
# SE Parry Sound ~ Muskoka Agriculture Initiative 2002 Report

## *To Our Project Funders*

We would like to thank the following three funding partners. Without your belief in this project, the following results would not be possible.

Canadian Agricultural Rural Communities Initiative (CARCI)

The Federal Economic Development Initiative for Northern Ontario

District of Muskoka

# Acknowledgements

***Sponsoring Organization***

Muskoka Community Co-operatives Inc. (MCC)
27 Aubrey St.
Bracebridge, ON
P1L 1L 9
705-645-4491 (P)
705-645-9879 (F)

***Project Coordinator***

Phyllis Winnington-Ingram

***Project Contributors***

Lauren Baker
Sustainable Agricultural and Food Systems Consultant
(416) 532-4667

Brad Hilliard
Soil Scientist
(705) 689-6444

Phyllis Winnington-Ingram
Community and Co-operative Development Consultant
(705) 645-4491

## ***Advisory Committee***

**Morris Hudasek, MCC**
Recently retired as acting Executive Director for the Muskoka Family, Youth and Children's Services (which includes Children's Aid) (grew up on a farm)
705-645-9146

**Penny Britnell**
Oakley Community Co-operative Inc.
President & Farmer
705-645-6157

**Judy Brouse, Director of Policy and Planning**
District of Muskoka
645-2100 ext 218

**Marianne Bolle**
President, Honey Harbour Community Co-op
Manager, Georgian Bay Chamber
Past farmer

**Heather Darlington**
Rosseau Farmers' Market, Farmer
705-732-1464

## ***Supporters/Advisors***

**Gord Mitchell**
Past OMAFRA representative for the region has offered to assist up with contacts. Gord is very well respected in this region.

**Ken Maltby and Cathy Simpson**
Economic Development Consultants
OMAFRA

**Jim Jones**
Big Ass Garlic, Farmer
Gravenhurst Farmers' Market Co-operative,
Past-President, Farmer
705-766-2748


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- Jennifer Robinson, Information Resources Officer
- Mary Lee Zimmer, Project Editor & Supervisor

# Table of Contents

# Overview & Summary

In presenting this paper, we would like to note that this is a living document and is currently in final draft form. We would like any input that is relevant to the subject and wish to continue in our effort of collaboration.

## BACKGROUND

Penny Britnell, a farmer in Vankoughnet and a member of Muskoka Community Co-operatives (MCC), initiated this project by highlighting the many issues of farmers in our region including:

- the decrease in provincial government support,
- the lack of support at a municipal level,
- increased governmental restrictions and,
- at the time, an inactive Muskoka Soils and Crop Association.

At the same time, Ken Maltby, an Economic Development Consultant with the Ontario Ministry of Agriculture and Food announced that he saw a number of opportunities to enhance agriculture in our region. This contributed to the relevancy and importance of addressing these farming sector issues. These opportunities, as stated by Maltby include:

- increasing the development of the intense seasonal market place due to the high number of tourists and cottagers,
- promoting 'local' branding,
- developing partnerships between chefs and producers, and
- identifying educational opportunities for farm management and soil nutrition, increasing yields and cash receipt.

These two individuals, and our preliminary investigation, identified the lack of support and information as a serious gap within our region. This inspired the members of the Muskoka Community Co-operatives to investigate opportunities and to be of assistance.

## PROJECT RESULTS

### Statistic Canada Results

Census Canada reported 210 farms for 1991, 260 farms in 1996, and 201 farms in 2001. Interestingly, Lake of Bays reported no farms in both 1991 and 2001, but reported 18 farms in 1996, with 2,320 hectares. Also, in all municipalities reporting, 3 had a decreasing number of farms, as well as hectares, each census year, while Bracebridge increased in hectares all three census years. 1991 reported 31 farms, 2,553 hectares; 1996 reported 53 farms, 2,825 hectares; and in 2001 reported 44 farms with 4,821 hectares.

1 hectare is equal to 2.47 acres
http://onlineconversion.com/area.htm

### Decrease in number of Farms

Nationally, provincially and locally, the number of farms has been steadily decreasing over the past 40 years. 1961, the District of Muskoka reported 391 farms, covering 37,534 hectares. The 2001 census reported only 201 farms, down 48%, and covering 14,075 hectares in 2001, a decrease of 67%.

## Anomalies

We identified a number of smaller farms that would be considered anomalies due to the geographical terrain of rock and trees. These particular farms, not identified through traditional large-scale mapping, are composed of microclimates, producing good growth opportunities, within low-quality areas. Farming can and does take place in areas not identified as 'good' farmland. These farms can be optimized through good farm management techniques; use of existing shelter; exposure and the moderating effects of bodies of water.

## Education

The only post-secondary agricultural courses in Ontario are through the University of Guelph. Currently they offer distance courses, but not a full diploma program. Students are required to move from our region to campuses either in Guelph, Ridgetown, Kemptville or Alfred. The only campus previously in northern Ontario, New Liskeard, has been discontinued.

A huge step has been made in the field of horticulture. With the advent of high-speed technology, the first e-diploma in horticulture, will be launched this summer at the University of Guelph and will give part-time adult learners a new educational opportunity using the World Wide Web. The e-diploma incorporates three important aspects: flexibility, which allows participants to set their own schedules; accessibility to anyone over 19 years of age; and credibility, since the University of Guelph accredits all courses. This model may be considered for agricultural programs in the future.

## Youth

Agricultural opportunities are incredibly dismal for youth in our region. Those who show an interest are often told they could never make a living at it and therefore they do not try. This is discouraging to the many youth who will never be computer wizards or able to hold down a 9 to 5 job, but who love to work for themselves, with animals and in the fresh air, even if it means they do snow removal in the winter, or other ad hoc jobs, to support their passion.

Most farmers will tell you that you never really get your money back out of farming until you retire off the farm. When asked if they had to do it all over again, they stated that they wouldn't change a thing! The reality is that if you want to earn an incredible amount of money per year, have the latest toys, work regular hours and not face the ups and downs of the elements, farming is not for you. But if you love the outdoors, irregular hours and a challenge, then maybe you should consider farming. The key is how do we present agriculture as an opportunity to those young people who might fit the criteria when:

- High schools in our region do not promote farming as a viable educational or employment opportunity
- Parry Sound, Muskoka, Nipissing Local Training and Adjustment Board (LTAB) has never identified farming as training need.
- 4 H Ontario has not existed in our region for several years.
- The nearest educational institutions supporting agriculture is in Guelph.

Some of the positive effects of this project are:

- High school administrators will read this report and consider how they might counsel students who might enjoy the challenges of farming.

- Donna Maitland, Executive Director of LTAB has agreed to present this report, as well as the Blue Sky report, to her Board of Directors, so that it could be included in the next environmental impact study.
- Evelyn Chambers, Volunteer Support Services Manager of 4-H Ontario is excited at the opportunity to promote 4-H in our region. 4-H Ontario not only supports youth interested in agriculture, but also rural youth interested in business and leadership training.

### Energy

Farmers articulated their concerns about increased hydro prices and the lack of hydro consistency, both of which can have adverse effects on profitability and the health of their livestock. Currently, when there are power outages, urban areas are connected often days before rural farm regions.

### Computers

Farmers using a computer, according to the 2001 census, are four out of 10, or 40%, across Canada, and 68 farms, or 38% in Muskoka. According to this project survey, 71 out of 100 farmers polled, own and use a computer – significantly higher than the 2001 census.

Since 1986, the census has collected data on how many farmers use computers as a management tool. For the first time in 2001, the census collected information on the kinds of computer applications used.

Based on the census, the share of farms using a computer to help manage the farm has doubled every five years since 1991, which is similar to the District of Muskoka results over the past 10 years. The proportion may seem low when compared with the 54.9% of all Canadians who owned a computer in 2000. However, until recently rural areas have lacked the infrastructure that makes computer "connectivity" as attractive, or practical, as in urban Canada.

Within the census data, in some cases, such as bookkeeping, farmers are simply transferring paper functions to the computer. Bookkeeping was the most common application on almost 7.5 out of 10 computers in Muskoka. Others, such as the Internet, have brought the world to the farm office.

Seven out of 10 farmers surfed the Internet for such information as commodity prices and/or weather reports. Internet, word processing, e-mail, and livestock and crop record-keeping followed, in that order. Computers were also used for other purposes such as banking.

Nationally, computers gained in importance in every receipt category, Canada 1996-2001 (at 2000 prices). Computer use increases as receipts rise.

### Succession Planning

Canadian farmers nearing retirement will transfer billions of dollars in assets in the next decade, but there's a lack of coordinated services to help them plan and carry out the transition. Studies of farm succession in Canadian agriculture have found that 120,000 farmers will reach retirement age in the next decade. Nearly 50 per cent of farm operators in Ontario are over 55 years of age. Muskoka is no exception.

In fact, we found very few older farmers comfortable in speaking to us about their plans, making it difficult to make any definitive statements. Looking at past patterns and older farmers' current situations, most farmers will tell you their retirement funds are their farms. We have a large number of farmers who are in their 60's, 70's and 80's and have spent several decades, if not their whole life, on the farm. If they are lucky, they have children who will run the farm and pay them some return on

their investment. This is usually not a large amount and still requires looking at other options. For many, the only way they can cover the costs of ageing is to look at what assets they can sell. We have seen many farms subdivided for housing lots, significantly decreasing productive land and eliminating the possibility of future agricultural use.

## MOBILIZING

### Farmers/Micro-processors

Since we began this project we have witnessed some remarkable changes. This is due to two conditions. One, the intense energy of Ken and Katya Riley in promoting agriculture. They revitalized the Muskoka Soils and Crop Association and developed an agricultural website, funded by the Muskoka Business Development Corporation. And two, this project and the participation of such a large number of farmers and micro-processors with whom we were able to consult, develop positive relations and encourage partnership opportunities. (part of statistical information)

Through this flurry of activity, a large number of newspaper and magazine articles have highlighted agriculture in our region, promoting it as a valuable sector of our tourist economy.

### Chefs

A number of local chefs were unaware of the true potential of agricultural production in our region. It was only if and when they heard about, or stumbled across, a particular farmer with whom they developed a relationship. They spoke of the difficulty in identifying farmers and produce in our region, as well as the 'all or nothing' growing patterns many of our farmers use.

### Businesses

Through this project, we were able to speak to a number of general stores, large grocery retailers, produce and meat retailers and health food stores. The concept of local branding was strongly supported both by small and large retailers. They felt that the promotion of fresh, local items is a great selling feature, especially to the seasonal population.

One of the interesting items to note is that large retail grocery stores are not able to purchase directly from a producer, even if they wished to, but rather must purchase through a wholesale company.

The idea was discussed concerning farmers and/or microprocessors forming a local wholesale company and distribution arm. Farmers are often not able to deliver their own product on a daily or weekly basis to the various purchasers due to time constraints.

### Farmers' Markets

The local farmers' markets have moved, this year, from operating totally separately to working in collaboration and have produced a District-wide pamphlet. Lynnis Royea, President of the Rosseau Farmers' Market Co-operative has stated that she is willing to consult with the other farmers' markets to consider the opportunity of more collaborative endeavours, including various marketing opportunities such as website development, sharing of event ideas, etc.

## CHALLENGES

### Census Statistics

Three major challenges faced this project:

- Report submission was postponed until 2001 census statistics became available on December 4th, 2002.
- Maneuverability on the Statistics Canada website proved to be extremely difficult and time consuming.
- Due to lack of local census material, much of the research was conducted in Guelph, Ontario.

### 911 Numbers

911 numbers, vital in creating a layer on the District's existing digitized map to identify actual current farm locations, were not easily obtained. . Surprisingly many of the farmers did not know their 911 numbers. It was our intention to match this data to the soils' classification map and to identify farming patterns and anomalies.

## UNEXPECTED RESULTS

### Regional Branding

We were overwhelmed with the solid support by all stakeholders for local branding. In fact 86% of retailers supported this concept. This idea has been successfully implemented in the Peterbourgh and Niagara region, as well in other areas throughout Canada.

### New vs. older farmers

While completing the surveys, we noted a common pattern between older farmers, people who have farmed for decades, and newer farmers. We found that older farmers were less comfortable with new technology and felt that farming was no longer a viable industry. They were pessimistic about the future of farming in our region.

On the other hand, we spoke to many newer farmers who were incredibly excited about the future of agriculture in our region, who saw technology, marketing, high-end products and collaborative partnerships as a way of turning a passion, or life-style choice, into a sustainable business.

None of the farmers we talked to thought that they were going to make huge profits. In fact, most considered themselves successful if they were able to cover expenses, feed their family and have a little disposable income.

### Cash receipts vs. Expenses

This was an extremely interesting topic when talking to farmers. As you will note from the statistics, expenses were higher than cash receipts, making farming appear like a losing venture. But in talking to farmers, off the record, it was noted that most farmers are not trying to make profits and if they can show a break-even position, all the better. Many of the older farmers are just doing enough to sustain the farm, therefore not working the land to its full potential. Newer farmers have a large number of ‘write-offs’ so it will take several years before they will show a profit on paper. This is an important consideration when evaluating the statistics such as cash receipts vs. expenses. This may not be the best yard-stick to judge the viability of the agriculture industry in our region.

### Women

As part of this project, we noted a large number of women, especially 60 and younger, who were the persons spearheading the family farm. These women were intelligent, confident and wanting new experiences. They were not deterred by the daunting workload or the long hours and were avid advocators for this hard work and fresh air lifestyle.

## RECOMMENDATIONS

### Government Support

This project has clearly identified the need for additional concrete support for farmers and micro-processors in our region. Virtually all of the knowledge-base required to support farmers is located a significant distance from the actual farms, leaving farmers with no real hands-on support. This support is especially necessary for new farmers and for the important training of the general farm population in new technology and marketing opportunities.

There is also a clear need for the District and local municipal governments to view agriculture as a separate sector, and to support it as a complimentary component of local tourism.

### Agriculture vs. Housing

Statistics show that Muskoka and SE Parry Sound is growing at an increasingly rapid rate as many baby-boomers decide to make this region their retirement home. The pressure on municipalities to open up more areas for housing development will only increase, as will the conflict between farmers and neighbours over manure handling, use of insecticides and pesticides. It is important that the appropriate body develop a plan to handle these issues before development is allowed to expand. If people choose to live near a farm, they must be willing to accept legal farming practices.

### Subdividing Farm Lots

Municipalities need to continue to work with the agricultural community to develop policy that recognizes the needs of farmers for flexibility in the management of farms while protecting agricultural land base for futures operations. We believe any plan should be balanced, recognizing the need for older farmers to access needed resources for retirement through the potential sale of small parcels of non-agricultural land. They could then continue to live on the farm, knowing that when the farm is actually sold, additional resources will be available. For farmers who have already sold a certain number of lots, subdividing any further property should be assessed on a case by case basis.

### Tourism

We recommend that the local tourist boards support agriculture and farmers' markets in all their promotional material and that the sector be included as a member, so that their input and participation could a contributing factor in all future endeavours.

### Marketing the Farm Experience

We recommend developing value-added, complimentary farm products and activities such as high-end unique items for local and/or global marketplaces, Bed & Breakfasts, micro-processing classes (pickles, jams, etc), and various youth experiences.

### Marketing Opportunities

We recommend more promotion of joint marketing opportunities between the local farmers markets and of ways to increase the length of their season and the variety of products/produce they market. We also recommend promotion of the incredible opportunities for farmers, micro-processors, chefs and retailers to collaborate together, supporting the development and enhancement of the various specialty products offered in our region.

### Regional Agricultural Conference

We recommend that a regional agriculture conference be held consisting of several workshops specific to producers needs, i.e. destination marketing, identification of chef's purchasing requirements, cost/benefit of greenhouses, niche crops, energy alternatives sources, e-business and identification of online resources, etc., as well as a marketplace to showcase local producers' wares.

### Education

We recommend that secondary schools be made aware of the opportunities provided by the agricultural sector, both at a hands-on level and at a research food production level, so that students in our region will be able to consider agriculture as an option.

We also recommend that the Muskoka, Parry Sound, Nipissing Local Training and Adjustment Board include agriculture as a sector in their annual environmental scans.

Finally, we recommend ore distance education opportunities for farmers, as this is a second career for a family and they are unable to leave the farm for educational advancements.

### Succession Planning

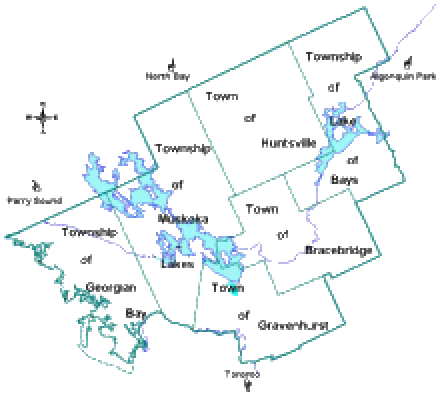
We recommend that promotion of succession planning be an important aspect of a farmer's long-term strategy. We cannot continue to sell off farm land as has been done in the past.

### Youth

It is imperative that opportunities for youth in agriculture be supported, whether through farm exchanges, 4-H Ontario or through business programs. It has been noted through talking to schools who teach business that agriculture as a business is rarely discussed.

# District of Muskoka Demographics

**Explanation**




## Population Projections

***District of Muskoka - Projected Change***

| 1996 | 1999 | 2021 | % Change (1999-2021) |
|---|---|---|---|
| 52.0 | 53.3 | 72.6 | 36.2% |

Source Ministry of Finance, 2000

This source included projections from 9 Districts in Northeastern Ontario. The other Districts/ Municipalities include Algoma; Cochrane Manitoulin; Nipissing; Parry Sound/ Greater Sudbury and Timiskaming. The District with the second closest % of positive change was Manitoulin at 23.1 %. The average amount of change is 4.9%

***District of Muskoka - Absolute Change***

| 1996 | 2001 | Absolute Change 1996-2001 | % Change 1996-2001 |
|---|---|---|---|
| 50.5 | 53.1 | +2.6 | +5.2% |

Source: Statistics Canada, 2001

This source also included projections from 9 Districts in Northeastern Ontario. The other Districts/Municipalities include Algoma; Cochrane; Manitoulin; Nipissing; Parry Sound/ Greater Sudbury and Timiskaming. The only District/Municipality that had a greater increase was Manitoulin with reported a 7.9% increase from 11,700 to 12,700 people. The average change was – 4.4% in the region.

## Household Income

Muskoka - Median $36,100 (45,200 – Ontario)
Source: Statistics Canada, 1996 Census

# Overview of Agriculture

## Canadian Farm Operations in the 21st Century

Farm numbers declined in all provinces.

Between 1996 and 2001, the number of farms declined by at least 10% in all provinces, with Ontario having an 11.5% decline.

Farm numbers have been falling for the last five decades, reflecting rapid changes in technology and increasing productivity. The largest-ever decline was between the 1956 and 1961 Censuses, when farm numbers fell by 16.4% Another 15% of farms were lost between 1966 and 1971. The rate of decline had slowed between 1991 and 1996.

Seven of every 10 farm operations that had been counted in 1996 remained in 2001, and three had left agriculture. Yet another 50,000 – or one-fifth of all farms – were new since 1996. This entry rate of new farm operations is consistent with longer-term trends.

Just under half of farms with less than $25,000 in receipts that were counted in 1996 had left by 2001. In the larger receipts classes, one-quarter of farms with receipts between $25,000 and $100,000 had left.

Farms with $250,000 or more in gross farm receipts (at 2000 prices) represented 13.8% of all farms in 2001, double the proportion in 1991. Their share had more than doubled between 1981 and 1991 as well. This is the only receipts class to show increases at the Canada level.

**Farm numbers down, average gross farm receipts and average farm area up in all provinces (at 2000 prices) (1996-2001)**

Source: 2001 Census of Agriculture

# Research Methodology

## Survey Development

Through consultation at the Muskoka Community Co-operatives agriculture committee and with other stakeholders representative of the agricultural community, the surveys were developed to best capture the information presented in this report. Some minor refinements of the survey evolved immediately due to subject responses upon implementation of the survey in the field.

## Survey process

By Phone & Site Visits

Mapping of and visits to rural areas provided many direct contacts with those involved in agriculture and also many leads to others similarly involved who may not have been surveyed otherwise. Personal telephone surveys and follow-up, along with ongoing site visits, gathered information from: Farms, Micro-Processors, Farmers' Markets, Retailers, Chefs, Restaurants, Resorts, Grocery retailers, General Stores and the Ontario Food Terminal.

## Data Collection and Capture

Format

Because of its capabilities for sharing, for reporting and for for exportation to spreadsheet, wordprocessing, mail merge, email address books other commonly used applications, Miscrosoft Access was the chosen database for the information collected during this initiative.

StatsCan

The 2001, 1996 and 1991 census statistics from the Statistics Canada provided much of the comparable data to be found in tables in this report. Historical statistics were collected thank to the Guelph Public Library and the University of Guelph.

Internet

The internet was used extensively to capture resources and case studies. Follow up phone calls were used to confirm the information.

Third Party Sources

This project utilized the a number of various organizations and government bodies involved in agriculture to collect information and to provide feedback.

# Small Scale Farm …. a quote

According to the December 2000 edition of Harrowsmith Country Life: "We've said it before and we'll say it again. One of the few remaining arenas in which the small-scale farm can still turn a decent profit is the production of gourmet food products for specialty markets. Growing organic garlic or salad greens, for instance, requires lots of hands-on labour and copious fertilizer such as manure and compost, but only a small land base. What's more, it offers a significantly larger return per acre than large-scale crop farming operations, and with the right marketing skills, is eminently suited to a home-based business. Other niche products include cut flowers, sprouts, mushrooms, herbs, as well as various value-added products such as pickles, preserves and herbal teas."

# Muskoka Statistical Information

**Statistics Canada 2001**
**Information reported on May 15,2001**

*Legend:*

| | |
|---|---|
| x | (confidential to meet secrecy requirements of Statistics Act) |
| - | nil or 0 |
| .. | figures not available |
| … | figures not appropriate or not applicable |
| -- | amount too small to be expressed |
| | area with no number or letter indicates that the category was not reported on in that census year. |

* Some of the statistics for 2001 are unavailable at the time of printing. Space has been left for readers to fill in #'s when they become available.

**Farm Type (historical classifications) for Farm Reporting Total Gross Farm Receipts Greater Than $2,499**

| | Reported Numbers | | | % Change |
|---|---|---|---|---|
| | 1991 | 1996 | 2001 | 1991-2001 |
| *Total* | 155 | 167 | 147 | -5.2 |
| *Dairy* | 7 | 3 | 1 | -85.8 |
| Cattle (Beef) | 65 | 45 | 45 | -30.8 |
| Hog | 3 | 3 | 0 | -100.0 |
| Poultry & Egg | 2 | 3 | 3 | 50.0 |
| Wheat | - | 1 | - | 0 |
| (Small) Grain & Oilseed (except wheat) | 1 | - | - | -100.0 |
| Field crop (except grain & wheat) | 10 | 26 | 26 | 160.0 |
| Fruit | 6 | 6 | 5 | -16.7 |
| Misc. Specialty | 50 | 65 | 50 | 0 |
| Livestock combination | 7 | 7 | 12 | 71.5 |
| Vegetables | 1 | 3 | 2 | 100.0 |
| Other combinations | 3 | 5 | 3 | 0 |

## Farm Type (NAICS classification by industry group) for Farms Reporting Total Gross Farm Receipts Greater Than $2,499

### North American Industrial Classification System (NAICS)

| | Reported Number |
|---|---|
| | 2001 |
| *Total* | 147 |
| *Cattle ranching and farming* | 38 |
| Hog and pig farming | 0 |
| Poultry and egg production | 3 |
| Sheep and goat farming | 5 |
| Other animal production | 36 |
| Oilseed and grain farming | 0 |
| Vegetable and melon farming | 2 |
| Fruit and tree nut farming | 5 |
| Greenhouse, nursery and floriculture production | 16 |
| Other crop farming | 42 |

### Land Tenure

| | Number of Farms Reporting | Hectares | Number of Farms Reporting | Hectares | Number of Farms Reporting | Hectares | % Change # Farms Reporting | % Change Hectares |
|---|---|---|---|---|---|---|---|---|
| | 1991 | | 1996 | | 2001 | | 1991-2001 | |
| **Total Area of Farms** | 210 | 15,517 | 260 | 16,794 | 201 | 14,075 | -4.3 | -9.3 |
| Area owned | 206 | 13,415 | 255 | 14,992 | 196 | 12,071 | -4.9 | -10.1 |
| Total area rented, leased or crop shared | 35 | 2,102 | 37 | 1802 | 37 | 2,003 | 5.8 | -4.7 |
| Area leased from government | 1 | x | 2 | x | 1 | x | 0 | x |
| Area rented or leased from others | 34 | x | 36 | x | 31 | 1,824 | -8.9 | x |
| Area crop shared by others | | | | | x | x | x | x |

## Land Use

| | Number of Farms Reporting | Hectares | Number of Farms Reporting | Hectares | Number of Farms Reporting | Hectares | % Change # Farms Reporting | % Change Hectares |
|---|---|---|---|---|---|---|---|---|
| | 1991 | | 1996 | | 2001 | | 1991-2001 | |
| **Total Area of Farms** | 210 | 15,517 | 260 | 16,794 | 201 | 14,075 | -4.3 | -9.3 |
| Land in crop (excluding Xmas tree area) | 134 | 2,533 | 146 | 3,032 | 138 | 3,138 | 3.0 | 23.9 |
| Summer fallow land | 14 | 133 | 7 | 73 | 2 | x | -85.8 | x |
| Tame or seed pasture * | 63 | 650 | 62 | 1077 | 65 | 1,147 | 3.2 | 169.6 |
| Natural land for pasture | 115 | 4,146 | 133 | 2783 | 118 | 2,219 | 2.6 | 1829.6 |
| All other land (including Xmas tree area) ** | 182 | 8,055 | 235 | 9,829 | 179 | x | -1.7 | x |

* In the 1991 Census, the category was called 'improved land' Consequently, some respondents may have reported differently in 1996 than in 1991, thereby affecting the comparable data for these years.

** In the 1991 Census, the category did not identify including or excluding Christmas (Xmas) Trees.

## Manure Application Method

| | Number of Farms Reporting | Hectares | Number of Farms Reporting | Hectares | % Change # Farms Reporting | % Change Hectares |
|---|---|---|---|---|---|---|
| | 1996 | | 2001 | | 1996-2001 | |
| **Total Number of Farms** | 260 | | 201 | | -22.7 | |
| Manure application using a soil spreader | 94 | 714 | 81 | 791 | -13.9 | 10.8 |
| Manure application using an irrigation system | - | - | - | - | | |
| Manure application using a liquid spreader (on surface) | 7 | 89 | 3 | 51 | -57.2 | -42.7 |
| Manure application using a liquid spreader (injected) | - | - | - | - | | |

* 1996 was the first year that the question about the Manure Application Method was asked.

## Vegetables

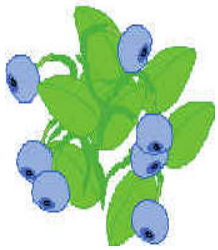
| | Number of Farms Reporting | Hectares | Number of Farms Reporting | Hectares | Number of Farms Reporting | Hectares | % Change # Farms Reporting | % Change Hectares |
|---|---|---|---|---|---|---|---|---|
| | 1991 | | 1996 | | 2001 | | 1991-2001 | |
| **Total Vegetables** | 21 | 28 | 24 | 18 | 16 | 15 | -31.3 | -46.5 |
| Sweet Corn | 11 | 16 | 14 | 9 | 8 | x | -27.3 | x |
| Tomatoes | 6 | -- | 7 | -- | 7 | x | 16.7 | x |
| Cucumbers | 8 | 1 | 4 | -- | 6 | x | -25.0 | x |
| Green Peas | 5 | 2 acres | 3 | x | 6 | 2 acres | 20.0 | 0 |
| Green or Wax Beans | 6 | x | 6 | x | 8 | x | 33.4 | x |
| Cabbage | 3 | -- | 1 | x | 2 | x | -33.3 | x |
| Chinese Cabbage | - | - | 1 | x | - | - | - | x |
| Cauliflower | 2 | x | 11 | -- | 1 | x | -50 | x |
| Broccoli | 1 | x | 4 | -- | 5 | x | 400.0 | x |
| Brussel Sprouts | - | - | - | - | 2 | x | - | x |
| Carrots | 7 | 2 acres | 4 | -- | 7 | 2 acres | 0 | 0 |
| Rutabagas and Turnips | 2 | x | 1 | x | 2 | x | 0 | x |
| Beets | 6 | -- | 5 | -- | 5 | x | -16.7 | x |
| Radishes | 2 | x | 10 | -- | 1 | x | -50.0 | x |
| Dry Onions | 2 | x | 2 | x | 2 | x | 0 | x |
| Shallots, Green and Seed Onion | 4 | -- | 2 | x | 3 | x | -25.0 | x |
| Celery | - | - | 1 | -- | - | - | | - |
| Lettuces | 2 | x | 3 | -- | 5 | 2 acres | | x |
| Spinach | 2 | x | 1 | x | 2 | x | 0 | x |
| Peppers | 1 | x | 2 | x | 1 | x | 0 | x |
| Squash, Pumpkins and Zucchini | 5 | x | 4 | -- | 8 | 2 | -60.0 | x |
| Rhubarb | 4 | x | 4 | -- | 3 | x | -25.0 | x |
| Asparagus, Producing | 1 | x | 2 | x | 2 | x | 100.0 | x |
| Asparagus, Non-Producing | - | - | 2 | x | 2 | x | - | x |
| Other Vegetables | 6 | 1 | 9 | 5 | 5 | x | -16.7 | x |

## Fruits, Berries and Nuts

| | Number of Farms Reporting | Hectares | Number of Farms Reporting | Hectares | Number of Farms Reporting | Hectares | % Change # Farms Reporting | % Change Hectares |
|---|---|---|---|---|---|---|---|---|
| | 1991 | | 1996 | | 2001 | | 1991-2001 | |
| **Total area (producing and non-producing) of fruits, berries and nuts** | 10 | 44 | 15 | 61 | 11 | 56 | 10.0 | 27.3 |
| **Total producing area of fruits, berries and nuts** | 10 | 41 | 14 | 45 | 11 | 54 | 10.0 | 31.7 |
| Strawberries | 7 | x | | | 6 | x | -14.3 | x |
| Raspberries | 5 | x | | | 5 | x | 0 | x |
| Blueberries | 1 | x | | | 2 | x | 100.0 | x |
| Cranberries | 2 | x | | | 2 | x | 0 | x |
| Saskatoons | - | - | | | 1 | x | - | x |
| Other | 1 | x | | | 1 | x | 0 | x |

* The 1991 census identified this section as Berries and Grapes and had a separate section for Tree Fruits.

**The 1996 census separated Tree Fruit and measured by the number of trees and whether or not they were bearing fruit, making it impossible to give comparative data.



| Trees | Number of Farms Reporting | # of Trees | Bearing | Non-Bearing | Number of Farms Reporting | # of Trees | Bearing | Non-Bearing |
|---|---|---|---|---|---|---|---|---|
| | 1996 | | | | 2001 | | | |
| Apple | 6 | 39 | 23 | 16 | | | | |
| Pear | 3 | 5 | - | 5 | | | | |
| Plums | 1 | - | - | - | | | | |
| Cherries (sweet) | 1 | - | - | - | | | | |

## Nursery Products, Sod and Christmas Trees

| | Number of Farms Reporting | Hectares | Number of Farms Reporting | Hectares | Number of Farms Reporting | Hectares | % Change # Farms Reporting | % Change Hectares |
|---|---|---|---|---|---|---|---|---|
| | 1991 | | 1996 | | 2001 | | 1991-2001 | |
| Total area of nursery products | 6 | x | 7 | 11 | 8 | 10 | 33.4 | x |
| Total areas of sod grown for sale | - | - | - | - | 0 | 0 | - | - |
| Total area of Christmas trees grown for sale | | | 13 | 42 | 8 | x | - | x |

* 1996 census included total number of Christmas trees harvested; 5 farms reported 15,281 trees.

## Greenhouse Products and Mushrooms

| | Number of Farms Reporting | Square Feet | Number of Farms Reporting | Square Feet | Number of Farms Reporting | Square Feet | % Change # Farms Reporting | % Change Square Feet |
|---|---|---|---|---|---|---|---|---|
| | 1991 | | 1996 | | 2001 | | 1991-2001 | |
| **Total area under glass, plastics or other protection** | 14 | 94,466 | 18 | 68,030 | 16 | 72,823 | 14.3 | -23.0 |
| Total area of greenhouses in use mid-May every Census year | 14 | 91,686 | 18 | 67,992 | 16 | 72,523 | 14.3 | -20.9 |
| Greenhouse flowers | 13 | x | 16 | 67,481 | 13 | 61,773 | 0 | x |
| Greenhouse vegetables | - | - | 4 | 511 | 5 | x | - | x |
| Other greenhouse products | | | - | - | 2 | x | - | x |
| Total growing area for mushrooms | 2 | x | - | - | 1 | x | -50.0 | x |

* 1991 Census reported Greenhouse vegetable and other greenhouse products as one.

