 acres (21.0%).

Table 3: Average Farm Size (Acres) by Municipality, 2016 and 2021

MUNICIPALITY	2016	2021	CHANGE	% CHANGE
NIAGARA REGION	119.5	126.2	6.8	5.7
WEST LINCOLN	170.3	189.8	19.5	11.4
WAINFLEET	107.7	242.9	135.2	125.5
LINCOLN	71.8	72.1	0.3	0.4
NIAGARA-ON-THE-LAKE	115.6	62.3	-53.3	-46.1
WELLAND/THOROLD	103.5	198.8	95.3	92.1
PELHAM	197.9	109.9	-87.9	-44.4
FORT ERIE	162.2	204.9	42.7	26.3
PORT COLBORNE	146.2	198.3	52.2	35.7
NIAGARA FALLS	78.3	102.9	24.7	31.5
GRIMSBY	74.0	53.9	-20.2	-27.3
ST. CATHARINES	67.8	53.6	-14.2	-21.0

Table 4 shows number of farms by farm type. From 2016 to 2021 Niagara gained the most farms in oilseed and grain by 16 (4.9%), followed by sheep and goat by 9 (37.5%), beef cattle ranching and feedlots by 5 (5.5%), and vegetable and melon by 2 (2.7%).

The farms types with a decrease included fruit and tree nut farming by 67 (12.2%), other animal by 53 (29.8%), greenhouse, nursery and floriculture by 44 (17.3%), other crop by 31 (21.8%), and poultry and egg by 13 (7.4%).

The number of hog and pig farms remained the same.

Table 4: Number of Farms by Type, 2016 and 2021

TYPE	2016	2021	CHANGE	% CHANGE
TOTAL NUMBER OF FARMS	1,827	1,651	-176	-9.6
OILSEED AND GRAIN	326	342	16	4.9
VEGETABLE AND MELON	73	75	2	2.7
FRUIT AND TREE NUT FARMING	547	480	-67	-12.2
GREENHOUSE, NURSERY, FLORICULTURE	254	210	-44	-17.3
OTHER CROP	142	111	-31	-21.8
BEEF CATTLE RANCHING, FEEDLOTS	91	96	5	5.5
HOG AND PIG	17	17	0	0.0
POULTRY AND EGG	175	162	-13	-7.4
SHEEP AND GOAT	24	33	9	37.5
OTHER ANIMAL	178	125	-53	-29.8

Table 5 shows land type by farmland area, number of farms and average farms size. Land crops was by far the largest land type with 179,404 acres, followed by woodlands and wetland with 12,495 acres, all other land with 10,087 acres, tame or seeded pasture with 2,622 acres, summerfallow land with 1,148 acres, summerfallow, tilled only with 611 acres, and chemical and tillage weed control on the same land with 382 acres. Chemfallow only, natural land pasture, and Christmas trees grown for sale are supressed due to limited data.

In regard to number of farms, land in crops had the most with 1,324, followed by all other land with 1,061, woodlands and wetlands with 532, natural land for pasture with 195, tame or seeded pasture with 152, summerfallow, land with 73, summerfallow, tilled only with 50, Christmas tree grown for sale with 25, chemical and tillage weed control on the same land with 16, and chemfallow only with 7.

In regard to land type by average farm size, land in crops had the average size at 135.5 acres, followed by chemical and tillage weed control on the same land at 23.9 acres, woodlands and wetlands at 23.5 acres, tame or seeded pasture at 17.3 acres, summerfallow land at 15.7 acres, summerfallow, tilled only at 12.2 acres,

Table 5: Land Type by Number of Farms, Farmland Area (Acres) and Average Farm Size (Acres), 2021

TYPE	AREA	FARMS	AVERAGE
TOTAL FARM AREA	208,414	1,651	126.2
LAND IN CROPS (EXCLUDING CHRISTMAS TREE AREA)	179,404	1,324	135.5
SUMMERFALLOW LAND	1,148	73	15.7
CHEMFALLOW ONLY	..	7	..
SUMMERFALLOW, TILLED ONLY	611	50	12.2
CHEMICAL AND TILLAGE WEED CONTROL ON THE SAME LAND	382	16	23.9
TAME OR SEEDED PASTURE	2,622	152	17.3
NATURAL LAND FOR PASTURE	..	195	..
WOODLANDS AND WETLANDS	12,495	532	23.5
CHRISTMAS TREES GROWN FOR SALE	..	25	..
ALL OTHER LAND	10,087	1,061	9.5

Table 6 shows number of greenhouses, total greenhouse area and average greenhouse size. From 2016 to 2021, number of greenhouses in Niagara declined by 24 (12.8%), greenhouse area in use declined by 502,058 (2.3%), and average greenhouse size grew by 14,185 square feet (12.1%).

