Chapter 4 Economic Profile of Agriculture in Niagara

4.1 Economic Profile of Agriculture in Niagara

To assess the impact of agriculture on the Niagara economy, it is necessary to understand the Region's characteristics and how they have changed over time. This chapter provides an overview of agriculture in Niagara, discusses how agriculture has changed and provides insight into the major agricultural activities in the Region.

4.2 Total Number of Farms, Area of Farmland and Gross Farm Receipts

In 2001, Niagara had:

- 2,266 farms,
- occupying 232,817 acres of land; which
- generated $511,395,019 in gross farm receipts.

To put this in perspective, it should be noted that out of the 49 regions, counties and districts in Ontario, Niagara ranks thirty-eighth in geographic size[1]. However with respect to agriculture, it ranks twenty-fifth in total area farmed, tenth in the number of farms and fourth in gross farm receipts. It ranks first in value of average gross farm receipts per acre. **Figure 4.1** summarizes the provincial rankings in terms of number of farms, acres farmed and gross farm receipts.

The Region contains 3.7% of the farms; 1.7% of the total farmland acres and generates 5.6% of the gross farm receipts in Ontario. Approximately 52% of the total Niagara land base is farmland. In assessing the importance of the agricultural sector, Niagara's relative size must be considered. Only Huron, Perth and Oxford Counties generated higher gross farm receipts in 2001 than Niagara, and all of these counties are geographically much larger. On a national basis, Niagara generates higher gross farm receipts than any of the Maritime Provinces.

As described in Chapter 2, the combination of climate, soils, physiography and location have made Niagara one of the most productive agricultural regions in Canada. The high quality of the land is reflected in the value of the gross farm receipts generated. **Figure 4.2** summarizes the gross farm receipts generated on a provincial and local basis. The unique nature of the Niagara region is underscored by the fact that it generates the highest gross farm receipts per acre[2] in the province. The average gross farm receipts in Ontario is $674 per acre, in southern Ontario $995 and in Niagara $2,195 per acre.

Figure 4.3 provides a comparison of the status of agriculture in Niagara and the province in 1996 and 2001. Provincially, there has been a slight decrease in the total area of farms during the period; in Niagara there has been a slight increase. There has been a 17% increase in gross farm receipts in the province; in Niagara the percentage increase has been 25%.

It is interesting to compare the change in area of farmland, number of farms and gross farm receipts for the local Niagara municipalities. The comparison reveals significant differences, which can be attributed, not only to industry trends but also to the variety of agricultural operations found throughout the Region. This variety is a reflection of the physical features of the different municipalities which make different types of farming appropriate in different areas.

1 Municipal Directory, 1995, based on Ministry of Municipal Affairs information from 1993.
2 See glossary for definition of Southern Ontario Region

Figure 4.1 Ranking by County, District and Municipality of Total Number of Census Farms, Farmland Acres, and Gross Farm Receipts, 2001

Rank	*Geographic Location*	*No. of Farms*
1	Huron County	2,880
2	Grey County	2,834
3	County of Middlesex	2,640
4	County of Wellington	2,616
5	County of Perth	2,570
6	Simcoe County	2,463
7	County of Lambton	2,427
8	Mun of Chatham-Kent	2,352
9	Bruce County	2,345
10	**Reg Mun of Niagara**	**2,266**
11	County of Oxford	2,104
12	U.C. Stormont, Dundas & Glengarry	1,939
13	County of Essex	1,789
14	Reg Mun of Durham	1,709
15	Norfolk County	1,651
16	Elgin County	1,608
17	City of Kawartha Lakes	1,516
18	Reg Mun of Waterloo	1,444
19	Leeds & Grenville U.C.	1,348
20	County of Renfrew	1,342
21	City of Ottawa	1,318
22	County of Peterborough	1,202
23	County of Hastings	1,190
24	U.C. of Prescott & Russell	1,148
25	Northumberland County	1,104
26	City of Hamilton	1,026
27	Reg Mun of York	1,020
28	Haldimand County	951
29	Lanark County	910
30	Dufferin County	898
31	County of Brant	817
32	County of Frontenac	699
33	County of Lennox & Addington	629
34	Reg Mun of Halton	619
35	County of Prince Edward	535
36	Timiskaming District	532
37	Region of Peel	522

Rank	*Geographic Location*	*Farm-land Acres*
1	Huron County	719,066
2	County of Middlesex	620,321
3	Bruce County	611,461
4	County of Lambton	604,555
5	Grey County	593,121
6	Mun of Chatham-Kent	552,402
7	Simcoe County	540,870
8	County of Perth	502,926
9	U.C. Stormont, Dundas & Glengarry	496,498
10	County of Wellington	471,389
11	County of Oxford	445,458
12	County of Renfrew	402,978
13	Elgin County	382,786
14	City of Kawartha Lakes	360,690
15	Leeds & Grenville U.C.	336,650
16	County of Essex	334,122
17	Reg Mun of Durham	330,286
18	County of Hastings	306,068
19	City of Ottawa	297,644
20	U.C. of Prescott & Russell	297,384
21	Norfolk County	292,703
22	County of Peterborough	258,642
23	Northumberland County	253,665
24	Lanark County	241,972
25	**Reg Mun of Niagara**	**232,817**
26	Reg Mun of Waterloo	225,800
27	Haldimand County	222,396
28	Timiskaming District	214,835
29	County of Frontenac	205,542
20	County of Lennox & Addington	197,441
31	Dufferin County	193,162
32	District of Rainy River	188,080
33	Reg Mun of York	175,965
34	Manitoulin District	173,523
35	County of Brant	158,693
36	County of Prince Edward	143,223
37	City of Hamilton	138,879
38	Ashfield-Colborne-Wawanosh	108,395
39	Region of Peel	104,433
40	Reg Mun of Halton	98,758

Rank	*Geographic Location*	*Gross Farm Receipts ($)*
1	Huron County	656,497,798
2	County of Oxford	556,129,845
3	County of Perth	555,081,128
4	**Reg Mun of Niagara**	**511,395,019**
5	County of Middlesex	494,456,195
6	County of Essex	470,768,851
7	Mun of Chatham-Kent	439,758,272
8	County of Wellington	433,775,725
9	Norfolk County	392,607,833
10	Reg Mun of Waterloo	379,601,661
11	County of Lambton	321,690,461
12	Bruce County	309,996,102
13	Simcoe County	293,933,003
14	Elgin County	262,605,470
15	U.C. Stormont, Dundas & Glengarry	252,046,737
16	Grey County	240,606,873
17	Reg Mun of Durham	233,890,944
18	City of Hamilton	222,342,429
19	U.C. of Prescott & Russell	183,265,517
20	Reg Mun of York	178,963,186
21	City of Ottawa	151,877,673
22	Haldimand County	148,823,006
23	Leeds & Grenville U.C.	144,744,197
24	County of Brant	144,282,453
25	Reg Mun of Halton	141,473,312
26	Northumberland County	123,298,980
27	Region of Peel	116,536,793

Source: Census of Agriculture, Statistics Canada, 2001
Note: Data for number of farms, farmland area and gross farm receipts are calculated on all farms reporting. (please see explanation in glossary of terms)

Figure 4.2 Comparison of Total Area of Farms and Farms with Gross Farm Receipts of $2,500 and over (excluding forest product sold) Per Acre for the Regional Municipality of Niagara by Area Municipality, 1996 and 2001

1996 ***Geographic Location***	***Area Municipality (ac)***	***Number of Farms***	***Farmland Area (ac)***	***Average Farm Size (ac)***	***Farmland Area as % of Total Provincial Area***	***Farmland Area as % of Total Municipal Area***	***Gross Farm Receipts ($)***	***Gross Farm Receipts Per Acre ($)***	***Gross Farm Receipts as % of Total Provincial***	***Gross Farm Receipts as % of Total Municipal***
Ontario		59,887	13,879,565	232			7,769,797,011	560		
Southern Ontario Region		20,756	4,100,912	198	29.55%		3,383,354,632	825	43.54%	
Niagara	**444,349**	**2,269**	**229,832**	**101**	**1.66%**		**407,857,114**	**1,775**	**5.25%**	
Fort Erie	40,670	59	10,330	175		4.49%	5,903,643	572		1.45%
Port Colborne	28,545	66	13,444	204		5.85%	7,646,618	569		1.87%
Wainfleet	53,143	204	34,061	167		14.82%	31,249,537	917		7.66%
West Lincoln	92,683	454	70,907	156		30.85%	63,306,743	893		15.52%
Pelham	28,483	193	17,449	90		7.59%	29,086,225	1,667		7.13%
Welland	20,581	14	1,660	119		0.72%	991,294	597		0.24%
Thorold	20,981	60	8,029	134		3.49%	9,165,817	1,142		2.25%
Niagara Falls	50,524	69	9,829	142		4.28%	6,512,480	663		1.60%
Niagara-on-the-Lake	31,132	453	21,291	47		9.26%	86,455,294	4,061		21.20%
St. Catharines	23,790	119	4,378	37		1.90%	33,423,830	7,634		8.19%
Lincoln	37,771	475	32,110	68		13.97%	113,387,274	3,531		27.80%
Grimsby	16,045	103	6,344	62		2.76%	20,728,359	3,267		5.08%
2001										
Ontario		55,092	13,507,357	245			9,109,847,515	674		
Southern Ontario Region		18,649	3,985,132	214	29.50%		3,963,662,611	995	43.51%	
Niagara	**444,349**	**2,024**	**232,817**	**115**	**1.72%**		**511,132,568**	**2,195**	**5.61%**	
Fort Erie	40,670	55	9,847	179		4.23%	5,886,750	598		1.15%
Port Colborne	28,545	59	13,379	227		5.75%	7,535,934	563		1.47%
Wainfleet	53,143	184	40,062	218		17.21%	30,306,251	756		5.93%
West Lincoln	92,683	413	67,118	163		28.83%	68,014,144	1,013		13.31%
Pelham	28,483	187	19,536	104		8.39%	40,613,784	2,079		7.95%
Welland	20,581	22	2,123	97		0.91%	2,201,514	1,037		0.43%
Thorold	20,981	43	11,537	268		4.96%	7,419,080	643		1.45%
Niagara Falls	50,524	64	8,191	128		3.52%	6,115,927	747		1.20%
Niagara-on-the-Lake	31,132	367	22,031	60		9.46%	109,807,035	4,984		21.48%
St. Catharines	23,790	100	4,755	48		2.04%	46,168,605	9,709		9.03%
Lincoln	37,771	432	27,945	65		12.00%	160,332,058	5,737		31.37%
Grimsby	16,045	98	6,293	64		2.70%	26,731,486	4,248		5.23%

Note: Southern Ontario Region includes the following Counties & Districts: Brant, Elgin, Essex, Haldimand-Norfolk (now Haldimand County and Norfolk County, 2001), Hamilton-Wentworth (now City of Hamilton, 2001), Chatham-Kent, Lambton, Middlesex, Niagara, and Oxford. Data for number of farms and gross farm receipts are calculated on farms reporting with gross farm receipts of $2,500 and over; data for farmland area is calculated from all farms reporting.
Source: 2001 Statistics Canada - Catalogue No. 95F0301XIE

Figure 4.3 Comparison of Total Area of Farms and Gross Farm Receipts ($2,500 and over* - excluding forest product sold) Per Acre for Ontario, Southern Ontario Region and the Regional Municipality of Niagara by Area Municipality by Area Municipality, 1996 and 2001

Geographic Location	*1996*					*2001*				
	Number of Farms	*Farmland Area (ac)*	*Average Farm Size (ac)*	*Gross Farm Receipts ($)*	*Gross Farm Receipts Per Acre ($)*	*Number of Farms*	*Farmland Area (ac)*	*Average Farm Size (ac)*	*Gross Farm Receipts ($)*	*Gross Farm Receipts Per Acre ($)*
Ontario	59,887	13,879,565	232	7,769,797,011	560	55,092	13,507,357	245	9,109,847,515	674
Southern Ontario Region	20,756	4,100,912	198	3,383,354,632	825	18,649	3,985,132	214	3,963,662,611	995
Reg Mun of Niagara	**2,269**	**229,832**	**101**	**407,857,114**	**1,775**	**2,024**	**232,817**	**115**	**511,132,568**	**2,195**
Fort Erie	59	10,330	175	5,903,643	572	55	9,847	179	5,886,750	598
Port Colborne	66	13,444	204	7,646,618	569	59	13,379	227	7,535,934	563
Wainfleet	204	34,061	167	31,249,537	917	184	40,062	218	30,306,251	756
West Lincoln	454	70,907	156	63,306,743	893	413	67,118	163	68,014,144	1,013
Pelham	193	17,449	90	29,086,225	1,667	187	19,536	104	40,613,784	2,079
Welland	14	1,660	119	991,294	597	22	2,123	97	2,201,514	1,037
Thorold	60	8,029	134	9,165,817	1,142	43	11,537	268	7,419,080	643
Niagara Falls	69	9,829	142	6,512,480	663	64	8,191	128	6,115,927	747
Niagara-on-the-Lake	453	21,291	47	86,455,294	4,061	367	22,031	60	109,807,035	4,984
St. Catharines	119	4,378	37	33,423,830	7,634	100	4,755	48	46,168,605	9,709
Lincoln	475	32,110	68	113,387,274	3,531	432	27,945	65	160,332,058	5,737
Grimsby	103	6,344	62	20,728,359	3,267	98	6,293	64	26,731,486	4,248

Note: Southern Ontario Region includes the following Counties & Districts: Brant, Elgin, Essex, Haldimand-Norfolk (now Haldimand County and Norfolk County, 2001), Hamilton-Wentworth (now City of Hamilton, 2001), Chatham-Kent, Lambton, Middlesex, Niagara, and Oxford. Data for gross farm receipts is calculated on farms reporting with gross farm receipts of $2,500 and over; data for farmland area is calculated from all farms reporting.
** see glossary*
Source: 2001 Statistics Canada - Catalogue No. 95F0301XIE; Ontario Profile of Agriculture, Statistics Canada, 1996

First, looking at the area of the municipalities compared to the area of farmland, there is an apparent relationship but there are also some anomalies. The following is a list of the ranking of the municipalities in Niagara, from smallest to largest, by geographic area, and by total acreage of farmland:

Figure 4.4 Ranking of Farmland Acreage as Percentage of Total Area by Area Municipality, 2001

Geographic Location	*Total Area (ac)*	*Farmland Area (ac)*	*Farmland as % of Total*
Grimsby	16,045	6,293	39.2%
Welland	20,581	2,123	10.3%
Thorold	20,981	11,537	55.0%
St. Catharines	23,790	4,755	20.0%
Pelham	28,483	19,536	68.6%
Port Colborne	28,545	13,379	46.9%
Niagara-on-the-Lake	31,132	22,031	70.8%
Lincoln	37,771	27,945	74.0%
Fort Erie	40,670	9,847	24.2%
Niagara Falls	50,524	8,191	16.2%
Wainfleet	53,143	40,062	75.4%
West Lincoln	92,683	67,118	72.4%

Source: 1995 Ontario Municipal Directory
2001 Statistics Canada - Census of Agriculture

West Lincoln is significantly larger than the other municipalities and not surprisingly, contains the highest amount of farmland. It ranks third in value of gross farm receipts. West Lincoln is consistent with the provincial trends, between 1996 and 2001 the number of farms decreased from 454 to 413, and the average farm size saw a small increase from 156 to 163 acres.