## Maple Tree Taps

| | Number of Farms Reporting | # | Number of Farms Reporting | # | Number of Farms Reporting | # | % Change # Farms Reporting | % Change # |
|---|---|---|---|---|---|---|---|---|
| | 1991 | | 1996 | | 2001 | | 1991-2001 | |
| **Number of taps on Maple trees** | 27 | 6,097 | 40 | 10,801 | 35 | 11,620 | 29.7 | 90.6 |

## Livestock – *As of a specific date in mid-May in census year*

| | Number of Farms Reporting | # | Number of Farms Reporting | # | Number of Farms Reporting | # | % Change # Farms Reporting | % Change # |
|---|---|---|---|---|---|---|---|---|
| | 1991 | | 1996 | | 2001 | | 1991-2001 | |
| Cattle and Calves | 109 | 2,606 | 94 | 2,061 | 76 | 1,858 | -30.3 | -28.7 |
| Pigs (grower and finishing pigs) | 24 | x | 26 | 513 | 16 | 108 | -33.4 | x |
| Sheep and Lambs | 14 | 613 | 17 | 379 | 18 | 402 | 28.6 | -34.5 |
| Rams | 7 | 11 | 9 | 13 | 12 | 16 | 71.5 | 45.5 |
| Ewes | 12 | 297 | 12 | 173 | 15 | 219 | 25.0 | -26.3 |
| Lambs | 13 | 305 | 14 | 193 | 13 | 167 | 0 | -45.3 |
| Horses & ponies | 66 | 395 | 66 | 371 | 56 | 520 | -15.2 | 31.7 |
| Goats | 12 | 90 | 13 | 67 | 13 | 143 | 8.4 | 58.9 |
| Wild Boars | - | - | - | - | 1 | x | | x |
| Mink | - | - | - | - | - | - | | - |
| Fox | - | - | - | - | - | - | | - |
| Bison (Buffalo) | - | - | - | - | - | - | | - |
| Deer (excluding wild deer)* | | | 1 | x | 2 | x | 100.0 | x |
| Elk* | | | - | - | - | - | - | - |
| Llamas and Alpacas | - | - | 3 | x | 3 | 9 | - | - |
| Rabbits | 10 | 109 | 8 | x | 8 | x | -20.0 | x |
| Colonies of bees | 11 | 100 | 7 | x | 5 | x | -54.6 | x |

* Not in 1991 census

## Poultry Inventory *– As of a specific date in mid-May in census year*

| | Number of Farms Reporting | # | Number of Farms Reporting | # | Number of Farms Reporting | # | % Change # Farms Reporting | % Change # |
|---|---|---|---|---|---|---|---|---|
| | 1991 | | 1996 | | 2001 | | 1991-2001 | |
| Total hens and chickens | 58 | 2,763 | 57 | 2,868 | 62 | 4,567 | 6.9 | 65.5 |
| Turkeys | 55 | 7,948 | 13 | 7,948 | 19 | 481 | -65.5 | -94.0 |
| Other poultry | 79 | x | 23 | 488 | 23 | 1,303 | -70.9 | x |

## Poultry Production *– As of a specific date in mid-May in census year*

| | Number of Farms Reporting | # | Number of Farms Reporting | # | Number of Farms Reporting | Kilo | Pounds | % Change # Farms Reporting |
|---|---|---|---|---|---|---|---|---|
| | 1991 | | 1996 | | 2001 | | | 1991-2001 |
| Broilers, roasters and cornish production | 24 | 3,681 | 36 | 8,770 | 34 | 9,878 | 21,777 | 41.7 |
| Turkey production | 55 | 7,948 | 13 | 371 | 20 | 3,769 | 8,309 | -63.6 |

* Please note that the reporting for poultry production for 2001 was in kilo and pounds, rather than the # on the specific date in question. Therefore 1991 and 1996 figures are not comparable to 2001.

## Farms Certified Organic

| | Number of Farms Reporting | # |
|---|---|---|
| | 2001 | |
| Total number of farms certified organic | 1 | 1 |

*** 2001 was the first year the census report organic farms**

# Farms Classified by Operating Arrangement

| | Number | | % Change Number of Farms |
|---|---|---|---|
| | 1996 | 2001 | 1996-2001 |
| **Total number of farms** | 260 | 201 | -22.7 |
| Sole proprietorship | 191 | 137 | -28.3 |
| Partnership without a written agreement | 11 | 47 | 327.3 |
| Partnership with a written agreement | 44 | 5 | -88.7 |
| Family corporation | 14 | 9 | -35.8 |
| Non-family corporation | - | 3 | - |
| Other (Institution, community pasture, etc) | 1 | 0 | -100.0 |

* 1991 and previously, the question was poised different resulting in an over reporting of incorporated farms.

## Farms Classified by Computer Application Used

| | Number | | | % Change Number |
|---|---|---|---|---|
| | 1991 | 1996 | 2001 | 1991-2001 |
| **Total number of farms using computers** | 16 | 42 | 68 | 325.0 |
| Bookkeeping, payroll or tax preparation | | | 51 | |
| Livestock and/or crop record keeping | | | 24 | |
| Word-processing | | | 46 | |
| Internet | | | 49 | |
| Email | | | 44 | |
| Other applications | | | 0 | |

* 2001 was the first year that more detailed questions were asked.

## Farms Classified by Total Farm Capital

| | Number | | | % Change |
|---|---|---|---|---|
| | 1991 | 1996 | 2001 | 1991-2001 |
| **Total number reporting** | 210 | 260 | 201 | -4.3 |
| Less than $50,000 | 8 | 9 | 7 | -12.5 |
| $50,000 – 99,999 | 17 | 19 | 11 | -35.3 |
| $100,000 – 199,999 | 62 | 90 | 64 | 3.3 |
| $200,000 – 349,999 | 71 | 86 | 65 | -8.5 |
| $350,000 – 499,999 | 26 | 29 | 21 | -19.3 |
| $500,000 – 999,999 | 18 | 15 | 29 | 61.2 |
| $1,000,000 – 1,499,999 | 3 | 6 | 3 | 0 |
| $1,500,000 – 1,999,999 | 5 | 6 | 0 | -100.0 |
| Over $2,000,000 | | | 1 | |

* 1991 and 1996's last financial category was $1,500,000 and over

## Farm Capital

| | Number of Farms Reporting | Market Value $ | Number of Farms Reporting | Market Value $ | Number of Farms Reporting | Market Value $ | % Change # Farms Reporting | % Change Market Value |
|---|---|---|---|---|---|---|---|---|
| | 1991 | | 1996 | | 2001 | | 1991-2001 | |
| **Total Farm Capital** | 210 | 65,740,619 | 260 | 81,689,017 | 201 | 64,325,287 | -4.3 | -2.2 |
| Value of all farm machinery and equipment | 209 | 5,874,060 | 250 | 8,223,032 | 201 | 10,837,351 | -3.9 | 84.5 |
| Value of livestock and poultry | 165 | 2,499,759 | 176 | 2,379,973 | 145 | 2,947,536 | -12.2 | 18.0 |
| Total value of land and building | 210 | 57,366,800 | 260 | 71,086,012 | 201 | 50,540,400 | -4.3 | -11.9 |
| Value of land and buildings owned | 207 | 52,632,800 | 255 | 67,319,112 | 196 | 45,553,900 | -5.4 | -13.5 |
| Value of land and buildings rented or leased from others | 36 | 4,734,000 | 38 | 3,766,900 | 37 | 4,986,500 | 2.8 | 5.4 |

## Farms Classified by Total Gross Farm Receipts

| | Number of Farms | Number of Farms | Number of Farms | % Change Number of Farms |
|---|---|---|---|---|
| | 1991 | 1996 | 2001 | 1991-2001 |
| **Total number of farms** | 210 | 260 | 201 | -4.3 |
| Under $2,500 | 55 | 93 | 54 | -1.9 |
| $2,500 – 4,999 | 41 | 51 | 28 | -31.7 |
| $5,000 – 9,999 | 47 | 45 | 52 | 10.7 |
| $10,000 – 24,999 | 34 | 38 | 38 | 11.8 |
| $25,000 – 49,999 | 13 | 14 | 16 | 23.1 |
| $50,000 – 99,999 | 13 | 11 | 5 | -61.6 |
| $100,000 – 249,999 | 5 | 4 | 4 | -20.0 |
| $250,000 – 499,999 | 1 | 2 | 2 | 100.0 |
| $500,000 and over | 1 | 2 | 2 | 100.0 |

## Gross Farm Receipts

| | Number of Farms Reporting | $ | Number of Farms Reporting | $ | Number of Farms Reporting | $ | % Change # Farms Reporting | % Change $ |
|---|---|---|---|---|---|---|---|---|
| | 1991 | | 1996 | | 2001 | | | |
| Total gross farm forest products sold) | 210 | 4,107,539 | 260 | 4,737,590 | 201 | $5,021,978 | -4.3 | 22.3 |
| Sales of forest products | 38 | 131,945 | | | 26 | $87,776 | -31.6 | -33.5 |

* 1996 does not state the total gross farm receipts (excluding forest products sold)

## Farm Business Operating Expenses

| | Number of Farms Reporting | $ | Number of Farms Reporting | $ | Number of Farms Reporting | $ | % Change # Farms Reporting | % Change $ |
|---|---|---|---|---|---|---|---|---|
| | 1991 | | 1996 | | 2001 | | 1991-2001 | |
| **Total farm business operating expenses** | 210 | 3,984,892 | 260 | 5,996,414 | 201 | $5,428,548 | -4.3 | 36.3 |
| Fertilizer and lime purchases | 77 | 73,582149 | 77 | 68,552 | 64 | 88,313 | -16.9 | -99.9 |
| Purchases of herbicide, insecticides, fungicides, etc. | 34 | 21,116 | 39 | 22,001 | 33 | 25,383 | -2.9 | 20.2 |
| Seed & plant purchases (excluding materials purchased for resale) | 65 | 120,613 | 76 | 112,383 | 69 | 131,447 | 6.2 | 9.0 |
| Total feed and supplement purchases | 158 | 479,518 | 170 | 426,396 | 128 | 446,281 | -19.0 | -6.9 |
| Feed purchases from other farmers | 149 | 428,115 | | | 39 | 138,525 | -73.8 | -67.6 |
| Livestock and poultry purchases | 84 | 318,865 | 99 | 312,662 | 87 | 276,618 | 3.6 | -13.2 |
| Veterinary services, drugs, etc | 119 | 72,405 | 126 | 126,078 | 107 | 128,759 | -10.1 | 77.8 |
| Custom work & contract work* | | | 73 | 330,791 | 54 | 130,991 | | |
| Total wages and salaries | 47 | 695,610 | 66 | 966,827 | 45 | 1,210,603 | -4.3 | 74. |
| Paid to family members | 23 | 202,836 | 35 | 234,407 | 19 | 314,549 | -17.4 | 55.1 |
| Paid to all other persons | 35 | 492,774 | 46 | 732,420 | 32 | 896,054 | -8.6 | 81.8 |
| All fuel expenses (diesel, gasoline, oil, wood, natural | | | 231 | 334,679 | 190 | 509,669 | | |

| | Number of Farms Reporting | $ | Number of Farms Reporting | $ | Number of Farms Reporting | $ | % Change # Farms Reporting | % Change $ |
|---|---|---|---|---|---|---|---|---|
| | 1991 | | 1996 | | 2001 | | 1991-2001 | |
| gas, etc.) | | | | | | | | |
| Repairs and maintenance to farm machinery equipment and vehicles | 179 | 544,225 | 189 | 456,932 | 184 | 549,808 | 2.8 | 1.0 |
| Rental and leasing of farming machinery, equipment and vehicles | | | | | 21 | 80,558 | | |
| Repairs and maintenance to farm buildings and fencing | | | 169 | 221,982 | 149 | 263,222 | | |
| Rental and leasing of land and buildings | | | 26 | 25,503 | 17 | 30,384 | | |
| Electricity, telephone and all other telecommunication services | 153 | 219,048 | 192 | 148,814 | 182 | 333,658 | 19.0 | 52.3 |
| Farm interest expenses | 67 | 483,032 | 76 | 435,560 | 67 | 362,035 | 0 | -25.0 |
| All other expenses (excluding depreciation and capital cost allowance) | 119 | 756,752 | 229 | 1,135,393 | 182 | 860,819 | 52.9 | 13.8 |
| Insurance | | | 222 | 339,713 | | | | |
| Crop & Hail & stabilization premiums | | | 10 | 7,545 | | | | |
| Other farm business | | | 219 | 332,168 | | | | |

'Custom work and contract work" and "rental and leasing of farm machinery equipment and vehicles' were separate entries for 2001; in 1996 they were grouped together. This change limits the comparability of the data between 2001 and previous censuses). 1996 – under fuel – electricity was reported as $299,905 and fuel for heating and drying crops was 96,418.

## Paid Agricultural Work

| | Number of Farms Reporting | # of Weeks | Number of Farms Reporting | # of Weeks | Number of Farms Reporting | # of Weeks | % Change Number of Farms Reporting | % Change # of Weeks |
|---|---|---|---|---|---|---|---|---|
| | 1991 | | 1996 | | 2001 | | 1991-2001 | |
| **Total weeks of paid work** | 47 | 1,575 | 66 | 2,412 | 45 | 2,243 | -4.3 | 42.4 |
| Paid work, year round | 16 | x | 18 | x | 7 | 743 | -56.3 | x |
| Paid work, seasonal | 38 | x | 53 | x | 42 | 1,500 | 10.5 | x |

## Farm Machinery Inventory

| | Number of Farms Reporting | # | Number of Farms Reporting | # | % Change Number of Farms Reporting | % Change # |
|---|---|---|---|---|---|---|
| | 1996 | | 2001 | | 1996-2001 | |
| Total tractors | 211 | 406 | 176 | 404 | | |
| Tractors less than 100hp | 358 | | 172 | 376 | -52.0 | - |
| Tractors 100 to 149 hp | 6 | x | 14 | 15 | 133.3 | x |
| Tractors over 149 | 2 | x | 10 | 13 | 400.0 | x |
| Total farm trucks | 182 | 245 | 151 | 196 | -17.0 | -20.0 |
| Pick-up and cargo vans | 164 | 187 | 141 | 163 | -14.0 | -12.8 |
| Other farm trucks | 45 | 58 | 29 | 33 | -35.6 | -43.1 |
| Cars and other passenger vehicles | 91 | 97 | 72 | 80 | -20.9 | -17.5 |
| Combines | 15 | 15 | 16 | 17 | 6.7 | 13.3 |
| Swathers and Mower-conditioners | 83 | 84 | 66 | 76 | -20.5 | -9.5 |
| Balers | 92 | 109 | 78 | 102 | -15.2 | -6.4 |
| Forage harvesters | 16 | x | 8 | 8 | -50.0 | |
| Tillage, cultivation, seeding and planting equipment | 108 | No # | 74 | 212 | 96.3 | x |

* In 1991, agricultural operators reported the farm machinery and equipment located on their operations on census day, regardless of ownership.

For the 1996 census of agriculture, operators were asked to report farm machinery and equipment that they owned or leased. This change in reporting limits the comparability of this data.

## Farms Classified by Total Farm Area

| | Number of Farms | Number of Farms | Number of Farms | % Change Number of Farms |
|---|---|---|---|---|
| | 1991 | 1996 | 2001 | 1991-2001 |
| **Total number of farms** | 210 | 260 | 201 | -4.3 |
| Under 3 (acres) | 9 | 17 | | |
| 3-9 | 3 | 10 | | |
| 10-69 | 46 | 59 | | |
| 70-129 | 62 | 83 | | |
| 130-179 | 16 | 17 | | |
| 180-239 | 26 | 24 | | |
| 240-399 | 31 | 19 | | |
| 400-559 | 9 | 10 | | |
| 560-759 | 3 | 4 | | |
| 760-1119 | 2 | 4 | | |
| 1120-1599 | 2 | 7 | | |
| 1600 -2239 | 1 | 4 | | |
| 2240-2879 | | 1 | | |
| 2280-3519 | | 1 | | |
| 3520 & over | | 1 | | |

## Farms Classified by Area in Crops & Summerfallow

| | Number of Farms | Number of Farms | Number of Farms | % Change Number of Farms |
|---|---|---|---|---|
| | 1991 | 1996 | 2001 | 1991-2001 |
| **Total number of farms** | 136 | 146 | 201 | 47.8 |
| Under 3 (acres) | 12 | 14 | | |
| 3-9 | 13 | 12 | | |
| 10-69 | 81 | 85 | | |
| 70-129 | 23 | 25 | | |
| 130-179 | 2 | 3 | | |
| 180-239 | 3 | 4 | | |
| 240-399 | 2 | 3 | | |
| 400-559 | - | - | | |
| 560-759 | - | - | | |
| 760-1119 | - | - | | |
| 1120-1599 | - | - | | |
| 1600 & over | - | - | | |

## Field Crops Seeded or to be Seeded for Harvest

| | Number of Farms Reporting | Hectares | Number of Farms Reporting | Hectares | Number of Farms Reporting | Hectares |
|---|---|---|---|---|---|---|
| | 1991 | | 1996 | | 2001 | |
| Winter Wheat | 1 | x | 1 | x | | |
| Oats | 17 | 86 | 13 | 56 | | |
| Barley | 6 | x | 3 | 25 | | |

## Field Crops Grown (or Seeded for Harvest)

| | Number of Farms Reporting | Hectares | Number of Farms Reporting | Hectares | Number of Farms Reporting | Hectares |
|---|---|---|---|---|---|---|
| | 1991 | | 1996 | | 2001 | |
| Mixed Grains | 8 | 82 | 8 | x | | |
| Corn for Grain | 1 | x | 2 | x | | |
| Buckwheat | 2 | x | 3 | x | | |
| Total Rye | 2 | x | 3 | 8 | | |
| Fall Rye | 2 | x | 3 | 8 | | |
| Spring Rye | - | - | - | - | | |
| Corn for Silage | 7 | 42 | 5 | x | | |
| Alfafa & Alfafa Mixture | 14 | 161 | 25 | 442 | | |
| Other Tame Hay | 95 | 1,962 | 99 | 2,227 | | |

## Practices Used to Control Soil Erosion (or Soil Conservation Practices)

| | Numbe Farms | Number Farms | Number of Farms | % Change Number of Farms Reporting |
|---|---|---|---|---|
| | 1991 | 1996 | 2001 | 1991-2001 |
| **Total number of farms** | 210 | 260 | 201 | -4.3 |
| Crop rotation using clover, alfalfa, etc. | 37 | 36 | | |
| Permenant Grass Cover | | 93 | | |
| Winter cover crops | 9 | 6 | | |
| Grassed waterways | 24 | 9 | | |
| Strip-cropping | 3 | 2 | | |
| Contour cultivation | 9 | 5 | | |
| Other practices | 9 | 10 | | |

## Forms of Weed Control used on Summerfallow Land

| | Number of Farms Reporting | Hectares | Number of Farms Reporting | Hectares | Number of Farms Reporting | Hectares |
|---|---|---|---|---|---|---|
| | 1991 | | 1996 | | 2001 | |
| Total summerfallow land | 14 | 133 | 7 | 73 | | |
| Chemicals only | 2 | x | 3 | 20 | | |
| Tillage only | 8 | x | 5 | 24 | | |
| Tillage & chemical combination on same land | 6 | x | - | - | | |
| | | | | | | |

# District of Muskoka Agriculture Statistics (Municipal Breakdown)

Some statistics may not be shown or may appear as 0 due to a lack of information

## Total area of Farms

| | Number of Farms Reporting | Hectares | Number of Farms Reporting | Hectares | Number of Farms Reporting | Hectares | Number of Farms Reporting | Hectares |
|---|---|---|---|---|---|---|---|---|
| | 1991 | | 1996 | | 2001 | | 1991-2001 | |
| Muskoka District | 210 | 15,527 | 260 | 16,794 | 201 | 14,075 | -4.3 | -9.4 |
| Gravenhurst | 31 | 2,543 | 34 | 2,280 | 40 | 2,120 | 29.0 | -16.6 |
| Bracebridge | 31 | 2,553 | 53 | 2,825 | 44 | 4,821 | 41.9 | 88.8 |
| Huntsville | 64 | 4,143 | 78 | 3,681 | 53 | 2569 | -17.2 | -38.0 |
| Muskoka Lakes | 84 | 6,278 | 77 | 5,689 | 64 | 4,565 | -23.8 | -27.3 |
| Lake of Bays | 0 | | 18 | 2,320 | 0 | | 0 | |
| Georgian Bay | 0 | | 0 | | 0 | | 0 | |

## Total Farm Capital

| | 1991 | | 1996 | |
|---|---|---|---|---|
| | R | $ | R | $ |
| *Muskoka District* | 210 | 65,740,619 | 260 | 81,689,017 |
| Bracebridge | 31 | 8,043,558 | 53 | 10,384,994 |
| Gravenhurst | 31 | 7,725,709 | 34 | 7,945,875 |
| Huntsville | 64 | 24,313,709 | 78 | 26,007,199 |
| Muskoka Lakes | 84 | 25,657,643 | 77 | 27,507,830 |
| Lake of Bays | 0 | | 18 | 9,843,119 |
| Georgian Bay | 0 | | 0 | |

'R' stands for number of farms reported.

## Total Gross Farm Receipts

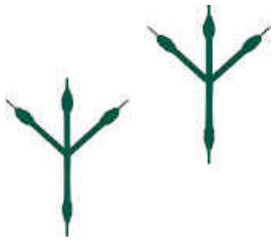
| | 1991 | | 1996 | |
|---|---|---|---|---|
| | R | $ | R | $ |
| *Muskoka District* | 210 | 4107539 | 260 | 4737596 |
| Bracebridge | 31 | 331424 | 53 | 511482 |
| Gravenhurst | 31 | 343007 | 34 | 285055 |
| Huntsville | 64 | 879592 | 78 | 610161 |
| Muskoka Lakes | 84 | 2553516 | 77 | 3011778 |
| Lake of Bays | 0 | | 18 | 319120 |
| Georgian Bay | 0 | | 0 | |

'R' stands for number of farms reported.

## Farms Classified by Total Gross Farm Receipts

| | Total Number of Farms | Under $25,000 Farms Reporting | $25,000 and over Farms Reporting |
|---|---|---|---|
| | 2001 | | |
| *Muskoka District* | 201 | 172 | 29 |
| Gravenhurst | 40 | 38 | 2 |
| Bracebridge | 44 | 41 | 3 |
| Huntsville | 53 | 49 | 4 |
| Muskoka Lakes | 64 | 44 | 20 |
| Lake of Bays | 0 | | |
| Georgian Bay | 0 | | |

## Total Expenses



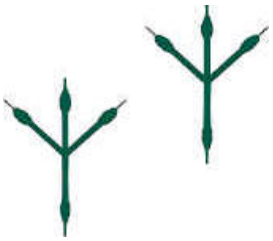
| | 1991 | | 1996 | |
|---|---|---|---|---|
| | R | $ | R | $ |
| *Muskoka District* | 210 | 3,984,892 | 260 | 5,996,414 |
| Bracebridge | 31 | 363,060 | 53 | 829,042 |
| Gravenhurst | 31 | 403,700 | 34 | 480,787 |
| Huntsville | 64 | 948,906 | 78 | 1,094,218 |
| Muskoka Lakes | 84 | 2,269,826 | 77 | 3,154,461 |
| Lake of Bays | 0 | | 18 | 437,906 |
| Georgian Bay | 0 | | 0 | |

'R' stands for number of farms reported.

## Total # Cattle & Calves, Pigs and Hens

| | Cattle/ Calves | | Pigs | | Hens | | Cattle/ Calves | | Pigs | | Hens | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1991* | | | | | | 2001 | | | | | |
| | R | # | R | # | R | # | R | # | R | # | R | # |
| *Muskoka District* | 109 | 2606 | 24 | x | 58 | 2763 | | | | | | |
| Bracebridge | 20 | 406 | 4 | 30 | 9 | 256 | | | | | | |
| Gravenhurst | 18 | 415 | 2 | x | 6 | 282 | | | | | | |
| Huntsville | 28 | 573 | 7 | x | 19 | 1137 | | | | | | |
| Muskoka | 43 | 1212 | 11 | 35 | 24 | 1088 | | | | | | |
| Lakes | | | | 8 | | | | | | | | |
| Lake of Bays | 0 | | 0 | | 0 | | | | | | | |
| Georgian Bay | 0 | | 0 | | 0 | | | | | | | |

* As of June 4th, 1991
'R' stands for reported



## Land Inputs - Use of Irrigation

| | Farms Reporting | Acres | Hectares |
|---|---|---|---|
| | 2001 | | |
| *Muskoka District* | 21 | 163 | 66 |
| Gravenhurst | 2 | 0 | 0 |
| Bracebridge | 6 | 0 | 0 |
| Huntsville | 4 | 34 | 14 |
| Muskoka Lakes | 9 | 117 | 47 |
| Lake of Bays | 0 | | |
| Georgian Bay | 0 | | |

## Practices Used to Control Soil Erosion

| | District | BB | G | H | ML | LB | GB |
|---|---|---|---|---|---|---|---|
| | 1991 | | | | | | |
| *Total* | 210 | 31 | 31 | 64 | 84 | 0 | 0 |
| Crop Rotation using clover, alfalfa | 37 | 6 | 8 | 7 | 16 | | |
| Winter cover crops | 9 | - | 3 | - | 6 | | |
| Grassed Waterways | 24 | 3 | 2 | 10 | 9 | | |
| Strip Cropping | 3 | 1 | - | - | 2 | | |
| Contour Cultivation | 9 | 3 | - | 3 | 3 | | |
| Other Practices | 9 | - | - | 6 | 3 | | |

* BB – Bracebridge; G – Gravenhurst; H – Huntsville; ML – Muskoka Lakes; LB – Lake of Bays; GB – Georgian Bay Municipality

## District Municipality of Muskoka – Summary Information

| Municipality | Permanent Population | Permanent Population | Population | Permanent Dwellings | Seasonal Dwellings | Land Area. |
|---|---|---|---|---|---|---|
| | 1996 | 2001 | % Change | 2001 | 2001 | $Km^2$ |
| Bracebridge | 13,223 | 13,751 | 4.0% | 4,770 | 2,062 | 623.09 |
| Georgian Bay | 2,230 | 1,991 | -10.7% | 932 | 4,427 | 607.20 |
| Gravenhurst | 10,030 | 10,899 | 8.7% | 3,586 | 3,114 | 524.06 |
| Huntsville | 15,918 | 17,338 | 8.9% | 5,982 | 1,791 | 700.90 |
| Lake of Bays | 2,850 | 2,900 | 1.8% | 1,309 | 3,252 | 699.33 |
| Muskoka Lakes | 6,061 | 6,042 | -0.3% | 2,733 | 6,981 | 830.79 |
| District | 50,312 | 53,106 | 5.6% | 19,312 | 21,627 | 3,994.37 |

## District Municipality of Muskoka – Permanent and Seasonal Population

| | Permanent Population 2001 | Seasonal Population 2001 | Total |
|---|---|---|---|
| Bracebridge | 13,751 | 10,104 | 23,855 |
| Georgian Bay | 1,991 | 21,692 | 23,683 |
| Gravenhurst | 10,899 | 15,259 | 26,158 |
| Huntsville | 17,338 | 8,776 | 26,114 |
| Lake of Bays | 2,900 | 15,935 | 18,835 |
| Muskoka Lakes | 6,042 | 34,207 | 40,249 |
| District | 53,106 | 105,972 | 159,078 |

## Population Statistics for Muskoka District and Ontario:

| Characteristics | Muskoka District Municipality | Ontario |
|---|---|---|
| Population in 2001 | 53,106 | 11,410,046 |
| Population in 1996 | 50,463 | 10,753,573 |
| 1996 to 2001 population change (%) | 5.2 | 6.1 |
| Total private dwellings | 42,843 | 4,556,240 |
| Population density per square kilometre | 13.7 | 12.6 |
| Land area (square km) | 3,890.42 | 907,655.59 |

| Characteristics | Muskoka District Municipality | Ontario |
|---|---|---|
| | Total | Total |
| Age characteristics of the population | | |
| Total – All persona | 53,110 | 11,410,050 |
| Age 0-4 | 2,505 | 671,250 |
| Age 5-14 | 6,680 | 1,561,500 |
| Age 15-19 | 3,525 | 769,420 |
| Age 20-24 | 2,660 | 718,420 |
| Age 25-44 | 13,605 | 3,518,010 |
| Age 45-54 | 7,895 | 1,635,280 |
| Age 55-64 | 6,440 | 1,064,000 |
| Age 65-74 | 5,590 | 818,165 |
| Age 75-84 | 3,255 | 503,930 |
| Age 85 and over | 945 | 150,075 |
| Median age of the population | 42.2 | 37.2 |
| % of population ages 15 and over | 82.7 | 80.4 |
| **Common-law Status** | | |
| Total – population 15 years and over | 43,920 | 9,177,300 |
| Not in a common-law relationship | 40,110 | 8,592,795 |
| In a common-law relationship | 3,810 | 584,505 |
| **Legal Marital Status** | | |
| Total population 15 years and over | 43,915 | 9,177,300 |
| Single | 11,065 | 2,793,080 |

| | Muskoka District Municipality | Ontario |
|---|---|---|
| Married | 24,465 | 4,897,095 |
| Separated | 1,595 | 311,380 |
| Divorced | 3,345 | 597,595 |
| Widowed | 3,435 | 578,145 |

# Farm Veterinarians
# (SE Parry Sound / Muskoka)

**Bracebridge Animal Hospital**
*Dr. George Collard & Dr. Birgit Degen*
Bracebridge Square Shopping Centre
645-5090
Hours: Monday, Weds and Friday 8 a.m. to 5 p.m.
Tues & Thurs 8 a.m. to 7 p.m.
Saturday 9 a.m. to 1 p.m.

**Animal Hospital -** Gravenhurst
*Dr. K.A. Euler – Part-time*
571 Muskoka Road N – All day - Mon & Tues
687-6663
Hours: All day Monday and Tuesday
Mornings – Weds.; Thursday, Friday and Saturday

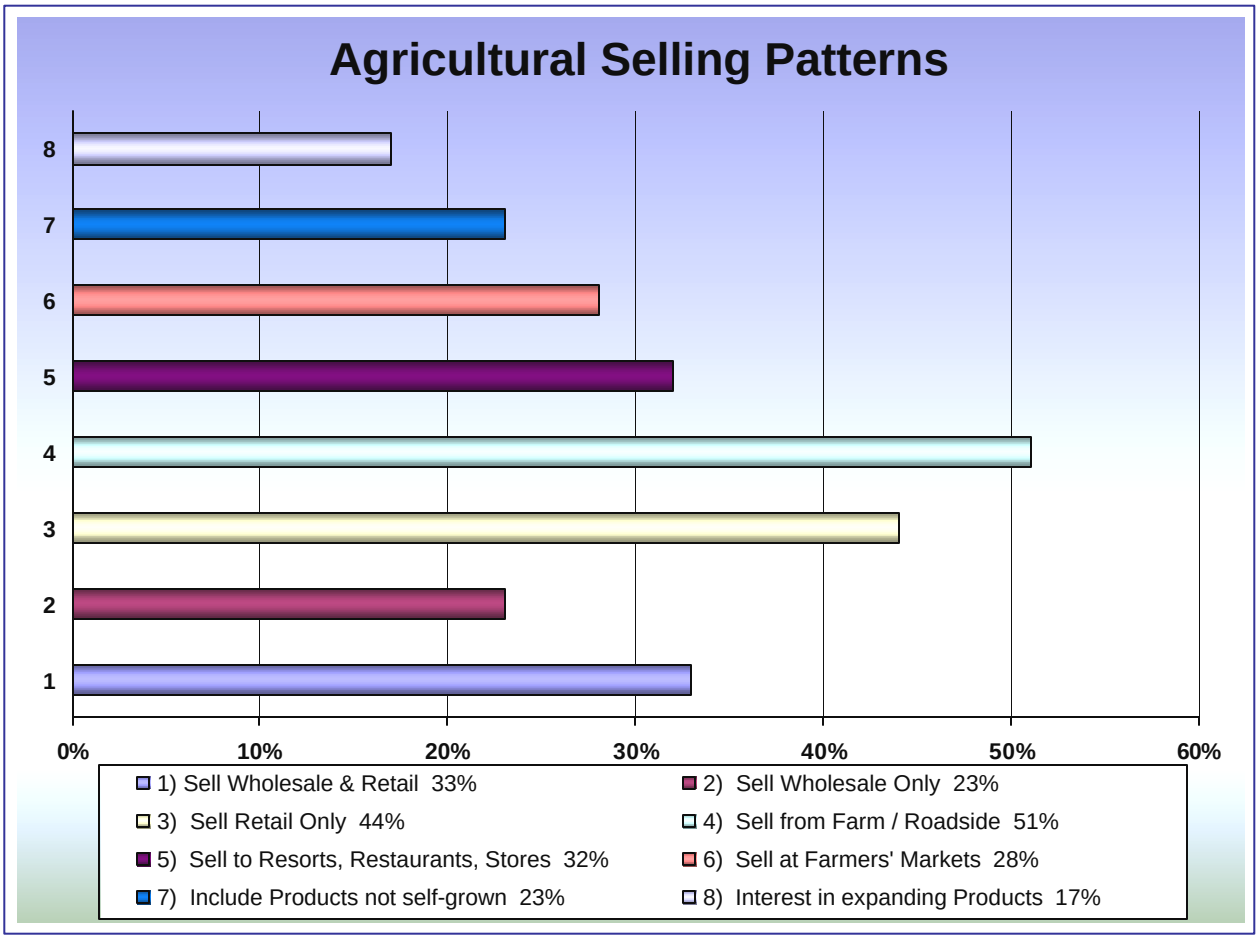
**Sunridge Veterinarian Services**
*Dr. K.A. Euler – Part-time*
25 Union St.
384-7366
Hours: Afternoons – Weds., Thursday, Friday and Saturday

**Derose Veterinarian Hospital** - Sunridge
Norma Derose
382-2981
Hours: Monday to Friday 8 am to 4:30

# Farmers' Survey Results

# Agricultural Selling Pattern (Graph)

33% of the responding farmers sell their products both wholesale and retail, with 23% exclusively wholesale and 44% exclusively retail. 51% sell their products from their farm or on the roadside, 32% sell to resorts, restaurants, produce, grocery, general, and variety stores, and 28% at Farmers' Markets, with 23% including the sale of products other than those they've grown. 17% would like to produce and sell products not currently feasible.