Table 6: Number of Greenhouses, Greenhouse Area (Square Feet) and Average Size (Square Feet), 2016 and 2021

	2016	2021	CHANGE	% CHANGE
GREENHOUSES	187	163	-24	-12.8
AREA IN USE	21,928,034	21,425,976	-502,058	-2.3
AVERAGE SIZE	117,262	131,448	14,185	12.1

Table 7 shows greenhouse use by number of farms and greenhouse area in use. In 2021 there were 163 greenhouse farms in Niagara with total area of 21,425,976 square feet. Potted plants had the largest number of greenhouse with 96 farms and the largest area at 13,576,618 square feet. This was 62.9% of total greenhouse area in use. This was followed by greenhouse fruits and vegetables with 48 farms and 4,678,352 square feet in use (21.8% of total), other greenhouse products with 30 farms and 2,252,828 square feet in use (10.5% of total), and cut flowers with 20 farms and 1,018,178 square feet in use (4.8% of total).

Table 7: Greenhouse Use by Number of Farms and Greenhouse Area

USE	FARMS	AREA	AREA %
GREENHOUSE AREA IN USE	163	21,425,976	100
POTTED PLANTS	96	13,476,618	62.9
GREENHOUSE FRUITS AND VEGETABLES	48	4,678,352	21.8
OTHER GREENHOUSE PRODUCTS	30	2,252,828	10.5
CUT FLOWERS	20	1,018,178	4.8

Table 8 shows the number of greenhouses and greenhouse area by municipality. Lincoln has the highest number of greenhouses with 53 and greenhouse area of 9,706,798 square feet, which is 45.3% of the total for Niagara. This was followed by Niagara-on-the-Lake with 31 greenhouses and 5,238,273 square feet (24.4%), Pelham with 21 greenhouses and 1,548,574 square feet (7.2%), St. Catharines with 11 greenhouses and 2,588,461 square feet (12.1%), Grimsby with 11 greenhouses, West Lincoln with 10 greenhouses, Wainfleet with 8 greenhouses and 262,800 square feet (3.3%), Welland/Thorold with 8 greenhouses and 262,880 square feet (1.2%), Port Colborne with 4 greenhouses, Fort Erie with 4 greenhouses, and Niagara Falls with 2 greenhouses.

Greenhouse area data was redacted for Grimsby, West Lincoln, Port Colborne, Fort Erie, and Niagara Falls due to quality concerns.

Table 8: Greenhouses and Greenhouse Area (Square Feet) by Municipality, 2021

MUNICIPALITY	FARMS	AREA	% OF TOTAL
NIAGARA REGION	163	21,425,976	100.0
LINCOLN	53	9,706,789	45.3
NIAGARA-ON-THE-LAKE	31	5,238,273	24.4
PELHAM	21	1,548,574	7.2
ST. CATHARINES	11	2,588,461	12.1
GRIMSBY	11	..	..
WEST LINCOLN	10	..	..
WAINFLEET	8	702,356	3.3
WELLAND/THOROLD	8	262,880	1.2
PORT COLBORNE	4	..	..
FORT ERIE	4	..	..
NIAGARA FALLS	2	..	..

Table 9 shows number of farms by farm tenure. Tenure means the conditions under which land or buildings are held or occupied. Of total farms in Niagara, 1,555 farms (94.2%) own the land, 453 farms (27.4%) rent or lease the land from others, 242 farms (14.7%) use provide land to others, 102 farms (6.2%) have other land area used by the operation, 26 farms (1.6%) use crop-shared land, and 21 farms (1.3%) use land leased from governments.

Table 9: Number of Farms by Land Tenure, 2021

LAND TENURE	FARMS	% OF TOTAL
TOTAL FARM AREA	1,651	100.0
AREA OWNED	1,555	94.2
AREA RENTED OR LEASED FROM OTHERS	453	27.4
TOTAL AREA OF LAND USED BY OTHERS	242	14.7
OTHER LAND AREA USED BY THE OPERATION	102	6.2
CROP-SHARED LAND USED BY THE OPERATION	26	1.6
AREA LEASED FROM GOVERNMENTS	21	1.3

Table 10 shows land area by land tenure. 133,327 acres (64%) are owned, 77,287 acres (37.1%) is area rented or leased from others, 9,155 acres (4.4%) is land provided to others, 4,046 (1.9%) is other land area used by the operation, 2,139 acres (1.0%) is land area that is crop-shared by the operation, and data from area leased to governments is suppressed.

Table 10: Farmland Area (Acres) by Land Tenure

LAND TENURE	AREA	% OF TOTAL
TOTAL FARM AREA	208,414	100.0
AREA OWNED	133,327	64.0
AREA RENTED OR LEASED FROM OTHERS	77,287	37.1
TOTAL AREA OF LAND USED BY OTHERS	9,155	4.4
OTHER LAND AREA USED BY THE OPERATION	4,046	1.9
CROP-SHARED LAND USED BY THE OPERATION	2,139	1.0
AREA LEASED FROM GOVERNMENTS	..	..