The municipalities with larger urban centers, Niagara Falls and St. Catharines contain proportionately smaller amounts of farmland. There is a correlation between population and amount of farmland. Those municipalities with the smallest populations, Wainfleet, West Lincoln, Niagara-on-the-Lake and Pelham have well in excess of 50% of their geographic area farmed. The other municipalities with more than of 50% of the land area farmed are Thorold and Lincoln. However all the municipalities in Niagara contain a significant amount of farmland.

As is discussed further on in this section, there is no direct correlation between area of farmland and gross farm receipts. The municipality which generated the highest level of gross farm receipts both in 1996 and 2001 was Lincoln followed by Niagara-on-the-Lake, West Lincoln and St. Catharines. Wainfleet, which is the second largest municipality with the second highest amount of farmland, ranked ninth in gross farm receipts in 1996, eighth in 2001.

The discrepancies between size and gross farm receipts are related to the type of commodity grown. This is clearly illustrated when the gross farm receipts per acre are considered. The top ranking municipalities in terms of average gross farm receipts per acre, are St. Catharines, Lincoln, Niagara-on-the-Lake and Grimsby. These are the municipalities where fruit and greenhouse products dominate. These commodities are high value and require smaller acreages to produce.

Municipalities with lower gross farm receipts per acre, tend to have higher numbers of land extensive agricultural operations such as cash crop and livestock.

4.3 Change in Number of Farms and Area of Farmland 1976- 2001

An examination of the change in farmland acres shown on **Figure 4.5** provides some insight into the trends in the agricultural sector in Niagara. A review of the number of farms shown on **Figure 4.6** is less helpful since there is an overall trend in agriculture toward fewer farms and the rationalization of operations. This results in larger operations with greater value of production.

Different definitions are used to record farm numbers making it difficult to obtain a clear picture of the extent of agriculture in Niagara. The Census of Agriculture includes farms that produce crops, livestock, poultry, or specialty items such as Christmas trees, maple syrup, or honey with a total annual value of $2,500 or more. In 2001, 55,092 census farms were recorded in Ontario. In contrast, municipal tax rolls include only those farms, which have sales of more than $8,200 and are registered with either the Ontario Federation of Agriculture, or the Christian Farmers Federation of Ontario. This difference can result in a failure to recognize the true importance of farming, particularly at the municipal level. In municipalities where small, part time farms predominate, the number of census farms is several times greater than the numbers of farms registered on tax rolls.

In absolute numbers, Niagara lost 1926 farms during the period from 1971 to 2001. This represents a 49% drop in the number of farms compared to a 42% decline at the provincial level and a 43% change for the southern Ontario region. However, when farmland acres[3] are compared, there was an absolute decline of 19,727 acres in number of farmland acres, or a 7.8% decline in Niagara as compared to a decrease of 2,455,699 acres or a 15% decline at the provincial level. For the southern Ontario region, the change in farmland acres was 4% which is lower than the percentage loss in Niagara. Niagara is losing farmland at a much slower rate than the province as a whole, but at a higher rate than in the southern Ontario region. The decline in number of farms in Niagara is occurring at a higher rate than in either the province as a whole or the southern Ontario region. This elevated level of loss is consistent with trends in other areas where pressure for urban growth is more intense. The percentage change in both the number of farms and farmland acres is graphically depicted on **Figures 4.7 and 4.8.**

For a clearer understanding of the trends in the Region, an analysis of the change in the number of farms and farmland acres between 1996 and 2001 was conducted for the local municipalities. The results are contained on **Figure 4.3**. Interestingly, Niagara differs slightly from the provincial trend. Across the province there has been a consistent increase in the size of farm operations. In Niagara there has been a decrease in average farm size in three of the municipalities, Welland, Niagara Falls, and Lincoln. This can probably be attributed to the nature of the operations that dominate in these municipalities. In each of them, the top ranked commodity groups are fruit, greenhouse or poultry operations that operate economically on smaller acreages.

As shown on **Figure 4.5** during the period between 1971 and 2001, the amount of farmland decreased by 19,727 acres. Between 1996 and 2001 there was a slight increase in acreage from 229,832 acres to 232,817 acres. **Figure 3.4** in the previous chapter maps the percentage change by municipality. These figures are also listed in **Figure 4.3**. A review of these numbers did not reveal any particular trends. Wainfleet has seen the largest percentage increase in amount of farmland. In real terms for Wainfleet, the increase translates to one of 6,001acres. Welland and Thorold have seen increases of 463 acres and 3,508 acres respectively. The largest decreases were experienced in Niagara Falls and Lincoln. In Niagara Falls there was a decrease of 1,638 acres; in Lincoln a decrease of 4,165 acres. This is significant in Lincoln considering the average farm size was 65 acres in 2001. This translates to a loss of an equivalent of 64 farms.

[3] Refers to total area farmed – for explanation see Glossary of Terms.

Figure 4.5 Farmland Acres (ac) in Ontario, Southern Ontario Region and the Regional Municipality of Niagara (Percentage of Change), 1971 to 2001

Geographic Location	***Farmland Area (ac)***							***Percentage of Change***	***Percentage of Change***
	1971	***1976***	***1981***	***1986***	***1991***	***1996***	***2001***	***1971 - 2001***	***1996 - 2001***
Ontario	15,963,056	15,473,011	14,923,280	13,953,009	13,470,653	13,879,565	13,507,357	-15.38%	-2.68%
Southern Ontario Region	4,164,494	4,106,658	4,079,868	3,930,710	3,902,841	4,100,912	3,985,132	-4.31%	-2.82%
Reg Mun of Niagara	252,544	243,615	248,655	236,942	215,939	229,832	232,817	-7.81%	1.30%

Note: Southern Ontario Region includes the following Counties & Districts: Brant, Elgin, Essex, Haldimand-Norfolk (now Haldimand County and Norfolk County, 2001), Hamilton-Wentworth (now City of Hamilton, 2001), Chatham-Kent, Lambton, Middlesex, Niagara, and Oxford. Data for farmland area is calculated from all farms reporting.
Source: 2001 Statistics Canada - Catalogue No. 95F0301XIE; 1996 Statistics Canada - Agriculture Profile of Ontario - Catalogue No 95-177-XPB; 1991 Agricultural Statistics for Ontario - OMAFRA - Publication 20; 1981 Agricultural Statistics for Ontario - OMAFRA - Publication 20

Figure 4.6 Number of Farms in Ontario, Southern Ontario Region and the Regional Municipality of Niagara (Percentage of Change), 1971 to 2001

Geographic Location	***Number of Farms***							***Percentage of Change***	***Percentage of Change***
	1971	***1976***	***1981***	***1986***	***1991***	***1996***	***2001***	***1971 - 2001***	***1996 - 2001***
Ontario	94,722	88,801	82,448	72,713	68,633	59,887	55,092	-41.84%	-8.01%
Southern Ontario Region	32,665	30,299	27,975	24,914	23,034	20,756	18,649	-42.91%	-10.15%
Reg Mun of Niagara	3,950	3,718	3,512	3,147	2,706	2,269	2,024	-48.76%	-10.80%

Note: Southern Ontario Region includes the following Counties & Districts: Brant, Elgin, Essex, Haldimand-Norfolk (now Haldimand County and Norfolk County, 2001), Hamilton-Wentworth (now City of Hamilton, 2001), Chatham-Kent, Lambton, Middlesex, Niagara, and Oxford. Data for number of farms is calculated on farms reporting with gross farm receipts of $2,500 and over.
Source: 2001 Statistics Canada - Catalogue No. 95F0301XIE; 1996 Statistics Canada - Agriculture Profile of Ontario - Catalogue No 95-177-XPB; 1991 Agricultural Statistics for Ontario - OMAFRA - Publication 20; 1981 Agricultural Statistics for Ontario - OMAFRA - Publication 20

Figure 4.7 Number of Farms in Ontario, Southern Ontario Region and Regional Municipality of Niagara (Percentage of Change), 1971 to 2001

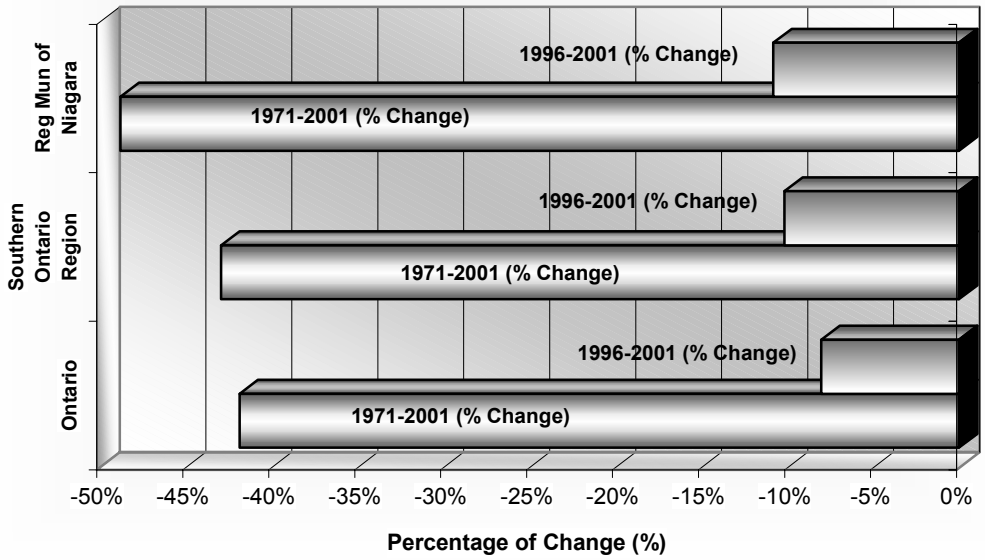
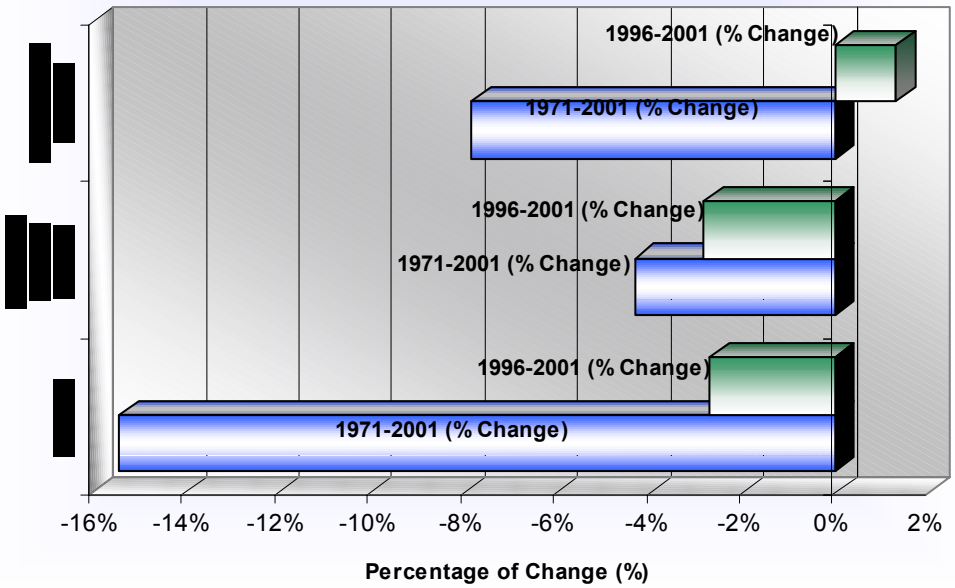


Figure 4.8 Farmland Area (ac) in Ontario, Southern Ontario Region and Regional Municipality of Niagara (Percentage of Change), 1971 to 2001



4.4 Change in Number of Farms by Commodity Group

Figure 4.9 contains a summary of the change in number of farms between 1986 and 2001 by commodity group. These numbers can be somewhat misleading because of the ongoing trend to farm amalgamation. The acreage change in production may be quite different from the change in the number of farms.

