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Canada's Supply of Agricultural Land

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Executive Summary

The amount of farmland in Canada serves as the basis for debate on a host of public policy issues ranging from food security to sustainability to competitiveness. Despite the interest and the basis for policies such as land use controls, there is little documentation on total farmland area and composition in Canada. This report documents the changes in the total amount of farmland in Canada using data from the Census of Agriculture. The national and provincial trends in the composition of farmland from 1921 to 2016 are described with additional focus at the county level for Ontario.

There are approximately 160 million acres of farmland in Canada. While there have generally not been significant changes in the amount of farmland between census periods, there were drops of around 4% in the 1981 and 2011 census. Most of this farmland is located in Saskatchewan (40%) and Alberta (31%), while the total amount in Ontario has fallen by 50% since 1941 and represents 8% of the Canadian total.

Approximately half of Canada's total farmland is used to grow crops. The amount of cropland has increased by 28% over the past 40 years with much of the growth occurring from 1976 to 2001. Seeded pasture, which makes up less than 10% of total farmland, has also increased over time with much of the increase occurring in the Prairies. While cropland and seeded pasture generally rose over time, the small decline in national farmland was due to the 92% drop in the area allocated to summerfallow since 1976.

The total loss of 3.1 million acres of farmland in Ontario since 1976 is due largely to the reduction in non-cropland as the area planted to crop rose by 4% in total from 1976 to 2016. These changes in total farmland and its mix are evident for all regions although the mix varies significantly. Counties in the southwestern portion of the province have over 75% of their total farmland allocated to growing crops whereas this is approximately 50% in the rest of the province. This percentage, although smaller than in the southwestern region, has also increased over time due to the drop in pasture, fallow, and woodlot/wetland area.

Table of Contents

	Page
Executive Summary	ii
Table of Contents	iii
List of Figures	iv
List of Tables	iv
1. Introduction	1
2. National Farmland Trends	
2.1 National and Provincial Totals.....	2
2.2 Changes in Type of Farmland.....	5
2.2.A. <i>Cropland</i>	6
2.2.B. <i>Tame or Seeded Pasture</i>	6
2.2.C. <i>Summerfallow Land</i>	7
2.2.D. <i>Other Land</i>	8
3. Provincial Farmland Trends	
3.1 British Columbia	8
3.2 Alberta	8
3.3 Saskatchewan	9
3.4 Manitoba	9
3.5 Ontario	10
3.6 Quebec	10
3.7 New Brunswick	11
3.8 Nova Scotia	11
3.9 Prince Edward Island	11
3.10 Newfoundland and Labrador	12
4. Distribution and Use of Farmland in Ontario	12
4.1 Southern Ontario	15
4.2 Western Ontario	16
4.3 Central Ontario	17
4.4 Eastern Ontario	18
4.5 Northern Ontario	20
5. Conclusion	22
6. References	23

List of Figures

	Page
Figure 1 Total Farmland in Canada, 1921-2016	2
Figure 2 Changes in Type of Farmland in Canada, 1976-2016	5
Figure 3. Land Use in Saskatchewan, 1976-2016	9
Figure 4. Land Use in Ontario, 1976-2016	10
Figure 5 Farmland in Southern Ontario, 1991-2016	16
Figure 6. Farmland in Western Ontario, 1991-2016	17
Figure 7. Farmland in Central Ontario, 1991-2016	18
Figure 8. Farmland in Eastern Ontario, 1991-2016	19
Figure 9. Farmland in Northern Ontario, 1991-2016	21
Figure 10. Total Farmland for 5 Agriculturally Significant Counties...	21

List of Tables

	Page
Table 1. Total Farmland in Acres by Province, 1921-2016	4
Table 2. Farmland Use in Ontario by County and Region, 2016	13

Canada's Supply of Agricultural Land

1. Introduction

The amount of farmland in Canada serves as the basis for debate on a host of public policy issues ranging from food security to sustainability to competitiveness. If Canada's total supply of agricultural land is declining, as is often assumed, then agricultural output could fall along with earnings to the sector and exports abroad. The assumption of declining agricultural land due to demand pressures from non-agricultural sources is the reason behind government policies on land use, such as Ontario's Greenbelt, and individual efforts to preserve farmland through trusts. An opposing view is that the amount of farmland necessary to produce current output will decline due to slower population growth and rising yields (Balmford *et al* 2005; Doyle (2012).

Despite the interest and basis for policy intervention, there is little documentation on total farmland area and composition in Canada. Muller and Middleton (1994) examined trends in all types of land use and distribution from 1936-1981 in the Niagara region of Ontario. The study concluded that Niagara has seen a 13% drop in agricultural land over that period but it does not specify what type of agricultural land was lost, or what are the uses of the existing agricultural land. The "Loss & Fragmentation of Farmland" report by the Ministry of Agriculture and Rural Development in Alberta (2007) looks at the extent to which farm and ranchlands in Alberta were converted to other uses for the period of 1997 to 1998. Although this report goes into great detail on the reasons for loss, it only covers one year, and only looks at land in Alberta.

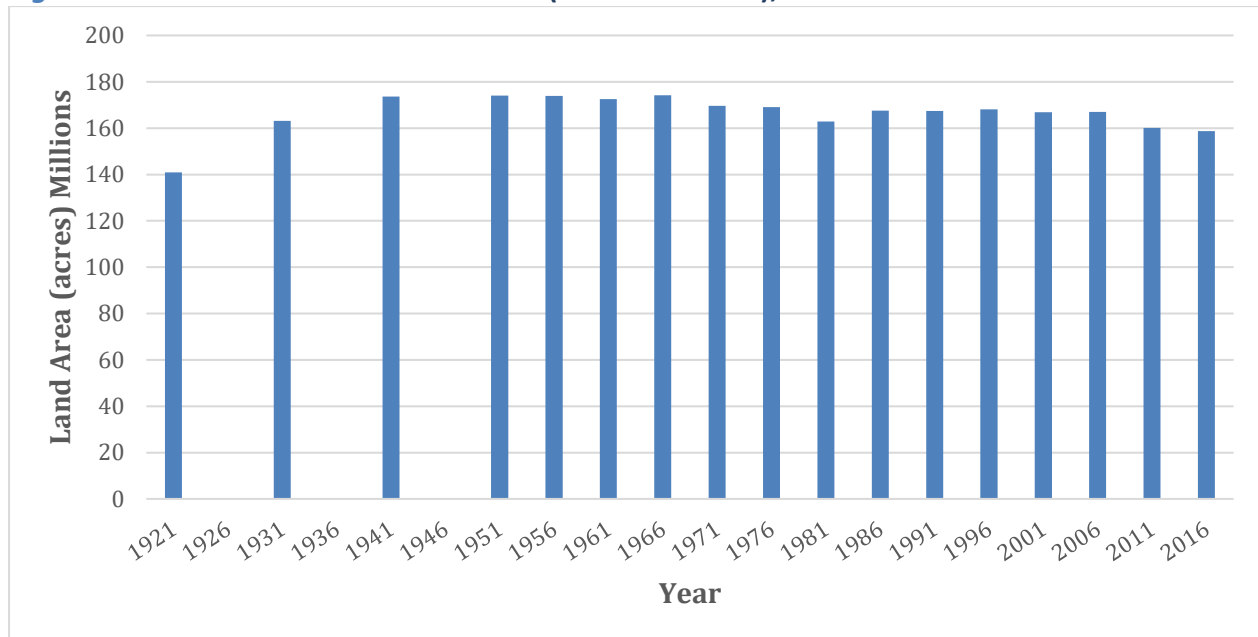
The purpose of this report is to document the changes in the total amount of farmland in Canada using data from the Census of Agriculture, and to analyze how the agricultural land is being used. We begin by discussing national trends in the composition of farmland from 1921 to 2011. The next section examines these trends at the provincial level. The report decomposes the trends further to the municipal level for the province with the most Class 1 farmland, Ontario.