FARM CAPITAL AND REVENUE

This section covers information on farm capital, farms revenues and expenses, farm revenue by municipality, and revenue by farm type.

Table 11 shows number of farms by farm capital type for 2021. Of 1,651 farms, 1,517 (91.9%) reported farm machinery, equipment and vehicles, and 607 (36.8%) reported livestock and poultry.

All 1,651 farms (100%) reported land and buildings, 1,551 (93.9%) reported land and buildings owned, and 549 (33.3%) reported land and buildings rented or leased from others.

Table 11: Number of Farms by Farm Capital Type, 2021

TYPE	FARMS	% OF TOTAL
TOTAL FARM CAPITAL	1,651	100.0
FARM MACHINERY, EQUIPMENT AND VEHICLES	1,517	91.9
LIVESTOCK AND POULTRY	607	36.8
LAND AND BUILDINGS, TOTAL	1,651	100.0
LAND AND BUILDINGS, OWNED	1,551	93.9
LAND AND BUILDINGS, RENTED OR LEASED FROM OTHERS	549	33.3

Table 12 shows total value of farm capital by type. In 2021, total farm capital in Niagara was valued at $5,593,981,370. Land and buildings accounted for $5,156,081,903 (92.2%), land and buildings owned accounted for $4,016,814,261 (71.8%), land and buildings rented or leased accounted for $1,139,267,642 (20.4%), farm machinery, equipment and vehicles accounted for $373,391,121 (6.7%), and livestock and poultry accounted for $64,508,345 (1.2%).

Table 12: Total Value ($) by Farm Capital Type, 2021

TYPE	VALUE	% OF TOTAL
TOTAL FARM CAPITAL	5,593,981,370	100.0
FARM MACHINERY, EQUIPMENT AND VEHICLES	373,391,121	6.7
LIVESTOCK AND POULTRY	64,508,345	1.2
LAND AND BUILDINGS, TOTAL	5,156,081,903	92.2
LAND AND BUILDINGS, OWNED	4,016,814,261	71.8
LAND AND BUILDINGS, RENTED OR LEASED	1,139,267,642	20.4

Table 13 shows average value of farm capital by type. Land and buildings accounted for $3,123,005 (92.2%) of farm capital on average, land and buildings owned accounted for $2,589,822 (76.4%) on average, land and buildings rented or leased accounted for $2,075,169 (61.2%) on average, farm machinery, equipment and vehicles accounted for $246,138 (7.3%) on average, and livestock and poultry accounted for $106,274 (3.1%) on average.

Table 13: Average Value ($) by Farm Capital Type, 2021

TYPE	2021	% OF TOTAL
TOTAL FARM CAPITAL	3,388,238	100.0
FARM MACHINERY, EQUIPMENT AND VEHICLES	246,138	7.3
LIVESTOCK AND POULTRY	106,274	3.1
LAND AND BUILDINGS, TOTAL	3,123,005	92.2
LAND AND BUILDINGS, OWNED	2,589,822	76.4
LAND AND BUILDINGS, RENTED OR LEASED	2,075,169	61.2

Table 14 shows total and average revenue and total and average expenses for 2016 and 2021. Total farm revenue for Niagara in 2021 was $1,014,290,126 which was an increase of $176,176,338 (21.0%) over 2016 at $838,113,788. Average revenue was $614,349 in 2021 which was an increased of $155,611 (33.9%) over $458,738 in 2016.

Total farm expenses in 2021 was $860,692,246 which was an increase of $154,020,554 (21.8%) over $706,671,692 (21.8%) in 2016.

Total net revenue was $153,597,880 in 2021 compared to $131,442,096 in 2016 which was an increase of $22,155,784 (16.9%).

Table 14: Revenue and Expenses by Number of Farms, Value ($) and Average ($), 2016 and 2021

	2016	2021	CHANGE	% CHANGE
FARMS	1,827	1,651	-176	-9.6
REVENUE	838,113,788	1,014,290,126	176,176,338	21.0
AVERAGE REVENUE	458,738	614,349	155,611	33.9
EXPENSES	706,671,692	860,692,246	154,020,554	21.8
AVERAGE EXPENSES	386,794	521,316	134,522	34.8

Table 15 shows total farm revenue, percent of total revenue and average farm revenue by municipality for 2021. Lincoln had the highest farm revenue value with $347,398,352 (34.2%), followed by Niagara-on-the-Lake with $220,854,903 (21.8%), West Lincoln with $144,565,116 (14.3%), St. Catharines with $92,392,484 (9.1%), Pelham with $73,148,130 (7.2%), Wainfleet with $62,616,551 (6.2%), Welland/Thorold with $24,753,780 (2.4%), Grimsby with $24,008,136 (2.4%), Port Colborne with $8,410,374 (0.8%), Fort Erie with $8,226,638 (0.8%), and Niagara Falls with $7,915,662 (0.8%).

