AGRICULTURAL PROFILE UPDATE

MARCH 1, 2024

Peterborough County

Kawartha Lakes

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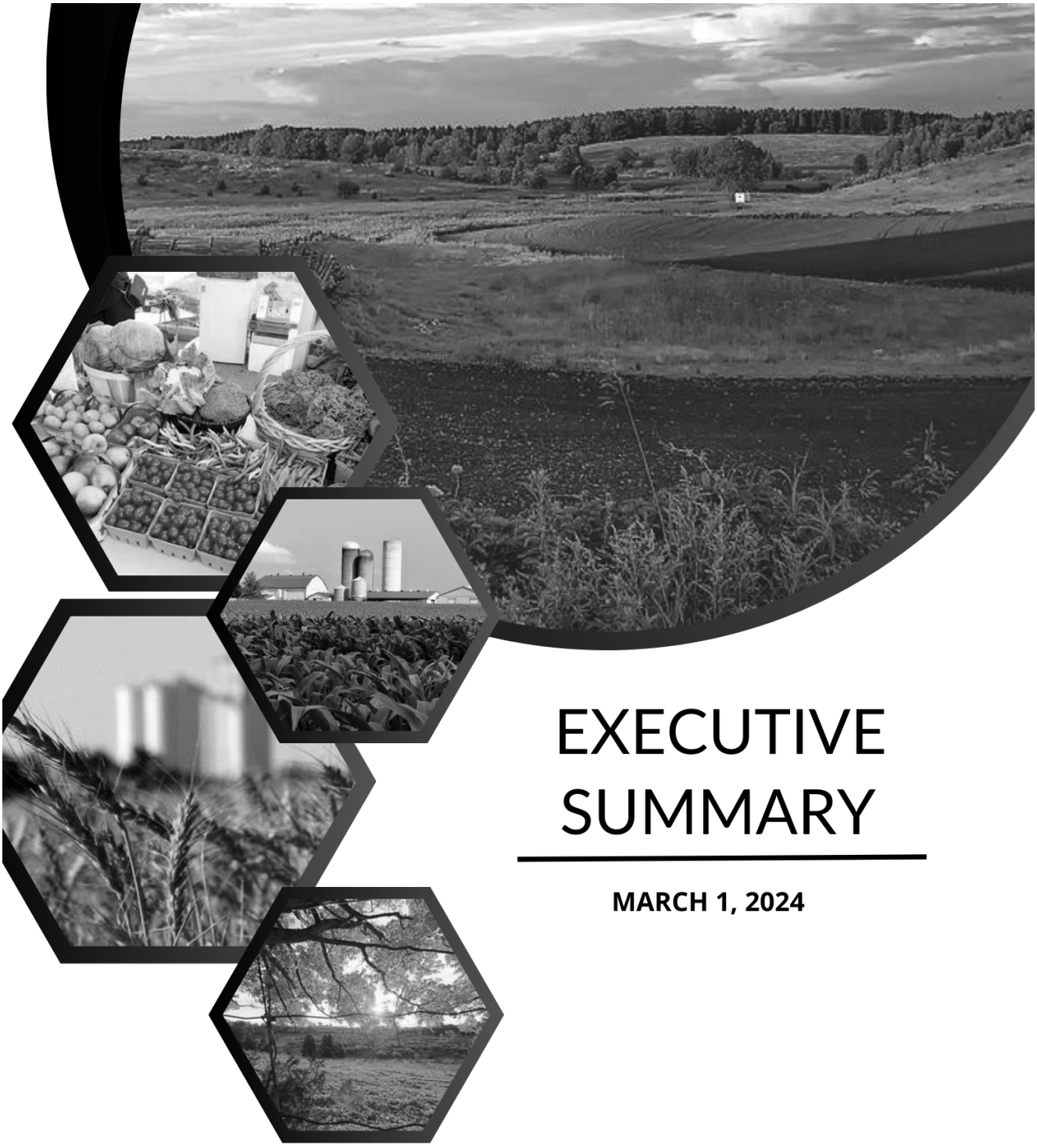


EXECUTIVE SUMMARY

MARCH 1, 2024

Peterborough County

Kawartha Lakes

AGRICULTURAL PROFILE UPDATE
PETERBOROUGH COUNTY AND KAWARTHA LAKES

1 Executive Summary

Both the City of Kawartha Lakes and Peterborough County contain significant areas of farmland reflecting a history of over 200 years of robust and ever-evolving agricultural operations. In 2023, the Peterborough County Federation of Agriculture in cooperation with the Kawartha Lakes Haliburton Federation of Agriculture retained Planscape to update the understanding of the state of agriculture in these two municipalities.

The purpose of this report is to provide an update on the agricultural profile of the County of Peterborough and the City of Kawartha Lakes. In 2006, an extensive Agricultural Economic Impact and Development Study was completed by Planscape, followed by a partial update in 2016 called Farmland, Farmers and Food Production in Peterborough County by Sustainable Peterborough Future of Food and Farming Working Group Farmland Task Force. This report uses these two historical reports as well as the 2011, 2016 and 2021 Agricultural Census data to provide a clear and relevant picture of the status of agricultural in the study area. The report also describes some of the broader trends affecting the agricultural industry. The intent is to identify relevant trends that will support decision-making regarding future agricultural policies and initiatives. This report does not include an update to the economic impact analysis of the agricultural sector.

The study area for this report is the geographical County of Peterborough and the City of Kawartha Lakes[1]. The reporting is structured based on the Statistics Canada Census Divisions, which include the area municipalities of:

- Kawartha Lakes
- Peterborough, broken down by;
  - Township of Asphodel-Norwood
  - Township of Otonabee-South Monaghan
  - Township of Cavan Monaghan
  - Township of Selwyn (now contains the City of Peterborough)
  - Township of Douro-Dummer
  - Township of Havelock-Belmont-Methuen
  - Township of Trent Lakes (now contains North Kawartha)

[1] References to Peterborough throughout this report are references to the County, not the City. References to Kawartha Lakes or the City are references to the City of Kawartha Lakes.

Data for the City of Kawartha Lakes has been presented for one unit. When the former municipalities that comprised the County of Victoria were amalgamated into the City, the area was consolidated as one census unit. It should also be noted that due to reliability issues, Statistics Canada has suppressed the data for certain factors in the Townships of Havelock-Belmont-Methuen and Trent Lakes. Where a column is blank, it is because the data is not reliable, not because there are no farming operations in the area. A more detailed explanation of Statistics Canada's approach to handling of data for these municipalities is contained in Appendix 1[2].

In conducting this study, several observations have been made about the agriculture sector in Peterborough and Kawartha Lakes. Based on our previous work in this area, and in other areas of southern Ontario, these observations are organized as strengths, concerns, opportunities, and thoughts about ongoing support for the sector. **Executive Summary Figure 1** provides a snapshot of the key characteristics of the agricultural sector in the study area. **Executive Summary Figure 2** provides a summary table of all the agricultural profile statistics that form this update. **Executive Summary Figures 3 and 4** graphically illustrate the key profile statistics for Kawartha Lakes and Peterborough.

1.1 Strengths

Agriculture in Peterborough and Kawartha Lakes continues to be a major component of the regional economy and the dominant land use. It is a strong, well-established industry with deep historic roots and a varied production profile. Agriculture is well supported by municipal policy and through programs focused on the agri-food sector. Both jurisdictions have economic development functions to support and enhance the operations and profile of agriculture. Historically, Kawartha Lakes has had a dedicated rural economic function that excels at supporting agriculture and related activities.

In the 2006 economic assessment of the impact of agriculture and agriculturally related businesses conducted by Planscape, it was determined that the economic output of the primary agricultural sector in the study area had a significant impact on the regional economy. Given the growth of economic returns generated by the sector, the number of agricultural-related businesses in the area, and the strong link to tourism and other economic sectors, it is expected that this impact continues and may have increased.

[2] Appendix 1, pg. 128. Statistics Canada – Frequently asked questions on random tabular adjustments (RTA) https://www.statcan.gc.ca/en/statistical-programs/document/3438_D4_V4

The profile of agriculture in the study area is diverse, providing flexibility to respond to evolving opportunities. The geography of the study area, particularly in Peterborough, has limited the trend of farm consolidation to ever larger farming operations, which can reduce the rural population and negatively impact rural communities. Maintaining smaller farm sizes focused on a diverse range of commodities supports local services and retains community.

Peterborough and the City of Kawartha Lakes are areas with a strong agricultural tradition. This strength should not be taken for granted. There are many pressures impacting the agricultural industry today as it struggles to cope with international competition, government regulation and various crises. Management of the resource, coupled with progressive economic development policies, will be critical to allow this resource to adapt and flourish.

1.2 Concerns

The decline in the agricultural land base and number of operations reported in the 2021 agricultural census is concerning. While it may be exaggerated due to the change made to the definition of a farm or agricultural operation for the 2021 agricultural census, there is still a significant ongoing decline in the amount of land used for agriculture. To provide further insight into this issue, data from the Municipal Property Assessment Corporation (MPAC) was reviewed. Although still reporting a decline in area, the MPAC data reports a larger area of farmland in 2021 than Statistics Canada.

The area of land reported by Statistics Canada is land that is farmed, not land that is designated agricultural and protected under planning policy. Comparing the area farmed to the area designated for protection in the local planning documents would provide additional insight into the future of the agricultural land base. Often land designated for future development is farmed until that development occurs. This can distort conclusions about the health of the sector.

Addressing the ongoing decline in the agricultural land area must be a major focus for sustaining the sector. Good agricultural land is a limited non-renewable resource that must be protected. Canada may be a huge country but in 2016, Statistics Canada reported that only 7% of its land mass was farmland, much less is prime agricultural land. Much of the prime land that can produce a wide range of commodities is in southern Ontario. The steady, ongoing decline in farmland is depleting this resource and reducing the ability to produce food.

There are significant differences in the requirements of farms related to factors including the type of crop produced and the size of the operation. Despite these differences, the planning controls imposed on agricultural land often operate on a “one size fits all” basis, based on the historic farm unit of one hundred acres with a house and a barn. Given the current trends to farm consolidations, advancing technology that allows smaller operations to thrive, different infrastructure requirements and the differences between those who farm full time and produce a significant amount of product and those who farm on a part time or recreational basis, this uniformity can create issues for farmers.

As in other parts of Ontario, the age profile of operators is rising in the study area with fewer younger operators moving in. The price of land, the cost of operating and uncertainty about revenue are deterrents to new operators. While there are factors including technology, which allow fewer farmers to run larger operations, this aging profile is a concern. In additional to fewer intergenerational transfers, younger people, not involved in agriculture, are often unaware of the opportunities the sector can offer. Circumstances need to be created which allow young people and other groups including recent immigrants, to be aware of the farming opportunities and enter the sector.

While climate change offers opportunities, it also introduces additional challenges. Issues related to increasing numbers of invasive species, changing weather patterns and extreme weather events require constant adjustments.

The study area is part of the Greater Golden Horseshoe and access to it has been vastly improved by upgrades in the provincial transportation system. This improved access, coupled with the cost and scarcity of housing in Toronto and its surrounding urban areas is driving up land prices and putting additional pressure for non-farm development in the study area. Changes under the current provincial government are proposed to many of the provincial policies designed to protect the agricultural land base and support the sector. Over the past decade, changes to provincial policy were designed to bring certainty to the sector. The recent actions of the current provincial government to reverse these controls have increased uncertainty for both farmers and municipal governments. Uncertainty about provincial direction makes it difficult to do business and is putting negative pressure on the land base.

Livestock related operations dominate the study area. To be successful, livestock operators need protection from non-farm development and general understanding of the resources and regulations these types of operations require to operate and expand. Often, livestock

operations can successfully operate on rural land, they do not require the soil capability of prime land for grazing. However, controls to protect the integrity of farming areas are less stringent on rural lands. With minimum distance separation requirements, and the conflict that can arise between livestock operators and non-farm residents, it is essential to provide separation. With the relatively small average farm size that characterizes much of the study area, this issue needs to be addressed on an on-going basis. If the proposed changes to provincial policy proceed, it may make it more difficult to maintain agricultural areas and separation of uses. This will have a negative impact on livestock operations.

Edge management at the interface between settlement areas and rural areas needs to be addressed to protect the integrity of the rural and agricultural areas. Buffers between urban and rural land uses of sufficient size to be effective, are necessary to protect agricultural lands and create a permanent separation between agricultural and urban uses.

In Kawartha Lakes, the amalgamation of the area into one census division has impacted the ability to understand trends in different parts of the City. Certainly, the nature of the land in the southern part of the City is better for crop producing agriculture. However, it is also the area closest to the Toronto centered urban area and therefore subject to pressure for non-farm development. By not having access to a better geographical breakdown of statistics related to the different areas, it is difficult to conduct a detailed analysis of area specific impacts.

As noted previously, suppression of data in Trent Lakes and Havelock- Belmont-Methuen creates similar problems and results in an underreporting of activity in those municipalities.

The increasing age profile of farmers and the lack of young farmers entering the sector, combined with a lack of succession planning, offers no certainty that existing farmers are formally planning to pass their operations to others.

Other conclusions reached as result of the analysis of the statistics confirm that while agriculture remains a dominant sector in the study area, growth in the sector has been moderate. Although revenues have increased, so have expenses. There may be mitigating factors that help to explain the decline in the number of farms, in the number of operators, the aging profile and the smaller land base but these are concerning trends.

1.3 Opportunities

The study area has an established history of agriculture with local understanding and support. There is a strong historical and cultural network for the farming community and continued agricultural economic development efforts that enhance farms' profile and profitability. The economic impact assessment conducted in 2006, concluded that for each $1 generated by the agricultural sectors there was a $3 impact in the economy[3]. While this analysis is dated, it is likely given the growth in the sector, that this positive impact has been sustained.

The agri-food sector is the largest economic sector in the Ontario economy and a significant presence in the study area. Operations that sustain and support the growth of this sector strengthen the local economy while providing access to a local, safe food supply. Programs are in place to promote the local food system. As public interest in safe, healthy, local food continues to grow there is an opportunity to expand these programs.

Due to the topography of the study area, smaller farms predominate. This could provide an opportunity for new farmers to enter the sector at a lower cost.

[3] Planscape, City of Kawartha Lakes and Greater Peterborough Area Agricultural Impact and Development Study, 2006, pgE3.

The diversity of products should continue to be encouraged as it buffers the industry from the negative impacts of a decline in price or demand for certain commodities.

The study area maintains the circumstances to support livestock operations. These opportunities are disappearing in other parts of the Greater Golden Horseshoe so operators in those areas are looking for alternative locations. There may be opportunities to encourage expansion of this form of agriculture. The more marginal lands in the northern part of the study area, which may be lower priced than more southerly prime land, may provide such an opportunity. There exists an established livestock sector with available resources, including grass lands for grazing and a large community pasture that can support additional livestock production.

Policies supporting communal facilities to support farm business such as abattoirs, cold storage, grain elevators, fertilizer mixing facilities, farm equipment mechanics and equipment dealers are key to sustainability and prosperity in the farm community. These services currently exist in the study area and will be attractive to farmers from other areas where these services are disappearing. Ongoing consultation with the agricultural sector will assist in protecting the existing infrastructure and addressing future needs.

Technology is constantly improving, providing opportunities for operations to increase efficiencies. Access to affordable, high-speed internet, three phase power, transportation networks and other modern infrastructure is critical for agricultural operations. Flexibility is essential to capitalize on technological advances. Understanding and responding to these needs will support ongoing modernization of the sector.

Canadian farmers are educated and progressive. Tracking of the adoption of new technologies for allowing more mechanization and environmentally sustainable practices confirms that farmers in the study area are part of this progressive movement.

Climate change is a reality and there is potential for Canadian agriculture to benefit because of it. A warming climate may provide opportunities for agriculture in certain regions with an expansion of the growing season due to milder and shorter winters. This could increase productivity and allow the production of new and potentially more profitable crops. For a high-latitude country like Canada, future warming is expected to be more pronounced than the global average. Northern regions and the southern and central Prairies will see more warming than other regions. Most regions will likely be warmer with longer frost-free seasons. Atmospheric carbon dioxide (CO^2) concentrations are expected to increase in the future which promotes the growth of small grains and oilseeds by increasing photosynthesis and crop water use efficiency. Corn will mostly benefit from increased water use efficiency and less from increases in photosynthesis.[4] Temperatures will rise, leading to longer growing seasons and with sustained access to water will increase productivity.

Conversely, other major growing areas of the world are expected to see a decline in productivity because of the warming climate and shortages of water. Canada is already a major exporter of agricultural products. With increased productivity, its role as a food basket for the world is expected to increase.

Covid, the war in Ukraine and other conflicts around the world have increased public understanding of the importance of sustaining a local food supply. This increased awareness may be an opportunity to expand education regarding food supply and local agriculture and the importance of supporting it.

There has been considerable advancement in the provincial policies related to on-farm and farm diversified uses. Kawartha Lakes and Peterborough County must consider how to benefit from the flexibility these policies offer while ensuring that such uses remain secondary or accessory to the main agricultural use. Scale and impact, both present and future, must be carefully considered in controlling these uses.

Farm enterprise zones, focused on existing settlements and planned through a secondary planning process could be used to accommodate agri-related businesses and support services, provide alternative locations for housing, focus on unique sectors in the agricultural area and support rural communities. It may be possible to apply a type of community improvement plan process to implement this approach.

[4] Climate change impacts on agriculture - agriculture.canada.ca

Both the County and City governments understand and support agriculture. The policies they have developed support the sector. This is a benefit when compared to more urban municipalities where the agriculture sector has little profile, is sometimes not as well understood and may not be appropriately addressed or protected in policy.

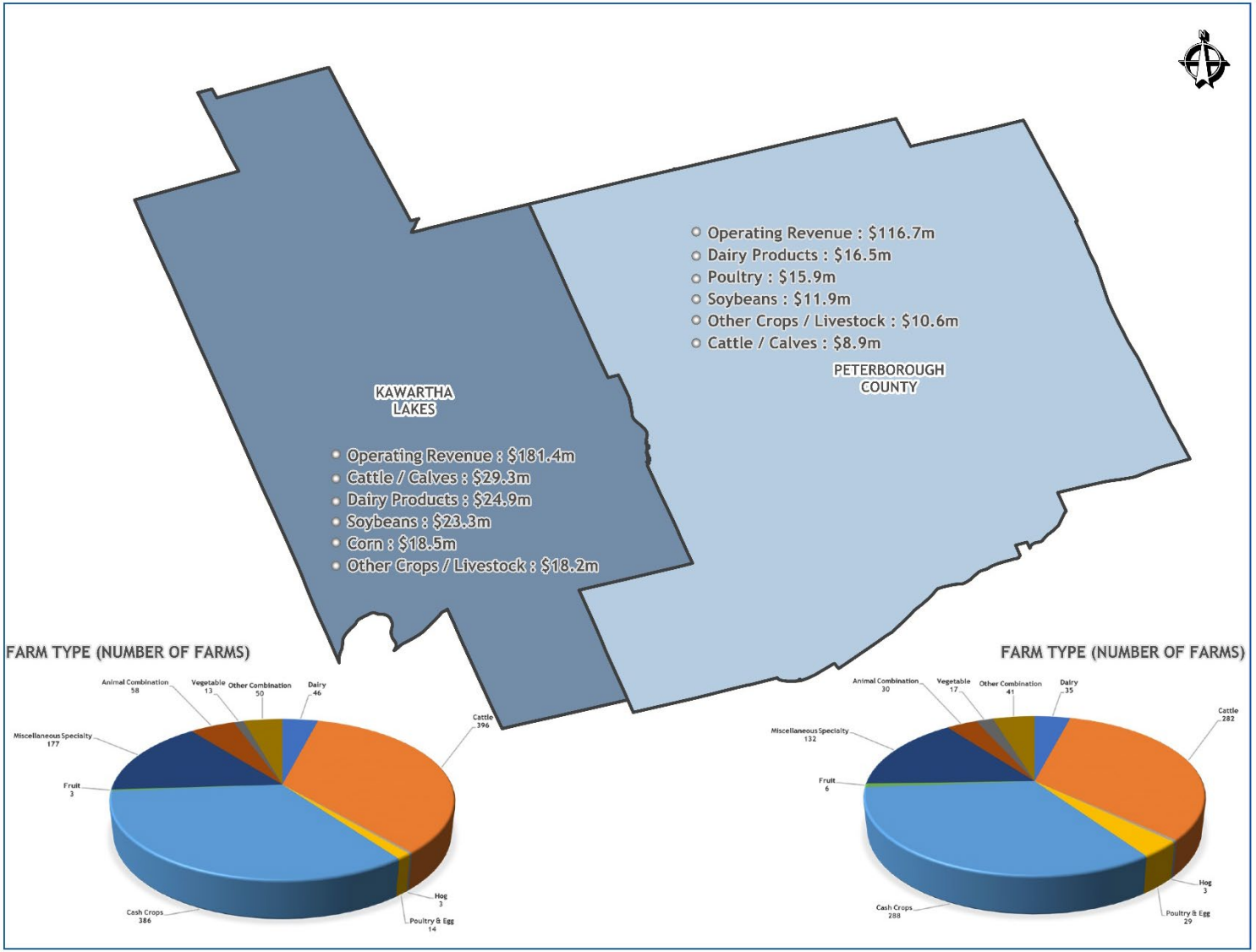
The total area of land under agricultural production in Canada was estimated by Statistics Canada in 2016 at less than 7.3%[5]. Of that, less than 5% is prime agricultural land, Class 1,2 and 3, and only approximately .05% is Class 1[6]. Good agricultural land is a non-renewable resource that needs to be managed and protected. Strong tools including rigorous, enforced planning policies, the registration of agricultural easements, and access to land under circumstances that farmers can afford are required.

Kawartha Lakes and Peterborough are characterized by certain features that impact the type of agriculture that will thrive. With the exception of certain areas including the south part of Kawartha lakes and Selwyn, the varied topography tends to make large cash crop operations more difficult. A range of land types, including a large community pasture in Kawartha Lakes, supports livestock operations. The strong agricultural heritage attracts non rural residents to experience the rural lifestyle. These features should be the building blocks upon which programs to support agriculture are based. Threats such as non-farm development in agricultural areas must be controlled.

The study area has a valuable resource in its agricultural sector, which is and should continue to be, a major element in regional and local economic development strategies. In developing these strategies, a commitment to supporting the agricultural and agri-food sector developed in consultation with the agricultural community will be key.

[5] Snapshot of Canadian agriculture (statcan.gc.ca)
[6] https://neptis.org/publications/chapters/where-are-significant-agricultural-lands-located

EXECUTIVE SUMMARY FIGURE 1: SUMMARY OF NUMBER OF FARMS BY TYPE, OPERATING REVENUES AND KEY COMMODITIES' CASH RECEIPTS, 2021

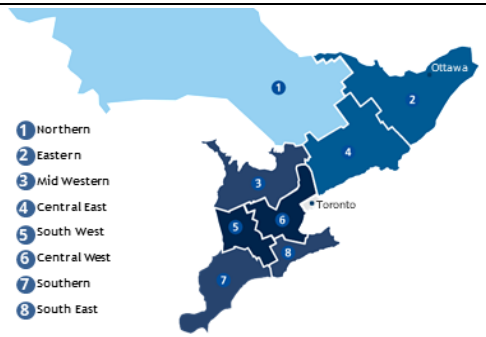


EXECUTIVE SUMMARY FIGURE 2: SUMMARY TABLE OF KEY AGRICULTURAL PROFILE CHARACTERISTICS

<table>
<tr><th>Characteristic</th><th>Kawartha Lakes</th><th>Peterborough</th></tr>
<tr><td>Number of Farms</td><td>There were 1,146 farms in 2021, 1,265 in 2016 and 1,366 in 2011.
There was a reported decrease of 220 farms (19.2% between 2011 and 2021.
The significant decline in number of reported farms may be due to the change in how Statistics Canada defines a farm.</td><td>There were 863 farms in 2021, 941 in 2016 and 1,053 in 2011.
There was a reported decrease of 190 farms (22.0%) between 2011 and 2021.
The significant decline in number of reported farms may be due to the change in how Statistics Canada defines a farm.</td></tr>
<tr><td>Area of Farmland</td><td>There were 277,793 acres of farmland reported in the 2021 census, 309,405 acres in 2016 and 326,092 acres in 2011.
Area of farmland has decreased by 48,299 acres (15%) between 2011 and 2021.</td><td>There were 180,372 acres of farmland reported in the 2021 census, 202,240 acres in 2016 and 228,936 acres in 2011.
Area of farmland decreased by 48,564 acres (21%) between 2011 and 2021.</td></tr>
<tr><td>Average Farm Size</td><td>Average Farm size in 2021 was reported as 242 acres, 245 acres in 2016 and 239 acres in 2011.
Average area fluctuated from 239 Acres in 2011 to 245 Acres in 2016 with a slight decrease in 2021 to 242 Acres.</td><td>Average Farm size in 2021 was reported as 209 acres, 215 acres in 2016 and 217 acres in 2011.
A slight decrease during the census years from 217 Acres in 2011 to 215 Acres in 2016 to 209 Acres in 2021.</td></tr>
<tr><td>Farms Classified by Total Farm Area</td><td>
<table>
<tr><th>Farm Area Class</th><th>2011</th><th>2016</th><th>2021</th></tr>
<tr><td>Under 10 acres:</td><td>36</td><td>45</td><td>25</td></tr>
<tr><td>10 to 69 acres:</td><td>253</td><td>238</td><td>247</td></tr>
<tr><td>70 to 129 acres:</td><td>410</td><td>356</td><td>320</td></tr>
<tr><td>130 to 179 acres:</td><td>161</td><td>134</td><td>132</td></tr>
</table>
</td><td>
<table>
<tr><th>Farm Area Class</th><th>2011</th><th>2016</th><th>2021</th></tr>
<tr><td>Under 10 acres:</td><td>26</td><td>38</td><td>28</td></tr>
<tr><td>10 to 69 acres:</td><td>182</td><td>175</td><td>172</td></tr>
<tr><td>70 to 129 acres:</td><td>331</td><td>289</td><td>268</td></tr>
<tr><td>130 to 179 acres:</td><td>104</td><td>84</td><td>95</td></tr>
</table>
</td></tr>
</table>

Characteristic	Kawartha Lakes				Peterborough			
	180 to 239 acres:	148	141	116	180 to 239 acres:	128	100	72
	240 to 399 acres:	160	166	148	240 to 399 acres:	133	120	111
	400 to 559 acres:	74	67	59	400 to 559 acres:	74	65	56
	560 to 759 acres:	47	46	39	560 to 759 acres:	30	32	28
	760 to 1,119 acres:	40	32	21	760 to 1,119 acres:	28	19	19
	1,120 to 1,599 acres:	14	17	17	1,120 to 1,599 acres:	11	14	8
	1,600 to 2,239 acres:	15	11	12	1,600 to 2,239 acres:	6	3	4
	2,240 to 2,879 acres:	3	10	6	2,240 to 2,879 acres:	0	2	2
	2,880 to 3,518 acres:	4	1	2	2,880 to 3,518 acres:	0	0	0
	3,520 acres and over:	1	1	2	3,520 acres and over:	0	0	0
Land Tenure (owned or rented)	The percentage of Farmland Area Owned and Rented has remained the same between 2011 and 2021 - Kawartha Lakes at 68% of land being Owned and 32% being Rented.				The percentage of Farmland Area Owned and Rented has remained constant with at least 70% of the lands being owned.			
Farms by Main Farm Type	Cattle operations have increased in Kawartha Lakes since 2016. Cash crops and horse and pony farms show the most significant decline. The main commodities in Kawartha Lakes based on Number of Farms Reporting: • 2011: Cash Crops (438), Cattle (411), and Miscellaneous Specialty (240). • 2016: Cash Crops (438), Cattle (367), and Miscellaneous Specialty (197).				Cattle and sheep are the only farm types showing growth since 2011. Horse and pony, cash crops and miscellaneous specialty farms show the greatest decline. The main commodities are: • 2011: Cash Crops (351), Cattle (272), and Miscellaneous Specialty (198). • 2016: Cash Crops (319), Cattle (247), and Miscellaneous Specialty (166).			

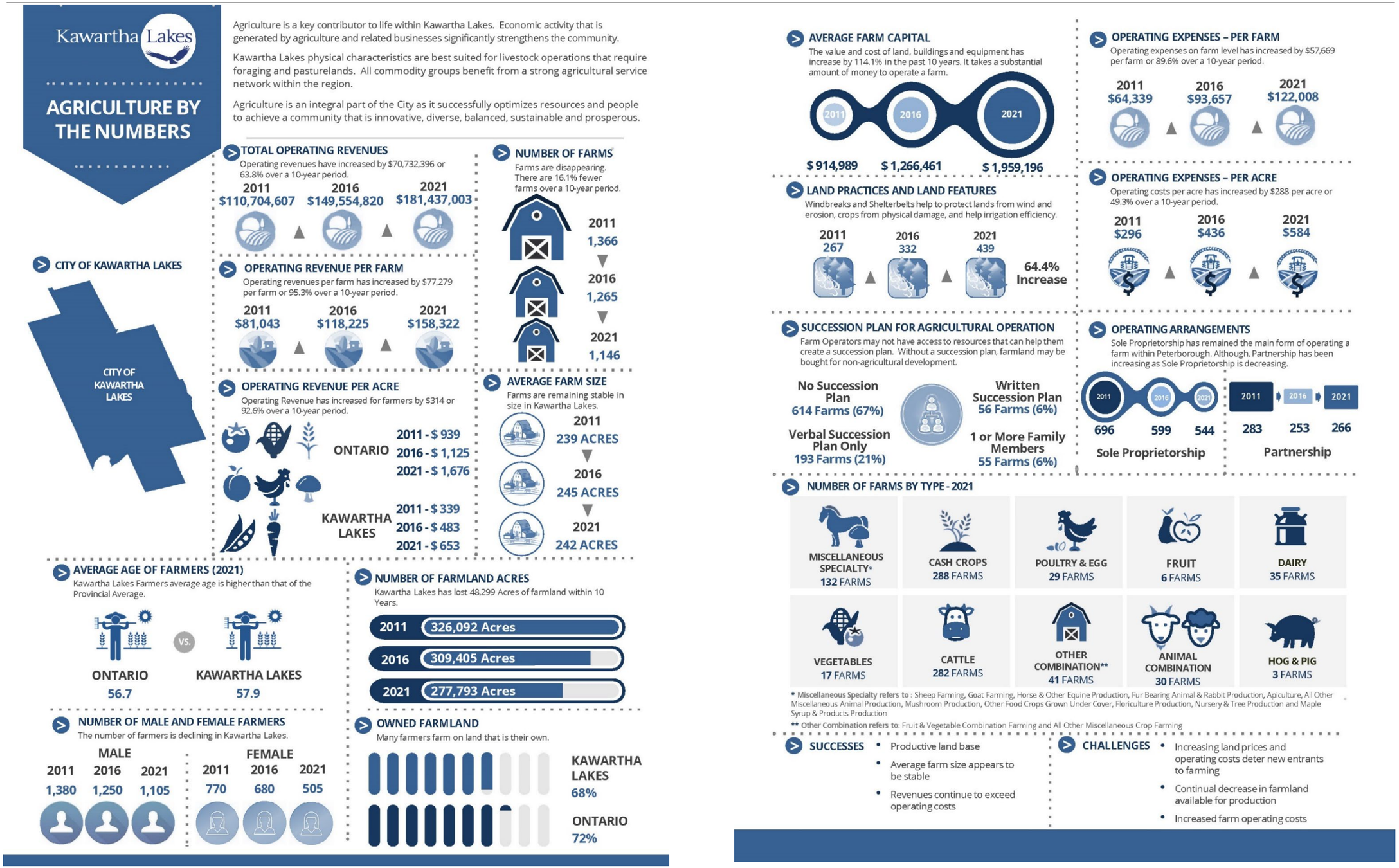
Characteristic	Kawartha Lakes	Peterborough
	• 2021: Cash Crops (386), Cattle (396), and Miscellaneous Specialty (177).	• 2021: Cash Crops (288), Cattle (282) and Miscellaneous Specialty (132).
Estimated Farm Cash Receipts (by farm and commodity)	There has been a significant increase in farm cash receipts. The greatest percent increases in farm cash receipts by commodity are Other Crops and Livestock (1483%), wheat (274% and Corn (113%). Cannabis is reported as Other Crops and Livestock and may explain the significant increase in this commodity classification. The decreases in farm cash receipts by commodity are Eggs (-100%) and Nursery (-37%).	There has been a significant increase in farm cash receipts. The greatest percent increases in farm cash receipts by commodity are Other Crops and Livestock (1488%), Eggs (324%) and Wheat (162%). Cannabis is reported as Other Crops and Livestock and may explain the significant increase in this commodity classification. The decreases in farm cash receipts by commodity are Nursery (-100%) and Dairy Products (-4%).
Operating Revenue	Total Operating Revenues increased from $110,704,607 in 2011 to $181,437,003 in 2021. Operating Revenues per Acre increased from $339 per acre in 2011 to $653 per acre in 2021.	Total Operating Revenues increased from $78,543,529 in 2011 to $116,692,862 in 2021. Operating Revenues per Acre increased from $343 per acre in 2011 to $647 per acre in 2021.
Operating Expenses	Farm Operating Expenses Per Acre has seen an increase from $321 per acre in 2011 to $609 per acre in 2021. Farm Operating Expenses Per Farm has seen an increase from $76,705 per farm in 2011 to $147,509 per farm in 2021.	Farm Operating Expenses Per Acre has seen an increase from $296 per acre in 2011 to $584 per acre in 2021. Farm Operating Expenses Per Farm has seen an increase from $64,339 per farm in 2011 to $122,008 per farm in 2021.
Gross Profit	Gross Profit per farm decreased $1103 between 2016 and 2021.	Gross Profit per farm increased $6,673 between 2016 and 2021. This trend is due to the significant increases in Otonabee-South Monaghan, Selwyn and Asphodel-Norwood. Otonabee-South Monaghan ($19,921), Selwyn ($8,910) and Asphodel-Norwood ($7,379)

Characteristic	Kawartha Lakes	Peterborough
		experienced the largest increase in gross farm profit. Havelock-Belmont-Methuen and Trent Lakes no longer generate sufficient gross profit from their agricultural activities to be reported.
Farm Capital	Average Farm Capital Per Farm has seen an increase from $953,350 per farm in 2011 to $1,476,127 per farm in 2016 to $2,349,707 per farm in 2021.	Average Farm Capital Per Farm has increased from $914,989 per farm in 2011 to $1,266,461 per farm in 2016 to $1,959,193 per farm in 2021.
Land Prices (Central East reporting area includes Kawartha Lakes and Peterborough)	Land prices in Central East (that includes the study area) have increased by 32% between 2011 and 2021. Land prices per acre in Central East rose another $2,400 per acre between 2021 and 2022. Across Ontario, land prices in Central West and Southwest show the steepest price increases while the northern area reports the slowest increase.	
Farm Operators (number, age and characteristics)	Total Number of Operators [All Farms] has seen a constant decline in the number of operators from 1,920 in 2011 to 1,105 in 2021. Total Number of Operators by Age Category [All Farms] has remained constant from 2011 to 2021 with the majority of operators being in the 55 year and older category. Average Age of Operators [All Farms] has increased slightly from 55.6 years in 2011 to 56.7 years in 2016 to 57.9 years in 2021.	Total Number of Operators [All Farms] has seen a constant decline in the number of operators from 1,460 in 2011 to 810 in 2021. Total Number of Operators by Age Category [All Farms] has remained constant from 2011 to 2021 with the majority of operators being within the 55 year and older category. The Average Age of Operators [All Farms] has increased from 56.5 years in 2011 to 57.3 years in 2016 to 58.7 years in 2021.

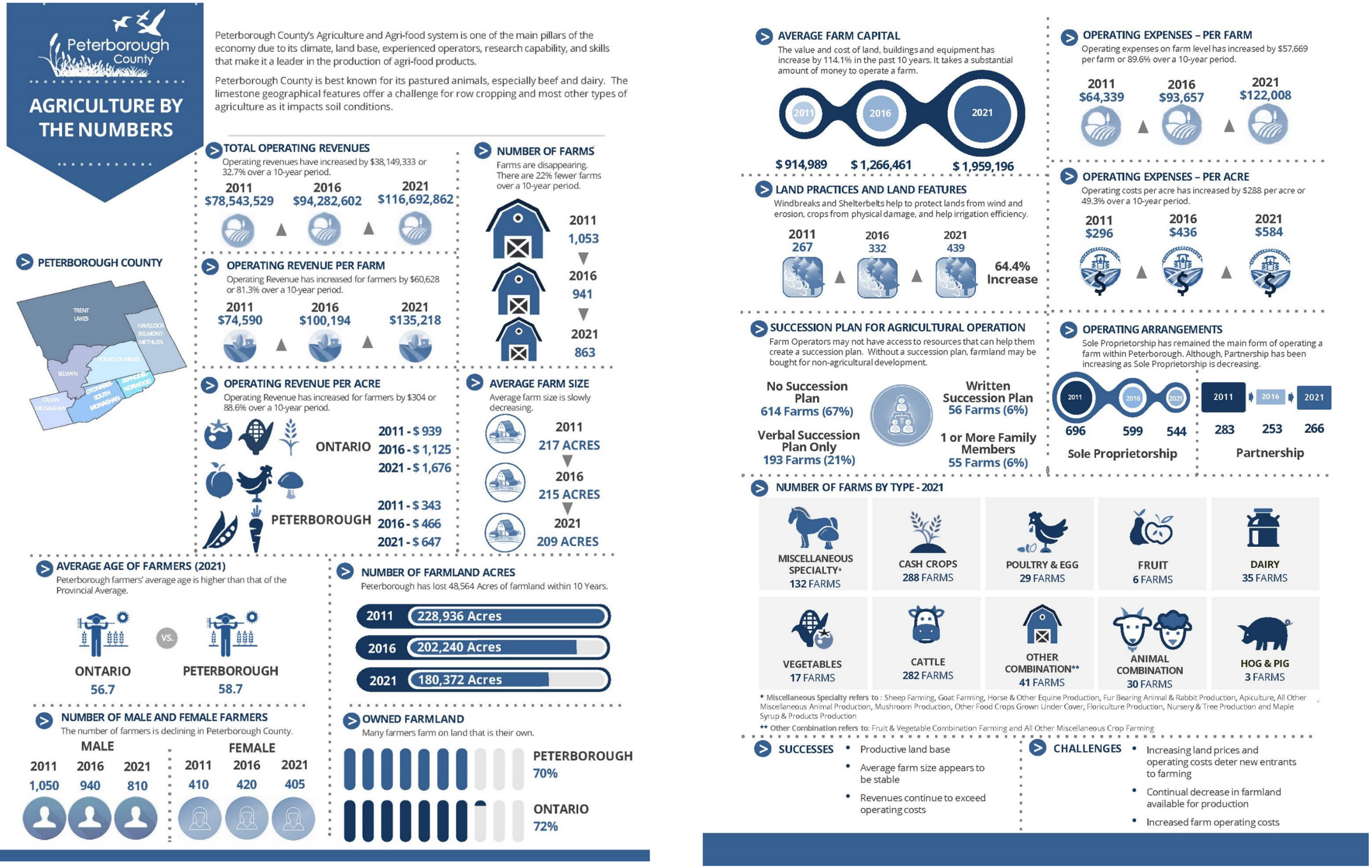
Characteristic	Kawartha Lakes	Peterborough
Operating Arrangements	Sole Proprietorship, although decreasing over time, has remained the dominant operating arrangement for farms in Kawartha Lakes. Over 60% of the farms reporting in 2021 are operating under a sole proprietor.	Sole Proprietorship, although decreasing over time, has remained the dominant operating arrangement for farms within Peterborough. Over 58% of the farms reporting in 2021 are operating under a sole proprietor.
Paid Labour	Data was only recorded in the 2016 and 2021 Agricultural Census. 11% of farms have either full or part-time employees (131 of 1,146 farms). The number of operations employing seasonal or temporary workers declined from 26% to 13% (325 to 152 farms). The number of family members working in the farm unit is higher than the provincial average with 24% in 2021.	Data was only recorded in the 2016 and 2021 Agricultural Census. 9% of farms have either full or part-time employees (79 of 863 farms). 14% of farms in Otonabee-South Monaghan have paid employees. The number of operations employing seasonal or temporary workers declined from 36% to 19% (337 to 160 farms). The number of family members working in the farm unit is higher than the provincial average with 20% in 2021. The number is as high as 47% in Asphodel-Norwood and as low as 10% in Selwyn.
Farming Practices	In-field winter grazing of livestock remained steady at around 202 farms Land Practices of Shelterbelts or Windbreaks (Natural or Planted) within Kawartha Lakes has seen an increase from 345 (farms reporting) in 2011 to 585 (farms reporting) in 2021.	Land Practices of Shelterbelts or Windbreaks (Natural or Planted) within Peterborough has seen an increase from 267 (farms reporting) in 2011 to 439 (farms reporting) in 2021.
Succession Planning	821 farms out of 1,146 farms in Kawartha Lakes have no succession plan. Verbal succession plans are more prevalent than written succession plans.	614 farms our of 863 farms in Peterborough have no succession plan. Verbal succession plans are more prevalent than written succession plans.