2. National Farmland Trends

2.1. National and Provincial Totals

The total amount of farmland in Canada between 1921 and the latest census in 2016 is illustrated in Figure 1. Total area increased by nearly 25% from approximately 140 million acres in 1921 to around 170 million acres in 1941. Farmland area remained relatively constant between 1941 and 1976 at approximately 172.5 million acres, and from 1986 to 2006 at approximately 167.40 million acres (see Figure 1). However, total farmland took a hit in 1981 and 2011 losing 3.71% and 4.1% from the previous censuses, respectively. The drop in total farmland between the 2011 and 2016 censuses was not as significant, declining by less than a percent.

Figure 1 Total Farmland in Canada (million of acres), 1921-2016



Saskatchewan is home to the greatest amount of farmland in Canada. Its share increased steadily from 1921 to 1966 before leveling out at just under 40% of Canada's total farmland in 1981 (see Table 1). Alberta (having the second largest amount of farmland in Canada) showed a significant gain in its share of Canadian farmland, going from a 20.8% to a 31.7% share over the 95-year period. In contrast to the other Prairie Provinces, the share of farmland in Manitoba did not change significantly and remained around 10% of the national total. The total amount of farmland in British Columbia has also increased from 2.9 million acres in 1921 to 6.4 million in 2016 resulting in its share of the national total rising from 2% in 1921 to 4% in 2016.

In contrast to the rising amount of farmland in the Prairies, total farmland area has fallen in the Maritimes since 1921. Farmland area in PEI fell in half from around 1.2 million acres in 1921 to 0.58 million in 2016. The decline was even greater in Nova Scotia and New Brunswick where farmland area was approximately 4.7 million acres and 4.3 million acres respectively in 1921 but now average around 0.8 million acres in each province. Consequently, the Maritimes now account for just 1.5% of all farmland in Canada whereas it was 7.3% in 1921. Note that Newfoundland and Labrador were not included in the census until 1951, as they joined Canada in 1949. However, since the amount of farmland in this province is less than 100,000 acres or less than 0.1% of the national total, it does not have much effect on Canadian or regional totals.

Total farmland has also fallen in Quebec and Ontario. In both provinces, farmland area has fallen by approximately 50% with a steady decline starting after 1941. The exception to the downward trend was a period of constant farmland area in the 1990s. As a result, the percentage of Canada's agricultural land in Quebec fell from 12.2% in 1921 to 5.1% in 2016 and in Ontario it decreased from 16.0% in 1921 to 7.8% in 2016. The changes in Ontario farmland are discussed further in section 3.

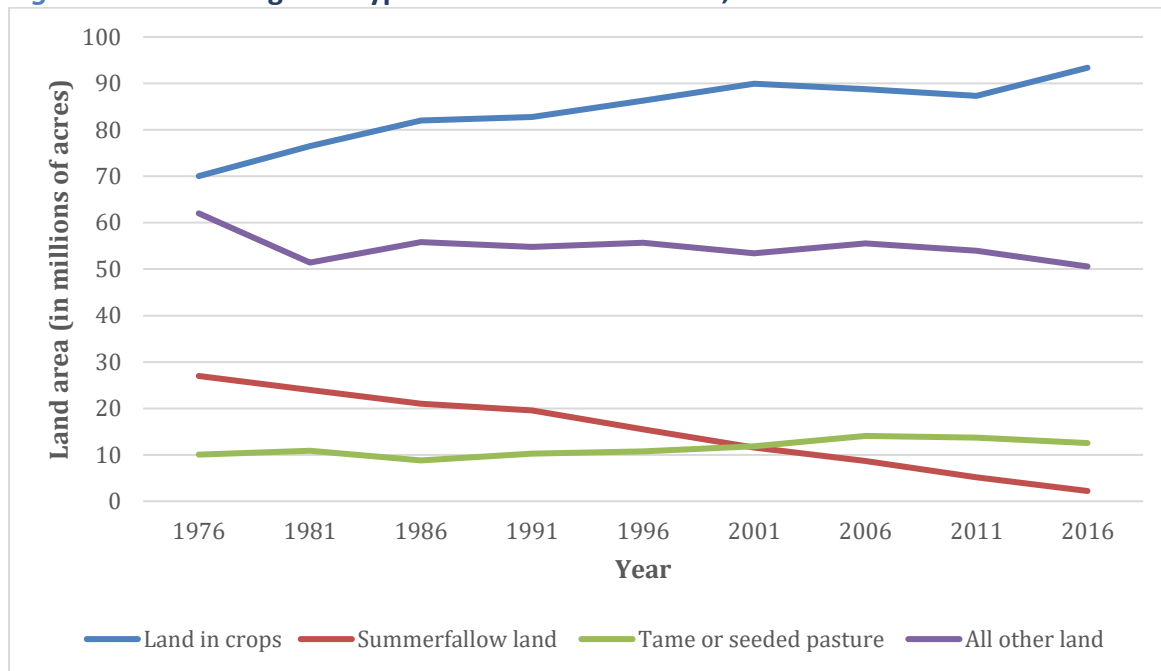
Table 1. Total Farmland (million of acres) in Canada by Province, (and % share of Total Farmland in Canada), 1921-2016,

	1921	1931	1941	1951	1961	1971	1981	1991	2001	2011	2016
Newfoundland and Labrador				0.1 (0.1%)	0.1 (0%)	0.1 (0%)	0.1 (0.1%)	0.1 (0.1%)	0.1 (0.1%)	0.1 (0.1%)	0.1 (0%)
PEI	1.2 (0.9%)	1.2 (0.7%)	1.2 (0.7%)	1.1 (0.6%)	1.0 (0.6%)	0.8 (0.5%)	0.7 (0.4%)	0.6 (0.4%)	0.6 (0.4%)	0.6 (0.4%)	0.6 (0.4%)
Nova Scotia	4.723 (3.4%)	4.3 (2.6%)	3.8 (2.2%)	3.2 (1.8%)	2.2 (1.3%)	1.3 (0.8%)	1.2 (0.7%)	1.0 (0.6%)	1.0 (0.6%)	1.0 (0.6%)	0.9 (0.6%)
New Brunswick	4.3 (3.0%)	4.2 (2.6%)	4.0 (2.3%)	3.5 (2.0%)	2.2 (1.3%)	1.3 (0.8%)	1.1 (0.7%)	0.9 (0.6%)	1.0 (0.6%)	0.9 (0.6%)	0.8 (0.5%)
Quebec	17.3 (12.2%)	17.3 (10.6%)	18.1 (10.4%)	16.8 (9.6%)	14.2 (8.2%)	10.8 (6.4%)	9.3 (5.7%)	8.5 (5.1%)	8.4 (5.1%)	8.3 (5.2%)	8.1 (5.1%)
Ontario	22.6 (16.0%)	22.8 (14.0%)	22.4 (12.9%)	20.8 (12.0%)	18.6 (10.8%)	16.0 (9.4%)	14.9 (9.2%)	13.5 (8.0%)	13.5 (8.1%)	12.7 (7.9%)	12.3 (7.8%)
Manitoba	14.6 (10.4%)	15.1 (9.3%)	16.9 (9.7%)	17.7 (10.2%)	18.2 (10.5%)	19.0 (10.6%)	18.8 (11.6%)	19.1 (11.4%)	18.8 (11.3%)	18.0 (11.2%)	17.6 (11.1%)
Saskatchewan	44.0 (31.2%)	55.7 (34.1%)	60.0 (34.6%)	61.7 (35.4%)	64.4 (37.3%)	65.1 (38.3%)	64.1 (39.4%)	66.4 (39.6%)	64.9 (38.9%)	61.6 (38.5%)	61.6 (38.8%)
Alberta	29.3 (20.8%)	39.0 (23.9%)	43.3 (24.9%)	44.5 (25.5%)	47.2 (27.4%)	49.5 (29.2%)	47.2 (29.0%)	51.4 (30.7%)	52.1 (31.2%)	50.5 (31.5%)	50.3 (31.7%)
British Columbia	2.9 (2.0%)	3.5 (2.2%)	4.0 (2.3%)	4.7 (2.7%)	4.5 (2.6%)	5.9 (3.4%)	5.4 (3.3%)	5.9 (3.5%)	6.4 (3.8%)	6.5 (4.0%)	6.4 (4.0%)
Total	140.1 (100%)	163.1 (100%)	173.6 (100%)	174.0 (100%)	172.5 (100%)	169.7 (100%)	162.8 (100%)	167.4 (100%)	166.8 (100%)	160.2 (100%)	158.7 (100%)