The commodity groups for which the number of farms increased between 1986 and 2001 included grain and oilseed, field crops, miscellaneous specialty, greenhouse and nursery. Dairy, hog, livestock and wheat experienced the largest decline in farm numbers. Poultry and egg remained relatively stable between 1986 and 2001 with small increases in numbers in 1991 and an overall loss for the 15-year period of 28. The number of fruit operations fell during the same period by 426.

Figures 4.10 and **4.11** summarize the percentage change by type of operation between 1986 and 2001 and between 1996 and 2001. Caution should be used in reviewing these figures since a very small change in a grouping with few operators will translate to a large percentage change. It is more reasonable to look at absolute numbers and acreage change.

4.5 Land Ownership

In 2001, 39% of the land farmed in Niagara was rented. This percentage is higher than both the provincial average of 31% and the southern Ontario average of 34%. However it is lower than the incidence of rental land in the Greater Toronto Region where it is at 54% in Halton and Peel, and 57% in York.

Figure 4.12 provides a breakdown of rental land for the period from 1986 to 2001; **Figure 4.13** depicts it graphically. There can be a variety of reasons for a higher incident of rental land. High land values can make it difficult for farmers to make the investment required to purchase land and so rental becomes the only alternative. This has been a recent problem in the grape growing areas. Owning a vineyard has become somewhat of a trend and therefore the amount paid for the land may be inflated beyond the productive value. When this occurs it makes it very difficult for bona fide growers who grow grapes for a living, to compete with growers who are doing it for a lifestyle.

Rented land may be held by speculators, retired farmers or families who want a rural lifestyle but do not want to farm. Qualification for the agricultural property tax rate which is lower than other tax rates, is a huge incentive for renting out rural land for agricultural production. Only land under production qualifies for the farm property tax rate. However, often the rental arrangements are short term and informal.

This was found to be the case in Niagara. In the questionnaire[4] administered to farmers it was found that approximately one third rented farmland in close proximity to their home farm. Of the respondents, 60% rented more than one parcel and 25% rented multiple parcels and had multiple landlords. The incidence of multiple landlords was noted as a complication in managing the farm operation.

[4] Analysis of the questionnaire is found in Appendix 2.

Figure 4.9 Change in Number of Farms by Product Type (excluding forest product sold) on farms with total gross farm receipts of $2,500 and over, for the Regional Municipality of Niagara by Area Municipality (Percentage of Change), 1986 to 2001

	Number of Farms											
1986 ***Farm Type***	***Niagara Region***	***Fort Erie***	***Port Colborne***	***Wainfleet***	***West Lincoln***	***Pelham***	***Welland / Thorold***	***Niagara Falls***	***Niagara-on-the-Lake***	***St. Catharines***	***Lincoln***	***Grimsby***
Dairy	224	7	7	39	134	10	5	8	2	0	8	4
Cattle	200	9	16	23	95	11	10	12	5	1	14	4
Hog	102	3	6	18	42	7	1	3	5	1	14	2
Poultry and Egg	195	4	12	19	73	7	5	7	15	3	37	13
Wheat	48	3	4	7	19	5	3	3	3	0	1	0
Grain & Oilseed[1]	161	8	12	29	51	12	13	12	8	0	9	7
Field Crops[2]	3	1	1	1	0	0	0	0	0	0	0	0
Fruit	1,193	1	1	6	24	77	10	8	461	87	422	96
Vegetable	59	2	5	11	0	12	3	6	13	3	3	1
Misc. Specialty[3]	97	3	2	8	30	19	5	9	10	1	8	2
Greenhouse Product	172	3	4	7	12	25	5	5	28	31	36	16
Nursery Product & Sod	40	0	2	0	3	10	1	1	12	2	9	0
Livestock/Other Combination	125	5	6	10	36	16	6	12	10	3	15	6
1991												
Dairy	203	6	8	40	107	15	5	6	2	2	11	1
Cattle	149	10	14	21	56	10	4	8	6	1	14	5
Hog	65	2	2	12	25	5	2	2	6	0	9	0
Poultry and Egg	201	5	11	23	72	8	6	7	14	2	38	15
Wheat	27	1	1	3	11	0	1	2	2	0	5	1
Grain & Oilseed[1]	127	8	12	21	36	11	12	6	7	0	12	2
Field Crops[2]	69	6	5	8	32	2	5	5	2	1	2	1
Fruit	964	5	5	10	25	75	12	7	366	76	318	65
Vegetable	39	2	3	4	1	10	2	4	6	5	2	0
Misc. Specialty[3]	198	16	11	23	60	28	7	14	10	1	23	5
Greenhouse Product	170	4	3	6	11	14	3	6	37	21	45	20
Nursery Product & Sod	50	0	2	4	2	11	3	4	12	4	8	0
Livestock/Other Combination	84	5	3	10	19	10	2	6	8	3	16	2

[1] - Grain & Oilseed includes: soilseed; corn for grain; dry field pea & bean; and other small grain.

[2] - Field Crops includes: hay & fodder; forage seed; tobacco; potato; and other field crop

[3] - Miscellaneous Specialty includes: sheep & lamb; goat; horse & pony; fur; other specialty livestock; mushroom; and maple & christmas tree.

Data for number of farms is calculated on farms reporting with gross farm receipts of $2,500 and over.

Source: Statistics Canada - Census of Agriculture, 1986, 1991, 1996 and 2001.

Figure 4.9 (cont'd) Change in Number of Farms by Product Type (excluding forest product sold) on farms with total gross farm receipts of $2,500 and over, for the Regional Municipality of Niagara by Area Municipality (Percentage of Change), 1986 to 2001

	Number of Farms											
1996 / ***Farm Type***	***Reg Mun of Niagara***	***Fort Erie***	***Port Colborne***	***Wainfleet***	***West Lincoln***	***Pelham***	***Welland / Thorold***	***Niagara Falls***	***Niagara-on-the-Lake***	***St. Catharines***	***Lincoln***	***Grimsby***
Dairy	174	6	9	33	98	7	4	4	2	1	7	3
Cattle	120	5	13	14	57	10	3	8	3	0	5	2
Hog	43	2	0	10	18	1	1	1	3	0	6	1
Poultry and Egg	193	8	8	24	81	10	7	5	10	2	27	11
Wheat	19	3	1	2	9	2	1	0	0	0	1	0
Grain & Oilseed[1]	140	5	11	40	38	11	10	6	6	0	11	2
Field Crops[2]	79	1	5	7	40	2	5	4	4	2	4	5
Fruit	895	2	1	10	19	55	14	9	345	72	315	53
Vegetable	45	1	5	5	0	10	2	4	11	5	2	0
Misc. Specialty[3]	198	21	6	29	54	28	7	10	13	2	23	5
Greenhouse Product	208	3	2	12	11	23	7	7	44	24	56	19
Nursery Product & Sod	57	1	1	2	5	17	2	3	10	7	8	1
Livestock/Other Combination	98	1	4	16	24	17	11	8	2	4	10	1
2001												
Dairy	116	5	4	26	64	4	2	3	2	0	4	2
Cattle	124	7	8	13	61	10	3	9	4	0	7	2
Hog	32	0	0	8	17	1	0	1	2	0	3	0
Poultry and Egg	167	5	9	17	76	10	4	5	8	1	23	9
Wheat	9	0	0	1	3	2	0	1	0	0	1	1
Grain & Oilseed[1]	200	11	14	46	57	20	18	6	7	2	15	4
Field Crops[2]	71	6	6	7	25	5	3	8	4	0	6	1
Fruit	767	1	2	5	21	54	12	7	281	60	277	47
Vegetable	34	1	1	6	4	11	1	1	4	1	4	0
Misc. Specialty[3]	158	11	7	23	41	25	7	10	5	3	20	6
Greenhouse Product	231	3	4	22	17	24	8	6	39	28	57	23
Nursery Product & Sod	43	2	0	3	1	11	3	3	8	4	7	1
Livestock/Other Combination	72	3	4	7	26	10	4	4	3	1	8	2

[1] - Grain & Oilseed includes: soilseed; corn for grain; dry field pea & bean; and other small grain.

[2] - Field Crops includes: hay & fodder; forage seed; tobacco; potato; and other field crop

[3] - Miscellaneous Specialty includes: sheep & lamb; goat; horse & pony; fur; other specialty livestock; mushroom; and maple & christmas tree.

Data for number of farms is calculated on farms reporting with gross farm receipts of $2,500 and over.

Source: Statistics Canada - Census of Agriculture, 1986, 1991, 1996 and 2001.

Figure 4.10 Change in Number of Farms by Product Type (excluding forest product sold) on farms with total gross farm receipts of $2,500 and over, for the Regional Municipality of Niagara by Area Municipality (Percentage of Change) for 1986 to 2001

	Percentage Change in Number of Farms by Product Type (%)											
1986 to 2001 Farm Type	***Reg Mun of Niagara***	***Fort Erie***	***Port Colborne***	***Wainfleet***	***West Lincoln***	***Pelham***	***Welland / Thorold***	***Niagara Falls***	***Niagara-on-the-Lake***	***St. Catharines***	***Lincoln***	***Grimsby***
Dairy	-48%	-29%	-43%	-33%	-52%	-60%	-60%	-63%	0%	0%	-50%	-50%
Cattle	-38%	-22%	-50%	-43%	-36%	-9%	-70%	-25%	-20%	-100%	-50%	-50%
Hog	-69%	-100%	-100%	-56%	-60%	-86%	-100%	-67%	-60%	-100%	-79%	-100%
Poultry and Egg	-14%	25%	-25%	-11%	4%	43%	-20%	-29%	-47%	-67%	-38%	-31%
Wheat	-81%	-100%	-100%	-86%	-84%	-60%	-100%	-67%	-100%	0%	0%	100%
Grain & Oilseed[1]	24%	38%	17%	59%	12%	67%	38%	-50%	-13%	100%	67%	-43%
Field Crops[2]	2267%	500%	500%	600%	100%	100%	100%	100%	100%	0%	100%	100%
Fruit	-36%	0%	100%	-17%	-13%	-30%	20%	-13%	-39%	-31%	-34%	-51%
Vegetable	-42%	-50%	-80%	-45%	100%	-8%	-67%	-83%	-69%	-67%	33%	-100%
Misc. Specialty[3]	63%	267%	250%	188%	37%	32%	40%	11%	-50%	200%	150%	200%
Greenhouse Product	34%	0%	0%	214%	42%	-4%	60%	20%	39%	-10%	58%	44%
Nursery Product & Sod	8%	100%	-100%	100%	-67%	10%	200%	200%	-33%	100%	-22%	100%
Livestock/Other	-42%	-40%	-33%	-30%	-28%	-38%	-33%	-67%	-70%	-67%	-47%	-67%

[1] - Grain & Oilseed includes: soilseed; corn for grain; dry field pea & bean; and other samll gain.

[2] - Field Crops includes: hay & fodder; forage seed; tobacco; potato; and other field crop

[3] - Miscellaneous Specialty includes: sheep & lamb; goat; horse & pony; fur; other specialty livestock; mushroom; and maple & christmas tree.

Source: Statistics Canada - Census of Agriculture, 1986, 1991, 1996 and 2001. SAME FOR TABLE 4.11 BELOW

Figure 4.11 Change in Number of Farms by Product Type (excluding forest product sold) on farms with total gross farm receipts of $2,500 and over for the Regional Municipality of Niagara by Area Municipality (Percentage of Change), 1996 to 2001

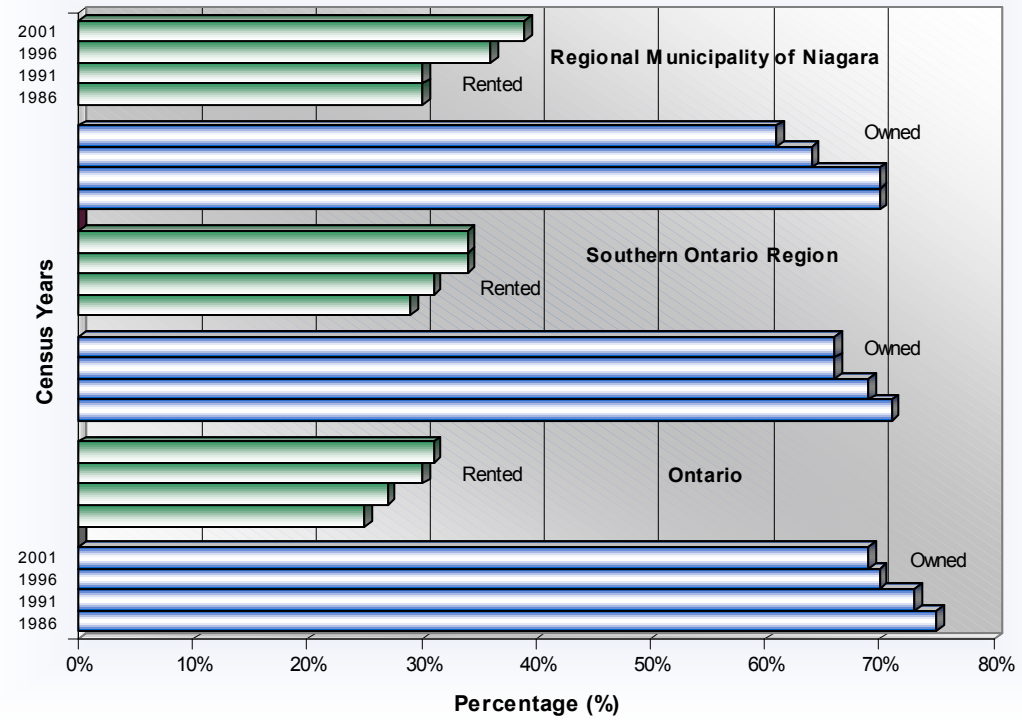
	Percentage Change in Number of Farms by Product Type (%)											
1996 to 2001 Farm Type	***Reg Mun of Niagara***	***Fort Erie***	***Port Colborne***	***Wainfleet***	***West Lincoln***	***Pelham***	***Welland / Thorold***	***Niagara Falls***	***Niagara-on-the-Lake***	***St. Catharines***	***Lincoln***	***Grimsby***
Dairy	-33%	-17%	-56%	-21%	-35%	-43%	-50%	-25%	0%	-100%	-43%	-33%
Cattle	3%	40%	-38%	-7%	7%	0%	0%	13%	33%	0%	40%	0%
Hog	-26%	-100%	0%	-20%	-6%	0%	-100%	0%	-33%	0%	-50%	-100%
Poultry and Egg	-13%	-38%	13%	-29%	-6%	0%	-43%	0%	-20%	-50%	-15%	-18%
Wheat	-53%	-100%	-100%	-50%	-67%	0%	-100%	0%	0%	0%	0%	100%
Grain & Oilseed[1]	43%	120%	27%	15%	50%	82%	80%	0%	17%	100%	36%	100%
Field Crops[2]	-10%	500%	20%	0%	-38%	150%	-40%	100%	0%	-100%	50%	-80%
Fruit	-14%	-50%	100%	-50%	11%	-2%	-14%	-22%	-19%	-17%	-12%	-11%
Vegetable	-24%	0%	-80%	20%	100%	10%	-50%	-75%	-64%	-80%	100%	0%
Misc. Specialty[3]	-20%	-48%	17%	-21%	-24%	-11%	0%	0%	-62%	50%	-13%	20%
Greenhouse Product	11%	0%	100%	83%	55%	4%	14%	-14%	-11%	17%	2%	21%
Nursery Product & Sod	-25%	100%	-100%	50%	-80%	-35%	50%	0%	-20%	-43%	-13%	0%
Livestock/Other	-27%	200%	0%	-56%	8%	-41%	-64%	-50%	50%	-75%	-20%	100%