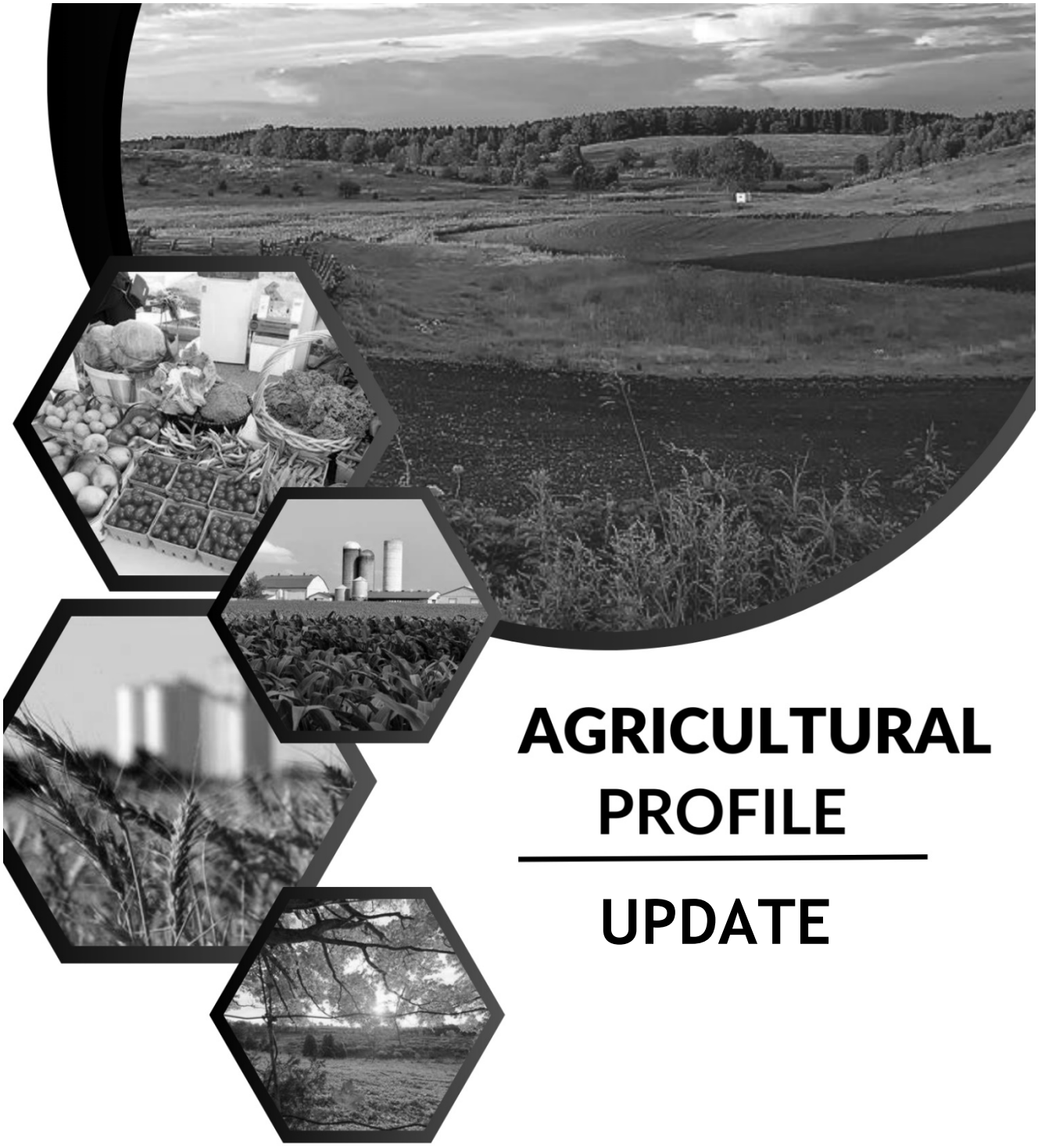
Characteristic	Kawartha Lakes	Peterborough
Technologies	In Kawartha Lakes, automated guidance steering systems has increased 4%, GIS Mapping has increased 3% and 8 more farms were using robotic milking between 2016 and 2021. Adoption of new digital and robotic technology is quickly evolving in Ontario. Robotic milking equipment has seen a 112% increase in adoption from 2016 to 2021 provincially. Adoptions of GIS mapping system has increased by 58% from 2016 to 2021 provincially.	In Peterborough, automated guidance steering systems has increased 4%, GIS Mapping has increased 4% and 6 more farms were using robotic milking between 2016 and 2021. Adoption of new digital and robotic technology is quickly evolving in Ontario. Robotic milking equipment has seen a 112% increase in adoption from 2016 to 2021 provincially. Adoptions of GIS mapping system has increased by 58% from 2016 to 2021 provincially.
Renewable Energy	Solar energy adoption across the study area has been significant and widespread with adoption rates generally above the provincial average. 190 farms are producing renewable energy, 108 farms are selling it, 5 farms have wind power, 128 farms have solar, 51 have bioenergy, 48 have biomass combustion energy, 3 have biomethane, 2 have another type of bioenergy (other biogas) and 32 farms have geothermal.	Solar energy adoption across the study area has been significant and widespread with adoption rates generally above the provincial average. Trent Lakes has increased n from 3 to 10 sites (+233%) and Cavan-Monaghan from 9 to 18 sites (+100%). 169 farms are producing renewable energy, 87 farms are selling it, 0 farms have wind power, 128 farms have solar, 33 have bioenergy, 32 have biomass combustion energy, 0 have biomethane,2 have another type of bioenergy (other biogas) and 24 farms have geothermal.
Business Location Counts	Agri-food businesses grew from 1,056 to 1,062 between 2016 and 2021. The number of businesses with employees grew by 20. The increases are seen in crop production operations (229 operations in 2016 to 324 in 2021). All other business types decreased over the same period.	Agri-food businesses declined by 97. Crop production businesses increased by 31 and Food, Beverage & Tobacco Manufacturing rose by 5 businesses. All other business types decreased between 2016 and 2021.

EXECUTIVE SUMMARY FIGURE 3: CITY OF KAWARTHA LAKES INFOGRAPHIC OF KEY AGRICULTURAL PROFILE STATISTICS



EXECUTIVE SUMMARY FIGURE 4: COUNTY OF PETERBOROUGH INFOGRAPHIC OF KEY AGRICULTURAL PROFILE STATISTICS





AGRICULTURAL PROFILE

UPDATE

Peterborough County

Kawartha Lakes

1 Report Introduction

Both the City of Kawartha Lakes and Peterborough County contain significant areas of farmland reflecting a history of over 200 years of robust and ever-evolving agricultural activity.

Planscape Inc. has been retained by the Peterborough County Federation of Agriculture in cooperation with the Kawartha Lakes Haliburton Federation of Agriculture to provide an understanding of the current state of agriculture in the two municipalities that comprise the study area.

1.1 Report Purpose

The purpose of this report is to provide an update on the agricultural profile of the County of Peterborough and the City of Kawartha Lakes. In 2006, an extensive Agricultural Economic Impact and Development Study was completed by Planscape, followed by a partial update in 2016 called Farmland, Farmers and Food Production in Peterborough County by Sustainable Peterborough Future of Food and Farming Working Group Farmland Task Force. This report uses these two historical reports as well as the 2011, 2016 and 2021 Agricultural Census data to provide a clear and relevant picture of the status of the agricultural system in the study area. The report also describes some of the broader trends affecting the agricultural industry. The intent is to identify relevant trends that will support decision-making regarding future agricultural policies and initiatives in the study area. The report does not include an update to the economic impact of agriculture.

1.2 Study Area

The study area for this report is the geographical County of Peterborough and the City of Kawartha Lakes[7]. The reporting is structured based on the Statistics Canada Census Divisions, which include the area municipalities of:

- Kawartha Lakes
- Peterborough, broken down by:
  - Township of Asphodel-Norwood
  - Township of Otonabee-South Monaghan
  - Township of Cavan Monaghan
  - Township of Selwyn

[7] References to Peterborough throughout this report are references to the County, not the City. References to Kawartha Lakes or the City are references to the City of Kawartha Lakes.

- Township of Douro-Dummer
- Township of Havelock-Belmont-Methuen
- Township of Trent Lakes[8]

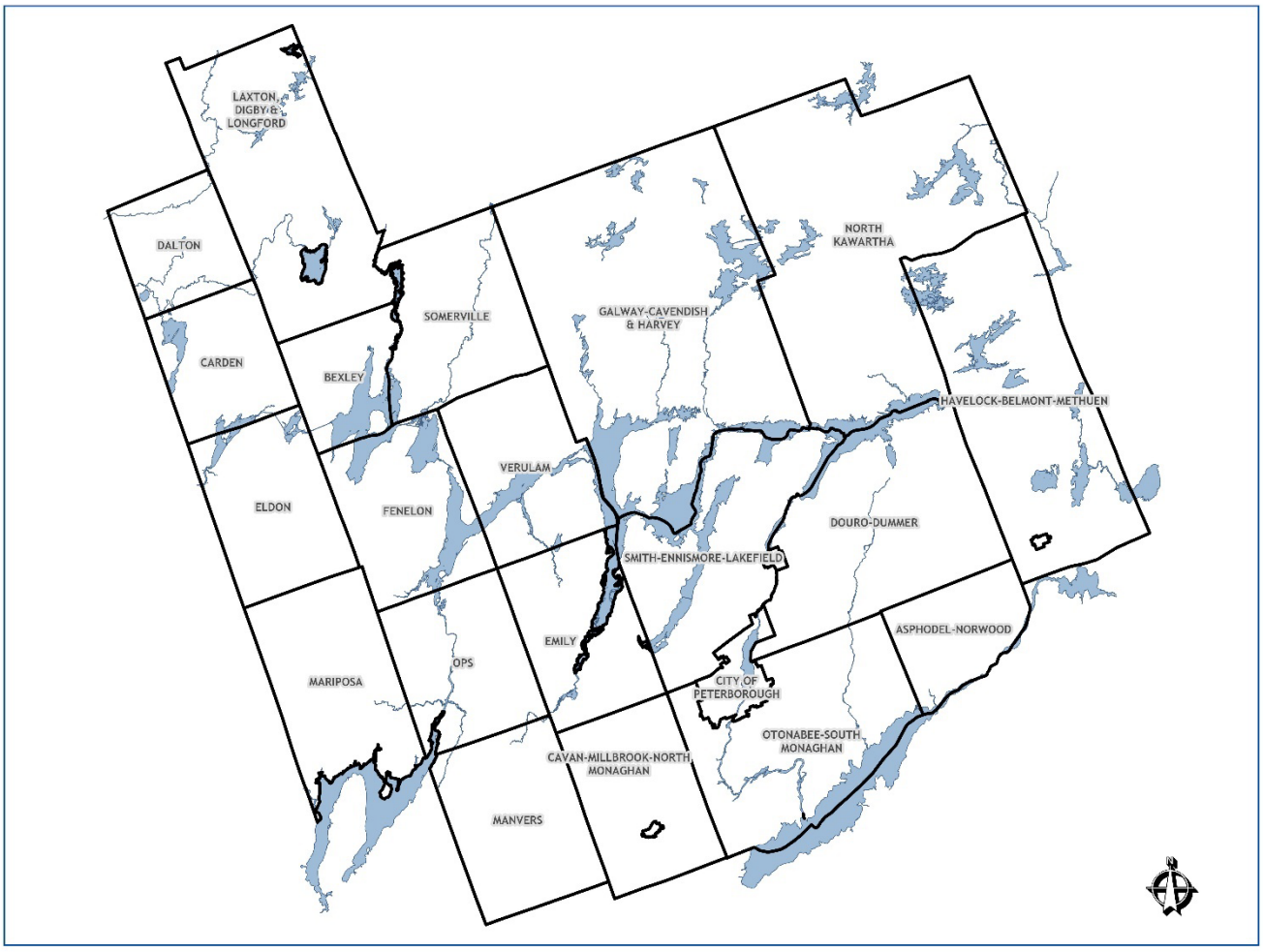
It should be noted that due to reliability issues, Statistics Canada has suppressed the data for certain factors in the Townships of Havelock-Belmont-Methuen and Trent Lakes. Where a column is blank, it is because the data is not reliable, not because there are no farming operations in the area. A more detailed explanation of Statistics Canada's approach in handling of data for these municipalities is contained in Appendix 2[9].

Figure 1 illustrates the Study Area with the surrounding municipalities shown for context. **Figure 2** illustrates the historical municipal structure of the 2006 report for reference. The amalgamation of the City of Kawartha Lakes as well as the census data combination of some areas are factors to be considered and will be referenced throughout this report.

FIGURE 1: STUDY AREA

[8] Note that data for the Township of North Kawartha in Peterborough County has been incorporated into the statistics for Trent Lakes in the 2021 Agricultural Census.
[9] Appendix 1, pg. 128

FIGURE 2: HISTORICAL STUDY AREA - 2001



1.3 Methodology

The Agricultural Census from 2011, 2016 and 2021 serves as the primary data source. Where possible, comparable data has been included from the 2006 City of Kawartha Lakes and Greater Peterborough Area Agricultural Economic Impact and Development Study which included data to 2001.

In situations where questions remained regarding interpretation of data, additional outreach was conducted with economic development officers in both the City of Kawartha Lakes and Peterborough County, local agronomists, local farmers, municipal planners, and not-for-profit agricultural organizations. Data from MPAC was used as an additional resource for assessing changes to the area of the agricultural land base.

An Agricultural Profile (Appendix 1) was generated using the Agricultural Census data. This profile was then summarized, analyzed, and contextualized for the study area to illustrate recent trends.

1.4 Evolution of Census Data

Between 2001 and 2006, the municipalities in the City of Kawartha Lakes were no longer reported separately. This merging of data makes it difficult to identify more localized patterns of change in the City. In the northern portion of Peterborough, the smaller number of operations resulted in data suppression, making it difficult to specifically analyse trends in those areas.

The data collection areas remained the same for the 2006 and the 2011 censuses. For the 2016 census, Galway-Cavendish and Harvey and North Kawartha were amalgamated into the municipality of Trent Lakes. The census subdivision of Smith-Ennismore-Lakefield plus the City of Peterborough became the census subdivision of Selwyn. The 2016 and 2021 census data collection areas remained the same. **Figure 3A, 3B and 3C** illustrate the census data changes from 2011 on the study area maps.

As previously noted, due to reliability issues with the data, Statistics Canada has suppressed the data for certain factors in the Township of Havelock-Belmont-Methuen and Trent Lakes. Where a column is blank, it is because the data is not reliable, not because there are no farming operations in the area. This will have reduced the total County and City totals for the factors where the data was not reported.

The most significant data collection change was to how a “farm” is reported. This may have had an impact on the reported decline in the number of farms and farmland area since the change in the definition of a farm unit would have reduced the number of operations reporting. For additional insight into this issue, data from the Municipal Property Assessment Corporation (MPAC) was also reviewed.

FIGURE 3A: 2001 & 2006 CENSUS DIVISIONS AND CENSUS CONSOLIDATED SUBDIVISIONS

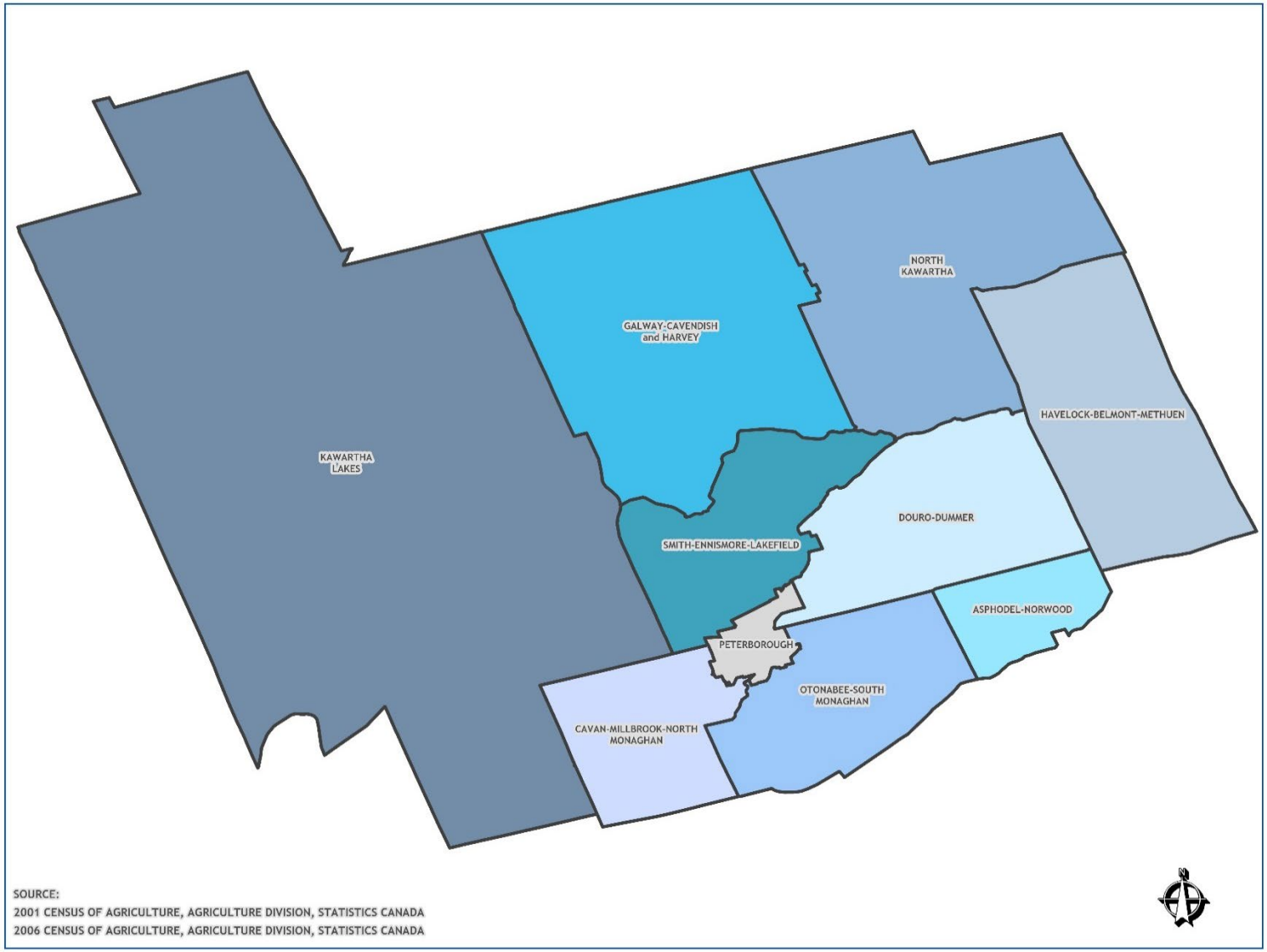


FIGURE 3B: 2011 CENSUS DIVISIONS AND CENSUS CONSOLIDATED SUBDIVISIONS

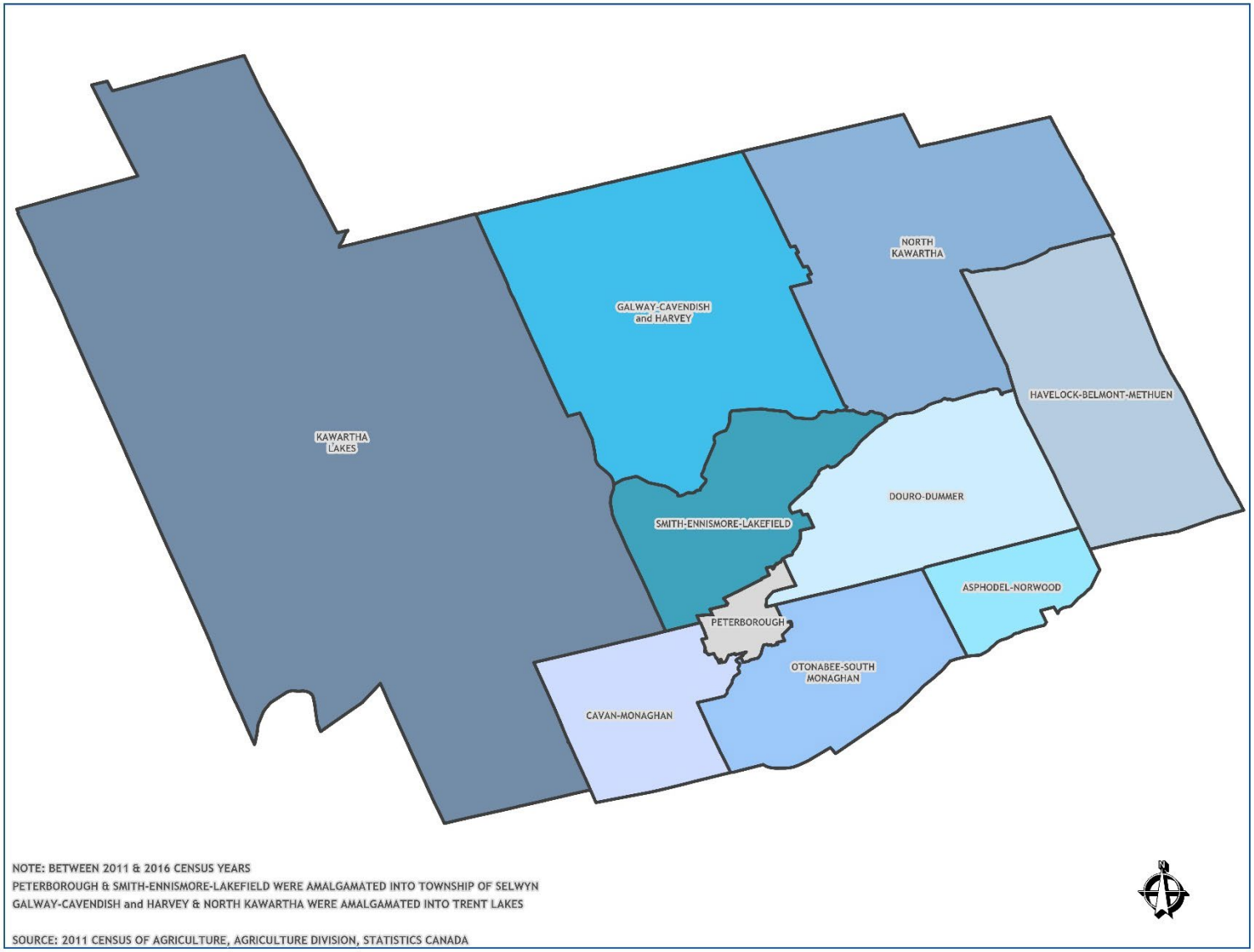
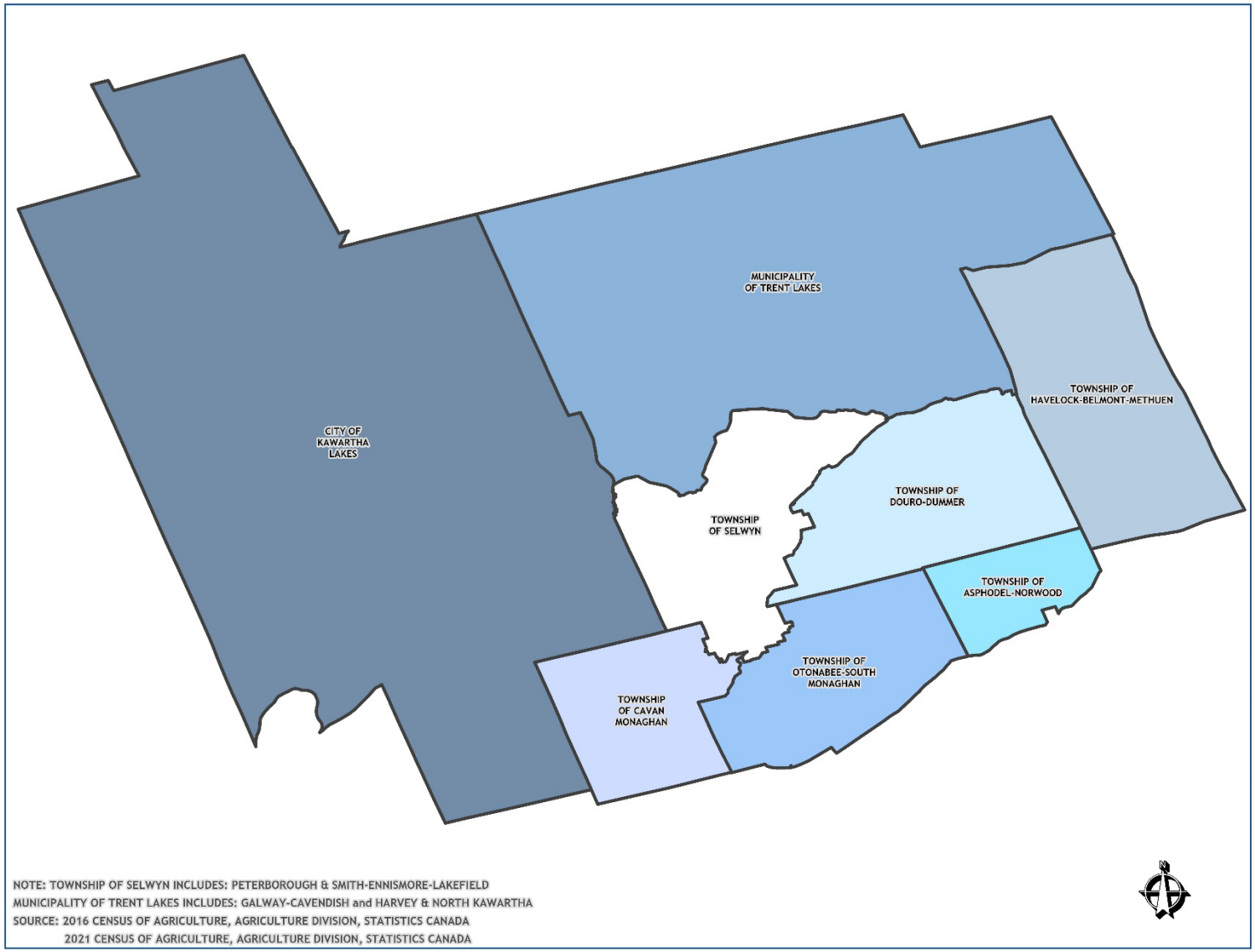


FIGURE 3C: 2016 & 2021 CENSUS DIVISIONS AND CENSUS CONSOLIDATED SUBDIVISIONS



2 Broader Trends Affecting Agriculture

To understand local trends, it is important to understand the global, national, and regional context in which the agricultural sector functions. Even though this report is a profile update, the context in which the trends emerge is important to determine how an area can best respond to leverage or mitigate changing circumstances.

2.1 Global Trends

The world has experienced some recent and ongoing traumatic events that have exposed fragility in the global food supply. Although the politics of trade have an impact on global agriculture, recently there have been other ongoing issues of significance that are impacting agriculture. The war in Ukraine and conflicts in other areas have put the world's food supply at risk and disrupted the agricultural supply chain. This has occurred at a time when the effects of the COVID-19 pandemic are still being felt. Other factors including shifting farm structure, advancements in technology, concerns about food safety, changes in food preferences, increasing concern about access to critical resources such as water, and the impact of climate change continue to impact the sector.

Multiple nationwide lockdowns by governments in response to the covid pandemic resulted in the shutdown of global industries which inevitably impacted the "farmer to consumer" supply chain[10]. It is estimated that the COVID-19 pandemic will affect the global agriculture market for the next decade, ultimately impacting food security, greenhouse gas emissions, and trade[11]. The fallout from COVID-19 will continue to alter production and consumption patterns.

Around the world, changing technology that supports the use of robotics and computer-based precision management is, in some areas, resulting in a shift to larger farms, with fewer operators. Conversely although the trends vary across the world, recent research has also shown an increase in smaller farms and new entrants into the sector. The component of the industry that is declining is the mid-range traditional farm of a single operator employed full time on the farm with a diversified production profile of multiple crops and some livestock. These changes to farm structures render the common policy approach of "one size fits all" increasingly problematic.

[10] Balakrishnan et al. "Global Impact of COVID-19 on agriculture: role of sustainable agriculture and digital farming." Environmental Science and Pollution Research Int. March 2022.

[11] "The Impact of Covid-19 on Agricultural Markets and GHG Emissions." OECD Policy Responses to Coronavirus (COVID-19). December 2020.

Advances in technology are allowing new forms of food production with vertical farming, roof tops and urban gardens and greenhouse production accounting for increasing volumes of production. Concern over the use of fossil fuels has led to evolving green energy solutions and sustainable agriculture. There has typically been a link between fossil fuels and certain commodities in the value chain, corn being an example. As these shifts occur, producers must anticipate and adjust to changing market demands.

Changes in consumer trends are also a factor. The decrease in demand for meat in North America is countered by the increasing demand in Asia. Issues with food safety have impacted food markets and opened opportunities for countries such as Canada which has an established and respected reputation for well-regulated, safe food production. Not only has this opened new markets for Canadian products, but it has also attracted food processors to the country to take advantage of Canada's reputation for safe food. Increased public awareness of the environmental costs of shipping food long distances has refocused interest in local foods and changed production and distribution practices. The debate over genetically modified foods (GMO's) which became a lightening rod for public concern when they were introduced, is ongoing.

Access to water, essential to support life and for food production, is a right being increasingly challenged. Many of the large agricultural producers in the world rely on ground water which scientists warn is being drawn down at unsustainable rates. Responsible management of and access to water must be addressed if food production is to be sustainable. With the increasing impact of climate change, addressing this issue is critical. Canada has a disproportionate supply of the world's fresh water. Through responsible management this is becoming a huge asset for Canadian agriculture.

Other issues including climate change, populations growth, migration all impact the agricultural sector. Essentially, the dominant theme running through global trends in agriculture is uncertainty. Producers must be forward thinking and flexible to respond to changing demands and seize on new opportunities. Policies related to the sector must be flexible and supportive to accommodate the evolving trends impacting the sector.

2.2 National Trends

Canada is a world leader in agricultural technology. Canadian farmers are leaders in the development and implementation of precision agricultural technologies described as:

> "(…) data-gathering technologies (like drones, satellite imagery, and sensors), analytics and precise application control to optimize the use of farm inputs.

> Matching farm practices to the specific needs of the soil and crops brings economic, agronomic, and environmental benefits."[12].

By utilizing precision technology, farmers can implement environmentally sustainable practices, increase yield, and reduce costs.

Climate change is increasing the uncertainty of weather from year to year. Extreme events including forest fires, floods, rain events, and fluctuations in weather patterns must be managed. Evolving demands for different food types also requires flexibility.

This country has an established reputation for producing safe food, a significant advantage in this time of consumer scepticism. Operators are educated and technologically advanced. The sector is well regulated and supported by a significant research network. There is access to good land and an abundance of fresh water.

However, Canadian agriculture and agri-food is susceptible to uncertainty. The agriculture sector was substantially impacted by COVID-19. The slower-than-expected recovery from the pandemic and unanticipated challenges of the supply chain impact the future of Canada's agriculture and food industry. Assessing past agriculture trends can assist in predicting future trends.

An additional factor that the Canadian agricultural sector must navigate is the increases of prices on key components of the industry. A 2020 review notes that machinery prices have increased by 100% over the past seven years and land values continue to increase by approximately 10% year to year across Canada[13]. The rise in cost of inputs such as fuel, greatly increases the cost of production which causes additional pressure on the individuals and businesses in the industry. Throughout Canada farmland prices have soared. According to Farm Credit Canada over three decades, prices in Canada have increased by 827% from $547 per acre to $4,527. In Ontario, already the most expensive market, average prices rose from $3,248 per acre to $17,962. In areas close to growing urban centres, the demand for land and associated increases in prices is higher. The impact of land price increases is addressed further in this report with specific comments on the impact on the study area.

The profile of farming in Canada has changed over the years. There has been a consistent decline in the number of farms over time. However, the area of farmland under production has not declined at the same rate. Between 1951 and 2021, the number of Canadian farms

[12] https://www.nourish.marketing/update-on-canadian-agriculture-trends/
[13] Haralovich, John. "Status of Agriculture Industry in Canada.", MNP Ltd. February 2020.

declined by 30% from more than 600,000 to less than 190,000. During the same period the area of farmland declined by 12% from approximately 170,000 million acres in 1951 to 150,000 million acres in 2021.[14]

The disconnect is accounted for by the change in average farm size. In 1951 average farm size in Canada was 279 acres. In 2021 it was 809 acres. Fewer farmers are farming larger farm operations.

As the number of farms has declined, so too has the number of operators. Between 1991 and 2021, according to Statistics Canada, the number of operators declined from 390,875 to 262,455. New challenges associated with the COVID-19 pandemic and the aging population of Canadian farmers have increased the number of farm operators establishing succession plans for their farm operations. The portion of Canadian farms reporting a succession plan increased from 8% in 2016 to 12% in 2021[15].

2.3 Provincial Trends

Ontario's agricultural sector is a significant component of the Canadian agricultural sector. Its strength lies in the variety of commodities that are grown in the province and the value of the agri-food sector.

[14] Statistics Canada – Land Use, Census of Agriculture Historical Data – Table 32-10-0153-01 - Land use, Census of Agriculture historical data (statcan.gc.ca)
[15] Statistics Canada – Canada's 2021 Census of Agriculture: A story about the transformation of the agriculture industry and adaptiveness of Canadian Farmers - The Daily — Canada's 2021 Census of Agriculture: A story about the transformation of the agriculture industry and adaptiveness of Canadian farmers (statcan.gc.ca)

The changes in the farm profile in Ontario over time varies from trends at the national level. The decline in farmland in Ontario over time has been significant. Whereas the national percentage decline in farmland between 1951 and 2021 was 12%, in Ontario it was 44%.

Because of the variety of production that occurs in Ontario, average farm size is much smaller than the national average. Average size in 2021 was 243 acres as compared to the Canadian average of 809 acres. In Kawartha Lakes the average farm size in 2021 was 242 acres, in Peterborough it was 209 acres. Variations in size between different types of farms and farming areas in Ontario are also notable because of the range in the type of farming that occurs.

In 2021, the province of Ontario once again made up the largest national share of farms and farm operators. Ontario was the second largest contributor to Canada's farm operating revenues. Moreover, the province was the leader among all provinces in commodities including soybeans, corn for grain, and greenhouse products.[16]

The 2021 Census of Agriculture showed that Ontario accounted for 25.5% of total farms in Canada, while making up 7.7% of total farm area. In 2021, compared to other provinces, Ontario had the largest proportion of Canada's farms classified as poultry and egg production (38.9%); sheep and goat (36.6%); other animal production (28.7%); vegetable and melon (30.8%); and greenhouse, nursery and floriculture (31.8%).[17]

[16] Statistics Canada – Ontario is an agricultural powerhouse that leads in many farming categories (statcan.gc.ca)
[17] Ibid.

3 Land Use Planning

The study area has two separate and distinct land use planning units, the City of Kawartha Lakes and the County of Peterborough. Their land use planning context is discussed separately below.

Land use planning in Ontario is governed by provincial policy and legislation. The Planning Act and the Provincial Policy Statement (PPS) contain directions for municipalities to conform with in the development and implementation of their official plans. Additionally, the study area is subject to the Places to Grow: A Growth Plan for the Greater Golden Horseshoe (the Growth Plan) and a small portion of it falls within the areas subject to the Greenbelt Plan and Oak Ridges Moraine Conservation Plan (ORMCP).

Together the Growth Plan, the Greenbelt Plan and the ORMCP, currently build on the PPS to establish a land use planning framework for the Greater Golden Horseshoe (GGH) that supports agriculture as part of a thriving economy, a clean and healthy environment and social equity.[18] It should be noted that in April, 2023, the provincial government released proposed updates to the PPS and Growth Plan for public review and comment. These updated policies propose to loosen a number of the controls associated with agricultural land. The proposed changes had not been brought into effect at the time of writing of this report. The comments in this section relate to the policies that were still in effect in January 2024.

3.1.1 Provincial Policy Statement, 2020

The PPS in effect at the time this report was prepared, contains specific policies that protect prime agricultural land and specialty crop areas from conversion to non-agricultural uses. In addition to the general encouragement to protect agricultural resources, the PPS limits when municipal boundary expansions are permitted into prime agricultural areas. It restricts lot creation and lot adjustments to prevent fragmentation of the agricultural land base and addresses separation between agricultural and non-agricultural uses.

The current PPS also speaks to the implementation of a systems-based approach for managing agricultural resources. In the area subject to the Growth Plan, the Province has mapped an agricultural system which municipalities are to address in their official plan.

[18] Greenbelt Plan (2017) | ontario.ca

3.1.2 The Growth Plan for the Greater Golden Horseshoe 2020

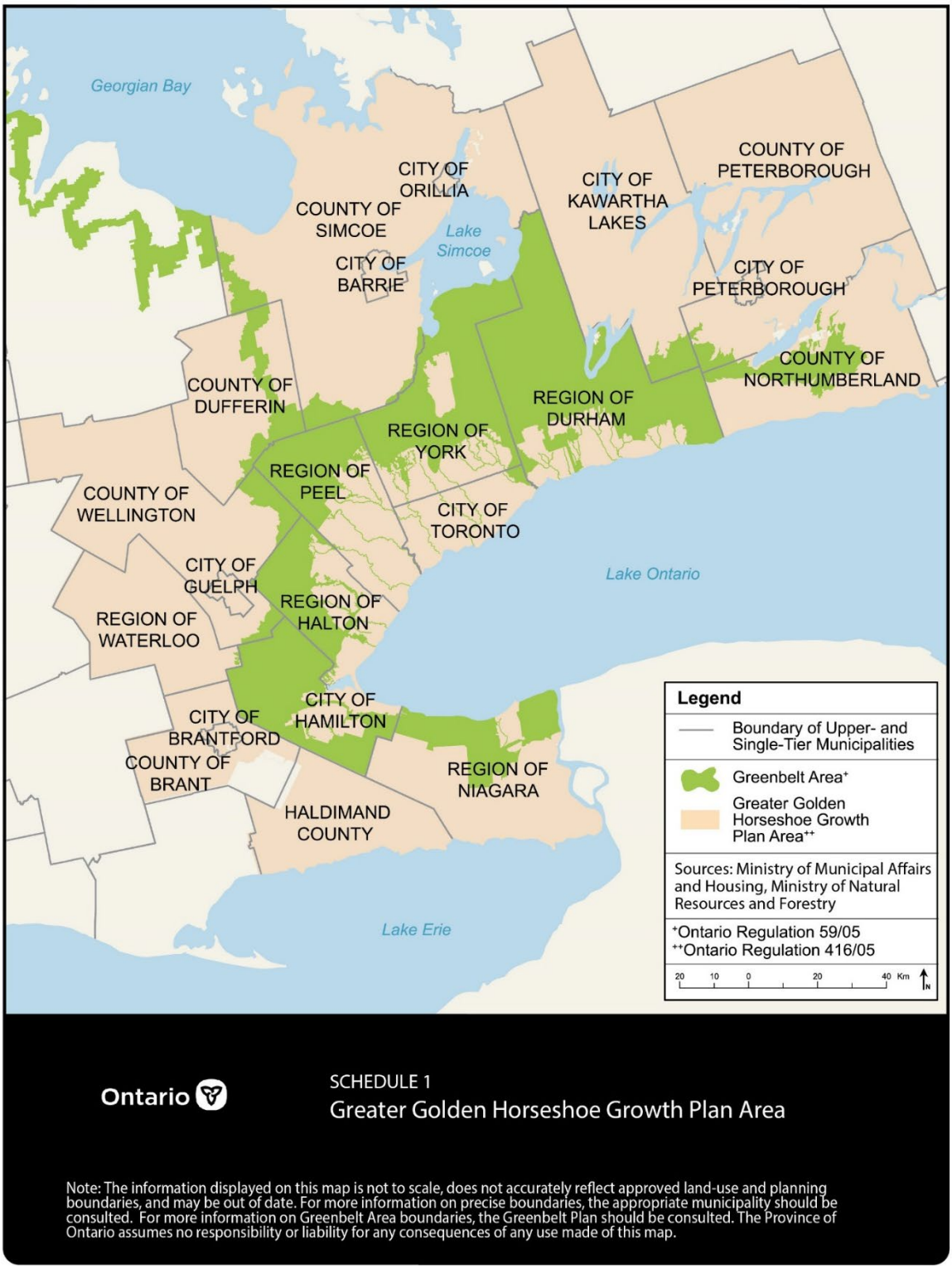
The City of Kawartha Lakes and the County of Peterborough are part of the GGH which is subject to the policies of the Growth Plan **(Figure 4)**. In the Growth Plan 2020 there is a requirement for municipalities to implement an agricultural system approach to managing agricultural land based on mapping prepared by the province.

The Agricultural System is a group of inter-connected elements. It has two components: the agricultural land base, which is comprised of prime agricultural areas, including specialty crop areas, and rural lands that together create a continuous, productive land base for agriculture, and the *agri*-food network, which includes infrastructure, services, and assets important to the viability of the agri-food sector. The Natural System identifies lands that support both natural heritage and hydrologic features and functions, including providing for pollinator habitat, which is an essential support for agricultural production and for ecosystems. Both systems maintain connections to the broader agricultural and natural systems of southern Ontario.[19]

Currently, implementation of an agricultural system must be addressed when municipal official plans are updated. The County of Peterborough addressed this requirement in its recent update to the Official Plan. However, as part of currently proposed updates to the 2020 PPS and Growth Plan, the mandatory requirement for municipalities in the GGH to implement the systems approach, based on the government mapping, has been downgraded to a recommendation. As noted previously the future of the proposed changes was not known at the time this report was writing. Given this uncertainty, the County of Peterborough has asked the province not to proceed with the review and approval of the new County Official Plan until potential changes to the provincial policies are finalized. The Official Plan reference in this document is the one that was in effect in January 2024.