In regard to average farm revenue by municipality, St. Catharines had the high-est with $1,086,970, followed by Lincoln with $1,037,010, Niagara-on-the-Lake with $738,645, Pelham with $537,854, Wainfleet with $423,085, West Lincoln with $402,688, Welland/Thorold with $392,917, Grimsby with $315,897, Port Colborne with $191,145, Niagara Falls with $161,544, and Fort Erie with $144,327.

Table 15: Revenue by Municipality for Number of Farms, Value, Percentage and Average, 2021

MUNICIPALITY	FARMS	REVENUE ($)	REVENUE %	AVG. REVENUE ($)
NIAGARA REGION	1,651	1,014,290,126	100.0	614,349
WEST LINCOLN	335	347,398,352	34.3	1,037,010
WAINFLEET	299	220,854,903	21.8	738,645
LINCOLN	359	144,565,116	14.3	402,688
NIAGARA-ON-THE-LAKE	85	92,392,484	9.1	1,086,970
WELLAND/THOROLD	136	73,148,130	7.2	537,854
PELHAM	148	62,616,551	6.2	423,085
FORT ERIE	63	24,753,780	2.4	392,917
PORT COLBORNE	76	24,008,136	2.4	315,897
NIAGARA FALLS	44	8,410,374	0.8	191,145
GRIMSBY	57	8,226,638	0.8	144,327
ST. CATHARINES	49	7,915,662	0.8	161,544

Table 16 shows total farm revenue, percent of total and average farm revenue by farm type for 2021. Greenhouse, nursery and floriculture had the highest total revenue at $492,035,472 (48.5%), followed by fruit tree and nut with $217,782,130 (21.5%), poultry and egg with $123,947,027 (12.2%), oilseed and grain with $76,856,149 (7.6%), other crop farming with $35,997,113 (3.5%), diary cattle and milk with $28,672,817 (2.8%), hog and pig with $15,455,284 (1.5%), other animal with $11,759,215 (1.2%), beef cattle ranching and feedlots with $5,304,482 (0.5%), sheep and goat with $3,285,524 (0.3%), and vegetable and melon with $3,194,913 (0.3%).

In regard to average farm revenue, greenhouse, nursery and floriculture was the highest at $2,343,026, followed by hog and pig with $909,143, poultry and egg with $765,105, dairy cattle and milk with $735,200, fruit and tree nut with $453,713, other crop farming with $324,298, oilseed and grain with $224,726, sheep and goat with $99,561, other animal with $94,074, beef cattle ranching and feedlots with $93,061, and vegetable and melon with $42,599.

Table 16: Revenue by Farm Type, Number of Farms, Value, Percentage and Average, 2021

TYPE	FARMS	REVENUE ($)	REVENUE %	AVG. REVENUE ($)
TOTAL	1,651	1,014,290,126	100.0	614,349
GREENHOUSE, NURSERY, FLORICULTURE	210	492,035,472	48.5	2,343,026
FRUIT AND TREE NUT	480	217,782,130	21.5	453,713
POULTRY AND EGG	162	123,947,027	12.2	765,105
OILSEED AND GRAIN	342	76,856,149	7.6	224,726
OTHER CROP FARMING	111	35,997,113	3.5	324,298
DAIRY CATTLE AND MILK	39	28,672,817	2.8	735,200
HOG AND PIG	17	15,455,284	1.5	909,134
OTHER ANIMAL	125	11,759,215	1.2	94,074
BEEF CATTLE RANCHING, FEEDLOTS	57	5,304,482	0.5	93,061
SHEEP AND GOAT	33	3,285,524	0.3	99,561
VEGETABLE AND MELON	75	3,194,913	0.3	42,599

OTHER FARM AND OPERATOR INFORMATION

This section covers additional information on farm operating arrangements (i.e. business structure), paid agricultural workers, farm operator characteristics (number, sex, age), farm succession planning, technology adoption on farms, renewable energy production on farms.

Table 17 shows number of farms by operating arrangement for Niagara for 2021. Operating arrangement is essentially the business structure of each farm. 693 farms (42.0%) were sole proprietorships, 456 (27.6%) were family corporations, 438 (26.5%) were partnerships, 64 (3.9%) were non-family corporations, and none were other operating arrangements.

Table 17: Operating Arrangement by Number of Farms, 2021

TYPE	FARMS	% OF TOTAL
TOTAL	1,651	100.0
SOLE PROPRIETORSHIP	693	42.0
FAMILY CORPORATION	456	27.6
PARTNERSHIP	438	26.5
NON-FAMILY CORPORATION	64	3.9
OTHER OPERATING ARRANGEMENTS	0	0.0

Table 18 shows paid agricultural workers for Niagara for 2021. 474 farms reported a total number of 7,794 people for an average of 16 per farm. 348 farms reported 1,078 agricultural worker family members for an average of 3 per farm. 350 farms reported employing a total of 2,475 full-time people for an average of 7 per farm. 204 farms reported employing 1,022 part-time workers for an average of 5 per farm, and 290 farms reported employing seasonal or temporary workers for an average of 15 per farm.