Figure 4.12 Farmland Acres Owned and Rented in Ontario, Southern Ontario Region and the Regional Municipality of Niagara, 1986-2001

2001 ***Geographic Location***	***Total Acres Farmed***	***Total Acres of Owned Farms***	***% of Owned Farms***	***Total Acres of Rented Farms***	***% of Rented Farms***
Ontario	13,507,357	9,373,178	69%	4,134,179	31%
Southern Ontario Region	3,985,132	2,639,831	66%	1,345,301	34%
Reg Mun of Niagara	232,817	141,716	61%	91,101	39%
1996					
Ontario	13,879,565	9,764,607	70%	4,114,958	30%
Southern Ontario Region	4,100,912	2,724,652	66%	1,376,260	34%
Reg Mun of Niagara	229,832	147,355	64%	82,477	36%
1991					
Ontario	13,470,653	9,887,990	73%	3,582,663	27%
Southern Ontario Region	3,902,841	2,694,650	69%	1,208,191	31%
Reg Mun of Niagara	215,939	150,702	70%	65,237	30%
1986					
Ontario	13,953,009	10,451,720	75%	3,501,285	25%
Southern Ontario Region	3,930,710	2,804,237	71%	1,126,473	29%
Reg Mun of Niagara	236,942	165,453	70%	71,489	30%

Note: Southern Ontario Region includes the following Counties & Districts: Brant, Elgin, Essex, Haldimand-Norfolk (now Haldimand County and Norfolk County, 2001), Hamilton-Wentworth (now City of Hamilton, 2001), Chatham-Kent, Lambton, Middlesex, Niagara, and Oxford.
Source: 2001 Statistics Canada - Catalogue No. 95F0301XIE; 1996 Agriculture Profile of Ontario - Statistics Canada - Catalogue No 95-177-XPB; 1986 Agricultural Statistics for Ontario - OMAFRA - Publication 20; 1991 Agricultural Statistics for Ontario - OMAFRA - Publication 20

Figure 4.13 Historical Survey of Farmland Acres Owned and Rented in Ontario, Southern Ontario Region and the Regional Municipality of Niagara, 1986-2001



Of the respondents, 67% indicated that their rental agreements were either for one year or on an informal basis. This can lead to deteriorization of the land base. Often farmers are reluctant to make the significant investments required to properly manage land on a property that is only available to them on a short term basis. Investments such as tile drainage and irrigation system are expensive and the return is only realized over a period of time. Crops such as tender fruit require a number of years to reach maximum production. Farmers will not risk making an investment that they may never be able to recoup.

In areas experiencing pressure for growth, the deteriorization that can result if land is not properly managed may be used to justify removing the land from an agricultural designation. Even if this does not occur, vacant parcels of unmanaged land fragment the agricultural area and make the business of farming in proximity to it more difficult.

In Niagara, the only municipalities where the amount of rented farmland exceeded the amount of owned land in 2001 were Fort Erie and Thorold. Municipalities with 40 to 50% of existing farmland rented included Port Colborne, Wainfleet, and West Lincoln. The rental land in Pelham represented 40% of the farmland in 2001. This breakdown is shown on **Figures 4.14** and **4.15.**

The pattern of rental land in Niagara suggests a relationship with the type of agriculture that occurs in certain areas. In the municipalities where fruit predominates, there is a lower incidence of rental land. This could be related to the time it takes to bring a fruit tree into production. Orchards that take five to ten years to come to full production will not be planted on land that is available on a short-term basis. Crops such as cash crop that have a short production life, are much more likely to be found on rental land.

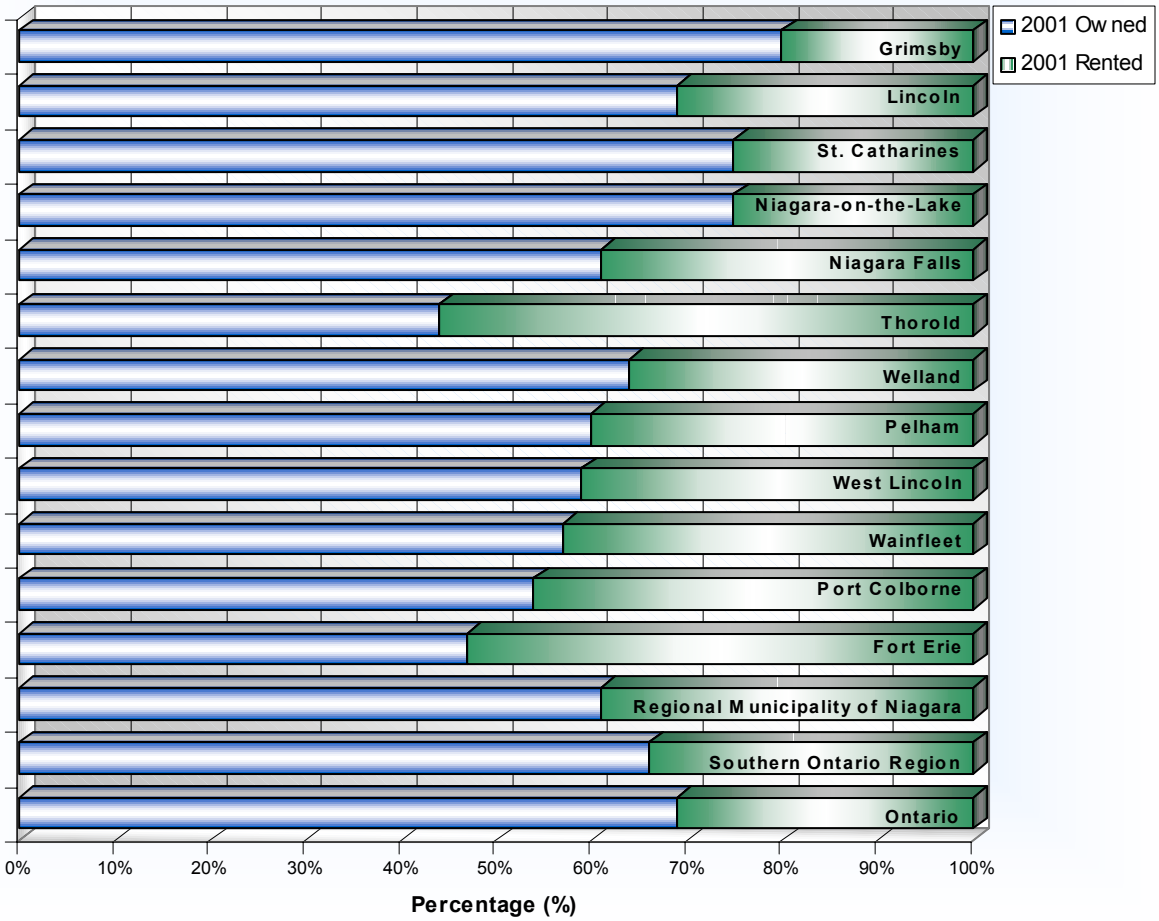
The fact that the incidence of land rental is less marked in Niagara than it is in the regions of the Greater Toronto Area is a good indicator of the stability of the industry. Characteristics generally found in areas experiencing pressure for development include a high incidence of rental land, multiple landlords, short lease terms and scattered operations.

Figure 4.14 Farmland Owned and Rented in Ontario, Southern Ontario Region and the Regional Municipality of Niagara by Area Municipality, 2001

Geographic Location	*Total Acres Farmed*	*Total Acres of Owned Farms*	*% of Owned Farms*	*Total Acres of Rented Farms*	*% of Rented Farms*
Ontario	13,507,357	9,373,178	69%	4,134,179	31%
Southern Ontario Region	3,985,132	2,639,831	66%	1,345,301	34%
Reg Mun of Niagara	**232,817**	**141,716**	**61%**	**91,101**	**39%**
Fort Erie	9,847	4,611	47%	5,236	53%
Port Colborne	13,379	7,173	54%	6,206	46%
Wainfleet	40,062	22,903	57%	17,159	43%
West Lincoln	67,118	39,636	59%	27,482	41%
Pelham	19,536	11,712	60%	7,824	40%
Welland	2,123	1,352	64%	771	36%
Thorold	11,537	5,027	44%	6,510	56%
Niagara Falls	8,191	5,034	61%	3,157	39%
Niagara-on-the-Lake	22,031	16,476	75%	5,555	25%
St. Catharines	4,755	3,571	75%	1,184	25%
Lincoln	27,945	19,197	69%	8,748	31%
Grimsby	6,293	5,024	80%	1,269	20%

Note: Southern Ontario Region includes the following Counties & Districts: Brant, Elgin, Essex, Haldimand-Norfolk (now Haldimand County and Norfolk County, 2001), Hamilton-Wentworth (now City of Hamilton, 2001), Chatham-Kent, Lambton, Middlesex, Niagara, and Oxford.
Source: 2001 Statistics Canada - Catalogue No. 95F0301XIE

Figure 4.15 Farmland Acres Owned and Rented in Ontario, Southern Ontario Region and the Regional Municipality of Niagara by Area Municipality, 2001



4.6 Farm Size

According to Statistics Canada, the average farm size in Ontario has increased steadily between 1976 and 2001. In 2001 the average farm size in Ontario was 245 acres, in southern Ontario 214 acres and in Niagara 115 acres. Unlike the provincial trends, the farm size in Niagara has not been increasing at the same rate. In several municipalities, Welland, Lincoln and Niagara Falls, it has decreased slightly. The change in average farm size from 1976 – 2001 is listed on **Figure 4.16.**

Figure 4.16 Average Farm Size (in acres) for Ontario, Southern Ontario and the Regional Municipality of Niagara (Percentage of Change), 1976-2001

	Farmland Acres						*Percentage of Change*		
Geographic Location	***1976***	***1981***	***1986***	***1991***	***1996***	***2001***	***1976 - 1991***	***1991 - 2001***	***1996 - 2001***
Ontario	174	181	192	196	232	245	12.6%	25.0%	5.6%
Southern Ontario Region	136	146	158	169	198	214	24.3%	26.6%	8.1%
Reg Mun of Niagara	66	71	75	80	101	115	21.2%	43.8%	13.9%

Note: Southern Ontario Region includes the following Counties & Districts: Brant, Elgin, Essex, Haldimand-Norfolk (now Haldimand County and Norfolk County, 2001), Hamilton-Wentworth (now City of Hamilton, 2001), Chatham-Kent, Lambton, Middlesex, Niagara, and Oxford.
Source: 2001 Statistics Canada - Catalogue No. 95F0301XIE; 1996 Agriculture Profile of Ontario - Statistics Canada - Catalogue No 95-177-XPB; Agricultural Statistics for Ontario - OMFRA - Publication 20 - 1987, 1995
Based on census farms generating in excess of $2,500 in gross farm receipts per annum.

The difference in farm size in Niagara is attributable to the different nature of agriculture in the region. The four leading commodity groups, greenhouse, fruit, poultry and egg and nursery require much smaller areas for a profitable operation. A review of the average farm size confirms this. The smallest average sizes are found in St. Catharines, Grimsby, Niagara-on-the-Lake, then Lincoln. All of these municipalities contain significant fruit, greenhouse and nursery operations which tend to be located on smaller acreages.

Average farm size in Port Colborne, Welland and Thorold, where cash crop and livestock operations are more common, is much closer to the provincial average. There is a striking difference between the average farm sizes in Niagara South and Niagara North. This speaks to the diversity and range of agriculture that is found in Niagara.

4.7 Farm Type

Agriculture in Niagara reflects the unique nature of this Region. Its geography and climate allow a diversity of production that is not possible in other regions. To clearly understand this diversity, farm types were analyzed from several different perspectives. Later in this chapter, there is a detailed assessment of farm type based on gross farm receipts. First however, a summary was prepared of the number of farms in each of the major commodity groups in each municipality.