[19] Greenbelt Plan (2017) | ontario.ca

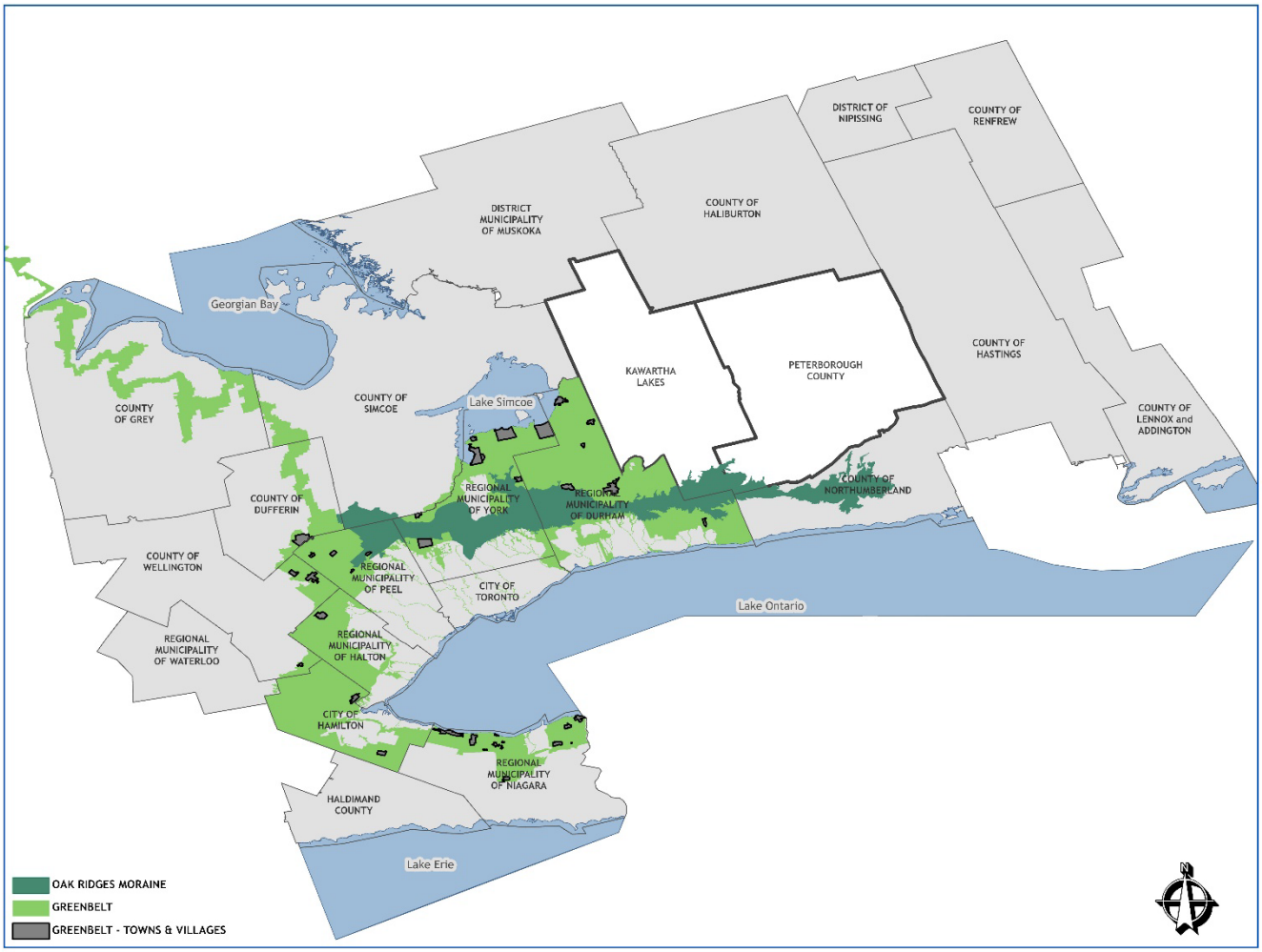
FIGURE 4: AGRICULTURAL SYSTEM FROM THE GROWTH PLAN FOR THE GREATER GOLDEN HORSESHOE



3.1.3 The Greenbelt Plan and Oak Ridges Moraine Conservation Plan

The Greenbelt Plan is a provincial policy designed to protect a significant contiguous area for natural heritage protection. Agricultural assets are part of this protection. A portion of the study area in Kawartha Lakes is subject to the Greenbelt Plan. Lands along the western side of Kawartha Lakes are designated as Protected Countryside in the Greenbelt Plan. Those lands and a swath of the Oak Ridges Moraine that crosses through the south part of the City and the County of Peterborough are subject to the policies of the of the Greenbelt Plan and the Oak Ridges Moraine Conservation Plan (ORMCP).

FIGURE 5: THE GREENBELT, OAK RIDGES MORAINE AND STUDY AREA

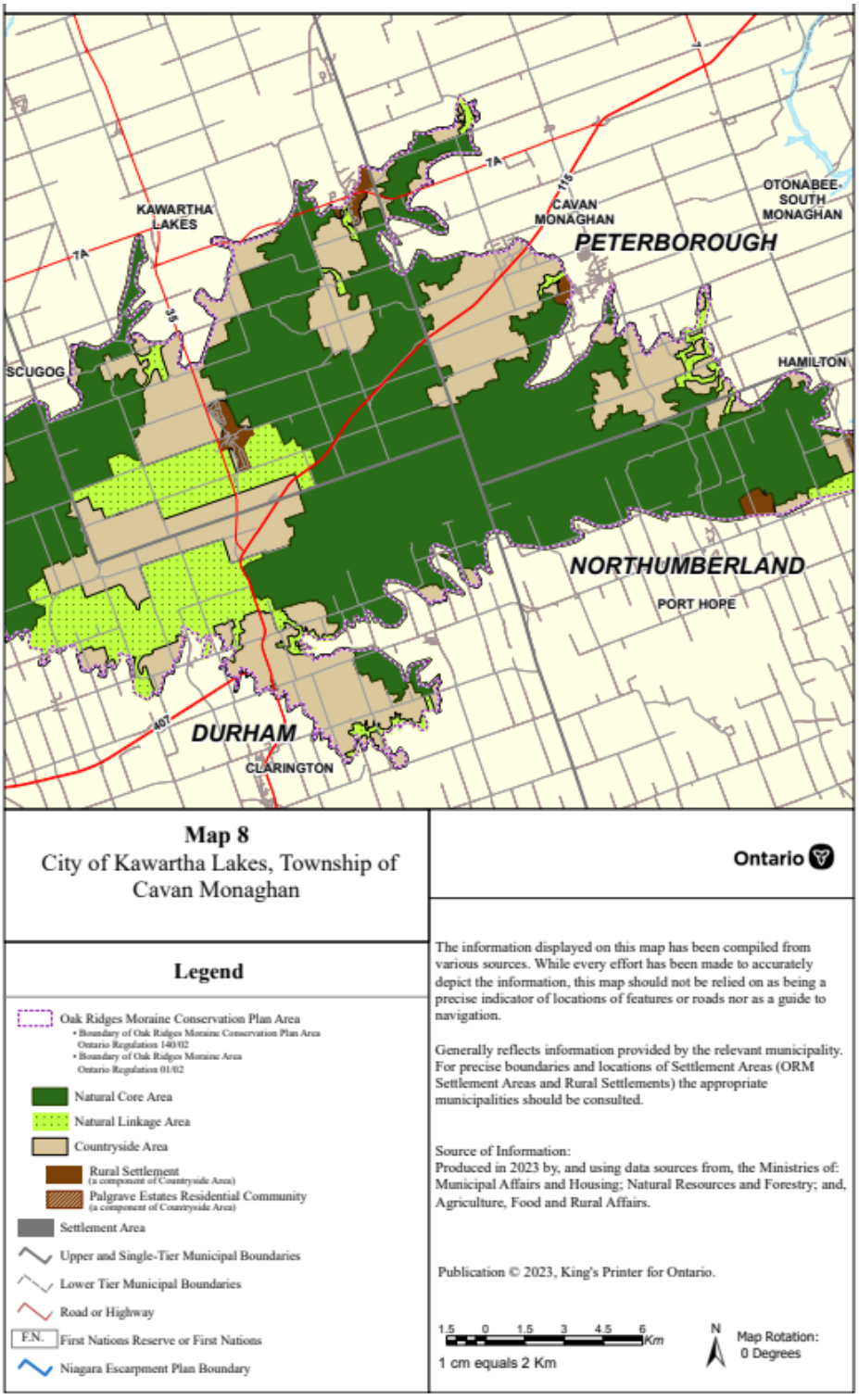


The Oak Ridges Moraine Conservation Plan is an ecologically based plan that provides land use and resource management direction for the 190,000 hectares of land and water in the Moraine.

The Oak Ridges Moraine is one of Ontario's most significant landforms. This irregular ridge stretches 160 kilometres from the Trent River in the east to the Niagara Escarpment in the west. The Escarpment, the Moraine and the Greenbelt Plan's Natural Heritage System together form the foundation of south-central Ontario's natural heritage and green space systems. Strategically located north of and parallel to Lake Ontario, the Moraine divides the watersheds draining south into western Lake Ontario from those draining north into Georgian Bay, Lake Simcoe and the Trent River system. As noted, there is a swath of land along the south edge of Kawartha Lakes that also stretches across the south part of Peterborough County (Cavan Monaghan Township) **(Figure 6)** which is part of the Oak Ridges Moraine.

The City of Kawartha Lakes and the Township of Cavan Monaghan are required to have Official Plan policies that confirm with the requirements of the ORMCP. This adds an additional layer of control and protection to certain lands in the study area. The policies of the ORMCP are generally supportive of agriculture, but they may impact the opportunity for value added businesses and commercial uses that may support the agricultural system in the study area.

FIGURE 6[20]: THE OAK RIDGES MORAINE AND STUDY AREA



[20] Oak Ridges Moraine Conservation Plan Land Use Designation Map (ontario.ca)

3.2 City of Kawartha Lakes

The City of Kawartha Lakes became a single tier municipality on January 1, 2001. The current Official Plan replaced the policies previously in effect for the thirteen local area municipalities that were restructured by the province into the City of Kawartha Lakes. The Official Plan was updated in 2012 but the approval was subject to a number of appeals. Some of those appeals are still being addressed but the portions of the plan not appealed are in effect.

The Official Plan lays out the following general guidance for agriculture:

a) Recognize and promote the agricultural sector and its sustainability for future generations to continue farming.
b) Support a healthy and productive agricultural industry as an important element to the City's heritage, identity and its economic base.
c) Prevent infiltration of conflicting uses that will restrict or hinder its expansion or flexibility on the agricultural community.
d) Raise awareness of the quality of the agriculture and agri-business sector in the City.
e) Recognize that sustainable agriculture allows for flexibility of production, strong, financially viable farms that adapt to market fluctuations and other factors that may change over time.
f) Promote educational programs that provide training for agricultural leadership expertise and innovation.
g) Promote the provision of skilled jobs and agricultural career opportunities in the industry as opportunities for younger farmers and new agri-business operators.
h) Identify and explore the development of new markets, crops, agricultural products, value-added processing and value-chain partnerships, locally, regionally and internationally.
i) Protect the right-to-farm without overly onerous restrictions.
j) Protect long-term food security for Canadians with an emphasis on locally produced food.

The City distinguishes between rural lands and prime agricultural lands. The stated goals for the prime agricultural designation are:

a) To promote growth and development of the City's agricultural resources through a sound economic, social and environmental framework.
b) Protect land that is primarily class 1-3 agricultural production from fragmentation, development and non-farm-related uses.

c) To protect prime agricultural lands by encouraging the business of agriculture, by providing for innovation and diversification within agriculture, by providing additional economic opportunities through secondary uses.
d) Preserve and promote the agricultural character of the City and the maintenance of the natural countryside.

The policies of the OP:

- describe the permitted uses in the prime agricultural designation,
- restrict lot creation to only agricultural uses with a minimum lot size of 40 ha,
- further directs that where lots are created as a "surplus farm severance" as permitted by provincial policy, that the residential lot be restricted to no more than 1 ha,
- that residential lots for retiring farmers or infilling shall not be permitted (this was previously an allowable action),
- that garden suites are permitted as a temporary use for farm help or a retiring farmer,
- required the demonstration of need for a proposed use if a request to change the designation from agricultural is received (this is important as this can be a prohibitive test),
- Areas that have been designated but may not be highly productive agriculturally are still protected to preserve the agricultural economy from incompatible uses.

Taken together, the policies of the City of Kawartha Lakes Official Plan strengthen the provincial policies to protect the agricultural resources of the jurisdiction.

3.3 County of Peterborough Official Plan, Consolidated December 2022

The County of Peterborough approved an updated Official Plan in June 2022, which has not yet been approved by the province. This plan addressed the provincial policy requirements in effect in 2022. Until this plan is approved by the province, the 1994 Official Plan consolidated in 2022, remains in effect. Both documents support agriculture. The newly adopted plan implements provincial policy in place at the time of approval and includes those related to the establishment of an agricultural system.

The Prime Agriculture designation applies to areas where Class 1, 2 and 3 lands under the Canada Land Inventory Soil Capability for Agriculture or specialty crop land predominate. These areas shall be protected for agricultural uses from incompatible, non-agricultural

development. Small scale, farm-related commercial/industrial uses shall be permitted provided that they are directly related to the farm operation and are in close proximity to the farm operation.[21]

The policies of the OP:

- Discourage non-rural related uses within the Prime Agriculture designation to prevent fragmentation,
- Reinforce the requirements of Minimum Distance Separation,
- Limit development on a farm to a single-detached dwelling,
- Permit lot creation for agricultural uses,
- Requires minimum lot frontage and lot area for surplus farm severance,
- Permits only one farm-related consent per a lot,
- Encourages consolidation of smaller lots,
- Requires newly created farm parcels to be 40 ha in size, and
- Directs that permitted farm-related commercial and industrial uses shall be small in scale and directly related to the farm operation and shall require a zoning by-law amendment to permit and site plan control.

The policies of the County of Peterborough Official Plan strengthen the provincial policies to protect the agricultural resources of the jurisdiction.

[21] planning-County-OP.pdf (ptbocounty.ca)

4 City of Kawartha Lakes and County of Peterborough Land Base

The land base of an area is an important factor in the ability and success of agricultural practices in an area. The following section of the report outlines the main characteristics of the study area.

4.1 The Geographic Profile

As this update includes both the County of Peterborough and the City of Kawartha Lakes, **Figure 7** has been assembled to illustrate the key factors of each area.

FIGURE 7[22]: GEOGRAPHIC PROFILE SUMMARY

FACTOR	PETERBOROUGH	KAWARTHA LAKES
Population (2021)	147,681	79,247
Land Area / Size (ha)	362,240	306,690
Watershed	• Otonabee Region Watershed	• Kawartha Watershed
Predominant geographic feature	• Oak Ridges Moraine to the south • Peterborough Drumlin Fields in the east • Canadian Shield to the north • Forms a diverse range of farm-types	• Canadian Shield • Carden Alvar • Victoria County Community Pasture (VCCP) 2,200 acres (890 hectares) of rural pasture[23]
Traditional Territory	• Mississauga Anishinaabeg (Curve Lake and Hiawatha First Nations communities)	• Mississauga Lands and the traditional territory covered by the Willams Treaties
City Centres	• Peterborough – population 83,651 • Both a university and college town and hosts the primary campuses for Trent University and Fleming College	• Lindsay – population 22,367 • Frost Campus of Fleming College

Since the release of the 2006 study, transportation links to both the City of Kawartha Lakes and the County of Peterborough have improved primarily through the extension of Highway 407. In the fall of 2019, the final leg of the Highway 407 was opened just north of the

[22] Statistics Canada, 2021 Census Profile – Peterborough County
[23] Victoria County Community Pasture (VCCP) is 2,200 acres (890 hectares) of rural pasture available to 50 area farmers for summer gazing for about 1,200 yearling cattle. The farmer-run management board has embraced both ecological stewardship and farmer education. It is run in partnership with Ducks Unlimited.

village of Kirby connecting to Highway 115/35 and providing a new gateway to the Kawarthas from the south. The impact of this extension has been to improve the commuter infrastructure linking both Kawartha Lakes and the County of Peterborough to the Greater Toronto Area.

4.2 Physiography

The City of Kawartha Lakes and Peterborough County both incorporate portions of the Precambrian Sheild which is covered under a mantle of glacial drift. In the northern part of these two areas where the Shield dominates, the drift is very thin, and the topography is a reflection of the bedrock geology. A thin belt of Black River limestone separates the Precambrian igneous and metamorphic rocks located in the north from the Trenton formation limestone to the south. This band includes extensive flats which offer little soil cover and are primarily utilized for grazing.

In the south, the Trenton formation limestone is largely hidden under glacial till which has been formed into large drumlins.

The drumlins located in the southeastern part of the City of Kawartha Lakes are sometimes steeply sloped, limiting use for agriculture. In the western part of the City is another highland area. Between these two highlands is the lakebed of former glacial Lake Schomberg. This ancient lakebed forms an undulating topography broken by small numerous steeply sloping drumlins.

The geology of Peterborough County is similarly stratified with a Precambrian geology defining the north, followed by Black River and Trenton limestone to the south. In the south of the region the Drumlins and Eskers located above the Black River and Trenton formations generally relate to the undelaying bedrock geology and as a result are stony except along the terminal moraine landforms in Douro-Dummer Township. The glacial till overlaying the Trenton formations to the south are thick, moderately stony, calcitic limestone till with strongly drumlinized landforms.

The highly calcitic nature of the glacial till located throughout both the City of Kawartha Lakes and Peterborough County has created a uniquely magnesium-deficient soil condition. This condition is unique within the Province and has been noted by local agronomists due to its impact in reducing chlorophyll production and stunting plant growth.

The Peterborough Drumlin Field located in the southern portion of Peterborough is a 5,000 square kilometer area containing approximately 3,000 well-developed drumlin ridges. This

significant landform straddles the Townships of Cavan Monaghan, Otonabee South Monaghan, Asphodel-Norwood, Selwyn and Douro-Dummer townships and is one of the largest of its kind in North America. Drumlins are generally shaped like upside spoons and composed of highly calcareous glacial till containing large quantities of Precambrian and limestone material. Typically, these structures are less than 1.5km in length and 400m or less in width and 25m in height. In Peterborough County the drumlins are generally oriented from northeast to southwest indicating the direction of ice advance. Long sinuous gravel ridges (eskers) are also integrated into this landscape and indicate the location of glacial rivers as ice melted away.

In the southern part of Otonabee South Monaghan Township there are small flat areas of lacustrine clay which indicates the remnants of another glacial lake which was important in the development of good quality soil.

4.2.1 Natural Drainage

The City of Kawartha Lakes contains a wide network of rivers and lakes which are generally divided into two primary drainage areas with the space between Cameron Lake and Sturgeon Lake acting as the divide. To the north, the streams flow south-west and west while those to the south flow north-east and east. While many of the rivers located in the north are fed by the Precambrian shield, the rivers in the south are generally spring-fed and originate within the drumlins and adjacent glacial lakebed areas to the south.

The Trent Severn Waterway forms the backbone of the drainage in Peterborough County with all streams emptying into the system. In the Township of Otonabee South Monaghan there is a large area of poorly drained soils which form part of the original glacial lakebed. Like the southern area of Kawartha Lakes which contained the bed of Lake Schomberg, this area contains a large amount of ground water which is important to the area's hydrologic health.

From north to south, the area can be broken down into the following minor physiographic regions, including Algonquin Highlands, Georgian Bay fringe, Dummer moraines, Peterborough Drumlin fields and Oak Ridges Moraine.

4.2.2 Algonquin Highlands

The Algonquin Highlands area of Peterborough is underlain by granite. The soils are generally shallow, stony, sandy, and acidic and the area is dotted with swamps and bogs making it marginal for agriculture.

4.2.3 Georgian Bay Fringe

This area is located at the northernmost part of Kawartha Lakes and Peterborough, is characterized by very shallow soil and bare rock knobs and ridges. Agriculture in this area is restricted by limited soil.

4.2.4 Carden Plain

This area stretches from the northern area of Kawartha Lakes across to Lake Couchiching and is comprised of limestone plain with very little surface level till. This is a unique geographic area which attracts much attention from naturalists. Due to the nature of this area, the predominant agricultural activity is raising cattle. It is home to the Victoria County Community Pasture, 2200 acres of community pasture.

4.2.5 Simcoe Lowlands

A small area located in the upper west section of Kawartha Lakes contains the Simcoe lowlands which is characterized by extensive areas of bog and wet sand. Generally, the farming in this area is restricted by these features.

4.2.6 Dummer Moraines

The Dummer Moraines constitute an area of rough, angular limestone cobbles and boulders that border the Canadian Shield from the Kawartha Lakes eastward. Apart from the presence of stones, the chief drawback of the soil is the drought proneness. The physically difficult region makes agricultural activity challenging. The farm economy in this region tends towards beef production and livestock operation.

4.2.7 Drumlin Fields

The drumlins in the Kawartha Lakes area are more scattered and not as well formed as in other areas. Around Lindsay, the landscape is described as a “drumlin and clay flat” due to the deposits of clay from Lake Schomberg which lie between the drumlins. The uniform slopes of most drumlins in Kawartha Lakes are amenable to contour cultivation and slope cropping. Almost half of the farmland is used for grazing and a little less than half of the cropland is used for hay.

The drumlins are most typical in form and most densely distributed in the County of Peterborough. The Peterborough drumlin field is also notable for its eskers, which are not important with respect to soils. The uniform slopes of most drumlins in the Peterborough Drumlin Field are amenable to contour cultivation and strip cropping, which is important to control erosion. Almost half of the farmland is used for grazing and a little less than half of

the cropland is used for hay. In this region of Peterborough, there is a mixture of beef cattle, dairy cattle, hogs, and poultry becoming important in some areas. The northeast/southwest direction of the drumlins contrasts to the north-south/east-west lot lines in most properties, resulting in many triangular and diamond-shaped fields, along with odd corners that have much value and appeal as residential building lots.

4.2.8 Schomberg Clay Plains

In Kawartha Lakes, the Scugog area overlies a flat till plain. Due to imperfect drainage, historically, wheat growing was not so successful and alsike and red clover were commonly used in the crop rotation. There was a tendency to put cropland down to grass, while a good deal of land also remains in natural or unimproved pasture. This region has long been noted for the raising of good beef cattle and is rated as a good farming area.

4.2.9 Oak Ridges Moraine

The Oak Ridges Moraine is one of the most distinctive physiographic regions of southern Ontario. It occupies the southernmost tip of Kawartha Lakes and a small pocket in the south-west corner of Peterborough County in Cavan Monaghan. Generally, the surface is hilly, with a knob-and-basin relief, covered by a composite of sandy or gravelly materials. Commonly, the hilly sandy soil is subject to blowing resulting in unstable soil conditions. Cattle seem to thrive on the sparse pastures.

4.3 Soil Capability

In Ontario, the Canadian Land Inventory (CLI) is used as the starting point for establishing soil capacity for agriculture. It ranks mineral soils in specific areas to produce common crops. This system assigns classes and subclasses to the land base on a standardized rating system. Organic soils are not rated in this system. Organic soils are unique soils that depending on circumstances, may be extremely useful for specialty agricultural production.

The Ontario Provincial Policy Statement (PPS) relies on the soil classification established in the CLI as well as agricultural features, as the basis for identifying land to be protected for agriculture in the province. Currently, Class 1, 2 and 3 soils and specialty crop lands are considered Prime Agricultural Lands and municipalities are required to protect contiguous areas of these soils for agricultural use. Class 4 soils can be included as prime lands based on the agricultural use associated with them.

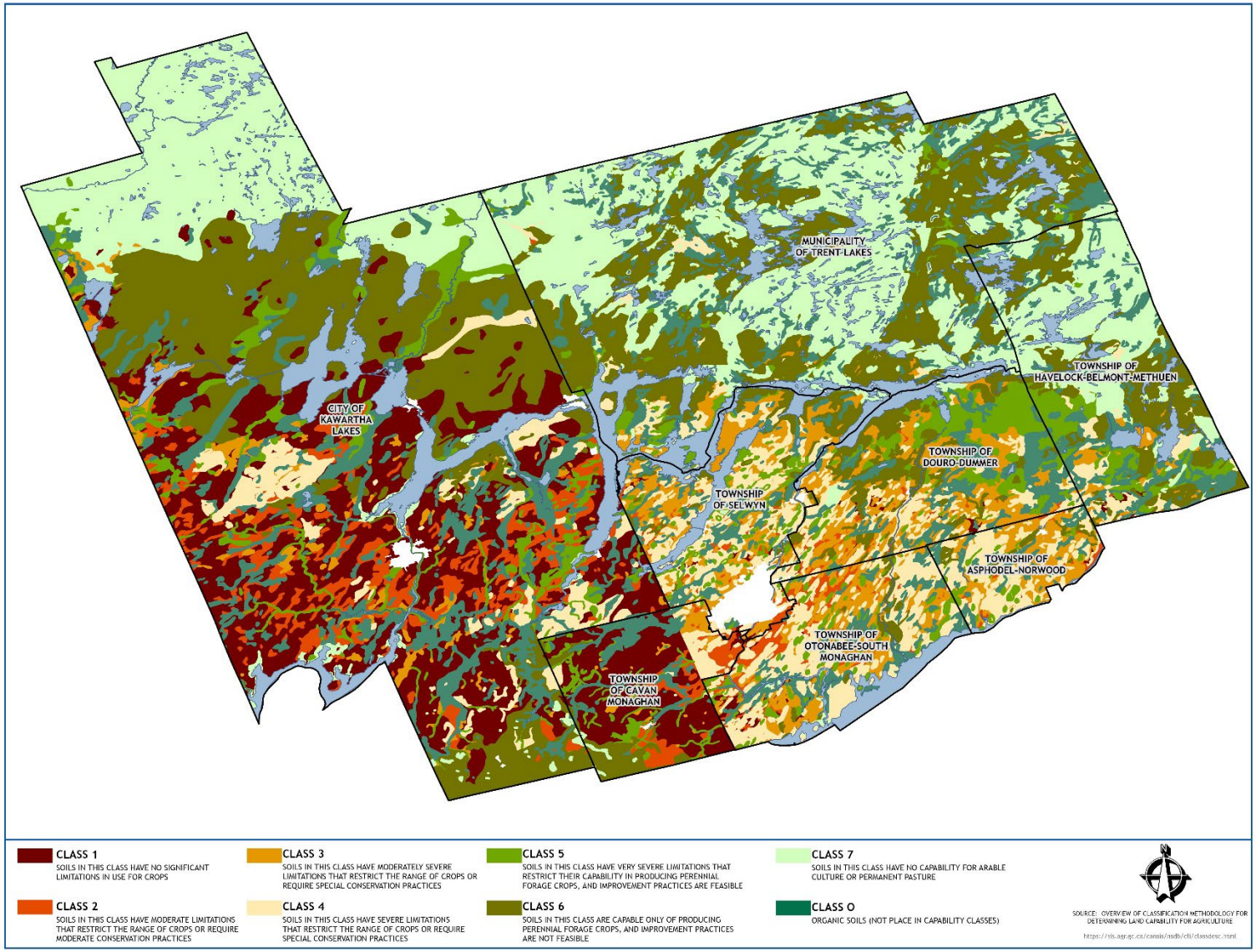
In Kawartha Lakes and Peterborough County, most of the land south of the Canadian Shield is considered Class 1 prime agricultural with some Class 4 organic and lower capacity soils mixed in. The northern portion of the municipality is characterized by Class 6 and 7 soils, the lowest capability to support agriculture, associated with the Precambrian Shield.

As can be seen in **Figure 8**, the south half of Kawartha Lakes is predominantly Class 1 and 2 lands, making the soils very viable for crop growing. Peterborough is characterized more by pockets of Class 2, 3 and 4 lands, making it slightly less productive for growing crops. It is acknowledged that the CLI system does not adequately represent the value of pasture and grazing lands and how those lands contribute to the overall viability of an agricultural area.

4.4 Climate

Many specialty crops are less hardy than common field crops and often have specific moisture requirements. Climatic factors are often as important as soil factors in determining the suitability of areas for special crop production. Temperature, precipitation, and growing season data are significant factors in determining which commodities are cultivated in Kawartha Lakes and Peterborough.

FIGURE 8: CANADA LAND INVENTORY OF SOILS



5 County of Peterborough and City of Kawartha Lakes Agricultural Profile

To assess the impact of agriculture in the Kawartha Lakes and Peterborough areas, it is necessary to understand the industry's characteristics and how these have changed over time. This chapter provides an overview of agriculture in the study area, discusses how agriculture has changed, and provides insight into the major agricultural activities in the City and the County.

The data summarized in this section is from the following sources:

- The Agricultural Census, Statistics Canada
- Farm Credit Canada – Farmland Values Report 2022
- City of Kawartha Lakes and the Greater Peterborough Area Agricultural Economic Impact and Development Study, September 15, 2006
- OMAFRA website – County profiles
- Municipal Property Assessment Corporation (MPAC)

Unfortunately, the City of Kawartha Lakes census area is for the entire jurisdiction (as it is now a single-tier government) which means that the former lower-tier townships are no longer reported on separately.

It should also be noted that due to reliability issues, Statistics Canada has suppressed the data for certain factors in the Townships of Havelock-Belmont- Methuen and Trent Lakes. Where a column is blank, it is because the data is not reliable, not because there are no farming operations in the area.

Appendix 1 contains a full and complete profile of the agricultural statistics that apply to the study area. It also addresses the key changes that have occurred in the collection of census data that impact the interpretation of the statistics and contains a more detailed explanation of Statistics Canada's approach in handling of data for municipalities where the data is considered to be "unreliable".[24]

[24] Appendix 1, pg. 128 (Statistics Canada – Frequently asked questions on random tabular adjustments (RTA) https://www.statcan.gc.ca/en/statistical-programs/document/3438_D4_V4

The most recent 2021 Census of Agriculture introduced a significant change which redefined a “farm” or an “agricultural holding” as “a unit that produces agricultural products and reports revenues or expenses for tax purposes to the Canadian Revenue Agency”. Before 2021, a “farm” was defined as an agricultural operation that produced at least one agricultural product intended for sale. The new definition is slightly more rigorous as it requires reported revenues and expenses to qualify as a farm operation versus just the intent to sell a product. Under the previous census definition many operations could be counted as a farm even with minimal sales or expenses. This change can affect the statistics for municipalities that contain a higher concentration of smaller operations and more marginal farmland. [25]

The change in the new farm definition may result in farms being classified differently across farm types than in previous censuses. As a result, comparisons with earlier census results should be interpreted with caution.

[25] Statistics Canada – Canada’s 2021 Census of Agriculture: A story about the transformation of the agriculture industry and adaptiveness of Canadian Farmers - https://www150.statcan.gc.ca/n1/daily-quotidien/220511/dq220511a-eng.htm

5.1 Number of Farms, Area of Farmland and Average Farm Sizes

Since the 1970s, the long-term trend in farming has been a decrease in the number of farms, but an increase in the size of individual farms. From 2011-2021 the number of farms provincially has decreased by 3,604 (7%). The number of farms in Peterborough has decreased by 18% (190), while in Kawartha Lakes the decrease is 16% (220 farms).

In 2021, as noted in Appendix 1, Statistics Canada changed the definition of farms for reporting purposes. In the past a farm was defined as an operation that produced at least one agricultural product intended for sale. In the 2021 census farm was defined as an operation producing agricultural products for which sales and expenses would be reported to Revenue Canada. While this may not impact the number of larger farming operations, it is expected to have impacted the reporting of smaller operations. For this reason, comparisons of certain data may be inappropriate. However, apart from discrepancies in the number of operations, the area under production is still a valid measure of lands which are still in production and continue to contribute to the agricultural system overall.

Number of Farms, Area of Farmland and Average Farm Sales Key Trends:

- Peterborough lost 190 farms between 2011 and 2021
- Kawartha Lakes lost 220 farms between 2011 and 2021
- Area of farmland in Peterborough decreased by 48,564 acres between 2011 and 2021 (21%)
- Area of farmland in Kawartha Lakes decreased by 48,299 between 2011 and 2021 (15%)
- Average farm size in the study area is stable
- Havelock-Belmont-Methuen and Trent Lakes have experienced the most significant reductions in farm size and farmland area
- Average farm size grew slightly in Selwyn and Cavan Monaghan between 2016 and 2021

In Peterborough County, the smallest decline in number of farms has been in Selwyn at 8% (5) while the largest declines occurred in the east portion of the County with Havelock-Belmont and Douro-Dummer both loosing 33% (19) and 32% (65) of their farms respectively.

Across Ontario, there has been a 7% decrease in area of farmland from 2011 to 2021 (12,668,236 to 11,766,071 acres) for a total loss of 902,165 acres. In Central Ontario, this loss is above the provincial average at 17% (1,773,625 to 1,475,250 acres) for a total loss of 298,375 acres. In Peterborough, the farmland area declined by 21% (309,405 to 277,793 acres); in Kawartha Lakes it declined by 15% (202,240 to 180,372 acres). It should be noted that farmland as reported by Statistics Canada, is land under production, not land

designated as agriculture in planning policy. There is no relationship between planning designations and the census definition of farmland.

Given the inability to compare the 2021 farmland area Statistics Canada data with previous census data, and the significant decline reported in farmland area, further investigation was undertaken to try and verify trends. The Municipal Property Assessment Corporation (MPAC) also tracks farmland area as the basis for property assessment and provides an alternative measure. It must be understood that this measure is based on a different approach and cannot be compared to Statistics Canada data.

MPAC's statistics on farmland area for the study area for 2011, 2016 and 2021, and the statistics provided by Statistics Canada are shown on **Figure 9**. The MPAC statistics are only provided for the County and City areas, not for individual municipalities. They are provided so a better understanding can be gained of the scale of the loss of farmland area using a different measure. While these numbers also reflect a decline in area, they also indicate a much larger farmland area.

FIGURE 9 – MPAC FARMLAND AREA STATISTICS, 2011, 2016 & 2021

KAWARTHA LAKES	FARMLAND AREA STATISTICS CANADA	MPAC (WITHOUT MANAGED FOREST)	MPAC (WITH MANAGED FOREST)
2011	326,092	442,428	460,880
2016	309,405	433,426	455,115
2021	277,793	417,975	445,572

PETERBOROUGH	FARMLAND AREA STATISTICS CANADA	MPAC (WITHOUT MANAGED FOREST)	MPAC (WITH MANAGED FOREST)
2011	228,936	325,899	380,259
2016	202,240	318,571	376,671
2021	180,372	313,150	374,320

NOTE: Statistics Canada data cannot be compared to MPAC data. They are based on different metrics.

The other metric that could be used to understand and manage the agricultural land base is tracking of the area designated as "prime agricultural" in planning policies. This measure is not comparable to the Statistics Canada number which reports land under production at a point in time. Often land that is designated as prime agricultural in planning policy is not

farmed and land that is not designated is. Monitoring this measure would provide additional insight into the status of the land base.

Based on Statistics Canada data, the decline in farmland acreage was most pronounced in the northern area of Peterborough County with Trent Lakes, including North Kawartha, experiencing the largest decline at 53% (9,161 acres of the total 17,361 acres). Other Townships within the County also saw reductions in total area of farmland by 48% (Havelock-Belmont-Methuen), 31% (Douro-Dummer), 22% (Cavan Monaghan) and 22% (Asphodel-Norwood). Of all the townships, only Selwyn experienced a slight increase its total area of farmland from 36,845 acres to 37,225 acres (1% increase).

The 2006 Agricultural Economic Impact and Development Study identified that from 1971 to 2001 the average farm size in Ontario grew from 169 acres to 226 acres. The same study found that Peterborough and Kawartha Lakes had an average farm size of 215 and 238 acres respectively. Peterborough and the Kawartha Lakes now have average farm sizes of 209 acres and 242 acres, representing a 3% decrease and 2% growth respectively.

Significant changes in farm size were experienced in Trent Lakes (44% decline or 310 to 174 acres) and Havelock-Belmont-Methuen (23% decline or 232 to 179 acres). The statistics for Trent Lakes are notable since as of the 2021 Agricultural Census they include the statistics for North Kawartha.

It is of note that in the City of Kawartha Lakes, the number of farms in the 10-to-69-acre size remained relatively stable, but the number in the larger farm size categories decreased.

The number of farms under 10 acres has declined in both municipalities. As noted, this is likely a result of the census data collection change which no longer counts farms that do not generate or report income for tax purposes.

In Peterborough, the number of farms in the 70-to-129-acre range declined from 331 to 289 between 2011 and 2016. Between 2016 and 2021 the number decreased again to 268. Interestingly, between 2011 and 2016 the number of farms between 180 and 239 acres declined from 104 to 84, then increased in 2021 to 95. All other farm size categories are relatively stable (declining, but at a stable rate).

Overall, in both municipalities there have been significant decreases in farmland acreage as well as in the number of farms. This cannot be explained by the consolidation of farm operations across the study area because the declines in number of farms and farmland

area is relatively balanced. There are some exceptions. In Cavan Monaghan the number of farm operations declined by 11 farms between 2016 and 2021, farmland area decreased by 145 acres, and average farm size increased by 12 acres. This indicates that there has been some operation consolidation in this municipality. Selwyn experienced an overall increase in farmland area, a decrease in number of operations and a slight increase in average farm size. All other municipalities show significant losses in farms, farmland, and a related reduction in average farm size.

The decrease in farmland area can be attributed to a number of factors that are impacting agriculture across Ontario. As land and housing prices have increased, commuter sheds have increased as people seek more affordable accommodation. In Kawartha and Peterborough, the completion of the Highway 407 extension linking to Highway 35/115 has undoubtably increased pressure for non-farm residential properties. It does not appear however, according to this census that the most logical municipalities of Cavan Monaghan and Otonabee-South Monaghan are being disproportionately impacted by the completion of this highway in terms of loss of farms or farmland area.

The topography of both areas may also have contributed to the decline. As expenses rise and farmland prices increase, earning a living on marginal land can become increasingly challenging. The decrease in both farmland area and number of farms in the areas of Peterborough where the Canadian Shield dominates may reflect this. It is unfortunate that the statistics for the Kawartha Lakes area are combined because it makes it impossible to evaluate the trends in the different areas of the City.

Figure 10a and 10b illustrate the key trends for these indicators on a study area map and **Figures 11 through 13c** provide more detailed information by indicator.

FIGURE 10A: VISUAL SUMMARY OF NUMBER OF FARMS, AREA OF FARMLAND AND AVERAGE FARM SIZE – STUDY AREA

FIGURE 10B: VISUAL SUMMARY OF NUMBER OF FARMS, AREA OF FARMLAND AND AVERAGE FARM SIZE – PETERBOROUGH MUNICIPALITIES

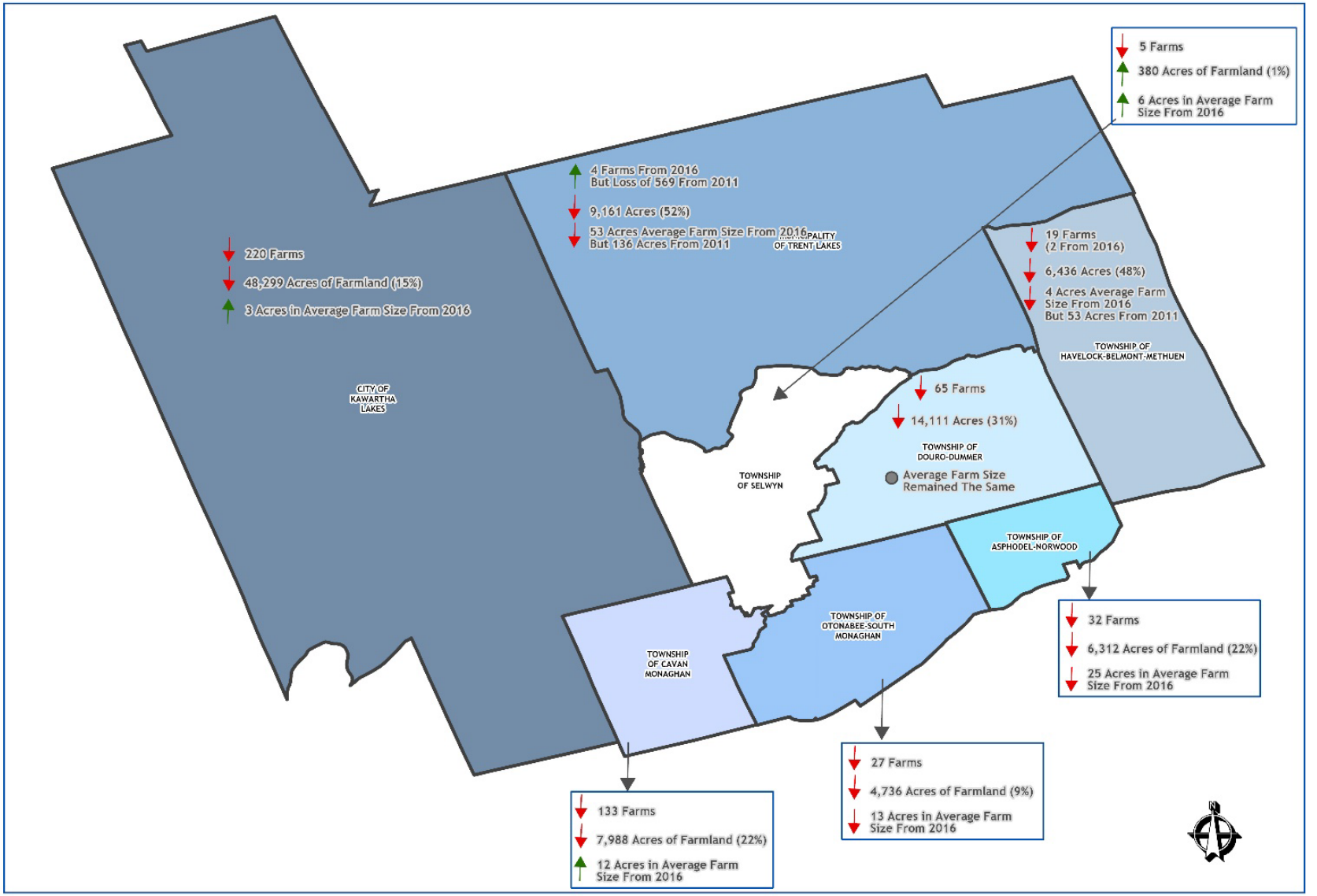


FIGURE 11 - TOTAL NUMBER OF FARMS, 2011, 2016 & 2021

	2011	2016	2021
Ontario	51,950	49,600	48,346
Central Ontario	7,817	7,147	6,330
Kawartha Lakes	**1,366**	**1,265**	**1,146**
Peterborough	**1,053**	**941**	**863**
Asphodel-Norwood	136	108	104
Otonabee-South Monaghan	223	215	196
Cavan Monaghan	186	164	153
Selwyn	188	189	183
Douro-Dummer	206	181	141
Havelock-Belmont-Methuen	58	41	39
Trent Lakes	56	43	47

Statistics Canada - Table 32-10-0404-01 – Farms classified by total farm area, Census of Agriculture 2016 (Inactive)

Statistics Canada - Table 32-10-0232-01 – Farms classified by total farm area, Census of Agriculture 2021

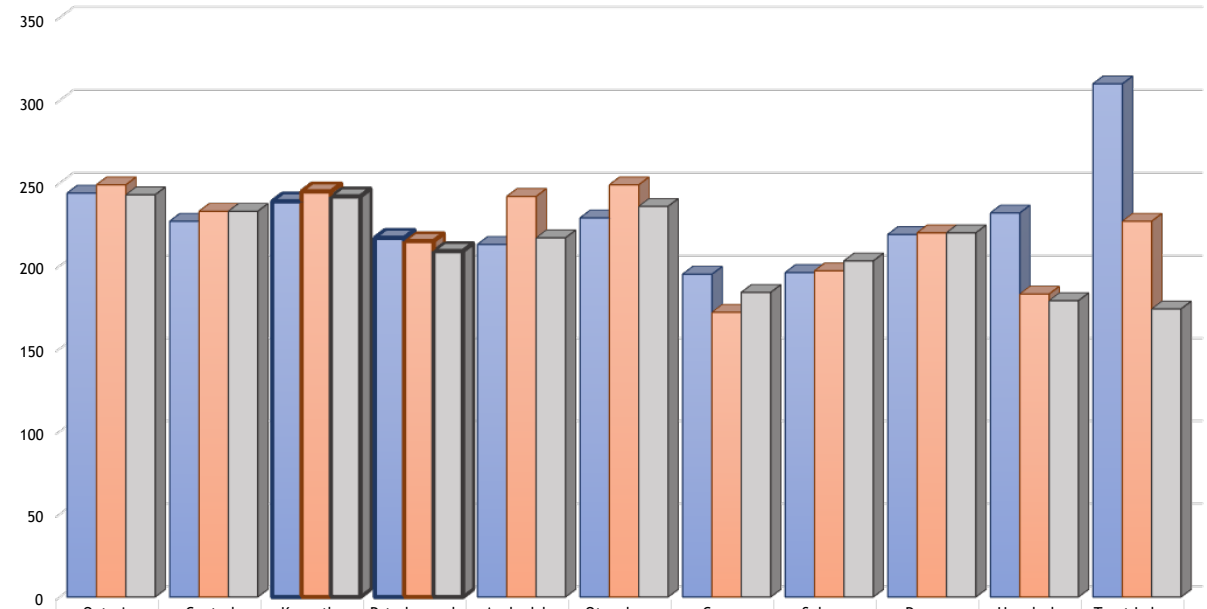
FIGURE 12A - TOTAL FARM AREA (ACRES), 2011, 2016 & 2021 AND AVERAGE FARM SIZE (ACRES), 2011, 2016 & 2021