Table 18: Paid Agricultural Workers, 2021

TYPE	FARMS	PEOPLE	AVERAGE
AGRICULTURAL WORKERS, TOTAL	474	7,794	16
AGRICULTURAL WORKERS, FAMILY MEMBERS	348	1,078	3
FULL-TIME WORKERS (YEAR-ROUND)	350	2,475	7
PART-TIME WORKERS (YEAR-ROUND)	204	1,022	5
SEASONAL OR TEMPORARY WORKERS	290	4,296	15

Table 19 shows total farms and total farm operators in Niagara. There are 1,651 farms in Niagara with 2,360 farm operators for an average of 1.4 operators per farm.

Table 19: Total Farms and Farm Operators, 2021

	NUMBER
FARMS	1,651
FARM OPERATORS	2,360
AVERAGE	1.4

Table 20 shows number of farmer by sex in Niagara for 2021. There were 2,365 operators with 1,605 (67.9%) being male and 760 (32.1%) being female.

Table 20: Farms Operators by Sex, 2021

SEX	FARMERS	PERCENTAGE
MALE	1,605	67.9
FEMALE	760	32.1
TOTAL	2,365	100

Table 21 shows farm operator age for Niagara for 2016 and 2021. Average age for farm operators in Niagara grew by 1.3 years from 56 years in 2016 to 57.3 years in 2021. The median age for farm operators in 2021 was 58, which means half of the operators were younger than 58 and the other half were older than 58. Median age data for 2016 was not available.

Table 21: Farm Operator Age, 2016 and 2021

	2016	2021
AGE (AVERAGE)	56	57.3
AGE (MEDIAN)	..	58

Table 22 shows number of farms with succession plans for 2021. 1,056 farms reported having no succession plan, followed by 381 with a verbal successional plan only, 213 with a written succession plan, 207 farms reported including 1 of more family members in the succession plan, and 11 farms reported 1 or more non-family members in the succession plan.

Table 22: Farms with Succession Plans, 2021

TYPE	FARMS
NO SUCCESSION PLAN	1,056
VERBAL SUCCESSION PLAN ONLY	381
WRITTEN SUCCESSION PLAN	213
INCLUDES 1 OR MORE FAMILY MEMBERS	207
INCLUDES 1 OR MORE NON-FAMILY MEMBERS	11

Table 23 shows number of farms by type of technology adoption for 2021. The most adopted technology was soil sample test with 485 farms, followed by slow-release fertilizer with 436, variable-rate input application with 302, automated guidance steering systems (auto-steer) with 206, geographic information system (GIS) mapping with 200, robotic greenhouse equipment with 33, drones with 30, and fully-robotic milkers with 9.

Table 23: Technology Adoption on Farms, 2021

TYPE	FARMS
SOIL SAMPLE TEST	485
SLOW-RELEASE FERTILIZER	436
VARIABLE-RATE INPUT APPLICATION	302
AUTOMATED GUIDANCE STEERING SYSTEMS (AUTO-STEER)	206
GEOGRAPHIC INFORMATION SYSTEM (GIS) MAPPING	200
ROBOTIC GREENHOUSE EQUIPMENT	33
DRONES	30
FULLY-ROBOTIC MILKERS	9

Table 24 show number of farms by renewable energy adoption and production type. Number of farms with renewable energy production was 279. Number of farms that produced renewable energy for sale was 196. Number of farms that produced renewable energy for on-farm use was 92.

In regard to type of renewable energy, 193 farms used solar, 36 used wind, 24 used biomass combustion, 1 used other biogas, and 34 used geothermal.

Table 24: Renewable Energy Production by Type, 2021

TYPE	FARMS
RENEWABLE ENERGY PRODUCTION, TOTAL	279
RENEWABLE ENERGY PRODUCTION, FOR SALE	196
RENEWABLE ENERGY PRODUCTION, FOR USE ON THE OPERATION	92
RENEWABLE ENERGY TYPE, SOLAR	193
RENEWABLE ENERGY TYPE, WIND	36
RENEWABLE ENERGY TYPE, BIOENERGY, TOTAL	27
RENEWABLE ENERGY TYPE, BIOENERGY, BIOMASS COMBUSTION	24
RENEWABLE ENERGY TYPE, BIOENERGY, OTHER BIOGAS	1
RENEWABLE ENERGY TYPE, GEOTHERMAL	34
RENEWABLE ENERGY TYPE, BIOENERGY, BIOMETHANE	..
RENEWABLE ENERGY TYPE, BIOENERGY, BIOFUEL	..
RENEWABLE ENERGY TYPE, OTHER	0

AGRICULTURAL ECONOMIC IMPACT

This section covers economic impact characteristics of agriculture in Niagara. It includes information including gross revenue, gross output impact, direct impact, indirect impact, induced impact, GDP impact, and jobs impact for Niagara by municipality and farm type. It also includes GDP change from 2016 to 2021 by municipality and farm type.