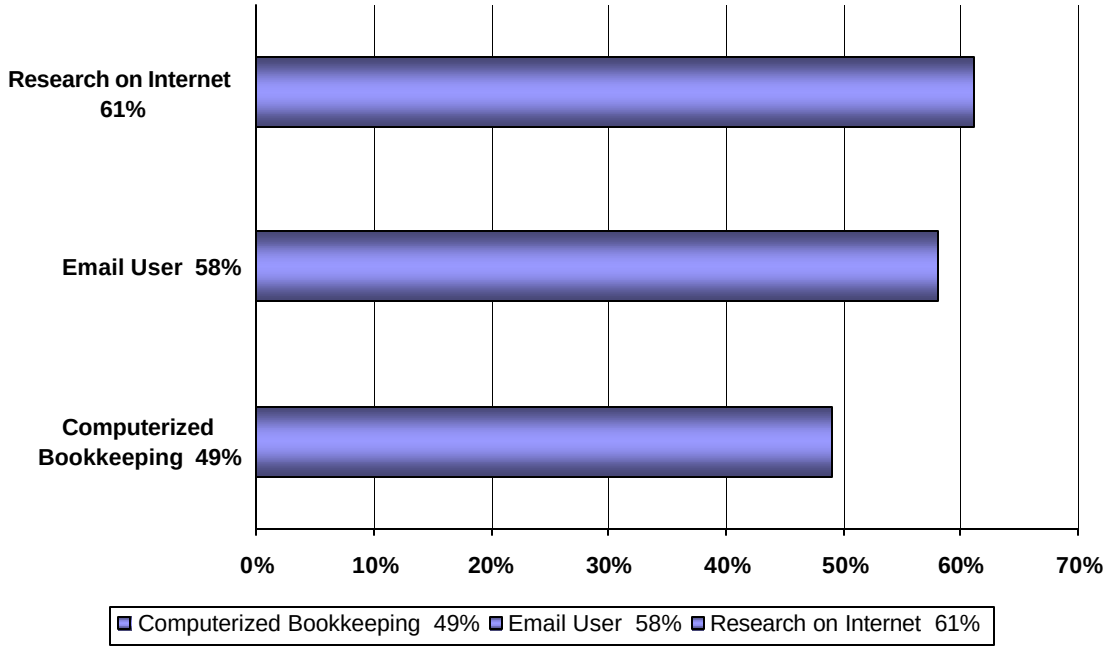


# Computer Technology Use (Graph)

## Muskoka/SE Parry Sound Summary

A summary of our results indicate that 71% of the farmers surveyed own a computer, with 49% using it for their bookkeeping. 58% use email, and 61% research on the web. This is considerably higher than that national average reported in the 2001 Census of Agriculture which reported that only forty % nationally and 34% district-wide owned a computer.

**Of the 71% of farmers who own a computer:**




## National Summary

Further information included that since 1986, the census has collected data on how many farms had computers as a management tool on their farms. For the first time in 2001, the census collected information on the kinds of computer applications used. This was of particular interested to the Muskoka Community Co-operatives Inc. as it is the administrator of 14 public internet sites in the District of Muskoka and promotes the education and usage of the computer as a tool to help facilitate and support rural farmers in our region. We wanted to identify our key assets and needs.

From a national perspective the share of farms using a computer to help manage the farm has doubled every five years since 1991. In 2001 it stood at almost 40%, compared with 21% in 1996. The proportion may seem low when compared with the 54.9% of all Canadians who had a computer in 2000. However, until recently rural areas have lacked

the infrastructure that makes computer "connectivity" as attractive or practical as in urban Canada.

In some cases, such as bookkeeping, farmers are simply transferring paper functions to the computer. Bookkeeping was the most common application on almost eight out of 10 computers. Others, such as the Internet, have brought the world to the farm office. Seven out of 10 farmers surfed the Internet for such information as commodity prices or weather reports.

Word processing, use of e-mail, and livestock and crop record-keeping followed, in that order. Computers were also used for other purposes such as banking.

Computers gain in importance in every receipts category, Canada 1996-2001 (at 2000 prices) Computer use increases as receipts rise.

## Province of Ontario Summary

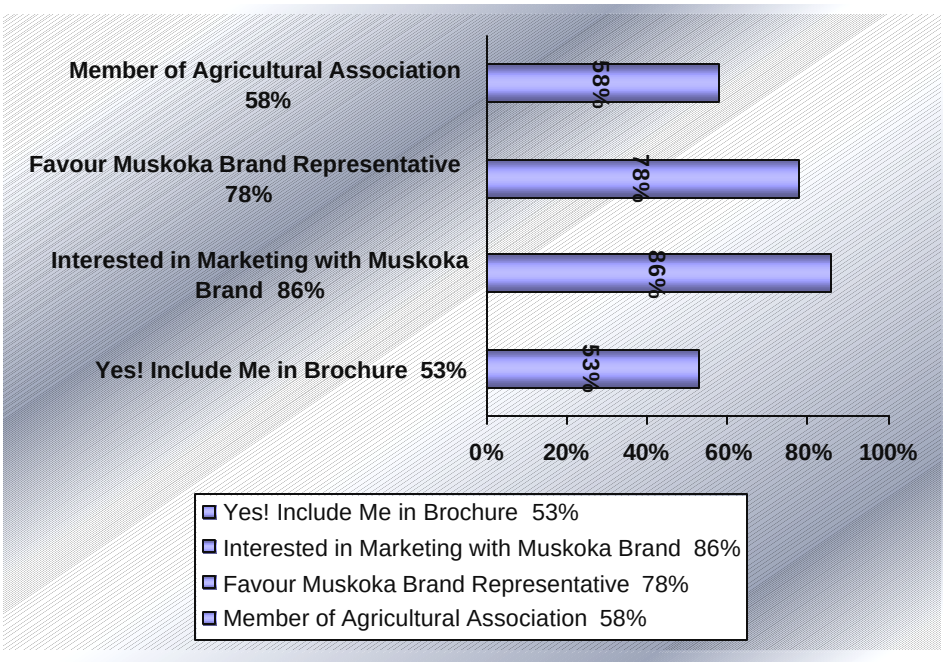
| Ontario | *1996* | *2001* | *1996 to 2001* | *2001* |
|---|---|---|---|---|
| | *Farms Reporting* | | *Change* | *As a proportion of all farms using computers* |
| | *Number* | | *%* | |
| All farms in the province | 67,520 | 59,728 | -11.5 | |
| Farms using computers | 14,131 | 23,552 | 66.7 | |
| Use: (1) | | | | |
| Bookkeeping | | 17,832 | | 75.7 |
| Livestock/crop recordkeeping | | 9,031 | | 38.3 |
| Word processing | | 15,184 | | 64.5 |
| Internet | | 17,371 | | 73.8 |
| Email | | 15,681 | | 66.6 |
| Other uses | | 139 | | 0.6 |

(1) This question was first asked in 2001. Respondents could choose more than one use.

Source: 2001 Census of Agriculture

# Agricultural Marketing Preferences (Graph)

53% would like to be included in the upcoming brochure with 86% interested in marketing their product under a Muskoka brand name and 78% suggesting a representative of the Muskoka Brand would help lessen their workload in dealing with individual retailers. 58% are members of an agricultural association.



# Farm Survey



161 respondents in Farmers' List

Name:_____ Business Name:_____

Phone: _____Fax: _____

Mailing address: _____Town _____Postal Code_____

What is the name of your village?_____

911 Address & road name_____

Do you own a computer? **YES 71 NO 29**
Of the 100 who are completed survey (even to halfway point as these questions were posed to them in the fall)

Use it to do your bookkeeping? **YES 35 NO 36**
Of the 71 who have a computer

Have you ever used e-mail? **YES 58 NO 42**
Of the 100 who have completed survey to this point

Do you have an e-mail address? **YES 55 NO 45**
Of the 100 who have completed survey to this point,

Would you care to share your e-mail address with us?
**Yes, 55 did as above of the 100**

Have you ever used the web to search for information? **YES 61 NO 39**
Of the 100 who have completed survey

Are you a member of an agricultural association?
Of the 72 that completed total survey **YES 41 NO 31**

_____

Total # of acres_____ Acres currently being worked_____

What types of crops are being grown?
Of the 72 that completed total survey:

| Maple Syrup | Corn | Strawberries | Pasture | Hay | Grain | Honey | Eggs |
|---|---|---|---|---|---|---|---|
| 16 | 5 | 5 | 19 | 31 | 12 | 16 | 9 |

| Perennials | Herbs | Vegetables | Garlic | Potatoes | Apples | Firewood | Cranberries |
|---|---|---|---|---|---|---|---|
| 12 | 10 | 19 | 3 | 1 | 2 | 6 | 2 |

What types of livestock are being raised?
Of the 72 that completed total survey

| Beef | Dairy | Poultry | Horses | Hogs | Sheep/Lamb | Goats | Rabbit | Wild Game/Fish |
|---|---|---|---|---|---|---|---|---|
| 25 | 1 | 19 | 24 | 9 | 12 | 3 | 4 | 4 |

Do you sell your products wholesale or retail or both?
Of the 52 who answered this question as posed

| Wholesale | Retail | Both |
|---|---|---|
| 12 | 23 | 17 |

Do you sell your products from your farm? Roadside stall? In Home or Barn?
YES **51** NO **49**

Do you sell your product at a Farmers' Market?
Yes, which/where? _____
No, why not? _____
Of the 72 totally completed surveys
**YES 20** **NO 43**

Do you sell products at the Farmers' Market other than those you've grown?
NO

YES, what are they? _____
Of the 72 totally complete
**YES 17** **NO 55**

Do you sell your products to retail stores? Resorts, restaurants, produce, grocery, general, variety) May we have the name of the retailer or type you sell to?
Of the 72 completed surveys
**YES 48** **NO 23**

Is there a product you are wishing you could produce and sell locally?
Of the 72 completed surveys
**YES 12** **NO 60**

Do you want to be included in the producer's brochure we are publishing?

Of the 72 completed surveys
**YES 38** **NO 34**

What information may we include…just phone or phone & address?

Are you interested in marketing your product under a "Muskoka" brand name?

Of the 72 completed surveys
**YES 62** **NO 10**

Would a representative of the Muskoka Brand help lessen your workload in dealing with individual retailers?
Of the 72 completed surveys, most of whom thought this would work for identifying producers more than anything
**YES 56** **NO 16**

Have you had any Agricultural training in the past? NO
YES _____

Of the 8 asked this question
**YES 7** **NO 1**

Would you be interested in additional training to improve your business' potential? NO
YES _____

Of the 8 asked this question
**YES 7** **NO 1**

# Farmers' Comments

135 farmers in the Muskoka Southeast Parry Sound region have been identified in various ways. Some farmers were found by means of farm site or Farmers' Market visits with subsequent interviews. 70 farmers' surveys are totally complete with most of the remaining having participated in the initial survey last fall.

All those contacted have many stories or comments to tell and therefore have been very engaging to speak with. These personal and telephone surveys are being completed using the following survey format.

**Comments generated by these farmers are:**

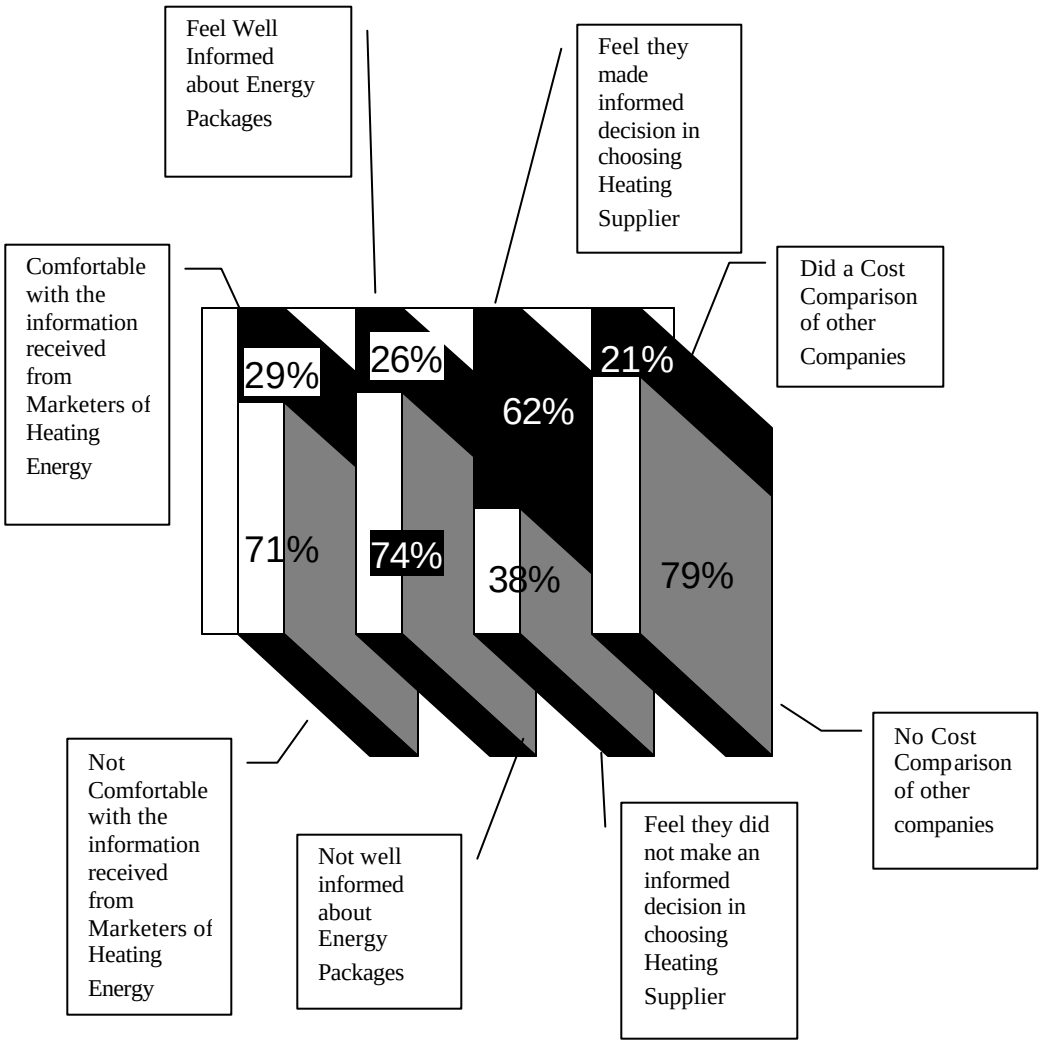
- What about asking about eco-tourism and recreation on our properties?
- Experience electrical brownouts due to being in rural area and it affects the equipment used in running our abattoir business.
- Would like to see training and licensing to be in this region for pesticide usage etc.
- The farm is now retired and non-producing…with no one to carry on with the tradition.
- We go to the Farmers' Markets for the social aspect more than selling anything!
- We realize that we cannot grow enough to supply the demand for our produce. The growing season in Muskoka is very short and land without rock is scarce.
- Farmers' Markets are great for some of us but they take too many days out of my week to attend all of them…Who does the farm work if I'm off at the markets?
- It costs too much to hire someone to go to them if I don't make enough sales at the markets to warrant the extra staff. Labourers are hard to come by in Muskoka since the tourist sector pays much better than farming families could.
- We think the brochure is a good idea to identify the local producers but we don't have enough product to sell to have people coming to our farm or phoning us.


# Energy Survey Results

# Agricultural Energy Survey Results (Graph)

***Through the survey, we posed a few additional questions concerning another project on which we are working.***

****Not all who answered had necessarily received any information from, or had been contacted by, marketers of energy.**



# Energy Survey

***We have a few additional questions concerning another project we are working on.***

****Not all who answered had necessarily received any information from, or had been contacted by, marketers of energy.**

What type of heating sources do you use?
Wood Hydro Propane Gas Oil Other_____

Do you feel comfortable with the information you have received from different marketers of heating energy?
Of the 100 who have completed survey,
**YES 29** **NO 71**

Do you feel well informed about all the various energy companies' packages offered?
Of the 100 who have completed survey
**YES 26** **NO 74**

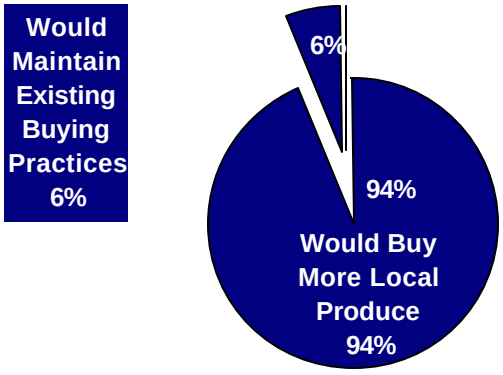
Do you feel you made an informed decision when you chose your heating supplier?
Of the 100 who have completed survey
**YES 62** **NO 38**

Did you do a cost comparison with other companies?
Of the 100 who have completed survey
**YES 21** **NO 79**

***We thank you for taking the time to respond to this survey.***

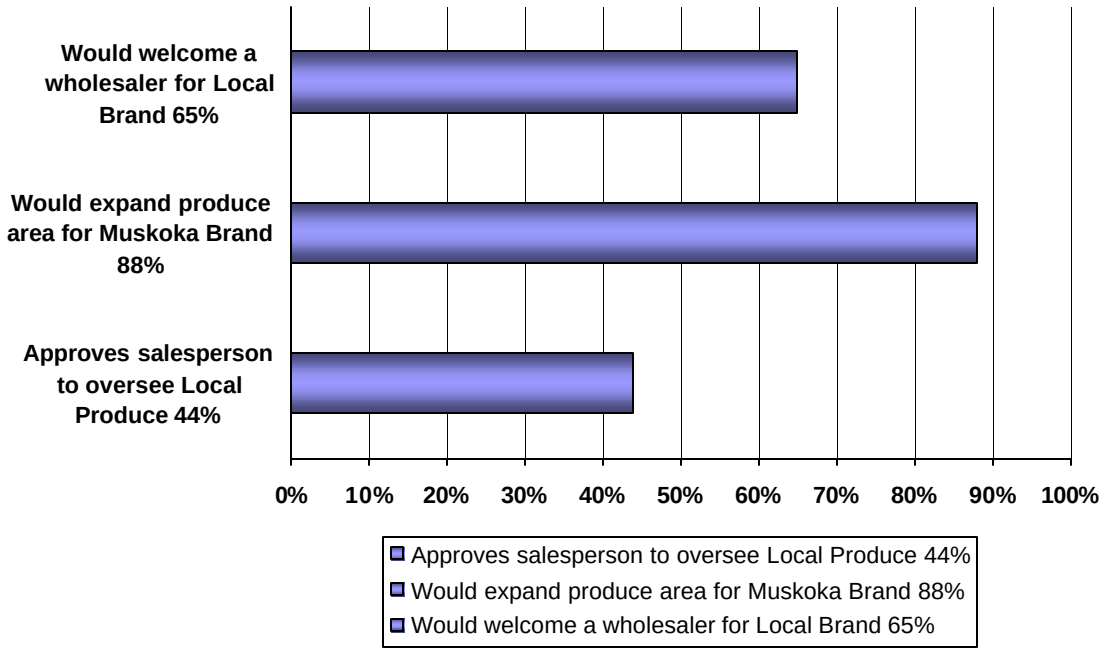
# Retailers' Survey Results

## Retailers' Willingness to Buy Locally .. if process were streamlined



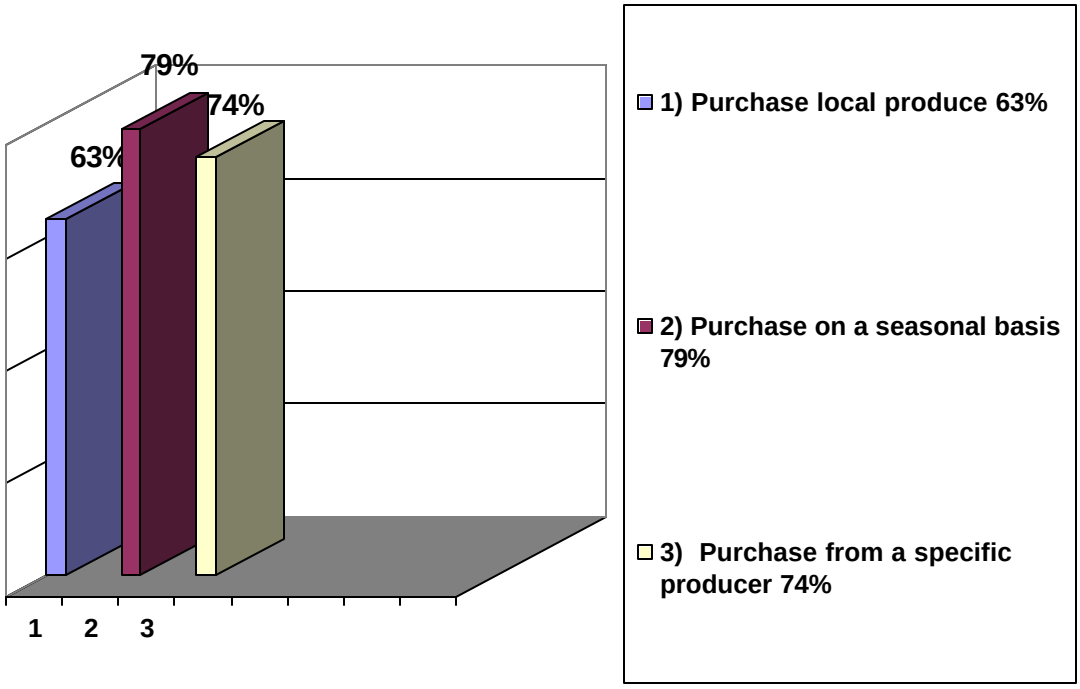

88%, of retailers purchasing locally, would be willing to expand their store's local produce area for the Muskoka Brand symbol. 65% felt a wholesaler for the Muskoka Brand would help minimize their workload (time, paperwork) in dealing with individual local producers, and 44% liked the idea of a salesperson to oversee the store's local produce.

If all individual requirements were met and roadblocks removed, less than 6% said they would continue with their current patterns and not buy locally, while 94% would buy a higher percentage of local product.



# Retailers' Survey Results (Graph)

63% of **Muskoka retailers** contacted and surveyed, including grocery, feed, butcher, general, and variety stores, as well as micro-producers, reported purchasing local produce, dairy, meats, eggs, flowers, plants, and/or herbs, 79% purchase on a seasonal basis, 74% from a preferred specific producer.



# Retailers' Survey



The purpose of the survey is to develop a marketing strategy to help local producers in the Muskoka and Southeast Parry Sound region to sell current products and identify potential opportunities.

The survey of local grocers, produce and general and variety store owners gives a cross section of each type of retailer.

In each telephone interview, the same questions were posed to each retailer.

## Retailers' Survey

69 retailers were contacted including grocery, general, variety, butcher, feed.

34 completed the survey, 20 don't purchase locally.

1) What is the official name of your company? _____
   Mailing Address: _____
   Physical: _____
   Phone/fax; _____
   E-mail, website, _____
   Contact person. _____

**2)** Do you purchase local produce/dairy/meats/eggs/flowers/plants/herbs? (Including micro-producers: ie: Yummies in a Jar, Maple Syrup, Fish)

   Yes No

   Of the 54 respondents to this survey

   **YES 34 NO 20**

3) What percentage of your in-store produce etc. does your local purchase constitute? (For each product!)

4) Do you only purchase at certain times of the year as per seasonal produce etc?

   Yes No

   Of the 34 respondents to this survey

   **YES 27 NO 7**

   If so, what do you purchase? _____
   _____

5) What requirements must be met by local producers in order for your store to purchase from them? (Health, timing, shipping, cost, supply, quality, quantity)

   _____
   _____

6) If you have other issues involved in buying locally; what are they?

7) Does your store have a preference of a specific producer and why?

Yes _____

No

Of the 34 respondents to this survey
**YES 25 NO 9**

8) If all requirements/ issues are addressed would you:

i. Buy locally if not already?
Yes No

Of the 34 respondents to this survey
**YES 32 NO 2**

ii. Purchase a higher percentage than you are now?
Yes: How much? _____

No: Why not? _____

Of the 32 retailers who answered yes to the above
**YES 27 NO 5**

9) What specific product are you wishing you could purchase locally and why?

10) Would you be willing to expand your local produce area in store utilizing the Muskoka Brand symbol?
Yes ÿ No

Of the 34 respondents to this survey
**YES 30 NO 4**

11) Would a wholesaler of the Muskoka Brand help minimize your workload (time, paperwork) in dealing with individual local producers?

Yes No

Of the 34 respondents to this survey
**YES 22 NO 12**

12) Would a salesperson overseeing the product in the store help in your decision?
Yes No

Of the 34 respondents to this survey
**YES 15 NO 19**

13) Have you any additional comments/questions concerning this strategy questionnaire?

_____
_____
_____

It was found that the larger grocer chains were allowed, to purchase only a percentage, if any, of their products locally. The wholesalers can sell them the same product usually at a lower cost. It was found that the grocers would prefer to have more control over what they purchase and from whom. They all agreed a Muskoka Brand would be a good visible symbol for the consumer who wants to see local products in the store. A wholesaler of the Muskoka Brand would, in fact, save them time and paperwork involved in purchasing from individual local producers. Some grocers expressed their wish for green-housing in the region to supply year-round tomatoes, strawberries etc. The producers have to give them a reasonable price and excellent quality. The stores often find that local producers ask a premium price for their product which, in turn, means the price in the store must reflect an increase for a decent profit margin. Some grocers have a long-time affiliation with local producers based on dependability and quality. If a local producer could supply the stores with the quantity they need, the owners would purchase a higher percentage locally. Reliability, consistency, price and cleanliness are the major considerations these retailers expressed in the survey.

The general store owners are overall very supportive of the idea of local producers and a Muskoka Brand being utilized although space in their small stores is minimal. The quote " the Muskoka Brand is a license to print money" is based on seasonal/tourist consumer's buying habits. They have noticed that many of their customers prefer to purchase from a farmer's roadside stand in the vicinity rather than pay a higher price at the store. The consumer realizes they are buying in a convenience fashion so for most the price is no deterrent. Most owners like the idea of a wholesaler/co-operative representative contacting the store because now it is "hit & miss" as to whether or not they are contacted to sell a product. They would know more about what products are available locally as well as who sells what product. Most of the producers in the area surrounding the general stores also use the store themselves to purchase necessities. They are both quite supportive of each other in a neighbourly fashion.

The variety store owners rarely purchase local products except maybe maple syrup because the have no room in-store or demand for fresh produce etc. It is not expected of them. Some of the larger rural area stores will purchase all the local products they can get their hands on. Individual owner preferences play a huge part in the decision to support local producers. These owners are rarely running their own store so were more difficult to contact.

Overall this interviewer found the questions were answered candidly and resulted in some quite lively discussions. The consensus seems to be the retailers would purchase a higher percentage locally if it were available to them as long as the price, quality and supply were consistent. The Muskoka Brand idea was well received, as was a wholesaler situation. The retailers want to know what product is available to them and from what producer.

# Large Grocer's Comments

**Grocer 1:** We find that, and rightly so, the producer's retail sales potential at farmer's markets takes precedent over supplying us with needed product. Farmer's markets should be located in rural areas such as between towns (like Milford Bay area) where stores are not located. We pay taxes for 12 months whereas seasonal vendors put up a stall to sell out of and pay no taxes.

**Grocer 2:** Root vegetables should be able to be stored locally for year round sales. Organic production should be increased for health & environmental concerns. Doesn't want a wholesaler situation because one on one contact is essential to owner and says organic growing is a specialized market.

**Grocer 3:** Glad that someone is attempting to organize information for producers and retailers to use collectively to help both. At present they are considered a corporate store but when they become an independent status again the produce manager may purchase a percentage from local producers.

**Grocer 4:** It is not as easy for him to buy locally as he must purchase most percentage from National Grocer's. Finds that local producer wants top dollar and can be greedy as far as pricing is concerned.

**Grocer 5:** Wishes there was greenhousing in Muskoka area to supply year-round tomatoes, strawberries etc.

**Grocer 6:** Supports the local producer rather than somebody from out of town selling locally. Thinks producers would rather "fleece" tourists themselves than supply him with the product at wholesale cost!!

**Grocer 7:** Extremely supportive of local producers and the Muskoka Brand but won't like to see someone buy in Toronto then bring it up to Muskoka stating it's "Muskoka Grown".

**Grocer 8:** **Maple Syrup:** Reliability, consistency and cleanliness are major considerations. Must be government inspected in order for store

to buy it. Sobey's supplies all their fresh produce needs…not enough of a supply in Muskoka.

**Grocer 9:** Finds that local producers ask a premium price for their product and use "Pick-Your-Own" system to cut back on costs associated with fuel, labour and packaging/crating.

**Grocer 10:** Pesticide use is a concern. Consistency in product size is a consideration as is price.

**Grocer 11:** Wishes there were hothouse products for year-round supply.

**Grocer 12:** Have bought from same local producer for 10 years because of consistently good quality and price.

**Grocer 13:** Price is major consideration in buying locally and would buy 100% of produce if it was available!!

**Grocer 14:** Thinks government $$ should fund green-housing feasibility study in Muskoka to provide year round availability of products. Some producers should consider utilizing their farms for normal (e.g. button mushrooms) instead of specialized (Shiitake) because he could sell 10:1 normal to Shiitake.

**Grocer 15:** Grocer has a long-time affiliation with local producer based on dependability and quality.

**Grocer 16:** If a local producer could supply the store with the quantity it needs, the owner would purchase more locally…would love the idea of a Muskoka brand as well as the wholesale aspect of a co-operative system to save him time. He wanted to emphasize his affiliation with the **Kawartha Dairy** based on their high quality and family owned concept.

# General Store Comments

**General Store 1:** Purchases maple syrup from one producer only based on consistent quality.

**General Store 2:** Would use the Muskoka brand; likes the idea of a wholesaler/co-operative representative contacting the store because now it is "Hit & Miss" as to whether or not they are contacted to sell a product. Most local producers sell from stands on the roadside in store's area so they are in direct competition with each other…therefore the store doesn't purchase much in the way of produce.

**General Store 3:** Prefers to buy locally from closest possible suppliers with price almost not an issue since they are in a convenience situation. "If someone comes we will buy". Loves the idea of a wholesaler/co-operative representative then they'll know who and what is out there to buy!!

**General Store 4:** Anything that saves her time would be great…wholesaler of Muskoka brand products a terrific idea…would buy all locally if it was available…if the quality is good the price doesn't seem to matter to consumer…would like a vegetable stand at her store.

**General Store 5:** Farmer's Market in Rosseau doesn't have much in the way of fresh produce (why aren't local producer's going there?) but it is a draw for people to come to town which benefits her store (and ultimately the town) in the long run…locals support her store and she'd like to support them back by way of purchasing their product to have in her store…"When one company is doing well, we all do well" as a spin off effect. In respect to the wholesaler idea, she's all for it due to time constraints in the summer months…she needs the producers to come to her and deliver the order.

**General Store 6:** Buys locally because they are acquaintances as well as due to their quality and fair prices. **Would love to find bulk BEESWAX** locally! (at least in Ontario as she must buy from BC!) The producer must deliver the order as her time is at a premium considering her store is in a prime cottager area in the summer months.