	2011			2016			2021		
	Number of Farms	Farmland Area (Acres)	Average Farm Size (Acres)	Number of Farms	Farmland Area (Acres)	Average Farm Size (Acres)	Number of Farms	Farmland Area (Acres)	Average Farm Size (Acres)
Ontario	51,950	12,668,236	244	49,600	12,348,463	249	48,346	11,766,071	243
Central Ontario	7,817	1,773,625	227	7,147	1,665,609	233	6,330	1,475,250	233
Kawartha Lakes	**1,366**	**326,092**	**239**	**1,265**	**309,405**	**245**	**1,146**	**277,793**	**242**
Peterborough	**1,053**	**228,936**	**217**	**941**	**202,240**	**215**	**863**	**180,372**	**209**
Asphodel-Norwood	136	28,903	213	108	26,090	242	104	22,591	217
Otonabee-South Monaghan	223	51,007	229	215	53,608	249	196	46,271	236
Cavan Monaghan	186	36,311	195	164	28,268	172	153	28,123	184
Selwyn	188	36,845	196	189	37,219	197	183	37,225	203
Douro-Dummer	206	45,074	219	181	39,825	220	141	30,963	220
Havelock-Belmont-Methuen	58	13,435	232	41	7,489	183	39	6,999	179
Trent Lakes	56	17,361	310	43	9,741	227	47	8,200	174

Statistics Canada - Table 32-10-0407-01 – Land Tenure, Census of Agriculture, 2016 (Inactive)

Statistics Canada – Table 32-10-0234-01 – Land Tenure, Census of Agriculture, 2021

FIGURE 12B - AVERAGE FARM SIZE (ACRES), 2011, 2016 & 2021

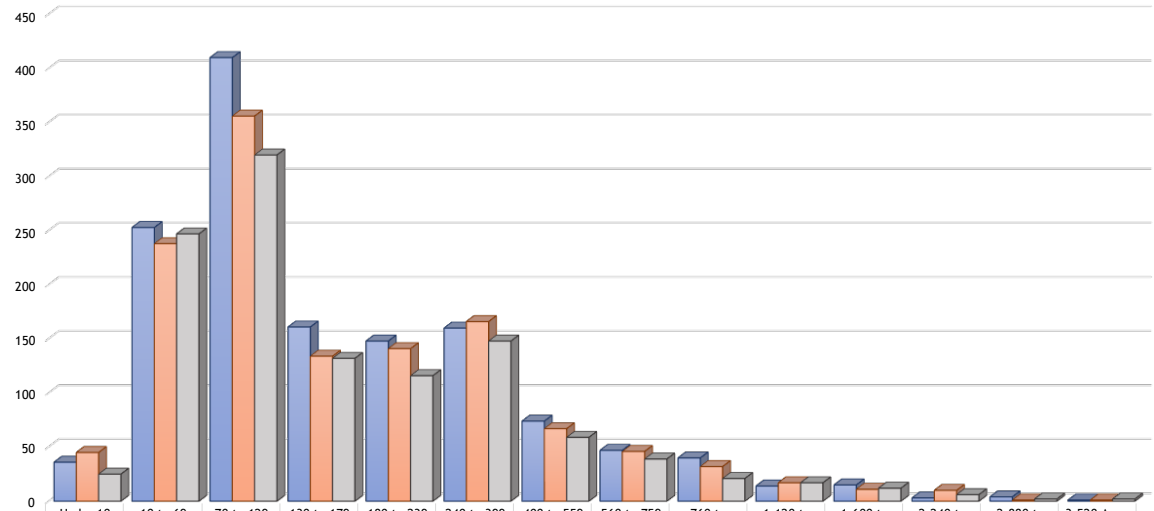


	Ontario	Central Ontario	Kawartha Lakes	Peterborough	Asphodel-Norwood	Otonabee-South Monaghan	Cavan Monaghan	Selwyn	Douro-Dummer	Havelock-Belmont-Methuen	Trent Lakes
2011	244	227	239	217	213	229	195	196	219	232	310
2016	249	233	245	215	242	249	172	197	220	183	227
2021	243	233	242	209	217	236	184	203	220	179	174

Statistics Canada - Table 32-10-0232-01 – Farms classified by total farm area, Census of Agriculture 2021

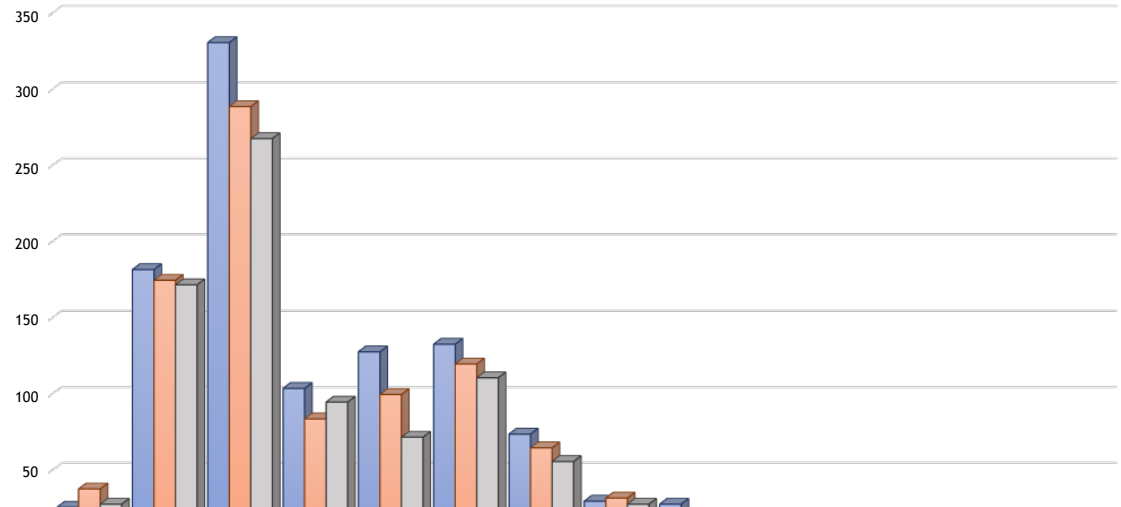
Statistics Canada – Table 32-10-0234-01 – Land Tenure, Census of Agriculture, 2021

FIGURE 13A - FARMS CLASSIFIED BY TOTAL FARM AREA, 2011, 2016 & 2021 – KAWARTHA LAKES



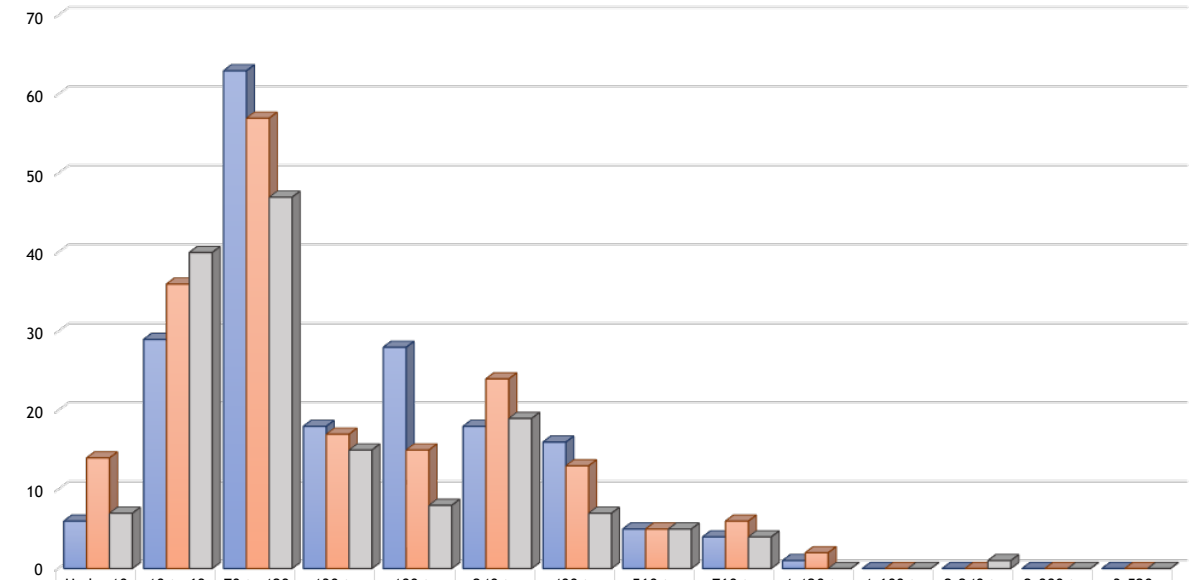
	Under 10 Acres	10 to 69 Acres	70 to 129 Acres	130 to 179 Acres	180 to 239 Acres	240 to 399 Acres	400 to 559 Acres	560 to 759 Acres	760 to 1,119 Acres	1,120 to 1,599 Acres	1,600 to 2,239 Acres	2,240 to 2,879 Acres	2,880 to 3,519 Acres	3,520 Acres & Over
2011	36	253	410	161	148	160	74	47	40	14	15	3	4	1
2016	45	238	356	134	141	166	67	46	32	17	11	10	1	1
2021	25	247	320	132	116	148	59	39	21	17	12	6	2	2

FIGURE 13B - FARMS CLASSIFIED BY TOTAL FARM AREA,2011, 2016 & 2021 – PETERBOROUGH



	Under 10 Acres	10 to 69 Acres	70 to 129 Acres	130 to 179 Acres	180 to 239 Acres	240 to 399 Acres	400 to 559 Acres	560 to 759 Acres	760 to 1,119 Acres	1,120 to 1,599 Acres	1,600 to 2,239 Acres	2,240 to 2,879 Acres	2,880 to 3,519 Acres	3,520 Acres & Over
2011	26	182	331	104	128	133	74	30	28	11	6	0	0	0
2016	38	175	289	84	100	120	65	32	19	14	3	2	0	0
2021	28	172	268	95	72	111	56	28	19	8	4	2	0	0

FIGURE 13C - FARMS CLASSIFIED BY TOTAL FARM AREA, 2011, 2016 & 2021 – SELWYN



	Under 10 Acres	10 to 69 Acres	70 to 129 Acres	130 to 179 Acres	180 to 239 Acres	240 to 399 Acres	400 to 559 Acres	560 to 759 Acres	760 to 1,119 Acres	1,120 to 1,599 Acres	1,600 to 2,239 Acres	2,240 to 2,879 Acres	2,880 to 3,519 Acres	3,520 Acres & Over
2011	6	29	63	18	28	18	16	5	4	1	0	0	0	0
2016	14	36	57	17	15	24	13	5	6	2	0	0	0	0
2021	7	40	47	15	8	19	7	5	4	0	0	1	0	0

Statistics Canada - Table 32-10-0404-01 – Farms classified by total farm area, Census of Agriculture 2016 (Inactive)

Statistics Canada - Table 32-10-0232-01 – Farms classified by total farm area, Census of Agriculture 2021

5.2 Farmland Tenure

Farmland Tenure Key Trends:

- Rental rates are stable in the Province and at a County and City level
- Selwyn is the only municipality to see an increase in the rental to ownership split

There are a variety of reasons for the incidence of rental land in an area. Higher land values can make it difficult for farmers to acquire land at a price that makes farming a viable economic option. Land can be held by retired farmers, speculators or by people seeking a rural lifestyle that don't want to farm and therefore the lands are rented to active operators. There is a strong incentive related to the farm property tax rebate program that encourages non-farm landowners to rent out land for agricultural production as only land that generates a certain return qualifies for the lowered tax rate. Access to rental land can provide farmers with use of additional land at a reasonable cost.

Based on discussion with farmers and the research done by Planscape on agricultural issues over the past 25 years it has been determined that there are issues related to rented land. The rental arrangements are often short-term and informal. When commodity prices rise, there is competition for lands and rental prices rise. With competition, there is more uncertainty about long term access to a property. Farmers are less inclined to make capital improvements on lands they do not own or may not have access to on an ongoing basis. Lack of certainty about access will limit the types of commodities grown to those that generate a return quickly. Properties that are not properly managed will deteriorate. Large areas of rental land can result in a less stable agricultural community and increase conflicts between farm and non-farm residents who may impose restrictions on the uses that can be made on land they own.

In areas of high current or future growth options, agricultural land is often optioned and then left to lay idle or be underutilized. This leads to the deterioration of the land base which in turn can be used to support the position that the land is not viable for production. This becomes an argument to remove lands from agricultural designations. The longer land lies idle and the more of it there is, the more difficult it can be to bring it back into production and the more difficult the business of farming.

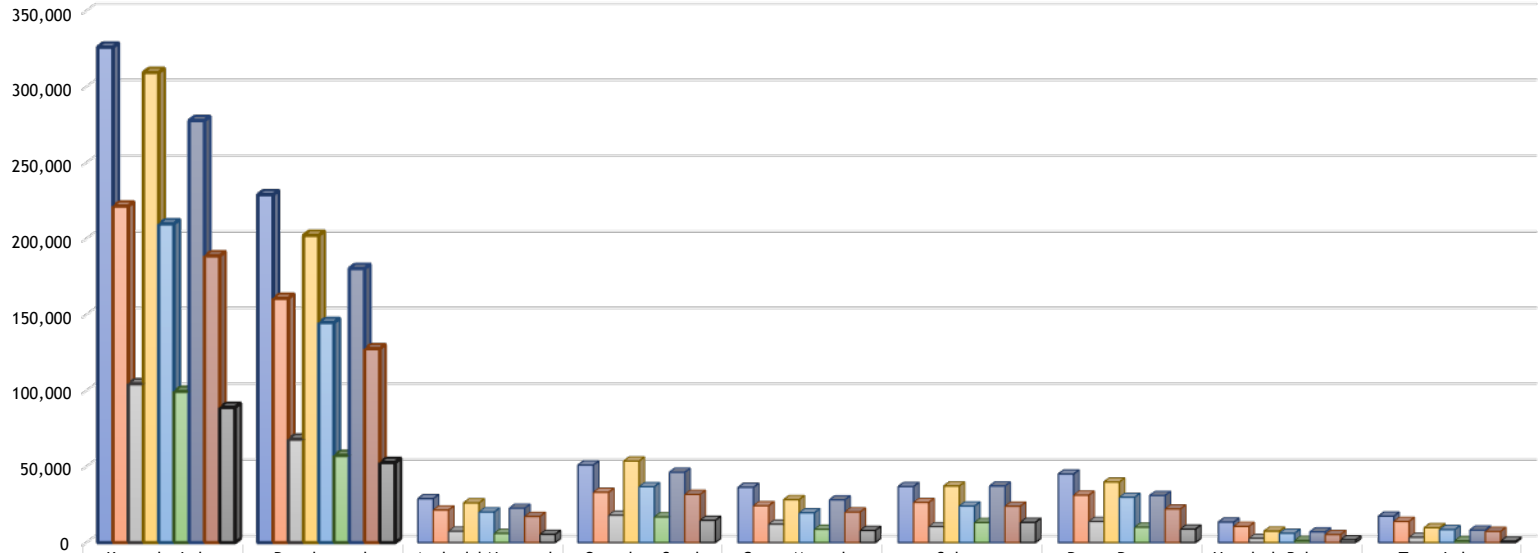
The rental rate for farmland in the province between 2011 and 2021 has been steady. The rate at the County and City level has remained stable. In Kawartha Lakes it has been consistently at 32% while in Peterborough it has fluctuated between 28% and 30%.

In the County, only Selwyn, where the rental land rate is slightly higher than in other areas, has experienced an increase in the amount of rented farmland. This may be related to the increase in the number of farms in the smaller size categories. It may be that agricultural land is being purchased for land speculation and/or by non-farming residents and rented back to surrounding farmers. Selwyn's proximity to the City of Peterborough, which is experiencing significant growth, may be a factor.

It would be interesting to understand rental land rates around Lindsay and some of the other communities in Kawartha Lakes to see if rental rates have changed between census periods. Unfortunately, due to the bundling of all of the statistics for the City, this is not possible.

Figure 14 illustrates a steady pattern of rental vs. ownership rates through the 2011, 2016 and 2021 census.

FIGURE 14 - FARMLAND AREA, OWNED & RENTED, 2011, 2016 & 2021



	Kawartha Lakes	Peterborough	Asphodel-Norwood	Otonabee-South Monaghan	Cavan Monaghan	Selwyn	Douro-Dummer	Havelock-Belmont-Methuen	Trent Lakes
2011 Total Farm Area (Acres)	326,092	228,936	28,903	51,007	36,311	36,845	45,074	13,435	17,361
2011 Owned	221,486	160,809	21,423	33,045	24,221	26,381	31,176	10,666	13,897
2011 Rented	104,606	68,127	7,480	17,962	12,090	10,464	13,898	2,769	3,464
2016 Total Farm Area (Acres)	309,405	202,240	26,090	53,608	28,268	37,219	39,825	7,489	9,741
2016 Owned	209,846	144,832	20,091	36,758	19,572	24,031	29,756	6,109	8,515
2016 Rented	99,559	57,408	5,999	16,850	8,696	13,188	10,069	1,380	1,226
2021 Total Farm Area (Acres)	277,793	180,372	22,591	46,271	28,123	37,225	30,963	6,999	8,200
2021 Owned	188,758	127,631	17,194	31,686	20,129	23,919	22,119	5,259	7,325
2021 Rented	89,035	52,741	5,397	14,585	7,994	13,306	8,844	1,740	875

Statistics Canada - Table 32-10-0407-01 – Land Tenure, Census of Agriculture, 2016 (Inactive)

Statistics Canada – Table 32-10-0234-01 – Land Tenure, Census of Agriculture, 2021

5.3 Farm Type

Overall, agriculture in Kawartha Lakes and Peterborough is characterized by traditional types of farming (cattle, dairy, grain & oilseed, and field crops). If the City and County were split in half from east to west, the pattern of farm type reflects the locational attributes of the area. The higher incidence of prime land found in the south and south-western portion of the study area, coupled with more benevolent topography and climate, relatively close proximity to highway corridors and access to larger markets create opportunities that are not so readily available in Kawartha Lakes' and Peterborough's north and north-eastern areas. The conditions are reflected in the greater diversity of farm types found in the south.

Farm Type Key Trends:

- Cattle operations have increased in Kawartha Lakes since 2016
- Cash crops and horse and pony farms show the most significant decline in Kawartha Lakes
- Cattle and sheep are the only farm types showing growth since 2011 in Peterborough
- Horse and pony, cash crops and miscellaneous specialty farms show the greatest decline in Peterborough

The diversity and size of operations of farm types based on number is often quite different from the profile based on farm cash receipts. Statistics Canada defines Farm Type as:

> "The process classifies each census farm according to the predominant type of production by estimating the potential revenues from the inventories of crops and livestock reported on the questionnaire and by determining the product or group of products that **make up the majority of the estimated revenues** (emphasis added). 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 farming" (NAICS 112210) farm.
>
> Changes in farm type over time could reflect a shift in the operation's agricultural activity, changes in commodity prices, or both."[26]

The definition therefore will not account for mixed types of operations.

[26] Dictionary, Census of Population, 2021 – Farm type (statcan.gc.ca)

Figures 15a through 15d illustrate the diversity of farm types in the County of Peterborough and the City of Kawartha Lakes.

FIGURE 15A - NUMBER OF FARMS BY FARM TYPE, 2021 – KAWARTHA LAKES

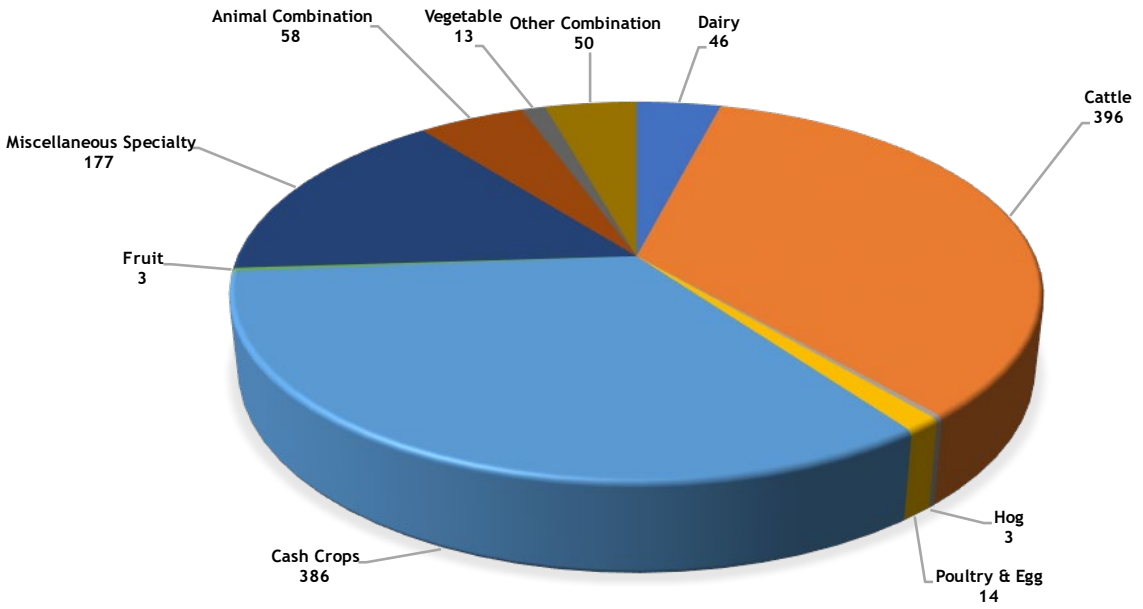
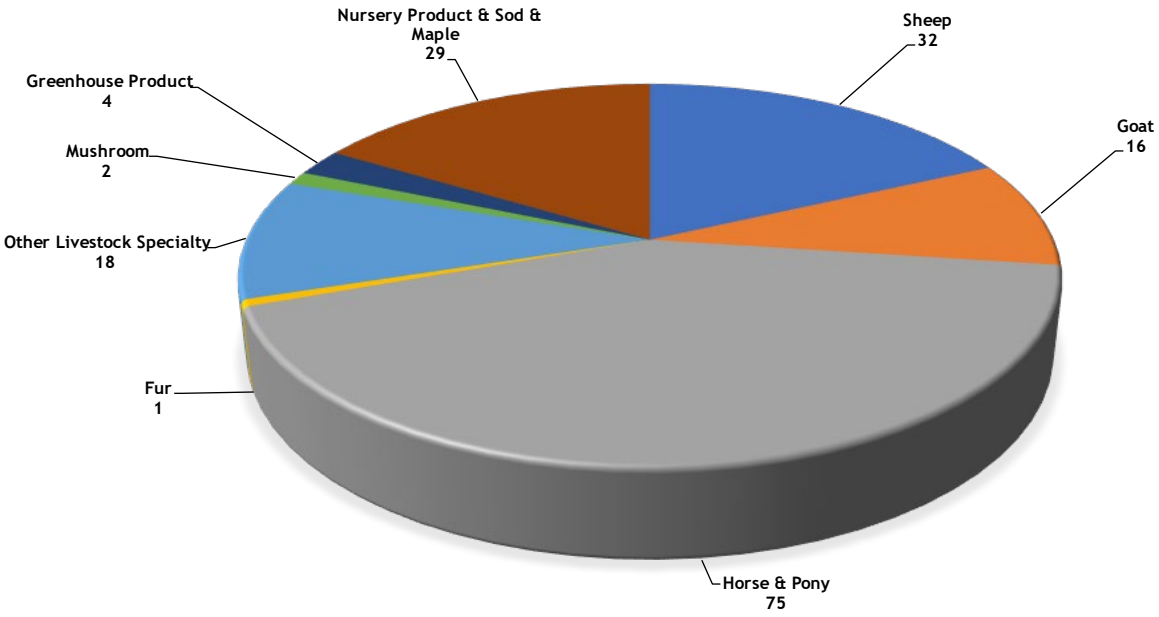


FIGURE 15B - MISCELLANEOUS SPECIALTY TYPE, 2021 – KAWARTHA LAKES



Statistics Canada – Table 32-10-0231-01 – Farms classified by farm type, Census of Agriculture, 2021

FIGURE 15C - NUMBER OF FARMS BY FARM TYPE, 2021 – PETERBOROUGH

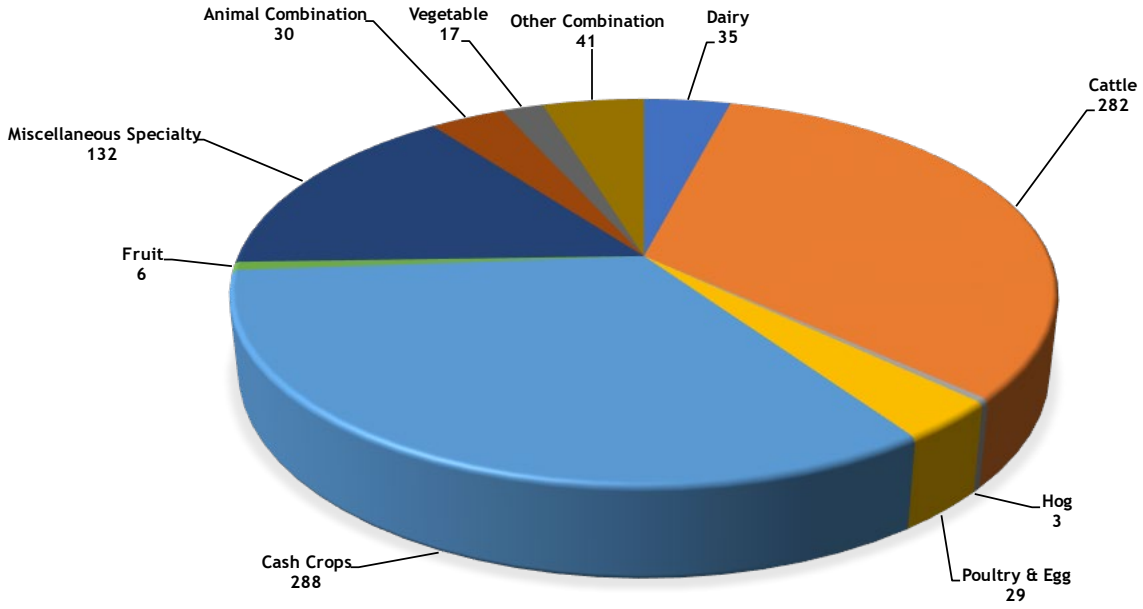
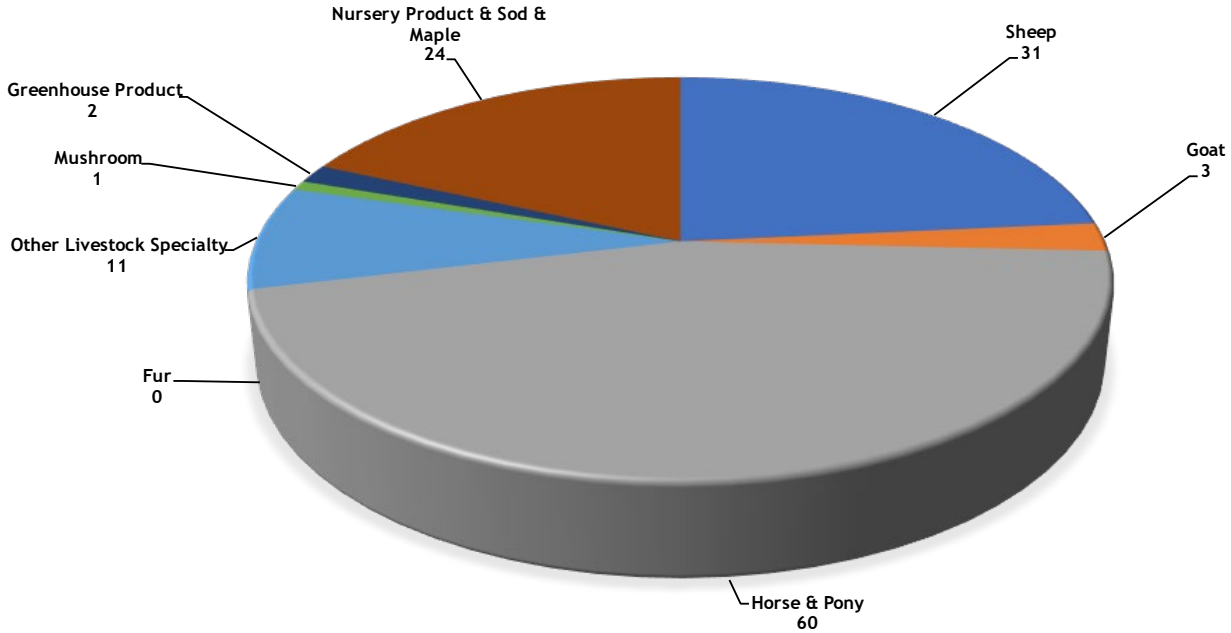


FIGURE 15D - MISCELLANEOUS SPECIALTY TYPE, 2021 – PETERBOROUGH



Statistics Canada – Table 32-10-0231-01 – Farms classified by farm type, Census of Agriculture, 2021

5.3.1 Cattle Farms

The largest number of operations in the Peterborough and Kawartha Lakes study area continued to be cattle farms with a combined total number of 678 cattle operations reported in 2021. This number was 614 in 2016 which represents an 11% increase between 2016 and 2021. However, in the 2006 Agricultural Economic Impact and Development Study, 1202 farms were reported as cattle operations (2001 census), which works out to an overall decline in number of operations of 56% over 20 years.

While the number of beef cattle operations has experienced long-term decline, recent trends from 2016 to 2021 show a market in recovery. Over the five years between 2016 and 2021 the provincial increase was 18% (6,786 to 7,986 farms) and for Central Ontario it was a 21% increase (1,297 to 1,566 farms).

This increase in cattle operations is evident across all areas in Peterborough except for Douro-Dummer. There the number of operations decreased by 8 operations (13%) between 2011-2021. In Peterborough County, there were 272 farms categorized as cattle operations in 2011, 247 in 2016 and 282 in 2021 representing a combined 4% increase over the 10 year period. In the most recent 2016-2021 census timeframe, Havelock-Belmont-Methuen gained 7 operations and Asphodel-Norwood gained 16 operations.

Kawartha Lakes experienced a decline in the number of cattle operations between 2011 and 2016 (44) with an increase of 29 between 2016 and 2021.

Overall, the perspective from 2011 to 2021 is a market in recovery moving from significant losses to modest gains in response to market demands, despite the long-term market contractions.

5.3.2 Cash Crop Farms

Cash crop farming is the second most significant farm type in the study area. When the 2021 Census was taken, there were 288 farms in Peterborough and 386 farms in Kawartha Lakes identifying as cash crop farms. This represents an 18% decrease in Peterborough and an 11% decrease in Kawartha Lakes from 2011. While the number of cash crop operations in the province has remained stable with a 1% increase between the same period (21,725 to 21,859 farms), this is not the case in Central Ontario (16% decrease) nor the study area. Otonabee-South Monaghan is the only exception to the overall decline in cash crop farms with the addition of four farms. Given the municipality's southern location in the County, the soils and access to transportation, this increase is logical. It is interesting to note that

the number of farms in Cavan Monaghan declined by 33 between 2011 and 2021, 15 of those farms were categorized as cash crop farms.

5.3.3 Miscellaneous Specialty Farms

Miscellaneous specialty is the third most common farm type in the study area. This type of agricultural production is often typical in areas that have close access to urban markets and can operate on smaller acreage. Types of commodities included in this group include mushrooms, greenhouses, and nurseries that require access to market and rapid logistics networks. This grouping also includes specialty animals such as horses/ponies, sheep, goat, and other specialty livestock breeds.

This type of farm in both the County and the City has seen provincial on-trend declines of around 30%. The decline in the number of operations has been greatest in the south and eastern parts of Peterborough County with 46% in Otonabee-South (39 to 21 farms), 40% in Havelock-Belmont-Methuen (10 to 6 farms), 37% in Asphodel-Norwood (19 to 12 farms), 32% in Cavan Monaghan (37 to 25 farms) and 29% in Selwyn (41 to 29 farms) from 2011 to 2021.

A contributing factor to the decline in horse and pony operations may be the impact of reduced provincial government funding for racetracks. As a result of changes to funding, Kawartha Downs, a racetrack located at Fraserville in Cavan Monaghan Township was closed, then opened on a limited basis. This limited opening reduced the support for horse and pony operations.

5.3.4 Animal Combination Farms

An animal combination operation includes farms that raise a combination of animals with no one type predominating.

In Ontario, the number of animal combination farms has decreased 34% between 2011 and 2021 (2,278 to 1,494 farms) with Central Ontario reporting a decline of 37% (430 to 269 farms). In the study area, this is the fourth most common type of farming with 149 farm operations reported in the Peterborough and Kawartha Lakes area (48 in Peterborough and 101 in Kawartha Lakes) in 2011. The number increased between 2011 and 2016 in Peterborough with 2 additional operations but decreased by 21 operations between 2016 to 2021 to a total of 30 operations. In Kawartha Lakes, the decline has been quite pronounced with a loss of 20 farms (101 to 81 farms between 2011 and 2016) and 81 to 51 farms between 2016 to 2021 for a combined loss of 43% in this period (43 less animal combination farms from 2011 to 2021).

5.3.5 "Other" Combination Farms

"Other Combination" farm types include other field crop combination farms; fruit and vegetable combination farms; and all other types of farms. This type of farm reflects a traditional diversified farm, not a specialized farm which has become more of the norm in recent decades.

There has been a 43% decline of this type of operation in Peterborough County (2011-2021), which is well above the provincial average of 29%. The largest decline in this type of farm operation (2011-2021) was concentrated in the areas of the central south townships of Peterborough County (Douro-Dummer (64%), Otonabee-South Monaghan (55%) and Asphodel-Norwood (43%)).

In Ontario, there were 2,121 "other combination" operations in 2011, falling to 1,496 in 2021 representing an overall decrease of 29%. These numbers are higher in both Central Ontario (40%) (443 to 267 farms), Peterborough 43% (72 to 41 farms) and Kawartha Lakes with a 31% decrease (72 to 50 farms).

Looking more closely at the 2021 Census, in Peterborough County, Cavan Monaghan and Trent Lakes both experienced slight increases in the "other combination" farm type between 2016 and 2021 (6 to 9 operations in Cavan and 1 to 3 operations in Trent Lakes). Given the topography in these areas, smaller diversified operations may be more successful.

5.3.6 Dairy Farms

Between 2011 and 2021 Ontario experienced a decline of 21% (4,036 to 3,188 farms) in the number of dairy farms while the number in Central Ontario declined by 30% (459 to 320 farms). Peterborough and Kawartha Lakes exceeded average provincial losses with a combined decrease of 34% (123 to 81 farms). Specifically, Peterborough has lost the most farms at 41% (59 to 46) while Kawartha Lakes is closer to the Ontario average with a loss of 28% (64 to 51 farms).

Looking more locally in Peterborough County between the 2016 to 2021, only Otonabee-South Monaghan experienced a slight increase with the addition of one farm while the remainder of the County experienced losses ranging from a 58% in Cavan Monaghan (12 to 5 operations) to no change in Havelock-Belmont-Methuen.

It should be noted that because it is a supply managed commodity, a decline in number of operations does not necessarily equate to a decline in production. A lower number of operations may be an indication that quota is being consolidated in a fewer number of operations or it may be relocating outside of study area. To understand the trends, a closer look at production levels and revenue is required. In Kawartha Lakes, dairy operations reported $22.61M farm cash receipts in 2016 and $24.86M in 2021, indicating that the reduction of farms does not equate to a loss of quota in the area. In Peterborough, farm cash receipts for dairy operations in 2016 reported $17.2M and $16.52M in 2021 so the loss of farms appears to have contributed to a decrease in dairy production in the County.

5.3.7 Fruit Production Farms

The decline in the number of farms in Central Ontario is generally in line with the Ontario average at 25% (182 to 136 farms). However, in Kawartha Lakes the number of fruit farms declined by 70% (10 to 3 farms) while Peterborough County shows a 40% loss (10 to 6 farms). Overall, only Cavan Monaghan, Douro-Dummer and Trent lakes experienced no losses. However, the number of operations in those municipalities is low, between 1 and 2 farms.

5.3.8 Poultry and Egg Farms

The number of Poultry and Egg operations increased across both the province and the study area between 2011 and 2021. In Ontario between 2011 and 2021, the overall increase in number of poultry and egg farms was 27% (1,619 to 2,061). This trend was also evident in Central Ontario but with a smaller increase of 5% (165 to 174 farms). In the study area, Peterborough stands out with an increase of 21% (24 to 33 farms) while Kawartha Lakes has remained constant with 14 producers (gaining 8 producers between 2011-2016 but losing that same number from 2016-2021).

It is noted that most of the gains in this farm type are centred on the 2011 to 2016 census window with all regions in the study area increasing in number of egg and poultry farms except for Havelock-Belmont-Methuen. Between 2016 to 2021, increases were reported in Selwyn (4 to 8 farms) and Asphodel-Norwood (5 to 8 farms).

5.3.9 Hog and Pig Farms

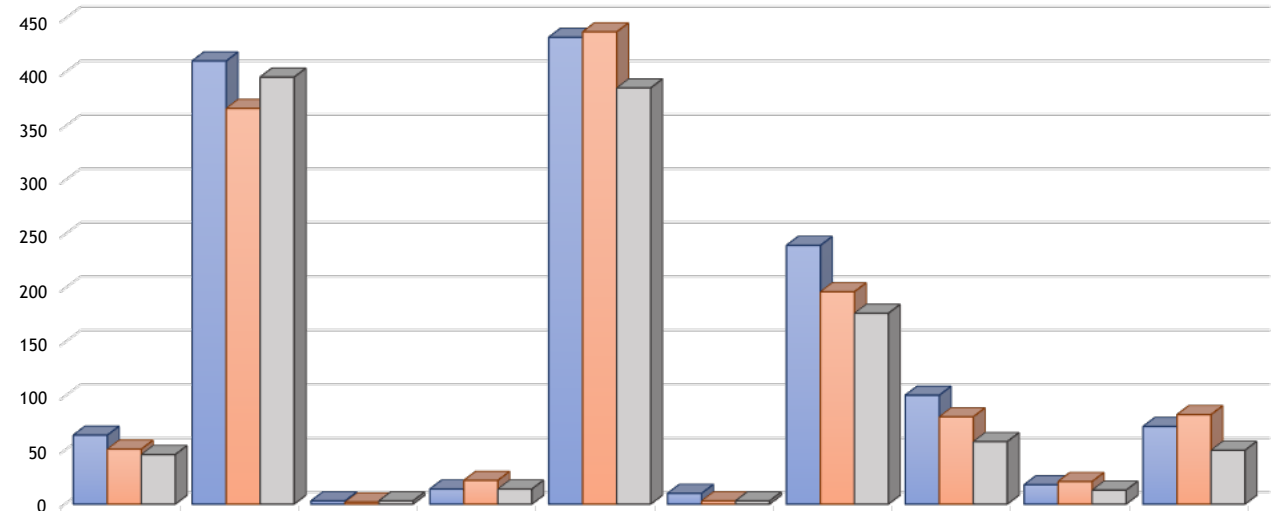
Hog and pig operations have been in a long-term decline with Ontario experiencing an overall decrease of 4% (1,235 to 1,189 farms) from 2011 to 2021 and Central Ontario experiencing a 15% decrease over that same time period (26 to 19 farms).

Kawartha Lakes has maintained a steady number of hog and pig operations in this same period with a 0% change while Peterborough experienced a decline of one farm.

It is notable that the dominant operations in the study area are livestock operations. This may in part be due to its largely rural nature. In areas where non-farm residential development and urbanization is occurring, livestock operators have increasing difficulty maintaining separation of uses and are subject to increased conflict with non-farm neighbours.

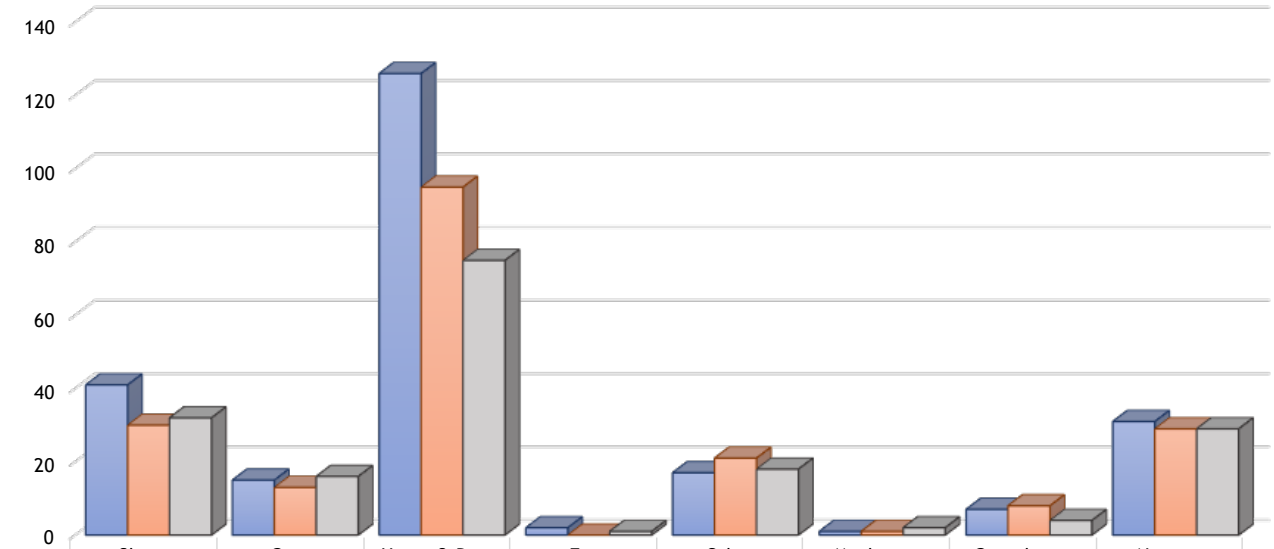
Figures 16a through 16d illustrate the change in farm type for 2011, 2016 and 2021.