2.2. Changes in Types of Farmland

The Census of Agriculture categorizes farmland into crops, summer fallow, pasture and other land. Cropland includes field crops, vegetables, fruits, nursery crops, and sod (added in 1981). Summerfallow is land that is intentionally left fallow for reasons of soil conservation. Tame and Seeded pasture is land used by farmers for grazing animals that has been improved in some way (i.e. not wild pasture). All other land includes unimproved pasture, land used for buildings, Christmas tree land, maple syrup land, unworkable land (privately owned woodlands and wetlands on production operations) and all other agricultural land. The changes in the area among the four categories of Canadian farmland between 1976 and 2016 are plotted in Figure 2.

Figure 2 Changes in Type of Farmland in Canada, 1976-2016



2.2.A. Cropland

The amount of farmland used to grow crops increased across Canada over the past 40 years by 23.3 million acres, or 33.3%, leaving the country with a total of 93.4 million acres. The nation-wide increases took place steadily from 1976 until 2001, it then declined slightly over the first two censuses of the new century but increased by 7% between the 2011 and 2016 census periods. Another significant increase in cropland (9.3%) occurred between 1976 and 1981.

The increase in total area of cropland in Canada was spread fairly evenly across the country, with every province except Nova Scotia and New Brunswick showing a growth in net cropland over the past 40 years. In terms of absolute amounts, Alberta and Saskatchewan showed the most significant increases over the past 40 years, with their gains of 6.4 and 14.2 million acres (33.8% and 54.6% increases) contributing 88.6% of cropland's total growth in the country. These two provinces had a constant increase over the period, with Saskatchewan decreasing between 2001 to 2011, and Alberta losing cropland only from 2001-2006. In relative amounts Newfoundland was the biggest gainer, growing 88.6%. More discussion of provincial changes in cropland area is given in section 3.

2.2.B. Tame or seeded pasture land

The amount of tame and seeded pasture in Canada also increased over time (see Figure 2). The area of pasture increased by 2.5 million acres or 25% since 1976. The peak total was 14.1 million acres in 2006, which represented around 5% of the national total of farmland. Since 1976, there have been only 3 periods in which pasture land decreased: 1981-1986 (with a decrease of 19.2%), 2006-2011 (with a decrease of 2.8%), and more recently 2011-2016 (with a decrease of 8.2%)

Although there was a net increase in pasture land, its area decreased in six of the ten provinces. Alberta, Saskatchewan, and Manitoba contributed 195% of the country's pasture acreage gains. Tame and seeded pasture's significant growth in the Prairies took place mostly between 1986 and 2006, with the most recent census in 2016 showing losses of 8.4%, 5.4% and 9.5% for Alberta, Saskatchewan and Manitoba, respectively. Saskatchewan showed the greatest growth since 1976, increasing by 2.5 million acres (114.1%) in total. Alberta's growth was comparatively modest, increasing by 65.4% and adding 2.1 million acres to the country's total. Manitoba gained only 0.15 million acres but increased its total seeded pasture by 20.8%.

The eastern Canadian provinces, encompassing Ontario, Quebec, and the Maritimes, all lost significant percentages of their areas of tame or seeded pasture since 1976. The highest proportional loss was in Quebec at 77%, and the lowest in Nova Scotia at 61%. However, none of the provinces contained particularly high amounts of pasture. The absolute amounts are small and the relative share of pastureland of total farmland in the eastern provinces averages less than 5% compared to close to 10% in the Prairies.

2.2.C. Summerfallow land

While cropland and pasture generally rose over time, the small decline in national farmland area was due to the large drop in the amount of land used for summerfallow. The area allocated to summerfallow declined by 24.8 million acres, which was an 91.8% change from 1976. The downward trend was consistent across the country, with every province recording a drop of at least 80% from 1976 to 2016.

Saskatchewan, with its large farmland area and common use of setting aside land to preserve moisture, was by far the largest contributor to the decline in the area allocated to summerfallow. At least 1 million acres and up to 3.5 million acres between each census period was switched out of summerfallow in Saskatchewan. The area of summerfallow fell by 16 million acres, or 92%, from 1976 to 2016. The other Prairie provinces that tend to use summerfallow also saw a significant decline in its use. Alberta has 5.8 million fewer acres of summerfallow in 2016 than in 1976 (90.1% loss). Summerfallow area fell by 95.6% in Manitoba from 1976 with most of the drop occurring between 2001 and 2006.

While losses in the non-Prairie provinces were proportionally significant, reaching up to 99% in PEI, or 96.2% New Brunswick, the provinces did not have much summerfallow land to begin with. Their decreases made up only 1.56% of Canada's total summerfallow area loss, or 0.39 million acres cumulatively. In addition, the data for the non-Prairie provinces does not tend to follow a particular chronological trend, jumping up and down from year to year due to the small area being considered.

2.2.D. Other Land

All other land used to produce agricultural products (such as Christmas tree land, maple syrup land, and bee hives), which roughly one-third of Canada's agricultural land as of 2016, experienced a moderate 18% or 11.4 million acre decrease between 1976 and 2016. The greatest period of decrease was between 1976 and 1981 with the country recording a loss of 17%, or 11 million acres. The amount of other agricultural land stayed between 50-55 million acres for the rest of the census period, showing gains and losses in alternating periods. The data did not show any

regional trends, or national trends as the amount of other land stayed relatively constant after 1981. No individual province was a significant contributor to the changes.

3. Provincial Farmland Trends

3.1 British Columbia

BC was the only province to record a meaningful net increase in farmland over the 40-year census period. Total farmland area grew by 5.74% between 1976 and 2016. Total farmland fell from 1976 to the next census year, reaching its lowest point in 1981 at 5.4 million acres. Farmland area grew consistently from 1991 to 2006, reaching a peak of 7 million acres in 2006. However, total farmland area fell by 0.6 million acres (8.6%) in the 2006-2016 interval. With 91.4% of the decrease occurring between the 2006 and 2011 censuses. The amount of cropland followed a similar pattern to overall farmland in BC with a general increase over time. In contrast, summerfallow use fell by 0.15 million acres, or 92.1%. The area of pasture peaked in 1981 at 0.66 million acres and decreased from there to end in 2016 with 0.5 million acres. Acreage of other types of farmland followed no discernible pattern, with approximately the same amount of land in 1976 as 2016 (4.4 million acres).