**General Store 7:** Would purchase 100% locally if it were available!!

**General Store 8:** Purchases local product from one producer she knows well as being conscientious, clean, gov't inspected, good quality. Would buy more products if they " moved" in her store as shelf space is

**General Store 9:** at a premium in her small store. Prefers to go "Right to the horse's mouth" as apposed to buying through a wholesaler. Will purchase locally because "If they support my store, I'll support them" and visa versa. Finds that her clientele is limited due to a small area population, 15 miles outside of town and the fact that she is not LOCALLY born herself but has been in Muskoka for 50 years!!

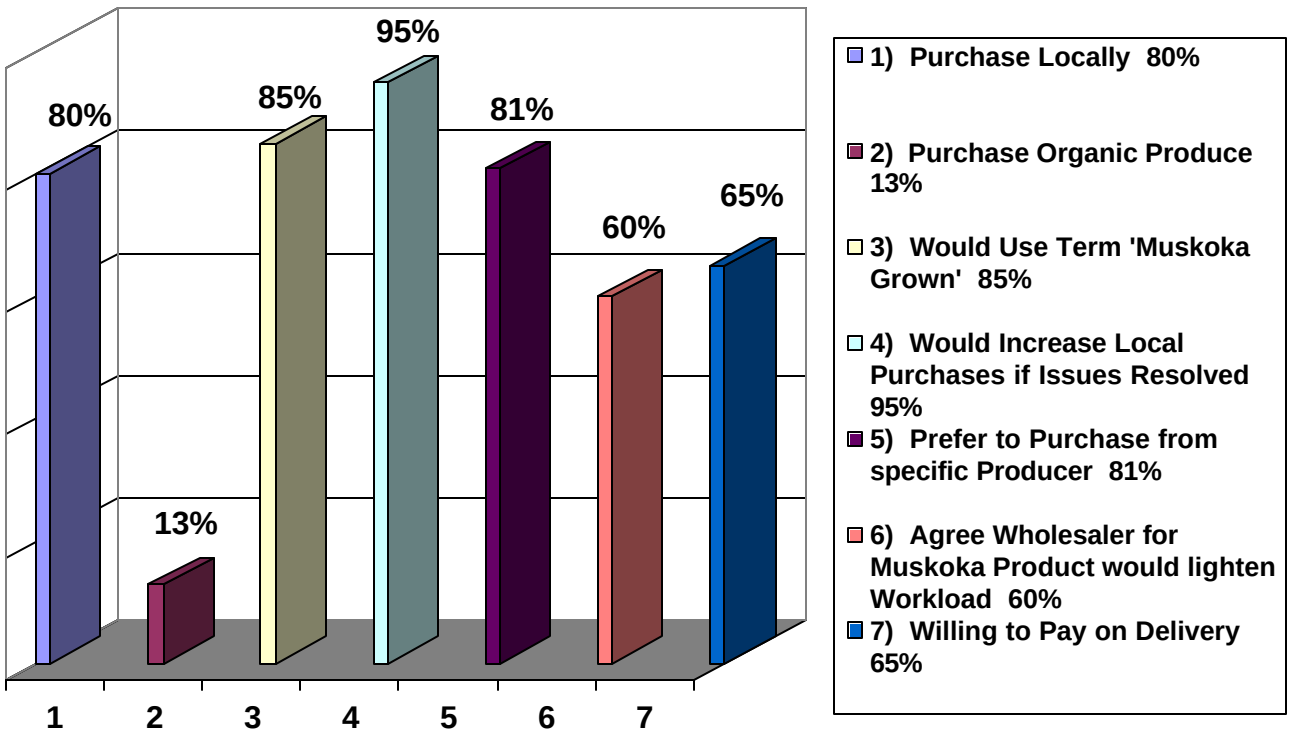
**General Store 10:** Glad that local producers are making themselves and their products known regionally.

# Variety Store Comments

**Variety Store 1:** Would utilize the Muskoka Brand symbol in her store based on demand for the product. Has a long-time affiliation with local producers of maple syrup and preserves based on quality and government inspection.

# Chefs' Survey Results

# Chefs' Survey Results (Graph)




The chefs at local high-end resorts and restaurants have been contacted and surveyed by telephone or personal interviews. Buying patterns were established. With 80% of chef respondents reporting they purchase locally in conjunction with their menu planning, just under 13 % purchase organic products. 85% would use the term " Muskoka Grown" in promoting a particular dish. 95% would increase their local purchasing if issues (6% health, 31% delivery, 88% cost, 94% quality and 6% supply) were addressed and resolved. 81% prefer to purchase from a particular producer, building a relationship with individual farmers, with 60% agreeing a wholesaler for the Muskoka product would help minimize their workload. 65% are willing to pay on delivery

# Chefs' Survey

The chefs at local high-end resorts and restaurants have been contacted and surveyed by telephone or personal interviews. Their buying patterns were asked of them through the following survey.

## Chefs' Survey:

**29 chef's at resorts and restaurants were contacted and 20 responded to the survey.** The chefs at local high-end resorts and restaurants have been contacted and surveyed by telephone or personal interviews. Buying patterns were established with the following survey.

1) What is the name of the Resort/Restaurant? _____
   Mailing Address: _____
   Physical: _____
   Phone/Fax: _____
   E-mail/website: _____
   Contact Person: _____

2) Do you purchase local produce or products for your menu planning?
   Yes, what are they? _____
   _____
   Who do you purchase from? _____
   Of the 20 respondents of the survey,
   **YES 16** **NO 4**

   Organic? _____

   No, why not? _____
   Of the 16 respondents who purchase locally,
   **YES 2** **NO 14**

3) What requirements must be met by local producers in order for your kitchen to purchase from them? (Health, timing, shipping, cost, supply, quality, quantity)
   Of the 16 respondents who purchase locally

| Health | Delivery | Cost | Quality | Supply |
|---|---|---|---|---|
| 1 | 5 | 14 | 15 | 1 |

4) Do you prefer to purchase from a particular producer and if so why? Do you feel relationship building with the individual farmer is important?
Of the 16 respondents who purchase locally
**YES 13 NO 3**

5) If all requirements/issues were addressed would you purchase a higher percentage locally?
Yes, how much?
_____
No
Of the 20 respondents who completed the survey
**YES 19 NO 1**

6) Would you use the term " Muskoka Grown" in promoting a particular dish you prepare? (Advertising / Menu) YES NO
Of the 20 respondents who completed the survey
**YES 17 NO 3**

7) Would a wholesaler of the Muskoka product help minimize your workload in dealing with individual local producers? _____
Of the 20 respondents who completed the survey
**YES 12 NO 8**

8) What is your current payment procedure for reimbursement of producer's invoices? _____

9) Would you be willing to pay on delivery? ( P.O.D./C.O.D.)? YES NO

Of the 20 respondents who completed the survey
**YES 13 NO 7**

10) Have you any additional comments/questions concerning this survey?

Chefs Interviewed are from:

| | | |
|---|---|---|
| **Greene Slate Inn** | **Cleveland's House** | **Windermere House** |
| **Patterson Kaye Lodge** | **Apollo Restaurant** | **M & J's Cozy Nest** |
| **Inn at the Falls** | **3 Guys & A Stove** | **Sherwood Inn** |
| **The Cottage Bar & Grill** | **Log Cabin** | **At the Bridge** |
| **Deerhurst Resort** | **Fine Dining** | **Kirrie Glen** |

# Chefs' Comments

**Chef 1:** Extremely supportive of local producers as he purchases many local products including corn, fresh herbs, fall harvest, cranberries, and trout. Organic is not a high priority with the volume of meals he puts out and the pricing is too high for a profitable return.

**Chef 2:** Rhubarb is a local purchase but deals normally with a large supplier such as Circa because he lacks the time to deal with finding the products etc.

**Chef 3:** No purchases locally and deals mainly with Sisco Foods.

**Chef 4:** The local producers cannot touch the large quantities he needs. The company he buys from gives him a great price based on large purchases too.

**Chef 5:** Purchases all locally grown products he can get his hands on. Already promotes the local products on menu. Would love to see a website showing all the producers and their products. Looks for quality and uniqueness in the vegetables etc. he chooses. Ontario produced lettuces are much too dirty for his use as he must use too much time to clean them properly. Great start to promote local producers & their products.

**Chef 6:** A website showing products would be beneficial as would on-line sales.

**Chef 7:** Feels negative about the role of local farmer's having enough crop yield to adequately supply the needs of retailers.

**Chef 8:** Would love to know **" WHO SELLS WHAT?"** then would buy more locally. He now purchases from a local produce store that probably buys high percentage from food terminal in Toronto.

**Chef 9:** Already mentions the use of Bala cranberries in dish on menu. Convenience is essential due to lack of his time. He purchases from visits to the farmer's market based on quality, availability, and price.

**Chef 10:** Uses a regional cuisine approach and names certain dishes after the farm or area the product comes from. Purchases berries, maple syrup, mushrooms, corn & fall harvest. Wouldn't hesitate in the least to purchase higher percentage locally. Cost and Quality must be balanced against each other. Normally payment procedure is net 15 days but would pay C.O.D. if enough time were allowed to have cheque ready in advance of delivery. Wholesaler of Muskoka product would be extremely convenient for him and makes sense.

**Chef 11:** Doesn't know the entire list of producers out there…using only the ones he has heard about and the fact that they are in the vicinity with exceptional quality and good pricing makes him continue to purchase from them.

**Chef 12:** Doesn't realize she is allowed to purchase locally produced products for health reasons as she was told she couldn't use a local's eggs. She looks forward to receiving a list of producers.

**Chef 13:** Purchases some produce locally but finds the prices to be quite high and the market in Toronto has prices that are hard to beat. Surprised there are not more producers knocking on his door to tell him about their products. The availability is an issue. Wants final information about producer's location and products.

**Chef 14:** Quality is key above all including price…willing to pay for quality. A representative for local growers should only oversee the overall picture not exclude the farmer's from speaking for themselves to retailers. It is important to her to have that relationship with individual producers. Her specific needs are addressed when she deals personally with them.

**Chef 15:** Purchases local trout and cranberries and produce at the farmer's market in the summer. The menu reflects this in the naming of certain dishes after the farm or area where producer is. He likes the idea of identifying all the producers to help their marketing strategy.

| Comments? |
|---|
| Bigger companies utilize on-line sales. |
| Cannot buy locally as large wholesalers give pricing and large quantities that locals cannot touch! |
| COD if could have amount so cheque ready in advance of delivery…don't want to chase down money! Uses regional cuisine approach in menu planning. Rep would make sense for convenience sake. |
| Convenience is essential. |
| Great start to promoting local producers and their products. |
| Heck,Yes! He'd promote a Locally grown brand!! Rep would save him some valuable time. |
| Likes the idea of this project identifying producers…get him the brochure quick! |
| Locals must find it hard to compete with the larger wholesaler's pricing and supply. |
| Looking for fresh garlic production. |
| Looks forward to list of producers. |
| NO |
| NO |
| Only buy from Sisco Foods. |
| Produce own herb garden for kitchen use. |
| Purchase from local produce store so leave the decisions as far as quality etc. up to him. |
| Surprised there are not more producers running around knocking on doors to tell about their products! Some costs are too high & availability is a factor. |
| The rep maybe a good idea to identify producers to let us know what is out there! |
| Time restraints a problem with having to deal with individual producers. A rep would help to have a reliable supply from local producers. |
| Uses beef& lamb bones from local butcher for soup/gravy stocks. |
| WHO SELLS WHAT! |
| Wholesaler not really good for them as they like interaction with the producer. |

# Association Survey Results

# Association Survey

## Associations Chart Report

The agricultural associations in the Muskoka Southeast Parry Sound region have been contacted for membership lists or other possible contacts for the project. The following agricultural societies exist and were contacted:

Dunchurch; Rosseau; Bracebridge; Emsdale; Magnetawan; Armour/Ryerson/ Burks Falls; McKellar; Stisted.

The Federated Women's Institutes of Ontario was contacted. They informed us about the website www.fwio.on.ca which contains the list of local institutes. There are a number of farm families involved in these associations and we have received local contacts.

Each of these societies has been asked to complete the following survey.

### Associations Survey

Purpose: We are researching all agricultural aspects in the Muskoka /Southeast Parry Sound region to help identify and support producers. We would like to promote all organizations and associations that promote farmers and give them feedback based on the information received.

**21 Agricultural Associations have been contacted with a positive response toward our project.**

**2 invited us to their board meeting.**

1) Association name: _____
   Mailing Address: _____
   Phone: _____Fax: _____
   Contacts: 1)_____/Title_____/Phone_____
   2)_____/Title_____/Phone_____
   Website/E-mail: _____

2) How many members are registered with your association?_____

3) Where, when and how often do you meet with your members or board?
   **MOST AGRICULTURAL SOCIETIES MEET MONTHLY WITH BOARD MEMBERS- AGM in JANUARY**

4) Do you produce a newsletter or have some other type of communications vehicle to correspond with your members? (Phone tree/ mailing list?)
YES NO
Of the 9 associations who completed the survey,
**YES 8 NO 1**

5) Is the association interested in helping promote our Agricultural project to its members through a newsletter or at meetings? YES NO
Of the 9 associations who completed the survey,
**YES 8 NO 1**

6) Is there someone who could fill the role of liaison? Yes: _____
Of the 9 associations who completed the survey,
**YES 9 NO 0**

7) Do you include/have microprocessors in your membership? YES NO
Of the 9 associations who completed the survey,
**YES 9 NO 0**

8) Could the association give copies of our farmer's survey to those not yet contacted or would you rather we just contact them? _____

9) Does the association want their information to be included on our website?
YES NO
Of the 9 associations who completed the survey,
**YES 9 NO 0**

10) Does the association like the idea of a Muskoka Brand? YES NO
Of the 9 associations who completed the survey,
**YES 9 NO 0**

11) Would having a representative to help promote it be a good idea? YES NO
Of the 9 associations who completed the survey,
**YES 7 NO 2**

12) Is there any way that we can make sure that we haven't missed any farmers? (Go over members list with a liaison?) YES NO
Of the 9 associations who completed the survey,
**YES 9 NO 0**

The associations' comments have been very positive toward the project as they see the need to identify and support local producers. They have liaised with us and provided the names of members who are farmers or microprocessors.

All associations contacted have been very supportive. Presidents and secretaries readily provided a means of contacting the members who fall within the confines of the study. This was a rewarding exercise in that everyone was eager to assist in whatever way they could. They saw the project as something that was needed and that would benefit the community as a whole.

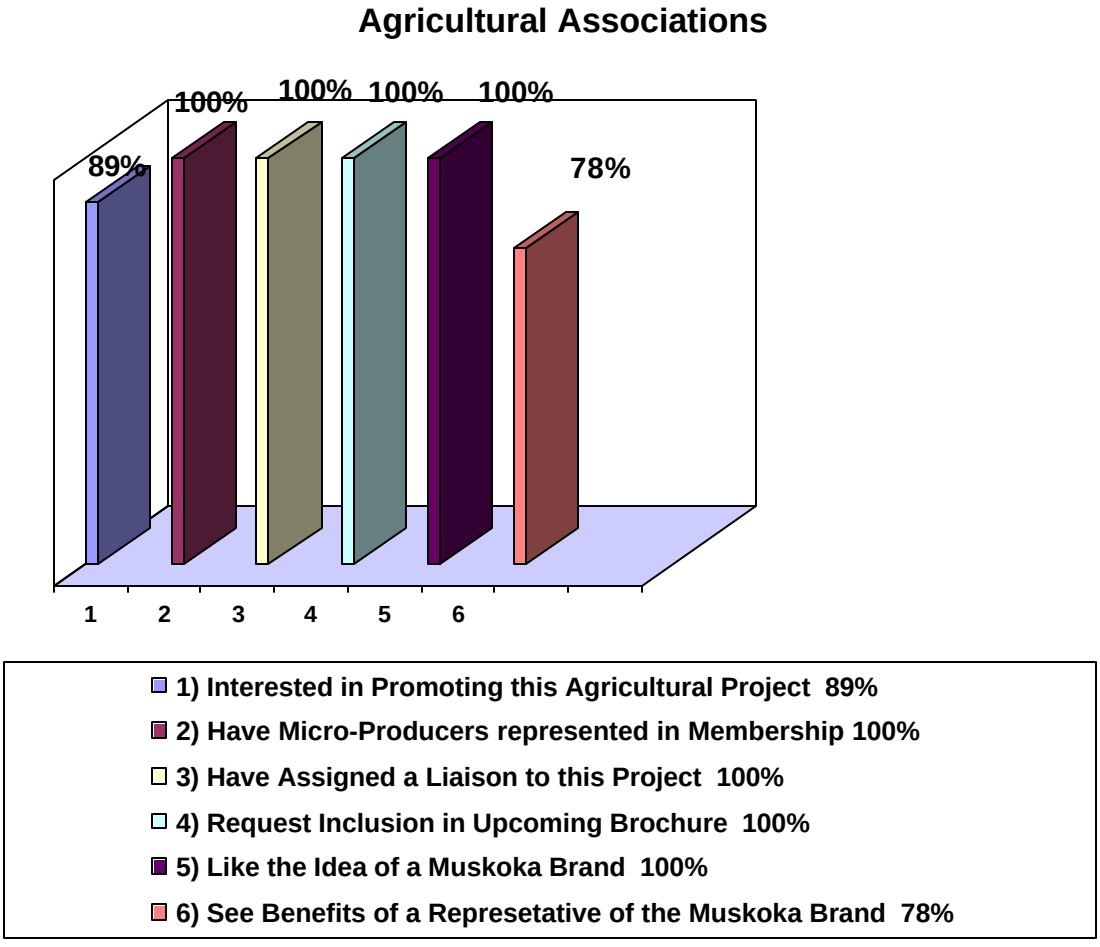
The Bracebridge Agricultural Society and the Huntsville & District Agricultural Society both allowed us time on their meeting agendas. We met with them the week of June 10 at which time surveys were distributed to the board members.

Inclusion on the proposed Muskoka/South East Parry Sound Agriculture website was unanimous. The creation of a 'Muskoka Brand' was also received with enthusiasm and approval.

# Agricultural Association Survey Results (Graph)

Of the **Agricultural Associations** contacted and surveyed, 89% were interested in promoting this project to their members through a newsletter or at meetings.

100% have micro-producers represented in their membership, have assigned a liaison and were willing to review their membership list for the project, requested inclusion in the upcoming brochure, and like the idea of a Muskoka Brand. 78% feel a representative of the Muskoka Brand would be beneficial.



# Microprocessors' Survey Results

# Microprocessors' Survey

Many of the microprocessors in the Muskoka Southeast Parry Sound region have been identified by means of the local Farmers' Markets. A number of them start in May or June and run to the last week in September. The manager of each market is identified and asked to fill out an Associations survey. They are made aware of the project and the survey questions asked of members. They have been interviewed at the market or through telephone surveys.

The following is a list of the local Farmers' Markets:

Bracebridge; Huntsville; Gravenhurst; Rosseau; Bala; Magnetawan; Baysville.

The following is the survey the microprocessors are asked to complete.

Muskoka Agricultural Research Project

## Microprocessors' Survey

Name:_____ Business Name:_____

Phone: _____Fax: _____

Mailing address: _____Town _____Postal Code_____

What is the name of your village? _____

911 Address & road name_____

Do you own a computer? YES NO
Of the 9 who completed the survey,
**YES 7** **NO 2**

Use it to do your bookkeeping? YES NO
Of the 7 who own a computer,
**YES 3** **NO 4**

Have you ever used e-mail? YES NO
Of the 7 who own a computer,
**YES 7** **NO 0**

Do you have an e-mail address? YES NO
Of the 7 who own a computer
**YES 7** **NO 0**

Would you care to share your e-mail address with us?
Of the 7 who own a computer
**YES 7 NO 0**

Have you ever used the web to search for information? YES NO
Of the 9 who completed the survey
**YES 7 NO 2**

Where do you get your ingredients? Buy or grow?
**Buy them? :** NO
Of the 9 who completed the survey
**YES 8 NO 1**

i) YES, from whom?
_____
ii) Local producers? NO / YES _____
Of the 8 who purchase
**YES 8 NO 0**

Percentage of total? _____

Do you only purchase at certain times of the year as per seasonal produce etc?
Yes No
Of the 8 who purchase
**YES 6 NO 2**

If so, what do you purchase? _____
Of the 8 who purchase

| Strawberries | Cranberries | Blueberries | Rhubarb | Eggs | Asparagus |
|---|---|---|---|---|---|
| 2 | 5 | 2 | 2 | 1 | 1 |

What requirements must be met by local producers in order for your company to purchase from them? (Health, timing, shipping, cost, supply, quality, quantity)
_____
Of the 9 who completed the survey,

| Health | Cost | Quality | Delivery | Supply | Taste |
|---|---|---|---|---|---|
| 2 | 6 | 6 | 0 | 2 | 1 |

If you have other issues involved in buying locally; what are they?
_____

Does your company have an allegiance to a specific producer and why?
No
Yes _____
Of the 8 who purchase

**YES 5** **NO 3**

If all requirements/ issues are addressed would you:

i. Buy locally if not already?

Yes No

Of the 9 who completed the survey,

**YES 7** **NO 2**

ii. Purchase a higher percentage than you are now?

Yes: How much?

_____

No: Why not?

_____

Of the 8 who purchase

**YES 6** **NO 2**

Do you **grow** your own ingredients? NO / YES

Of the 9 who completed the survey

**YES 2** **NO 7**

Total # of acres_____ Acres currently being worked_____

What types of crops are being grown? _____

Of the 2 who grow their own ingredients

| **Rhubarb** | **Vegetables** | **Pasture** | **Hay** |
|---|---|---|---|
| **1** | **1** | **1** | **1** |

What types of livestock are being raised? _____

Of the 9 who completed the survey

| **Donkey** | **Chickens** | **Potbellied Pigs** | **Emus** | **Ducks** | **Peacocks** |
|---|---|---|---|---|---|
| **1** | **1** | **1** | **1** | **1** | **1** |

Are you a member of an agricultural association? _____

Of the 9 who completed the survey

**YES 8** **NO 1**

Do you sell your products wholesale or retail or both? _____

Of the 9 who completed the survey

| Wholesale | **Retail** | **Both** |
|---|---|---|
| **6** | **3** | **6** |

Do you sell your products from your farm? Roadside stall? In Home or Barn?
YES NO
Of the 9 who completed the survey
**YES 4** **NO 5**

Do you sell your product at a Farmers' Market?
Yes which/where? _____
No, why not? _____
Of the 9 who completed the survey
**YES 7** **NO 2**

Do you sell products at the Farmers' Market other than those you've made?
NO
YES, what are they?_____
Of the 9 who completed the survey
**YES 2** **NO 7**

Do you sell your products to retail stores? (Resorts, restaurants, produce, grocery, general, variety) May we have the name of the retailer or type you sell to?
NO
YES,_____
_____

Of the 9 who completed the survey,
**YES 7** **NO 2**

Is there any other product or variation of your products you are wishing you could produce?
NO
YES, _____
Of the 9 who completed the survey
**YES 2** **NO 7**

Do you want to be included in the producers' brochure we are publishing?
YES NO
Of the 9 who completed the survey
**YES 9** **NO 0**

What information may we include…just phone or phone & address?

Are you interested in marketing your product under a "Muskoka" brand name?
YES NO
Of the 9 who completed the survey
**YES 9** **NO 0**

Would a representative of the Muskoka Brand help lessen your workload in dealing with individual producers & retailers? YES NO
Of the 9 who completed the survey
**YES 6** **NO 3**

***We thank you for taking the time to respond to this survey.***

# Microprocessors' Comments

- ✓ I pick baskets of strawberries, raspberries etc. from local producers to store in my 6 freezers. I can then make my jams, jellies and baking fresh throughout the year.
- ✓ We purchase most of our fresh ingredients from the Farmers' Market vendors. We scratch their backs and they scratch ours…usually by steering customers our way at the market!
- ✓ Not only do we purchase locally but we also grow some of our ingredients on our farm.
- ✓ I buy only the freshest and top quality ingredients for my preserves. I love the idea of a Muskoka Brand.
- ✓ The customers love to buy my homemade products…they're just like Grandma's.

We purchase the raw syrup from local producers then filter it and put it into souvenir jars for retail sale.

| Comments? |
|---|
| Farm families will need to receive enough to cover their costs involved in producing their produce. |
| Gold & green sticker would look great! Will give names regarding stickers! |
| Just a hobby to add income to pension. |
| My product doesn't use local produce etc. as an ingredient but I support locally when I can in purchasing all my packaging materials, promotional work etc. |
| I stick to producing baked goods other than pies as there is already someone in the markets that sells pies!…and she doesn't sell what I produce either. |
| Muskoka brand rep would help in identification of producers. |

# Growing a Thriving Food & Agriculture Sector

Local, National and International Case Studies

# Executive Summary

The success of sustainable agriculture and rural development initiatives depends on the involvement of rural communities, regional planners, governments, scientific experts and the private sector. This cooperative study undertaken to understand Muskoka and South East Parry Sound District's agricultural sector, and promote production for local consumption, is an important step towards sustainability and food security.

When we look to the future, what is our vision for agriculture?

- Vibrant rural communities with diverse economic opportunities
- Farms that produce healthy, fresh food using production methods that regenerate ecosystems and encourage biodiversity
- Consumers that buy food directly from farmers and care about the freshness, safety and nutritional value of their food

At the international level, the Food and Agriculture Organization is approaching agricultural sustainability by promoting integrated production systems. By combining crops, livestock, trees and aquaculture on the farm, production can be intensified and diversified, and farmers can maximize the economic potential of their land.

Farmers have always had to dedicate a portion of their time to marketing. As farms diversify, however, marketing becomes a central activity. Existing marketing channels often do not suit the small producer, making it difficult to sell what is available from the farm after it has been harvested. As large retailers grasp for larger and larger shares of the food market, farmers interested in selling directly to their customers have to become creative. The planning begins before the seed is planted, and successful marketing depends on a deep understanding of what consumers want, how to deliver it to them, and still make a profit.

The following section of this report offers concrete ways to revitalize the local farming economy. First, a variety of conceptual and practical ways to diversify production are offered. On a farm, diversity means "not putting all your eggs in one basket." Second, regional marketing opportunities are reviewed. Many communities have turned inward in their struggle to survive. This does not mean ignoring others in the world, but is based on the principle of "feed the community first, trade second." Third, co-operative organizing strategies are outlined. In order to be competitive, groups need to recognize the strength gained by cooperating. The shift will not occur without a commitment to training and capacity building. Fourth, regional networks are necessary for farmers and consumers to share and obtain the information they will need to grow and eat food in the future.

Throughout the report, a variety of recommendations were made for the District of Muskoka and South East Parry Sound.

On-Farm Diversification Possibilities:

- Additional research on the potential of agroforestry, the emerging organic market, season extension techniques and the market for specialty vegetables should be undertaken and made available to local farmers.

Regional Marketing Opportunities:

- A local logo and regional wholesale strategy should be developed to help farmers market their products in the district.
- The link between the tourism sector and potential agri-tourism endeavors should be explored through a feasibility study.

**Cooperative Strategies:**

- Farmer and consumer cooperatives should be explored as a strategy to promote local agriculture.

**Regional Training Opportunities:**

- A survey asking farmers about their specific training needs should be undertaken.
- As part of a local marketing campaign, a consumer education strategy should be considered.

# International Trends in Sustainable Agriculture

In 1992 world leaders gathered in Rio de Janeiro for the first Earth Summit, changing the way the international community looks at environment and development. During this meeting, a guide to attaining sustainable development in the 21st century was adopted. The guide, called *Agenda 21*, is an action program that addresses environmental and developmental issues at the global, national and local levels.

Chapter 14 in *Agenda 21* deals with sustainable agriculture and rural development. The tools outlined in the chapter are being promoted by the Food and Agriculture Organization to "increase food production in a sustainable way and enhance food security." (1)

The success of sustainable agriculture and rural development initiatives depends on the involvement of rural communities, regional planners, governments, scientific experts and the private sector. This cooperative study undertaken to understand Muskoka and South East Parry Sound District's agricultural sector, and promote local production and consumption is an important step towards sustainability and food security. In addition, it fits into a global strategy to address problems by finding local, appropriate solutions.

The problems with the current food and agriculture system run deep. Farmers, as a group, are the poorest people on the planet. The inability of farmers to survive on the land has created a desperate crisis in rural communities around the world. The vast majority of a dollar spent on food goes to the processing and marketing sector. People are eating more packaged and prepared food. And a growing number of low-income people are dependent on food charity. A recent statistic published by the World Watch Institute states that not only are 1.1 billion people in the world going to bed malnourished and hungry, 1.1 billion people are going to bed over nourished. Obesity has become an international public health problem. (2)

The environmental effects of agriculture are also becoming clear. Increased chemical use over the past 50 years has led to contamination of our water supply from nitrates and pesticides. A loss of farm diversity as landscape structures such as hedgerows, ponds and windbreaks are cleared for machinery has meant that crops are vulnerable to erratic weather patterns and pest problems. Increased irrigation has led to an increase in salinity and a drop in groundwater levels. Long distance transportation of our food leads to increased greenhouse gas emissions.

To address these problems with the way our food is brought from the field to our tables, a more local and ecological approach to agriculture is necessary. While globalization connects people across borders, communities are developing innovative, local solutions to rural problems. There is an increased appreciation of regional agricultural products that is shared by the global community. Farmers and consumers alike are becoming more and more interested in participating in these emerging local food systems.

The many inspiring case studies presented throughout the report illustrate that there is potential for Muskoka, to take advantage of the experience others have gained building a local food system.

## Inuvik Community Greenhouse

The Inuvik Community Greenhouse is located in Inuvik, Northwest Territories, just above the 68th parallel, roughly 2 degrees north of the Arctic Circle. It is the most Northern commercial greenhouse in North America and the largest community greenhouse of it's kind on the planet. Operated by the Community Garden Society of Inuvik - a non-profit organization formed in November of 1998, the facility includes 4000 square feet of commercial growing space as well as 74 community plots for residents of Inuvik to use as personal gardening space. The greenhouse was started to ensure a more successful harvest of vegetables and to allow a greater variety of crops in a region where fresh and economical produce is often unavailable.

The greenhouse is a retrofitted arena that has been roofed with polycarbonate glazing. A ridge vent runs along the length of the roof and is set up to open automatically for maximum airflow and ventilation.

The greenhouse has brought experienced and new gardeners, the elderly and young, and people from many ethnic backgrounds. There has been significant interest from the two local aboriginal peoples.

The summer of 2000 was the first year of full operation for the greenhouse. The commercial greenhouse, staffed with 2 employees, produced a large crop of bedding plants and starter veggie plants for early June sales. As the bedding plants moved out, the commercial greenhouse shifted to hydroponic tomato and cucumber production. Downstairs, in the community plots, people were planting out as early as the first weekend of May and gardened until the beginning of September. The greenhouse gives growers climatic conditions similar to southern Alberta.

Carrie Young
Coordinator, Inuvik Community Greenhouse
Greenhouse@permafrost.com
http://www.cityfarmer.org/inuvik.html

The Food and Agriculture Organization has identified six trends for agriculture in the 21st century. (3)

1. Commodity prices will drop and stagnate, despite increased demand, reflecting corporate control and vertical integration of these markets. This will mean that farmers will have to become more efficient at the farm level to continue to produce for these markets.
2. Government will play a declining role in food safety and regulatory issues, while food retailers and the private sector will play a growing role. At the same time, the market share of organic food will grow to 15-20% by 2020 due to consumer concerns about food safety.

3. Consumers will become increasingly concerned about the production and global movement of livestock and the resulting potential for diseases to be transferred from animals to humans. This will result in greater consumer interest in local livestock markets.
4. The number of people involved in agriculture is dropping dramatically due to urbanization trends and the economic feasibility of farming. Young people are not being attracted to work in agriculture. This will put pressure on farmers to increase their volumes and become more mechanized, raising challenges for ecological and sustainable agriculture techniques.
5. People are becoming increasingly concerned about food safety and human health issues, such as genetically modified organisms, rating these issues higher than the environment. These health and environmental issues will become increasingly linked in the future. Food regulatory agencies are struggling to address these concerns.
6. Public interest in nutriceuticals is growing. There will be an increasing market for foods that have health benefits.

In Canada, there are several documents that address these trends. AgriFood and Agriculture Canada published "Agriculture in Harmony with Nature: Agriculture and Agri-Food Canada's Sustainable Development Strategy" in 2001. (4) The document defines sustainable agriculture as, "a way of producing and processing agricultural products that can be carried out over the long term, in a manner that supports or enhances the high quality of life we enjoy in Canada today." Agriculture and Agri-Food Canada commits to working with numerous stakeholders in the agricultural sector to promote scientific understanding and innovation; to develop envrionmentally sound products, practices and technologies; and to encourage the adoption of these practices.

# Diversifying Production: Sustainable Production Systems and Techniques

At the international level, the Food and Agriculture Organization is approaching agricultural sustainability and farm diversification by promoting integrated production systems. By combining crops, livestock, trees and aquaculture on the farm, production can be intensified, and farmers can maximize the economic potential of their land.
The newly introduced farm elements need to managed efficiently across the farm, and farmers need to take more responsibility for the processing, distribution and marketing stages of production. (5)

Farmers in the District of Muskoka and South East Parry Sound are already diversifying their farms. Many farms are mixed and include agro-forestry elements. Because the soil is marginal in most areas, this strategy has been a necessity for farmers in the region.

