



**Ontario Federation of Agriculture**

**Ontario AgriCentre**

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## **Economic Contributions of Farming in Northern Ontario**

### **Socio-Economic Profile of Northern Ontario**

With a population of 824,150 people, northern Ontario<sup>1</sup> accounted for 6.2% of Ontario's total population in 2016. Fifty-nine percent of the northern population is between 20 to 64 years old. Even though most of the population is in their prime working years, northern Ontario has an unemployment rate of 9.2%, considerably higher than the provincial average of 7.4%. Given the high rate of unemployment, it is not surprising that average household income in northern Ontario is \$69,003, significantly lower than the provincial average of \$80,322.

Educational attainment in northern Ontario varies from the provincial average. Residents in northern Ontario are more likely to have obtained certificates/diplomas from apprenticeship, trades, or college and less likely to have completed a university degree at the bachelor level or above, when compared to the provincial average.

### **Profile of Farming in the North**

With 2,399 farms, northern Ontario accounted for 4.8% of Ontario's 49,600 farms in 2016. With 356 farms, Timiskaming was the northern district with the highest number of farms, while Kenora had the fewest with only 72 farms. Similar to the provincial trend, the number of farms in northern Ontario dropped by 363 between 2011 and 2016 due primarily to industry consolidation. Farmers in northern Ontario are more likely to own land; 77.9% of farmland in northern Ontario is owned compared to the provincial average of 71.1%.

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<sup>1</sup> For the purposes of this study "Northern Ontario" Includes: Muskoka, Parry Sound, Algoma, Cochrane, Sudbury, Kenora, Manitoulin, Nipissing, Rainy River, Thunder Bay and Timiskaming

Northern Ontario features a variety of farm types, including livestock, grain and oilseed, fruit and vegetable, and greenhouse and floriculture. Beef cattle is the most frequently produced commodity in northern Ontario with 479 farms. Some of the other most frequent farm types in northern Ontario include grains and oilseeds (136 farms), dairy (117 farms), and greenhouse production (120 farms).

Northern Ontario reported 3,485 farm operators in 2016. The profile of these farm operators matched up closely with the average farm operator in the province; they are mostly male and are getting older. Sixty-eight percent of the farm operators in northern Ontario were male, which is very comparable to the 70.3% of male farm operators at the provincial level. The average age of farm operators in northern Ontario in 2016 was 55.5 years of age (up from 55.0 in 2011), while the average age of farm operators in the province was 55.3 years of age (up from 54.4 in 2011). Parry Sound represents the district with the greatest average age of farm operators in 2016, at 59.5 years of age.

### **Economic Contributions of Northern Ontario Farm Sector**

This economic impact analysis is broken into two sections. The first section measures the impact of the farm sector in northern Ontario on the “downstream” portion of the agri-food supply chain. This includes farms, food processors and food retailers. The second section measures the impact of the farm sector in the “upstream” portion of the agri-food supply chain. This includes businesses that sell seeds, equipment and other inputs directly to farms.

The analysis of upstream and downstream economic impacts should not be interpreted as a combined impact of the northern Ontario farm sector. We cannot simply add the downstream impacts to the upstream impacts to arrive at a larger total impact of the northern farm sector. These are separate analysis, that employ very different methodologies and although they focus on different parts of the agri-food supply chain there will inevitably be a degree of overlap. The downstream and upstream analysis should be interpreted separately from one another.

The two methodologies are only included to demonstrate that farming in northern Ontario plays a vital role in in the agri-food supply chain which ranges from farm seed companies all the way to food retailers.

## **Section 1: Downstream Economic Impacts**

This section of the report estimates the economic impacts of northern Ontario farms based on the linkages to “**downstream**” businesses within the agri-food supply chain such as food processors and retailers. This does not include any of the “**upstream**” impacts which capture the economic impacts based on linkages between farms and “**upstream**” businesses that supply farms with the necessary inputs such as seed and machinery.

This section of the report does not rely on the use of economic multipliers, but instead implements the attribution model developed by the Ontario Ministry of Agriculture, Food & Rural Affairs (OMAFRA). The attribution model accounts for the direct Gross Domestic Product (GDP) and jobs generated by primary agriculture, food processing and food retail in Ontario. The economic impacts attributed to farms in northern Ontario is proportionate to northern Ontario’s relative share of farm production in the province. For example, since 1.3% of all farm cash receipts originated from farms in Northern Ontario, approximately 1.3% of the economic contributions of the agri-food sector to the provincial economy are attributed to the north.

Farming in northern Ontario is a major driver of economic activity making significant contributions to the provincial economy. Farm level commodity sales (referred to going forward as “farm cash receipts”) have grown over the past ten years from \$182 million in 2006 to nearly \$206 million in 2017.