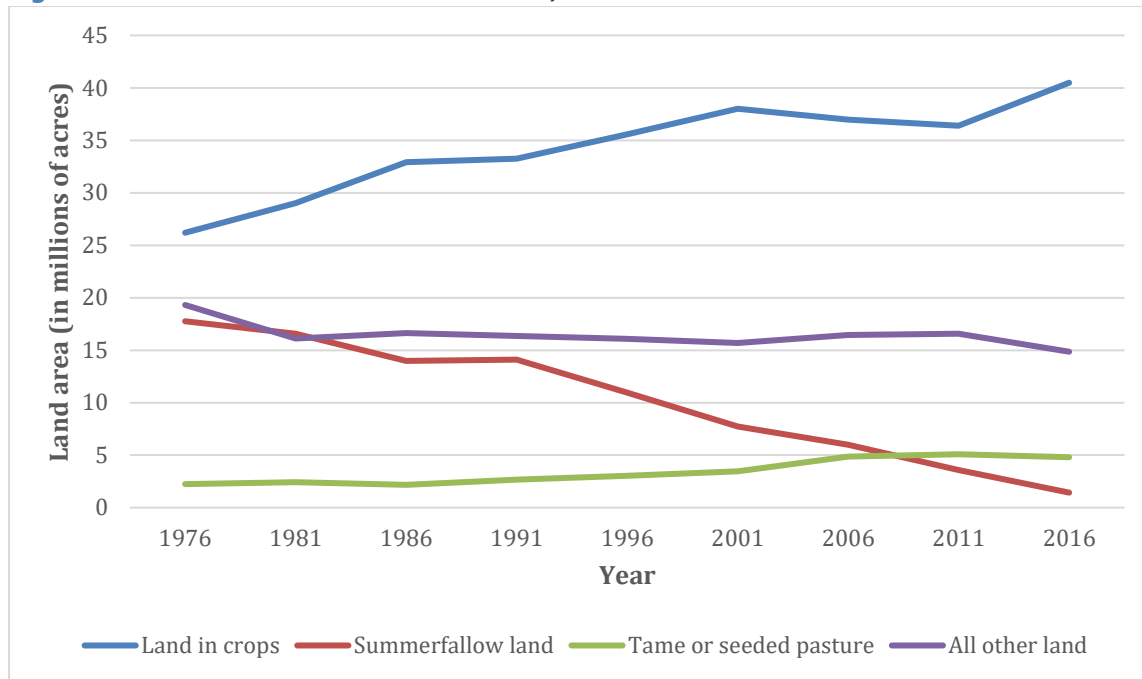
3.2 Alberta

Total farmland in Alberta decreased by a negligible 0.32 million acres, or 0.64% between 1976 and 2016. A 6.4 million acre increase in cropland offset a 5.85 million acre decrease in summerfallow. Summerfallow followed the national trend and declined steadily over the last 40 years. Tame and seeded pasture increased from 1976 to 2016 by 2.14 million acres, or 65.4%, but area allocated to all other land fell by 2.3 million acres or 11.1%.

3.3 Saskatchewan

Total farmland in Saskatchewan fell by 3.92 million acres, which represents 37.9% of Canada's total loss in farmland since 1976. Farmland in Saskatchewan increased from 1976 to its peak of 66.4 million acres in 1991. Since that time, farmland area has dropped by approximately 1% between subsequent census periods with the exception of 2011 and the latest census when the rate of decrease jumped to 4% and then fell to 0.1%. The decline in farmland in Saskatchewan is due largely to the decline in the use of summerfallow, which decreased by 16.4 million acres or 92% since 1976 (see Figure 3). The large decline in summerfallow was nearly offset by increases the pasture and cropland area. Pasture land increased by 2.6 million acres (1114%) and cropland area rose by 14.3 million acres or approximately 54.6%. All other land declined by 4.45 million acres, or 23.1%.

Figure 3 Land Use in Saskatchewan, 1976-2016



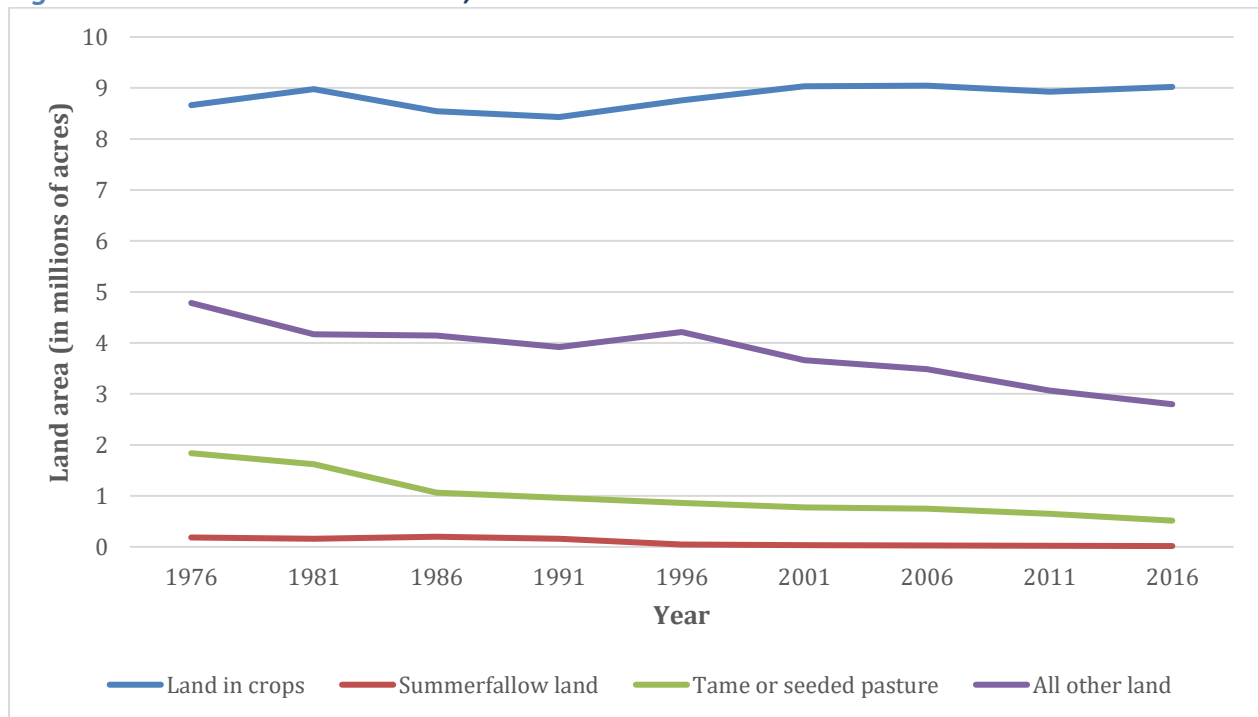
3.4 Manitoba

Farmland area in Manitoba stayed relatively constant, recording a net loss of only 1.4 million acres, or 7.3% of its total since 1976. Cropland in Manitoba showed a net increase of 2 million acres, or 21% with the increases occurring from 1976 until 1991 when it reached a peak of 11.8 million acres. The area planted in crops has fallen steadily since 1991 until the most recent census saw an increase of 0.8 million acres (7.3%) from the 2011 census. As in the other Prairie provinces, the use of summerfallow dropped significantly. Summerfallow area declined by 2.2 million acres or 96% since 1976. The area in tame and seeded pasture showed a net increase of 0.16 million acres, or 20.8% with increases occurring in all but two census periods (1981-1986 and 2011-2016).

3.5 Ontario:

Farmland in Ontario comprised 9.15% of all Canadian farmland in 1976 and 7.8% in 2011. Ontario recorded a total loss of 3.1 million acres of agricultural land, or 30.2% of the country's total agricultural land lost. All areas of farmland except cropland recorded a loss. Other land decreased by 41.5%, tame and seeded pasture by 72%, and summerfallow land was reduced by 91.5%. Tame and seeded pasture showed decreases over all periods while summerfallow showed only one period of increase from 1981-1986. Other land also had a single period of increase from 1991-1996 of 7.5%, or 0.29 million acres. Cropland showed an increase of 4.1% or 0.36 million acres. There was no trend in when cropland was gained or lost over the 35-year period (see Figure 4). Ontario accounted for 30.16% of all farmland lost in Canada over the 40-year period. This is due to the significant decreases in other land, tame and seeded pasture, and summerfallow land.

Figure 4 Land Use in Ontario, 1976-2016



3.6 Quebec:

Quebec recorded a loss of 18.20% or 1.8million acres of land used for agriculture. Of note is 159.7% growth of summerfallow from 1976-1981. After that initial jump, summerfallow decreased consistently to end in 2016 with 11.3% (5,225 acres) of what it had originally in 1976 (89.7% loss, or 45,285 acres). Tame and seeded pasture also showed a significant decrease over the census period. 0.89 Million acres, or 76.5% was lost, 0.35 million acres (or 32.1%) between 1981 and 1986. Other land also recorded a net decrease of 0.92 million acres, or 22.2%. This decrease was spread evenly across all census periods. Keeping with the trend, cropland increased slightly by 0.05 million acres or 1.05%. Cropland recorded losses from 1976-1991, where it started to record gains until 2006, where it began to show decreases of 3% and 0.4% in subsequent census periods.