Please see the "glossary of terms" at the end of the document for definitions of gross revenue, gross output impact, direct impact, indirect impact, induced impact, GDP impact, and jobs impact.

Table 25 shows agricultural economic impact characteristics for Niagara and the local municipalities. In 2021, total GDP impact for agriculture in Niagara was $1,705,909,311. Of the local municipalities Lincoln had the highest GDP impact of $584,280,639 (34.3%), followed by Niagara-on-the-Lake with $371,450,362 (21.8%), West Lincoln with $243,140,469 (14.3%), St. Catharines with $155,392,619 (9.1%), Pelham with $123,026,019 (7.2%), Wainfleet with $105,313,218 (6.2%), Thorold/Welland with $41,632,766 (2.4%), Grimsby with $40,378,686 (2.4%), Port Colborne with $14,145,199 (0.8%), Fort Erie with $13,836,178 (0.8%), and Niagara Falls with $13,313,155 (0.8%).

Total jobs impact for agriculture in Niagara was 24,073 in 2021. Of the local municipalities, Lincoln had the highest with 8,245, followed by Niagara-on-the-Lake with 5,242, West Lincoln with 3,431, St. Catharines with 2,193, Pelham with 1,736, Wainfleet with 1,486, Welland/Thorold with 588, Grimsby with 570, Port Colborne with 200, Fort Erie with 195, and Niagara Falls with 188.

Table 25: Agricultural Economic Impact by Municipality ($ Millions), 2021

MUNICIPALITY	GROSS REVENUE	GROSS OUTPUT	DIRECT	INDIRECT	INDUCED	GDP	JOBS
NIAGARA REGION	1,014.3	3,709.6	664.2	1,809.5	1,230.5	1,705.9	24,073
LINCOLN	347.4	1,270.6	227.5	619.8	421.5	584.3	8,245
NIAGARA-ON-THE-LAKE	220.9	807.7	144.6	394.0	267.9	371.5	5,242
WEST LINCOLN	144.6	528.7	94.7	257.9	175.4	243.1	3,431
ST. CATHARINES	92.4	337.9	60.5	164.8	112.1	155.4	2,193
PELHAM	73.1	267.5	47.9	130.5	88.7	123.0	1,736
WAINFLEET	62.6	229.0	41.0	111.7	76.0	105.3	1,486
WELLAND/THOROLD	24.8	90.5	16.2	44.2	30.0	41.6	588
GRIMSBY	24.0	87.8	15.7	42.8	29.1	40.4	570
PORT COLBORNE	8.4	30.8	5.5	15.0	10.2	14.1	200
FORT ERIE	8.2	30.1	5.4	14.7	10.0	13.8	195
NIAGARA FALLS	7.9	29.0	5.2	14.1	9.6	13.3	188

Table 26 shows agricultural economic impact characteristics by farm type in Niagara for 2021. Greenhouse, nursery and floriculture had the highest GDP impact at $827,542,210 (48.5%), followed by fruit and tree nut with $366,282,342 (21.5%), poultry and egg with $208,463,419 (12.2%), oilseed and grain with $129,262,444 (7.6%), other crop with $60,542,648 (3.5%), dairy cattle and milk with $48,224,097 (2.8%), hog and pig farming with $25,993,857 (1.5%), other animal with $19,777,531 (1.2%), beef cattle ranching and feedlots with $8,921,476 (0.5%), sheep and goat with $5,525,841 (0.3%), and vegetable melon with $5,373,445 (0.3%).

Total jobs impact by farm type included greenhouse, nursery and floriculture with 11,678, fruit and tree nut with 5,169, poultry and egg with 2,942, oilseed and grain with 1,824, other crop farming with 854, fairy cattle and milk with 681, hog and pig farming with 367, other animal with 279, beef cattle ranching and feedlots with 126, sheep and goat with 78, and vegetable and melon with 76.