There are many benefits of integrated production systems and farm diversification.

Benefits to Farmers
- Reduction in cost
- In case of mechanized farmers: longer lifetime and less repair of tractors, less power and fewer passes, hence much lower fuel consumption
- More stable yields, particularly in dry years
- Gradually increasing yields with decreasing inputs
- Improved soil fertility
- Potential reduction in energy, input and labour costs
- Shelter for livestock provided

Benefits to the Community, Environment and Watershed
- More constant water flows in the rivers, re-emergence of dried wells
- Stream and riverbank stabilization
- Cleaner water due to less erosion
- Less flooding
- Less impact of extreme climatic situations (hurricanes, drought etc.)
- Less cost for road and waterway maintenance
- Better food security

Global Benefits:
- Carbon sequestration (greenhouse effect)
- Less leaching of soil nutrients or chemicals into the ground water
- Less pollution of the water
- Practically no erosion (erosion is less than soil build up)
- Potential recharge of the aquifers through better infiltration
- Less fuel use in agriculture

- Wildlife habitat restored through buffer zones, corridors, and landscape structures

# Conservation Agriculture

## What is it?

Conservation Agriculture focuses on the conservation and efficient use of farm resources. External inputs are carefully managed to enhance biological processes through practices such as integrated pest management and recycling farm nutrients. Livestock are central to the system, enabling the farmer to rotate forage crops into their system for the dual purpose of fodder and soil cover. This is particularly relevant for the district of Muskoka and South East Parry Sound, where most of the agricultural land is only appropriate for grazing, fodder or specialty crops. Small-scale, specialty crop farmers, can build their soil fertility following sound management practices, such as conservation agriculture. (6)

## Common Conservation Agriculture Practices

Maintaining a permanent or semi-permanent organic soil cover to protect the soil from wind, rain and sun, and to feed soil biota is a central practice in Conservation Agriculture. Soil tillage is taken over by micro-organisms and soil fauna, eliminating the need for mechanical tillage. In fact, mechanical tillage disrupts the delicate soil balance. Seeding in this zero-tillage system is carried out by heavy direct drills and direct planting.

Crop rotation is also an important practice in Conservation Agriculture. Crops are rotated to provide fodder for livestock, to provide soil cover, as well as to manage disease and pest problems. Green manure crops, cover crops and crop residues are left on the surface of the soil to protect it. This encourages high levels of organic matter.

### Agroforestry

## What is it?

Agroforestry integrates annual crops and/or livestock with long-term tree crops, and is an essential strategy for farmers in the Muskoka and South East Parry Sound district. Trees can be managed as an independent farm enterprise. Farmers adopt agroforestry practices because they want to improve the management of resources on their farm and because they want to increase their economic stability over the long term.

Tree farms or nut plantations are not considered agroforestry until another enterprise such as mushroom growing or grazing animals is added. Farms with existing woodlands can also add enterprises to diversify their income sources. (7, 8, 9)

**Common Agroforestry Practices**

1. Alleycropping:

Alleycropping involves growing crops between trees planted in rows. The trees must be planted with the mature size of the tree in mind, and the system can be designed to accommodate shade or sun-loving crops. In many systems, the cropping sequence changes as the trees mature and limit the amount of sun available. For example, when

the trees are young, rotation crops can be planted. As the trees mature and the canopy closes, forages can be harvested from under the trees. When the trees reach full maturity, mushrooms or ginsing can be planted.

2. Silvopasture:
When livestock graze between rows of planted trees, this is called silvopasture. Often hardwood (sometimes nut trees) or softwood trees are planted in rows, and after the trees are large enough that livestock can't damage them, animals are introduced. Using good management practices, animals can reduce the maintenance costs of these tree crops. Mowing may be unnecessary, and the animals increase organic matter, so that no extra fertilization is required.

3. Windbreaks and Shelterbelts:
Trees planted along the edge of a field can help to reduce the wind effect on crops and can increase yield up to 20%. Reducing wind and water erosion create a more favorable climate for the crop. Choosing diverse plant material for the landscape structure provides a home for beneficial insects and wildlife.

4. Riparian Buffer Strips:
Trees, grasses, and/or shrubs planted along streams or rivers contribute to farming systems in two ways. First, they act as a filter for soil, excess nutrients, and chemical pesticides as they seep from farm fields into the watershed. Second, the plantings stabilize the banks of the river or stream, which decreases downstream sedimentation and improves aquatic life. Wildlife habitat, and habitat for beneficial insects is also provided by these areas.

5. Farming Special Forest Products:
There are unlimited products that a woodlot can contribute to diversify farm income. These products can be developed slowly over time, as the farmer builds profitable markets for the products. Some possible products include:

- fruits, nuts, berries
- honey and other hive products
- mushrooms
- herbs and medicinal plants
- materials for basket-making or chair-caning
- pine straw, boughs, pinecones
- dried or ornamental flowers and plant materials
- fenceposts, firewood, smokewood
- decorative or odd wood, e.g. burls
- seeds, seedlings, and cuttings
- ginseng

### Organic Agriculture

## What is it?

Organic agriculture is a holistic system of crop and livestock production that views soil health as the most important focus for farms. Organic farming uses crop rotations, cover cropping, and resource cycling to maintain soil health and control disease and insect

problems. Organic production prohibits the use of certain pesticides, fertilizers, genetically modified organisms, antibiotics and growth hormones. Certified organic farms comply with a host of regulations and must have their farm inspected every year. These standards are then relayed to the consumer through a certification label that prove these production practices have been followed. Organic farmers often receive a premium price for their organic products. (10)
There are several organic farms in the District of Muskoka and South East Parry Sound. As consumer interest for organic products grows, research on the sector should be undertaken, so farmers are ready to meet the demand.

**Common Organic Agriculture Practices:**
Organic farming is dependent on crop rotation to regenerate and build soil health. Long term rotation plans ensure that soils do not get depleted. Composting systems that manage farm waste and transform it into high quality nutrients for the soil are also key in organic farming systems. Pest and disease control is maintained by promoting on-farm diversity, and by inter-cropping and companion planting. (11)

# Organic Certification

Becoming certified organic is a choice farmers can make about their production methods. Certification by an accredited organization reviews the production, processing, handling and sales of organic food products. Currently, there are national organic standards, but no national organic certification agency. (12)

Some of the certifying organizations are locally based, and some are chapters of larger, international organizations. It is up to the farmer to choose a certifying agency based on the requirements of that organization, costs, and consumer preference.

The standards for each of these certification organizations are outlined in manuals that meet or exceed the national standards. The certification process involves a visit by an inspector, review of farm documentation and a peer review. Farms that meet the criteria are able to use an organic logo to distinguish their products.

Conventional farmers interested in becoming certified organic must go through a transitional phase. There are several organizations in Ontario that offer resources to transitioning farmers. A good source of information about this and other organic issues is the National Organic Conference held in Guelph every January.

The following is a list of organic certifying agencies in Ontario:

Organic Crop Improvement Association (OCIA)
Ray Rivers, 445 Mountsberg Rd, RR# 2 Campbellville ON L0P 1B0
Tel: 905-659-3866 Fax 659-3867 email ray.rivers@sympatico.ca
web: www.ocia.on.ca/

Organic Crop Producers & Processors Ontario Inc. (OCPP)
Larry Lenhardt, RR #1, 1099 Monarch Road Lindsay, ON K9V 4R1
Tel: (705) 324-2709 Fax: (705) 324-4829 email:ocpp@lindsaycomp.on.ca

Organic Forum International
Peter Bruce, RR#3, 1280 Merkley Road, Gravenhurst, ON P1P 1R3

Tel: (705) 687-2228 Fax: (705) 687-9981 email: organicforum@sympatico.ca

Quality Assurance International
Tomas Nimmo, Suite 450 115 First Street, Collingwood ON L9Y 4W3
Tel : (705) 443-4444 fax : (705) 444-0380

Society for Biodynamic Farming & Gardening in Ontario (DEMETER)
Cory Eichman, RR #4, Community Farm Bright, ON N0T 1B0
Tel: (519) 684-6846

Permaculture

# What is it?

The word "permaculture" was coined in 1978 by Bill Mollison, an Australian ecologist, and is a contraction of "permanent agriculture" or "permanent culture." Permaculture is the ecological design of human habitats and food production systems. Mimicking patterns found in nature, permaculture strives to use human dwellings, microclimates, annual and perennial plants, animals, soils, and water to create sustainable communities. In this sense, permaculture principles can extend beyond the farm and are applicable to whole communities or regions. (13)

Permaculture principles, distilled from the disciplines of ecology, energy conservation, landscape design and environmental science, are equally applicable for community or farm planning.

- Relative location
- Each farm element performs multiple functions
- Energy efficient planning
- Using biological resources
- Energy cycling
- Small-scale intensive systems
- Natural plant succession and sequencing
- Polyculture and diversity of species
- Increasing "edge" within a system – using buffers to attract diversity
- Observe and replicate natural patterns
- Pay attention to scale

# Common Permaculture Practices

Permaculture systems are carefully designed around on-farm water resources by integrating aquaculture, water collection and greywater recycling. (14)

Gardening techniques common to permaculture include edible landscaping, keyhole gardening, companion planting, trellising, sheet mulching, chicken tractors (a portable chicken coop), solar greenhouses, spiral herb gardens, and vermicomposting. Agroforestry practices such as ally-cropping are also extensively used.



**Season Extension**

Farmers working in the harsh Muskoka and South East Parry Sound climate are forced to work extra hard to provide their market with produce beyond the short growing season. Season extension techniques, looking for specialty crops that bring in a high return, and finding alternative energy sources can help farmers over come this challenge.

Techniques used to overcome climactic limitations are called season extensions. Season extension techniques range from planting crops in microclimatic zones on the farm to greenhouse production. The techniques protect crops from the elements, and lengthen the growing season by making it possible to plant earlier or extend the harvest season. (15)

Eliot Coleman, author of *Four-Season Harvest: Organic Vegetables from your Home Garden all Year Long* and *The Winter Harvest Manual*, is the most successful year-round farmer in North America. Despite long and cold winters in Northern Maine, Coleman sells freshly harvested salad greens and vegetables from October to May by using an environmentally sound, resource efficient and economically viable system.

Looking at regions between the 44$^{th}$ and 48$^{th}$ parallel of latitude, Coleman has proven that by choosing hardy cold tolerant varieties, and by protecting crops, year round production is possible. Italy and France have milder winters than we do in North America at the same parallels of latitude, but they have the same daylight hours. These day light hours are what proves critical in using successful season extension techniques, not the climatic conditions. By buffering the temperature, North Americans farming between the 46 and 48 parallels of latitude can grow the same crops through out the winter as those grown in Europe. (16)

Greenhouses, plastic hoop houses, and row covers that protect the crops are used in Coleman's winter farming system. Planting starts in early August and is continued through out the fall. Cold hardy crops such as spinach, chard, carrots, scallions and many other greens and herbs can be harvested throughout the winter months. Little to no supplemental heat is required. (17)

Other season extension techniques include:

- Planting in a protected or south-facing location
- Planting in raised beds
- Using a cloche (transparent plant covers made out of glass or plastic)
- Building a cold frame (mini greenhouse)
- Using plastic or paper mulch
- Using a floating row cover
- Building a low tunnel

**Cookstown Greens**

In 1988, David Cohlmeyer, a decided to start a business providing top quality produce to some of the province's most acclaimed hotels and restaurants. Moving to Cookstown, Ontario, he has spent over 10 years learning how to grow crops through out the winter months. Specializing in unusual and heritage varieties of vegetables, David spends a lot of time scouring seed catalogues from all over the world looking for crops that will adapt well to the cold Ontario climate. These varieties can grow successfully in the low light conditions of winter, and are cold tolerant.

The unusual produce is complemented by a steady supply of baby salad greens, seedlings, and colored tomatoes, carrots and potatoes chefs have come to depend on.

Before becoming a farmer, David was a small business consultant and a chef. To make his cash-strapped farm succeed, he began by growing items that could be harvested quickly off of his three acres of land, such as seedling sprouts, edible flowers, baby greens. By providing these items year round by using greenhouses, he was able to maintain a steady cash flow, keep employees and retain his customers. Currently, David is farming 17 acres of land, has 20,000 square feet of greenhouses (some heated with propane) and employs 12 people full time. Over $400,000 of specialty produce is sold to about 35 restaurants and hotels in southern Ontario.

David has been successful in comparison to many other farms. Nevertheless, high fuel prices and continued, slow growth cut into this margin. "Compared with most city businesses we have been a failure," says David. "But I do get to enjoy nature in a way no city dweller ever could, participate in the magic of growing plants, make significant contributions to the hospitality industry to help share the wonders of Ontario, and leave the world more healthful and sustainable that when I assumed stewardship."

David prides himself on quality and consistency - something that is very important to the chefs who are his customers. His produce is steadily available throughout the season, the price is set for the year, the delivery day and time are agreed upon in advance, sizing and ripeness are even and predictable, and his produce has a long shelf-life. Organic growing methods are used, not necessarily because of the price premium they demand, but because David feels strongly about protecting the environment, and the healthy, flavourful food these method produce.

# Source

*A Millennium Report, 13 Years of Growing*, by David Cohlmeyer

David Cohlmeyer, Cookstown Greens
Box 227
Cookstown, Ontario
L0L 1L0 Phone: (705) 458-9077, Fax: (705) 458-1707

**Wind Technologies for the Farm**

For properties over one acre in size, wind energy makes sense. In fact, the number of small-scale renewable energy systems is growing by 30% each year in North America. The North American sector is way behind the European who have been enthusiastically implementing this technology for decades. Wind power is an alternative for farmers, who need a cost-effective alternative to utility line extensions, utility bills and fossil fuel generators. (18)

Historically on farms, wind energy has been most used to pump water. Several different options are available today: traditional mechanical wind pumps (windmills), air pumps, and wind-electric pumping. Other applications for wind energy include: micro turbines to power small appliances, electric fence charging, and electric vehicle charging. (19)
The district of Muskoka and South East Parry Sound provides a good opportunity for the development of wind technologies on farms.

## Integrating Specialty Crops into the Farming System

# Specialty Vegetables

Specialty vegetables represent a growing market and command a higher price than conventional vegetables. Chefs and consumers are intrigued by oddly shaped vegetables, miniatures, heirlooms, and ethnic produce. Farmers are adding these crops to their mix, and find that there is a growing market for them. In the district of Muskoka and South East Parry Sound, with their thriving tourism industry, this is particularly true. Specialty products can be marketed locally to residents, tourists, and chefs.

Locally restaurants and grocery stores are interested in accessing this produce on a year round basis. Herbs, for example, are cool weather crops that can easily be grown all year in a greenhouse, and demand a high retail price. Farmers in Muskoka and South East Parry Sound have an opportunity to tap into this market.

Products can also be marketed to nearby cities where there are two markets for this produce. The first are ethnic communities, such as the Latino, Indian and Asian groups who use the produce as a staple in their diet. The second are the high-end buyers who seek out this produce when preparing gourmet meals. Farmers need to grow for the market that exists in their area, understanding that the market constantly changes as culinary trends evolve. (20)

There are four main categories of specialty vegetables. (21)

### *Miniature/Baby Vegetables*

Baby vegetables are harvested at an immature stage, or can be small mature varieties. Some examples include baby summer squash (patti pan), red heart sweet peppers and baby corn.

### *Specialty Lettuce, Greens and Herbs*

Many people are interested in specialty greens and herbs to make salads more unusual. Many of these varieties are cool weather crops, making them ideal for Muskoka and South East Parry Sound farmers. Some popular, but unusual greens include: amaranth, arugula, mustard greens, oracle and claytonia. Popular herbs include: many different varieties of basil, mint, chives, oregano, cilantro, and parsley.

### *Ethnic Vegetables*

Both ethnic communities and gourmet cooks are interested in ethnic vegetables. For example Italian vegetables such as rapini, endive and romanesco cauliflower are gaining popularity. Tomatillos are popular in the Latin community and eggplant of various shapes and sizes (long purple, small green, white egg) are preferred in Asian and African cuisine. As our world becomes increasingly globalized, consumer's are demanding more exotic foods.

### *Heirloom Vegetables*

Heirloom varieties have grown in popularity in the last five years. These varieties are old, and are often from a local gardening tradition. They tend to be more delicate than conventional varieties and sometimes have unusual characteristics that make them popular with gourmet chefs. Interesting varieties include lemon boy tomatoes, turkish orange eggplant, chocolate peppers and cape gooseberries.

**Aquaculture**

The decline of global fisheries has resulted in a growth in fish farming, or aquaculture. There are a wide range of ways aquaculture can be integrated in to farming systems, as one component of farm diversification or as a commercial enterprise. Establishing an aquaculture enterprise will require a substantial amount of research, but there is a lot of information available. Generally, it is advised that farmers begin with a small-scale enterprise and gradually expand to meet commercial goals. (22)

**Ginseng, Goldenseal and other Native Roots**

Farm production of native plants is becoming more and more common as their use in nutriceutical products increases. The growing popularity of herbal supplements has put pressure on particular species in the wild, and farm production is being encouraged as a way to protect the remnant populations. Crops such as ginseng, goldenseal, echinacea, black and blue cohosh are popular, high value crops. (23, 24)

**Mushrooms**

The market for fresh mushrooms has grown in recent years. More and more consumers are moving away from the traditional button mushrooms to specialty varieties such as shittake, oyster and chanterelles. Shittake and oyster are easy for beginners to grow. Others require a significant investment before production is possible. Some growing methods are patented and other mushrooms have not been successfully cultivated. (25)

Fungi, or mushroom crops, grow on a substrate. This substrate is often a by-product from other agricultural production, and mushrooms can play a role in managing organic wastes. Materials that have been colonized by mushrooms can be used as an organic soil amendment.

Mushrooms are extremely healthy, containing amino acids, protein, vitamins and trace minerals. Chinese medicine practitioners use mushrooms frequently for their anti-carcinogenic properties and other health benefits. (26)

Mushroom production can be a viable commercial enterprise or additional farm enterprise.

**Muskoka Mushroom Farm**

Steve Ross worked at a mushroom farm in Orillia for several years before moving to Muskoka to start his own business in 1997. Shittake mushrooms are a high value crop, and Steve Ross has had little problem selling what he produces to the Independent Grocer in Huntsville, as well as several other produce retailers. Deliveries are made to small restaurants and individual customers.

"The mushrooms are extremely nutritious," says Tammy Ross. "People are becoming more aware of what they eat." The growing business supports the Ross' and one other employee. None of them are originally from Muskoka, and were attracted to the area because of the lifestyle.

The new business is stabilizing as the owners learn more and more about mushroom production. The shiitake's flush in the outdoor growing areas in the spring and fall. Two buildings, a control room and a greenhouse grow mushrooms enable the company to provide mushrooms all year round.

Steve and Tammy Ross
258 Whitehouse Rd
Box 5590
Huntsville ON
P1H 2L5
705-787-1115

**Livestock**

Small-scale livestock production is another way to diversify the farm. A few animals can be purchased, raised and sold, and over time production can be increased. Unusual livestock breeds such as llamas, emu, as well as rare breeds are becoming popular. Consumers, worried about the safety of their meat, are interested in finding local sources. Marketing by products from animals (eggs, oils, etc.), directly from the farm gate, is also a way to diversify income.

**Chasing the Wind Farm**

Penny Britnell grew up in Muskoka, but moved away for 20 years. In 1993 she and her family bought a 20 acre property, and built a house and barns. Penny started gardening and then farming, following her lifelong dream.

The farm is diversified and includes sheep, chickens, turkeys, cows, pigs, rabbits and a market garden. The livestock is sold directly to individual customers who receive their meat custom cut and wrapped to their specifications. This value adding is a lot of extra work, but brings in the best price for the product. Alternatively, Penny could auction off her animals, but this would mean she would get a reduced price. The vegetables are sold from the farm gate. A sign draws neighbours onto the farm to buy produce and eggs throughout the summer months.

For a small, diversified farmer like Penny, it is difficult to access support from the Ontario Ministry of Agriculture, Food and Rural Affairs. Programs to support farmers are designed to help large-scale farmers. Farm groups need to advocate for these policies to be changed to reflect the needs of a diversity of farming situations.

Penny Britnell
1-705-645-6157

## Hobby and Recreational Farms

Hobby and recreational farms are also considered a part of the agricultural sector. These include horse farms, petting zoos and other endeavors where livestock is involved. In a district like Muskoka and South East Parry Sound, hobby farms aimed at providing a recreation service to residents and tourists are a viable option.

**Woodridge Riding Centre**

Sue Ashley and Jason Milburn decided to transform their property into a farm that boards horses and offers riding lessons. After investing in a barn, an indoor riding ring and a paddock space, the business was launched in December of 2001.

26 horses presently live on the property, as well as a flock of sheep. Jason and Sue's reputation has meant initial success with the endeavor. And through word of mouth, their business is growing.

The business is very young, and the farm's infrastructure needs to be developed. Over the short term, the land needs to be reclaimed and fenced. Existing fencing needs to be upgraded. An addition needs to be put on the barn, and a safe, secure tack area has to be built. Over the long term, the barn needs to be plumbed and a washroom and wash stalls for the horses installed.

All of these plans translate into a substantial capital investment. Sue Ashley feels like the Ministry of Agriculture, which has been eroded over the years, is not supportive of this kind of initiative. Grants available for agri-tourism and rural development are administered by local financial institutions that don't value her horses, and actually see them as a liability. Any income made through the horses, such as riding lessons, is not considered. Any services that are offered by the Ministry of Agriculture, are over two hours away in the town of Verner, making it difficult and expensive to access them. In addition, Ministry staff are too busy to properly consider requests for information. Sue and Jason have spent a lot of their time and resources improving their property. Any upgrades made to municipal road ways are not compensated, nor are there incentives for farmers to make these improvements.

Although the challenges are daunting, Sue and Jason feel optimistic about their future. They have been able to build a business from the ground up, and are generating their own incomes.

Sue Ashley and Jason Milburn
RR#1
Utterson, Ontario
P0B 1M0
705-385-3020

## *Recommendations*

**Diversification Possibilities for the District of Muskoka and South East Parry Sound:**

- **Additional research on the potential of agroforestry, the emerging organic market, season extension techniques and the market for specialty vegetables should be made available to local farmers.**

# Regional Marketing Opportunities: Linking Producers with Consumers

Farmers have always had to dedicate a portion of their time to marketing. As farms diversify, however, marketing becomes a central activity, perhaps as important as production. Existing marketing channels often do not suit the small producer, making it difficult to sell what is available from the farm after it has been harvested. As large retailers grasp for larger and larger shares of the food market, farmers interested in selling directly to their customers have to become increasingly creative. (27)

There are many innovative marketing methods available for farmers in Muskoka and South East Parry Sound to adapt. These methods are explored in the following pages. What do they have in common? The planning begins before the seed is planted, and they depend on a deep understanding of what consumers want, how to deliver it to them and still make a profit.

The diversity of direct marketing options available to farmers in Muskoka and South East Parry Sound include roadside stands, pick-your-own operations, farmers' markets, as well as sales to restaurants, retail or specialty stores. Community Shared Agriculture, agri-tourism, mail order, e-commerce and home delivery are other direct marketing options. The emergence of these alternatives to big box grocery stores, has made it possible for some creative farmers to make a comfortable living by finding specialty market niches, and keeping a larger share of each dollar the consumer pays for food.

Appealing to consumers who are concerned about factory farming and seek fresh locally grown food, these farmers not only grow food, but also educate the public about the way food grows. This means farmers need a variety of skills beyond food production. Direct marketing requires farmers to be positive and friendly, to understand appropriate food packaging, to display their products in an appealing way, to open their farms to the public, to become sales people, to develop advertising materials such as brochures and posters, and to understand the potential of new technologies such as e-commerce.

### Direct Marketing Alternatives

## Local Logos

How can consumers tell if produce on supermarket shelves is locally grown? Even at a farmers market, fruit and vegetables are bought by vendors at the Food Terminal. In order to support the local agricultural economy, consumers need know where the food comes from. This is most easily done by creating a local logo that producers can use to identify their products. Local logos not only make it easier for consumers to identify local products, but help to develop a sense of pride and community. Logos can be used with other marketing tools, such as a list of what is in season locally, marketing brochures, and farm tours.

**Peterborough's Own, Locally Grown**

In the early 1990's Peterborough developed a local logo that proclaimed, "Peterborough's Own, Locally Grown." Stickers for produce were printed, and local farmers could buy the stickers inexpensively.

The marketing campaign was started by a community group interested in supporting local farmers and building a more regional food system. Unfortunately, the group who started the campaign ran out of funding, so momentum for the project was lost. However, the idea lives on as an example of an innovative way to bring consumers and farmers together.

## Regional Wholesale Cooperatives

One barrier to buying locally for chefs and grocery retailers is the confusion of many farmers selling one or two products for short periods of time throughout the growing season. To overcome this barrier, a regional wholesale organization could be established. Sometimes, these organizations are farmer marketing cooperatives. Bringing together farmers to sell their produce locally enables farmers to organize their growing so products are available for longer throughout the growing season. The buyer only needs to deal with one supplier. Depending on how these groups are organized, they may apply for outside funding to do market research, or develop marketing materials.

## Farmers Markets

There are at least seven farmers markets in the district of Muskoka and South East Parry Sound. These are administered individually, and at least one is a vendor cooperative. Most include farmers and local crafts people.

Farmers markets are a well known way to reach local consumers who are interested in buying locally. The excitement of visiting a farmers market, with abundant tables overflowing with local produce, sold by farmers themselves is very appealing to consumers.

Some farmers markets have opened their doors to vendors who do not sell local produce, changing the flavour of these community events. More variety is available at these markets, but often, local farmers with their seasonal produce cannot compete.

When starting a farmers market it is important to consider the goals of the market before advertising for vendors. The market organizing committee may want consider some policies that make it easy for local farmers to participate. For example, only local vendors who are selling produce from their farms would be allowed to participate. Or there could be no table fee for local farmers. Or vendors bringing produce from outside the region could be asked not to sell what is available locally.

Many farmers find it difficult to participate in a farmers market. Table fees are high and the distance to travel to the market is long, making it expensive. Often farmers don't have big trucks, so can only bring a small amount of produce to the market. These barriers to participation can be overcome by providing incentives for farmers to participate.

There are a number of farmers markets in Muskoka and South East Parry Sound. These are quite popular during the summer with both tourists and locals, and are potentially a way to build support for local agriculture.

Some farmers travel great distances to sell at a farmers market. For example, if you can load your truck up with $1000 worth of produce, attend a market in a large urban area and sell out, the trip is worth it.

## Community Shared Agriculture

Community Shared Agriculture (CSA) is another way farmers can market their products directly to consumers. The basic concept behind CSA is that consumers finance a share of the farm costs in exchange for a share of the harvest. The consumer pays the farmer at the beginning of the season, and then receives a basket of produce through out the growing season. Through this unique arrangement, the consumer takes the same risk as the farmer. If the growing season is plagued by drought, for example, the consumer will get less produce. "I've learned that the community part of a CSA actually consists of a group of people, not a place, sharing the responsibility of growing their food well. It is an opportunity to take the marketplace right out of a process that's just too important to everyone's, and everything's well-being to leave in the hands of a few," says Bob Budd, a CSA farmer in Ontario. (28)

Consumers have had very positive experiences with CSA. At the most basic level, they are connected to the food they eat. With their families they are able to visit "their" farm and get to know "their" farmer. They get to experience the abundance of harvest and the trials of farming first hand through the food that arrives in on their front door every week, and the relationship developed with the farmer. (29)

**Spring Arbour Farm**

Spring Arbour Farm is 50 acres of crop land, mixed hardwood forest, streams and meadows. Located near Long Point and Lake Erie (about 200km southwest of Toronto), the farm delivers to CSA members in Toronto. Half of the organic farm is asparagus the other half is a mixture of fruits, vegetables, herbs and flowers. An expert at crop sequencing, Ken is able to bring a diverse amount of produce to his customers every week.

Most of the varieties grown on the farm are heirlooms predating 1890. These are available as seeds, transplants, fresh food and preserves. The wild part of the farm supplies members with maple syrup, native ferns and flowers and exotic flavours such as wild ginger and wild grape. Ken McMullen and his family also deliver other local produce such as eggs, cheese and honey to members in the city, acting as a distributor for other local products to urban consumers.

Ken McMullen
Spring Arbour Farm
305 7th Concession T/L, R.R.1, Walsingham, Ontario,N0E 1X0
(519) 875-4883
springarbour@kwic.com
http://www.springarbourfarm.com

## Pick-Your-Own

Another option for farmers centrally located, is a pick-your-own operation. Consumers are invited to come onto the farm and pick fruit and vegetables themselves. This offers a chance for non-farmers to spend some time on the land and enjoy the farm property. Often produce is also available pre-picked at a market stand on the farm, or at the roadside.

Pick-your-own offers advantages and disadvantages to farmers. Inexperienced pickers could damage the crop, and this is a risk that has to be taken. Farmers also need to be willing to open their farm to the community, and arrange their work and schedule around the public.

## Brooklands Farm

An inviting sign on the roadside draws the community on to the Riley farm to pick their own vegetables and berries, or to shop at the farm market. The variety of crops include maple syrup, asparagus, strawberries, sweet corn and a delicate salad mix, and draw locals and tourists to the farm summer after summer. Every year there is something new to taste, and the Riley's are constantly expanding their production.

The Riley Family has been working their 300 acre farm for over six generations. A dairy operation until 1958, the family has creatively reinvented the farm several times to remain viable.

"Marketing isn't a problem in Muskoka and South East Parry Sound," says Katya Riley. "Production is the problem." The Riley's have definitely found their niche. A good location and reputation, as well as opening their farm to the community, are all reasons why this farm is successful. In the early summer, the local church puts on a strawberry social at the farm. Artists and musicians are invited to use the farm, charming the shoppers. In late September pumpkins, gourds, Indian corn, corn stalks draw people to the fall fair.

Because the farm is such a public space, the Riley's have had to purchase third party liability insurance from a private insurance broker. This is expensive, but the cost has to be factored into the farm expenses. Katya has explored group insurance options, but has found that this offers no real savings.

Like the many farmers in Muskoka and South East Parry Sound who farm specialty products, the Rileys have oriented their farm towards the booming tourism economy. Ken Riley notes that there is an unfulfilled potential for this kind of farming business in the area. Produce is also sold to over nine resorts and restaurants in the area, who have come to rely on the farm for seasonal specialties such as berries, sweet corn and maple syrup. Every week, chefs leave their order on the Riley's answering machine, knowing they can expect a delivery the next day.

The Riley's are active members in the Muskoka Soils and Crops Association that was started 61 years ago. Continuing the tradition of Walker Riley, who was a founding member of two local farmers markets, the Riley's are leaders in the local farm community.

Ken and Katya Riley
Brooklands Farm
Milford Bay, Ontario
705-764-1888
k.riley@sympatico.ca

# Agri-Tourism

Because of the thriving tourism industry in the district of Muskoka and Parry Sound, there are many opportunities for agri-tourism. Agri-tourism can take many forms, and can boost the local agricultural economy by raising awareness about local farms, and linking consumers with farmers. Agri-tourism plays an important role in making farm activities and life available to the community.

Farms can participate in agri-tourism initiatives in a variety of ways. Farm tours are often organized by groups of farmers or local organizations looking for a way to boost the economy. These tours invite the public onto the farm to participate in special events such as strawberry socials, pony rides, garden tours, apple picking, etc. If advertised well, people will travel far to attend these events and tour the local area.

Agri-tourism also includes farm stays, as described in the case study below from Italy. Some farms have an educational mandate, and offer agricultural programming through out the year to the public and to children. Everdale Environmental Learning Centre, also describe below, is an example of an educational farm.

**Everdale Environmental Learning Centre**

Everdale Environmental Learning Centre demonstrates sustainable living methods by offering hands on opportunities to people of all ages. The 50 acre property located in Hillsburgh, Ontario, includes a working organic farm, forests and meadows, and models of sustainable technologies such as solar and wind energy, and strawbale construction. Visitors to the Learning Centre are involved, through hands on activities in sustainable agriculture, renewable energy, and alternative building methods.

The public participates in the activities offered at Everdale in a number of ways. Local community members purchase shares in the community shared agriculture (CSA) project and receive a box of farm fresh products every week. Apprentices are hired every summer to work on the farm. A regular workshop series covers topics such as organic gardening, composting, solar energy and strawbale construction. Seasonal open houses bring people from the city out to experience life on a farm for a day. Programs are designed for school and youth groups from the surrounding cities.

The Everdale Learning Centre is built on a tradition of education. It was founded in 1966 as Canada's first free school, and is still owned and operated by Everdale's non-profit corporation. A board of directors guides the Centre's growth, and is involved in on-going fundraising to support the staff and activities. It is challenging for the staff at Everdale to balance the Learning Centre activities with production goals.