3.7 New Brunswick:

Total agricultural land in New Brunswick decreased by 0.32 million acres, or 27.6%. Summerfallow land, which made up only 0.4% of the province's total farmland area in 1976, dropped by 96.2% over the forty-year period to comprise a scant 0.02% of New Brunswick Agricultural land in 2011. Contrary to the national trend, cropland, which made up 29.37% of New Brunswick's total acreage in 1976, decreased by 27.6% over the census period, decreasing by 10.9% from 2011-2016. The period of greatest increase was 1991-1996, with growth of 10.4%. The area of tame and seeded pasture decreased every year except from 1976-1981 (gain of 3.1%). The period of greatest decrease was from 1981-1986 (34.4%) adding to the net decrease of 0.07 million acres, or 30.4%. All other land uses most of the farmland in the province (at 62.4% in 1976 and 55% in 2016). It consistently decreased over the entire census period, showing only two periods of increase (1991-1996 and 2001-2006). In total 0.25million acres of other land was lost. New Brunswick land loss accounts for 3.1% of all land lost in Canada.

3.8 Nova Scotia:

Nova Scotia's farmland area shrank by 0.3 million acres (24.9%) over the forty-year period. Total land in Nova Scotia comprised 0.73% of Canadian farmland in 1976, and 0.6% in 2016. Following the national trend, summerfallow and tame and seeded pasture were areas of loss, decreasing by 92.1% and 60.6% (6,621 and 63,588 acres) respectively. Cropland showed a negligible decrease of 3% despite great fluctuations in the amount of land lost or gained during the census period. Cropland increased from 1976-1981 and 1991-2001 and decreased from 1981-1991, and 2001-2016. The largest land use grouping, other types of land (68.17% in 1976 of total land area), shrank by 27% over the 40 years. There was steady decrease from 1976-1991 (23%), followed by periods of increase from 1991-1996 and 2006-2011, and a period of decrease from 1996-2006, as well as most recently between 2011-2016 decreasing by 11.3%

3.9 Prince Edward Island:

PEI has very little agricultural land, and therefore makes little impact on the Canadian totals. PEI recorded a net loss of 0.15 million acres or 21.3% of its total farmland. This accounts only for 1.5% of all agricultural land lost in Canada. Summerfallow land showed a decrease of 98.9% (or 5,728 acres), the greatest percentage loss recorded by any province. The greatest period of loss was from 2006-2011, with 65.8% of summerfallow land loss. Other land and tame and seeded pasture also reported net losses over the census period. Other land decreased by a total of 87,253 acres, or 36.7%. Only one gain was recorded from 1981-1986; showing other land growth of 12,794 acres, or 6.1%. Tame and seeded pasture lost 71,352 acres or 74.5%. Cropland was alone in posting a net increase of 8,788 acres or 2.2%.

3.10 Newfoundland and Labrador:

Newfoundland and Labrador has very little land devoted to agriculture, therefore large percentage changes have little impact on Canadian totals. In all, the province lost 9,311 acres of farmland, or 11.6%. Total farmland peaked in 1991 with 0.12 million acres. Most of this loss came from tame or seeded pasture, which recorded a loss of 10,390 acres, or 72%. The greatest period of decrease was from 1991-1996 at 48.7%, followed by a period of increase at 7.1%. The only other periods of increase for pasture land was from 1986-1991 and 2011-2016, where pasture acreage increased by 20.5% and 0.3%. The amount of other land increased over the first three intervals, and decreased over the last five. Total other land loss numbered 7,563 acres or 13.9%. Summerfallow land lost 350 acres, to finish in 2016 with just 82 acres of summerfallow land. Cropland was the only land classification to show a net increase in land area, boasting an increase of 8,992 acres or 85%. The only periods of decrease was from 2006-2011 and 2011-2016, where 2,053 acres (9.1%) and 999 acres (4.9%) were lost respectively.

4. Distribution and Use of Farmland in Ontario

There are 48 counties in Ontario. Only 11 had fewer than 100,000 acres of farmland in 2016, while 6 had more than 500,000 acres. The counties with the greatest amount of farmland include Chatham-Kent, Lambton, Middlesex, Bruce, Huron, and Perth counties, all of which are found in Southern and Western Ontario. Southern and Western Ontario accounted for more than 60% of all farmland in Ontario. Huron County had the most agricultural land in 2016 with 735,696 acres and 83.9% of the land was in crops (or 617,278 acres). This was the only county with more than 700,000 acres and was found in Western Ontario. The county with the second largest amount of farmland (Middlesex), which is in Southern Ontario, has 615,906 acres of farmland of which 527,841 (86%) was cropland.

The counties in Southern Ontario had over 87% of all farmland consisting of cropland with counties like Essex and Kent having nearly 95% of total farmland in crops (see Table 2). Western Ontario had over 75% of its land in cropland with the highest percentage being those in the more southern parts of the region (i.e. Huron, Perth, and Waterloo). The more northern counties of Western Ontario had more farmland allocated to tamed pasture instead of cropland. In contrast, cropland makes up approximately 60% of all farmland in Central and Eastern Ontario and 40% in Northern Ontario. While the percentage of farmland in seeded pasture is relatively constant at 6% across all regions (except Southern Ontario), the decline in the share of cropland is replaced by increasing allocations to native pasture and woodlots/wetlands.

Table 2 Land Use in Ontario by County and Regions, 2016 (Acres)

Counties & Districts	Cropland	Summer fallow	Tame or seeded pasture	All other land	Total
Brant	139,429	322	4,311	24,926	165,270
Chatham-Kent	554,249	171	2,991	30,535	590,346
Elgin	315,387	274	5,616	62,594	377,269
Essex	328,174	186	2,114	16,931	350,218
Haldimand-Norfolk	379,755	1,787	7,564	98,988	462,358
Hamilton	104,136	748	2,884	27,335	128,532
Lambton	518,698	379	6,624	74,187	591,591
Middlesex	527,841	234	13,937	85,889	615,906
Niagara	181,507	1,134	2,606	42,018	218,251
Oxford	386,041	249	7,896	59,631	444,142
Southern Ontario	3,435,217	5,484	56,543	523,034	3,943,883
Bruce	369,900	414	84,822	156,325	611,461
Dufferin	130,951	767	15,663	45,781	193,162
Grey	317,132	2,097	75,847	198,045	593,121
Halton	75,290	562	4,276	18,630	98,758
Huron	585,050	280	29,342	104,394	719,066
Peel	78,118	211	4,516	21,588	104,433
Perth	430,311	123	16,177	56,315	502,926
Simcoe	359,913	2,714	29,238	149,005	540,870
Waterloo	180,274	822	9,344	35,360	225,800
Wellington	370,553	643	22,276	77,917	471,389
Western Ontario	2,897,492	8,633	291,501	863,360	4,060,986

Durham	221,965	x	21,483	38,680	330,286
Haliburton	1,518	56	631	11,771	13,976
Hastings	141,792	820	16,897	146,559	306,068
Kawartha Lakes	162,115	1,000	32,815	164,760	360,690
Muskoka	7,754	x	2,834	5,483	34,779
Northumberland	156,763	552	14,189	82,161	253,665
Parry Sound	23,944	146	7,217	64,503	95,810
Peterborough	124,517	1,440	24,111	108,574	258,642
Prince Edward	91,976	762	7,648	42,837	143,223
York	129,718	1,884	6,601	37,762	175,965
Central Ontario	1,062,062	7,851	134,426	768,765	1,973,104
Frontenac	77,995	237	14,241	113,069	205,542
Lanark	86,339	299	21,357	133,977	241,972
Leeds & Grenville	156,021	678	20,998	158,953	336,650
Lennox & Addington	89,242	705	12,333	95,161	197,441
Ottawa	198,311	1,910	18,386	79,037	297,644
Prescott & Russell	229,075	500	12,870	54,939	297,384
Renfrew	152,126	649	36,134	214,069	402,978
Stormont, Dundas & Glengarry	351,383	714	23,493	120,908	496,498
Eastern Ontario	1,340,492	5,692	159,812	970,113	2,476,109
Algoma	34,834	166	10,240	48,884	94,124
Cochrane	29,172	202	7,352	40,146	76,872
Greater Sudbury	9,293	425	1,029	14,667	25,414