FIGURE 16A - NUMBER OF FARMS BY FARM TYPE, 2011, 2016 & 2021 – KAWARTHA LAKES



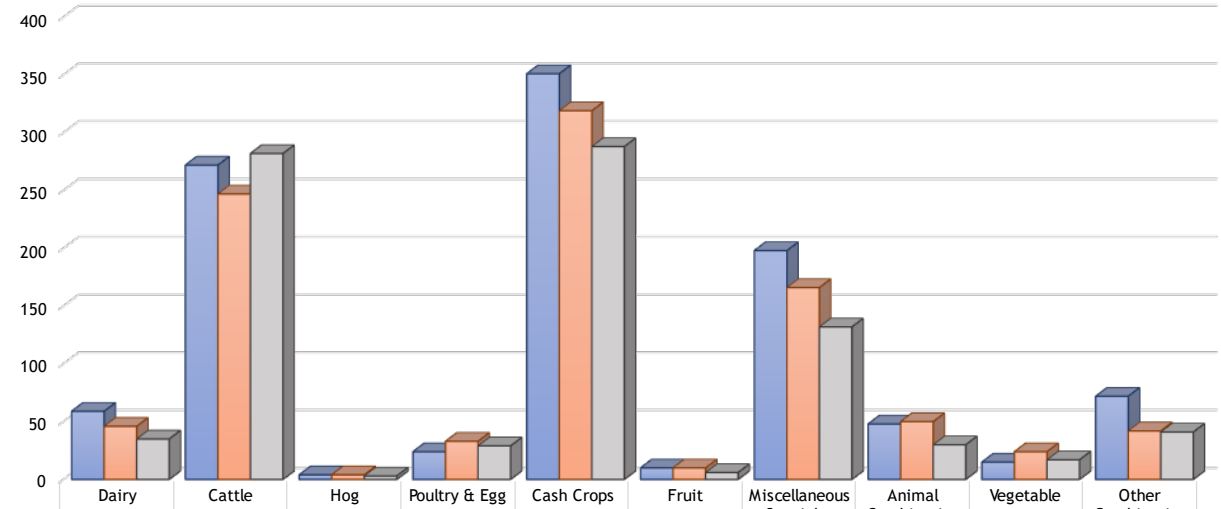
	Dairy	Cattle	Hog & Pig	Poultry & Egg	Cash Crops	Fruit	Miscellaneous Specialty	Animal Combination	Vegetable	Other Combination
2011	64	411	3	14	433	10	240	101	18	72
2016	51	367	2	22	438	3	197	81	21	83
2021	46	396	3	14	386	3	177	58	13	50

FIGURE 16B - MISCELLANEOUS SPECIALTY TYPE, 2011, 2016 & 2021 – KAWARTHA LAKES



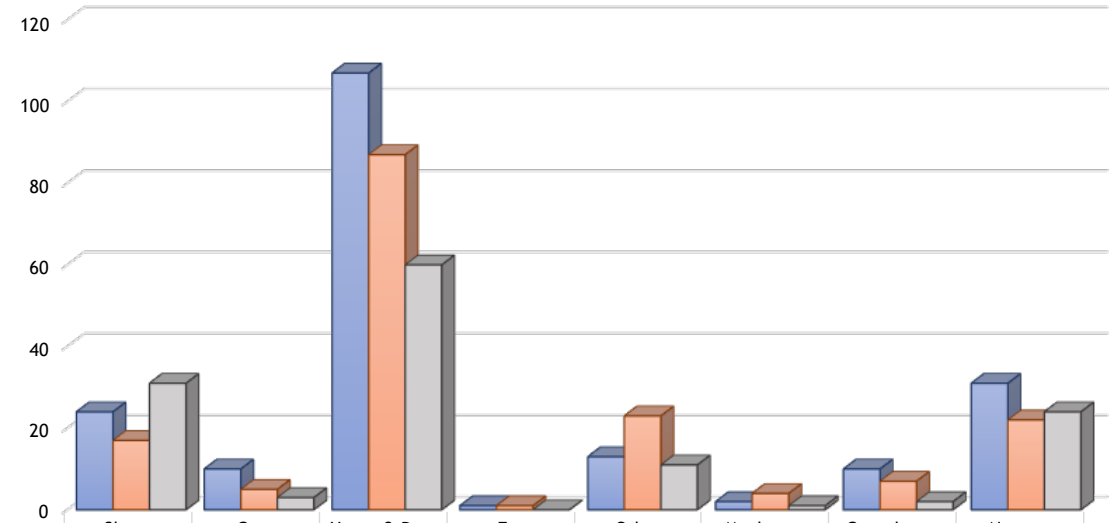
	Sheep	Goat	Horse & Pony	Fur	Other Livestock Specialty	Mushroom	Greenhouse Product	Nursery Product & Sod & Maple
2011	41	15	126	2	17	1	7	31
2016	30	13	95	0	21	1	8	29
2021	32	16	75	1	18	2	4	29

FIGURE 16C - NUMBER OF FARMS BY FARM TYPE, 2011, 2016 & 2021 - PETERBOROUGH



	Dairy	Cattle	Hog	Poultry & Egg	Cash Crops	Fruit	Miscellaneous Specialty	Animal Combination	Vegetable	Other Combination
2011	59	272	4	24	351	10	198	48	15	72
2016	46	247	4	33	319	10	166	50	24	42
2021	35	282	3	29	288	6	132	30	17	41

FIGURE 16D - MISCELLANEOUS SPECIALTY TYPE, 2011, 2016 & 2021 - PETERBOROUGH



	Sheep	Goat	Horse & Pony	Fur	Other Livestock Specialty	Mushroom	Greenhouse Product	Nursery Product & Sod & Maple
2011	24	10	107	1	13	2	10	31
2016	17	5	87	1	23	4	7	22
2021	31	3	60	0	11	1	2	24

Statistics Canada – Table 32-10-0403-01 – Farms classified by farm type, Census of Agriculture, 2016 (Inactive)

Statistics Canada – Table 32-10-0231-01 – Farms classified by farm type, Census of Agriculture, 2021

5.4 Farm Cash Receipts

Farm cash receipts measure the gross revenues of farm businesses. They include sales of crops and livestock products (except sales between farms in the same province) and program payments. Receipts are recorded when the money is paid to farmers. These do not represent their bottom line since farmers have to pay their expenses and loans and cover depreciation.

Farm cash receipts, are for the most part, based on monthly marketings and the monthly prices of various commodities. Marketings are quantities sold, using various units of measure.

The following is an explanation of how Statistics Canada calculated farm cash receipts:

Data are extracted from administrative files and derived from other Statistics Canada surveys or other sources to determine farm cash receipts. These data are subject to revision. The COVID-19 pandemic has also had some impact on normal collection operations. For certain commodities, it was not possible to collect data either in time or at all; in these cases, estimates were produced (e.g., fur, maple syrup). Revisions to these estimates will be made in future releases as data becomes available.[27]

Figure 17 provides a summary of the farm cash receipts for the study area. These numbers reflect a slight decrease in value between 2011 and 2016 for

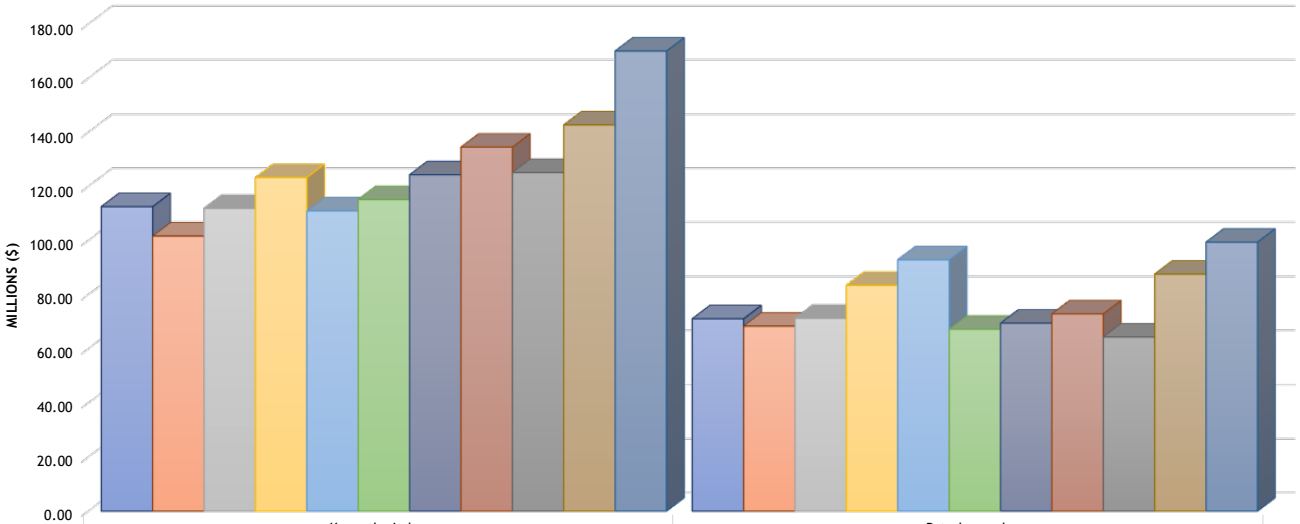
Farm Cash Receipts Key Trends:

- There has been a decrease in value of farm cash receipts between 2011 and 2016 for Peterborough, a slight increase for Kawartha Lakes
- In Kawartha Lakes, the greatest percent increases in farm cash receipts by commodity are Other Crops and Livestock (1,483%), wheat (274% and Corn (113%)
- The decreases in farm cash receipts by commodity in Kawartha Lakes are Eggs (-100%) and Nursery (-37%)
- In Peterborough, the greatest percent increases in farm cash receipts by commodity are Other Crops and Livestock (1,488 %), Eggs (324%) and Wheat (162%)
- The decreases in farm cash receipts by commodity in Peterborough are Nursery (-100%) and Dairy Products (-4%)
- Cannabis is reported as Other Crops and Livestock and may explain the significant increase in this commodity classification's farm cash receipts

[27] Statistics Canada – Farm Cash Receipts - The Daily — Farm cash receipts, January to June 2022 (statcan.gc.ca)

Peterborough, a slight increase for Kawartha Lakes. Between 2016 and 2021 there was a significant increase for both areas.

FIGURE 17 – ESTIMATED FARM CASH RECEIPTS (MILLIONS $) – TOTAL –, 2011 TO 2021 - KAWARTHA LAKES & PETERBOROUGH



	Kawartha Lakes	Peterborough
2011	112.53	71.08
2012	101.66	68.39
2013	111.86	71.23
2014	123.30	83.42
2015	110.98	92.88
2016	115.16	67.22
2017	124.33	69.46
2018	134.52	72.90
2019	125.16	64.37
2020	142.72	87.59
2021	170.04	99.42

Statistics Canada – Ontario farm cash receipts by county and commodity

https://data.ontario.ca/dataset/d4461f70-cab3-46c0-8adc-f4d77945a273/resource/c4cffe14-d1a0-40e8-b2b6-393a7631ec24/download/fcr2011_22_en.xlsx

Between 2016 and 2021, the largest changes to cash receipt by commodity in the study area are summarized in **Figure 18**.

FIGURE 18 – SUMMARY OF KEY CASH RECEIPT CHANGES

Commodity	Kawartha Lakes % Change	Peterborough % Change
Wheat	274 %	162 %
Soybeans	66 %	34 %
Corn	113 %	109 %
Nursery	- 37 %	- 100 %
Dairy Products	10 %	- 4 %
Eggs	- 100 %	324 %
Other Crops and Livestock	1483 %	1488 %

A key statistic to consider is "Other Crops and Livestock" that shows a huge increase in the last 5-year period. An explanation for this increase may be that Cannabis grown in open fields is reported in the "Other Crops and Livestock" category (NAICS table 111995). Where Cannabis is grown in a greenhouse or under cover, it is reported in the "Nursery" category (NAICS table 111412).[28]

In terms of policy and the agricultural system, it is appropriate to consider cannabis as a crop to be monitored. There is also the opportunity for policy and zoning by-law provisions that can support cannabis production in cooperation with Health Canada. It is too soon to determine if cannabis as a crop has any specific / differentiating impact on the agricultural system overall.

With regards to dairy, this is a supply managed commodity. The comments about the number of operations declining should be considered in reference to the farm cash receipts being generated. While the number of operations may have declined, the returns generated decreased by only 4% in Peterborough and rose in Kawartha Lakes. This would indicate that while the number of operations has declined the output has remained relatively constant. Dairy quota, which can be bought and sold, may just have changed hands in the study area.

Figure 19 provides cash receipts for Kawartha Lakes and Peterborough for 2011, 2016 and 2021.

[28] NAICS 2017 Version 3.0 - 1114 - Greenhouse, nursery and floriculture production - Industry group (statcan.gc.ca)

FIGURE 19 – ESTIMATED FARM CASH RECEIPTS (MILLIONS $) – BY COMMODITY, 2011, 2016& 2021

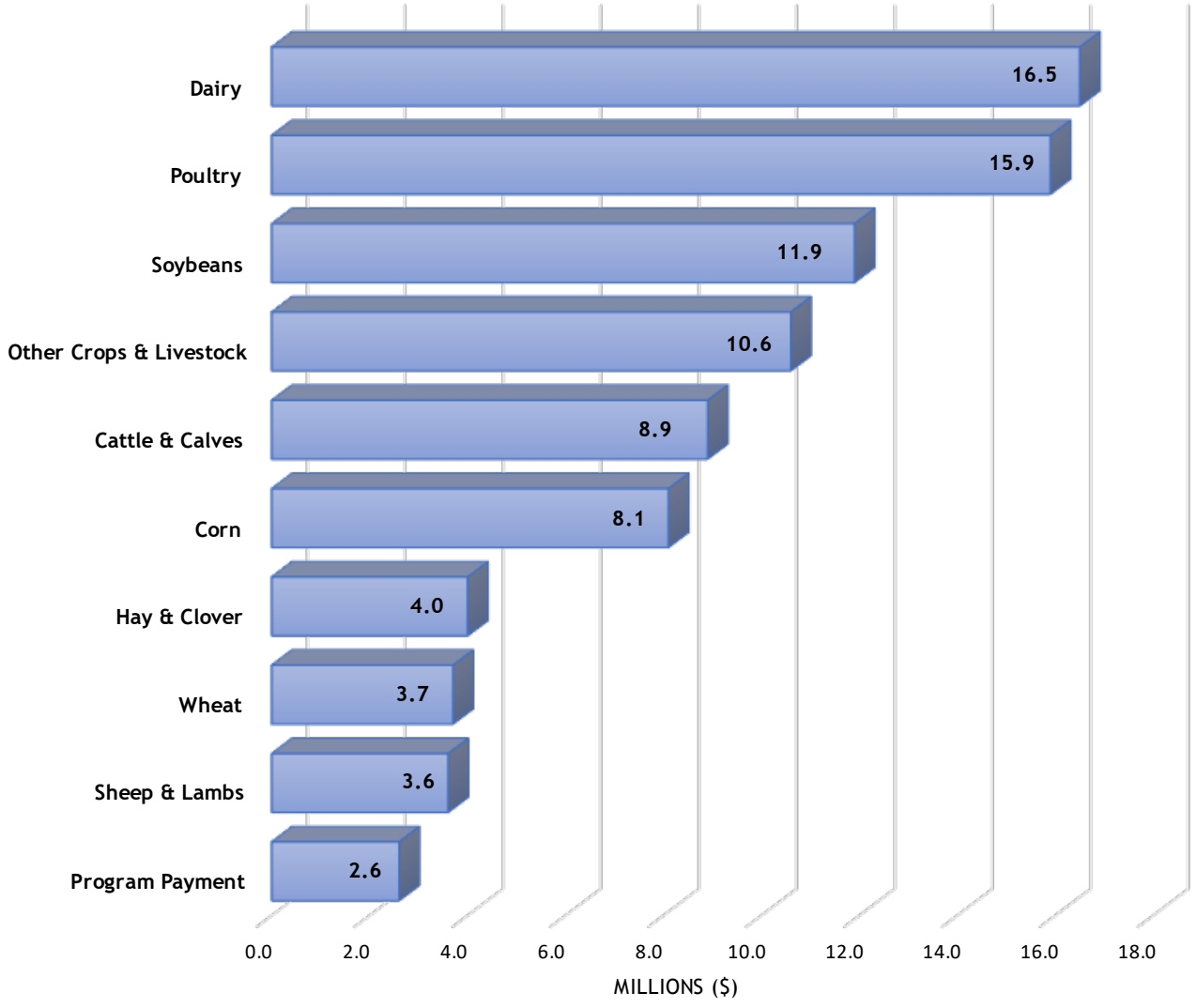
	2011		2016		2021	
	Kawartha Lakes (MILLIONS $)	Peterborough (MILLIONS $)	Kawartha Lakes (MILLIONS $)	Peterborough (MILLIONS $)	Kawartha Lakes (MILLIONS $)	Peterborough (MILLIONS $)
Wheat	2.95	1.60	2.25	1.43	8.42	3.74
Oats	0.58	0.06	0.66	0.08	0.12	0.19
Barley	0.30	0.07	0.34	0.16	0.18	0.13
Rye	0.02	0.01	0.06	0.04	0.14	0.40
Canola	0.49	0.00	-	-	0.27	-
Soybeans	13.28	5.87	14.07	8.85	23.34	11.88
Corn	15.76	7.19	8.69	5.68	18.53	8.07
Potatoes	0.46	0.13	0.63	0.80	4.83	1.93
Field Vegetables	2.82	1.93	6.76	2.46	8.53	2.14
Greenhouse Vegetables	0.00	0.00	0.09	0.13	-	-
Fruit	0.32	0.52	0.30	0.74	0.04	0.06
Floriculture	1.93	1.15	1.63	1.36	2.28	0.93
Mushrooms	-	-	0.00	0.00	-	-
Christmas Trees	0.27	0.19	0.15	0.24	0.38	-
Nursery	5.13	2.86	4.47	0.05	3.21	-
Sod	0.11	0.23	-	-	-	-
Tobacco	-	-	-	-	-	-
Ginseng	0.00	0.00	-	-	-	-
Dry Beans	0.57	0.00	0.89	-	0.66	1.40
Forage & Grass Seed	0.16	0.19	0.00	0.04	-	-
Hay & Clover	2.34	1.27	3.89	1.54	4.56	3.97
Maple Products	0.62	0.66	0.40	0.35	0.45	0.36
Forest Products	0.07	0.12	0.32	0.22	0.36	0.27
Steers & Slaughter Hefers	20.83	7.58	22.65	7.79	28.49	8.36
Calves	-	-	2.01	1.30	0.85	0.55
Hogs	2.51	0.36	1.74	1.05	2.65	1.60
Sheep & Lambs	2.26	1.16	3.12	2.64	4.27	3.61
Dairy Products	21.57	18.34	22.61	17.20	24.86	16.52
Chickens	4.17	11.40	4.02	7.20	5.13	15.91
Turkeys	0.03	0.16	0.14	0.01	0.35	-
Eggs	2.79	0.95	0.36	0.37	-	1.57
Honey	0.82	0.17	0.52	0.62	0.54	0.58
Furs	-	-	-	-	-	-
Other Crops & Livestock	1.94	1.20	1.15	0.67	18.20	10.64
Program Payment	2.80	1.30	3.16	1.85	4.44	2.60
Other	0.48	0.30	4.08	2.38	3.97	2.32

Statistics Canada – Ontario farm cash receipts by county and commodity

https://data.ontario.ca/dataset/d4461f70-cab3-46c0-8adc-f4d77945a273/resource/c4cffe14-d1a0-40e8-b2b6-393a7631ec24/download/fcr2011_22_en.xlsx

The breakdown of farm cash receipts provides an alternative view of the farm profile in the study area. **Figure 20** below shows the breakdown of farm cash receipts for Peterborough County in 2021. In addition to the farm cash receipts related to commodity production these figures also reflect the importance of program payments.

FIGURE 20 - FARM CASH RECEIPTS FOR PETERBOROUGH COUNTY, 2021



Statistics Canada – Ontario business, agri-food, and farm data profiles

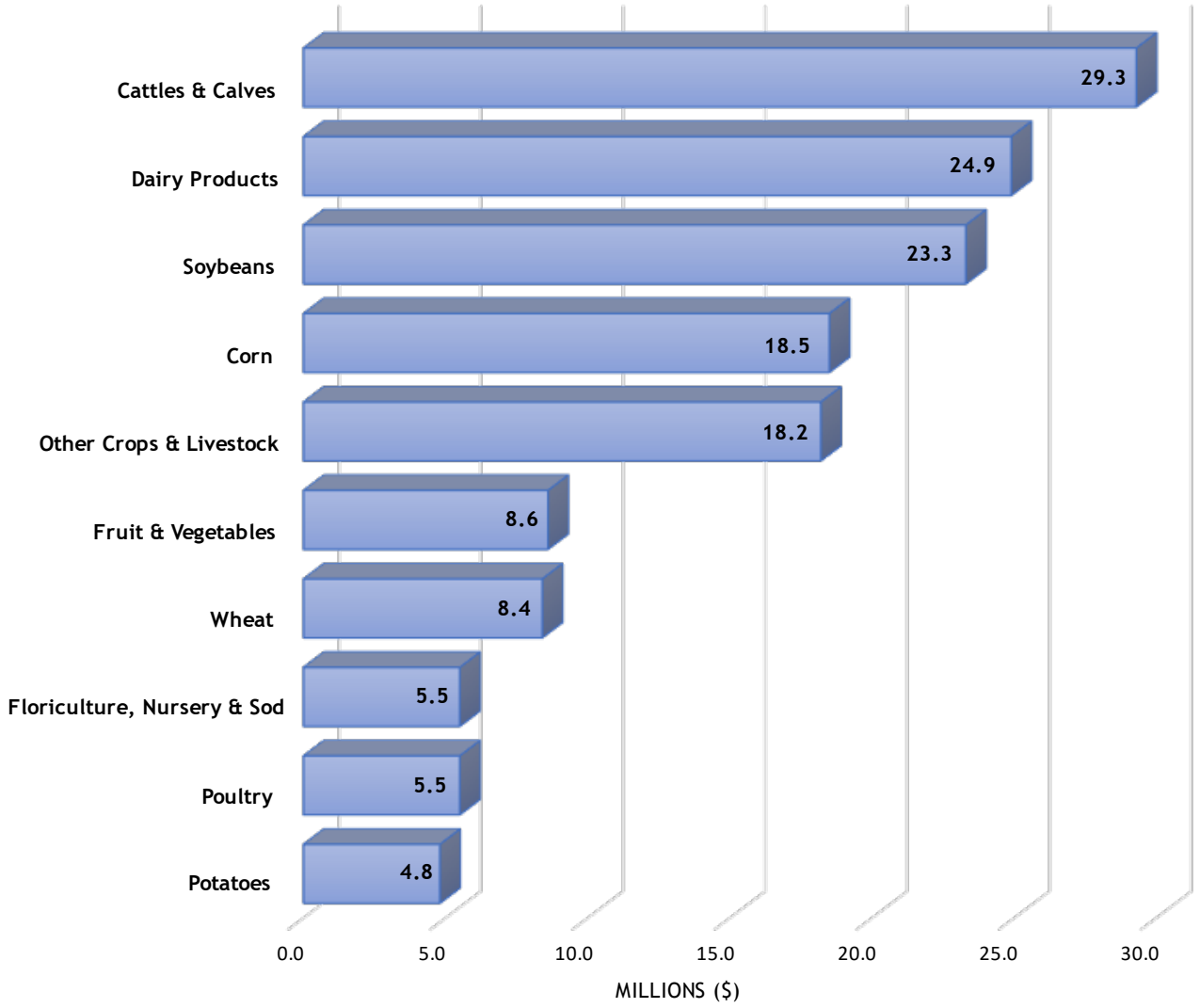
https://data.ontario.ca/dataset/0d8ec71d-373c-47bf-8bfe-254155797a26/resource/4642180b-9949-43f1-8ad4-fd50e969cfb1/download/peterborough.xlsx

While in Peterborough, based on number of operations, cattle is clearly dominant; on the basis of farm cash receipts, dairy is the lead commodity followed by poultry and soybeans. If you combine sheep and lambs, cattle and calves and other crops & livestock the combined farm cash receipts generated by these groups exceeds dairy. Dairy is also a livestock-based operation so clearly livestock is the dominant commodity grouping in Peterborough. It underscores the importance of ensuring the conditions for livestock to thrive are in place.

As shown on **Figure 21** below, in Kawartha Lakes cattle and calves dominate in farm cash receipts, dairy ranks second. Calves and cattle are the leading commodity group in Kawartha Lakes both in terms of farm cash receipts and number of farms.

Kawartha Lakes has quite a different farm cash profile from Peterborough. Fruit and vegetable, floriculture, nursery and sod and potatoes all have a presence. These commodities are not listed for Peterborough.

FIGURE 21 - FARM CASH RECEIPTS FOR KAWARTHA LAKES, 2021



Statistics Canada – Ontario business, agri-food, and farm data profiles

https://data.ontario.ca/dataset/0d8ec71d-373c-47bf-8bfe-254155797a26/resource/38051f51-7f00-4807-b47c-633579852698/download/kawartha_lakes.xlsx

5.5 Operating Revenues

In 2020, the Government of Canada introduced "Operating Revenues" as a new farm enterprise definition to replace "Gross Farm Receipts". The new definition is based on farm operations reporting agricultural revenues and expenses as opposed to the older definition, which was based on a future intention to sell agricultural commodities.

It is critical to examine the operating revenues to get a true picture of the agricultural community. Statistics Canada defines a farm as any operation that produces one of a list of commodities so operations that have minimum sales and minimum production are counted as equal to operations that have sales in excess of $500,000 per year. Therefore, the number of farms producing certain commodities is far less representative of the strength of various sectors than the operating revenues. Examining operating revenues provides a much more realistic assessment of the breakdown in production.

Operating Revenues Key Trends:

- Selwyn has experienced the greatest increase in total operating revenues with an increase of 107% between 2011 and 2021
- Kawartha Lakes represents 61% of operating revenues, while Peterborough represents 39%
- Operating Revenues per Acres increased from $339 in 2011 to $653 in 2021 in Kawartha Lakes
- Operating Revenues per Acre increased from $343 in 2011 to $647 in 2021 in Peterborough

Figure 22 provides a percentage breakdown of the operating revenues generated in Kawartha Lakes and Peterborough and **Figure 23** provides a breakdown of the revenues for the study area for the 2011, 2016 and 2021 census periods.

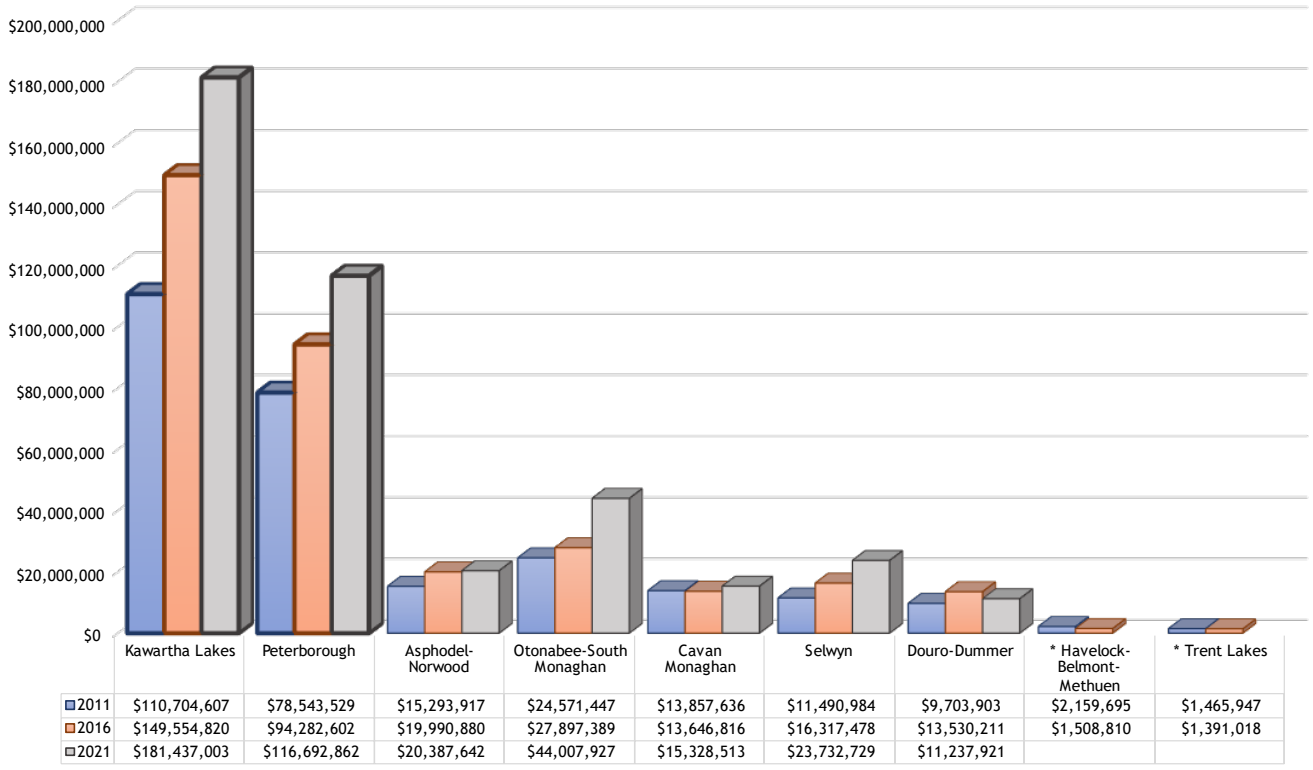
FIGURE 22 – PERCENT BREAKDOWN OF OPERATING REVENUES, 2021

Location	Operating Revenue	Percentage
Kawartha Lakes / Peterborough	$298,129,865	100%
Kawartha Lakes	$181,437,003	61%
Peterborough	$116,692,862	39%
Asphodel-Norwood	$20,387,642	18% of Peterborough
Otonabee-South Monaghan	$44,007,927	38% of Peterborough
Cavan Monaghan	$15,328,513	13% of Peterborough
Selwyn	$23,732,729	20% of Peterborough
Douro-Dummer	$11,237,921	10% of Peterborough
Havelock-Belmont-Methuen	$0 *	-
Trent Lakes	$0 *	-

* Data has been supressed as per Statistics Canada privacy protection

FIGURE 23 - TOTAL OPERATING REVENUES ($), 2011, 2016 & 2021

[FORMERLY - FARMS CLASSIFIED BY TOTAL GROSS FARM RECEIPTS]



	Kawartha Lakes	Peterborough	Asphodel-Norwood	Otonabee-South Monaghan	Cavan Monaghan	Selwyn	Douro-Dummer	* Havelock-Belmont-Methuen	* Trent Lakes
2011	$110,704,607	$78,543,529	$15,293,917	$24,571,447	$13,857,636	$11,490,984	$9,703,903	$2,159,695	$1,465,947
2016	$149,554,820	$94,282,602	$19,990,880	$27,897,389	$13,646,816	$16,317,478	$13,530,211	$1,508,810	$1,391,018
2021	$181,437,003	$116,692,862	$20,387,642	$44,007,927	$15,328,513	$23,732,729	$11,237,921		

NOTE - * Havelock-Belmont-Methuen & * Trent Lakes 2021 Data too unreliable to be published.

Statistics Canada - Table 32-10-0436-01 - Farms classified by total gross farm receipts, Census of Agriculture, 2016

Statistics Canada - Table 32-10-0240-01 - Operating Revenues, Census of Agriculture, 2021

NOTE - Farms Classified by total gross farm receipts (Table 32-10-0436-01) replaced by Operating Revenues (Table 32-10-0240-01)

In 2021, Ontario's total farm Operating Revenue was $19,724,857,808, a 66% increase from 2011. This represents a per acre revenue of $1,676. For Central Ontario, the total Operating Revenue was $1,605,566,025, an increase of 49% (per acre revenue of $1,088). For Peterborough and Kawartha Lakes, the totals were $116,692,862 ($647/acre) and $181,437,003 ($653/acre) respectively, up 49% and 64% from 2011. Kawartha Lakes' revenue represents 61% of the study area with Peterborough representing 39%. In Peterborough, Otonabee-South Monaghan represents 38% of the operating revenue, followed by Selwyn at 20% and Asphodel-Norwood at 18%.

In the 2006 Agricultural Economic Impact and Development Study, the revenues in Kawartha Lakes were similarly distributed across the south portions of the municipality.

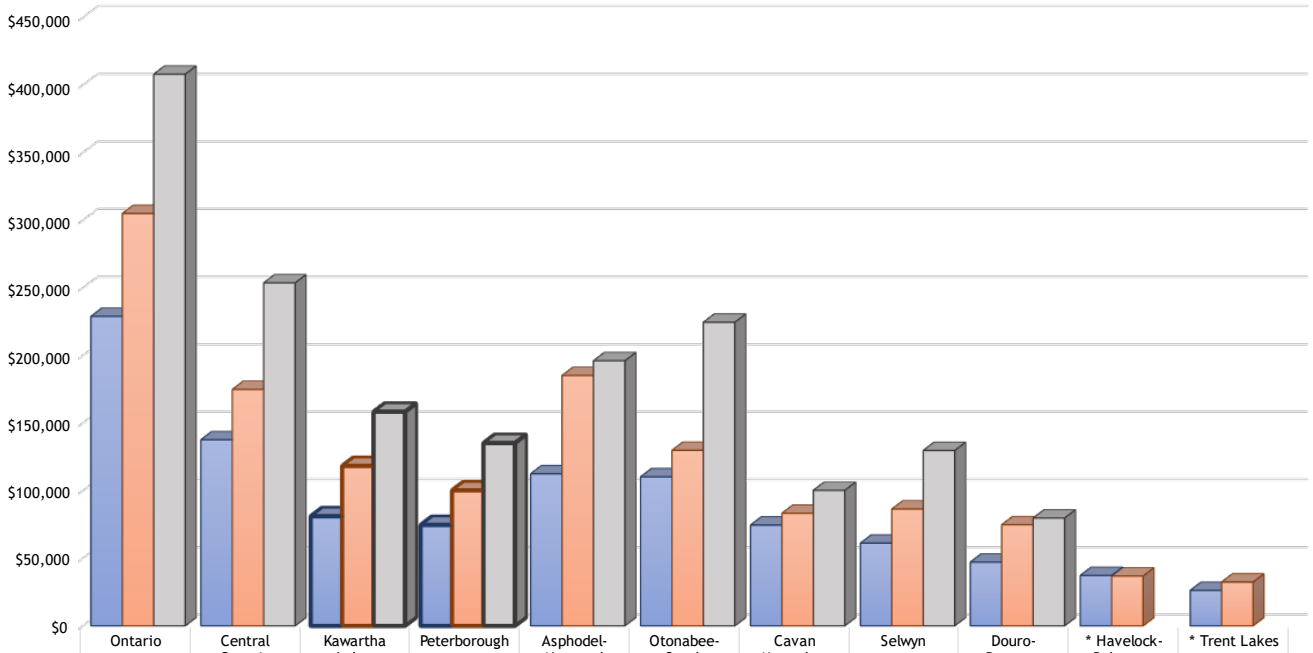
Even though there is no longer reporting for the former municipalities in Kawartha Lakes, we can reasonably assume that the pattern of the higher operating revenue has continued to be associated with the higher land classes according to the Canadian Land Index (CLI). These would be the former municipalities of Eldon, Fenelon, Mariposa, Ops, Emily, and Manvers.

A notable trend is that the number of farms operating with revenues greater than $500,000 is increasing. In all categories of revenue below $500,000, the number of farms is decreasing.

Figure 24 illustrates the operating revenue per farm. The operating revenue in Kawartha Lakes is consistently higher over time than in Peterborough.

In Peterborough, the southern municipalities (including Selwyn) have the greatest operating revenue per farm. For privacy reasons, Statistics Canada has not shown revenue in Havelock-Belmont-Methuen and Trent Lakes, but the totals are included in the county data.

FIGURE 24 - OPERATING REVENUE PER FARM ($), 2011, 2016 & 2021



	Ontario	Central Ontario	Kawartha Lakes	Peterborough	Asphodel-Norwood	Otonabee-South Monaghan	Cavan Monaghan	Selwyn	Douro-Dummer	* Havelock-Belmont-Methuen	* Trent Lakes
2011	$228,890	$137,605	$81,043	$74,590	$112,455	$110,186	$74,503	$61,122	$47,106	$37,236	$26,178
2016	$304,977	$174,803	$118,225	$100,194	$185,101	$129,755	$83,212	$86,336	$74,753	$36,800	$32,349
2021	$407,994	$253,644	$158,322	$135,218	$196,035	$224,530	$100,186	$129,687	$79,702		

NOTE - * Havelock-Belmont-Methuen & * Trent Lakes 2021 Data too unreliable to be published.

Statistics Canada - Table 32-10-0240-01 - Operating Revenues, Census of Agriculture, 2021

5.6 Farm Operating Expenses

Farm operating expenses represent the cost of doing business as well as the contribution farms make to the broader community through the purchase of goods and services. The statistics confirm that expenses have risen dramatically over recent years. These increases will relate directly to the increase in many costs including fuel, equipment and land. In 2021 when the statistics were collected, the sector was also experiencing supply chain challenges related to COVID-19 and the world conflicts. It is logical that to increase revenue, operations must adapt, be bigger and more sophisticated. This comes with increased costs.

A review of **Figures 25 & 26** confirms a relationship between rising revenues and rising costs.

Operating Expenses Key Trends:

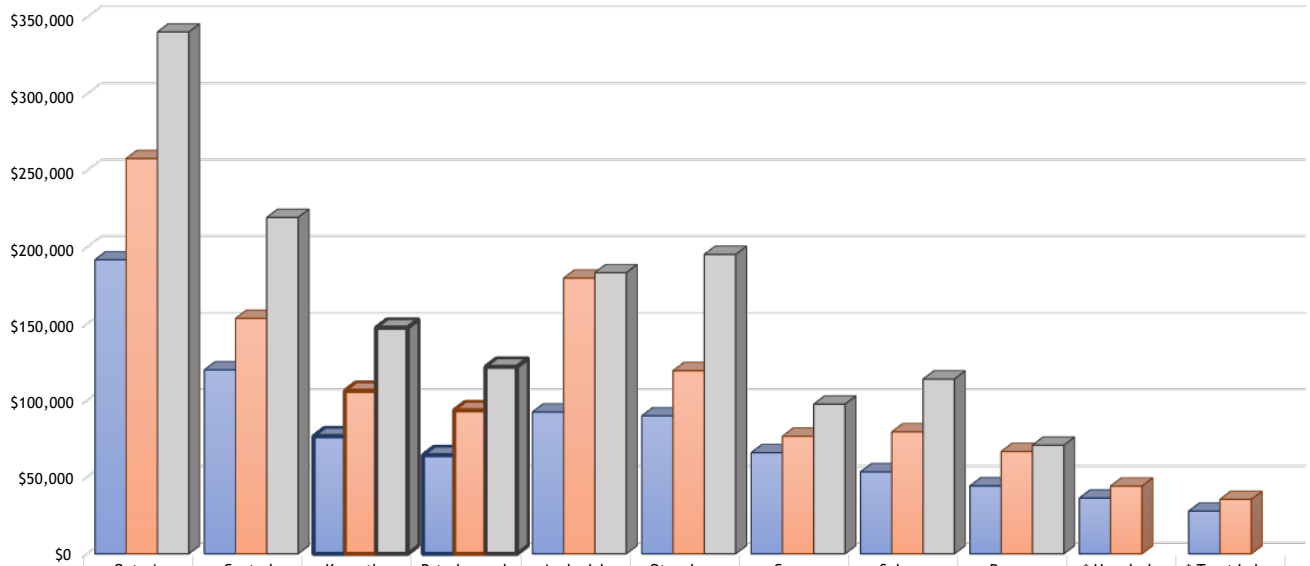
- Operating expenses have increased at a similar rate to operating revenues
- Operating expenses have risen over 90% since 2011
- In Kawartha Lakes, Farm Operating Expenses Per Acre has seen an increase from $321 in 2011 to $609 in 2021
- In Peterborough, Farm Operating Expenses Per Acre has seen an increase from $296 in 2011 to $584 in 2021

In 2001, the average operating cost per farm in Kawartha Lakes and Peterborough was $53,713 (per farm reporting total farm expense).[29] In 2021, the operating expense per farm in Kawartha Lakes was $147,509 and in Peterborough it was $122,008. There has been a 92% increase in operating expenses in Kawartha Lakes and a 90% increase in Peterborough between 2011 and 2021. As discussed in Section 5.5, the operating revenues increased by 95% in Kawartha Lakes and 81% in Peterborough over the same period indicating that farming in Peterborough is earning comparatively less profit than farming in Kawartha Lakes.

Figure 26 illustrates the direct relationship between operating revenues and operating expenses by farm in 2021. Otonabee-South-Monaghan and Selwyn had the highest revenues and operating expenses in 2021, as discussed further in Section 5.7 Gross Farm Profits.