The organic farm at Everdale markets produce in two ways. First, CSA members purchase shares in the farm at the beginning of each season. Every week, the members come to the farm to pick up their produce. Three farmers and three full time apprentices grow the food on the farm. Fresh vegetables are also delivered to the city, where Everdale has developed relationships with several food box companies and retail stores who buy produce in bulk.

Funding is always an issue for Everdale. In the past they have receive funds from the Trillium Foundation, from CARCI, from the TD Canada Trust Friends of the Environment Foundation, as well as other private foundations. It takes concerted effort to fundraise for the diverse programs offered on the farm.

Gavin Dandy and Lynn Bishop
(519) 855-6511
Info@everdale.org
www.everdale.org

**Bio-Ecological Agri-Tourism in Italy**
Italy has about 400 organic farms that offer environmentally friendly holidays, or farm stays. The farms have become a popular way to travel in Italy, enabling tourists to experience the beautiful Italian country side, meet local people and taste the world renown cuisine. The farms offer a range of services, from a simple meal to weeklong stays. Sometimes they offer the possibility of working on the farm or learning traditional crafts.

A national organic certification agency sets the standards for the agri-eco tourism industry. These standards require the farms to comply with ecological practices and principles and ensure that the farm activities reflect the local values and cultural heritage of the area where they are located. (30)

**Other Issues**

# Regulations

Farmers that are selling agricultural products to the public have to comply with various regulations surrounding production, storage, processing and retailing. The CFIA was created in 1997 to enforce the food safety and nutritional quality standards established by the Ministry of Health. (31)

CFIA activities are broad, and range from the inspection of meat processing facilities to border inspections, to the enforcement of labeling. The CFIA also conducts food investigations and recalls, performs laboratory testing and environmental assessments of seeds, plants, feeds and fertilizers. Information on these issues is available in great detail at the CFIA web site.

# Insurance

Insurance is an expensive farm expense. If a farm is open to the public, third party liability insurance is necessary. Only a few insurance companies offer this kind of insurance to farmers. Group insurance plans can be organized and offered through agricultural associations. The premium price, however, does not drop with group rates.

## *Recommendations*

**Regional Marketing Opportunities for the District of Muskoka and South East Parry Sound:**

- **A local logo and regional wholesale strategy should be developed to help farmers market their products in the district.**
- **The link between the tourism sector and potential agri-tourism endeavors should be explored through a feasibility study.**

# Working Co-operatively: Strategies for Farmer Groups

## The History of Agriculture and Cooperatives

Agricultural co-operatives have a long history in Canada. The first co-ops were organized by dairy farmers in Ontario, Quebec and the Maritimes in the 1870's and 1880's. These farmers were reacting to the establishment of large dairies and wanted to gain direct access to growing urban markets. (32)

Co-operatives are a means to an end. By forming a co-operative members agree on principles that guide their activities. These principles include:

- One member, one vote: the members control the co-operative democratically.
- Membership is voluntary and open to everyone participating in co-operative's activities.
- Economic participation by the members.
- Autonomy and independence.
- Education, training and information.

**Co-ops offer farmers a way to pool resources, access inputs and farm supplies, and market collaboratively. There are many examples of farmers who have organized co-operatively. Some examples include:**

- Grain processing co-operatives
- Beef marketing co-operatives
- Co-operative extension programs
- Co-operative farm supply stores
- Co-operative feed suppliers

**Home Grown Wisconsin**

Founded in 1996, Home Grown Wisconsin is a marketing cooperative that is owned not only by the farmers who are the suppliers, but by the customer restaurants as well. The group is still exploring how to incorporate formally, but the multi-stakeholder model is unique.

Over 100 varieties of local fruits and vegetables are distributed to local restaurants through out the growing season. Marketing and distribution is centralized through an established and reputable local distributor. The co-op hopes to increase the range of products offered through the co-op to include meat and processed products.

The produce is organically grown and a focus of the co-op is producer and customer education, promoting "a more regional palette." Weekly feedback from chefs ensure that growers are meeting the chef's needs in terms of quality and price. Growers participate in regular workshops that cover topics

including marketing, efficiency and specialization.

From: http://www.wisc.edu/uwcc/info/homegrown.html
Joe Sonza-Novera, Home Grown Wisconsin, (608) 255-9400

*Recommendation*

Co-operative Strategies for the District of Muskoka and South East Parry Sound

- **Farmer and consumer co-operatives should be explored as a strategy to promote local agriculture.**

2 Sunday, September 23, 2001 - MUSKOKA ADVANCE

# Agricultural potential exists in Muskoka

**By Tamara de la Vega**

More attention needs to be diverted to Muskoka's agricultural potential rather than just tourism, says the Muskoka Community Co-operative (MCC).

"There is a need to recognize it as a viable sector of this economy," said MCC representative Phillis Winnington-Ingram.

MCC is planning to pull together various government resources in order to compile information about what it considers a neglected sector in Muskoka.

"In Muskoka there is absolutely no agricultural information for people who farm or those wanting to do a business plan," she said, adding that there are many fallow farms in the area that could be brought back to life. "Since this land has laid fallow for five to 10 years, it's easy to look at this land for organic growing opportunities as well," she said, adding that according to an economic development officer with the Province, the possibility of bringing that sector to life in Muskoka is viable.

"He thought it would be successful because there is such an intense market in terms of tourism and resorts, and people look for home-grown produce," she said, adding that the climate and soil is definitely workable.

"The soil here is certainly something that can be productive, yes we have a lot of rock but there are still amazing opportunities for agricultural productions."

Winnington-Ingram said the first phase of the initiative by MCC, will compile statistical information about farming in Muskoka.

"Once you've got the research done, then you are giving people tools to look at farming in Muskoka," she said.

The second and third phases of the project would include bringing the agricultural community together, and identifying partners through marketing.

"FedNor asked us to look at a broader area," she said, adding that the research will include southeast Parry Sound.

"What we're trying to do is look at farming from a holistic perspective," she said, concluding: "We don't want farmers to think that we're going ahead and they're not included, because all we're trying to do is collect information so we have something to share with them. It is important to do this part first so we can move forward."

MCC is also hoping to work closely with the District Municipality of Muskoka.

# Regional Training and Capacity Building



There are five main approaches to food systems education. (33) The district of Muskoka and Parry Sound will have to develop their own priorities to build producer-consumer links. The research prepared for this report already begins farmer and food buyer education, and provides a strong foundation for understanding the local food economy.

1. **Farmer Education**
   Farmers themselves identified education as crucial toward building a regional food system. Small-scale growers and gardeners need to become larger scale and need to diversify their farms. In order for this to happen, farmers called for support from the extension system and from local universities or colleges. Farmers were interested in participating in research projects that helped them become more efficient and manage their farm resources more effectively. Farmers also called for more information and education on direct marketing.

2. **Food Buyer Education**
   Chefs were identified as being key in the shift to a regional food system. By encouraging chefs to use local produce and plan their menus according to seasonal availability, consumers become aware of the possibilities of eating locally and seasonally, and the demand for local produce increases.

3. **Consumer Education**
   In order to encourage local production, consumers need a deeper understanding of their regional food system. They need to understand issues around seasonality and be willing to buy directly from the producer. This is the most difficult task in shifting to a more sustainable, regional food system.

4. **Research**
   The report identified that research in several areas was needed. First, terms such as “local” and “sustainable” needed to be defined in a way that was appropriate to the community. Second, analysis of the current food system – both producers and markets, imports and exports – would make it easier to visualize how to promote a regional food system. Financial support is required to undertake this research.

5. **Cooperation**
   The above four points, farmer, food buyer and consumer education, and research require an interdisciplinary, cooperative approach between institutions, community organizations and local leaders. New production, processing, marketing and distribution ventures would most likely succeed if they involved a variety of partners and stakeholders.

These findings point toward the importance of regional networks and capacity building. In order for this to happen, a community facilitator needs to bring people together and provide leadership. Often, it is difficult for farmers to do this, as they are so busy and over worked. Consumer groups can reach out to farmers and take the lead on this kind of initiative.

## Farmer Training

Agriculture extension services offered by the provincial government have been drastically cut over the last 10 years. At the same time, the face of farming across the country is changing significantly. How will farmers gain the new skills needed to be successful into the future?

Farmer training and producer education takes many forms. In Quebec farmer groups have successfully organized to implement farm conservation programs. These farm clubs make proposals to the government about how they will become more sustainable. The program is coordinated by local ecological consultants, who are paid for by the government (90%) and the farmers (10%). The program both acts as an educational tool, and as an incentive to farmers. Most importantly, however, the local initiatives are developed by farmers and recognize the farmer's expertise. (34)

Another example of farmer training is The Ontario Soil and Crop Improvement Association (OSCIA), which was founded in 1939. The organization's mission is to "communicate and facilitate responsible, economic management of soil, water, air and crops." Over 55 local branches across the province represent all commodity groups. The organization works on four strategic areas: producer education, local association development, program delivery and consumer outreach. (35)

Another farmer training organization is Appropriate Technology Transfer for Rural Areas (ATTRA). (36) Based in the US, ATTRA is a non-profit, national farming information centre. By offering technical assistance, publications, and resources, ATTRA provides services to farmers, extension agents, market gardeners, agricultural researchers, and other agricultural professionals across the US. The organization focuses on three main topics:

- sustainable farming production practices
- alternative crop and livestock enterprises
- innovative marketing

## Consumer Education

Consumer education is crucial to the regional agriculture sector. Fortunately, this education can happen at a variety of levels. The most powerful education happens, however, when consumers have an opportunity to purchase food directly from local farmers. At a farmers market, for example, consumers can learn about the farming season, what crops are currently being harvested, and get to know local farmers. On a farm tour, the community can visit the farm, see the crops growing, see livestock and meet the farm family. The two case studies below represent other innovative consumer education ideas.

**International Society for Ecology and Culture (ISEC), Local Food Program**

This innovative food education program aims to raise public awareness about the agricultural crisis, the globalization of the food economy, environmental issues surrounding food production and distribution, and local solutions to these problems.

The Food Program has developed a Local Food Roadshow that includes a slide presentation and an exhibition of 20 posters. Staff take the roadshow out to schools, community groups, churches and environmental organizations.

**The Slow Food Movement**

Slow Food started in Italy in 1986, and has become a world-wide grassroots movement to promote the pleasure of local cuisine. Self described as 'eco-gastronomes' the movement has grown rapidly and has local chapters all over the world. Appealing to people who want to slow life down, promote biodiversity and local culture, the grassroots chapters organize events, lectures, tours and other initiatives that spurn fast food and fast paced corporate culture.

Slow Food has launched a massive project called the *Ark of Taste* that aims to identify and catalogue products, dishes and animals that are endangered of disappearing.

This interesting movement illustrates how consumer education can be fun and engaging. Its success illustrates how people are literally hungry for local food and alternatives to fast food like McDonalds and Taco Bell.

## Source

www.slowfood.com

*Recommendation*

Regional Training for the District of Muskoka and South East Parry Sound

- **A survey asking farmers about their specific training needs**
- **A consumer education strategy as part of a local marketing campaign**

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# Research, Field Findings Mapping & Potential

Agricultural potential In the
District of Muskoka

# Executive Summary

The District of Muskoka is well known as a tourist and recreational area. Less recognized is the role that agriculture plays in the economy of the region. Farming has been established for over 150 years. Even though a large area of Muskoka is dissected by lakes, rivers, wetlands, and rock outcrops, there exists, within this framework, productive agricultural soils. The major tracts of agriculturally productive land generally lie along the north - south corridor of Highway # 11,and include the areas east and west of the towns of Gravenhurst in the south, Bracebridge in the center and Huntsville in the north.

An examination of existing Agricultural Land Classification information (Map included in this report) shows that most of the area ranges from Class( 4-7) Some Class 2 and 3 land is found in the southern parts of the District. The Canada Land Inventory Classification System suggests that agricultural output with Class (4-7) land is subject to severe limitations and that agricultural practices are generally limited to the production of forage crops and the grazing of livestock. However, a check of farming practices in the region, suggests that a variety of vegetable crops( potatoes, corn, peas, carrots), berries(strawberries, raspberries, gooseberries), orchard fruit such as apples and pears, and specialty crops such as ginseng are being cultivated successfully in addition to the traditional forage crops previously mentioned.

For this study , existing agricultural information on Land Use Classification and Cleared Land (potentially available for farming) was transferred from District source maps to a digitized base map of the District of Muskoka. The areas of land classified using the Land Classification System and the Cleared Land were checked with air photos and land satellite images. Visual field checks were also run in the central and southern parts of the District. The air photos and satellite images confirmed that a large portion of the District is involved in the production of forage crops or grazing practices. Most of the Cleared Land originally denoted on District Maps still appeared to be available for potential farming.

The scale of the current Land Classification information (1:50 000 from original map data) does not allow for the identification of small tracts of farmland within a Class (4-7) designation. The scale is too small. It is obvious however, that successful agricultural practices other than forage and grazing abound within the District of Muskoka. Crop heat unit information suggests that a number of vegetable and fruit crops have a moderate to good chance of maturing despite the fact that Muskoka has less frost free days than agricultural areas to the south. It is possible that the climate in this region will become warmer as the effects of "global warming" increase. A slightly warmer climate and the identification ,in the future, of anomalies in agricultural land may allow for the development of alternative crops.

# Project Purpose

The purpose of this component of the project was to collect existing information on the surficial deposits of the District of Muskoka in order that some understanding of "agricultural potential" of these areas could be determined. Soils and Agricultural Land Classification information was to be displayed in map and chart form where possible. Suggestions regarding present and future agricultural feasibility will be offered based on present available information.

# Project Area- District Of Muskoka

The field area for the District of Muskoka is bounded by Georgian Bay on the west, the District of Parry Sound on the north, Nipissing and Haliburton Counties on the east and Victoria and Simcoe Counties on the south. It includes the Towns of Gravenhurst, Bracebridge, and Huntsville, and the Townships of Georgian Bay, Muskoka Lakes and Lake of Bays.

A brief account of the Geological History of the Muskoka-Parry Sound Region (Appendix I) describes how the present surficial deposits and soils developed.

# Research Methodology

## Existing Sources of Information

The information used in this study was for the most part secondary owing to the time (initially 9 weeks) of the project.

Established sources of information on surficial deposits were studied and consolidated. A map was developed for the District of Muskoka which showed soil capability for agriculture based upon the Canada Land Inventory System.[7] Areas of cleared land taken from District Maps,[2] were also designated.

## District of Muskoka

Surficial deposit information was based upon four geological maps,[3,4,5] which characterize the types of glacial deposits and bedrock distributed throughout the study region. In addition, six maps produced by the District of Muskoka[2], which denoted zones of Agricultural Potential as classified in the Canada Land Inventory (ARDA, 1967)[6,7] were studied. The data on the land use classification was checked against copies of the original information compiled on topographic

sheets[8]. Areas of cleared land listed on the District of Muskoka Schedule B Maps[2] were checked against air photographs[13], which were run on April 20th-May 9th,1976. As well, a check of the Bracebridge areas east to Lake of Bays and northeast to Huntsville was conducted at the Ministry of Natural Resources in Peterborough[29] by using remote sensing images (LAND SAT 7) having a resolution of 30 meters square and false colour capability.

## Transfer of Soil Capability Information

Information on Soil Capability (ARDA)[6,7] and Cleared Land was initially transferred to a District of Muskoka Base Map[1] (1:10 000) listing farm properties by colour code. The transfer was done by hand drawing zones of Agricultural Potential and zones of Cleared Land from District Township Maps[2] (1:50 000). Owing to the method of information transfer, inaccuracies will exist. The polygons representing Agricultural Potential (Soil Land Use Classification) and the polygons representing Cleared Land, were transferred separately onto vellum sheets, by tracing the polygons from the original working map. The polygons representing Soil Land Use Classification were coded using the Canada Land Inventory System and legend text was added. The Base Map of the District of Muskoka, and the two vellum sheets were scanned and then digitized using the "AutoCad " software system.[22]

## Composite Map of Surficial Deposits - District of Muskoka

A composite map[11], omitting bedrock outcrops, of the surficial deposits of the District of Muskoka was compiled from the four geological maps,[3,4,5] using the services of The District of Muskoka.[21,24] The legend information from the geological maps was integrated into a new legend, using or modifying the categories stored in the District's geological legend map base. The integration of the legends resulted in the loss of some specific surficial deposit information, e.g. fine grained wind-borne deposits (lacustrine) from one map were blended and classified as alluvium on the Composite Surficial Deposit Map[11].

## Field Work

Visual field checks were done in the southern part of the District of Muskoka. The areas included:

- Severn Bridge northwest to Barkway and Vankoughnet,
- Gravenhurst and areas west and northwest to Fraserburg Road and Rocksborough Road east of Bracebridge, and
- tracks of land immediately to the west of Bracebridge.

## Comparison of "Cleared Land" in Muskoka with Air Photographs[13] and LAND SAT 7 Images[29]

A qualitative visual comparison of areas of "Cleared Land" in the District of Muskoka with air photographs[13] (1976 run) was undertaken to help establish presence or loss of cleared land and farming activities in Muskoka. In addition, LAND SAT 7[29] images (resolution of 30m x 30m) were viewed for the areas surrounding Bracebridge and Huntsville.

## Comparison of "Cleared Land" in Muskoka[2] with Grass and Meadow Lands[12B]

A qualitative visual comparison of "Cleared Land" in the District of Muskoka with Grass and Meadow Lands[12B] was undertaken to help establish the current presence or loss of cleared land in Muskoka. (Appendix III).

## Crop Weather Information

Information on frost sensitive and frost tolerant crops[23], crops heat units[15], freeze risk in Spring and Autumn[16], and freeze protection methods for crops[17] was gathered from the Agrometerological Department, University of Guelph. In addition, climatological data on crop heat units over a thirty-year period was obtained for the weather stations at Huntsville and Bancroft[23].

# Results



## Correlation of Land Use Classes with Glacial Surficial Deposits

A survey of the surficial deposits in the District of Muskoka suggested that farms and areas of agricultural potential were most often associated with drift, till, glaciolacustrine, and glaciofluvial deposits. (Appendix II).

There were no obvious differences in underlying glacial deposits between land use classes 4,5, and 6, but it must be stressed that this conclusion results from a visual qualitative comparison of land use classes compared to glacial surficial deposits. A quantitative comparison of digitized land use classification polygons and digitized glacial surficial deposits may show more detailed correlation than the present analysis suggests.

It is also important to remember that without primary field data, the prediction of productive farm land located on a particular type of glacial deposit is, at best, speculative. Glacial deposits are by their definition “depositional“ through the agents of water and wind. Soil formation is almost exclusively “on site” and is influenced by the parent material, water regime, vegetation cover and micro-organism diversity, to name only a few factors.

## Marshes, Wetlands and Organic Farming

The term "organic" when used to denote a muck soil, refers to the slippery black ooze which is often found in association with marsh, bog and wetland areas. Typically, a muck soil contains between (60-65)% undecomposed organic matter. The presence of "organic soils" in the District of Muskoka should not be confused with the practice of "organic farming". As discussed in another section of this report, "organic farming" uses a variety of farm management techniques to promote healthy crops and maintain the productivity of the soil. One of the components of organic farm management, restricts or prohibits the use of many types of pesticides, herbicides, chemical fertilizers, genetically modified organisms, antibiotics and growth hormones.

The Composite Map of Surficial Deposits[11] of the Muskoka District (approximately. 1:125 000) reflects many small elongated areas of marsh and wetland. These areas are lowlands often adjacent to hummocky outcrops of bedrock, till, and glaciolacustrine deposits. The ARDA Land Classification Map[6] (1:250 000), however, shows very few deposits of "organic soil" in the District of Muskoka. The primary reason for this apparent discrepancy between the two map sources, is likely the mapping scale used for the ARDA Map[6] The scale is only half as large as the scale used for the Composite Map[11] and areas of "organic soils"(muck soils) would have been too small at that scale to map accurately. In general, given the present data, there appears to be little

correlation between these identified organic soils and known farms in the District of Muskoka.



## Further Land Analysis and Niche Farming

Studies to link consistent crop yields with field data derived from remote sensing technology is being undertaken.[25] At present the study is very much an " academic" problem. Long term outcomes may, however, allow remote sensing to be used to predict areas where specialized crops might grow.

## Soil Capability for Agriculture

The ARDA Land Classification System for Agriculture (1967)[6,7] clearly shows that the majority of the land area in Muskoka is Class 7 and has no capability for arable agriculture or permanent pasture. Zones of land ranging from Class 4 to Class 6, are interspersed throughout the field area, notably around the towns of Bracebridge and Huntsville, south and southeast of Sparrow Lake in the vicinity of Severn Bridge.

The agricultural practices suggested by the ARDA Land Use Classification[6] range from cropping where specific crop production will be limited by "ease of tillage, crop choice, and conservation practices (Class 4)" to soils "capable only of forage crops" (Class 6). Owing to the scale used to reflect the classification (1:50 000) it is possible that anomalies in both soil capability and topographic advantage may exist in the areas of land classification described above (Classes 4 to 6). Future field work at a much lower scale, e.g. (1:10 000) may divulge specific pockets of land where the agricultural potential for certain specialized crops is much more favourable than the present classification denotes.

**Class 5 land near Roxborough Road, east of Bracebridge, used for forage crops**

## Current Crop Practices

The collection of data on current crop practices in District of Muskoka was not attempted. Current information regarding crop production is unavailable from District records. Systematic fieldwork would, in the future, provide the most reliable data on specific cropping practices. With this information available, it would be possible to check cropping practices with land classification. Currently there is no soil survey for the District of Muskoka. A comparison of land classification with cropping practices may suggest some degree of predictability of reliable crops to be planted on certain soil classes.

Land satellite imagery (LAND SAT 7- resolution 30 meters square) and air photographs (1976) were used to check land use activity for land classified from Class 4 to 6 (ARDA) and for zones of "Cleared Land " in the Bracebridge and Huntsville areas. This imagery confirmed farming practices consistent with foraging and/or grazing of livestock.

## Correlation of Map Information with Air Photos[11] and LAND SAT 7 Images[29]

Air photographs flown in late April to early May of 1976, were used to check the accuracy of the location of zones of "agricultural potential" and areas of "cleared land", against the District of Muskoka- Schedule B Maps[2]. The photograph check confirmed the accuracy of this information, which was subsequently used to produce a working map overlain on the District's Base Map[1]. In some cases, farm "out buildings" (barns, sheds, silos), present in the photograph were not indicated in the legend designation of the Base Map[1]. Similarly, land which appeared vacant in the air photograph had a farm residence registered in the present District Base Map[1]. These differences between the air photograph and the Base Map information are not surprising considering that the photographs are 26 years old.

## Field Work Check

Visual field checks were done in the southern part of the District of Muskoka. The areas covered included, Severn Bridge northeast to Barkway and Vankoughnet, Gravenhurst and areas west and northwest, to the Fraserburg Road and Rocksborough Road east of Bracebridge, and the tracks of land immediately to the west of Bracebridge. The visual sitings confirmed that the predominant farming practice was forage crops and grazing for cattle. This evaluation is consistent with the suggestions from the ARDA land classification of Class 4 to 6, which predominates in the District of Muskoka.

**Figure 1 Class 4 land near Sparrow Lake, used for grazing and forage crops**

## Correlation of "Cleared Land" with Grass and Meadow Areas[12B]

Much of the Grass and Meadow area data was established in 1982. The criteria for this class rejected areas of "Cleared Land" which had any type of tree or shrub development.[31] For this reason, it is understandable that some of the areas of Muskoka Maps[2] did not show up as grass and meadow polygons, or showed up as smaller polygons in the general area of the "Cleared Land" polygon. In general, however, this comparison confirmed the presence of the majority of "Cleared Land" polygons which are designated in the map that accompanies this report and the original District of Muskoka Resource Potential Maps[2].

## Map Scale and Niche Farming

Agricultural information transferred to the Muskoka District Base Map[1] from ARDA Land Classification Maps[6] and the Soil Capability Topographic Sheets[7]is too generalized to make any prediction regarding the suitability of a particular farm, (or portion of a farm) for "niche farming." Analysis of a particular area for specialized crops could only occur if actual fieldwork were done. Criteria such as clay content of soil, presence of a small body of water, or sheltering from a predominant wind by an adjacent forest might be factors to consider in such fieldwork.

## Crops and Climate Information

The southern area of the District of Muskoka on average receives between 2300-2500 crops heat units per season, while the northern half of the District receives 2100-2300 crop heat units[15]. As a result, frost susceptible crops such as greenbeans, lima beans, strawberries, cucumbers, peppers, squash, pumpkins, tomatoes and sweet corn would be considered to have only a "fair" chance of reaching maturity during the growing season[23].

Frost tolerant crops such as carrots, late potatoes, faba beans, asparagus, beets, broccoli, brussel sprouts, cabbage, cauliflower, celery, ginseng, onion, parsnip, peas, radishes, rhubarb, spinach, sugar beets, and turnip would have a "good" chance of reaching maturity.

Crop heat unit zones cover large areas. Within a certain zone, e.g. 2300-2500 units, it is possible that local climate anomalies could result in small areas receiving higher accumulated crop heat units. These areas would be more favourable for growing a variety of the crops noted above. Over the next twenty years, there may be a shift in the boundaries of the heat unit zones southward if

the average daily temperature over the growing season rises in response to the effect of global warming. A rise in the average daily temperature could make the growing of frost susceptible crops more reliable.

## Canada Land Inventory

Agricultural potential has been designated on the District of Muskoka Preliminary Map #1 (enclosed with this report). Although the soil survey work and subsequent land capability classification for agriculture was done forty years ago (1961), the suggested uses and limitations linked to each class are still highly relevant today. A shortened version of potential and limitations for agricultural use is contained in the map legend. The user of the enclosed map is directed to refer to The Canada Land Inventory Report[7] for a detailed explanation of: (1) capability class, and (2) capability subclass. It is important to realize that the classification is "an inventory of agricultural soil resources and not a guide for the most profitable land use".

## Soil Capability Classification[7]

Soil capability for agricultural purposes are interpretive groupings developed from soil-mapping units.* Mineral soils are grouped into "seven classes according to their potentials and limitations for agricultural use." The first three classes are capable of sustained production of common cultivated crops, while the fourth is marginal. The fifth class is capable of use only for permanent pasture and hay, while the sixth is capable for use only as wild pasture. The seventh class includes rock outcrops, small unmappable bodies of water, and soils unsuitable for arable agriculture or permanent pasture. Crops that require little or no cultivation such as; trees, fruit trees, cranberries, blueberries and ornamental plants are not considered as cultivated or common field crops.

*The location of the original soil survey data used to develop land classification groupings for Muskoka was unknown at the time of the publication of this report.[31]

## Assumptions for Using The Classification System[7]

The soil capability classification is based upon seven assumptions:

1) The classification is interpretive based upon the combinations of soil climate and characteristics, limitations in the use of the soils for agriculture, and general productive capacity for common field crops.

2) Good soil management is based upon feasible and practical uses of mechanized systems.

3) Many different kinds of soils may be included in each class, however, these different soils may need unlike management and treatment. Subclass provides information on the kind of limitation (topography, stoniness, etc.), while class gives information on the intensity of the limitation.

4) Soils considered feasible for improvement (within present day economic possibility for the farmer), are classified according to their continuing limitations after improvements have been made.

5) The capability classification of soils in an area may be permanently changed where major reclamation occurs.

6) Capability groups are not based upon distance to market, farm size and location, or the skill or resources of individual farmers.

7) Capability groupings may change as new information about soil behaviour and responses becomes available.

# Recommendations

Within the District of Muskoka, groups engaged in future land use planning and/or research initiatives may wish to consider the following:

1) All map information contained in this current study was based on original data presented at a (1:50 000) scale. Confirmation of information at a more intense scale, e.g.: (1:5 000) should be checked with fieldwork.

2) Most of the areas of "Agricultural Potential" in the District of Muskoka are within Classes 4-7, which specify increasing limitations on the cultivation of traditional field crops. The mapping scale used (1: 50 000) is too small to predict areas suitable for new specialized crops. Future initiatives to establish new crops can utilize the map information as a starting point only. Field work on a more detailed scale which examines the present subclass criteria, will be required to enhance predictability of crop success.

3) Current mapping information on "land capability classes" and "cleared land" should be geo-referenced for future comparison with up-to-date air photo and satellite imagery.

4) A future map integrating farm property information, identifying areas of possible agricultural potential, (Soil Capability Classification), cleared land, and geological surficial deposit information might be useful. Consideration will need to be given to the selection of an appropriate legend to ensure clarity of the four types of information listed.

5) Areas of "cleared land" registered on the original District of Muskoka Maps need to be quantitatively checked using up-to-date images (taken within the last two years) of the areas in question, to determine if non-agricultural land uses have supplanted potential farming possibilities. Three sources of imaging seem relevant:
   (1) air photographs,
   (2) satellite images having at least a (5m x 5m) resolution with false colour imagery to determine existing surface cover (e.g.: ploughed field, grassland, deciduous forest), and
   (3) grass and meadow land polygons (already stored digitally with MNR.)

6) Information on specific land development (construction, resource utilizations) should be reviewed and researched within the District of Muskoka and the Ministry of Natural Resources to determine if there are sources of information (recent air photos, soil profiles, engineering reports, environmental reports) for specific areas which exist. Information of this nature, even if it does not cover the entire District of Muskoka could be useful in supporting or refutting existing agricultural land classification.

7) Comprehensive information on crop heat units for the Muskoka region, and appropriate field, vegetable, and fruit crops should be gathered and studied with a view to developing a list of crops which can be successfully grown within the District of Muskoka.

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## Oral Communication

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20) Mr, David Bray, Soils and Land Use Specialist, Ontario Ministry of Agriculture, Food and Rural Affaires. 1 Stone Road, Guelph, Ontario.

21) Judy Brouse, Director of Long Range Planning, The District Municipality of Muskoka, 70 Pine Street, Bracebridge, Ontario. P1l 1N3.

22) Mr. Jim Clubine, Automated Design Systems. 49 Morrow Road, Unit 12, Barrie, Ontario. L4N 3V8.

23) Dr. Terry Gillespie, Department of Land Resource Science-Agrometeorology, University of Guelph, Guelph ,Ontario.

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26) Phyllis Ingram, Winnington-Ingram & Associates, Community Planner and Project Co-ordinator. 27 Aubrey St., Bracebridge, Ontario. P1L 1L9.

27) Marty Martelle, Gis Analyst/Forestry Consultant, MITIG Forestry Services, Parry Sound, Ontario.

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29) Mr. David White, Remote Sensing Specialist, Ontario Ministry of Natural Resources, 300 Water Street, Peterborough, Ontario.

30) Mr. Mike White, Forestry Information and Mapping Specialist, Ontario Ministry of Natural Resources, RR#2, High Falls Road, Bracebridge, Ontario. P1L 1W9.

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# Appendix I



## A Brief Geological History of the Muskoka and Parry Sound Region

The oldest rocks in the area are dated at 1.5 billions years. Volcanic and plutonic processes were most active from 1.5 billions years to about 570 millions years ago. During this time mountain building produced a topography not unlike the present day Rocky Mountains. The granite gneiss which predominates today in many rock outcrops was formed from previously formed rocks. Much evidence from the last mountain building period- The Grenville Orogeny can be seen today in the form of dikes of pegmatite and folded anticlines and synclines near Skeleton Lake. Between 1 billion-550 million years numerous large earthquakes resulted in the formation of the Ottawa Valley and left the rock systems in Muskoka and Parry Sound fractured and faulted. Coincident with these events, the forces of erosion wore down the mountains to a flat plateau.

Between 550-50 million years, Southern Ontario including Muskoka and Parry Sound was flooded by inland seas. These seas laid out thick layers of sediments which over time became limestone. Many outcroppings of this rock are visible today, e.g. Kingston, areas immediately south of Muskoka in Simcoe and Victorian Counties and areas to the northern boundaries of Algonquin Park.

A period of uplifting around 50 million years formed the Algonquin Arch which contributed to the formation of the Haliburton Highlands to the east of Muskoka and more faulting within the Muskoka-Parry Sound area. Erosional processes eventually removed almost all of the limestone cap which had formed during the period of flooding.

During the last 11 million years, there have been four major periods of glaciation which covered the Muskoka region with up to 1.5 km of ice. The glaciers scraped away much of the overburden from the bedrock and reshaped the hills leaving rounded faces on north slopes and fractured and more angular features on the southern faces.

The last glaciation, the Wisconsin, retreated about 10 000 years ago. Much of the existing overburden and soil was removed, but as the glacier melted, vast amounts of sand, silt, and gravel were deposited. The melt waters formed Lake Algonquin which covered most of Muskoka and Parry Sound to an elevation of about 335 meters. Clay gradually deposited in low lying areas and along the margines of larger lakes adjacent to Lake Algonquin. The towns of Burk's Falls, Magnetawan, South River, Powassan, and the eastern part of the District of Parry Sound, Gravenhurst, Bracebridge, and Huntsville, and the western area of the District of Muskoka, were gradually covered by these waters.

As the waters of Lake Algonquin receded, wave action eroded most of the overburden leaving bare exposed terraces in uplands east of Trout Creek and south of Burk's Falls. Shallow sand deposits underlain by silts predominate, although some deeper sand and gravel deposits associated with kames and moraines can be found near Trout Creek, Burk's Falls and Parry Sound.