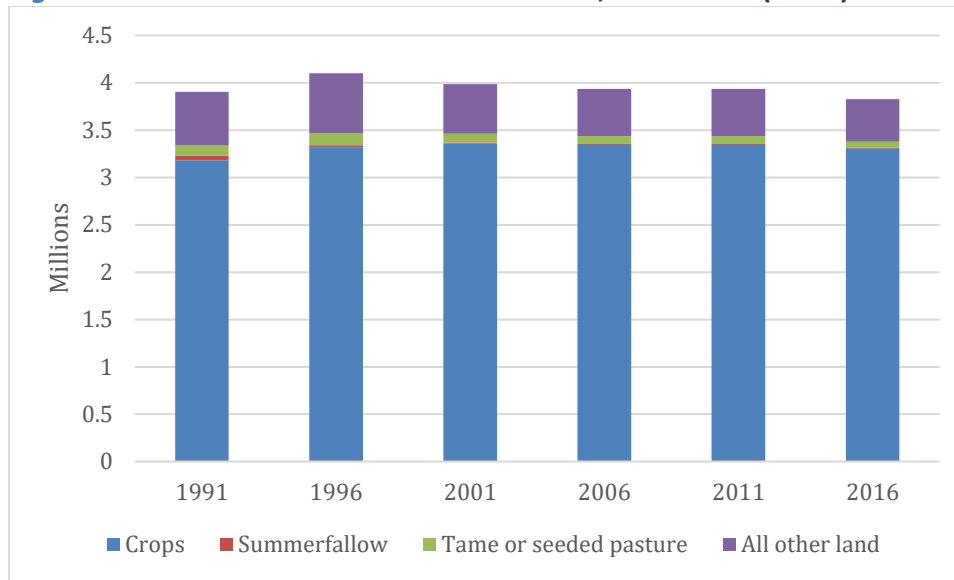
Kenora	12,371	151	3,665	21,805	37,992
Manitoulin	36,954	27	14,108	122,434	173,523
Nipissing	34,310	205	5,114	43,541	83,170
Rainy River	57,212	637	24,806	105,425	188,080
Sudbury	17,701	91	4,230	36,611	58,633
Thunder Bay	27,748	110	3,399	28,126	59,383
Timiskaming	118,092	499	20,538	75,706	214,835
Northern Ontario	377,687	2,513	94,481	537,345	1,012,026

4.1 Southern Ontario

Southern Ontario had the most farmland of all the regions with 3.94 million acres in 2016. Total farmland in Southern Ontario has increased by 41,042 acres or 1.1% over the last 25 years (see Figure 5). The total amount of farmland peaked in Southern Ontario in 1996 at 4.10 million acres. Aside from a recent increase between 2011 and 2016, 1991-1996 was the only other period of increase for the region. In 2016 Southern Ontario had 3,943,883 acres of farmland. Cropland comprised 81.5% of total farmland in Southern Ontario in 1991, and 87.10 in 2016. The amount of cropland increased from 1991-2001, peaked with 3.36 million acres in 2001, and steadily decreased from 2001-2011, before increasing approximately 4% over the most recent census period. There was a net increase in cropland of 0.25 million acres, or 8%. Summerfallow decreased steadily by 89% over the twenty-five-year period, with no periods of increase, ending in 2016 with 5,484 acres. Tame or seeded pasture decreased by 51,180 acres, or 47.5%. Following the trend, the only period of increase was from 1991-1996. All other land comprised 11.3% of all farmland in southern Ontario in 2016. Over the twenty-five-year period there was a net decrease of 118,887 acres or 21% in this all other land category with the only period of increase from 1991-1996.

Southern Ontario encompasses 10 counties (see Table 2). The most agriculturally significant one is Middlesex County, with 615,906 acres of farmland in 2016. This was 15.6% of all farmland in southern Ontario in 2016. The changes in the relative amount of farmland for this county are reflective of the other counties in the region. The county showed a net decrease of 3,325 acres or 0.54% over the census period. The only periods of increase of total farmland in Middlesex were from 1991-1996 (22,172 acres or 3.6%) and 2011-2016 (6,562 acres or 1.1%). Cropland comprised 80.4% of total land in 1991, and 85.7% in 2016, showing a total net increase of 29,925 acres or 6.01%. Following the general trend with regards to summerfallow, land area decreased by 3,570 acres, or 94%, leaving the county with only 234 acres in 2016. Tame or seeded pasture followed a similar pattern, fell by 54% losing 16,592 acres. All other land was the second greatest user of land in Middlesex County with 14% of the land in 1991, and 12% in 2016.

Figure 5 Farmland in Southern Ontario, 1991-2016 (acres)

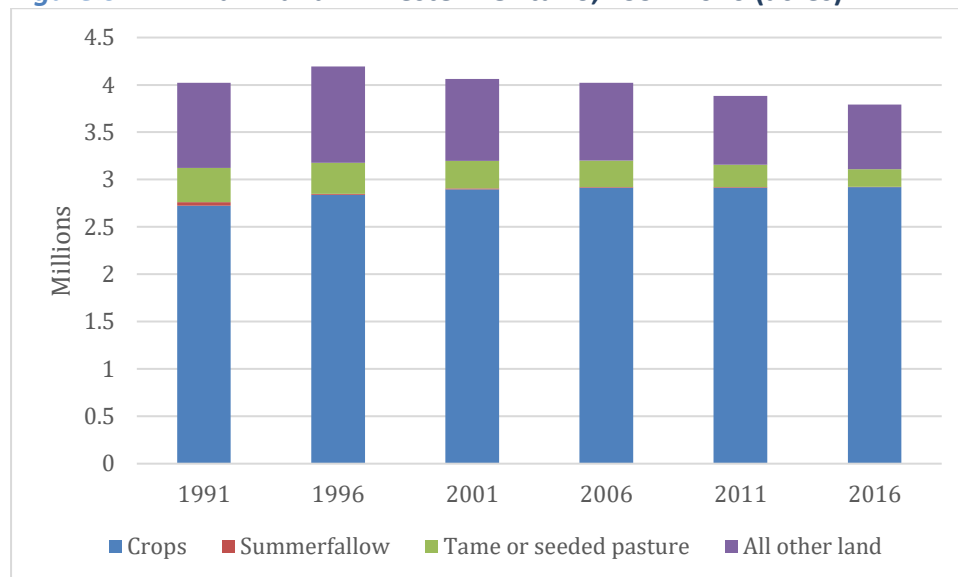


4.2 Western Ontario

Western Ontario had the second most farmland of all the regions with 3.8 million acres in 2016. This is down 399,593 acres from the high of 4.13 million in 1996, and 227,748 acres from 1991 (a net decrease of 5.7%). Huron County has the most agricultural land in Ontario, while Bruce, and Perth counties all have over 500,000 acres. Like Southern Ontario, most of the land is used for crops (77% in 2016, or 2.92 million acres). Unlike southern Ontario, there were no periods of decrease in cropland over the twenty-five-year interval. The net increase was 196,176 acres, or 7.2%. Summerfallow dramatically declined going from 37,735 to only 3,341 acres (a decrease of 91%). Most of this decline happened from 1991-1996, where 27,121 acres were lost (85% of the total loss). Tame and seeded pasture also had no periods of increase, losing 174,081 acres, or 48% in Western Ontario. More than 50% this decrease has occurred since 2006 as the region has lost 93,268 acres over the 10-year period. All other land comprised 18% of all the farmland in Western Ontario in 2016, and 22.32% in 1991. Other land only increased from 1991-1996, showing periods of decrease from 1996 onwards. The net change was a loss of 215,449 acres or 24% (see Figure 6).