[29] City of Kawartha Lakes and the Greater Peterborough Area Agricultural Economic Impact and Development Study, September 15, 2006 – page 4.17

FIGURE 25 - FARM OPERATING EXPENSES PER FARM ($), 2011, 2016 & 2021



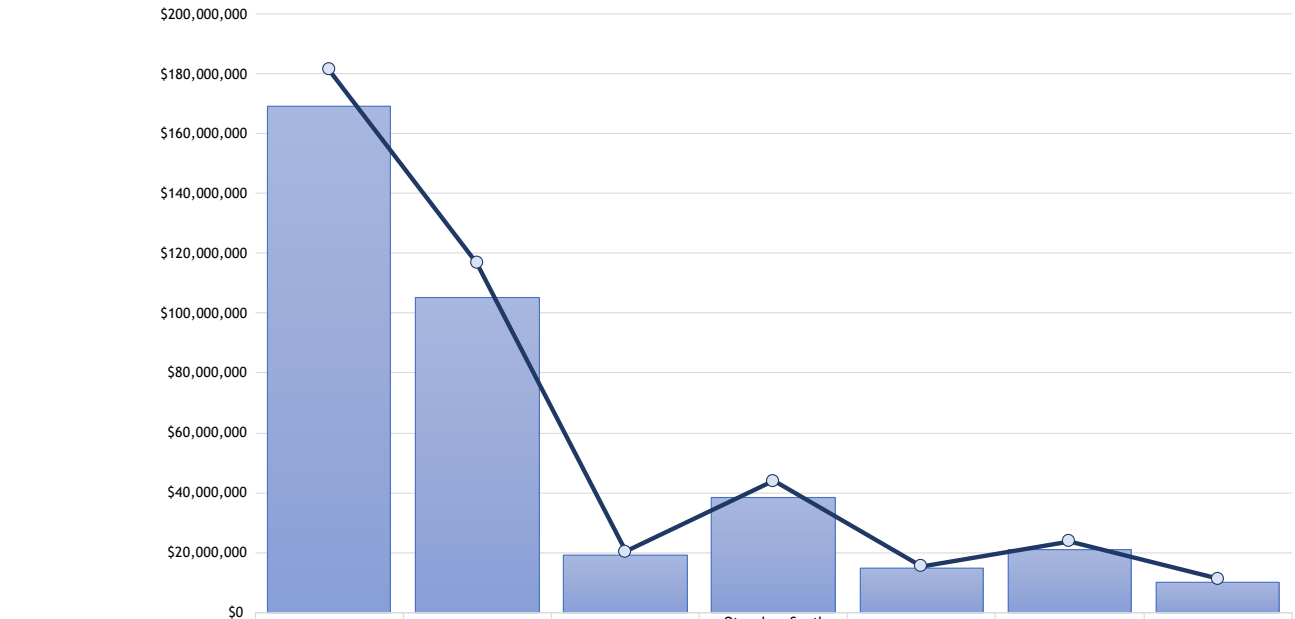
	Ontario	Central Ontario	Kawartha Lakes	Peterborough	Asphodel-Norwood	Otonabee-South Monaghan	Cavan Monaghan	Selwyn	Douro-Dummer	* Havelock-Belmont-Methuen	* Trent Lakes
2011	$191,836	$119,948	$76,705	$64,339	$92,512	$89,989	$65,966	$53,448	$44,258	$36,308	$27,836
2016	$257,862	$153,566	$106,309	$93,657	$179,855	$119,454	$76,650	$79,541	$66,715	$44,132	$35,481
2021	$340,435	$219,451	$147,509	$122,008	$183,410	$195,308	$97,611	$113,982	$70,811		

NOTE - * Havelock-Belmont-Methuen & * Trent Lakes 2021 Data too unreliable to be published.

Statistics Canada - Table 32-10-0438-01 - Operating Expenses, Census of Agriculture, 2016 (Inactive)

Statistics Canada - Table 32-10-0241-01 - Operating Expenses, Census of Agriculture, 2021

FIGURE 26 – TOTAL FARM OPERATING REVENUES & TOTAL FARM OPERATING EXPENSES ($), 2021



	Kawartha Lakes	Peterborough	Asphodel-Norwood	Otonabee-South Monaghan	Cavan Monaghan	Selwyn	Douro-Dummer
2021 Farm Operating Expenses ($)	$169,045,618	$105,293,237	$19,074,662	$38,280,340	$14,934,499	$20,858,623	$9,984,291
2021 Farm Operating Revenue ($)	$181,437,003	$116,692,862	$20,387,642	$44,007,927	$15,328,513	$23,732,729	$11,237,921

NOTE – * Havelock-Belmont-Methuen & * Trent Lakes 2021 Data too unreliable to be published.

Statistics Canada - Table 32-10-0436-01 – Farms classified by total gross farm receipts, Census of Agriculture, 2016 (Inactive)

Statistics Canada – Table 32-10-0240-01 – Operating Revenues, Census of Agriculture, 2021

Statistics Canada – Table 32-10-0438-01 – Operating Expenses, Census of Agriculture, 2016 (Inactive)

Statistics Canada – Table 32-10-0241-01 – Operating Expenses, Census of Agriculture, 2021

5.7 Gross Farm Profit

Gross farm profit is a good indicator of the financial success of farms. Profitable operations can invest in expansion, improvements and infrastructure that can have long-term benefits to the operation and the general strength of the agricultural community.

Figure 27 provides a comparison of gross profits from 2011, 2016 and 2021. It illustrates that the provincial and Central Ontario profits increased more in the 2016 to 2021 period than they did between 2011 and 2016. Gross profits across Kawartha Lakes and Peterborough are lower than the Central Ontario and provincial averages per farm. Otonabee-South-Monaghan and Selwyn gross profits per farm between 2016 and 2021 have shown the most significant growth in the study area. In Kawartha Lakes, gross profit per farm decreased $1,103 between 2016 and 2021.

In considering gross profits it is also important to consider the impact investments may have had on bottom lines. Construction of modern barns for example is an expensive but long term investment. In recent years, construction of several modern milking parlors and poultry barns has been noted in the study area. These investments will reduce gross profits in those sectors for a period but increase them over the long term.

Gross Farm Profit Key Trends:

- Gross profits across Kawartha Lakes and Peterborough are lower than the Central Ontario and provincial averages per farm
- In Kawartha Lakes, Gross Profit per farm decreased $1,103 between 2016 and 2021
- Havelock-Belmont-Methuen and Trent Lakes no longer generate sufficient gross profit from their agricultural activities to be reported
- In Peterborough, Gross Profit per farm increased $6,673 between 2016 and 2021
- Otonabee-South Monaghan ($19,921), Selwyn ($8,910) and Asphodel-Norwood ($7,379) experienced the largest increases in gross farm profit between 2016 and 2021

As illustrated in Figure 19 in Section 5.4, the Other Crops and Livestock farm cash receipts increased by $17.5 million in Kawartha Lakes and $9.97 million in Peterborough. In Peterborough, Otonabee South Monaghan accounts for 38% of farm cash receipts but only 23% of the farms, 25% of the farmland and shows the largest portion of gross farm profit.

Trends from 2011 to 2021 show struggling profitability in Havelock-Belmont-Methuen and Trent Lakes to the point that there were reported losses in 2016 and no data collected in 2021 due to reliability and privacy protection. It is reported that 45 farms remain in

Havelock-Belmont-Methuen (1 dairy, 15 cattle, 13 cash crops, 6 miscellaneous specialty, 4 other combination, 1 sheep, 2 horse and pony, 2 other livestock specialty and 1 nursery product/sod/maple). While their total operating revenue is not reported, it is reported that 36 of the 45 farms operate below the $50,000 operating revenue level.

In Trent Lakes, there are 57 reported farms (16 cattle, 1 poultry and egg, 11 cash crop, 1 fruit, 10 miscellaneous specialty, 2 animal combination, 3 vegetable, 3 other combination, 3 sheep, 2 horse and pony, 1 other livestock specialty, 1 greenhouse product and 3 nursery product/sod/maple). 42 of the farms operate below the $50,000 operating revenue level.

It is noted that 16 farms that are identified by farm type are not reflected individually in the operating revenue reporting as the data for those farms was deemed "too unreliable to be published" by Statistics Canada. However, it is reasonable to assume that these farms also fall within the "under $10,000" operating revenue category.

It seems agriculture is not an economic contributor in Havelock-Bemont-Bethune or Trent lakes (including North Kawartha) at this point in history. However, agriculture does contribute to the local culture and community fabric of these areas and is an inherent part of the areas' history.

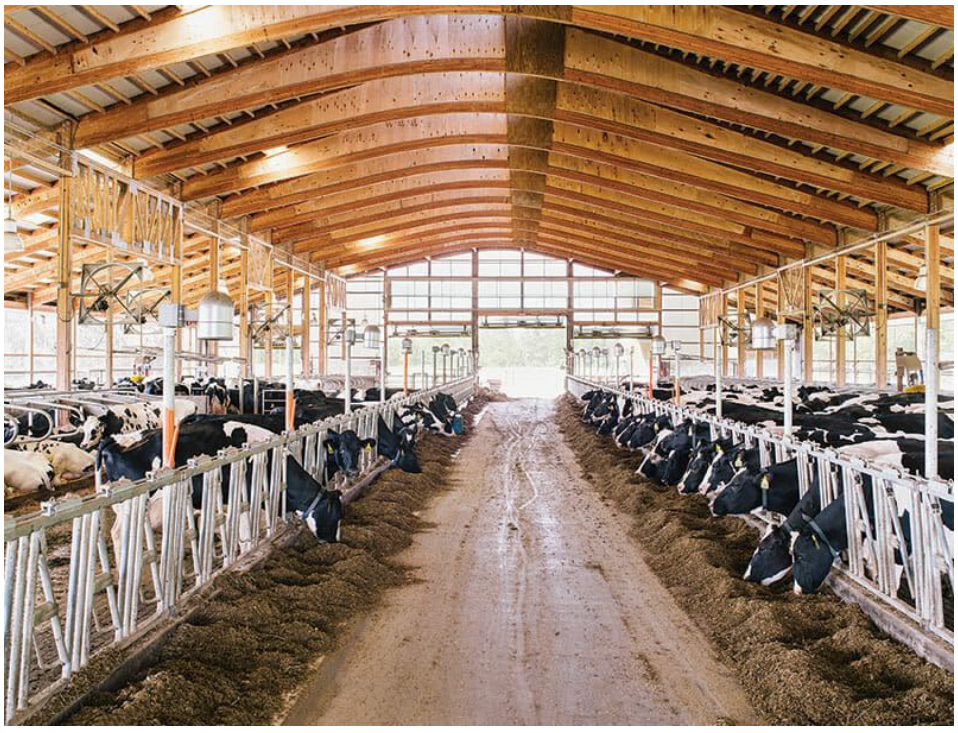
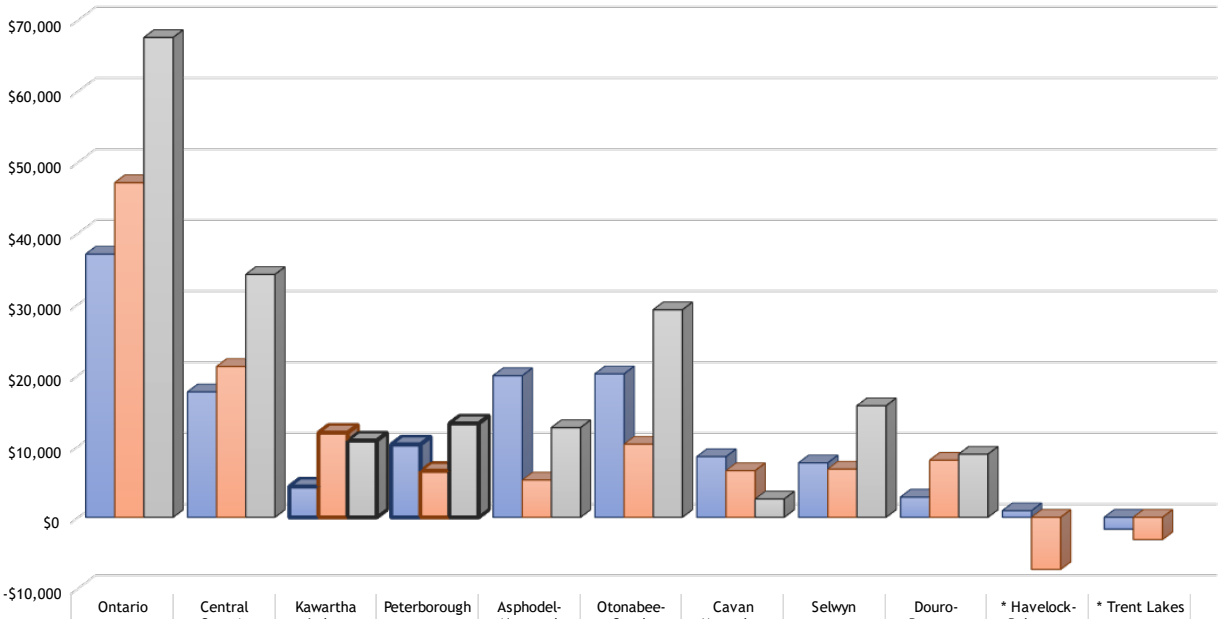


FIGURE 27 – GROSS PROFIT PER FARM – FARM OPERATING EXPENSES / FARM OPERATING REVENUES ($), 2011, 2016 & 2021



	Ontario	Central Ontario	Kawartha Lakes	Peterborough	Asphodel-Norwood	Otonabee-South Monaghan	Cavan Monaghan	Selwyn	Douro-Dummer	* Havelock-Belmont-Methuen	* Trent Lakes
Gross Profit 2011	$37,054	$17,657	$4,338	$10,251	$19,943	$20,197	$8,537	$7,674	$2,848	$928	-$1,658
Gross Profit 2016	$47,115	$21,237	$11,916	$6,537	$5,246	$10,301	$6,562	$6,795	$8,038	-$7,332	-$3,132
Gross Profit 2021	$67,559	$34,193	$10,813	$13,210	$12,625	$29,222	$2,575	$15,705	$8,891		

NOTE – Havelock-Belmont-Methuen & Trent Lakes 2021 Data too unreliable to be published.

Statistics Canada - Table 32-10-0436-01 – Farms classified by total gross farm receipts, Census of Agriculture, 2016

Statistics Canada – Table 32-10-0240-01 – Operating Revenues, Census of Agriculture, 2021

Statistics Canada – Table 32-10-0438-01 – Operating Expenses, Census of Agriculture, 2016 (Inactive)

Statistics Canada – Table 32-10-0241-01 – Operating Expenses, Census of Agriculture, 2021

5.8 Farm Capital

Farm capital represents the value of capital associated with the production of agricultural commodities, regardless of whether the capital is owned or leased. The three components of farm capital are:

1) land and buildings;
2) livestock; and
3) farm machinery and equipment.

In the last 5-year period, the provincial average for farm capital rose 43% while in Central Ontario it rose 62%. The percent increases between 2016 and 2021 in the study area, were as follows:

- Kawartha Lakes – 59%
- Peterborough – 55%
- Asphodel-Norwood – 75%
- Otonabee-South Monaghan – 36%
- Cavan Monaghan – 61%
- Selwyn – 69%
- Douro-Dummer – 51%
- Havelock-Belmont-Methuen – 85%
- Trent Lakes – 35%

Farm Capital Key Trends:

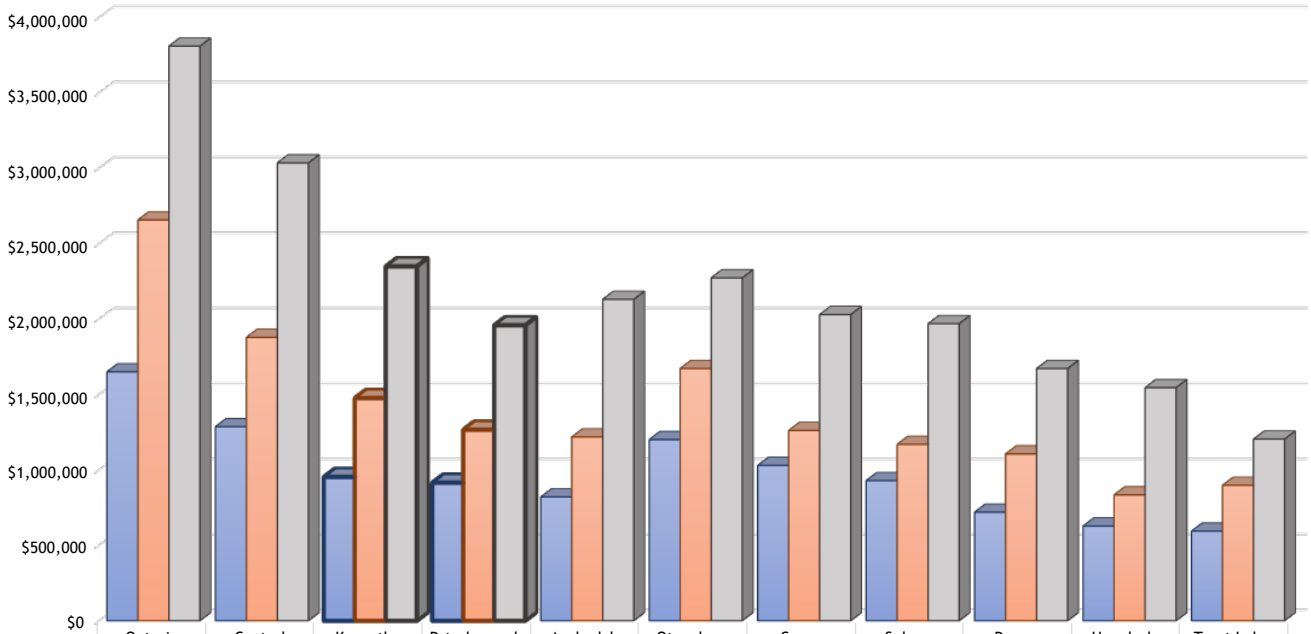
- Average Farm Capital in Peterborough ($1,959,193) and Kawartha Lakes ($2,349,707) is significantly lower than the Central Ontario ($3,035,461) and the provincial average ($3,809,388)
- Between 2016 and 2021 Kawartha Lakes farm capital increased by 59% and Peterborough's by 55%

When considered in the context of gross profit, the significant increase in farm capital in Havelock-Belmont-Methuen (an increase of $711,290 in 2021 over 2016) is surprising. This municipality reported a loss of $41M in the 2016 reporting period and no profits were recorded in 2021, yet there was a significant increase in capital investment. In Otonabee-South Monaghan, the increase in farm capital is lower at 36% ($601,013), yet this municipality saw one of the largest increases in gross profits. In Asphodel-Norwood, the relatively large capital increase is consistent with that municipality's increase in gross profits.

These trends support the previous comment that investments in infrastructure may temporarily reduce gross profit but increase it over the long term.

Figure 28 illustrates the trends in average farm capital in 2011, 2016 and 2021.

FIGURE 28 - AVERAGE FARM CAPITAL ($), 2011, 2016 & 2021



	Ontario	Central Ontario	Kawartha Lakes	Peterborough	Asphodel-Norwood	Otonabee-South Monaghan	Cavan Monaghan	Selwyn	Douro-Dummer	Havelock-Belmont-Methuen	Trent Lakes
2011	$1,649,727	$1,286,034	$953,350	$914,989	$820,662	$1,200,874	$1,029,706	$929,055	$719,551	$627,608	$593,968
2016	$2,656,963	$1,878,012	$1,476,127	$1,266,461	$1,218,094	$1,672,199	$1,261,089	$1,168,841	$1,105,644	$834,124	$897,971
2021	$3,809,388	$3,035,461	$2,349,707	$1,959,193	$2,130,941	$2,273,212	$2,029,928	$1,969,529	$1,672,003	$1,545,414	$1,204,033

Statistics Canada – Table 32-10-0437-01 – Farm Capital, Census of Agriculture, 2016 (Inactive)
Statistics Canada – Table 32-10-0237-01 – Farm Capital, Census of Agriculture, 2021

5.9 Land Prices

Land values impact trends in rental vs. ownership and the ability of farmers to enter farming or expand operations. To understand these trends, land values as reported by Farm Credit Canada (FCC) were considered. Land value is reported by FCC as land prices per acre in regions across Ontario with "Central East" **(Figure 29)** representing the area that includes Peterborough and Kawartha Lakes.

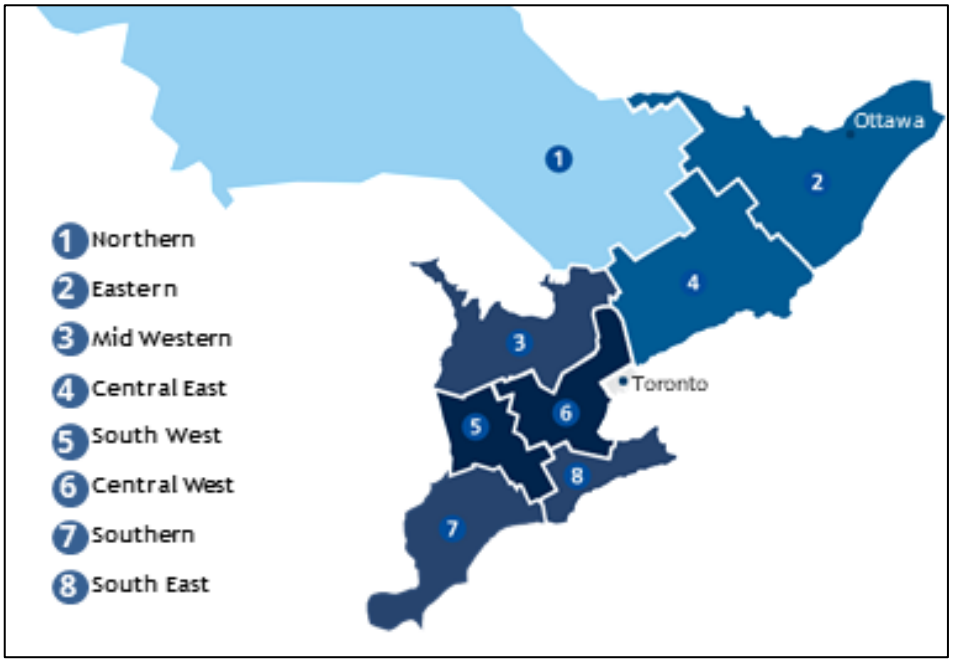
For agriculture, land prices are a key factor in determining whether entry into farming, or the expansion of existing operations is possible / profitable.

Land Prices Key Trends:

- Cultivated land price has risen 459% between 2006 and 2022
- Land prices have exceeded the increase in commodity prices by approximately 300%
- The rising value of and competition for land is a strong negative factor for future generations of farmers

Land values continue to trend up with significant increases in each census period. Between 2011 and 2016 in the Central East area, farmland values increased $2,260 per acre. Between 2016 and 2021 cultivated land prices rose another $4,830 per acre. In 2022, the reported value per cultivated acre of land in the Central East area was $12,800.

FIGURE 29 - ONTARIO FARMLAND REGION MAP



Central East – Includes Peterborough and Kawartha Lakes

Source – Farm Credit Canada – Farmland Values Report 2022

Covers period from January 1 to December 31,2022

Published March 13, 2023

Farmland values reported in the 2006 Agricultural Economic Impact and Development Study showed an average per acre cultivated land price of $2,093 in Otonabee-South Monaghan and an average cultivated land price per acre in Kawartha Lakes of $2,486. Averaged together to get a representative comparison of the Central East area that Farm Credit Canada uses to report land prices, we can reasonably compare a price of $2,290 per cultivated acre in 2006 to a cost of $12,800 per cultivated acre in 2022. Extrapolated again to understand the impact of purchasing a 100-acre farm (note that no value has been assigned to structures or dwellings in this hypothetical comparison), in 2006 you could purchase those 100 acres of cultivated land for approximately $230,000, whereas in 2022, those same 100 acres would cost an estimated $1.28 million dollars.

It is important to reflect on comparative commodity prices to understand how the increase in land prices impacts farm profitability. To inform this context, **Figure 30** has been assembled to compare the percentage increase in land prices to changes in two commodity prices. This is an illustrative exercise only and not a comprehensive investigation per commodity. As can be seen, the 459% land price increase far surpasses the price increase of both canola and beef over the same periods allowing us to infer that the land price increases are a prohibitive element to the economic viability of establishing new or expanding existing farms.

FIGURE 30 - COMPARISON OF LAND PRICES, CANOLA AND LIVE WEIGHT CATTLE PRICES, 2006 VS. 2022

Year	2006	2022	$ change	% increase
Land Price/cultivated acre	$2,290	$12,800	$10,510	459%
Canola	$291	$800	$509	175%
Beef	$83	$167	$84	101%

Source: Table 32-10-0077-01 Farm product prices, crops and livestock from the Statistics Canada

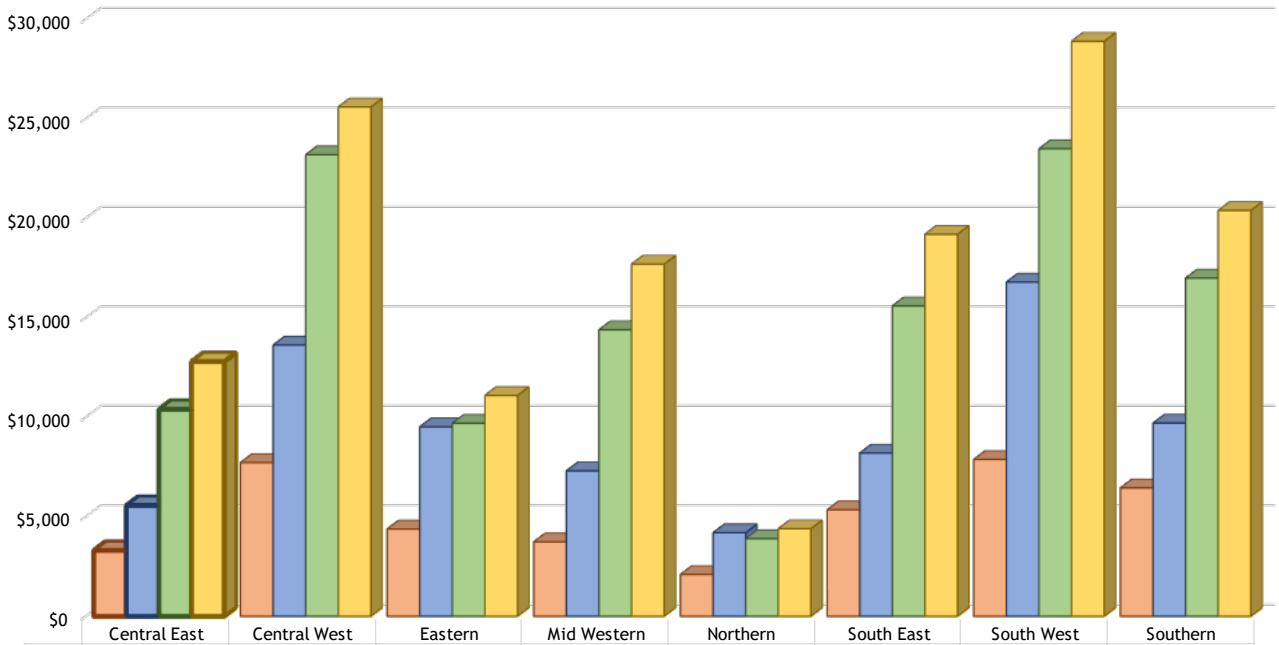
Renting land, although an alternative also has its problems. As noted elsewhere in this report, land ownership offers the agricultural sector more stability on a longer-term basis.

For areas impacted by pressure for residential growth, the sale of agricultural properties becomes an increasingly lucrative possibility for retiring or financially struggling operators.

The rising value of and competition for land, is a strong negative factor for future generations of farmers.

Figure 31 illustrates the comparative land prices for 2011, 2016, 2021 and 2022.

FIGURE 31 - LAND PRICES [CULTIVATED LAND] VALUE $/ACRE, 2011, 2016, 2021 & 2022



	Central East	Central West	Eastern	Mid Western	Northern	South East	South West	Southern
2011	$3,310	$7,725	$4,387	$3,741	$2,100	$5,350	$7,883	$6,454
2016	$5,570	$13,633	$9,520	$7,310	$4,200	$8,200	$16,796	$9,709
2021	$10,400	$23,200	$9,700	$14,400	$3,900	$15,600	$23,500	$17,000
2022	$12,800	$25,600	$11,100	$17,700	$4,400	$19,200	$28,900	$20,400

Central East - Includes Peterborough and Kawartha Lakes

Source - Farm Credit Canada - Farmland Values Report 1985 - 2022
Published March 13, 2023

5.10 Farm Operator Profile

It is important to evaluate the profile of the farmers to understand how the demographics of the farm sector are changing. This section is not a comprehensive or exhaustive investigation of farm demographics but presents the available data from Statistics Canada to provide some background about the human resource sector of the sector.

5.10.1 Number of Farm Operators

In 2001, there were 3,795 operators in the study area. Operators are defined by Statistics Canada as "those persons responsible for the day-to-day management decisions made in the operation of a census farm.[30]

Figure 32 details the total number of operators in the study area in 2011, 2016 and 2021 and the total loss of operators in 10-year and 5-year increments. This provides a comparison to loss of farms over the same periods.

Farm Operator Profile Key Trends:

- There has been a 10-year loss of 815 operators and a 5-year loss of 670 operators in Kawartha Lakes
- There has been a 650 10-year loss and a 550 5-year loss of operators in Peterborough
- 62% of operators in Ontario are 55 years or older
- 66% of operators in the study area are over 55 years of age, 27.5% of operators are between 35 and 54 and 6.5% of operators are under 35
- Hours worked on the farm is generally declining
- Partnerships are the only operating arrangement that has an increasing trend in the study area
- An average of 10% of operations in the study area have paid labour

FIGURE 32 - TOTAL NUMBER OF OPERATORS

Area	Total Number of Operators				10-year loss	5-year loss
	2001[31]	2011	2016	2021		
Kawartha Lakes	2,095	1,920	1,775	1,105	815	670
Peterborough	1,700	1,460	1,360	810	650	550

[30] City of Kawartha Lakes and the Greater Peterborough Area Agricultural Economic Impact and Development Study, September 15, 2006 – page 7.1
[31] Ibid.

The decrease in the number of operators in the last five (5) years is significant. The number of farmers reported in Havelock-Belmont-Methuen declined from 90 in 2011 to 35 in 2021. In Trent Lakes during the same period the number declined from 80 to 40. These figures are consistent with the overall reported decline of agriculture in these two municipalities.

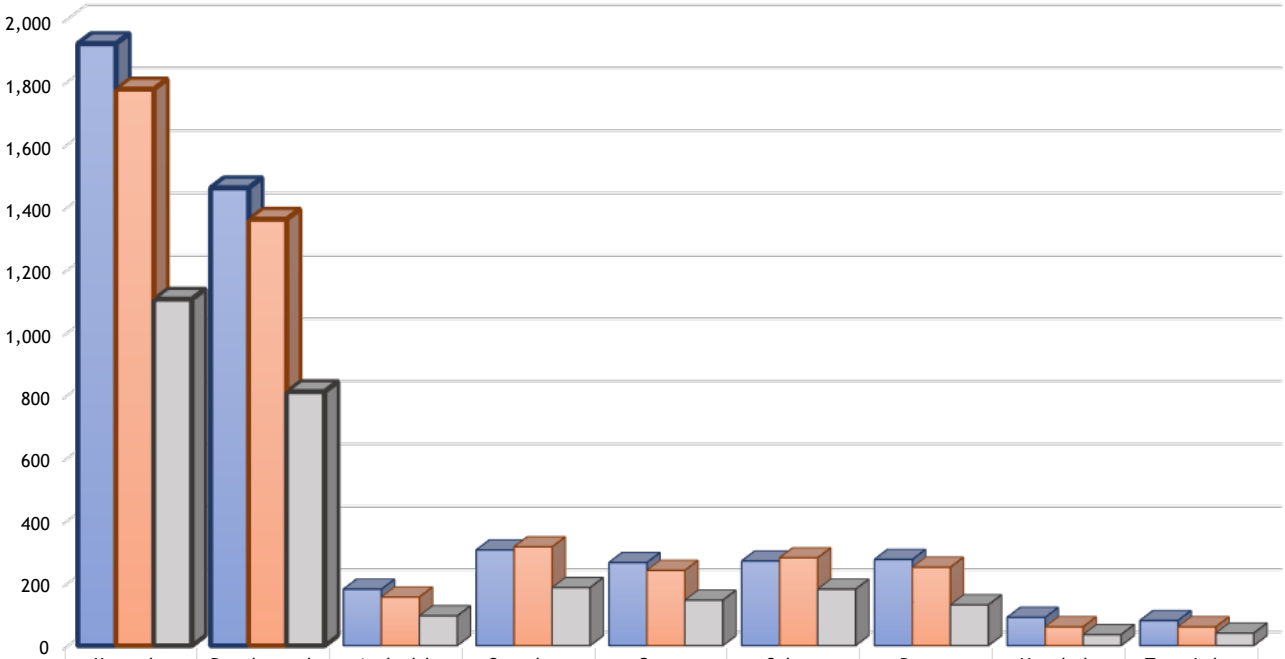
There were no increases in the number of operators reported across the study area. **Figure 33** illustrates the total number of operators throughout the study area in 2011, 2016 and 2021.

Part of the decline can be attributed to the decline in the number of farms (220 in Kawartha Lakes and 190 in Peterborough between 2011 and 2021) but this does not offer a full explanation of the loss of 815 and 650 operators respectively in the same period. In the 2006 report, it was noted that fewer operators were running larger farms and this factor contributed to the decrease in the number of operators. However, the average farm size in Kawartha Lakes has only increased by 3 acres since 2001 and there has been a decrease in the average farm size in Peterborough, so this explanation does not explain the ongoing decline in operators.

Other factors that will impact the number of operators are improvements in technology and the practice of custom work where work is shared among operators. Both practices will reduce the number of operators required by the sector. Increased mechanization can also impact the number of operators. As the size and sophistication of equipment increases, specifically in livestock and field crop cultivation, fewer farmers are required to manage farms.

Demographics also contribute to the decline – large numbers of operators in the study area have reached an age where they are no longer reporting as operators. However regardless of these factors the ongoing decline in number of operators is a concern.

FIGURE 33 - TOTAL NUMBER OF OPERATORS [ALL FARMS] 2011, 2016 & 2021



	Kawartha Lakes	Peterborough	Asphodel-Norwood	Otonabee-South Monaghan	Cavan Monaghan	Selwyn	Douro-Dummer	Havelock-Belmont-Methuen	Trent Lakes
2011	1,920	1,460	180	305	265	270	275	90	80
2016	1,775	1,360	155	315	240	280	250	60	60
2021	1,105	810	95	185	145	180	130	35	40

Statistics Canada – Table 32-10-0442-01 – Characteristics of Farm Operators: Age and Number of Operators on the Farm, Census of Agriculture, 2016 (Inactive)

Statistics Canada - Table 32-10-0381-01 – Characteristics of Farm Operators: Age, Sex and Number of Operators on the farm, Census of Agriculture, 2021

5.10.2 Demographics

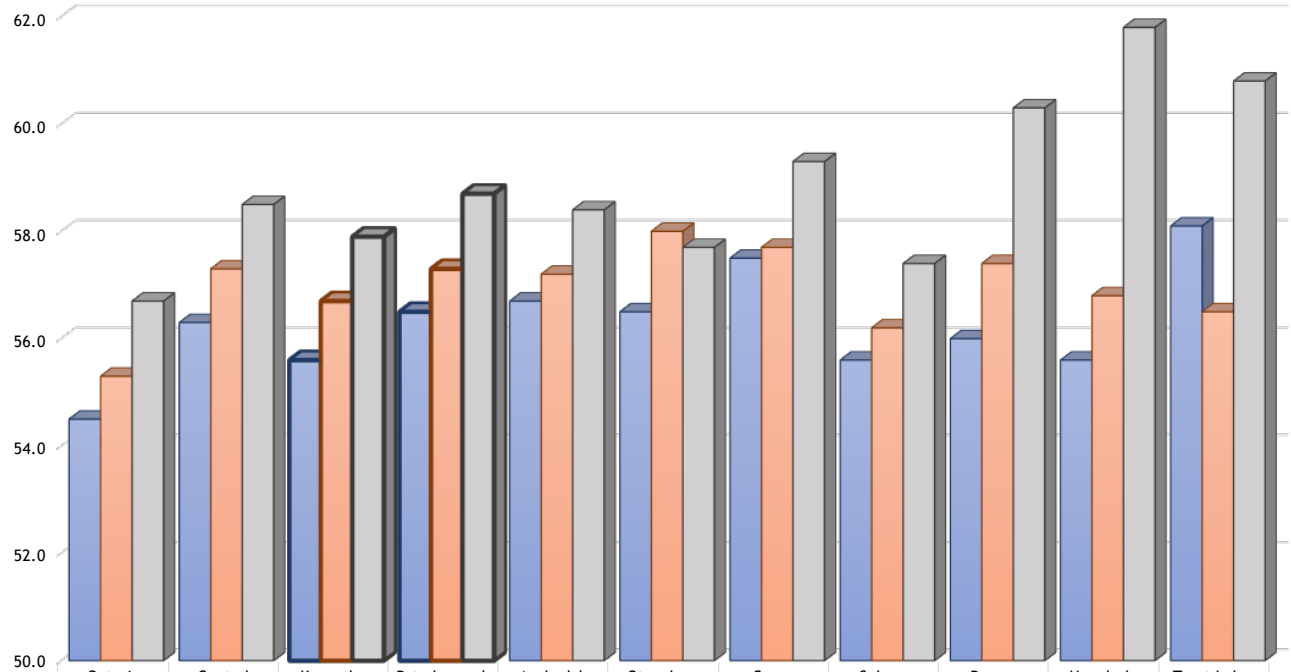
In 2021 there were 67,390 operators working on farms in Ontario. The 55+ age group increased from 48% of operators in 2011 to 62% in 2021. The average age for farmers in Ontario is 56.7 years. The following illustrates the key aging trends in the study area:

- Only in Otonabee-South Monaghan has there been an increase in operators under the age of 35. This municipality gained 5 operators under 35 between 2016 and 2021.
- In the study area, 66% of operators are over the age of 55, approximately 27.5% of operators are between 35 to 54 and 6.5% of operators are under 35 years of age.

- The general aging trend in the study area between 2011 and 2021 shows that the under 35 age group has remained constant, the 35 to 54 age group has declined 13% over time and the over 55 group has increased 8%.
- Kawartha Lakes is home to significant Mennonite and Amish communities. These groups typically have multi generational operators on a farm. Given the amalgamation of data for the City, it is difficult to assess the impact this has on the areas where the Mennonites and Amish have settled.

Figures 34a and 34b illustrate the trends.

FIGURE 34A - AVERAGE AGE OF FARM OPERATORS [ALL FARMS] 2011, 2016 & 2021

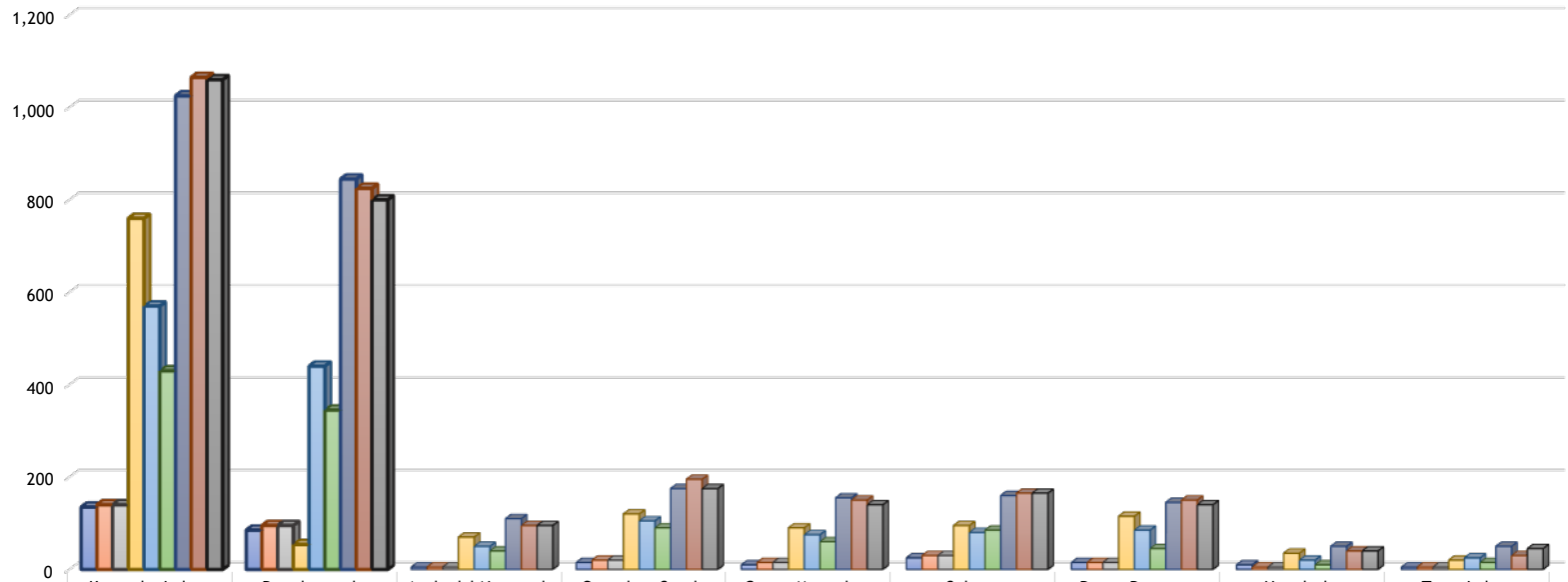


	Ontario	Central Ontario	Kawartha Lakes	Peterborough	Asphodel-Norwood	Otonabee-South Monaghan	Cavan Monaghan	Selwyn	Douro-Dummer	Havelock-Belmont-Methuen	Trent Lakes
2011	54.5	56.3	55.6	56.5	56.7	56.5	57.5	55.6	56.0	55.6	58.1
2016	55.3	57.3	56.7	57.3	57.2	58.0	57.7	56.2	57.4	56.8	56.5
2021	56.7	58.5	57.9	58.7	58.4	57.7	59.3	57.4	60.3	61.8	60.8

Statistics Canada – Table 32-10-0442-01 – Characteristics of Farm Operators: Age and Number of Operators on the Farm, Census of Agriculture, 2016 (Inactive)

Statistics Canada - Table 32-10-0381-01 – Characteristics of Farm Operators: Age, Sex and Number of Operators on the farm, Census of Agriculture, 2021

FIGURE 34B - AVERAGE AGE OF FARM OPERATORS [ALL FARMS] 2011, 2016 & 2021



	Kawartha Lakes	Peterborough	Asphodel-Norwood	Otonabee-South Monaghan	Cavan Monaghan	Selwyn	Douro-Dummer	Havelock-Belmont-Methuen	Trent Lakes
2011- Under 35 Years	135	85	5	15	10	25	15	10	5
2016- Under 35 Years	140	95	5	20	15	30	15	5	5
2021 - Under 35 Years	140	95	5	20	15	30	15	5	5
2011 - 35 to 54	760	54	70	120	90	95	115	35	20
2016 - 35 to 54	570	440	50	105	75	80	85	20	25
2021 - 35 to 54	430	345	40	90	60	85	45	10	15
2011 - 55 Years & Over	1,025	845	110	175	155	160	145	50	50
2016 - 55 Years & Over	1,065	825	95	195	150	165	150	40	30
2021 - 55& Over	1,060	800	95	175	140	165	140	40	45

Statistics Canada – Table 32-10-0442-01 – Characteristics of Farm Operators: Age and Number of Operators on the Farm, Census of Agriculture, 2016 (Inactive)

Statistics Canada - Table 32-10-0381-01 – Characteristics of Farm Operators: Age, Sex and Number of Operators on the farm, Census of Agriculture, 2021

5.10.3 Hours Worked

Hours spent on the farm have been decreasing over the 2011 to 2021 period. Provincially, the percentage of operators working less than 20 hours per week has increased from 34% (2011) to 37% (2021), workers in both the 20-29 hours as well as 34-40-hour groups has remained unchanged at 16% and 14% while the number logging more than 40 hours has decreased from 37% to 33%.