As shown in Table 1.1, Timiskaming, Thunder Bay and Rainy River accounted for 55% of all farm cash receipts in the northern Ontario with \$61 million, \$29 million and \$18 million respectively. As shown in Table 1.2, the dairy sector accounted for the largest share of cash receipts of any commodities, with more than \$57 million in sales in in 2017. The grains and oilseeds, and cattle

sectors are also major contributors accounting for \$43.8 million and \$37.5 million in farm cash receipts respectively.

**Table 1.1: Total Farm Cash Receipts in Northern Ontario by District 2017<sup>2</sup>**

Region	Farm Cash Receipts (Millions of Dollars)
Muskoka	\$3.4
Parry Sound	\$7.4
Algoma	\$18
Cochrane	\$8.6
Kenora	\$2.9
Manitoulin	\$17.8
Nipissing	\$14.1
Rainy River	\$22.8
Sudbury	\$17.7
Thunder Bay	\$30.8
Timiskaming	\$62.5
<b>Total: Northern Ontario Farm Cash Receipts</b>	<b>\$205.96</b>

**Table 1.2: Total Farm Cash Receipts in Northern Ontario by Commodity, 2017**

<sup>2</sup> All figures in Tables 1.1, 1.2, 1.3, and 1.4 are rounded to the nearest million



Commodity	Farm Cash Receipts (Millions of Dollars)
Grains & Oilseeds	\$43.8
Potatoes	\$5.1
Greenhouse Vegetables	\$0.5
Field Vegetables	\$4.3
Fruit	\$2
Floriculture	\$9.2
Christmas Trees	\$0.8
Nursery	\$0.01
Maple	\$4.5
Forest Products	\$0.94
Cattle	\$37.5
Sheep	\$3.5
Dairy	\$57.3
Poultry	\$1.4
Eggs	\$0.6
Hogs	\$0.9
Honey	\$0.3
Other	\$2.1

These farm cash receipt figures demonstrate the growth of farming in northern Ontario and reveal which commodities have been the primary drivers of that growth. Grains and oilseeds producers have seen the most explosive growth, with farm cash receipts increasing by over 300% from 2006 to 2017. Cattle producers have also seen a significant expansion in northern Ontario over the past ten years with a 66% increase in cash receipts. Grains and oilseeds, and cattle cash receipts grew by a combined \$38.5 million from 2006 to 2017.

However, these farm cash receipts are merely the starting point in measuring the economic contributions of farm businesses in northern Ontario. The economic activity generated from these farm cash receipts is represented through the jobs, and GDP added to provincial economy.

As shown in Table 1.3, northern farm cash receipts support 12,220 jobs and contributed \$587 million in GDP to the provincial economy. This economic activity originates at the farm and then moves through the value chain where farm commodities are processed into marketable food products before moving to retail levels such as grocery stores and restaurants where that processed farm commodity is sold to an end user. This represents the “field to fork” aspect of the agri-food value chain. At each level of the value chain there is investment and activities that generate significant benefits to the provincial economy.

Timiskaming, Thunder Bay and Rainy River account for 58% of the GDP contributed by farm production in the northern Ontario with \$186 million, \$91 million and \$66 million respectively. Those same districts also accounted for 58 % of job creation with Timiskaming leading the way with 3,876 jobs, followed by Thunder Bay with 1,898 jobs, and Rainy River with 1,365 jobs.

**Table 1.3: Economic Contributions of Northern Farm Production by District, 2017**

Region	Number of Jobs	GDP (Millions of dollars)
Muskoka	148	\$7
Parry Sound	368	\$18
Algoma	1,035	\$50
Cochrane	484	\$23
Kenora	155	\$7
Manitoulin	1,058	\$51
Nipissing	810	\$39
Rainy River	1,365	\$66
Sudbury	1,025	\$49
Thunder Bay	1,898	\$91
Timiskaming	3,876	\$186
<b>Total</b>	<b>12,220</b>	<b>\$587</b>

The contribution to the provincial economy by farmers in northern Ontario has been growing over the past ten years. Gross domestic product contributions to provincial economy have increased by 36% over the past decade from \$433 million in 2006 to \$587 million in 2017.

## Section 2: Upstream Economic Impacts

This section of the report estimates the economic impacts of northern Ontario farms based on the linkages to “**upstream**” suppliers such as seed, equipment and other input suppliers to farms<sup>3</sup>. This does not include any of the “**downstream**” impacts, which capture the economic impacts of the “value added” activities of processing and then retailing agricultural commodities.

Farming in northern Ontario is a major driver of economic activity, making significant contributions to the provincial economy. Farm cash receipts have grown from \$182 million in 2006 to \$206 million in 2017.