Huron County contains the most farmland of all the counties in Ontario. In 2016 it had 19.4% of the farmland in Western Ontario, and 6% of the farmland in the Province. The only period of decrease for the county was from 1996-2001. The net increase in total farmland was 24,171 acres or 3.4%. Although the total amount of farmland did not change significantly, the composition of it did. Cropland increased by 59,830 acres or 10.7%. Summerfallow land fell by 2,275 acres or 96.7% leaving the county with only 77 acres in 2016. Tame and seeded pasture also showed a significant decrease of 47.3%, or 16,284 acres. The only period of increase was from 1991-1996. All other land lost a comparatively modest 14.6%, or 17,100 acres. Other agriculturally intensive counties in Western Ontario, such as Perth which makes up nearly 14% of the farmland in the region, displayed similar changes over time as Huron.

Figure 6 Farmland in Western Ontario, 1991-2016 (acres)

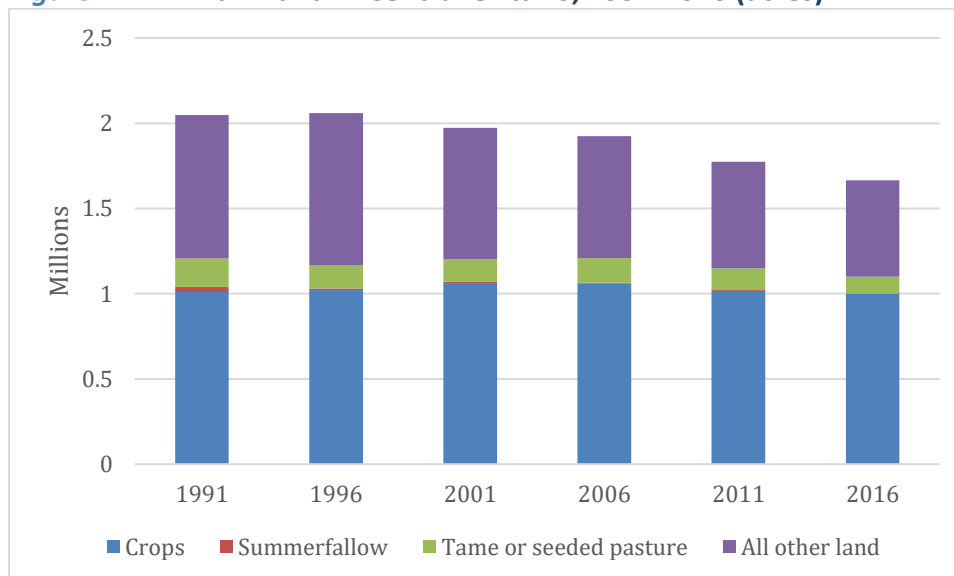


4.3 Central Ontario

Central Ontario has significantly less farmland than Southern and Western Ontario. In 2011 it contained only 1.66 million acres of farmland or 13.5% of all farmland in the province in 2016. In addition to having less farmland, less of it is in cropland. Around 60% of all farmland was in crops in 2016, which is an increase from the 49.3% of total farmland in the region that was cropland in 1991. Cropland decreased by 10,145 acres from 1991 to 2016, while total farmland in the county fell by 383,578 acres (see Figure 7). This was largely due to the decline in summerfallow (26,493 acres, or 91%), tame and seeded pasture (68,872 acres, or 41.2%), and other land (278,068, or 33%). The greatest drop in summerfallow was found from 1991-1996, where 19,712 acres were lost or 67.5%. In 2016, there was 98,147 acres in seeded pasture, or 5.89% of total farmland. The only period of increase was from 1996-2001. Other land increased from 1991-1996 and from 2001-2006.

The most agriculturally significant county in Central Ontario is Kawartha Lakes (formerly Victoria County) with 309,405. This is less than half of the amount of farmland in Huron County (see Figure 10). Kawartha Lakes has 18.6% of the farmland in Central Ontario. Cropland is still the largest user of farmland, but unlike counties in the, it comprises only 54.4% of the land. In 2016 there were 294 acres of summerfallow, or 0.1% of the county's land. Tame pasture stayed relatively stable up until the most recent census in 2016 which saw a 23.50% decrease since 2011. Overall, tame and seeded pasture has decreased by 28.01% or 9,817 acres since 1991 in the county. In addition, other land decreased by 32.40% or 55,400 acres.

Figure 7 Farmland in Central Ontario, 1991-2016 (acres)

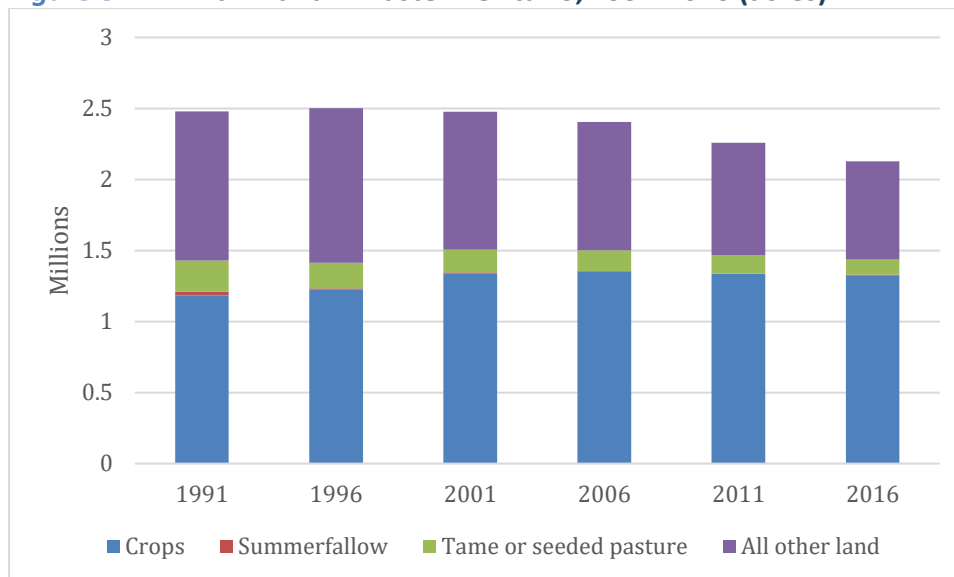


4.4 Eastern Ontario

Eastern Ontario has the third most amount of farmland, after Southern Ontario and Western Ontario, with 2,128,143 acres in 2016. This is down 351,857 acres from 1991, or around 14%. The only period of increase in total farmland in Eastern Ontario was from 1991-1996, with total farmland peaking in 1996 at 2,500,799 acres. Cropland comprised 47.7% of all land in Eastern Ontario in 1991, and this rose to 62.33% in 2016 as total area in cropland rose by 143,527 acres, or 12.2%. Cropland has decreased in the past two census periods (2006-2011, and 2011-2016) (see Figure 8). Following with the trend in the province, a dramatic fall in summerfallow land was observed with area falling by 88.68% or 24,346 acres with most of this drop occurring between 1991-1996. Seeded land for pasture fell by 114,008 acres, or 51.81%. There was no period of increase in tame pasture land, and the decrease was spread evenly across the twenty-five-year period. Additionally, other land use fell by 357,029 acres or 34.02% over the twenty-five-year period.