The percentage of farm operators working in Peterborough and the Kawarthas has tracked in line with the declines seen provincially. However, in the 40+ hour range the percentage of workforce is below the provincial average at 27% in both jurisdictions in 2021.

Figure 35a and 35b illustrates that the highest concentration of hours worked is less that 20 hours and more than 40 hours. Statistics Canada's definition of farm captures hobby farms as well as rural residents seeking a quasi-agricultural lifestyle. This may account for the high concentration of farms having operators reporting less than 20 hours per week of work on their farm. In both Kawartha Lakes and Peterborough, the second highest grouping are operators working more than 40 hours per week on their farm. This will be the group who are full time operators.

FIGURE 35A – CHARACTERISTICS OF FARM OPERATORS - FARM WORK [ALL FARMS], 2021

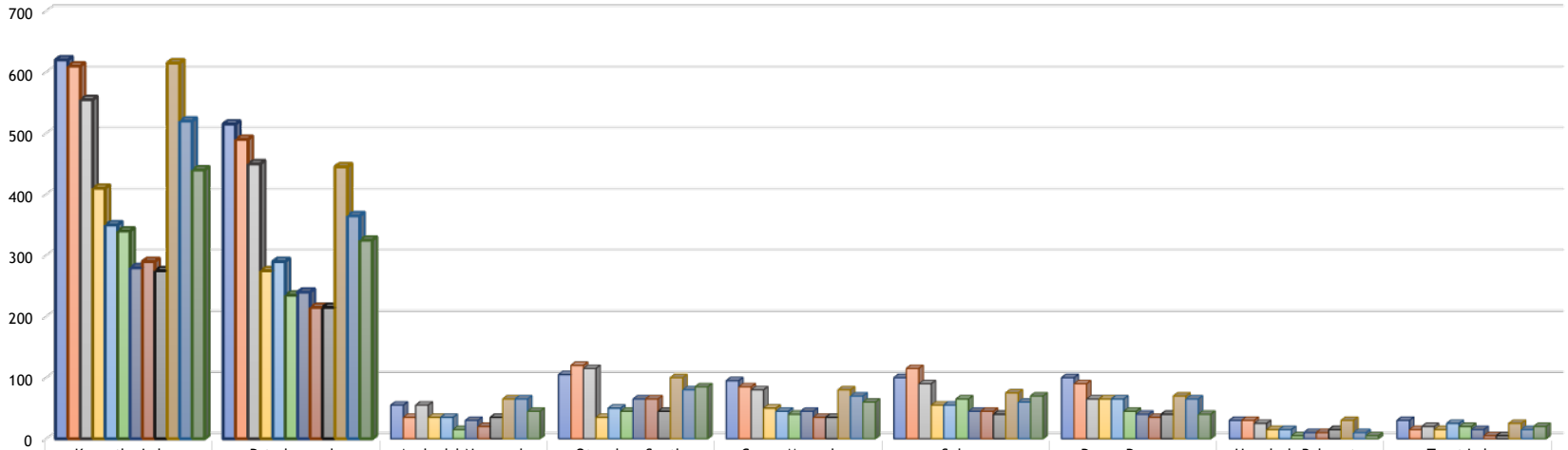
	2021					
	Number of Farms	Total Number of Farm Operators	Less Than 20 Hours	20 to 29 Hours	30 to 40 Hours	More than 40 Hours
Ontario	48,346	67,390	24,680	10,945	9,690	22,070
Central Ontario	6,330	8,965	3,035	1,605	1,465	2,865
Kawartha Lakes	**1,146**	**1,610**	**555**	**340**	**275**	**440**
Peterborough	**863**	**1,215**	**450**	**235**	**215**	**325**
Asphodel-Norwood	104	145	55	15	35	45
Otonabee-South Monaghan	196	285	115	45	45	85
Cavan Monaghan	153	215	80	40	35	60
Selwyn	183	265	90	65	40	70
Douro-Dummer	141	195	65	45	40	40
Havelock-Belmont-Methuen	39	50	25	5	15	5
Trent Lakes	47	60	20	20	5	20

Statistics Canada – Table 32-10-0444-01 – Characteristics of Farm Operators: Farm Work, Census of Agriculture, 2011 and 2016 (Inactive)

Statistics Canada - Table 32-10-0382-01 – Characteristics of Farm Operators: Farm Work and Other Paid Work, Census of Agriculture, 2021

Figure 35B describes the trends in hours worked for 2011, 2016 and 2021.

FIGURE 35B – CHARACTERISTICS OF FARM OPERATORS - FARM WORK [ALL FARMS] 2011, 2016 & 2021



	Kawartha Lakes	Peterborough	Asphodel-Norwood	Otonabee-South Monaghan	Cavan Monaghan	Selwyn	Douro-Dummer	Havelock-Belmont-Methuen	Trent Lakes
2011 - Less Than 20 Hours	620	515	55	105	95	100	100	30	30
2016 - Less Than 20 Hours	610	490	35	120	85	115	90	30	15
2021 - Less Than 20 Hours	555	450	55	115	80	90	65	25	20
2011 - 20 to 29 Hours	410	275	35	35	50	55	65	15	15
2016 - 20 to 29 Hours	350	290	35	50	45	55	65	15	25
2021 - 20 to 29 Hours	340	235	15	45	40	65	45	5	20
2011 - 30 to 40 Hours	280	240	30	65	45	45	40	10	15
2016 - 30 to 40 Hours	290	215	20	65	35	45	35	10	5
2021 - 30 to 40 Hours	275	215	35	45	35	40	40	15	5
2011 - More than 40 Hours	615	445	65	100	80	75	70	30	25
2016 - More than 40 Hours	520	365	65	80	70	60	65	10	15
2021 - More than 40 Hours	440	325	45	85	60	70	40	5	20

Statistics Canada – Table 32-10-0444-01 – Characteristics of Farm Operators: Farm Work, Census of Agriculture, 2011 and 2016 (Inactive)

Statistics Canada - Table 32-10-0382-01 – Characteristics of Farm Operators: Farm Work and Other Paid Work, Census of Agriculture, 2021

5.10.4 Operating Arrangements

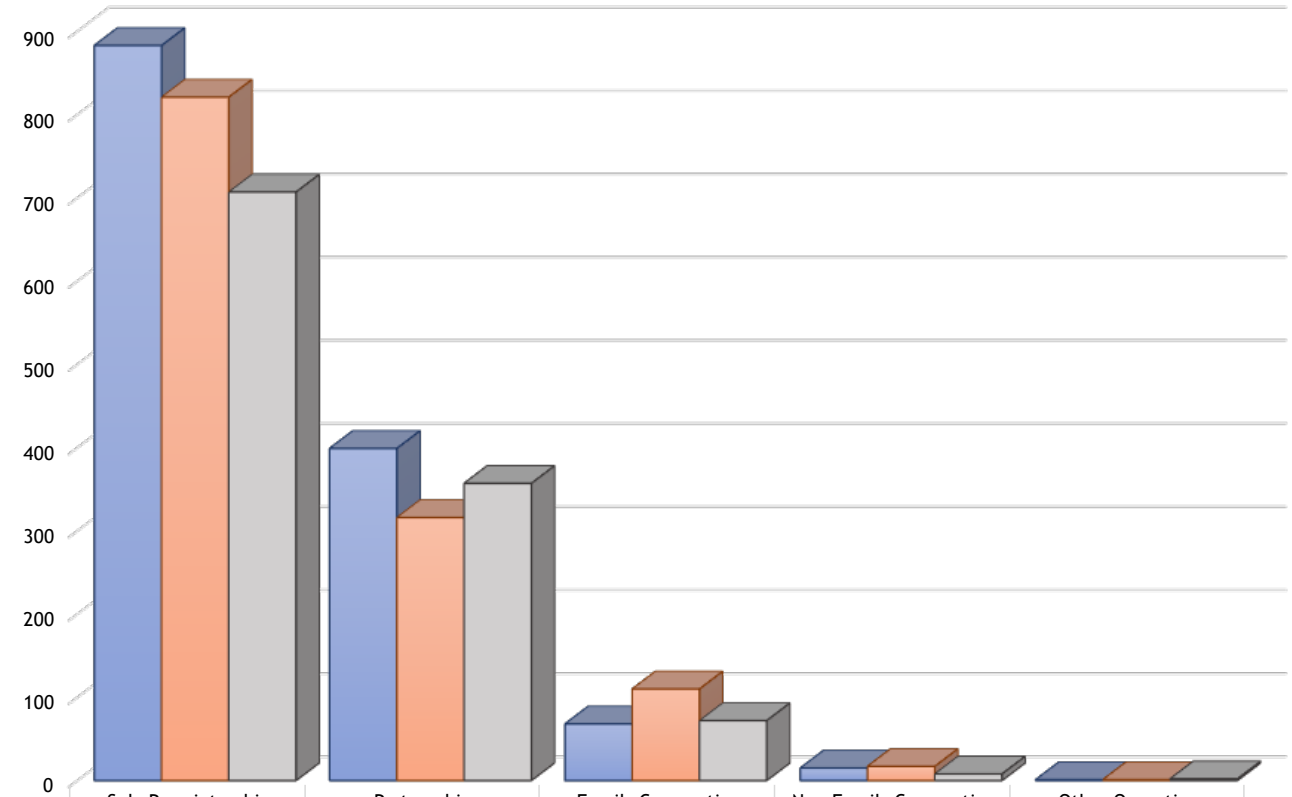
The operating arrangements reported on include sole proprietorship, partnership, family corporations, non-family corporations and other arrangements. From 2011 to 2021 there has been a consistent decline in the number of sole proprietorship farm operations in Ontario (55% to 49%) with a 2% rise in partnerships (28% to 30%), a 4% increase in family corporations (15% to 19%) and a marginal increase in non-family corporations (879 to 979) out of 48,346 farm operations.

For Peterborough's 863 and the Kawartha Lakes' 1,146 farms, the trend is generally in line with provincial trends. Peterborough has seen a decline in sole proprietorship farms by 3%, a 4% increase in partnerships, no change in family corporations and a decline in non-family corporations from 13 to 4 operations. In Kawartha Lakes, the number of sole proprietorship farming operations has increased by 3%, partnerships are up by 2%, family corporations are up by 1% and non-family corporations which are less than 1% of the total have decreased from 15 to 8 operations.

There is no evidence in the study area of a growing trend whereby private equity firms fund farmland transactions. This is a model that is taking hold in some parts of Ontario. Non-farm investors fund farmland purchases then lease the farms to farmer partners. This trend is more common in the United States where it is reported that approximately 20% of farmland is owned by non-farm investors.

Figures 36a and 36b describe the changing trends in Kawartha Lakes and Peterborough.

FIGURE 36A – OPERATING ARRANGEMENTS - 2011, 2016 & 2021 – KAWARTHA LAKES

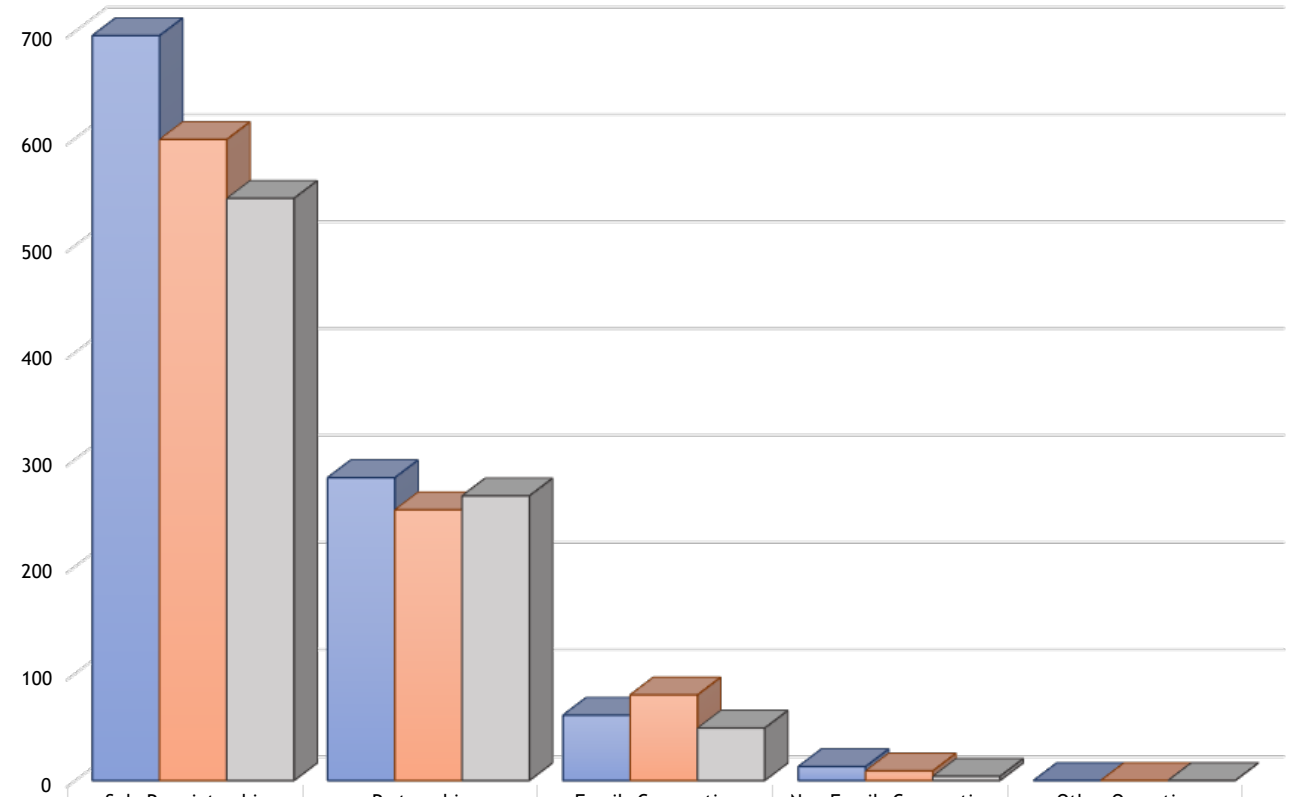


	Sole Proprietorship	Partnership	Family Corporation	Non-Family Corporation	Other Operating Arrangements
2011	883	399	68	15	1
2016	821	316	110	17	1
2021	707	357	72	8	2

Statistics Canada – Table 32-10-0243-01 – Farms Classified by Operating Arrangement, Census of Agriculture, 2011 and 2016 (Inactive)

Statistics Canada - Table 32-10-0235-01 – Farms Classified by Operating Arrangement, Census of Agriculture, 2021

FIGURE 36B – OPERATING ARRANGEMENTS - 2011, 2016 & 2021 – PETERBOROUGH



	Sole Proprietorship	Partnership	Family Corporation	Non-Family Corporation	Other Operating Arrangements
2011	696	283	61	13	0
2016	599	253	80	9	0
2021	544	266	49	4	0

Statistics Canada – Table 32-10-0243-01 – Farms Classified by Operating Arrangement, Census of Agriculture, 2011 and 2016 (Inactive)

Statistics Canada - Table 32-10-0235-01 – Farms Classified by Operating Arrangement, Census of Agriculture, 2021

5.10.5 Paid Labour

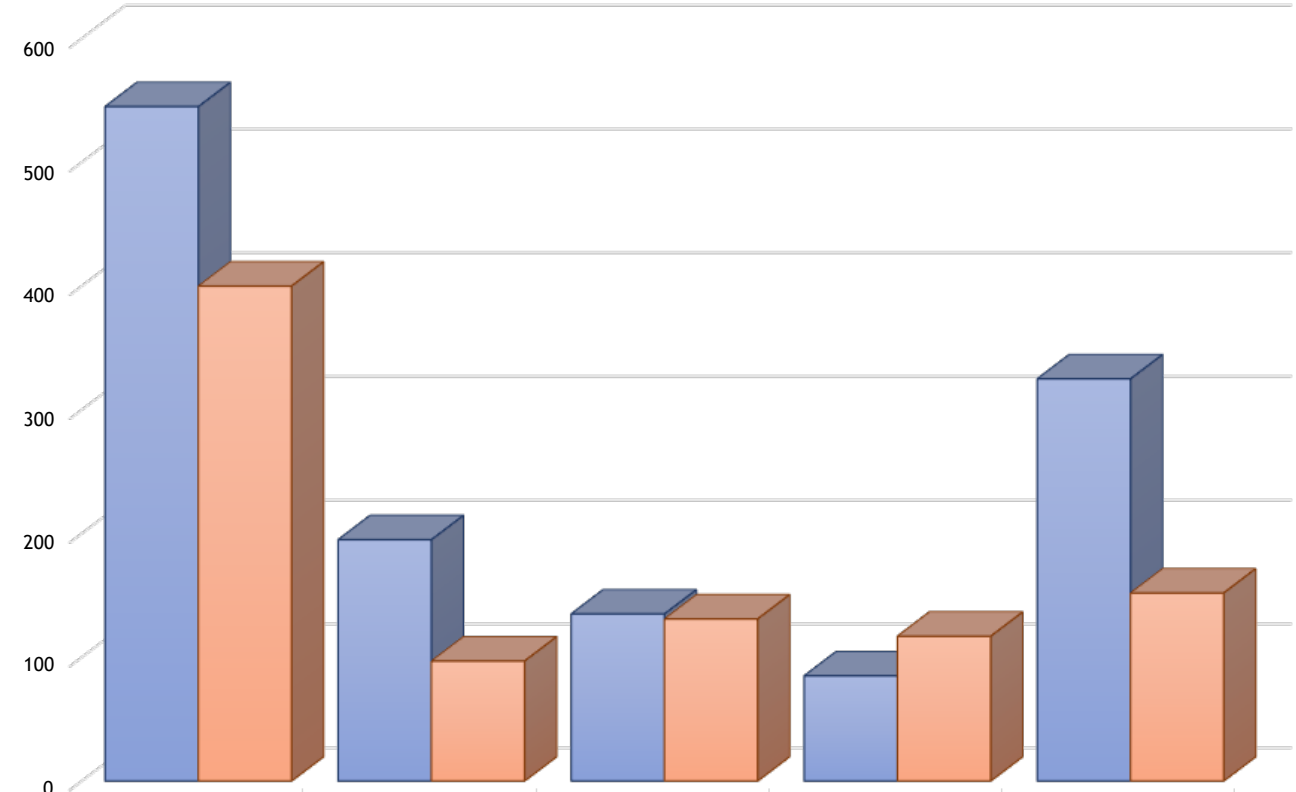
Paid labour data was only recorded in the 2016 and 2021 Agricultural Census. During this 5-year period the number of operations with full-time and part-time employees in Ontario has remained relatively consistently between 50-51% and 22-21% respectively. In the Peterborough and Kawartha Lakes study area in 2021, the number of farms with either full-time or part-time employees is significantly lower than the provincial average with 9% in Peterborough (79 of 863 operations) and 11% (131 of 1,146 operations) in Kawartha Lakes. In the individual census tracts, the highest number is 14% in Otonabee-South Monaghan.

The engagement of seasonal or temporary workers is also an area that has seen declines with the total number of seasonal migrant workers decreasing from 46,139 (2016) to 36,261 in 2021 at the provincial level. Locally, the percentage of operations employing seasonal or temporary workers has also declined in Peterborough and Kawartha Lakes, between 2016 and 2021, decreasing from 36% to 19% in Peterborough (337 to 160) and 26% to 13% (325 to 152) in Kawartha Lakes. In 2021, Selwyn was a standout census tract in that 51% of their operations engage seasonal or temporary workers. This is to be expected given the presence of berry operations in that municipality.

In Ontario, the percentage of family members employed in a farm operation has declined relative to the number of operations from 23% in 2016 to 17% in 2021. In Peterborough and Kawartha Lakes, the number of family members working in the farm unit is higher than the Provincial average with the 2021 census indicating 20% in Peterborough and 24% in Kawartha Lakes. In Peterborough County, the number is as high as 47% in Asphodel-Norwood and as low as 10% in Selwyn.

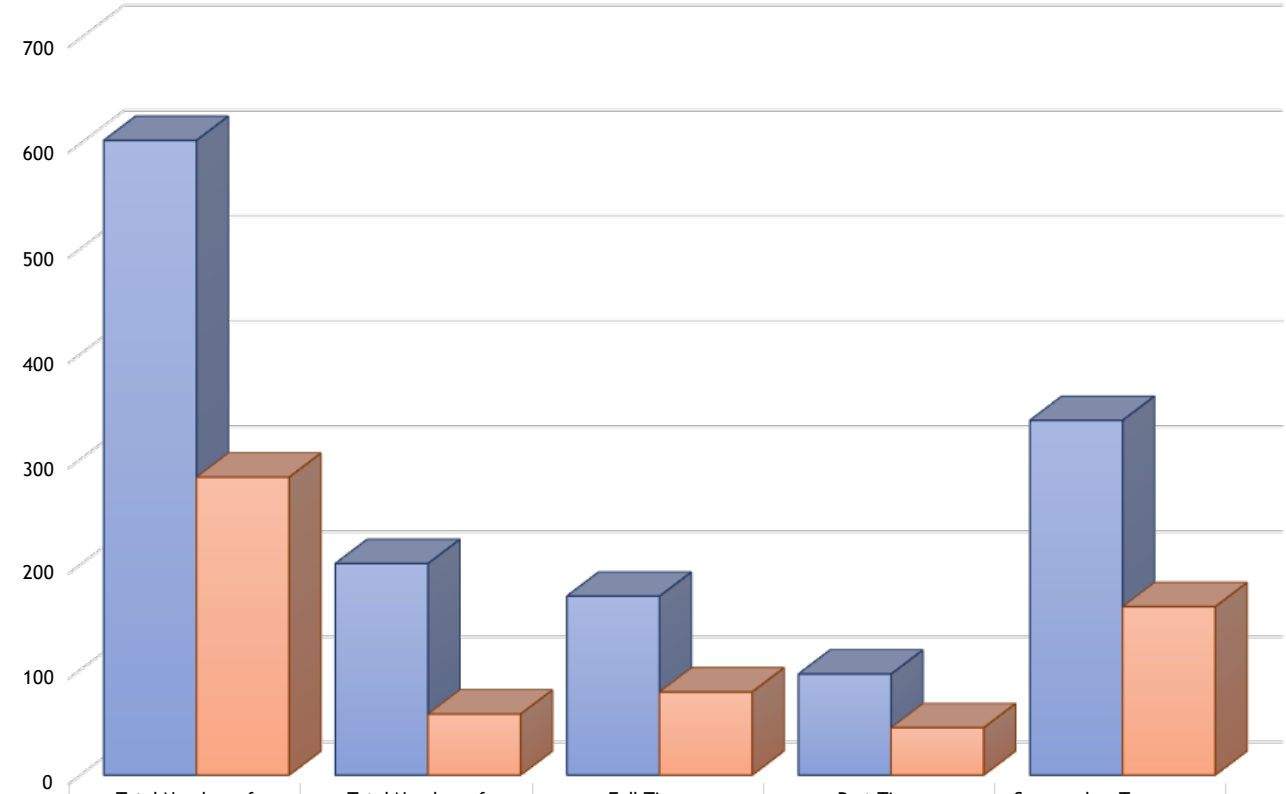
Figures 37a and 37b illustrate the paid labour trends for Kawartha Lakes and Peterborough.

FIGURE 37A – PAID LABOUR [NUMBER OF EMPLOYEES], 2016 & 2021 – KAWARTHA LAKES



	Total Number of Employees	Total Number of Employees - Family Members	Full Time	Part Time	Seasonal or Temporary
2016	545	195	135	85	325
2021	400	97	131	117	152

FIGURE 37B – PAID LABOUR [NUMBER OF EMPLOYEES], 2016 & 2021 – PETERBOROUGH



	Total Number of Employees	Total Number of Employees - Family Members	Full Time	Part Time	Seasonal or Temporary
2016	603	201	170	96	337
2021	283	58	79	45	160

Statistics Canada – Table 32-10-0439-01 – Paid Labour, Census of Agriculture, 2011 and 2016 (Inactive)

Statistics Canada - Table 32-10-0243-01 – Paid Labour, Census of Agriculture, 2021

5.10.6 Farming Practices

The following farm practices are collected as data sets by Statistics Canada. They serve to illustrate changing practices.

In Field Winter Grazing or Feeding

In-field winter grazing of livestock has remained steady in Kawartha Lakes with a decline recorded in Peterborough that may be accounted for by the loss of cattle operations. Otonabee-South Monaghan experienced a 17% increase in winter grazing between 2011 and 2016 and Trent Lakes experienced a 9% increase between 2016 and 2021.

Rotational Grazing

Rotational Grazing has continued to decline at the provincial level from 2011 to 2016 with an average decline of 16%, but in the study area there has been a slight uptake in interest in the most recent 2021 census. Specifically, Asphodel-Norwood (+10%), Trent Lakes (+9%), Selwyn (+5%) and Cavan Monaghan (+2%) have experienced a modest increase with all other areas experiencing declines of between 11% (Kawartha Lakes) and 33% Havelock-Belmont-Methuen.

Plow Down Green Crops

Interestingly, plow down crops experienced a significant increase in the 2011 to 2016 census period with a 36% increase across the province and a 47% increase in Kawartha Lakes and 20% increase in Peterborough. The only exception in that trend was Asphodel-Norwood (-36%) and Otonabee-South Monaghan (-4%).

Between 2016 to 2021 the trend shifted towards a decline with Ontario seeing a 10% decline, Kawartha Lakes, -27% and -15% in Peterborough. The only exception to this decrease was Selwyn (+18%) and Cavan Monaghan (+5%).

Planting Winter Cover Crops

Winter cover crops can help to reduce soil compaction, improve drainage, and soil structure and is particularly helpful in clay loam soils which is a more predominant soil type in the study area. The addition of plant tops and root mater helps to improve long-term soil structure release nitrogen and aid in percolation.

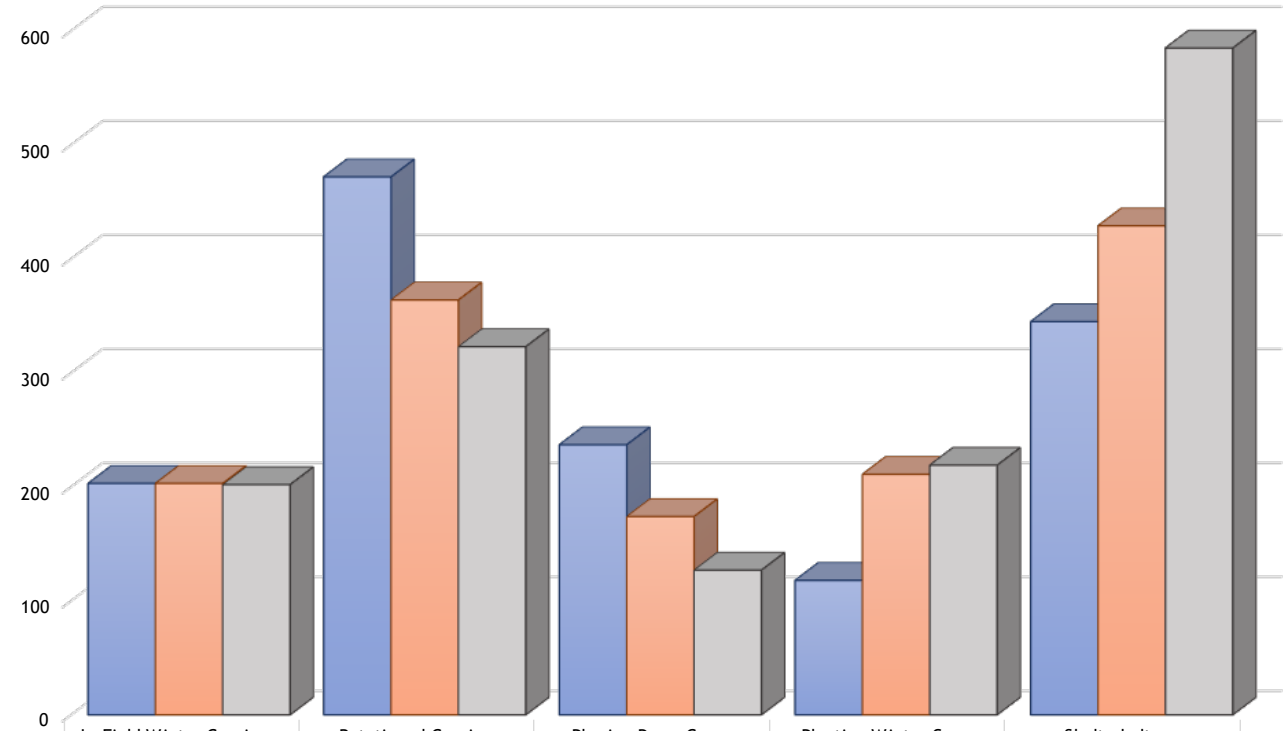
Between 2011 and 2021 this type of soil management increased by 104% at the provincial level (6,340 to 12,902 operations). In the study area, this trend was most significantly in Trent Lakes and Selwyn which increased its use by 350% (2 to 9 operations) and 200% (11 to 33 operations), while Otonabee-South Monaghan and Asphodel-Norwood have the lowest uptake, 9% (23 to 25 operations) and 7% (14 to 15 operations). There is a clear relationship in local soil types (gravel vs clay) in areas that have high engagement in this practice and areas that have lower engagement.

Shelter and Windbreaks

Windbreaks assist with soil retention and moisture retention. There has been a marked increase in using shelter and windbreak land practices in both Kawartha Lakes and Peterborough since 2011.

Figure 38a and 38b illustrated the land practices trends in Kawartha Lakes and Peterborough from 2011 through 2021.

FIGURE 38A – LAND PRACTICES AND LAND FEATURES, 2011, 2016 & 2021 – KAWARTHA LAKES

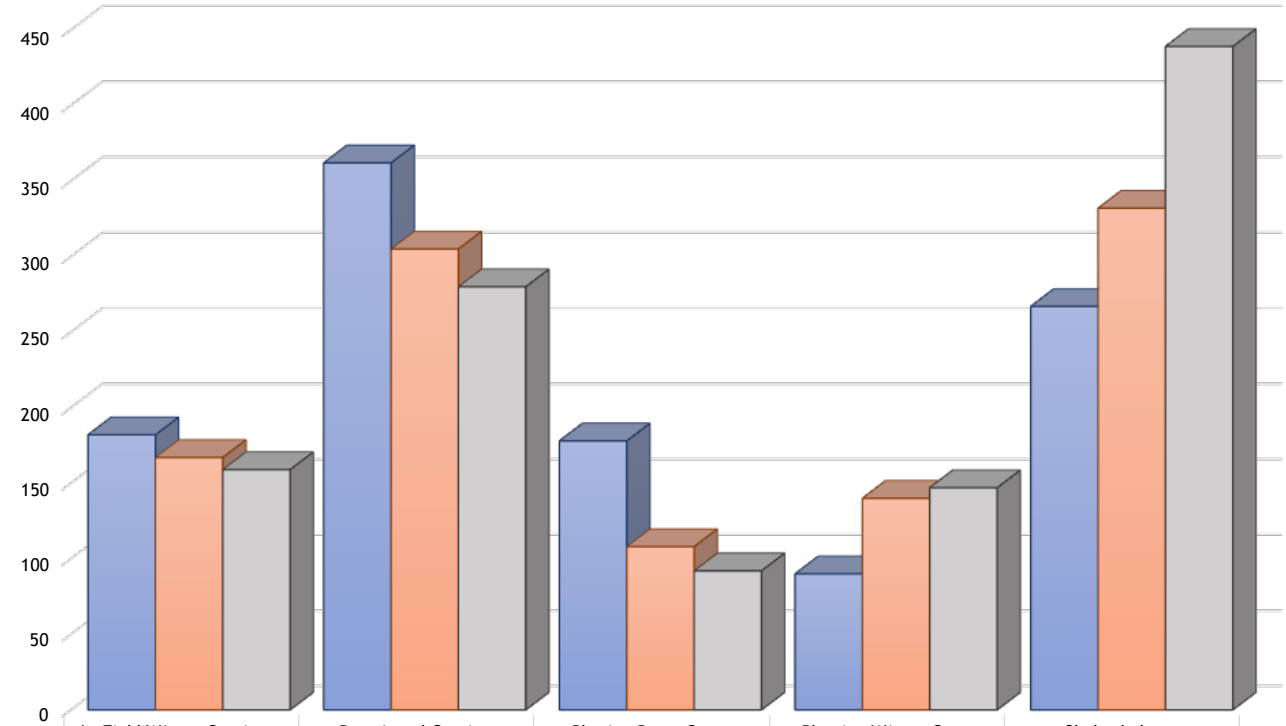


	In-Field Winter Grazing or Feeding	Rotation al Grazing	Plowing Down Green Crops	Planting Winter Cover Crops	Shelterbelts or Windbreaks (Natural or Planted)
2011	203	472	237	118	345
2016	203	364	174	211	429
2021	202	323	127	219	585

Statistics Canada - Table 32-10-0411-01 – Land Practices and Land Features, Census of Agriculture, 2016 (Inactive)

Statistics Canada – Table 32-10-0369-01 – Land Practices and Land Features, Census of Agriculture, 2021

FIGURE 38B – LAND PRACTICES AND LAND FEATURES, 2011, 2016 & 2021 – PETERBOROUGH



	In-Field Winter Grazing or Feeding	Rotation al Grazing	Plowing Down Green Crops	Planting Winter Cover Crops	Shelterbelts or Windbreaks (Natural or Planted)
2011	182	362	178	90	267
2016	167	305	108	140	332
2021	159	280	92	147	439

Statistics Canada - Table 32-10-0411-01 – Land Practices and Land Features, Census of Agriculture, 2016 (Inactive)

Statistics Canada – Table 32-10-0369-01 – Land Practices and Land Features, Census of Agriculture, 2021

5.11 Succession Planning

Succession planning is a key tool to the long-term stability of the agricultural sector. Unfortunately, the number of farming operations that have engaged in the process is marginal. In 2021, of the 48,346 farm operations in Ontario 31,530 or 65% of farm operations had no written or verbal succession plan.

In 2016, 8% of respondents in Ontario had a written succession plan, by 2021 that number had grown to 12%. The number who have a plan that includes 1 or more family members in 2016 was 8%, again growing to 12% in 2021. Lastly the number of succession plans that include one or more non-family members made up .33% in 2016 and .39% in 2021.

Succession Planning Key Trends:

- 65% of farm operations in Ontario do not have a succession plan
- 821 farms out of 1,146 farms in Kawartha Lakes have no succession plan
- 614 farms our of 863 farms in Peterborough have no succession plan
- Verbal succession plans are more prevalent than written succession plans

In the 2021 census, verbal succession was added as a question as well as the negative question of whether there was no succession plan at all. 22% of respondents to the 2021 survey confirmed that there was a verbal succession plan. The addition of this question filled an information gap from the 2016 census to clarify if succession plans were informally in place.

Amongst the Peterborough County census tracts, Trent Lakes has the least number of farm operators with a succession plan (77%).

Figure 39a provides a snapshot of the 2021 status of succession plans and **Figure 39b** compares the 2021 snapshot in Kawartha Lakes and Peterborough.

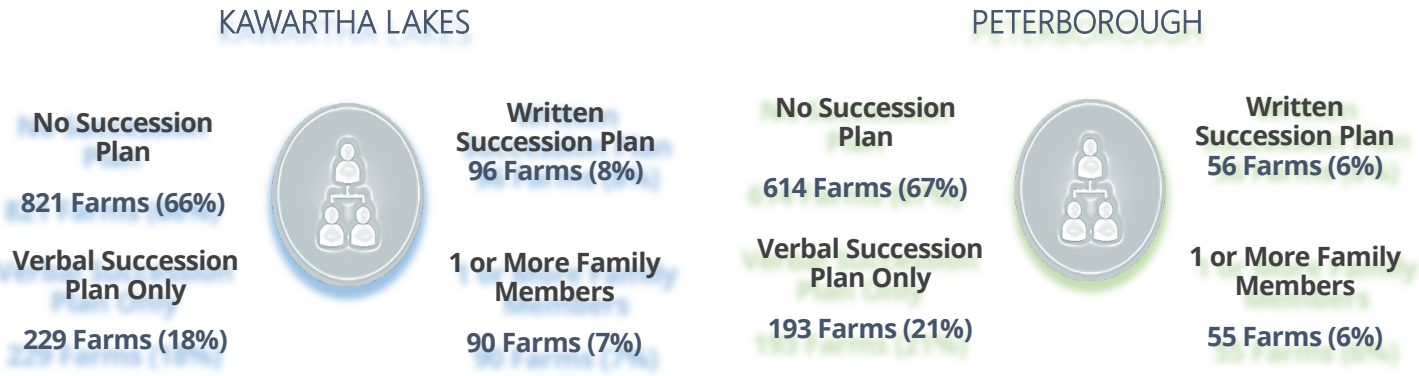


FIGURE 39A – SUCCESSION PLAN TABLE FOR THE AGRICULTURAL OPERATION, 2021

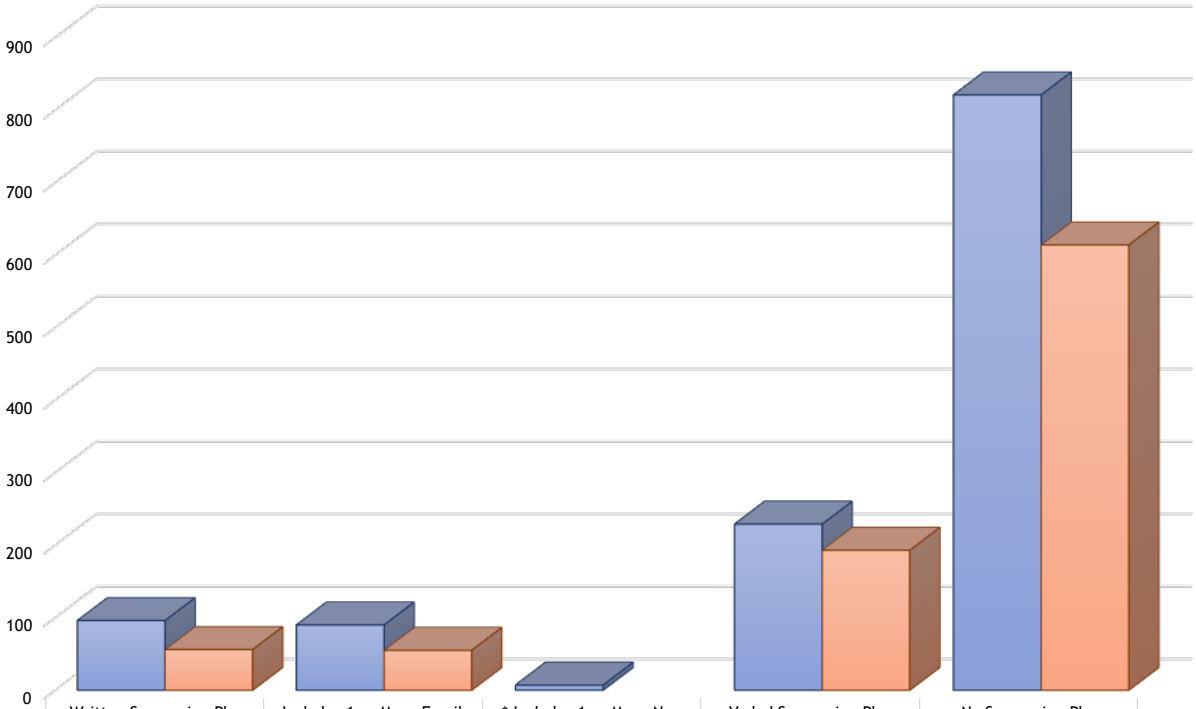
	2021					
	Total Number of Farms	Written Succession Plan	Includes 1 or More Family Members	Includes 1 or More Non-Family Members	Verbal Succession Plan Only	No Succession Plan
Ontario	48,346	5,987	5,858	190	10,829	31,530
Central Ontario	6,330	585	563	29	1,396	4,349
Kawartha Lakes	**1,146**	**96**	**90**	**7**	**229**	**821**
Peterborough	**863**	**56**	**55**	**F**	**193**	**614**
Asphodel-Norwood	104	5	5	0	28	71
Otonabee-South Monaghan	196	14	13	1	40	142
Cavan Monaghan	153	11	11	0	38	104
Selwyn	183	8	8	0	44	131
Douro-Dummer	141	9	9	0	26	106
Havelock-Belmont-Methuen	39	5	5	0	10	24
Trent Lakes	47	F	4	0	7	36

F = too unreliable to be published

Statistics Canada – Table 32-10-0244-01 – Succession Plan for the Agricultural Operation, Census of Agriculture, 2021

NOTE: 2016 & 2021 Data is No Longer Comparable – as Census Categories have changed.

FIGURE 39B – SUCCESSION PLAN FOR THE AGRICULTURAL OPERATION, 2021



	Written Succession Plan	Includes 1 or More Family Members	* Includes 1 or More Non-Family Members	Verbal Succession Plan Only	No Succession Plan
Kawartha Lakes	96	90	7	229	821
Peterborough	56	55		193	614

NOTE – * 2021 Data too unreliable to be published.

Statistics Canada – Table 32-10-0244-01 – Succession Plan for the Agricultural Operation, Census of Agriculture, 2021

NOTE: 2016 & 2021 Data is No Longer Comparable – as Census Categories have changed.

5.12 Technologies

At its core, farming is built around technological innovation. Today's agricultural community is quickly moving beyond mechanical technology into an array of digital and robotic technologies. Before 2016, technology was not a category in the census. Its evolution can be confirmed by the changing range of questions that are now asked as part of the agricultural census.

Between the 2016 and 2021 censuses, only Automated Guidance Steering System (Auto-Steer), Geographic Information Systems (GIS), Robotic Milking System are shared data collection questions. While greenhouse automation was included in the 2016 census, the wording changed to Robotic Greenhouse Equipment in 2021, which may be considered differently. In the 2021 census variable rate seed/fertilizer application, drones, soil sample test and slow-release fertilizer were new questions to survey.

Comparing the relatable questions provincially between the 2016 and 2021 census shows a significant uptake of robotic milking equipment with growth of 337 in 2016 to 715 in 2021 (or a 112% increase) of farms employing this technology. Similarly in Ontario, auto-steer systems increased from 6,851 in 2016 to 11,074 by 2021 for a 62% increase, and GIS mapping increased from 5,436 in 2016 to 8,567 in 2021, a 58% increase. An emphasis on agronomy and soil health at the provincial level is evident in the number of respondents who identified soil sample tests (36%), slow-release fertilizers (30%) and variable rate input applications (18%) in the 2021 census.