Statistics Canada classifies farms into different farm types. This is done by estimating the gross farm receipts from the inventories of crops and livestock for each farm. The commodity or group of commodities that account for more than 51% of potential farm receipts determines the farm type. For the purposes of this study, the commodity groups represented in Niagara were ranked and the top twelve commodity groups were selected as the basis for the analysis. The balance of production was grouped as “Other”. Since this “Other” grouping represents less than 1% of total production, this approach ensures that all of the significant commodity groupings are included. **Figure 4.17** lists the number of farms by commodity group for each of the municipalities in Niagara. **Figure 4.18** shows the distribution of farm types graphically.

The highest number of farms are located in Lincoln followed by West Lincoln, Niagara-on-the-Lake, Pelham and Wainfleet. Fruit is the most dominant farm type in terms of numbers of farms, with miscellaneous specialty second. Miscellaneous specialty includes greenhouses. Grain and oilseed are third with the farms concentrated in Niagara South. Poultry is fourth with the largest number of operations located in West Lincoln. The diversity in farm type by number is mapped on **Figure 4.19.**

To properly understand the composition of some of the commodity groups that contain a number of different products, a detailed breakdown of types of farms was done. **Figure 4.20** provides a breakdown of the number of farms that produce fruits, berries and nuts. From that is disaggregated the number of apple, peach, cherry, plum and grape operations. Grapes represent by far the largest number of operations, occupying the greatest amount of land with the highest value. Peaches are second with apples a distant third. Sour cherries, plums, and sweet cherries rank fourth, fifth and sixth respectively.

The breakdown in the category of Miscellaneous Specialty operations is contained on **Figure 4.21** and mapped on **Figure 4.22**. The largest component of this sector in Niagara is greenhouse. For that reason it has been broken out as a separate category in this paper. Horse and pony is the second largest element in this grouping and nursery is third. Nursery as a category would be much larger but any nursery operation that is under glass will be included in the greenhouse sector.

Figure 4.17 Number of Farms by Farm Types for the Regional Municipality of Niagara by Area Municipality on Farms with Gross Farm Receipts of $2,500 and over, 2001

Geographic Location	*# of Farms*	*Farm Type*												*Gross Farms Receipts*
		Dairy	*Cattle*	*Hog*	*Poultry & Egg*	*Wheat*	*Grain & Oilseed*	*Field Crops*	*Fruit*	*Vegetable*	*Misc. Specialty*	*Livestock Combination*	*Other Combination*	
Reg Mun of Niagara	**2,024**	**116**	**124**	**32**	**167**	**9**	**200**	**71**	**767**	**34**	**432**	**24**	**48**	**511,132,568**
Fort Erie	55	5	7	0	5	0	11	6	1	1	16	0	3	5,886,750
Port Colborne	59	4	8	0	9	0	14	6	2	1	11	2	2	7,535,934
Wainfleet	184	26	13	8	17	1	46	7	5	6	48	4	3	30,306,251
West Lincoln	413	64	61	17	76	3	57	25	21	4	59	12	14	68,014,144
Pelham	187	4	10	1	10	2	20	5	54	11	60	0	10	40,613,784
Welland	22	0	1	0	1	0	7	3	1	0	8	1	0	2,201,514
Thorold	43	2	2	0	3	0	11	0	11	1	10	0	3	7,419,080
Niagara Falls	64	3	9	1	5	1	6	8	7	1	19	1	3	6,115,927
Niagara-on-the-Lake	367	2	4	2	8	0	7	4	281	4	52	1	2	109,807,035
St. Catharines	100	0	0	0	1	0	2	0	60	1	35	0	1	46,168,605
Lincoln	432	4	7	3	23	1	15	6	277	4	84	2	6	160,332,058
Grimsby	98	2	2	0	9	1	4	1	47	0	30	1	1	26,731,486

Data for number of farms and gross farm receipts is calculated on farms reporting with gross farm receipts of $2,500 and over.
Source: 2001 Statistics Canada - special order

Figure 4.18 Percentage of Farm Types by Number of Farms for the Regional Municipality of Niagara, 2001

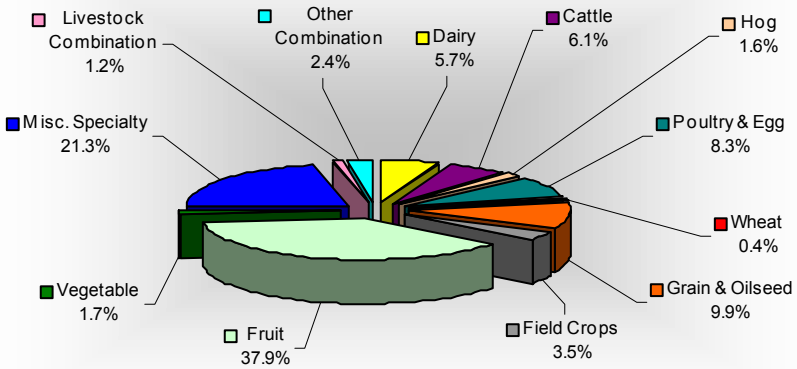


Figure 4.20 Number of Farms, Acreage and Farm Value for Selected Fruits & Berries for the Regional Municipality of Niagara by Area Municipality, 2001

Geographic Location	Total producing Area															
	Total Fruits, Berries & Nuts		Apples		Pears		Plums & Prunes		Cherries (sweet)		Cherries (sour)		Peaches		Grapes**	
	# of Farms	Area (ac)	# of Farms	Area (ac)	# of Farms	Area (ac)	# of Farms	Area (ac)	# of Farms	Area (ac)	# of Farms	Area (ac)	# of Farms	Area (ac)	# of Farms	Area (ac)
Reg Mun of Niaga	**943**	**24,486**	**225**	**983**	**326**	**1,460**	**274**	**867**	**212**	**614**	**73**	**924**	**264**	**4,994**	**561**	**13,523**
Fort Erie	3	x	1	x	1	x	1	x	0	0	0	0	0	0	0	0
Port Colborne	6	18	1	x	1	x	1	x	0	0	0	0	0	0	2	x
Wainfleet	10	36	4	x	2	x	1	x	2	x	0	0	1	x	0	0
West Lincoln	29	299	10	74	8	24	3	3	1	x	1	x	1	x	16	187
Pelham	75	1,299	35	193	35	174	13	20	20	32	16	431	9	49	21	348
Welland	1	x	0	0	0	0	0	0	0	0	0	0	0	0	1	x
Thorold	16	300	7	32	4	20	1	x	1	x	0	0	2	x	10	227
Niagara Falls	13	90	4	7	5	4	3	1	3	4	1	x	2	x	7	71
Niagara-on-the-La	324	10,711	49	76	81	255	125	504	66	147	11	160	115	2,889	214	5,999
St. Catharines	70	1,558	13	23	25	61	18	31	12	30	3	14	27	412	41	926
Lincoln	335	9,033	85	462	136	759	96	292	91	345	35	277	100	1,611	211	5,045
Grimsby	61	1,127	16	110	28	158	12	13	16	54	6	x	7	22	38	712

Note: Total Fruits, Berries & Nuts include: Apples, Pears, Plums & Prunes; Cherries (Sweet & Sour), Peaches, Apricots, Strawberries, Raspberries, Blueberries, Grapes, and Other Fruits, Berries & Nuts. Data for number of farms and farmland area is calculated on all farms reporting.

Source: Census of Agriculture, Statistics Canada, 2001

** OMAF website, Horticultural Statistics, 2001*

*** Includes both Labrusca and Vinifera varieties*

X Data suppressed to protect confidentiality

Note: This data differs from data on Figure 4.17 because of the different definitions used by OMAF and Statistics Canada

Figure 4.21 Miscellaneous Specialty Farm Type by Number of Farms for the Regional Municipality of Niagara by Area Municipality on Farms with Gross Farm Receipts of $2,500 and over, 2001

Geographic Location	Number of Farms	Miscellaneous Specialty									Gross Farm Receipts
		Sheep & Lamb	Goat	Horse & Pony	Fur	Other Livestock Specialty	Mushroom	Greenhouse Product	Nursery Product & Sod	Maple & Xmas Tree	
Reg Mun of Niagara	**432**	**17**	**6**	**92**	**6**	**17**	**0**	**231**	**43**	**20**	**252,457,958**
Fort Erie	16	0	0	10	0	0	0	3	2	1	2,055,430
Port Colborne	11	1	0	5	0	0	0	4	0	1	907,510
Wainfleet	48	3	0	14	4	1	0	22	3	1	7,375,696
West Lincoln	59	10	5	17	0	7	0	17	1	2	6,887,111
Pelham	60	0	0	18	0	0	0	24	11	7	26,534,470
Welland	8	0	0	1	0	1	0	3	2	1	1,555,140
Thorold	10	0	0	4	0	0	0	5	1	0	3,113,363
Niagara Falls	19	2	0	4	1	2	0	6	3	1	1,716,456
Niagara-on-the-Lake	52	1	1	3	0	0	0	39	8	0	55,090,718
St. Catharines	35	0	0	1	0	2	0	28	4	0	39,168,425
Lincoln	84	0	0	11	1	3	0	57	7	5	88,684,335
Grimsby	30	0	0	4	0	1	0	23	1	1	19,369,304

Note: Data for number of farms and gross farm receipts is calculated on farms reporting gross farm receipts of $2,500 and over.
Source: 2001 Statistics Canada - special order

Horse and pony is a sector that is sometimes questioned as being a bona fide agricultural operation. Given the complexity and diversity of agriculture today this is not warranted. With the resurgence of harness racing, standard bred operations are flourishing and profitable. Horse and pony operations support other components of agriculture by buying feed and supplies. They use agricultural services such as veterinarians, feed mills, implement dealers and agricultural supply depots thereby ensuring there is sufficient trade to keep them in business. The Fort Erie racetrack contributes to the area economy and attracts tourists. It is notable that a large component of agriculture in Fort Erie is horse and pony, probably because of the racetrack.

In reviewing the trends in specialty farms over the period from 1986 to 2001 contained in **Figure 4.23**, it is notable that horse and pony has expanded by the largest percentage, followed by green house, nursery and sheep. Maple syrup also has a significant presence in this grouping.

Field crops, although not normally associated with agriculture in Niagara, represent a significant component of agricultural production in the region. There are some very large cash crop operations in Niagara South. Of the 232,817 acres of farmland that existed in 2001, 181,064 or 77% of it was in field crops. **Figure 4.24** provides a breakdown of the field crop statistics. **Figure 4.25** shows how the production fluctuated during the period between 1996 and 2002[5].

The breakdown in number of farms by farm types and by municipality illustrates the diversity of operations found across the region. Although Niagara is known for fruit, the depth of the agricultural industry is striking. Fruit may be dominant but the other commodity groups, notably poultry and egg, wheat, grain and oilseed, dairy and cattle are also significant.

The distribution of farm types is consistent with the average farm size for the various municipalities. Niagara-on-the-Lake, with 281 fruit farms reported in 2001, had an average farm size of 60 acres. West Lincoln, reporting 60 whea, grain and oilseed operations, had an average farm size of 163 acres.

4.8 Gross Farm Receipts

Figure 4.26 depicts how the $511.13 million in gross farm receipts reported in the region in 2001 were generated.

Figure 4.26 Total Gross Farm Receipts (excluding forest product sold) for the Regional Municipality of Niagara by Area Municipality, 2001

Geographic Location	*Total Gross Farm Receipts*	*Percentage*
Reg Mun of Niagara	**$ 511,132,568**	
Fort Erie	$ 5,905,919	1.2%
Port Colborne	$ 7,544,540	1.5%
Wainfleet	$ 30,328,473	5.9%
West Lincoln	$ 68,058,325	13.3%
Pelham	$ 40,636,003	8.0%
Welland	$ 2,208,029	0.4%
Thorold	$ 7,428,360	1.5%
Niagara Falls	$ 6,133,914	1.2%
Niagara-on-the-Lake	$ 109,847,469	21.5%
St. Catharines	$ 46,178,766	9.0%
Lincoln	$ 160,372,708	31.4%
Grimsby	$ 26,752,513	5.2%

Source: 2001 Statistics Canada - Catalogue No 95F0301XIE

[5] Source: OMAF Agricultural Statistics, www.gov.on.ca/OMAF/english/stats/crops/index.html

Figure 4.23 Trends in Miscellaneous Specialty Farm Types by Number of Farms on farms with total gross farm receipts of $2,500 and over, for the Regional Municipality of Niagara by Area Municipality (Percentage of Change), 1986 to 2001

	Number of Farms											
1986 ***Farm Type***	***Reg Mun of Niagara***	***Fort Erie***	***Port Colborne***	***Wainfleet***	***West Lincoln***	***Pelham***	***Welland / Thorold***	***Niagara Falls***	***Niagara-on-the-Lake***	***St. Catharines***	***Lincoln***	***Grimsby***
Sheep & Lamb	16	0	0	0	10	1	1	1	1	1	1	0
Goat	9	1	0	1	4	0	0	0	1	0	1	1
Horse & Pony	44	0	1	3	8	16	2	4	6	0	3	1
Fur	10	1	1	4	2	0	0	1	0	0	1	0
Other Specialty Livestock	16	1	0	0	5	2	2	3	1	0	2	0
Mushroom	2	0	0	0	1	0	0	0	1	0	0	0
Greenhouse Product	172	3	4	7	12	25	5	5	28	31	36	16
Nursery Product & Sod	40	0	2	0	3	10	1	1	12	2	9	0
1991												
Sheep & Lamb	24	1	1	3	11	0	3	3	0	0	2	0
Goat	9	0	0	0	5	1	0	0	1	0	1	1
Horse & Pony	141	14	8	12	40	25	3	10	7	1	17	4
Fur	10	1	2	4	2	0	0	1	0	0	0	0
Other Specialty Livestock	13	0	0	4	2	1	1	0	2	0	3	0
Mushroom	1	0	0	0	0	1	0	0	0	0	0	0
Greenhouse Product	170	4	3	6	11	14	3	6	37	21	45	20
Nursery Product & Sod	50	0	2	4	2	11	3	4	12	4	8	0

Note: Data for number of farms and gross farm receipts is calculated on farms reporting gross farm receipts of $2,500 and over.
Source: Statistics Canada - Census of Agriculture, 1986, 1991, 1996 and 2001.