The most agriculturally significant county in Eastern Ontario is Stormont, Dundas, and Glengarry United County. In 2011, the County had 475,571 acres of agricultural land or 22.35% of the farmland in Eastern Ontario. The net change in total land over the twenty-five year period was an increase of 4,217 acres, or 0.89%. Cropland increased by over 20% by 22.38 acres. There were no periods of loss. Summerfallow fell by 80% or 4324 acres. Tame and seeded pasture declined by 11,539 acres (or 70.60%), also with no periods of increase. In 2016 there were 11,539 acres of tame or seeded pasture. In 2016 there was 94,987 acres of other land in the county. This was 19.97% of the total land. The net change was a loss of 31,033 acres, or 24.63%. The only period of gain was from 1991-1996.

Figure 8 Farmland in Eastern Ontario, 1991-2016 (acres)



4.5 Northern Ontario

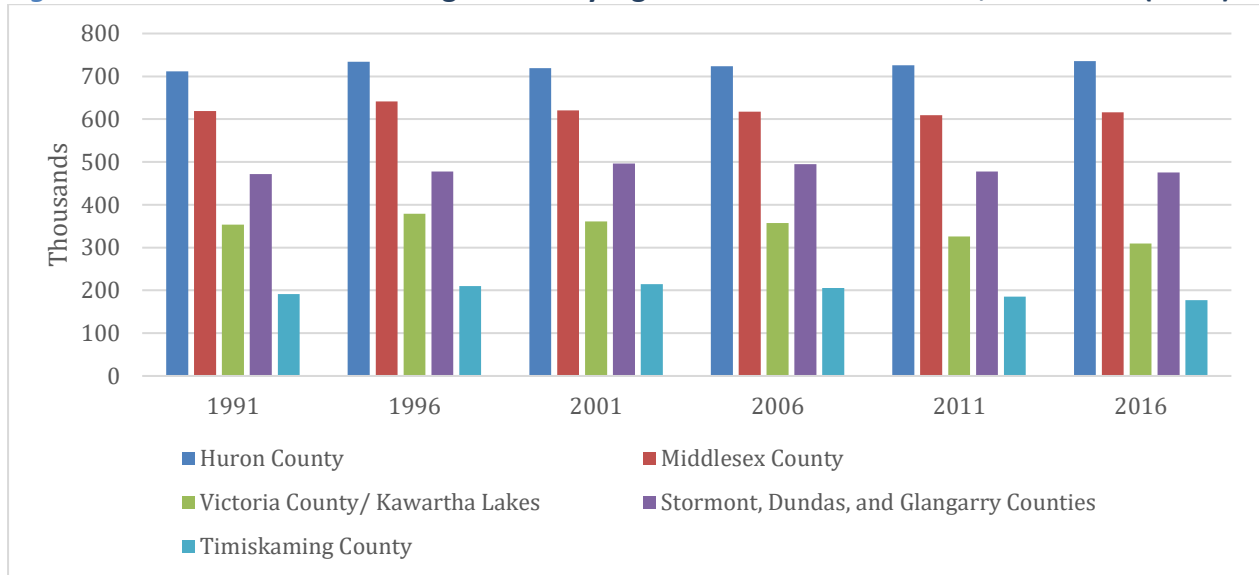
Northern Ontario has the least amount of farmland in the province, with only 817,244 acres in 2016 (6.62% of the total) and 1,017,293 acres in 1991 (7.55%). The total loss was 200,049 acres, or 19.66%. There were two periods of increase: one from 1991-1996, and the other from 2001-2006. The major use of farmland is for crops but only 41.64% of the total farmland is planted to crops in northern Ontario. As with other regions, the net area of cropland increased by 1.48% (4,951 acres) since 1991 with the only periods of decrease occurring recently from 2006-2011 and 2011-2016. As expected, summerfallow declined by 10,917 acres, or 89.64%%, leaving only 1,262 acres in 2016. Tame and seeded pasture decreased by 41,925 acres, or 39.37%. All other agricultural land makes up a much larger share of total farmland in Northern Ontario (50.31%) as compared to other regions in the province. However, as with other farmland use categories except for crop land, the amount of area in all other agricultural land has fallen since 1991 by 27.01% or 152,158 acres in Northern Ontario.

Northern Ontario has 7 of the 10 counties with less than 100,000 acres of farmland. The most agriculturally significant county is Timiskaming, with only 176,773 acres of farmland in 2016. Total amount of farmland peaked in Timiskaming in 2001 at 214,835 acres. Compared to other counties and regions in Northern Ontario Timiskaming saw the lowest decrease in total farmland since 1991 losing only 7.70% or 14,755 acres. 7 of the 10 counties saw declines greater than 20% of total farmland since 1991. Cropland made up 49.19% of the land in Timiskaming in 1991 and 66.03% in 2016. This is somewhat comparable to what was seen in the other agriculturally intensive counties selected regions of Ontario (see Figure 10). The area in cropland increased by 22,515 acres, or 23.90%. Summerfallow lost 1,571 acres or 77.70%, leaving the county with only 451 acres in 2016. Tame or seeded pasture lost 12,925 acres or 54.64%%. Other land showed a net decrease of 22,774 acres, or 31.79%.

Figure 9 Farmland in Northern Ontario, 1991-2016 (acres)



Figure 10. Total Farmland for 5 Agriculturally Significant Ontario Counties, 1991-2016 (acres)



5. Conclusions

Farmland area has increased over the past 95 years, although most of this growth came from 1921-1951. Although the total amount of farmland has stayed relatively constant recently, it did fall by approximately 4% between the 2006 and 2011 censuses and 0.89% between the 2011 and 2016 censuss. Currently, there is just under 160 million acres of farmland. Most of this farmland is located in Saskatchewan (39%) and Alberta (32%), while the total amount in Ontario has fallen by 45% since 1941 and represents 8% of the Canadian total.

Although the total amount of farmland has been relatively constant in Canada, there has been a significant shift in how the farmland is used. The area allocated to summerfallow has fallen by 92% or 24.8 million acres since 1976. This decline in summerfallow was offset by an increase in cropland of 23.3 million acres, over the same time period. More than half (58.8%) of Canada's total farmland is now used to grow crops with the 25% increase in the amount planted to crops occurring primarily from 1976 to 2001. Seeded pasture, which makes up less than 10% of total farmland, has also increased over time with much of the increase occurring in the Prairies.

Farmland loss in Canada has been recognized as a growing issue that requires attention and action. Canadian farmland is an important natural resource that allows Canadians to maintain a productive agricultural sector. It is important to know the total amount of farmland and its composition in order to determine the type of government response to keep the agricultural sector sustainable and competitive.

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- Statistics Canada. *Table 004-0002 - Census of Agriculture, total area of farms and use of farm land, Canada and provinces, every 5 years (number unless otherwise noted)*, CANSIM (database).

Imported Notes: (from StatsCan table 004-0002)

1. Traditionally, the data for summerfallow land are overstated in geographic areas where the practice is not common. However, a question added since 1991 on the use of weed control methods on summerfallow land significantly reduced the extent of over-reporting.
2. Since 1976, the area of "All other land" is the sum of the areas reported for all of the remaining land-use categories. Since 1996, the area of Christmas trees has been included with "All other land." Since 2006, a separate question about woodlands and wetlands was added and is also included in "All other land."
3. Since 1996, the term "Tame or seeded pasture" replaced "Improved land for pasture or grazing" used previously. Consequently, some respondents may have reported differently since 1996, thereby affecting the comparability of data with previous censuses.
4. In 1996 and 2001, some operators reported unplanted land intended for crops as idle land (a component of "All other land"), since at the time of the Census of Agriculture they were uncertain as to whether this land would be planted.
5. In 2006, in British Columbia the "Total area of farms" , "Unimproved pasture" and "All other land" are higher than in previous censuses due to better quality data on government lands operated under a license, permit or lease.
6. The Yukon Territory, Northwest Territories and Nunavut are not included in Canada totals.
7. In Alberta, Saskatchewan, and Manitoba, land that was reported as "too wet to seed" has been classified as "other land" instead of cropland or summerfallow.
8. Nova Scotia the area in "Christmas tree area, woodlands and wetlands" is higher than in previous censuses, partly due to the inclusion of integrated agricultural-forestry operations.