Today, the Districts of Parry Sound and Muskoka can be viewed as a large tilted plain with an elevation in the Georgian Bay area of approximately 150 meters to nearly 460 meters, in Sinclair Township near Algonquin Park. Air photographs and satellite images reveal a landscape of rounded bedrock surfaces, smoothed by the action of glaciation and pock marked by numerous swamps and lakes which were gouged out as the glaciers rode over the land. Many outcrops of elevated bedrock dissect the landscape in a general band running south east from Georgian Bay, to the northwest, and east of Highway 11 to the perimeter of Algonquin Park. The presence of so many lakes and swamps is due in part to the impermeable nature of the bedrock, (largely granite gneiss).

The eastern part of the District of Muskoka is covered with a thin layer of glacial soil (till and glaciofluvial material) while the western areas extending across Parry Sound to Georgian Bay are generally bare owing to the loss of deposits by erosion as Lake Algonquin retreated. These past geological events have generally left both the District's of Muskoka and Parry Sound bereft of economic minerals for mining but relatively well off in terms of aggregate deposits such as sand and gravel, and building stone. The erosion of overburden either by glaciation or water has also left the greater part of the District of Muskoka and Parry Sound devoid of large areas of productive soils. However, in Muskoka, pockets of farmland are found around Gravenhurst, Bracebridge, and Huntsville, and north around Three Mile Lake, northwest of Mary Lake, and Lake Vernon, and south and east of Fairy Lake. In Parry Sound productive farm land is concentrated in the vicinity of Burk's Falls, Magnetawan, Powassan and Nipissing.

## Soil Development in Parry Sound and Muskoka

Much of the landscape in these Districts is dotted with lakes, rivers, wetlands and rock outcrops. Within these areas soils which do occur are generally limited in their productivity, owing to the scarcity of thick parent materials. Some soil anomalies exist .and present the possibility of much more productive agriculture. Thicker soils (Podzols) have developed over sandy glaciofluvial deposits around Bracebridge and intermittently along the route of Highway 11 to Trout Creek. The glacial deposition of silt and clay in small plains east of Sparrow Lake, west of Bracebridge, north and south of Fairy Lake, north of Peninsula Lake and in the

areas of Powassan, and Magnetawan have provided soil parent material on which productive soils have established.

## Establishing a Grid Map Reference for Appendices II and III

A rectangular grid pattern measuring 8cm x 8cm was drawn onto a working copy of the District of Muskoka Base Map[1] and the Composite Map of Surficial Deposits.[11] Grid designation was done with letters A-G horizontally and numbers 1-7 vertically. Grid area A1 was located in the upper left hand corner of each map.

# Co-op gauging farming activity

by Mary-Lyn Tebby

When people think of Muskoka, their minds conjure up images of rocky shorelines on clear lakes and vast forests.

They don't usually see fields of grain or contentedly grazing cattle.

Muskoka isn't usually associated with agriculture as a major industry.

"But there are pockets," said Phyllis Ingram of Muskoka Community Co-operative, "and there are a lot of small producers around, everything from cattle farmers to beekeepers."

Muskoka Community Co-operative, along with the District of Muskoka and the Ontario Ministry of Agriculture and Rural Affairs, is working on a project to gauge the extent of agriculture in Muskoka and southeastern Parry Sound.

"We have been searching for and surveying all the producers we can find in the area to determine just what is available," said Ingram.

"We want to know what is being grown and what value-added products, such as jams, are produced. The second part of the project is a survey of users, retail outlets, hotels, chefs, people who may be the purchasers of these products to see what they are looking for in suppliers."

Jennifer Robinson is the person who is the initial contact person with both producers and retailers. She's been spending time at farmers' markets, going out to farms, talking to chefs, meeting and talking to people about their problems and concerns.

Farmers are very receptive to the project," she said. "They will always talk about what is important to their operation and what they need to make things better. One thing that they have identified is the need for local training on issues such as new government regulations and the use of pesticides. They also want to know about energy sources, alternatives to hydro."

Retailers, hotels and chefs are equally enthusiastic.

"They feel that one of the big positives of this project is that it will quickly identify the producers and products available in the area," she said. "They want to know that, if they decide to purchase locally, what can they get and how reliable is the source."

Robinson has found many different types of farming in the area. There are people growing perennials, garden vegetables, corn, trees, herbs and strawberries and, of course, many maple syrup producers. There are cattle farmers, beekeepers, a trout farm and poultry farms. There are even a couple of very unusual products, such as goats' milk soap and butterflies.

The project will produce a brochure in July with a comprehensive list of all the producers and what they have available.

"The project is giving us a big data base on what agriculture there is here now," said Ingram. "It also identifies areas where there are no or few producers. For instance, are greenhouses a viable option here, could they supply some of the resorts with fresh produce?"

Ingram said that the project is identifying a lot of potential opportunities for both farmers and purchasers.

# Appendix II

## Correlation of land use classes With glacial surficial deposits

** Code for Geological Legend stored in computer base, District of Muskoka.

| LAND USE CLASSES | | | INTEGRATED DEPOSIT MAP | | |
|---|---|---|---|---|---|
| | **Grid** | **Location/Class** | **Deposit** | **Original I.D.**** | **New I.D.**** |
| | | **Lake Vernon / Fairy Lake** | | | |
| 1 | F – 1/2 | North of both lakes<br>• ($4^{P}_{M}$) polygon | - Drift<br>- Till<br>- Glaciofluvial outwash<br>- Glaciolacustrine /deltaic<br><br>- Predominately drift<br>- till, south of Fairy Lake and east of Mary Lake | 2a<br>5b<br>7b<br><br>8a<br><br>2<br>5b | 1197<br>599<br>7<br><br>362<br><br>2377<br>549 |
| 2 | E/F/G – 2/3 | South of Fairy Lake and east and south of Mary Lake<br>• polygon ($4^{F}_{M}$) – large area east of Hwy 11 | - predominately drift<br>- till, only north of Fairy Lake | | |
| 3 | G2 | North of Fairy Lake and Peninsula Lake<br>• polygon ($6^{R}_{D}$) | - glaciolacustrine bordering north shore of Fairy Lake and Peninsula Lake<br>- glaciofluvial<br><br>- drift and glaciolacustrine | 2b<br><br>5b | 880 |
| 4 | E3 | South of Mary Lake<br>• polygon ($3_{F}$) | - glaciofluvial outwash | 9b | 14 |
| | | **Lake of Bays** | | | |
| 5 | F4 | West of southwest section of Lake of Bays<br>• polygon ($4^{F}_{M}$) | - glaciofluvial | 7b | 7 |
| 6 | G4 | South of southwest arm of Lake of Bays<br>• polygon ($4^{F}_{M}$) | - some drift<br>- glaciofluvial<br>- glaciofluvial outwash | 6a | 431 |
| | | **Lake of Bays (cont'd)** | | | |
| 7 | G4 | West of ($4^{F}_{M}$) above, south of southwest arm of Lake of Bays<br>• polygon($6^{F}_{M}$) | - mostly till<br>- some glaciofluvial<br>- core of glaciofluvial outwash for northern polygon | 2b<br>6a<br>7b | 880<br>431<br>7 |
| 8 | G/H, 4/5 | | | 5b | 599 |

| LAND USE CLASSES | | | INTEGRATED DEPOSIT MAP | | |
|---|---|---|---|---|---|
| | Grid | Location/Class | Deposit | Original I.D.** | New I.D.** |
| | | South of Lake of Bays | | 6 | 138 |
| | | • polygons ($4^{F}_{M}$) | | 7 | 711 |
| | | | - coarse glaciolacustrine along Hwy 141 | | |
| | | | - drift | | |
| 9 | E3 | **West of Mary Lake & East of 3 Mile Lake** Extends east-west across Hwy 11, along Hwy 141 | - coarse glaciolacustrine<br>- drift<br>- glaciolacustrine /deltaic | 9 | 359 |
| | | | - predominately glaciolacustrine /deltaic | 2a | 1197 |
| 10 | E3 | • ($4^{F}_{M}$) polygon | - with some drift | 9 | 359 |
| | | | | 2a | 1197 |
| | | West of the previous ($4^{F}_{M}$), extending to east shore of 3 Mile Lake | - drift | 8a | 362 |
| | | | - glaciolacustrine /deltaic along major SW-NE road | | |
| 11 | D3 | • polygon ($5^{6}_{T}3^{4}_{D}$) | | 8a | 362 |
| | | **North of 3 Mile Lake** East of north arm of 3 Mile Lake and north of east arm of 3 Mile Lake | - some outwash fan<br>- some fine glaciolacustrine | 2a | 1197 |
| | | | - mostly glaciolacustrine /deltaic | 2a | 1197 |
| 12 | C/D, 2/3 | • Polygon ($5^{6}_{T}3^{4}_{D}$) | - with some drift | 8a | 359 |
| | | Northwest and west of 3 Mile Lake | | | |
| | | • Polygon ($5^{6}_{T}3^{4}_{D}$) | - predominately glaciolacustrine /deltaic | 6b<br>9b | 162<br>14 |
| | | | - with some drift | | |
| 13 | C/D, 2 | | - predominately glaciolacustrine /deltaic | 8a | 362 |
| | | East of Lake Rosseau and south of Hwy 141 | - with some drift | | |
| | | • Polygon ($6^{R}_{D}$) | - predominately glaciolacustrine /deltaic | 2b | 880 |
| 14 | D3 | **East of Lake Muskoka and S. of 3 Mile Lake** Directly south of 3 Mile Lake | - with drift bordering<br>- some swamp/muck | 8a | 362 |
| | | • Polygon ($6^{R}_{D}$) | - glaciolacustrine /deltaic<br>- with some drift | 2a | 1197 |
| 15 | D3 | | - some outwash fan | 8a | 362 |
| | | Southeast of previous above – halfway between Hwy 47 and Hwy 141 | - predominately drift<br>- with some outwash fan | 2a | 1197 |
| 16 | D4 | • Polygon ($6^{R}_{D}$) | | 8a | 362 |
| | | Dissected by Hwy 47 | - mostly drift<br>- some fine glaciolacustrine | 2a | 1197 |

| LAND USE CLASSES | | | INTEGRATED DEPOSIT MAP | | |
|---|---|---|---|---|---|
| | **Grid** | **Location/Class** | **Deposit** | **Original I.D.**** | **New I.D.**** |
| | | • Polygon ($6^{R}_{D}$) | | 2c | 8087 |
| | | | - predominately drift | | |
| 17 | Border C/D, 3/4 | | | 8a | 362 |
| | | | - drift | 2a | 1197 |
| | | West of ($6^{R}_{D}$) above and east of Lake Muskoka | - glaciolacustrine | 6b | 162 |
| 18 | D4 | • Polygon ($4^{F}_{M}$) | - drift | 2a | 1197 |
| | | | - with some fine glaciolacustrine | 6b | 162 |
| | | South of ($4^{F}_{M}$) above | | | |
| | | • Polygon ($5^{6}_{T}3^{4}_{D}$), | | | |
| 19 | D4 | | | 2b | 880 |
| | | | | 9b | 14 |
| | | **East of Lake Muskoka and West of Bracebridge** | - fine glaciolacustrine silt | | |
| 20 | D4 | Northwest of Bracebridge | | 2b | 880 |
| | | • Polygon ($4^{F}_{M}$) | - predominately fine sand glaciolacustrine | 2b | 880 |
| 21 | | | - with an area east of Hwy 11 being outwash fan | 9b | 143 |
| | | Directly south of previous | | 2b | 880 |
| 22 | D4 | • Polygon ($4^{F}_{M}$) | - some patches of drift | 9b | 14 |
| | | East of Lake Muskoka | | | |
| | | • Polygon ($3^{F}$) | - drift<br>- some coarse glaciolacustrine | | |
| | | East of Lake Muskoka | | | |
| | | • Polygon ($5^{6}_{T}3^{4}_{D}$) | - coarse glaciolacustrine | | |
| 23 | D5 | | - outwash fan<br>- drift | 9c | 880 |
| | | **East of Lake Muskoka and West of Bracebridge (cont'd)** | - fine silt/sand glaciolacustrine | | |
| 24 | D/E, 4/5 | South of Muskoka Road at mouth to Lake Muskoka | - drift | 9b | 14 |
| | | • Polygon ($5^{6}_{T}3^{4}_{D}$) | | 6b | 162 |
| | | | - outwash fan<br>- some drift | | |
| | | Large polygon ($5^{T}_{M}$) which surrounds Bracebridge and extends both north and south | - some fine sand, glaciolacustrine | 2b | 880 |
| 25 | E4 | | | 2b | 880 |
| | | | | 9 | 359 |
| 26 | D/E, 5 | | | 9 | 359 |
| | | North of Hwy 117E and east of Hwy 11, | | 6b | 162 |
| | | • Polygon ($5^{6}_{T}3^{4}_{D}$) | | 2b | 880 |

| LAND USE CLASSES | | | INTEGRATED DEPOSIT MAP | | |
|---|---|---|---|---|---|
| | **Grid** | **Location/Class** | **Deposit** | **Original I.D.**** | **New I.D.**** |
| 27 | D5 | • Dissected by Hwy 118E and Hwy 11 North<br>• Polygon ($4^{F}_{M}$) | - predominately drift<br>- some outwash fan<br>- fine glaciolacustrine<br>- drift | 9c<br><br>2b | 880<br><br>880 |
| 28 | D5 | Southeast of junction of Hwy 11 North and 118 East.<br>• Polygon ($4^{F}_{M}$) | - fine glaciolacustrine<br>- only drift | 6b<br>2b | 162<br>880 |
| | | Southeastern margin of Lake Muskoka – north of Gravenhurst<br>• Polygon ($4^{F}_{M}$) | - glaciolacustrine /deltaic<br>- drift<br>- fine glaciolacustrine<br>- drift | | |
| 29 | E, 6/7 | | | 2a<br>6b<br>9c | 1197<br>162<br>15 |
| 30 | D7 | **East of Kashe Lake**<br>East of Kashe Lake<br>• Polygon ($4^{F}_{M}$) | | 2a<br>9c | 1197<br>151 |
| 31 | D7 | Southern border of map boundary<br>• Polygon (2D) | | 2a | 1197 |
| 32 | C7 | • Polygons (5W) & (3F) | | 8a<br><br>2b<br>9b | 362<br><br>880<br>14 |
| 33 | | **East of & Southeast of Sparrow Lake**<br>• Polygon ($4^{F}_{M}$) | | 2b | 880 |
| | | Southern border of maps – due south of Sparrow Lake.<br>• Polygon ($3^{F}_{M}$) | | | |

# Appendix III

## Correlation of "cleared land" polygons
## *From muskoka district maps[2]*
## *With "grass and meadow" areas*
## *In forestry resource inventory[12b]*

| District of Muskoka – Agriculture Cleared Land | | | Forestry Resource Inventory Grass & Meadows >20 ha. |
|---|---|---|---|
| | **Grid** | **Location** | |
| | | **Fairy Lake** | |
| 1. | F2 | Southern border within ($4^{F}_{M}$) polygon | - No area present. |
| 2. | G2 | 2 distinct polygons | - Area east of these polygons in southeast section |
| 3. | G2 | Eastern border within ($4^{F}_{M}$)<br>• 2 small distinct polygons between Fairy and Peninsula Lakes | - confirmed |
| 4. | G2 | 1 large polygon adjacent to eastern border | - not present |
| 5. | F2 | Northeast of Huntsville within ($4^{P}_{M}$) | - confirmed |
| 6. | F2 | • not on base map<br>• not on base map | - 3 areas north of Fairy Lake<br>- 1 area NE of Fairy Lake |
| 7. | G2 | 1 polygon, south of Hwy 60 | - not present |
| 8. | | north of Fairy Lake in ($6^{R}_{D}$) | - not present |
| 9. & 10. | F2<br>F3 | 2 polygons directly south of Huntsville, northeast of Mary Lake & west of Hwy 2 within ($4^{F}_{M}$) | - present, but not as large or extensive |
| | | **Mary Lake** | |
| 11 & 12. | E2&3<br>F2&3 | 3 large polygons northwest of lake with 2 east of Hwy 11 and 1 cut by Hwy 11 | - numerous small areas consistent with cleared land polygon closest to Mary Lake<br>- no evidence of most northern polygon<br>- several small areas in location of most eastern polygon<br>- confirmed by 4 scattered polygons in |

| District of Muskoka – Agriculture Cleared Land | | | Forestry Resource Inventory Grass & Meadows >20 ha. |
|---|---|---|---|
| | **Grid** | **Location** | |
| | | | same area |
| 13. | E3 | 1 polygon west of southern part of Mary Lake adjacent to Hwy 11 and north of ($4^{F}_{M}$) | - numerous scattered, smaller polygons in described area confirmed |
| 14 & 15. | E3 F3 | 7 polygons south of Mary Lake in ($4^{F}_{M}$) with northern 2 being the largest | - numerous small scattered polygons with larger polygon area, smaller one confirmed |
| | | **<u>Lake Vernon</u>** | |
| 16. | F2 | 2 polygons north and east in ($4^{P}_{M}$) | - 4 distinct polygons in vicinity of sourthern one on basemap |
| | | | - 4 distinct polygons in ($7^{R}_{F}$) area |
| 17 & 18. | F1 F2 | 2 polygons directly north of Huntsville | - 1 small polygon in ($4^{P}_{M}$) area |
| 19 & 20. | E1&2 F1 | 5 polygons in a southwest to northeast row, northwest in ($7^{R}_{F}$) with northern one in ($4^{P}_{M}$) | - 3 smaller ones in same area – confirmed<br>- 3 polygons in described area – confirmed |
| 21. | G2 | **<u>Peninsula Lake</u>** 3 polygons northeast border within or adjacent to ($6^{R}_{D}$) | - confirmed, same size |
| 22. | H2 | 1 polygon east of lake and adjacent to Hwy 35 | - numerous other small polygons within the ($6^{R}_{D}$) area north of Peninsula Lake |
| 23. | G2 | 1 large polygon in northeast part of peninsula – north shore on southward jutting peninsula | - numerous scattered polygons, none having the size suggested by the “cleared area” on base map |
| 24. | | not present as a large polygon | - many small groupings of polygons in same area confirmed |
| 25. | D3 | **<u>3 Mile Lake / Skeleton Lake</u>** | |
| 26. & 27. | C3 partial D3 C4, D4 | large polygon south of central area of 3 Mile Lake within ($6^{R}_{D}$) with Hwy 4 running east-west through centre | - confirmed<br>- polygons west of 3 Mile Lake confirmed, but the large area within ($5^{6}_{T}\,7^{4}_{P}$) does not show up |
| 28. | D3, 4 | 5 polygons within ($6^{R}_{D}$), west of Hwy 4, adjacent to major east-west concession road and east of Lake Muskoka | - (at least) 18 smaller polygons within the designated area |
| 29. | C2, 3 partial D2, 3 | | |

| | District of Muskoka – Agriculture Cleared Land | | Forestry Resource Inventory Grass & Meadows >20 ha. |
|---|---|---|---|
| | **Grid** | **Location** | |
| 30. | D3 | 1 polygon adjacent to Hwy 4, south of large ($6^{R}_{D}$) polygon | - confirmed |
| 31. | C/D 3/4 | 2 polygons, west of 3 Mile Lake and east of Lake Rosseau and running north of 3 Mile Lake<br>large cleared area within ($5^{6}_{T}3^{4}_{P}$) northeast of 3 Mile Lake and south of Skeleton | - confirmed<br>- confirmed |
| 32. | C2, D1 | Lake Hwy 141 runs through the centre<br>1 large polygon within ($4^{F}_{M}$) east of Lake Muskoka, Hwy 47 runs through the middle<br>2 polygons northwest of Skeleton Lake, one north of Hwy 3 and the other south of Hwy 3 | - smaller areas of polygons confirm location – but size is much smaller than indicated on base map |
| 33. | D4 | | - several small patches but not nearly as extensive as indicated on the base map<br>- does not show, however, smaller areas closer to southwest area of Bracebridge are evident |
| 34. | D4 | **<u>West Bracebridge</u>**<br>2 small polygons, northeast shore of Lake Muskoka, | - do not show up |
| 35. | D5 | Hwy 118 runs through within or adjacent to ($4^{F}_{M}$), northwest of Bracebridge | - scattered polygons in same area confirm presence |
| 36. | D5 | 1 large area extending from northeast shore Lake Muskoka to halfway to Hwy 4 | |
| 37. | E5 | large area adjacent to Muskoka Road within ($5^{6}_{T}3^{4}_{D}$) | - confirmed by a small cluster of polygons |
| 38. | E5 | polygons south of Muskoka Road just east of Lake Muskoka within ($5^{6}_{T}3^{4}_{D}$)<br>**<u>East Bracebridge</u>** | - confirmed |

| | District of Muskoka – Agriculture Cleared Land | | Forestry Resource Inventory Grass & Meadows >20 ha. |
|---|---|---|---|
| | **Grid** | **Location** | |
| 39. | E4 | 5 polygons (4 east of Hwy 11 and 1 west of Hwy 11) – just east of Bracebridge – Hwy 14 runs through the group of them | |
| | | 2 polygons along Roxborough Road south of Hwy 14 and east of Bracebridge | - not present |
| 40. | D5 | 1 polygon within ($5^{6}_{T}\,3^{4}_{D}$) north of Hwy 117E and east of Hwy 11 | - several polygons along Hwy 118 – not found on District Base Map<br>- numerous small areas south of Hwy 118 and east of Gravenhurst which do not show on District Map |
| 41. | E/F/G 5/6 | | - confirmed |
| 42. | D/E/F, 6 | | |
| 43. | D5 | **East of Gravenhurst**<br>1 polygon east of Hwy 11 and south of the large ($4^{F}_{M}$) polygon and Hwy 118<br>not present | - small polygons scattered within designated region but not nearly as extensive as on base map<br>- confirmed |
| 44. | E 6/7 | not present | - confirmed |
| 45. | E7 | | - small on confirmed<br>- very small areas verify location but are not nearly as extensive as indicated on base map |
| 46. | D7 | 4 polygons east of Lake Muskoka and west of Hwy 11 | |
| 47. | C7 | **Northeast of Kashe Lake**<br>10 polygons within ($4^{F}_{M}$) of varying size | |
| | | 2 polygons, east of Hwy 6 north of Riley Lake | |
| | | **Sparrow Lake**<br>1 polygon on southern map border in ($2_{D}$) | |

| District of Muskoka – Agriculture Cleared Land | | | Forestry Resource Inventory Grass & Meadows >20 ha. |
|---|---|---|---|
| | **Grid** | **Location** | |
| | | 4-3 larger polygon and 1 small southeast of Sparrow Lake – 3 large within ($4^{F}_{M}$) and small in ($3^{F}_{M}$) | |

**Penny Britnell**

**Catch the Wind Farm**

# Mapping Of Agricultural Potential In Parry Sound

## Field Area

The field area for Parry Sound as identified from the electoral map of the region includes the area bounded by Georgian Bay on the west, Nickel Belt and Temiskaming-Cochrane on the north, the District of Nipissing on the east and the District of Muskoka on the south.

## Final Product

A map showing agricultural potential using the Canada Land Inventory Classification System and Soil Classification for Eastern Parry Sound is about 80% complete. This map, when finished, will show areas of agricultural potential, classified from classes (2 to 7 )on a base map having a scale of (1:200 000)[5,7]. A description of the criteria and limitations for agricultural production, for each land class will be included in the map's legend. In addition, the map will include soil classification information regarding soils which have developed on different glacial parent materials, including, glacial till, outwash, and lacustrine (wind borne) deposits, as well as, organic deposits and soil complexes(soils which have developed on two or more types of parent material). The map legend will list each soil type by name. Specific characteristics for each soil type will be found in the original report - Soil Survey of Parry Sound District (Report # 31 of the Ontario Soil Survey)[4].

A report will be included with the map which will suggest uses and limitations of the mapping information.

## Research Methodology

The information used to compile the map on agricultural potential (in progress), is secondary and based on two previous reports and original map sources. [1,2,3,4]. A base map having a scale of (1:200 000) was obtained from the Ministry of Natural Resources in Bracebridge [5,7]. This map was scanned and geo - referenced using "northing and easting" co-ordinates[6]. Land use classification polygons were traced onto vellum from copies of original soils information contained on topographical maps (scale 1:50 000) [3]. In addition, a soils map of Eastern Parry Sound [4]was scanned. The vellum sheets, containing the land use classification polygons and the soils map were referenced to the District base map using " northing and easting" co-ordinates. The process of digitizing[6] each soil polygon from the land classification information is complete. About 20% of the soil polygons for the soil survey sheet remain to be digitized. Codes for all soil polygons and legend text for the land use classification classes and for the soil survey classes must still be added to the map.

## Bibliography and Map Resources

Soil Capability for Agriculture – Canada Land Inventory. Scale: 1:250 000 ARDA Huntsville-31E and, sheet ( 1967 ).

The Canada Land Inventory, Report No. 2-1965 ( Reprinted-1969,1972) Soil Capability Classification for Agriculture. Department of the Environment.

Soil Capability for Agriculture Originally documented on Topographic sheets. - Scale 1: 50 000. Seguin Falls ACR31E/05, Burk's Falls ACR 31E/11, Magnetawan ACR31E/12, Golden Valley ACR31E/13.

Soil Survey of Parry Sound District –Report No. 31 of the Ontario Soil Survey. Canada Department of Agriculture and the Ontario Agriculture College. ( February 1962. ) D.W. Hoffman, R.E. Wicklund, and N.R. Richards.

District of Parry Sound Ministry of Natural Resources GI S. Base Map (1: 200 000 )

## Oral Communication

Mr. Jim Clubine, Automated Design Systems. 49 Morrow Road, Unit 12, Barrie, Ontario. L4N 3V8.

Mr. Mike White, Forestry Information and Mapping Specialist, Ontario Ministry of Natural Resources, RR#2, High Falls Road, Bracebridge, Ontario. P1L 1W9.

Brad Hilliard - October 21,2002.

# Market Report

# Market Report



*This market report is a summary of findings and has been designed for project participants and local interested parties. It utilizes and compliments the information presented in the three previous sections and is the result of numerous interviews with the various stakeholders.*

*The objective is to identify practical, cost efficient methods of marketing local produce and micro-processed foods in the immediate region.*

*External marketing opportunities were explored, but although a few producers do serve the larger urban area, as a region current limited capacity would necessitate expansion of produce, and/or products, and presents demands and marketing costs which appear unrealistic.*

An overwhelming majority of participants expressed positive enthusiasm for individual and/or group marketing opportunities. Farmers closer to retirement and those satisfied with their sales were not interested in participating in such ventures.

## Statistical Information

Local statistical market information to assist in the development of a strong market, or business, plan was surprising difficult to collect. However we were able to identify special reports from *Statistics Canada*.

The statistical information provided below focused on the District of Muskoka. Unfortunately, micro information on SE Parry Sound was unavailable. When this information does become accessible the same statistical calculations can be made to identify gross food purchases by households and gross market receipts by farmers.

Limitations were presented due to statistics lacking the inclusion of:

- Seasonal residents (*Muskoka Tourism* estimates three-fold increase)
- Food sales for drive-through or short term tourists (2.1 million – *Muskoka Tourism*)
- Gross food retail sales for our region (*Statistics Canada* has stated these results are confidential due to sample size)

## Household Food Expenditures

The survey of household food expenditures included Muskoka District in the survey. Since *Statistics Canada* stated that, due to lack of data for Muskoka District, their information could not be released in order to protect confidentiality, we used the provincial average for household food expenditures: $6,709 per household, 4% higher than the national average of $6,438. Muskoka District reported 20,690 households in the 2001 census, or approximately $138,809,210 in food expenditures.

### Per Capita Consumption of Major Food Groups

This report looks at the average consumption of food from major food groups. Trends such as increased advertisement by health organizations and family doctors to promote certain foods could account for the increase, or decrease, of certain major food items.

Fresh fruit was one of the largest areas of growth within the fruit category, 1990 – 2001 110.7kg to 125kg or 13.6% increase.

Fresh vegetables have also seen an increase in consumption, up 8% or 169.9kg to 183.4 kg over the same time period.

Cheese virtually stayed the same while other products such as yogurt have increased by 14.3%.

Red meat has decreased slightly by 2.2% or 64.3 km to 62.9 km, while poultry has increased from 28.1 kg to 36.2 kg or 29%. Fish consumption has shown a slight increase from 9 kg to 9.6 kg or 6.6%.

## Marketing Opportunities/Challenges

### Regional

Partnerships and/or collaborations, whether formal or informal, are the backbone of agriculture retail in regions such as ours. Many smaller retailers, local chefs, cottagers and year round residents have created informal, personal relationships with local farmers and/or micro-producers either through 'word of mouth', community bulletin boards, local farming associations or farmers markets.

Local Branding

Local branding received overwhelming support as a marketing tool by retailers and resorts/restaurants. To be successful, it would need to be championed by a strong, representative organization and supported by local district and municipal councils.

In the recent past, OMAF provided funding through a program under Foodland Ontario known as the "Shared Cost Program" (SCP). The SCP helped a large number of counties across the province to establish Farm Gate Sales Associations (FGSAs).

The SCP provided matching funds (50-50) to assist associations to market local produce directly to the consumer. Typically a county organization consisting of farmers who were willing to market their produce directly to consumers from their farm was established. Most FGSAs required participants to pay a membership fee which was used to access funds from the SCP. They created a brochure listing all of the members and products offered to the consumer and distributed these brochures throughout the community at health food stores, Chambers of Commerce, tourism offices and doctor and health practioner's offices.

Locally the Peterborough Farm Gate Sales Association pulled together 24 such farmers in their first year and printed 7000 brochures. Two years later their membership grew to



31 members and they printed another 10,000 brochures. The PFGSA issued press releases as the market seasons progressed to help members introduce the season to consumers (i.e. to remind consumers “strawberries” are ripening); held press tours to various farms, conducted market surveys, provided signs for each member to identify their farm (these were very popular) and participated at different community events in an effort to create awareness.

The PFGSA ran strong until year five when they needed to reprint the next set of brochures. Unfortunately without the matching funds, they were forced to increase membership fees and lost numbers. By year seven, they lost some of their champions due to health and personal reasons and have now faded.

The SCP created similar FGSAs in Renfrew, Leeds, Prince Edward, Trent Valley, Northumberland, Hastings, Durham, York, plus a host of other areas across western Ontario. In some cases like in Durham Region, the FGSA has prospered due the financial support from the Region. Durham,still has one of the very best FGSAs in the province, has a regional marketing program and signage program to help consumers recognize participating farms. The municipality greatly assists the association with their road sign policy. Rather than refusing to allow signage they compromised by allowing the FGSA signs to be posted on existing road signs.

Other local initiatives include:

- Huron County - Huron Harvest Trail (for more info see www.hurontourism.on.ca and follow the links to Huron Harvest Trail).
- Halton Region has a project in the works.
- Waterloo Region’s project received funding from CanAdapt.
- Prince Edward County’s project is known as "Taste of the County."

Annual Regional Conference

An annual regional conference was identified as a potential opportunity to bring together farmers, micro-processors, markets, chefs and businesses for various informational workshops, promotion of collective collaborations and marketing opportunities and a chance to showcase regional products, innovative specialities and new business ventures.

Such a conference could happen in late fall or mid-winter and be a collaborative effort between Muskoka Soils and Crops, local agricultural societies, farmers markets, OFA, resorts and the appropriate government funding agencies. It has been proposed that the broader community be invited to attend an evening marketplace, promoting regional cuisine, farmers markets, farm produce and micro-processed foods.

The challenge of such an event is to identify a lead body to take on the demanding work of identifying funding and organizing the event, especially in year 1. A potential target date for 2003 could be November, depending on the ability of the organizing group to aggregate partners and resources.

Collective Wholesale Business

In speaking with a number of farmers and local businesses, there was strong support for a local collective (or co-operative) wholesale business that would promote regional products and/or produce.

From a large retail perspective, retailers would purchase only from wholesalers eliminating interfacing directly with individual producers. Buying a wider range of items with only one invoice was attractive to many.

Speaking to a number of farmers, many had mixed feelings. Their concerns included:

1. Time, ability and tools to set up such a business,
2. Level of mark-up necessary to self-sustain and
3. Getting the food to the purchaser,
4. Method of payment and
5. Capacity.

Younger farmers were much more enthusiastic about such a venture, especially those who were focused on growth. Also those producers comfortable with Internet opportunities saw it as a viable opportunity to increase their market share and to ensure that all of the crops grown could be sold, maximizing their profit margin.

Two other alternative methods in achieving the same goal could be:

1. Working through an incorporated farmers market (or a regional association of farmers' markets), thereby enhancing their ability to market with local vendors and/or
2. Promoting the opportunity to local entrepreneurs who may be willing to develop a wholesale business.

Potential technical assistance could be provided through Northern Development and Mines, the Ontario Co-operative Association, Muskoka or Parry Sound Community Futures Development Corporation, the OFA, etc. Also, templates from other communities could be identified, especially from the United States. Based on the input at the regional conference, a working team could be organized to investigate potential options over the fall and winter of 2003/2004.