Figure 4.23b Trends in Miscellaneous Specialty Farm Types by Number of Farms on farms with total gross farm receipts of $2,500 and over, for the Regional Municipality of Niagara by Area Municipality (Percentage of Change), 1986 to 2001

	Number of Farms											
1996 ***Farm Type***	***Reg Mun of Niagara***	***Fort Erie***	***Port Colborne***	***Wainfleet***	***West Lincoln***	***Pelham***	***Welland / Thorold***	***Niagara Falls***	***Niagara-on-the-Lake***	***St. Catharines***	***Lincoln***	***Grimsby***
Sheep & Lamb	24	1	0	3	14	0	0	3	2	0	1	0
Goat	7	0	0	1	3	0	0	0	2	0	1	0
Horse & Pony	144	20	6	19	32	26	6	5	7	1	18	4
Fur	6	0	0	4	0	0	0	1	0	0	1	0
Other Specialty Livestock	17	0	0	2	5	2	1	1	2	1	2	1
Mushroom	0	0	0	0	0	0	0	0	0	0	0	0
Greenhouse Product	208	3	2	12	11	23	7	7	44	24	56	19
Nursery Product & Sod	57	1	1	2	5	17	2	3	10	7	8	1
2001												
Sheep & Lamb	17	0	1	3	10	0	0	2	1	0	0	0
Goat	6	0	0	0	5	0	0	0	1	0	0	0
Horse & Pony	92	10	5	14	17	18	5	4	3	1	11	4
Fur	6	0	0	4	0	0	0	1	0	0	1	0
Other Specialty Livestock	17	0	0	1	7	0	1	2	0	2	3	1
Mushroom	0	0	0	0	0	0	0	0	0	0	0	0
Greenhouse Product	231	3	4	22	17	24	8	6	39	28	57	23
Nursery Product & Sod	43	2	0	3	1	11	3	3	8	4	7	1

Note: Data for number of farms and gross farm receipts is calculated on farms reporting gross farm receipts of $2,500 and over.
Source: Statistics Canada - Census of Agriculture, 1986, 1991, 1996 and 2001.

Figure 4.23c Trends in Miscellaneous Specialty Farm Types by Number of Farms on farms with total gross farm receipts of $2,500 and over, for the Regional Municipality of Niagara by Area Municipality (Percentage of Change), 1986 to 2001

1986 to 2001	***Percentage Change in Number of Farms by Product Type (%)***											
Farm Type	***Reg Mun of Niagara***	***Fort Erie***	***Port Colborne***	***Wainfleet***	***West Lincoln***	***Pelham***	***Welland / Thorold***	***Niagara Falls***	***Niagara-on-the-Lake***	***St. Catharines***	***Lincoln***	***Grimsby***
Sheep & Lamb	6%	0%	100%	100%	0%	-100%	-100%	100%	0%	-100%	-100%	0%
Goat	-33%	-100%	0%	-100%	25%	0%	0%	0%	0%	0%	-100%	-100%
Horse & Pony	109%	100%	400%	367%	113%	13%	150%	0%	-50%	100%	267%	300%
Fur	-40%	-100%	-100%	0%	-100%	0%	0%	0%	0%	0%	0%	0%
Other Specialty Livestock	6%	-100%	0%	100%	40%	-100%	-50%	-33%	-100%	100%	50%	100%
Mushroom	-100%	0%	0%	0%	-100%	0%	0%	0%	-100%	0%	0%	0%
Greenhouse Product	34%	0%	0%	214%	42%	-4%	60%	20%	39%	-10%	58%	44%
Nursery Product & Sod	8%	100%	-100%	100%	-67%	10%	200%	200%	-33%	100%	-22%	100%

Source: Statistics Canada - Census of Agriculture, 1986, 1991, 1996 and 2001.

Figure 4.24 Area of Land in Field Crops and Pasture Lands for the Regional Municipality of Niagara by Area Municipality, 2001

	Reg Mun of Niagara (ac)	***% of Total***	***Fort Erie (ac)***	***% of Total***	***Port Colborne (ac)***	***% of Total***	***Wainfleet (ac)***	***% of Total***	***West Lincoln (ac)***	***% of Total***	***Pelham (ac)***	***% of Total***	***Welland (ac)***	***% of Total***
Cropland	181,064	77.77	6,830	69.36	10,704	80.01	34,281	85.57	52,211	77.79	16,038	82.09	1,479	69.67
Summerfallow	2,823	1.21	708	7.19	58	0.43	107	0.27	504	0.75	x	x	x	x
Tame or seeded pasture[1]	6,912	2.97	556	5.65	275	2.06	694	1.73	2,852	4.25	268	1.37	58	2.73
Natural land for pasture[2]	6,931	2.98	274	2.78	373	2.79	819	2.04	2,105	3.14	308	1.58	18	0.85
All other land	35,087	15.07	1,479	15.02	1,969	14.72	4,161	10.39	9,446	14.07	x	x	x	x
Total Area of Farms	**232,817**		**9,847**		**13,379**		**40,062**		**67,118**		**19,536**		**2,123**	

	Thorold (ac)	***% of Total***	***Niagara Falls (ac)***	***% of Total***	***Niagara-On-The-Lake (ac)***	***% of Total***	***St. Catharines (ac)***	***% of Total***	***Lincoln (ac)***	***% of Total***	***Grimsby (ac)***	***% of Total***
Cropland	10,195	88.4	5,366	65.5	16,600	75.3	3,441	72.4	20,253	72.5	3,666	58.3
Summerfallow	x	x	383	4.7	414	1.9	x	x	517	1.9	0	0.0
Tame or seeded pasture[1]	115	1.0	218	2.7	641	2.9	150	3.2	786	2.8	299	4.8
Natural land for pasture[2]	240	2.1	280	3.4	871	4.0	309	6.5	766	2.7	568	9.0
All other land	x	x	1,944	23.7	3,505	15.9	x	x	5,623	20.1	1,760	28.0
Total Area of Farms	**11,537**		**8,191**		**22,031**		**4,755**		**27,945**		**6,293**	

[1] *This can also be defined as improved pasture, which is cultivated occasionally.*

[2] *This can also be defined as permanent pasture.*

X Data suppressed to protect confidentiality

Source: 2001, Census of Agriculture, Statistics Canada

Figure 4.25 Change in the Number of Acres in Field Crops for the Regional Municipality of Niagara,

Winter Wheat	***1996***	***1998***	***1999***	***2000***	***2001***	***2002***	***Percentage of Change 1996-2002***
Niagara	15,700	16,000	20,000	20,000	14,500	16,300	
% Change		2%	25%	0%	-28%	12%	4%
Oats *(represents total area seeded including area cut for fodder)*							
Niagara	1,800	4,400	2,400	3,700	2,000	1,200	
% Change		144%	-45%	54%	-46%	-40%	-33%
Barley *(represents total area seeded including area cut for fodder)*							
Niagara	1,000	1,800	1,700	1,600	900	1,050	
% Change		80%	-6%	-6%	-44%	17%	5%
Mixed Grain *(represents total area seeded including area cut for fodder)*							
Niagara	450	400	1,000	400	800	1,100	
% Change		-11%	150%	-60%	100%	38%	144%
Grain Corn							
Niagara	26,500	25,200	30,000	21,000	29,300	23,200	
% Change		-5%	19%	-30%	40%	-21%	-12%
Soybeans							
Niagara	29,600	44,000	50,000	50,000	53,400	54,000	
% Change		49%	14%	0%	7%	1%	82%
Fodder Corn							
Niagara	4,600	2,000	2,500	2,000	3,800	3,250	
% Change		-57%	25%	-20%	90%	-14%	-29%
Hay *(includes area of forage seed)*							
Niagara	42,900	32,000	60,000	50,000	46,000	56,600	
% Change		-25%	88%	-17%	-8%	23%	32%
Spring Wheat							
Niagara	-	-	-	-	1,000	1,250	
% Change						25%	25%
Total Field Crops							
Niagara	122,550	125,800	167,600	148,700	150,700	156,700	
% Change		3%	33%	-11%	1%	4%	28%

Note: Figures are estimates primarily derived from a probability survey conducted by Statistics Canada, in conjunction with other administrative data sources. The probability survey is designed to produce accurate field crop area and yield information for the province as a whole. However, the accuracy of county and district estimates may suffer, particularly when the level of farming activity in a given area is relatively small. A measure of caution is advised when using sub-provincial estimates.
Source: OMAFRA, Agricultural Statistics, 1996. (www.gov.on.ca/OMAF/english/stats/crops/index.html)

1996 to 2002

Figure 4.27 lists the geographic breakdown of the $511.03 million in gross farm receipts. The municipality with the greatest gross farm receipts is Lincoln ($160 million), followed by Niagara-on-the-Lake ($110 million), and West Lincoln ($68 million). Welland generates the smallest amount of gross farm receipts; it is also the second smallest municipality in the Region with the smallest amount of farmland.

A good indication of the intensity of farm production is gained by measuring the gross farm receipts (or farm gate sales) per acre. **Figure 4.28** provides a breakdown of the gross farm receipts per acre by municipality. **Figure 4.29** illustrates this graphically. Of the 12 municipalities in Niagara, Fort Erie, Port Colborne and Thorold have per acre average gross farm receipts lower than the provincial average. Wainfleet and Niagara Falls are higher than the provincial average but lower than the average for southern Ontario. The remaining seven municipalities have average per acre gross farm receipts considerably higher than the provincial average. These numbers reflect the very high productivity of the area and the high value of the crops produced. The lower per acre values in Fort Erie, Port Colborne and Thorold are reflective of different geographic conditions and crop profiles. However overall, Niagara is an area of very high productivity and profitable agricultural operations.

Figure 4.28 Gross Farm Receipts (excluding forest product sold) Per Acre for Regional Municipality of Niagara by Area Municipality, 2001

Geographic Location	*Farmland Area (ac)*	*Gross Farm Receipts ($)*	*Gross Farm Receipts Per Acre ($)*
Ontario	13,507,357	9,115,454,790	675
Southern Ontario Region	3,985,132	3,964,859,834	995
Reg Mun of Niagara	**232,817**	**511,395,019**	**2,197**
Fort Erie	9,847	5,905,919	600
Port Colborne	13,379	7,544,540	564
Wainfleet	40,062	30,328,473	757
West Lincoln	67,118	68,058,325	1,014
Pelham	19,536	40,636,003	2,080
Welland	2,123	2,208,029	1,040
Thorold	11,537	7,428,360	644
Niagara Falls	8,191	6,133,914	749
Niagara-on-the-Lake	22,031	109,847,469	4,986
St. Catharines	4,755	46,178,766	9,712
Lincoln	27,945	160,372,708	5,739
Grimsby	6,293	26,752,513	4,251

Note: Data for farmland area and gross farm receipts is calculated on total number of farms reporting.
Source: 2001 Statistics Canada - Catalogue No 95F0301XIE

Figure 4.29 Gross Farm Receipts Per Acre for the Regional Municipality of Niagara, 2001

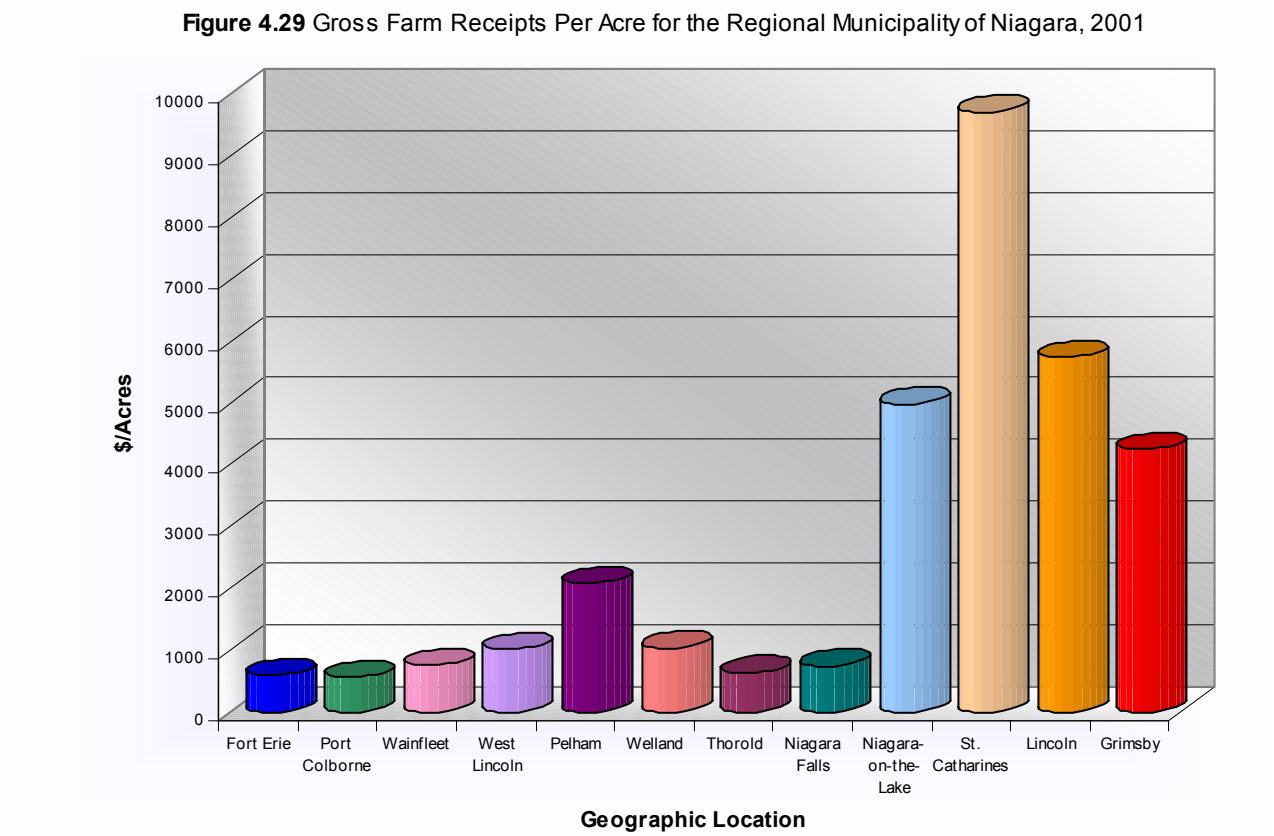


Figure 4.30 provides a breakdown of the top 10 commodity groups by municipality. This figure underscores the dominance and importance of the greenhouse sector to the Niagara agricultural economy. In six of the twelve municipalities, it is the top generator of gross farm receipts. In five municipalities, poultry and egg are the top generators. Fruit tops the list in Niagara-on-the-Lake and is a strong second in four other municipalities.