**Table 2.1: Total Farm Cash Receipts in Northern Ontario by District, 2017<sup>4</sup>**

Region	Farm Cash Receipts (Millions of Dollars)
Muskoka	\$3.4
Parry Sound	\$7.4
Algoma	\$18
Cochrane	\$8.6
Kenora	\$2.9
Manitoulin	\$17.8
Nipissing	\$14.1
Rainy River	\$22.8
Sudbury	\$17.7
Thunder Bay	\$30.8
Timiskaming	\$62.5
<b>Total: Northern Ontario Farm Cash Receipts</b>	<b>\$205.96</b>

A dollar spent on producing farm level commodities circulates and re-circulates within the provincial economy. This multiplies the effect of the original dollar spent on overall economic

<sup>3</sup> This methodology uses the 2013 Input-Output Multipliers developed by Statistics Canada. The input-output multipliers are derived from the supply and use tables (SUTs). They are used to assess the effects on the economy of an exogenous change in final demand for the output of a given industry. They provide a measure of the interdependence between an industry and the rest of the economy.

<sup>4</sup> All figures in Tables 1.1, 1.2, 1.3, and 1.4 are rounded to the nearest million

impact. This is referred to as the economic multiplier effect. It has three levels starting from the direct, moving to the indirect, and finally the induced impacts.

**Direct:** The economic impact to the Ontario economy generated directly from farm level expenditures on inputs such equipment, seeds, labour etc.

**Indirect:** The economic impact generated by the firms that supply farms. For example, this would include seed and tractor suppliers.

**Induced:** The further economic impacts of spending by households who received income because of the direct and indirect impacts of farming output.

The upstream economic impacts of northern agriculture are driven by the expenditures that these farms directly spend to operate their farm business. These include spending's on things such as seeds, fertilizer, machinery, veterinarian fees, and all other inputs that farmers in the north need to purchase in their day-to-day operations. These expenditures are made possible by the farm cash receipts ("output") which generate revenue for farmers to pay for these expenditures.

In 2017, the direct output from the sale of farm commodities in northern Ontario was \$205,962,416. This direct output drives not only northern farmer's direct economic impact, but also sustains the businesses that supply farms such as a seed company. The economic activity generated directly by the input suppliers that are depended upon farm output is referred to as the "indirect" effect.

Tables 2.2 to 2.4 show the direct, indirect, induced and total economic contributions of farms in northern Ontario to the provincial economy. Beginning with Table 2.2, the \$206 million in farm cash receipts are spent on seeds, labour, machinery and other inputs. This **direct** spending of farm cash receipts in northern Ontario contributes \$71.7 million to provincial GDP.

The \$206 million in farm cash receipts also sustains the local businesses that supply the inputs for farms in northern Ontario. That \$206 million is taken in by input businesses which in turn

spend that money to purchase their own inputs, resulting in an additional \$71.1 million in provincial GDP. This represents the **indirect** effect that farms in northern Ontario have on provincial GDP.

**Table 2.2: Contributions of Northern Farm Production to GDP (millions of dollars)**

	2017	2011
<b>Farm Cash Receipts</b>	<b>\$205,962,416</b>	<b>\$173,550,000</b>
<b>GDP (\$ million)</b>		
Direct	\$71.7	\$60.4
Indirect	\$71.1	\$59.8
Induced	\$25.5	\$21.5
<b>Total</b>	<b>\$168.3</b>	<b>\$141.8</b>

Tables 2.3 and 2.4 show us the impact that \$206 million in farm cash receipts has on jobs and wages. The **direct** impact of farm cash receipts is 1,030 jobs (Table 2.3) which generate \$34.8 million in wages (Table 2.4). Recall that \$206 million in expenditures by farms represents revenue for the businesses that supply the inputs for farms in northern Ontario, which is then spent on their own inputs, one of which is labour. These input supply businesses take the revenue they receive from farms in northern Ontario and that sustains an additional 682 jobs (Table 2.3), totalling \$37.1 million in wages (Table 2.4). This represents the indirect impact that farm output in northern Ontario has on jobs and wages.

It is interesting to note that although the indirect jobs are fewer than the direct jobs, the total wages paid to indirect employment is larger. This tells us that the indirect jobs sustained by input supply businesses, which depend on northern farms, are relatively high paying jobs.