Table 26: Agricultural Economic Impact by Farm Type ($ Millions), 2021

TYPE	GROSS REVENUE	GROSS OUTPUT	DIRECT	INDIRECT	INDUCED	GDP	JOBS
TOTAL	1,014.3	3,709.6	664.2	1,809.5	1,230.5	1,705.9	24,073
GREENHOUSE, NURSERY, FLORICULTURE	492.0	1,799.5	322.2	877.8	596.9	827.5	11,678
FRUIT AND TREE NUT	217.8	796.5	142.6	388.5	264.2	366.3	5,169
POULTRY AND EGG	123.9	453.3	81.2	221.1	150.4	208.5	2,942
OILSEED AND GRAIN	76.9	281.1	50.3	137.1	93.2	129.3	1,824
OTHER CROP FARMING	36.0	131.7	23.6	64.2	43.7	60.5	854
DAIRY CATTLE AND MILK	28.7	104.9	18.8	51.2	34.8	48.2	681
HOG AND PIG FARMING	15.5	56.5	10.1	27.6	18.8	26.0	367
OTHER ANIMAL	11.8	43.0	7.7	21.0	14.3	19.8	279
BEEF CATTLE RANCHING, FEEDLOTS	5.3	19.4	3.5	9.5	6.4	8.9	126
SHEEP AND GOAT	3.3	12.0	2.2	5.9	4.0	5.5	78
VEGETABLE AND MELON	3.2	11.7	2.1	5.7	3.9	5.4	76

Table 27 shows agricultural GDP impact change from 2016 to 2021. Although Niagara lost a number of farms and agricultural land, GDP increased significantly. Agricultural GDP impact in Niagara grew by $296,306,597 (21.0%). In regard to the local municipalities, it grew by $296,306,597 (21.0%) for Lincoln, $87,031.264 (30.6%) for Niagara-on-the-Lake, $42,051,324 (51.9%) for Pelham, $24,922,841 (19.2%) for St. Catharines, $17,728,661 (20.2%) for Wainfleet, $17,362,814 (71.5%) for Welland/Thorold, $590,200 (0.2%) for West Lincoln, and $467,778 (3.5%) for Fort Erie.

A few local municipalities had a decline in agricultural GDP impact. Port Colborne declined by $1,413,049 (9.1%), Niagara Falls declined by $16,177,931 (54.9%), and Grimsby declined by $33,619,787 (45.4%).

Table 27: GDP Impact Change by Municipality ($ Millions), 2016 and 2021

MUNICIPALITY	2016	2021	CHANGE	% CHANGE
NIAGARA REGION	1,409.6	1,705.9	296.3	21.0
LINCOLN	426.9	584.3	157.4	36.9
NIAGARA-ON-THE-LAKE	284.4	371.5	87.0	30.6
WEST LINCOLN	242.6	243.1	0.6	0.2
ST. CATHARINES	130.5	155.4	24.9	19.1
PELHAM	81.0	123.0	42.1	51.9
WAINFLEET	87.6	105.3	17.7	20.2
WELLAND/THOROLD	24.3	41.6	17.4	71.5
GRIMSBY	74.0	40.4	-33.6	-45.4
PORT COLBORNE	15.6	14.1	-1.4	-9.1
FORT ERIE	13.4	13.8	0.5	3.5
NIAGARA FALLS	29.5	13.3	-16.2	-54.9

Table 28 shows GDP impact change by farm type for Niagara for 2021. Greenhouse, nursery and floriculture grew by $135,827,454 (19.6%), fruit and tree nut grew by $130,860,472 (55.6%), other crop grew by $45,442,565 (300.9%), oilseed and grain grew by $33,328,339 (34.7%), dairy cattle and milk grew by $15,256,237 (46.3%), beef cattle ranching and feedlots grew by $5,286,774 (145.5%), sheep and goat grew by $3,675,901 (198.7%), other animal grew by $1,555,112 (8.5%), and vegetable and melon grew by $172,100 (3.3%).

In regard to farms types that had a decline in GDP impact, hog and pig declined by $23,800,587 (47.8%), and poultry and egg declined by $51,297,771 (19.7%).

Table 28: GDP Impact Change by Farm Type ($ Millions), 2016 and 2021

TYPE	2016	2021	CHANGE	% CHANGE
TOTAL	1,409.6	1,705.9	296.3	21.0
GREENHOUSE, NURSERY, FLORICULTURE	691.7	827.5	135.8	19.6
FRUIT AND TREE NUT	235.4	366.3	130.9	55.6
POULTRY AND EGG	259.8	208.5	-51.3	-19.7
OILSEED AND GRAIN	95.9	129.3	33.3	34.7
OTHER CROP	15.1	60.5	45.4	300.9
DAIRY CATTLE AND MILK	33.0	48.2	15.3	46.3
HOG AND PIG	49.8	26.0	-23.8	-47.8
OTHER ANIMAL	18.2	19.8	1.6	8.5
BEEF CATTLE RANCHING, FEEDLOTS	3.6	8.9	5.3	145.5
SHEEP AND GOAT	1.8	5.5	3.7	198.7
VEGETABLE AND MELON	5.2	5.4	0.2	3.3

Table 29 shows economic impact characteristics by the census divisions within the Golden Horseshoe region and Ontario. The Golden Horseshoe region contributes 12.5% of agricultural GDP in Ontario. Of the census divisions within the Golden Horseshoe, Niagara Region has the largest GDP impact at 5.1%, followed by Durham Region at 2.2%, York Region at 2.0%, Hamilton at 1.9%, Halton Region at 0.8%, and Peel Region at 0.5%.