Technologies Key Trends:

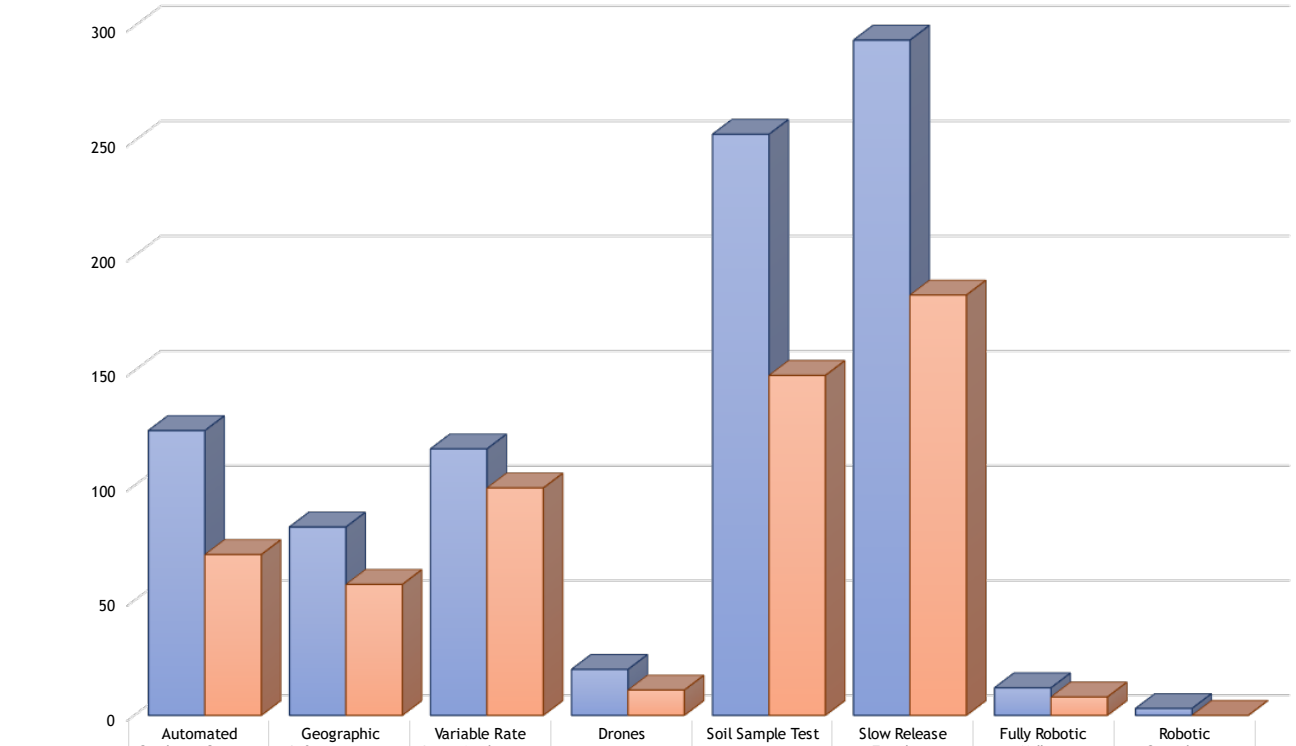
- Adoption of new digital and robotic technology is quickly evolving in Ontario
- Robotic milking equipment has seen a 112% increase in adoption from 2016 to 2021 provincially
- Adoptions of GIS mapping system has increased by 58% from 2016 to 2021 provincially
- In Kawartha Lakes, automated guidance steering systems has increased 4%, GIS Mapping has increased 3% and 8 more farms are using robotic milking between 2016 and 2021
- In Peterborough, automated guidance steering systems has increased 4%, GIS Mapping has increased 4% and 6 more farms are using robotic milking between 2016 and 2021

In the study area Automated Guidance Steering Systems and GIS Mapping increased by 4% usage in both Kawartha Lakes and Peterborough, and 8 more farms use robotic milking in Kawartha Lakes and 6 more farms use it in Peterborough.

Drones are a new technology in agriculture that has no comparable in earlier censuses. As of the 2021 census, 14% of farm operations in Ontario, 2% in Kawartha Lakes and 1% in Peterborough were utilizing drones in some way.

Figure 40 illustrates the technologies used in Kawartha Lakes and Peterborough in 2021.

FIGURE 40 - TECHNOLOGIES USED ON THE OPERATION, 2021



	Automated Guidance Steering Systems (Auto-Steer)	Geographic Information on System (GIS) Mapping	Variable Rate Input Application	Drones	Soil Sample Test	Slow Release Fertilizer	Fully Robotic Milkers	Robotic Greenhouse Equipment
Kawartha Lakes	124	82	116	20	253	294	12	3
Peterborough	70	57	99	11	148	183	8	0

Statistics Canada – Table 32-10-0379-01 – Technologies Used on the Operation, Census of Agriculture, 2021

NOTE: 2016 & 2021 Data is No Longer Comparable – as Census Categories have changed.

5.13 Renewable Energy Production

The Renewable Energy Technology category is like the technology category in that it is experiencing rapid changes. Census questions have only been asked and information collected since 2016. In the Renewable Energy Category only three questions are consistent between 2016 and 2021; 1) solar panels; 2) wind turbines; and 3) anaerobic biodigester (biogas/methane).

Renewable Energy Production Key Trends:

- Solar, wind and anaerobic digesters are the three current renewable energy leaders
- Wind power has emerged as the renewable energy leader in the Peterborough and Kawartha Lakes study area
- On-farm use of grid sales of renewable energy in the study area is almost 50%

Adoption of the three technologies that were included in the 2016 census shows growth at the provincial level, but only solar energy has been adopted in the Peterborough and Kawartha Lakes study area. Specifically, at the provincial level, solar energy has increased by 20%, wind energy generation by 15% and anaerobic biodigesters by 10%. In the study area, the adoption of these technologies is primarily limited to solar although Cavan Monaghan reported two wind energy production sites.

Solar energy adoption across the study area has been significant and widespread with adoption rates generally above the provincial average. Trent Lakes has increased from 3 to 10 sites (+233%) and Cavan-Monaghan from 9 to 18 sites (+100%). Except for Asphodel-Norwood which has increased from 13 to 15 sites (15%) the average increase for the remainder of the study area has been 35%.

In Kawartha Lakes, 190 farms are producing renewable energy, 108 farms are selling it, 5 farms have wind power, 128 farms have solar, 51 have bioenergy, 48 have biomass combustion energy, 3 have biomethane, 2 have another type of bioenergy (other biogas) and 32 farms have geothermal.

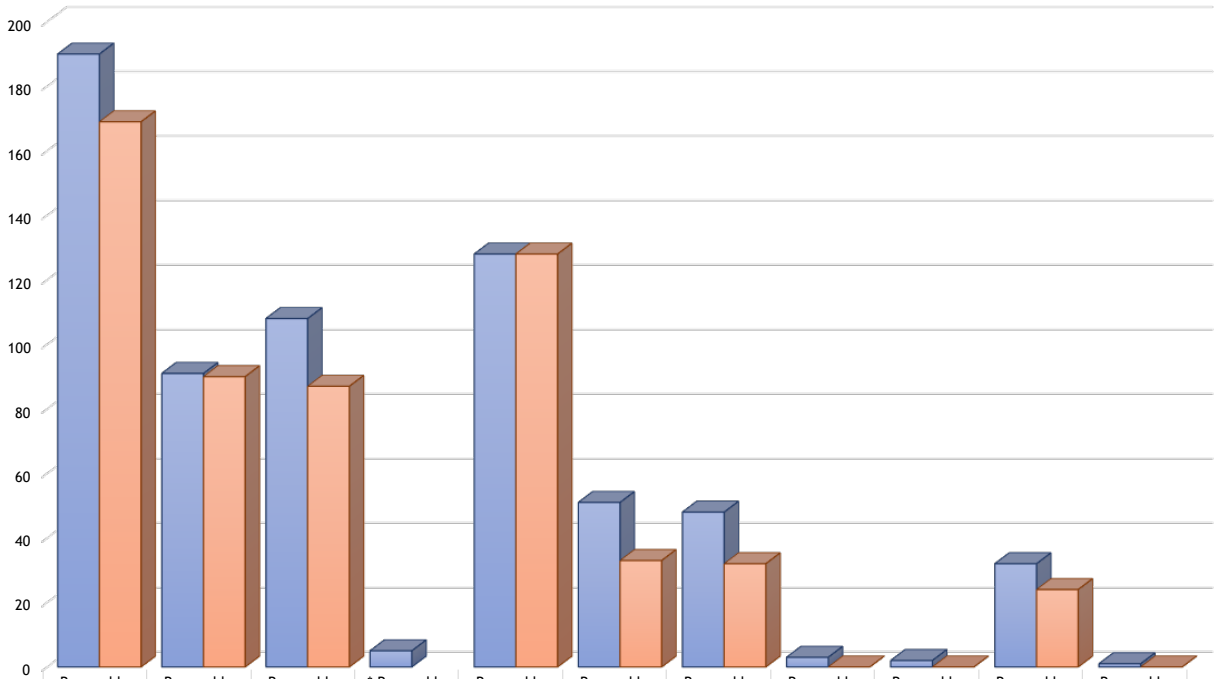
In Peterborough, 169 farms are producing renewable energy, 87 farms are selling it, 0 farms have wind power, 128 farms have solar, 33 have bioenergy, 32 have biomass combustion energy, 0 have biomethane,2 have another type of bioenergy (other biogas) and 24 farms have geothermal.

New and innovative energy production systems are emerging across the study area. These include biomas combustion, bioenergy, and geothermal energy production. These new production centres are being combined with other forms of sustainable energy production

for both on-farm use and market sale. As of 2021 at the provincial level, 65% of on-farm generated energy is being sold to the grid with 45% used on-site. In the study area, the ratio of on-farm sales to markets sales is closer to 50% with Selwyn closer to the provincial average.

Figure 41 illustrates the renewable energy technologies in use for the study area in 2021.

FIGURE 41 - RENEWABLE ENERGY PRODUCTION, 2021



	Renewable Energy, Production Total	Renewable Energy Production, For Use on the Operation	Renewable Energy, Production For Sale	* Renewable Energy Type - Wind	Renewable Engery Type - Solar	Renewable Energy Type Bioenergy	Renewable Energy Type - Bioenergy, Biomass Combustion	Renewable Energy Type - Bioenergy, Biomethane	Renewable Energy Type - Bioenergy, Other Biogas	Renewable Energy Type - Geothermal	Renewable Energy Type - Other
Kawartha Lakes	190	91	108	5	128	51	48	3	2	32	1
Peterborough	169	90	87		128	33	32	0	0	24	0

NOTE - * 2021 Data too unreliable to be published.

Statistics Canada - Table 32-10-0380-01 - Renewable Energy Production, Census of Agriculture, 2021

NOTE: 2016 & 2021 Data is No Longer Comparable - as Census Categories have changed.

5.14 Agri-food Sector

Ontario's agri-food sector is the largest and most diverse in Canada. It is an important economic driver for the province and Canada, and a significant jurisdiction internationally. Ontario accounts for $14.5 billion, or 41.9% of Canada's contribution to the national food and beverage GDP, and represented the third largest contributor of farm cash receipts in the country in 2021.

- Ontario's agri-food sector comprises primary agriculture, food and beverage processing and manufacturing, wholesale, and retail and food services.
- More than 750,000 Ontarians, or 1-in-10 of the province's labour force, are employed throughout the agri-food supply chain.
- Agri-food generated $52 billion in manufacturing sales in 2021.
- Ontario's food and beverage manufacturing sector is one of the largest in North America, comprised of 4,675 businesses.
- $19.6 billion in agri-food exports were reported in 2021.
- 48,346 Ontario farms produce over 200 commodities.
- Agri-food contributes $47 billion to Ontario GDP (6.4% of the province's total GDP).[32]

Agri Food Sector Key Trends:

- More than 750,000 Ontarians, or 1-in-10 of the province's labour force, are employed throughout the agri-food supply chain
- In Kawartha Lakes, agri-food businesses grew from 1,056 to 1,062 between 2016 and 2021. The number of businesses with employees grew by 20. The increases are seen in crop production operations (229 operations in 2016 to 324 in 2021). All other business types decreased over the same period
- In Peterborough, agri-food businesses declined by 97. Crop production businesses increased by 31 and Food, Beverage & Tobacco Manufacturing rose by 5 businesses. All other business types decreased between 2016 and 2021

The agri-food network incudes "infrastructure services and assets". The complete agri-food cluster is comprised of:

- Primary agriculture
- Farm input and service providers

[32] 2021 statistics — OMAFRA calculations and Statistics Canada.

- Food beverage and tobacco processing
- Food retail / wholesale; and
- Food service.

Provincial policy recognizes that these components of the agri-food sector are not easily mapped in a municipal context due to the shifting nature of the sector. However, provincial policy requires that the agri-food components of the system be addressed.

Employment numbers can assist in understanding the extent of the agri-food sector. Employment numbers for the specific areas of agri-food sector in the study area in 2016 and 2021 are summarized below in **Figures 42a and 42b.**

In Kawartha Lakes, agri-food businesses grew from 1,056 to 1,062 between 2016 and 2021. The number of businesses with employees grew by 20. The increases are seen in crop production operations (229 operations in 2016 to 324 in 2021). All other business types decreased over the same period.

In Peterborough, agri-food businesses declined by 97. Crop production businesses increased by 31 and Food, Beverage & Tobacco Manufacturing rose by 5 businesses. All other business types decreased between 2016 and 2021.

FIGURE 42A – BUSINESS LOCATION COUNTS BY CD/CSD, NAICS & NUMBER OF EMPLOYEES – 2016

	2016											
	Ontario			Central Ontario			Kawartha Lakes			Peterborough		
	Net	Without Employees	With Employees	Net	Without Employees	With Employees	Net	Without Employees	With Employees	Net	Without Employees	With Employees
Total Agri-Food	**106,304**	**56,791**	**49,513**	**32,198**	**13,950**	**18,248**	**1,056**	**806**	**250**	**1,153**	**640**	**513**
Total Primary Agriculture (111-112)	**40,580**	**33,349**	**7,231**	**4,588**	**3,794**	**794**	**715**	**662**	**53**	**495**	**433**	**62**
Crop Production (111)	21,168	17,358	3,810	1,967	1,548	419	229	204	25	143	121	22
Animal Production & Aquaculture (112)	19,412	15,991	3,421	2,621	2,246	375	486	458	28	352	312	40
Food, Beverage & Tobacco Manufacturing (311-312)	**4,079**	**1,665**	**2,414**	**1,769**	**731**	**1,038**	**15**	**7**	**8**	**26**	**6**	**20**
Food Manufacturing (311)	3,365	1,348	2,017	1,527	619	908	13	6	7	22	5	17
Beverage & Tobacco Product Manufacturing (312)	714	317	397	242	112	130	2	1	1	4	1	3
Leather & Allied Product Manufacturing (316)	**199**	**125**	**74**	**103**	**63**	**40**	**1**	**1**	**0**	**2**	**2**	**0**
Farm Product Merchant Wholesalers (411)	**858**	**518**	**340**	**227**	**161**	**66**	**9**	**5**	**4**	**11**	**10**	**1**
Food, Beverage & Tobacco Merchant Wholesalers (413)	**4,789**	**2,237**	**2,552**	**2,449**	**1,146**	**1,303**	**16**	**8**	**8**	**36**	**12**	**24**
Agricultural Supplies Merchant Wholesalers (4183)	541	204	337	101	44	57	7	2	5	6	2	4
Food & Beverage Stores (445)	**15,011**	**5,916**	**9,095**	**6,102**	**2,710**	**3,392**	**90**	**40**	**50**	**172**	**61**	**111**
Food Services & Drinking Places (722)	**37,368**	**10,443**	**26,925**	**16,356**	**4,905**	**11,451**	**167**	**47**	**120**	**374**	**85**	**289**

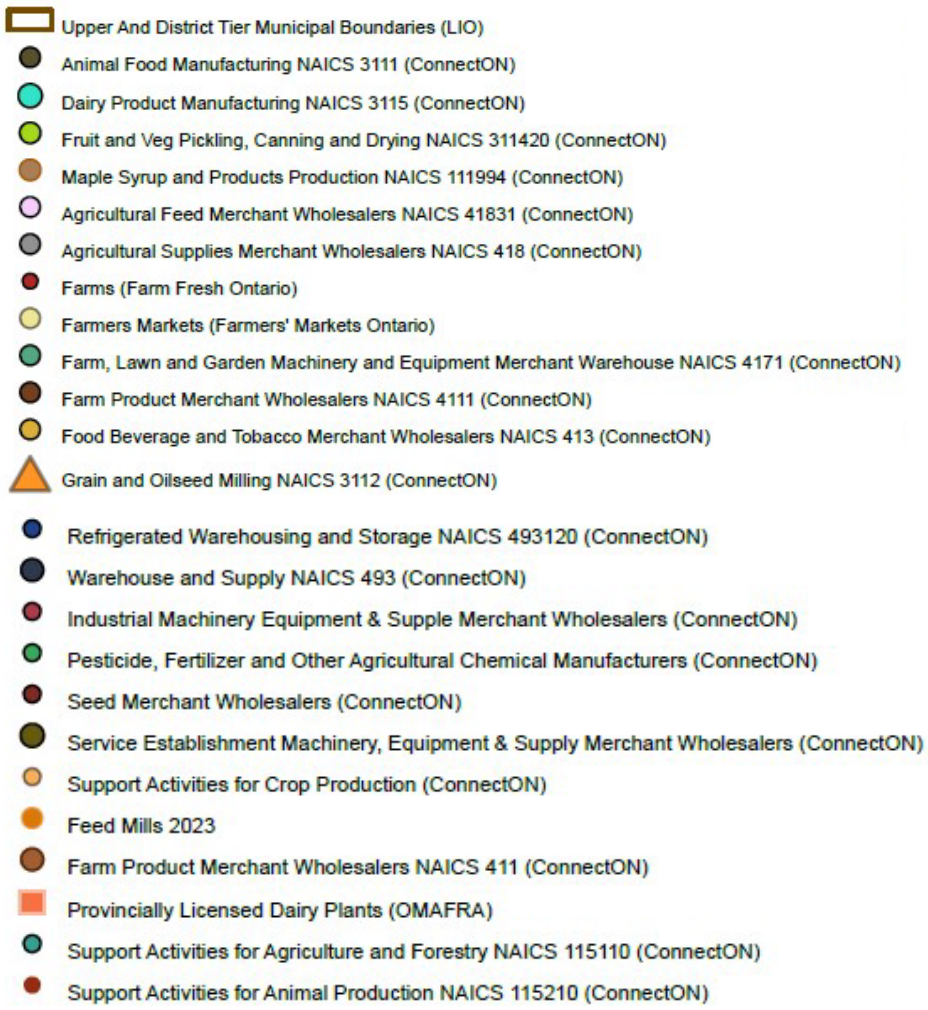
FIGURE 42B – BUSINESS LOCATION COUNTS BY CD/CSD, NAICS & NUMBER OF EMPLOYEES - 2021

	2021											
	Ontario			Central Ontario			Kawartha Lakes			Peterborough		
	Net	Without Employees	With Employees	Net	Without Employees	With Employees	Net	Without Employees	With Employees	Net	Without Employees	With Employees
Total Agri-Food	**108,300**	**58,957**	**49,343**	**32,059**	**14,082**	**17,977**	**1,062**	**792**	**270**	**1,056**	**574**	**482**
Total Primary Agriculture (111-112)	**42,560**	**35,240**	**7,320**	**4,627**	**3,769**	**858**	**737**	**660**	**77**	**464**	**396**	**68**
Crop Production (111)	24,135	20,181	3,954	2,407	1,918	489	324	288	36	174	142	32
Animal Production & Aquaculture (112)	18,425	15,059	3,366	2,220	1,851	369	413	372	41	290	254	36
Food, Beverage & Tobacco Manufacturing (311-312)	**4,675**	**1,914**	**2,761**	**2,012**	**857**	**1,155**	**20**	**9**	**11**	**31**	**8**	**23**
Food Manufacturing (311)	3,669	1,492	2,177	1,661	700	961	14	7	7	25	8	17
Beverage & Tobacco Product Manufacturing (312)	1,006	422	584	351	157	194	6	2	4	6	0	6
Leather & Allied Product Manufacturing (316)	**170**	**111**	**59**	**83**	**49**	**34**	**0**	**0**	**0**	**4**	**4**	**0**
Farm Product Merchant Wholesalers (411)	**856**	**508**	**348**	**220**	**155**	**65**	**7**	**4**	**3**	**6**	**5**	**1**
Food, Beverage & Tobacco Merchant Wholesalers (413)	**4,769**	**2,324**	**2,445**	**2,519**	**1,219**	**1,300**	**8**	**3**	**5**	**33**	**14**	**19**
Agricultural Supplies Merchant Wholesalers (4183)	491	188	303	87	33	54	8	2	6	8	3	5
Food & Beverage Stores (445)	**14,084**	**4,804**	**9,280**	**5,633**	**2,230**	**3,403**	**88**	**34**	**54**	**150**	**34**	**116**
Food Services & Drinking Places (722)	**37,669**	**11,414**	**26,255**	**16,411**	**5,409**	**11,002**	**148**	**40**	**108**	**330**	**83**	**247**

https://data.ontario.ca/dataset/0d8ec71d-373c-47bf-8bfe-254155797a26/resource/4642180b-9949-43f1-8ad4-fd50e969cfb1/download/peterborough.xlsx

5.14.1 Agri-Food Business Inventory

To understand the extent of the agri-food sector, the province, working with the Golden Horseshoe Food and Farming Alliance, municipalities and farm-based organizations has been building an agri-food asset inventory and mapping related businesses. **Figure 43** below is an excerpt from this mapping showing the agri-food operations in Kawartha Lakes and the County of Peterborough in 2021 as per the legend below.



Kawartha Choice Farm Fresh supported by the Peterborough & the Kawarthas Economic Development (PKED) and Kawartha Lakes Economic Development have created an interactive map and directory to find local food and drink. **Figure 44** illustrates the proliferation of agricultural businesses being promoted for economic development purposes in the study area and includes farms, food services, retail operations, restaurants, farmers markets and agri-experiences. These businesses form part of the agri-food sector and will support and strengthen the study area economy.

FIGURE 43: AGRI-FOOD OPERATIONS IN KAWARTHA LAKES AND THE COUNTY OF PETERBOROUGH

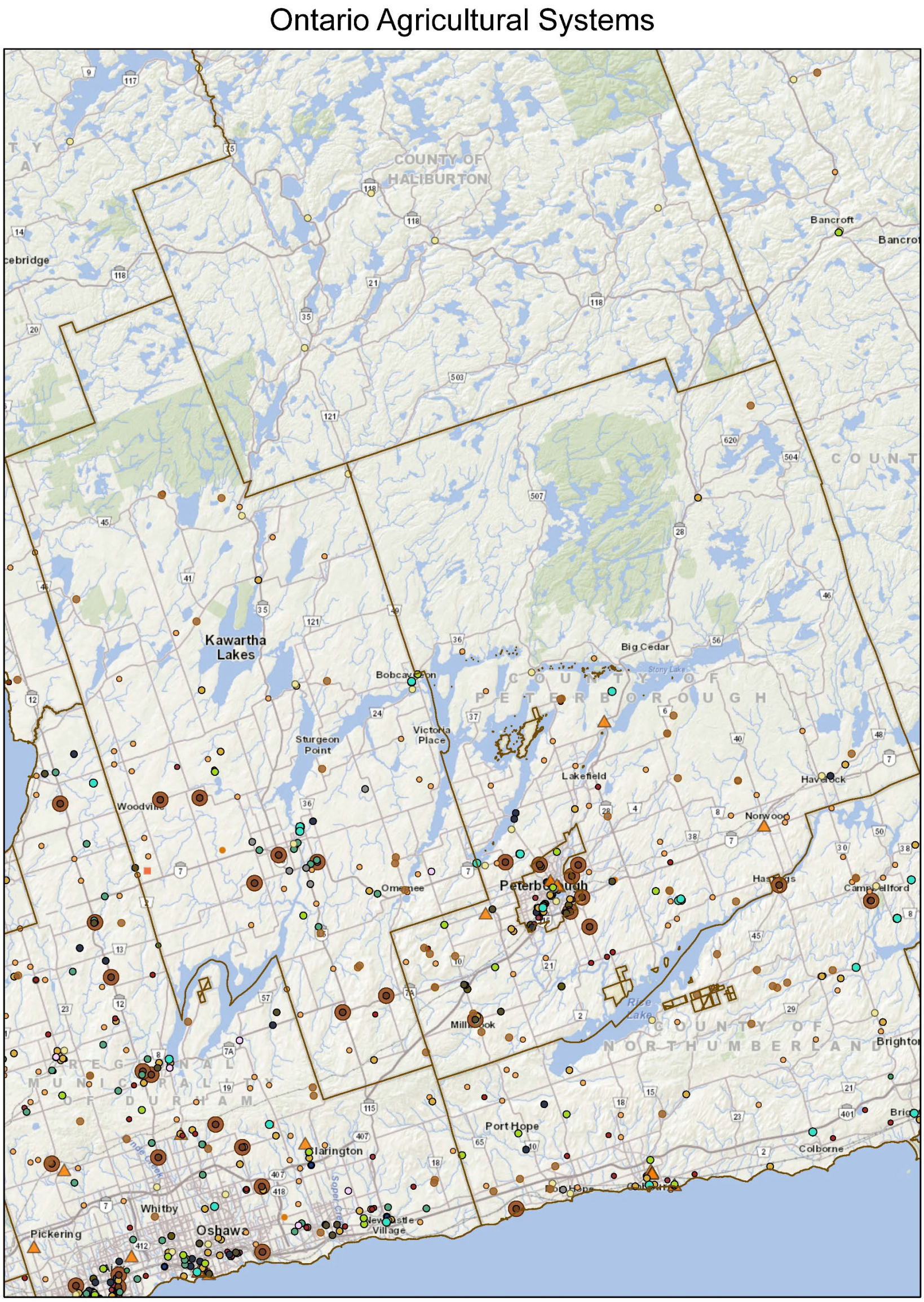
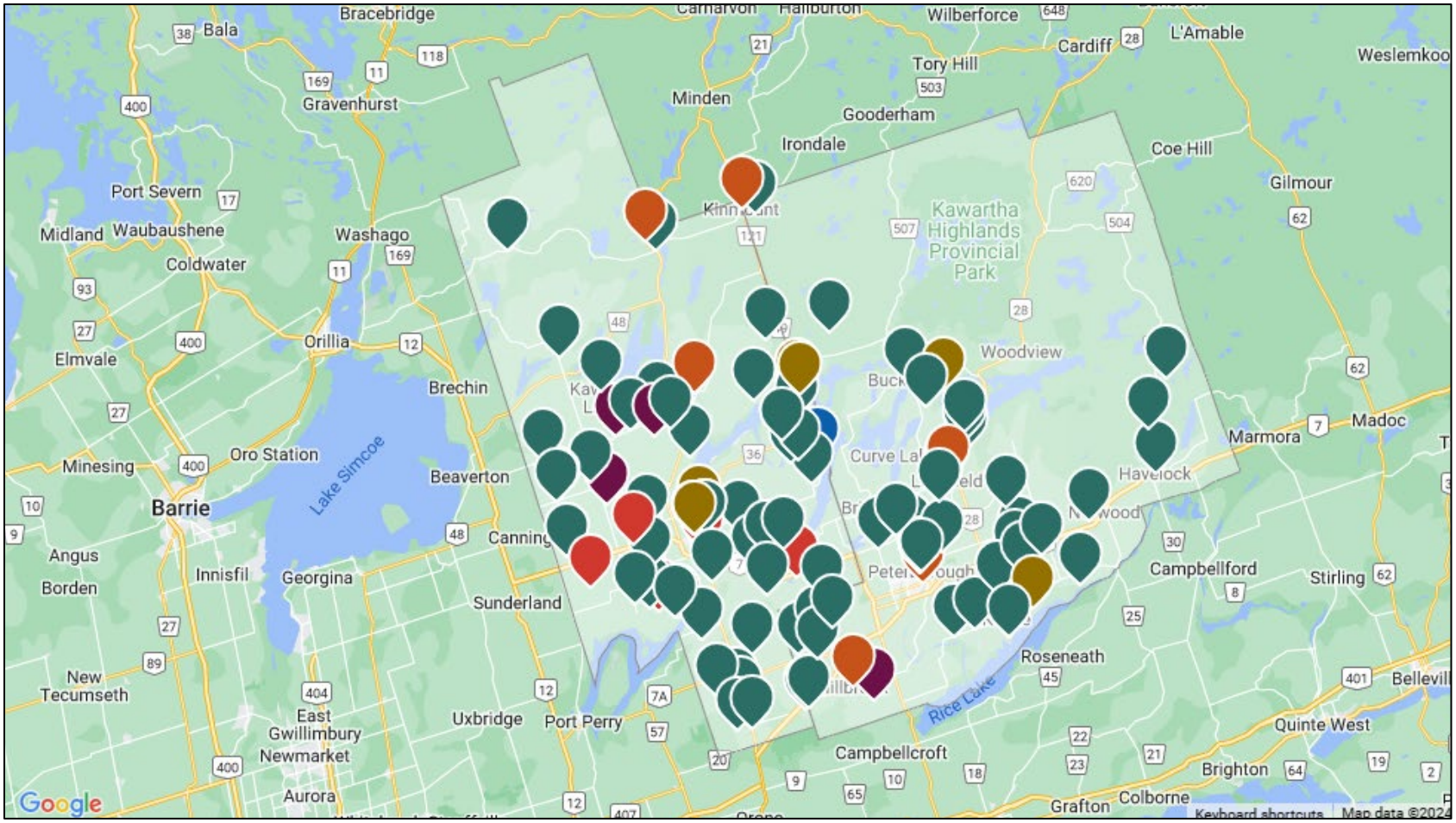


FIGURE 44: KAWARTHA LAKES AND PETERBOROUGH LOCAL FOOD MAP



LEGEND: Orange=Farmers' Markets / Green=Farm / Yellow-green=Food Services / Purple=Retail / Red=Agri-experience / Blue=Restaurant
note: some properties fit in more than one category.

Source: Map - Kawartha Choice FarmFresh

6 Conclusions and Recommendations

In conducting this study, observations have been made about the agriculture sector in Peterborough and Kawartha Lakes. Based on our previous work in this area and in other areas of southern Ontario, these observations are organized as strengths, concerns, opportunities, and thoughts about ongoing support for the sector. **Figure 45** provides a snapshot of the key characteristics of the agricultural sector in the study area.

6.1 Strengths

Agriculture in Peterborough and Kawartha Lakes continues to be a major component of the regional economy and the dominant land use. It is a strong, well-established industry with deep historic roots and a varied production profile. Agriculture is well supported by municipal policy and through programs focused on the agri-food sector. Both jurisdictions have economic development functions to support and enhance the operations and profile of agriculture. Historically, Kawartha Lakes has had a dedicated rural economic function that excels at supporting agriculture and related activities.

In the 2006 economic assessment of the impact of agriculture and agriculturally related businesses conducted by Planscape, it was determined that the economic output of the primary agricultural sector in the study area had a significant impact on the regional economy. Given the growth of economic returns generated by the sector, the number of agricultural-related businesses in the area and the strong link to the tourism and other economic sectors it is expected that this impact continues and may have increased.

The profile of agriculture in the study area is diverse, providing flexibility to respond to evolving opportunities. The geography of the study area, particularly in Peterborough, has limited the trend of farm consolidation to ever larger farming operations, which can reduce the rural population and negatively impact rural communities. Maintaining smaller farm sizes focused on a diverse range of commodities supports local services and retains community.

Peterborough and the City of Kawartha Lakes are areas with a strong agricultural tradition. This strength should not be taken for granted. There are many pressures impacting the agricultural industry today as it struggles to cope with international competition, government regulation and various crises. Management of the resource, coupled with progressive economic development policies, will be critical to allow this resource to adapt and flourish.

6.2 Concerns

The decline in the agricultural land base and number of operations reported in the 2021 agricultural census is concerning. While it may be exaggerated due to the change made to the definition of a farm or agricultural operation for the 2021 agricultural census, there is still a significant ongoing decline in the amount of land used for agriculture. To provide further insight into this issue, data from the Municipal Property Assessment Corporation (MPAC) was reviewed. Although still reporting a decline in area, the MPAC data reports a larger area of farmland in 2021 than Statistics Canada.

The area of land reported by Statistics Canada is land that is farmed, not land that is designated agricultural and protected under planning policy. Comparing the area farmed to the area designated for protection in the local planning documents would provide additional insight into the future of the agricultural land base. Often land designated for future development is farmed until that development occurs. This can distort conclusions about the health of the sector.

Addressing the ongoing decline in the agricultural land area must be a major focus in sustaining the sector. Good agricultural land is a limited non-renewable resource that must be protected. Canada may be a huge country but in 2016, Statistics Canada reported that only 7% of its land mass was farmland, much less is prime agricultural land. Much of the prime land that can produce a wide range of commodities is in southern Ontario. The steady, ongoing decline in farmland is depleting this resource and reducing our ability to produce food.

There are significant differences in the requirements of farms related to factors including the type of crop produced and the size of the operation. Despite these differences, the planning controls imposed on agricultural land often operate on a “one size fits all” basis, based on the historic farm unit of one hundred acres with a house and a barn. Given the current trends to farm consolidations, advancing technology that allows smaller operations to thrive, different infrastructure requirements and the differences between those who farm full time and produce a significant amount of product and those who farm on a part time or recreational basis this uniformity can create issues for farmers.

As in other parts of Ontario, the age profile of operators is rising in the study area with fewer younger operators moving in. The price of land, the cost of operating and uncertainty about revenue are deterrents to new operators. While there are factors including technology, which allow fewer farmers to run larger operations, this aging profile is a

concern. In additional to fewer intergenerational transfers, younger people, not involved in agriculture, are often unaware of the opportunities the sector can offer. Circumstances need to be created which allow young people and other groups including recent immigrants, to be aware of the farming opportunities and enter the sector.

While climate change offers opportunities, it also introduces additional challenges. Issues related to increasing numbers of invasive species, changing weather patterns and extreme weather events require constant adjustments.

The study area is part of the Greater Golden Horseshoe and access to it has been vastly improved by upgrades in the provincial transportation system. This improved access, coupled with the cost and scarcity of housing in Toronto and its surrounding urban areas is driving up land prices and putting additional pressure for non-farm development in the study area. Changes under the current provincial government are proposed to many of the provincial policies designed to protect the agricultural land base and support the sector. Over the past decade, changes to provincial policy were designed to bring certainty to the sector. The recent actions of the current provincial government to reverse these controls have increased uncertainty for both farmers and municipal governments. Uncertainty about provincial direction makes it difficult to do business and is putting pressure on the land base.

Livestock related operations dominate the study area. To be successful, livestock operators need protection from non-farm development and general understanding of the resources and regulations these types of operations require to operate and expand. Often, livestock operations can successfully operate on rural land, they do not require the soil capability of prime land for grazing. However, controls to protect the integrity of farming areas are less stringent on rural lands. With minimum distance separation requirements, and the conflict that can arise between livestock operators and non-farm residents, it is essential to provide separation. With the relatively small average farm size that characterizes much of the study area, this issue needs to be addressed on an on-going basis. If the proposed changes to provincial policy proceed, it may make it more difficult to maintain agricultural areas and separation of uses. This will have a negative impact on livestock operations.

Edge management at the interface between settlement areas and rural areas needs to be addressed to protect the integrity of the rural and agricultural areas. Buffers between urban and rural land uses of sufficient size to be effective, are necessary to protect agricultural lands and create a permanent separation between agricultural and urban uses.

In Kawartha Lakes, the amalgamation of the area into one census division has impacted the ability to understand trends in different parts of the City. Certainly, the nature of the land in the southern part of the City is better for crop producing agriculture. However, it is also the area closest to the Toronto centered urban area and therefore subject to pressure for non-farm development. By not having access to a better geographical breakdown of statistics related to the different areas, it is difficult to conduct a detailed analysis of area specific impacts.

As noted previously, suppression of data in Trent Lakes and Havelock-Belmont-Methuen creates similar problems and results in an under reporting of activity in those municipalities.

The increasing age profile of farmers and the lack of young farmers entering the sector, combined with a lack of succession planning, offers no certainty that existing farmers are formally planning to pass their operations to others.

Other conclusions reached as result of the analysis of the statistics confirm that while agriculture remains a dominant sector in the study area, growth in the sector has been moderate. Although revenues have increased, so have expenses. There may be mitigating factors that explain the decline in the number of farms, in the number of operators, the aging profile and the smaller land base but regardless, these are concerning trends.

6.3 Opportunities

The study area has an established history of agriculture with local understanding and support. There is a strong historical and cultural network for the farming community and continued agricultural economic development efforts that enhance farms' profile and profitability. The economic impact assessment conducted in 2006, concluded that for each $1 generated by the agricultural sectors there was a $3 impact in the economy[33]. While this analysis is dated, it is likely given the growth in the sector, that this positive impact has been sustained.

The agri-food sector is the largest economic sector in the Ontario economy and a significant presence in the study area. Operations that sustain and support the growth of this sector strengthen the local economy while providing access to a local, safe food supply. Programs

[33] Planscape, City of Kawartha Lakes and Greater Peterborough Area Agricultural Impact and Development Study, 2006, pg. E3.

are in place to promote the local food system. As public interest in safe, healthy, local food continues to grow there is an opportunity to expand these programs.

Due to the topography of the study area, smaller farms predominate. This could provide an opportunity for new farmers to enter the sector at a lower cost.

The diversity of products should continue to be encouraged as it buffers the industry from the negative impacts of a decline in price or demand for certain commodities.

The study area maintains the circumstances to support livestock operations. These opportunities are disappearing in other parts of the Greater Golden Horseshoe so operators in those areas are looking for alternative locations. There may be opportunities to encourage expansion of this form of agriculture. The more marginal lands in the northern part of the study area, which may be lower priced than more southerly prime land, may provide such an opportunity. There exists an established livestock sector with available resources, including grass lands for grazing and a large community pasture that can support additional livestock production.

Policies supporting communal facilities to support farm business such as abattoirs, cold storage, grain elevators, fertilizer mixing facilities, farm equipment mechanics and equipment dealers are key to sustainability and prosperity in the farm community. These services currently exist in the study area and will be attractive to farmers from other areas where these services are disappearing. Ongoing consultation with the agricultural sector will assist in protecting the existing infrastructure and addressing future needs.

Technology is constantly improving, providing opportunities for operations to increase efficiencies. Access to affordable, high-speed internet, three phase power, transportation networks and other modern infrastructure is critical for agricultural operations. Flexibility is essential to capitalize on technological advances. Understanding and responding to these needs will support ongoing modernization of the sector.

Canadian farmers are educated and progressive. Tracking of the adoption of new technologies for allowing more mechanization and environmentally sustainable practices confirms that farmers in the study area are part of this progressive movement.

Climate change is a reality and there is potential for Canadian agriculture to benefit because of it. A warming climate may provide opportunities for agriculture in certain regions with an expansion of the growing season due to milder and shorter winters. This could increase productivity and allow the production of new and potentially more profitable crops. For a

high-latitude country like Canada, future warming is expected to be more pronounced than the global average. Northern regions and the southern and central Prairies will see more warming than other regions. Most regions will likely be warmer with longer frost-free seasons. Atmospheric carbon dioxide (CO^2) concentrations are expected to increase in the future which promotes the growth of small grains and oilseeds by increasing photosynthesis and crop water use efficiency. Corn will mostly benefit from increased water use efficiency and less from increases in photosynthesis.[34] Temperatures will rise, leading to longer growing seasons and with sustained access to water will increase productivity.

Conversely, other areas of the world are expected to see a decline in productivity because of the warming climate and shortages of water. Canada is already a major exporter of agricultural products. With increased productivity its role as a food basket for the world is expected to increase.

Covid, the war in Ukraine and other conflicts around the world have increased public understanding of the importance of sustaining a local food supply. This increased awareness may be an opportunity to expand education regarding food supply and local agriculture and the importance of supporting it.

There has been considerable advancement in the provincial policies related to on-farm and farm diversified uses. Kawartha Lakes and Peterborough County must consider how to benefit from the flexibility these policies offer while ensuring that such uses remain secondary or accessory to the main agricultural use. Scale and impact, both present and future, must be carefully considered in controlling these uses.

Farm enterprise zones, focused on existing settlements and planned through a secondary planning process could be used to accommodate agri-related businesses and support services, provide alternative locations for housing, focus on unique sectors in the agricultural area and support rural communities. It may be possible to apply a type of community improvement plan process to implement this approach.

Both the County and City governments understand and support agriculture. The policies they have developed support the sector. This is a benefit when compared to more urban municipalities where the agriculture sector has little profile, is sometimes not as well understood and may not be appropriately addressed or protected in policy.

[34] Climate change impacts on agriculture - agriculture.canada.ca

The total area of land under agricultural production in Canada was estimated by Statistics Canada in 2016 at less than 7.3% of the total land area[35]. Of that, less than 5% is prime agricultural land, Class 1,2 and 3, and only approximately .05% is Class 1[36]. There is a significant amount of this land in the study area. Good agricultural land is a non-renewable resource that needs to be managed and protected. Strong tools including rigorous, enforced planning policies, the registration of agricultural easements and access to land under circumstances that farmers can afford are required.

Kawartha Lakes and Peterborough are characterized by certain features that impact the type of agriculture that will thrive. With the exception of certain areas including the south part of Kawartha lakes and Selwyn, the varied topography tends to make large cash crop operations more difficult. A range of land types, including a large community pasture in Kawartha Lakes, supports livestock operations. The strong agricultural heritage attracts non rural residents to experience the rural lifestyle. These features should be the building blocks upon which programs to support agriculture are based. Threats such as non-farm development in agricultural areas must be controlled.

The study area has a valuable resource in its agricultural sector, which is and should continue to be, a major element in regional and local economic development strategies. In developing these strategies, a commitment to supporting the agricultural and agri-food sector developed in consultation with the agricultural community will be key.

[35] Snapshot of Canadian agriculture (statcan.gc.ca)
[36] https://neptis.org/publications/chapters/where-are-significant-agricultural-lands-located

FIGURE 45 - SUMMARY OF NUMBER OF FARMS BY TYPE, OPERATING REVENUES AND KEY COMMODITIES' CASH RECEIPTS, 2021