**Table 2.3: Contributions of Northern Farm Production to Jobs**

	2017	2011
<b>Farm Cash Receipts</b>	<b>\$205,962,416</b>	<b>\$173,550,000</b>
<b>Jobs</b>		
Direct	1,030	868
Indirect	682	574
Induced	267	225
<b>Total</b>	<b>1,978</b>	<b>1,667</b>

**Table 2.4: Contributions of Northern Farm Production to Wages (millions of dollars)**

	2017	2011
<b>Farm Cash Receipts</b>	<b>\$205,962,416</b>	<b>\$173,550,000</b>
<b>Wages (\$ million)</b>		
Direct	\$34.8	\$29.34
Indirect	\$37.1	\$31.2
Induced	\$11.8	\$10.0
<b>Total</b>	<b>\$83.8</b>	<b>\$70.6</b>

Tables 2.1 to 2.3 also show us the induced effect of northern farm cash receipts. The direct farm effects and the indirect effects of farm input supply businesses sustained 1,712 jobs in the provincial economy and paid nearly \$72 million in wages in 2017. Those wages represent income for households in Ontario, which in turn spend that revenue in the provincial economy creating additional economic contributions to the provincial economy, referred to as the **induced effect**. This induced effect of household spending provides an additional \$25.5 million in GDP and sustains an additional 267 jobs and \$11.8 million in wages in the provincial economy in 2017.

When considering the direct, indirect and induced effects of the \$206 million in cash receipts, farms in northern Ontario contributed over \$168 million in GDP, sustaining nearly 2,000 jobs and \$83.4 million in wages to the provincial economy in 2017.

As demonstrated by Tables 2.2 to 2.4, with GDP, jobs and wages all increased by approximately 19% from 2011 to 2017. The Ontario economy has been enjoying the benefits of increased farm production in northern Ontario.

Tables 2.5 to 2.7 show the total (direct + indirect + induced) economic contributions broken down by district. Farm cash receipts in Timiskaming generated the largest economic contributions of any other district, providing \$51,100,000 in GDP, 600 jobs and \$25,400,000 in wages to the provincial economy.

**Table 2.5: Direct + Indirect + Induced GDP by District (millions of Dollars)**

District	2017	2011
Muskoka	\$2.7	\$2.8
Parry Sound District	\$6.1	\$7.5
Algoma	\$14.7	\$15.3
Cochrane	\$7.0	\$5.1
Kenora	\$2.3	\$2.1
Manitoulin	\$14.5	\$9.5
Nipissing	\$11.5	\$6.6
<b>Rainy River</b>	<b>\$18.6</b>	<b>\$13.7</b>
Sudbury	\$14.4	\$9.3
<b>Thunder Bay</b>	<b>\$25.1</b>	<b>\$24.3</b>
<b>Timiskaming</b>	<b>\$51.1</b>	<b>\$45.4</b>
<b>Total</b>	<b>\$168.4</b>	<b>\$141.8</b>

**Table 2.6: Direct + Indirect + Induced Jobs by District**

District	2017	2011
Muskoka	33	33
Parry Sound District	71	89
Algoma	173	179
Cochrane	83	60
Kenora	28	25
Manitoulin	171	112
Nipissing	135	77
<b>Rainy River</b>	<b>219</b>	<b>161</b>
Sudbury	170	111
<b>Thunder Bay</b>	<b>296</b>	<b>286</b>
<b>Timiskaming</b>	<b>600</b>	<b>534</b>
<b>Total</b>	<b>1,978</b>	<b>1,667</b>

**Table 2.7: Direct + Indirect + Induced Wages by District (millions of dollars)**

District	2017	2011
Muskoka	\$1.3	\$1.4
Parry Sound District	\$3.0	\$3.7
Algoma	\$7.3	\$7.5
Cochrane	\$3.5	\$2.5
Kenora	\$1.1	\$1.0
Manitoulin	\$7.2	\$4.7
Nipissing	\$5.7	\$3.2
<b>Rainy River</b>	\$9.2	\$6.8
Sudbury	\$7.1	\$4.6
<b>Thunder Bay</b>	\$12.5	\$12.1
<b>Timiskaming</b>	\$25.4	\$22.6
<b>Total</b>	<b>\$83.7</b>	<b>\$70.6</b>

Whether we are measuring the downstream impacts, which include food processors and retailers, or the upstream impact which include farm input suppliers, the economic impact of farming in northern Ontario has been growing significantly over the past decade.

This growth was made possible, in part by funding for tile drainage available through the Northern Ontario Heritage Fund. Northern Ontario farmers face unique challenges that their southern counterparts do not. While the market value of farmland is less expensive in northern Ontario, the cost to bring land to proper farming condition can be cost prohibitive. These costs often discourage potential investment through the expansion of an existing farm or starting a new farm business in northern Ontario. Programs such as the Northern Ontario Heritage Fund will continue to play a key role in the future expansion of farming in the north, and the economic benefits that farming brings to the provincial economy, and funding for these programs must be kept intact.

*This report was received and approved by the Northern Caucus of the Ontario Federation of Agriculture on November 18<sup>th</sup> 2018.*