Table 29: Agricultural Economic Impact by Region ($ Millions), 2021

REGION	GROSS REVENUE	GROSS OUTPUT	DIRECT	INDIRECT	INDUCED	GDP	JOBS	JOBS
ONTARIO	19,724.9	72,140.4	12,916.1	35,189.1	23,930.1	33,174.7	100.0	468,156
GOLDEN HORSESHOE	2,456.6	8,984.5	1,608.6	4,382.5	2,980.3	4,131.7	12.5	58,306
NIAGARA REGION	1,014.3	3,709.6	664.2	1,809.5	1,230.5	1,705.9	5.1	24,073
DURHAM REGION	428.4	1,566.6	280.5	764.2	519.7	720.4	2.2	10,166
YORK REGION	390.2	1,427.1	255.5	696.1	473.4	656.3	2.0	9,261
HAMILTON	366.3	1,339.6	239.8	653.4	444.4	616.0	1.9	8,692
HALTON REGION	161.5	590.5	105.7	288.0	195.9	271.5	0.8	3,832
PEEL REGION	96.0	351.2	62.9	171.3	116.5	161.5	0.5	2,279

CONCLUSION

In conclusion, Niagara has experienced substantial change in the agriculture sector from 2016 to 2021. Although there are many successes, there are also many challenges presented in the information. Key findings from the report are addressed below.

From 2016 to 2021, the overall number of farms in Niagara decreased by 176 and total farmland area decreased by 9,837 acres; however, the average number of farms increased by 6.8 acres and average farm revenue increased by $155,611. Total GDP impact also increased by $296.3 million. So, although farms and farmland area has decreased the economic output has increased.

In regard to revenue versus expenses, from 2016 to 2021 farm revenue increased by 21% while average farm expenses increased by 21.8%. Average farm expenses are slightly outpacing the average farm revenue. This will pose a challenge if it continues over the long term.

It is also clear that certain types of farms have a far greater economic and jobs impact than others. In 2021, greenhouse, nursery and floriculture production; fruit and tree nut farming; and, poultry and egg production generated 82% of the total agricultural economic impact in Niagara. Greenhouse, nursery and floriculture production accounted for 49% of economic impact alone.

From 2016 to 2021, the number of greenhouses declined by 24 and the total square footage of greenhouses declined by 502,058 square feet despite greenhouse economic output increasing by 19.6%.

From 2016 to 2021, economic growth was led by greenhouse, nursery and floriculture production, followed by fruit and tree nut, other crop, oilseed and grain, dairy cattle and milk, beef cattle ranching and feedlots, sheep and goat, other animal, and vegetable and melon.

In regard to the local municipalities, from 2016 to 2021 economic growth in agriculture was led led by Lincoln followed by Niagara-on-the-Lake, Pelham, St. Catharines, Wainfleet, Welland/Thorold, West Lincoln, and Fort Erie. Niagara still remains the census division within the Golden Horseshoe region of Ontario with the highest agricultural economic impact by a significant margin.

The 2021 Census of Agriculture collected new data such as renewable energy production, technology adoption, and succession planning. Although adoption of these things appears relatively low, it will serve as a benchmark to measure adoption going forward.

The age of farm operators has been a concern for many years, and average age of operators continues to increase. The average age of operators increased from 56 in 2016 to 57.3 and the median age of operators was 58 in 2021. This characteristics along with the lack of succession planning poses a challenge to the agriculture sector into the future. This could also be influencing the decline of number of farms and farmland areas as farm operators retire without any succession plan for the farms.

GLOSSARY OF TERMS

GROSS REVENUE: Gross revenue refers to the gross revenue of the agricultural operation in the year prior to Census or the last complete accounting (fiscal) year. This includes revenue from all agricultural and forest products sold, program payments and custom work receipts. It does not include sales forestry products (firewood, pulpwood, logs, fence posts, pilings, etc.), of capital items (quota, land, machinery, etc.), or receipts from the sale of any goods purchased only for retail sales. It is gross revenue before deducting expenses.

GROSS OUTPUT IMPACT: Gross output impact is the impact of the total value of goods and services produced by an industry.

DIRECT IMPACT: The direct impact refers to the impacts that come from the input requirements of the directly impacted industries themselves.

INDIRECT IMPACT: The indirect impacts refer to the input requirements of those industries that respond to the directly impacted industries by providing needed inputs.

INDUCED IMPACT: The induced impacts refer to those impacts coming from the personal consumption expenditures stimulated by the wages and salaries paid by all impacted industries (direct and indirect).

GROSS DOMESTIC PRODUCT (GDP) IMPACT: The GDP impact refers to the impact on the total value of goods produced and services provided within in a region during one year.

JOBS IMPACT: Jobs impact refers to total number of jobs supported by agricultural activity including direct, indirect, and induced.

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Niagara Region

NIAGARA ECONOMIC DEVELOPMENT