The statistics mapped on **Figure 4.31** emphasize the strength and diversity of the agricultural operations in Niagara. To be healthy, any economic sector must have diversity to ensure the services required for on going operation are in place and secure. This is particularly true for agriculture. Having strength, diversity and numbers ensures that the agricultural sector is secure, that it gets political attention and that the conflicts that can degrade it, are minimized.

Figure 4.32 depicts how the Niagara agricultural economy has changed over the years. In 1986, poultry and egg was the largest commodity group followed closely by fruit. Greenhouse was a distant third and dairy was in fourth position. Over time dairy increased, then dropped below the 1986 value in 2001. Fruit has held it's own and grown as a commodity group. Grain and oilseed has more than doubled in value over the 25-year period but it is the greenhouse sector that has gone from generating $47.66 million in 1986 to $217.60 million in 2001.

Figure 4.30 Top Ten Ranking by Gross Farm Receipts ($2,500 and over) for the Regional Municipality of Niagara by Area Municipality, 2001

Rank	*Reg Mun of Niagara*	*Fort Erie*	*Port Colborne*	*Wainfleet*	*West Lincoln*	*Pelham*	*Thorold/ Welland**	*Niagara Falls*	*Niagara-on-the-Lake*	*St. Catharines*	*Lincoln*	*Grimsby*
1	Greenhouse Products[1]	Poultry & Egg	Poultry & Egg	Poultry & Egg	Poultry & Egg	Greenhouse Products[1]	Greenhouse Products[1]	Poultry & Egg	Fruit	Greenhouse Products[1]	Greenhouse Products[1]	Greenhouse Products[1]
2	Fruit	Greenhouse Products[1]	Oilseed[2]	Dairy	Dairy	Nursery Product & Sod[1]	Oilseed[2]	Greenhouse Products[1]	Greenhouse Products[1]	Fruit	Fruit	Fruit
3	Poultry & Egg	Dairy	Greenhouse Products[1]	Greenhouse Products[1]	Greenhouse Products[1]	Poultry & Egg	Fruit	Dairy	Nursery Product & Sod[1]	Nursery Product & Sod[1]	Poultry & Egg	Poultry & Egg
4	Nursery Product & Sod[1]	Oilseed[2]	Other Small Grain[2]	Oilseed[2]	Hog	Fruit	Other Small Grain[2]	Other Small Grain[2]	Poultry & Egg	x	Nursery Product & Sod[1]	Horse & Pony[1]
5	Dairy	Horse & Pony[1]	Dairy	Hog	Other Small Grain[2]	Hay & Fodder[3]	x	Nursery Product & Sod[1]	Vegetable	x	Cattle	x
6	Oilseed[2]	Cattle	Cattle	Other Small Grain[2]	Specialty Livestock[1]	Dairy	x	Fruit	Oilseed[2]	x	Hog	x
7	Other Small Grain[2]	Other Small Grain[2]	Hay & Fodder[3]	Corn for Grain[2]	Cattle	Oilseed[2]	x	Cattle	Cattle	x	Horse & Pony[1]	x
8	Hog	Hay & Fodder[3]	x	Vegetable	Oilseed[2]	Horse & Pony[1]	x	Horse & Pony[1]	x	x	Specialty Livestock[1]	x
9	Cattle	Other Field Crop[4]	x	Horse & Pony[1]	Other Field Crop[4]	Vegetable	x	x	x	x	Dairy	x
10	Horse & Pony[1]	x	x	Cattle	All Other Types[4]	All Other Types[4]	x	x	x	x	Corn for Grain[2]	x

[1] *- For purposes of this table Miscellaneous Specialty has been broken down into: horse & pony; specialty livestock, greenhouse product and nursery product & sod. None of the remaining commodities in this grouping are significant in the Regional Municipality of Niagara.*

[2] *- For purposes of this table Grain & Oilseed has been broken down into: oilseed, corn for grain, and other small grain. None of the remaining commodities in this grouping are significant in the Regional Municipality of Niagara.*

[3] *- For purposes of this table Field Crops has been broken down into: hay & fodder. None of the remaining commodities in this grouping are significant in the Regional Municipality of Niagara.*

[4] *- For purposes of this table Other Cominbation has been broken down into: other field crop combination and all other types of combination. None of the remaining commodities in this grouping are significant in the Regional Municipality of Niagara.*

** - Combined to protect confidentiality*

X - Data suppressed to protect confidentiality

Note: Data for number of farms is calculated on farms reporting gross farm receipts of $2,500 and over.

Source: 2001 Statistics Canada - Catalogue No 95F0301XIE

Figure 4.33 illustrates the shifts that have occurred in gross farm receipts over time. There has been a continual increase in the value of production. In 1985, when Statistics Canada began reporting the number of operations generating in excess of $500,000 in gross farm receipts per annum, there were 91 operations in this category in Niagara; in 2001 there were 223.

Figure 4.33 Trends for Farms Classified by Total Gross Farm Receipts by Ontario and Regional Municipality of Niagara, 1980 to 2000

~~1980~~ Geographic Location	Number of Farms	Under $2,500	$2,500 to $4,999	$5,000 to $9,999	$10,000 to $24,999	$25,000 to $49,999	$50,000 to $99,999	$100,000 and over		
Ontario	82,448	13,488	8,818	10,158	13,952	10,963	12,510	12,559		
Percentage (%)		16.4%	10.7%	12.3%	16.9%	13.3%	15.2%	15.2%		
Reg Mun of Niagara	3,512	742	453	474	620	407	364	470		
Percentage (%)		21.1%	12.9%	13.5%	17.7%	11.6%	10.4%	13.4%		
~~1985~~	Number of Farms	Under $2,500	$2,500 to $4,999	$5,000 to $9,999	$10,000 to $24,999	$25,000 to $49,999	$50,000 to $99,999	$100,000 to $249,999	$250,000 to $499,999	$500,000 and over
Ontario	72,713	9,460	5,868	8,842	12,620	9,034	10,453	12,358	2,949	1,129
Percentage (%)		13.0%	8.1%	12.2%	17.4%	12.4%	14.4%	17.0%	4.1%	1.6%
Reg Mun of Niagara	3,147	528	309	397	537	368	329	416	172	91
Percentage (%)		16.8%	9.8%	12.6%	17.1%	11.7%	10.5%	13.2%	5.5%	2.9%
~~1990~~										
Ontario	68,633	7,201	4,839	8,258	12,669	8,670	8,368	12,513	4,247	1,868
Percentage (%)		10.5%	7.1%	12.0%	18.5%	12.6%	12.2%	18.2%	6.2%	2.7%
Reg Mun of Niagara	2,706	360	231	319	523	286	251	380	206	150
Percentage (%)		13.3%	8.5%	11.8%	19.3%	10.6%	9.3%	14.0%	7.6%	5.5%
~~1995~~										
Ontario	67,520	7,633	4,595	8,078	12,010	8,162	7,477	11,642	5,513	2,410
Percentage (%)		11.3%	6.8%	12.0%	17.8%	12.1%	11.1%	17.2%	8.2%	3.6%
Reg Mun of Niagara	2,672	403	192	308	436	268	267	381	230	187
Percentage (%)		15.1%	7.2%	11.5%	16.3%	10.0%	10.0%	14.3%	8.6%	7.0%
~~2000~~										
Ontario	59,728	4,636	3,360	7,374	11,378	7,862	6,542	9,587	5,493	3,496
Percentage (%)		7.8%	5.6%	12.3%	19.0%	13.2%	11.0%	16.1%	9.2%	5.9%
Reg Mun of Niagara	2,266	242	154	268	351	248	222	314	244	223
Percentage (%)		10.7%	6.8%	11.8%	15.5%	10.9%	9.8%	13.9%	10.8%	9.8%

Source: Statistics Canada, Census of Agriculture, 1981, 1986, 1991; 1996 Agricultural Profile of Ontario, Statistics Canada - Catalogue No. 95-177-XPB; 2001 Statistics Canada -

4.9 Farm Operating Costs

Farm operating costs represent an important contribution that farms make to the broader community through the purchase of goods and services. They are summarized on **Figure 4.34**. In 2001 the average operating cost per farm in Niagara was $192,348 per farm reporting total farm expense and the average operating cost per acre was $1,872. The latter figure is higher than the average cost per acre in Ontario, ($580 per acre) or in southern Ontario, ($840 per acre).

The operating costs vary considerably by municipality. St. Catharines, where there is a concentration of greenhouse operators, has the highest average operating cost per acre at $8,180. This is a result of a combination of the smaller size of the operation and the higher costs associated with running a greenhouse.

Figure 4.34 Total Farm Operating Expenses and Operating Costs Per Acre for Regional Municipality of Niagara by Area Municipality, 2001

Geographic Location	*Number of Farms*	*Farmland Area (ac)*	*Farm Business Operating Expenses ($)*	*Average Operating Cost Per Acre ($)*	*Average Operating Cost Per Farm ($)*
Ontario	59,728	13,507,357	7,829,246,574	580	131,082
Southern Ontario Region	19,631	3,985,132	3,349,000,014	840	170,598
Reg Mun of Niagara	**2,266**	**232,817**	**435,859,856**	**1,872**	**192,348**
Fort Erie	70	9,847	5,317,387	540	75,963
Port Colborne	70	13,379	6,861,958	513	98,028
Wainfleet	207	40,062	25,706,688	642	124,187
West Lincoln	454	67,118	57,089,015	851	125,747
Pelham	209	19,536	33,533,458	1,716	160,447
Welland	28	2,123	2,280,836	1,074	81,458
Thorold	49	11,537	5,980,131	518	122,043
Niagara Falls	82	8,191	5,481,298	669	66,845
Niagara-on-the-Lake	401	22,031	90,429,689	4,105	225,510
St. Catharines	108	4,755	38,894,451	8,180	360,134
Lincoln	473	27,945	140,719,048	5,036	297,503
Grimsby	115	6,293	23,565,897	3,745	204,921

Note: Data for number of farms and farmland area is calculated on total number of farms reporting.
Source: 2001 Statistics Canada - Catalogue No 95F0301XIE

Figure 4.35 is a comparison of the ratio of costs to revenue in the agricultural industry between the years 1986 and 2001. It shows the proportion of revenue that is consumed by costs. In 2001 the percentage of revenues that was consumed by costs was 85%. In 1996 the percentage of revenues that was consumed by costs was 86%. Therefore the ratio of costs to revenue has improved slightly.

Figure 4.35 Ratio of Cost/Revenues for the Regional Municipality of Niagara by Area Municipality, 1996 and 2001

Geographic Location	*1996*			*2001*		
	Receipts	*Expenses*	*Ratio Costs / Revenues*	*Receipts*	*Expenses*	*Ration Costs / Revenues*
Ontario	7,778,476,483	6,545,516,325	0.84	9,115,454,790	7,829,246,574	0.86
Southern Ontario Region	3,383,161,496	2,799,078,044	0.83	3,964,859,834	3,349,000,014	0.84
Reg Mun of Niagara	**408,322,788**	**350,960,918**	**0.86**	**511,395,019**	**435,859,856**	**0.85**
Fort Erie	5,919,192	5,502,610	0.93	5,905,919	5,317,387	0.90
Port Colborne	7,663,587	6,752,233	0.88	7,544,540	6,861,958	0.91
Wainfleet	31,281,766	24,949,906	0.80	30,328,473	25,706,688	0.85
West Lincoln	63,411,599	52,944,006	0.83	68,058,325	57,089,015	0.84
Pelham	29,153,822	25,326,160	0.87	40,636,003	33,533,458	0.83
Welland	999,142	1,020,668	1.02	2,208,029	2,280,836	1.03
Thorold	9,176,556	7,550,800	0.82	7,428,360	5,980,131	0.81
Niagara Falls	6,541,338	5,843,759	0.89	6,133,914	5,481,298	0.89
Niagara-on-the-Lake	86,520,103	73,892,339	0.85	109,847,469	90,429,689	0.82
St. Catharines	33,435,436	29,636,827	0.89	46,178,766	38,894,451	0.84
Lincoln	113,445,396	99,646,256	0.88	160,372,708	140,719,048	0.88
Grimsby	20,774,851	17,895,654	0.86	26,752,513	23,565,897	0.88

Source: 2001 Statistics Canada - Catalogue 95F0301XIE

Farm capital gives the total value of capital held by farms. It is not a measure of capital investment but rather the total value of all capital from machinery to land and buildings, as well as livestock and poultry. It does not include the cost of quota for supply management systems, which is expensive.

The first set of figures in **Figure 4.36** is calculated based on what each farmer gives Statistics Canada as an assessment of their value. The value of livestock and poultry inventories is calculated based on commodity prices. In 2001 the total farm capital value for Niagara was $1,764,362,508. In 1996 this value was assessed at $1,467,961,740. Between 1996 and 2001, the change in total farm capital value for Niagara was $296,400,768.

Figure 4.36 Farm Capital Data for the Regional Municipality of Niagara by Area Municipality, 1996 and 2001

Geographic Location	*Number of Farms*	*Total Capital ($)*	*Average Capital ($)*	*Total Farms*	*Total Capital ($)*	*Average Capital ($)*
	1996			*2001*		
Ontario	67,520	40,860,936,035	605,168	59,728	50,529,783,505	845,998
Southern Ontario	22,427	15,202,664,622	677,873	19,631	19,328,708,521	984,601
Reg Mun of Niagara	**2,672**	**1,467,961,740**	**549,387**	**2,266**	**1,764,362,508**	**778,624**
Fort Erie	72	41,027,656	569,829	70	39,584,603	565,494
Port Colborne	83	44,307,519	533,826	70	34,328,141	490,402
Wainfleet	234	110,696,693	473,063	207	169,917,712	820,859
West Lincoln	539	258,905,605	480,344	454	291,232,698	641,482
Pelham	255	119,065,804	466,925	209	145,229,142	694,876
Welland	20	5,763,959	288,198	28	12,061,592	430,771
Thorold	68	34,114,509	501,684	49	53,532,497	1,092,500
Niagara Falls	94	42,484,441	451,962	82	48,822,392	595,395
Niagara-on-the-Lake	513	280,218,927	546,236	401	340,287,353	848,597
St. Catharines	129	85,871,347	665,669	108	115,743,149	1,071,696
Lincoln	524	379,865,005	724,933	473	442,398,183	935,303
Grimsby	141	65,367,276	463,598	115	71,225,046	619,348

Note: Data for number of farms is calculated on total number of farms reporting.
Source: 2001 Statistics Canada - Catalogue No 95F0301XIE; 1996 Agriculture Profile of Ontario - Statistics Canada - Catalogue No. 95-177-XPB

As shown on **Figure 4.37** Niagara has a lower total farm capital value than many other regions in the province. This is not surprising given its geographic size compared to other regions. However when farm capital value is expressed as farm capital per acre, the Niagara value rises to fourth highest in the province. This is also not surprising given the type of agricultural operations that exist in the Region.

Figure 4.37 Farm Capital Per Acre, a Comparison of Various Municipalities, Counties and Districts, 2001

Geographic Location	*Total Farm Capital ($)*	*Average Farmland Area (ac)*	*Average Farm Capital Per Acre ($)*
Region of Peel	1,433,724,388	104,433	13,729
Regional Municipality of York	2,053,980,635	175,965	11,673
Regional Municipality of Halton	1,009,980,734	98,758	10,227
Regional Municipality of Niagara	1,764,362,508	232,817	7,578
City of Hamilton	845,093,210	138,879	6,085
Norfolk County	1,440,549,857	292,703	4,922
County of Wellington	2,259,725,987	471,389	4,794
Regional Municipality of Durham	1,577,423,794	330,286	4,776
Huron County	3,190,430,260	719,066	4,437
Simcoe County	2,081,575,843	540,870	3,849
Haldimand County	657,838,610	222,396	2,958
United Counties of Stormont, Dundas & Glengarry	1,416,021,581	496,498	2,852
Bruce County	1,591,157,380	611,461	2,602
Grey County	1,470,509,861	593,121	2,479

Note: Data for farmland area is calculated on total number of farms reporting.
Source: 2001 Statistics Canada - Catalogue No. 95F0301XIE

4.10 Profile of Subsectors

The Niagara Poultry Sector

Niagara is the largest chicken producing region in Ontario. It produces in excess of 49 million kilograms of chicken and over 3 million kilograms of turkey per year. **Figure 4.38** is a profile of the poultry and egg sector in Niagara. Poultry and egg, although it does not receive as much attention as some of the other agricultural sectors in Niagara, is the third ranked sector in terms of gross farm receipts. In 2001, 17.8% of the gross farm receipts generated in Niagara came from poultry and egg.

Overall, Ontario's egg and poultry industry is a highly specialized, automated and regulated industry. It is a world leader in setting standards for growth of breeding stock, health and safety of flocks and eggs and technical and innovative improvements. Ontario's poultry producers have a reputation as having one of the highest cleanliness standards in the world.

Poultry production in Niagara is progressive and innovative. Chickens raised for meat are not kept in cages nor are they given hormones. They are grain fed. Ontario chickens are free to roam the barn and have access to feed and water 24 hours a day. Chicken barns are climate controlled and protect the chickens from hot summers, cold winters, predators and disease.[6]

The nature of the housing of the chickens gives rise to an interesting procedure when time comes to send them to market. Specialized work crews, referred to as chicken catchers, are hired on contract to come in and secure the chickens for shipment. Although somewhat unusual, chicken catching is a specialized skill, as anyone who has attempted to round up and secure thousands of chicken in a limited period of time will confirm.

[6] http://www.cfo.on.ca/10 _ facts.html

Egg producers are the other component of this sector. In 2001 there were in excess of 800,000 laying hens and pullets in Niagara.[7] Egg laying chickens are housed in cages which allow manure to drop away from both bird and eggs. Ninety-five percent of eggs produced are white, five percent are brown. Producers can manage feed to control cholesterol levels in eggs. Rising demand for free range and organic eggs is being responded to by the industry.

In talking to poultry producers it was noted that many of the problems they are experiencing are common to those affecting other agricultural sectors. Despite being supply-managed, the front line producer is continually squeezed and asked to provide more for less. However, in coping with market variations, poultry producers have the advantage over other producers of being able to respond quickly to changes in the market. The turn around for poultry production is approximately 9 weeks which facilitates a quick response to market trends.

Poultry has another advantage over other agricultural operations in that it can operate successfully on a fairly small acreage. One successful poultry farmer, who operates on 10 acres, grows 55,000 units which turn over 5.5 times per year. When asked about the issue of manure management he indicated that he has a contract with a vegetable producer who takes all of the manure produced on his operation. Chicken manure, when managed properly, is a desirable form of fertilizer. Management of the manure is subject to all of the appropriate regulations regardless of its destination.

The poultry and egg sector in Niagara has a long history of successful operation. It is an integral part of the Niagara economy. Although it may not have the high public profile of some of the other sectors, the producers are addressing this through programs such as PoultryFest, a festival to celebrate chicken that is held each June in Smithville. Traditionally poultry producers have participated in the annual fairs held in the Region and, as anyone who has attended an agricultural fair knows, to see a display of truly exotic animals, there is nothing like a visit to the poultry barn.

The Niagara Grape and Wine Industry

Unlike the poultry sector, the grape and wine sector is a component of Niagara agriculture that receives extensive attention. It has an extremely high profile and is the generator of considerable tourism activity associated with the value added activities that occur on winery sites. Initiatives such as the Niagara Wine Route, numerous wine festivals and high end restaurants that feature local produce complimented by local wines, are a huge attraction.

Not all of these value added attractions and activities are generated by the desire of the winery owners to participate in agri tourism. Many would be satisfied to produce wine without the added burden of running what is essentially a tourism business. However the compelling motive for doing so is to raise the profile of the industry and to realize a significantly higher return on a bottle of wine sold at the winery than would be returned if the same bottle were sold by the Liquor Control Board of Ontario (LCBO). It is also reality that much of the wine produced in Niagara is not carried in the LCBO. Many small wineries do not produce sufficient quantities to meet the requirements of the LCBO. Selling from the winery or establishing individual contracts with restaurants to supply wine is a more lucrative and manageable outlet for many small operators.

In addition to the higher profile wineries, grape producers are an essential component of the industry. Many growers do not produce wine but enter into contracts to grow for specific wineries. Grape production has been growing rapidly since the industry recovered from the difficult times associated

[7] Statistics Canada 2001

with negotiation of the free trade agreement in the early 1990's. Farm gate income from grape sales has risen from $35 million in 1997, to in excess of $48 million in 2001.

There are two types of grapes produced in Niagara, vinifera and hybrids. In the year 2000, vinifera production overtook hybrid production when it achieved sales to the wineries of $20.4 million. In the same year, sales of hybrids were valued at $18 million.

Grapes are not solely used for the production of wines. Jams and juices also comprise a significant component of the market although it is a declining share. In 1997, 32,309 metric tones of grapes were sold for production of wine, 9,236 metric tones went to juice and jams. In 2001, 41,267 metric tones of grapes went to wine, 10,124 went to jams and juices.

The evolution of the grape and wine industry has not been without issues. As the wine production has become increasingly concentrated, growers have complained about unfair treatment in the negotiation of the price being paid for grapes. There is a time delay between planting vines and realizing a return. Demand for wine changes as the market evolves and grapes that were in demand at the time of planting can lose their value by the time they mature, leaving the grower vulnerable to shifts beyond their control.

Owning a vineyard has become fashionable. Money pours in and drives up the cost of land for long-term growers. Competition for land becomes fierce. Recently this issue has been complicated by the introduction of an initiative to establish an agricultural preserve to protect Niagara's future as a wine producing region. Uncertainty about the implications of this initiative has growers uneasy and at odds with certain elements of the winery industry. The Region has established a task force to address this issue with membership from all agricultural sectors. Hopefully, this group can draft a Niagara solution that will work for the Region.

Regardless of the growing pains affecting the industry, grape and wine production is a tremendously important component of Niagara agriculture. Although accurate numbers have never been kept, reliable estimates are that it attracts 800,000 to 1,000,000 tourists to Niagara a year. Niagara Falls may bring people once, but the interactive tourism experience provided by the vineyards, wineries and related restaurants keeps them coming back.

Some interesting facts about the industry are contained on **Figure 4.39.**

The Greenhouse Sector

As mentioned numerous times in this report, the greenhouse sector is the largest and fastest growing in the agricultural economy of Niagara. **Figure 4.40** provides some insight into this very progressive industry.

Floriculture and ornamentals dominate the industry in Niagara and account for 40% of all Canadian production. Although vegetables are a component of the sector, floriculture represents approximately 80% of greenhouse production in the Region. This production does not include a significant component of cut flowers, 70% of cut flowers sold in Ontario are imported[8] from abroad.

The greenhouse industry has a huge advantage in agriculture because it can operate year round. Among other advantages, this allows continuity for labour management. The greenhouse sector employs approximately 14,000 people in Niagara and because of its nature, can do so on a more permanent basis. The greenhouse operators have chosen to manage the risk that faces all

[8] Submission to the Regional Municipality of Niagara Planning and Development Department by Flowers Canada, Dr Irwin Smith March 2002

agricultural producers by controlling climate and achieving uniformity of production. However they are still vulnerable to external factors beyond their control such as unforeseen delays in delivery.

Floriculture is the only agriculture commodity group that has a positive trade balance. This makes the industry particularly vulnerable to issues related to border crossing. An open, accessible border is essential to the success of the industry. Unlike other agricultural products, potted plants are subject to federal and provincial sales tax which also impacts the bottom line.

In addition to currently being the most successful agricultural sector in Niagara, in many ways the greenhouse sector is also the most controversial. The debate of whether it is truly agriculture has been ongoing for many years. Each time there is an application for expansion, the issue surfaces. Although it has been arbitrated in the courts and the validity of greenhouse operations as agricultural has been upheld continuously, the issue continues to exist. Off site issues such as those associated with potential moderation of the microclimate, development of associated operations and noise from operation continue to plague the industry.

The success of the greenhouse industry in Niagara can be attributed largely to the development and provision of infrastructure by the Region[9]. Highway access and natural gas are the two services that have made the difference. This in itself is creating more controversy. The success of the industry has spawned related industries in the greenhouse construction and service industry. These are occupying land that is part of the prime agricultural land base. Ever increasing traffic on the QEW has generated calls for it to be expanded. The response has been an increased focus on Niagara's long standing commitment to a mid peninsula transportation corridor and related calls for the greenhouses to move with the corridor. However, even if this initiative is successful and provides the incentive for the greenhouse industry to expand to the top of the escarpment, infrastructure development is painfully slow and the industry cannot put its expansion plans on hold while it waits for the infrastructure to be built.

The issues associated with the greenhouse industry are illustrative of the problems currently facing agriculture generally. Agriculture is a fast evolving modern business. It cannot be placed in a box and subjected to controls that are based on an historic vision of what the industry was. Flexibility to respond quickly and with innovation is essential to the future of agriculture. The greenhouse industry in Niagara is an example of how this can be successful. Successful resolution of the issues facing the industry will speak to whether future efforts to manage other sectors of the industry will succeed.

4.11 Summary

This chapter has provided a profile and overview of the agricultural industry in Niagara. The conclusion that can be reached in evaluating this profile is that agriculture is a hugely significant component of the region's history, economy and way of life. Agriculture in Niagara is historic, profitable, diverse, innovative, and evolving.

[9] Ibid