Muskoka Tourism/Almaguin Highlands Information Centre/Chambers of Commerce

*Farmers' markets and agricultural associations need to increase their visibility through promotional literature with the above organizations. Agriculture and its complimentary components are valuable sectors of local tourism. Fresh, local produce and regional cuisine have long been highlighted as an incentive to visit many regions within Ontario.*

*Market promotion, seasonal opportunities (i.e. maple syrup, strawberry, pumpkin season) and agro-tourism should be an integral component of the local tourism marketing plan. This has been successfully done, provincially, in Nova Scotia where agro-tourism has its own section in the marketing material.*

*General promotion of this sector should be included in the 2003 summer literature. Further detailed information should be made available in the 2004 spring/summer literature and include agro-tourist opportunities throughout the season, farmers' markets (dates and times), website links, resorts and restaurants that locally grown produce.*



## Sector Specific

### Farms

Organics/Free Range

*According to the 2001 census, this region had only one farm registered as being organic, although several identify themselves as such. In speaking to farmers who identify their produce as organic, but are not registered, stated they are limited in their ability to be certified due to the requirements, process and cost, especially since most are small farms. They do state to consumers that they are not registered organic.*

*Through the course of this project, it became apparent that there needed to be another term that would identify a produce as pesticide free, free range, etc or a combination of these terms and standards for using such terms. Through this process there would be a recognition of 'healthy' standards even if a farmer could not meet the full standards of organic. Such 'labeling' would have to include a caveat stating that this produce has not been certified and is based on farmer's self-identification.*

Agro-tourism

As many farmers would tell you, it takes a variety of profit centers, or various jobs, to start or keep a farm in operation. Farming is a way of life, a passion and sometimes just plain stubbornness and tenacity. In brainstorming with various farmers, potential side opportunities were proposed.

Bed and Breakfasts

Bed and breakfasts are continuing to grow as an affordable, pleasant means of accommodation. In traveling across eastern Canadian, many diehard B & Ber's stated they enjoyed staying on farms as it often reminded them of growing up in rural areas and/or visiting relatives that lived on farms.

People often think of a roaring fire, fresh baked goodies and stick-to-your ribs home cooking. Most B & Bs charge $55.00 to $85.00 per night, depending on the accommodations. Many guests, salespeople and people who attend regular meetings in an area, become repeat visitors. For people who require more simple accommodations, at a reduced rate (i.e. between $25.00 to $45.00), hostel accommodations is another option. Both of these types of accommodations have associations that can assist in the development/marketing of this type of business. Additional benefits could be revenue from such complimentary activities such as horseback riding and the sale of micro-processed goods or crafts. Considerations would be zoning requirements, additional insurance and limiting guests interaction with the 'farm', if fear of contamination is a concern.

Food Preparation Classes

To many farm families, food preparation workshops seem foreign as this was an art taught from a very young age. But as Canada becomes more urban centered, with fewer people growing up on farms, a vast majority of people have never made jams, jellies, maple syrup or pickles from scratch and are eager to learn.

Classes or workshops could take place in a church/community center or large grocery store with an industrial kitchen. Another option is to provide workshops in the farm kitchen where learners can assist in making preserves or meals for the farm family - making the work of doing large batches of preserves much quicker and selling the produce required for making the preserves (i.e. fruit, cucumbers, etc) to participants. All of this could be tied into a bed and breakfast weekend special.

Youth or the Young at Heart

Again, with so many people growing up in larger communities, having a chance to live on a farm for a week or two and actually participate in farming activities is something that people will pay for. In the United States, a number of farms utilize this type of 'camp' to assist with various aspects of seasonal farming. This would bring in $200-$300 per week, per person, and an extra set of hands to assist in the farm work. Disadvantages would include training people who have never farmed and insurance considerations.

Day camps

Full day or half day 'farm experiences' is another potential venture that some farms do to create another income stream and to promote the farm. The cost of for such experiences range from $5.00 to $50.00 per person (children are usually at the lower end), depending on amount of time and the activities included. Again insurance and contamination are always a consideration.

Workshops

The variety of specialized workshop is potentially endless and could be done in partnership with other farmers or crafters. Examples include a sheep to sweater workshop, or, an autumn/Halloween decoration class using materials from the farm field.

## Micro-processors

Catalogue

Most micro-processors work independently, distributing to various stores and resorts in the region. Several work as independent vendors within farmers' markets with an average 12-week season.

In Lanark county micro-processors and crafters developed a catalogue and worked in partnership with the board of education. As a fundraiser for the schools it benefited both the educational institutions and the local producer. Likewise, partnerships with other local fundraising organizations could be possible, such as the hockey teams, Big Brothers and Big Sisters, etc.

This type of initiative could be used on a much broader scale promoting local products based on seasons or promoting the 'Muskoka/Parry Sound' recreation area identity. Based on consultation with various micro-processors, there was agreement that there would need to be a champion to organize the group, market the concept, develop the

catalogue and receive and distribute order requests. This person could be paid a percentage for their work, with initial compensation from the group.



## Farmer's Markets

This region has a healthy number of farmers' markets and has seen an increase of two new markets in the last 18 months, Rosseau and Baysville.

2001 was the first season for Rosseau Farmers Market Co-op. At that time they began with 35 vendors, with the majority being crafters, and increased that number to 41 in the 2002 season, with a majority being food vendors.

Regional Marketing Association

Beginning with in 2001 and culminating for the 2002 season, some dedicated individuals representing their market, organized several meetings resulting in their first regional brochure jointly promoting all of the markets. This collaborative effort needs to be expanded in order to better utilize limited resources, share expertise and develop positive relationships among the markets. The collective success of all the markets will support the local economy in each of the communities and limit the unhealthy competitive nature of markets within a small regional area.

Joint Projects with Other Associations

Opportunities for farmers' markets could include developing joint educational and promotional opportunities with Soils and Crops and local agricultural associations. Each group has the same mandate to develop and promote agriculture in our region. By working together, more educational workshops and informational sessions could be provided to current and potential farmers, increasing the health of the agricultural community.

Websites

Websites for farmers' markets is non-existent in this region and a valuable opportunity to enhance seasonal and year-round promotion of vendors. During the season, information on current and upcoming in-season produce could be advertised, recipes highlighted (including canning, pickling and jams), and orders taken from cottagers who may not be able to reach the market early in the day. A website could facilitate the assurance of sufficient stock, guaranteeing sales for farmers.

As well, a website could offer a year-round market for micro-processors and crafters, and provide opportunities for 'virtual' vendors who may not be able to participate in the seasonal market due to other jobs, or their participation in another market, on the same day. A percentage of sales could cover the cost of the website manager and provide revenue for the market. Another option is that vendors pay a monthly fee to be a vendor of a 'website market'. The goals would be to extend the season to year-round sales and to broaden the consumer base, increasing revenue for individual vendors.

Skill Development

Finally, farmers' markets that have a large number of vendors with various products have a strong economic impact on other local businesses. Gravenhurst Farmers' Market Co-op is a wonderful example of vendor participation and diversity. They began over a decade ago and have developed a large consumer base that supports and



compliments other local tourist attractions and retailers. They recently won the award for best seasonal market in Ontario and are working collectively with their community council on a major waterfront development that will include a permanent home for the market. They are very successful at promoting their market with their local Chamber of Commerce and Muskoka Tourism.

Smaller markets in rural locations often struggle to attract the larger venders due to their size, the day of the market and/or location. Markets need to identify gaps within the various sectors of the market and promote opportunities to local residents. Where lack of skill is an issue, but an enthusiastic person is willing to be educated, the market may want to consider training an individual or look at assisting them with opportunities to learn a new skill. Not only would it provide a local community member an additional skill and revenue opportunity, it would assist and strengthen the market by increasing diversity and consumer interest.

## Retailers

Creating a Win/Win Situation

Marketing local produce is a win/win for both retailers and farmers. Tourists and seasonal residents find the appeal of local grown produce worth paying for. They like the idea fresh, locally grown corn rather than corn from Nebraska, something they can easily buy in their own community. Retailers were extremely enthusiastic about the concept of local branding and the marketing opportunities it would provide. Local branding and a local produce wholesale business (for large retailers) could significantly increase the purchase of local produce by regional retailers.

## Resorts/Restaurants

Promoting Locally Produced Ingredients

The chefs interviewed for this project were incredibly aware of the marketing advantages of locally produced ingredients. They are very attuned to the sophisticated pallets interested in local cuisine. Over the last decade, this trend has been successfully marketed in the Niagara region, as well as several smaller communities across Ontario. An opportunity to present local produce and to identify areas of need could happen at the monthly meetings of resort and restaurant chefs. The level of communication between the chefs and producers needs to increase substantially, if both are going to benefit from any partnership opportunities. This communication would need to include each group understanding the needs and limitations of the other. Only through this process can a strong business relationship occur.

Networking/Centralized System

One of the major limitations to resorts and restaurants purchasing from local producers is the lack of a centralized system to market their produce, identify availability and provide easy ordering and payment. Without such a system, chefs have to identify and work with individual producers, who may have limited produce and not be able to produce enough on a regular schedule. A streamline system could substantially increase marketing opportunities for farmers and payments could be C.O.D., recognizing the need for time sensitive revenue for farmers.

## Associations

*Muskoka Soil and Crop is one of the best local marketers for farmers in the region. It has a dedicated membership that is working hard to raise the profile of the agriculture*

*sector in this region. They have a user friendly website that markets local produce and provides valuable information. As a marketing tool, they have a strong future.*

# Resources

# Resources



## *Local Resources*

### The Muskoka Soils and Crops Improvement Association (MSCIA)

MSCIA is a 61 year old association of Muskoka farmers aimed at supporting local agriculture, and encouraging best management practices on farms. MSCIA is a member of the Ontario Soil and Crop Improvement Association (OSCIA) and part of the North Eastern Regio nal Group within OSCIA.

www.muskokafarmfresh.com

### Agricultural Economic Impact Study – Blue Sky Region (Parry Sound Nipissing)

Available by disk through Mattew Collins, NECO Offices in North Bay. The figures in the report are based on the 1996 census and will be updated with 2001 information as it becomes available.

705-476-8822 Ext 211
mcollins@acncanada.net

## *Provincial*

### Christian Farmers of Ontario

The Christian Farmers of Ontario have two goals
*** to enable farmers to work out their Christian faith in their vocations as citizens**
*** to develop policy applications of the Christian faith to agriculture.**

519-837-1620
www.christianfarmers.org

### Innovative Farmers Association of Ontario.

Their vision includes:
The IFAO membership includes highly innovative farmers and supporters of innovation at the technical and funding level.

The IFAO contributes to the betterment of society and agriculture through a number of service activities.
The IFAO functions as a network or resource available to organize demonstrations and exhibits and to provide authoritative speakers, panellists and other services for

contribution.

The IFAO provides representation on committees and organizations with mutual interests.

This is a great site with lots of interesting information. They have an innovative Farmers Conference Feb 18th and 19th , 2003

www.ifao.com

## Ontarbio

This is a co-op of family farms interested in organics.

Andrea Wills
519-767-9694

## Ontario Soil and Crops Improvement Association

The Ontario Soil and Crop Improvement Association (OSCIA), founded in 1939, is a unique non-profit farm organization. The dedicated membership represents virtually all commodity groups across the province and is a credible, active, grassroots voice on agricultural issues.

OSCIA has 55 local county/district branches across the province and is a significant presence in all the major agricultural areas of Ontario.

www.ontariosoilcrop.org

## Organic Crop Improvement Association

ORGANIC Crop Improvement Association (Ontario) Inc. is an organization to provide farmers and farmers in transition the means to establish and maintain standards of production for the organic foods industry in order to promote a sustainable agriculture.

519-696-3544
http://ocia.on.ca

## Rural Online Communications

Welcome to Rural Online Communications, your gateway to rural Ontario! This ***dynamic*** website can help you plan your calendar, discuss your areas of interest, keep up on current issues relevant to rural Ontario, receive news releases and newsletters and locate key people across all sectors of Ontario. We are working to build a

comprehensive resource centre for rural Ontario -- visit us often to see our newest additions to the site.

www.ruralonline.on.ca



### The Ontario Rural Council (TORC)

TORC has convened several rural Working Groups to address issues critical to rural people.

The Working Groups are open to all members and associate members of TORC. Guests are also welcome. Working Groups meet four times a year, however sub-committees may meet more frequently

### Ontario Institute of Agrologists

The Ontario Institute of Agrologists (OIA) is a vital network of competent members providing quality advice and service to the agri-food system. Our mission is to inspire excellence in our members.

### Junior Farmer's Association of Ontario

Junior Farmers' has been called the best kept secret in Ontario Agriculture! Their mission is **"to build future rural leaders through self help and community betterment."** If you are a youth, or a youth at heart, this is a wonderful site to check out.

### OATI Learning Group

OATI offers a variety of courses to help farmers and agri-marketers. Some of those courses include:

Increasing Profits at Farmer Markets – Product Presentation
Bookkeeping and Record Keeping
Introduction to Ecological Agriculture

OATI Learning Group
800-668-6284
www.oati.com

### Harvest Ontario

Harvest Ontario is a site dedicated to promoting Agri-tourism in Ontario.

www.harvestontario.com

## 4-H Ontario

*An information education program, 4-H helps young people develop a variety of personal skills related to working with other people; skills related to projects of special interest to the members; and skills related to a young person developing into a responsible citizen. The program offers youth the opportunity to learn about food production, processing and marketing systems, heritage and culture in Ontario, through projects such as livestock and crop production, financial management, food preparation, nutrition, recreational activities and career development.*

4-H Ontario, Guelph
877-410-6748
Resource Page
www.4-hontario.ca/4hresource.cfm

## The Foundation for Rural Living

The Foundation for Rural Living is a charitable organization dedicated to building healthy, sustainable rural communities and enhancing the agricultural industry in Ontario.

## Advanced Agricultural Leadership Program

Established in 1985, the Advanced Agricultural Leadership Program (AALP) is an executive development program for men and women who want to broaden their horizons and expand their networks to help shape the future of the agri-food sector in Ontario. AALP is administered by the Agricultural Leadership Trust.

## Land Information Ontario 'putting Land Use maps online'

From an agricultural perspective, its goal is to increase crop yields by applying precision farming techniques to predict crop disease, insect infestations, weather conditions, and soil capability.
Land information includes:

- Property boundaries, and boundaries of cities and towns;
- Zoning, land-use, assessments and mining rights information;
- Population information (e.g. demographics and census data );

- Topographic features (e.g. elevation, contours, streams, etc.);
- Information about water, soils, plants, trees, fish and wildlife;
- Water and air quality information;
- Roads and civic addressing data and;
- Structures built on the land, such as utilities and buildings.

Website: www.lio.mnr.gov.on.ca

## Rural Water Quality Testing Program

This program includes testing on Metals and Minerals; Bacteria; Oils and Deisel; Pesticides; and Gasoline and Solvents. The cost varies and you can receive more information through:

Ontario Federation of Agriculture
800-668-3276
www.ofa.on.ca/water

## Ecological Farmers Association of Ontario

The Ecological Farmers Association of Ontario is a volunteer group that educates farmers about ecological methods of farming. Their goal is to create an agriculture which maintains and enhances the health of the soil, the crops, the livestock and the farm community through the understanding of ecological principles. It has an organic database

Jenny Keith (613) 393-5241
http://gks.com/efao/

## Factsheets

Factsheets support on all aspects of agriculture is produced by the Ontario Ministry of Agriculture and Food. The Contact Centre provides province wide, toll free technical and business information to commercial farms, agri-businesses and other rural businesses. It can be reached at:

877-424-1300
ag.info@omafra.gov.on.ca
Specific information for Northern Ontario is available at
800-461-6132

## Ontario Farmers Association

Farm organizations have been a central part of the development of Ontario agriculture. For over six decades, the OFA has dedicated itself to advocating on behalf of Ontario farmers. Our mission is to improve the economic and social well-being of farmers in cooperation with county, commodity and rural farm groups.

www.ofa.on.ca

**Ontario Farmer**

A provincial newspaper that has frequent online updates.

1-800-567-3276
www.ontariofarmer.com

**Ontario Agriculture**

An online resource for agriculture in Ontario.

http://tdg-unix.tdg.ca/ontag

**Ontario Guide – Agriculture**

This is a great site to find a number of agriculture associations.

www.ontarioguide.com/sites/agriculture.htm

## Town and Country Ontario

They have an excellent weekly program that promotes rural economic development and agriculture.

www.gov.on.ca/OMAFRA/english/tco/tcohome.html

### *National*

**Statistics Canada**

This was a difficult site to maneuver at times using the internet, however if you are having difficulty, the is help at the other end of the phone. Be warned however, that the information available free over the internet is extremely general, with more detailed information costing.

www.statcan.ca/english

**Directory of Research**, Agriculture and Agric-Food Canada.

This site has current and past research compiled to make it easier to access.

http://res2.agr.gc.ca/research-recherche/ann-dir/res_e.html
www.agr.gc.ca

## ManureNet

Inventory of Canadian Funding Sources related to Manure/Nutrient Management Issues

http://res2.agr.ca/initiatives/manurenet/en/funding_sources.html

Evelyn's Chambers
Volunteer Support Services Manager
4-H Ontario
705-357-3964 (Lindsay)

## Agriculture Government Programs Guide 2002 (Federal and Provincial)

When ordered you will receive free the "Agriculture Business Management Guide" plus the Government Programs Guide for Business. It can be purchased for $99.79, which includes GST from:

InfoCan
#407-532 Montreal Rd.
Ottawa, ON
K1K 4R4
877-729-2117
info@info-can.ca

## Farmers Helping Farmers

Are you an experienced farmer wanting to help others in third world cultures, if so, this may be a site for you.

(902) 368 - 5605
www.farmershelpingfarmers.ca

## Canadagriculture Online

A national site, with an Ontario component, that updates daily with news and information for farmers.

www.agcanada.com

## Farm Credit Canada

Farm Credit Canada (FCC) is a federal Crown corporation, reporting to Parliament through the Minister of Agriculture and Agri-Food. Established in 1959, FCC is Canada's largest agricultural term lender and is totally focused on serving the agricultural industry.

FCC's loan portfolio includes 44,000 customers and is valued at $7.7 billion. Approximately 900 employees serve customers from 100 offices in communities across Canada. FCC's Corporate Office is located in Regina, Saskatchewan.

(306) 780-8100
www.fcc-sca.ca

# Appendix IV

# Comparative Statistics

# National and Provincial Comparative Statistics

## Paid Agricultural Work

| **Canada** | **1995** | **2000** | **1995 to 2000** |
|---|---|---|---|
| | number | | % change |
| **All farms Canada** | **276,548** | **246,923** | **-10.7** |
| Farms reporting paid work[2] | 120,172 | 103,280 | -14.1 |
| Weeks of paid work: | | | |
| Year round | 3,987,070 | 4,597,758 | 15.3 |
| Seasonal or temporary | 2,373,283 | 2,503,494 | 5.5 |
| **Ontario** | **1995** | **2000** | **1995 to 2000** |
| | number | | % change |
| **All farms in the province** | **67,520** | **59,728** | **-11.5** |
| Farms reporting paid work[2] | 27,946 | 24,013 | -14.1 |
| Weeks of paid work: | | | |
| Year round | 1,147,368 | 1,376,166 | 19.9 |
| Seasonal or temporary | 780,765 | 911,030 | 16.7 |

1. Data are reported on Census Day for the preceding calendar year.

2. As in previous censuses, response errors are common for the paid work question because of the variety of arrangements in hiring farm labour. However, the data are comparable with previous censuses.

**Source:** Statistics Canada, Census of Agriculture.

Last modified: May 14, 2002.

# Greenhouse, mushroom, nursery, sod and Christmas tree area

| Canada | 1996 | 2001 | 1996 to 2001 | 1996 | 2001 | 1996 to 2001 |
|---|---|---|---|---|---|---|
| | Farms reporting | | | Area[1, 2] | | |
| | number | | % change | | | |
| **All farms in Canada** | **276,548** | **246,923** | **-10.7** | **…** | **…** | **…** |
| | | | | square metres | | % change |
| Greenhouse area under glass, plastic or other protection | 6,422 | 6,073 | -5.4 | 12,913,404 | 18,352,645 | 42.1 |
| Mushrooms | 224 | 222 | -0.9 | 673,345 | 629,644 | -6.5 |
| | | | | hectares | | % change |
| Nursery products | 4,844 | 4,530 | -6.5 | 21,522 | 22,777 | 5.8 |
| Sod | 422 | 359 | -14.9 | 21,964 | 22,467 | 2.3 |
| Christmas trees | 4,077 | 2,933 | -28.1 | 51,071 | 37,613 | -26.4 |

| Ontario | 1996 | 2001 | 1996 to 2001 | 1996 | 2001 | 1996 to 2001 |
|---|---|---|---|---|---|---|
| | Farms reporting | | | Area[1, 2] | | |
| | number | | % change | | | |
| **All farms in the province** | **67,520** | **59,728** | **-11.5** | **…** | **…** | **…** |
| | | | | square metres | | % change |
| Greenhouse area under glass, plastic or other protection | 2,085 | 2,012 | -3.5 | 5,881,001 | 9,139,268 | 55.4 |
| Mushrooms | 80 | 76 | -5.0 | 316,556 | 280,197 | -11.5 |
| | | | | hectares | | % change |
| Nursery products | 1,619 | 1,443 | -10.9 | 10,610 | 10,315 | -2.8 |
| Sod | 144 | 135 | -6.3 | 9,526 | 11,604 | 21.8 |
| Christmas trees | 1,345 | 918 | -31.7 | 11,286 | 8,809 | -21.9 |

… Not applicable.

1. Conversion factor: 1 square metre is equivalent to 10.763 91 square feet.

2. Conversion factor: 1 hectare is equivalent to 2.471 acres.

# Certified organic farming[1, 2]

| Canada | 2001 | |
|---|---|---|
| | **Farms reporting** | **As a proportion of farms reporting certified organic products** |
| | number | % |
| **All farms in Canada** | **246,923** | **…** |
| Farms reporting certified organic products | 2,230 | … |
| Type of products:[3] | | |
| Fruits, vegetables or greenhouse products | 614 | 27.5 |
| Field crops | 1,442 | 64.7 |
| Animals or animal products | 381 | 17.1 |
| Other (maple syrup, herbs, etc.) | 340 | 15.2 |
| **Ontario** | **2001** | |
| | **Farms reporting** | **As a proportion of farms reporting certified organic products** |
| | number | % |
| **All farms in the province** | **59,728** | **…** |
| Farms reporting certified organic products | 405 | … |
| Type of products:[3] | | |
| Fruits, vegetables or greenhouse products | 120 | 29.6 |
| Field crops | 308 | 76.0 |
| Animals or animal products | 120 | 29.6 |
| Other (maple syrup, herbs, etc.) | 38 | 9.4 |

… Not applicable.

1. The question on certified organic farming was new in 2001.

2. Due to both undercoverage and response errors, the number of farms producing certified organic products for sale is under-reported.

3. Respondents could choose more than one category.

**Source:** Statistics Canada, Census of Agriculture.

Last modified: May 2, 2002.

Muskoka District, 2001 Agricultural Census, reported on 1 farm in the district had been identified as 'registered organic' and that it had been identified in the 'fruit, vegetables or greenhouse' products.

# Applications to the land[1]

| Canada | 1995 | 2000 | 1995 to 2000 | | 1995 | 2000 | 1995 to 2000 |
|---|---|---|---|---|---|---|---|
| | Farms reporting | | | | Area[2, 3] | | |
| | number | | % change | | hectares | | % change |
| **Land in crops in Canada** | **237,760** | **215,581** | **-9.3** | | **34,919,497** | **36,395,948** | **4.2** |
| Application of:[4, 5] | | | | | | | |
| Herbicides | 137,184 | 126,850 | -7.5 | | 23,265,200 | 25,901,478 | 11.3 |
| Insecticides | 39,087 | 27,742 | -29.0 | | 2,935,208 | 2,225,986 | -24.2 |
| Fungicides | 22,022 | 22,482 | 2.1 | | 1,818,476 | 2,572,445 | 41.5 |
| Irrigation | 21,448 | 17,204 | -19.8 | | 856,151 | 784,486 | -8.4 |
| Commercial fertilizer | 162,257 | 134,120 | -17.3 | | 24,943,181 | 24,015,340 | -3.7 |
| Manure application using:[6] | | | | | | | |
| Solid spreader | 101,890 | 85,542 | -16.0 | | 1,881,459 | 1,828,574 | -2.8 |
| Irrigation system | 2,163 | 1,297 | -40.0 | | 66,878 | 48,288 | -27.8 |
| Liquid spreader (surface) | 16,851 | 16,461 | -2.3 | | 579,190 | 718,178 | 24.0 |
| Liquid spreader (injected) | 1,011 | 1,958 | 93.7 | | 51,513 | 126,309 | 145.2 |

1. Data are reported on Census Day for the preceding calendar year.

2. Conversion factor: 1 hectare is equivalent to 2.471 acres.

3. Excludes Christmas tree area.

4. Respondents could report more than one application.

5. As in previous censuses, the area of land on which herbicides, insecticides, fungicides, and commercial fertilizer were applied is under-reported. However, the data are comparable with previous censuses.

6. As in 1995, the area of land on which manure was applied using each manure application method was under-reported. However, the 1995 and 2000 data are comparable.

**Source:** Statistics Canada, Census of Agriculture.

Last modified: May 6, 2002.

| *Ontario* | 1995 | 2000 | 1995 to 2000 | 1995 | 2000 | 1995 to 2000 |
|---|---|---|---|---|---|---|
| | Farms reporting | | | Area[2, 3] | | |
| | number | | % change | hectares | | % change |
| **Land in crops in the province** | **59,269** | **53,799** | **-9.2** | **3,545,005** | **3,656,785** | **3.2** |
| Application of:[4, 5] | | | | | | |
| Herbicides | 33,373 | 31,544 | -5.5 | 1,995,142 | 2,209,030 | 10.7 |
| Insecticides | 11,418 | 9,370 | -17.9 | 371,830 | 360,829 | -3.0 |
| Fungicides | 6,429 | 5,712 | -11.2 | 182,881 | 194,153 | 6.2 |
| Irrigation | 4,266 | 3,002 | -29.6 | 66,092 | 49,272 | -25.4 |
| Commercial fertilizer | 41,877 | 35,445 | -15.4 | 2,407,569 | 2,231,872 | -7.3 |
| Manure application using:[6] | | | | | | |
| Solid spreader | 35,050 | 28,915 | -17.5 | 533,384 | 477,109 | -10.6 |
| Irrigation system | 1,229 | 778 | -36.7 | 33,722 | 28,568 | -15.3 |
| Liquid spreader (surface) | 5,072 | 5,131 | 1.2 | 159,311 | 198,733 | 24.7 |
| Liquid spreader (injected) | 230 | 366 | 59.1 | 7,687 | 18,021 | 134.4 |

1. Data are reported on Census Day for the preceding calendar year.

2. Conversion factor: 1 hectare is equivalent to 2.471 acres.

3. Excludes Christmas tree area.

4. Respondents could report more than one application.

5. As in previous censuses, the area of land on which herbicides, insecticides, fungicides, and commercial fertilizer were applied is under-reported. However, the data are comparable with previous censuses.

6. As in 1995, the area of land on which manure was applied using each manure application method was under-reported. However, the 1995 and 2000 data are comparable.

**Source:** Statistics Canada, Census of Agriculture.

Last modified: May 6, 2002.

# Cattle and calves

| Canada | 1996 | 2001 | 1996 to 2001 | | 1996 | 2001 | 1996 to 2001 |
|---|---|---|---|---|---|---|---|
| | Farms reporting | | | | Animals | | |
| | number | | % change | | number | | % change |
| **All farms in Canada** | **276,548** | **246,923** | **-10.7** | | **…** | **…** | **…** |
| Farms reporting cattle and calves | 142,157 | 122,066 | -14.1 | | 14,893,034 | 15,551,449 | 4.4 |
| Calves, under 1 year | 125,173 | 110,397 | -11.8 | | 4,673,641 | 5,203,770 | 11.3 |
| Steers, 1 year and over | 51,674 | 32,884 | -36.4 | | 1,734,113 | 1,731,100 | -0.2 |
| Heifers, 1 year and over | 100,930 | 83,914 | -16.9 | | 2,285,988 | 2,492,996 | 9.1 |
| Dairy cows[1] | 30,926 | 21,911 | -29.2 | | 1,227,732 | 1,060,965 | -13.6 |
| Beef cows | 103,673 | 90,066 | -13.1 | | 4,680,585 | 4,802,400 | 2.6 |
| Bulls, 1 year and over | 93,597 | 78,816 | -15.8 | | 290,975 | 260,218 | -10.6 |

| Ontario | 1996 | 2001 | 1996 to 2001 | | 1996 | 2001 | 1996 to 2001 |
|---|---|---|---|---|---|---|---|
| | Farms reporting | | | | Animals | | |
| | number | | % change | | number | | % change |
| **All farms in the province** | **67,520** | **59,728** | **-11.5** | | **…** | **…** | **…** |
| Farms reporting cattle and calves | 33,394 | 28,209 | -15.5 | | 2,285,996 | 2,140,731 | -6.4 |
| Calves, under 1 year | 27,992 | 23,906 | -14.6 | | 607,871 | 595,191 | -2.1 |
| Steers, 1 year and over | 13,005 | 9,234 | -29.0 | | 348,663 | 332,215 | -4.7 |
| Heifers, 1 year and over | 23,904 | 19,647 | -17.8 | | 450,777 | 449,326 | -0.3 |
| Dairy cows[1] | 10,122 | 7,557 | -25.3 | | 404,797 | 363,544 | -10.2 |
| Beef cows | 19,572 | 16,179 | -17.3 | | 441,211 | 376,020 | -14.8 |
| Bulls, 1 year and over | 17,232 | 13,896 | -19.4 | | 32,677 | 24,435 | -25.2 |

… Not applicable.

1. Due to response errors in 1996, the number of dairy cows and the number of farms reporting dairy cows may have been overstated, whereas the number of beef cows and the number of farms reporting beef cows may have been understated. The total number of cattle and calves, however, was not affected. These errors limit the comparability of the data between 1996 and 2001. Response errors were more prevalent in provinces with a low proportion of dairy operations. **Source:** Statistics Canada, Census of Agriculture

# Pigs

| Canada | 1996 | 2001 | 1996 to 2001 | 1996 | 2001 | 1996 to 2001 |
|---|---|---|---|---|---|---|
| | Farms reporting | | | Animals | | |
| | number | | % change | number | | % change |
| **All farms in Canada** | **276,548** | **246,923** | **-10.7** | **…** | **…** | **…** |
| Farms reporting pigs | 21,105 | 15,472 | -26.7 | 11,040,462 | 13,958,772 | 26.4 |
| Boars | 10,858 | 7,615 | -29.9 | 59,416 | 45,771 | -23.0 |
| Sows and gilts for breeding | 12,134 | 8,542 | -29.6 | 1,089,007 | 1,410,724 | 29.5 |
| Other pigs[1] | 19,850 | 14,319 | -27.9 | 9,892,039 | 12,502,277 | 26.4 |
| … Not applicable. | | | | | | |
| 1. "Other pigs" includes nursing and weaner pigs, and grower and finishing pigs. | | | | | | |
| **Source:** Statistics Canada, Census of Agriculture. | | | | | | |
| Last modified: May 6, 2002. | | | | | | |

| Ontario | 1996 | 2001 | 1996 to 2001 | 1996 | 2001 | 1996 to 2001 |
|---|---|---|---|---|---|---|
| | Farms reporting | | | Animals | | |
| | number | | % change | number | | % change |
| **All farms in the province** | **67,520** | **59,728** | **-11.5** | **…** | **…** | **…** |
| Farms reporting pigs | 6,777 | 4,972 | -26.6 | 2,831,082 | 3,457,346 | 22.1 |
| Boars | 3,749 | 2,560 | -31.7 | 15,777 | 13,188 | -16.4 |
| Sows and gilts for breeding | 4,141 | 2,802 | -32.3 | 296,306 | 356,172 | 20.2 |
| Other pigs[1] | 6,420 | 4,651 | -27.6 | 2,518,999 | 3,087,986 | 22.6 |
| … Not applicable. | | | | | | |
| 1. "Other pigs" includes nursing and weaner pigs, and grower and finishing pigs. | | | | | | |
| **Source:** Statistics Canada, Census of Agriculture. | | | | | | |
| Last modified: May 6, 2002. | | | | | | |

# Sheep and lambs

| Canada | 1996 | 2001 | 1996 to 2001 | 1996 | 2001 | 1996 to 2001 |
|---|---|---|---|---|---|---|
| | Farms reporting | | | Animals | | |
| | number | | % change | number | | % change |
| **All farms in Canada** | **276,548** | **246,923** | **-10.7** | **…** | **…** | **…** |
| Farms reporting sheep and lambs | 11,790 | 13,232 | 12.2 | 864,850 | 1,262,448 | 46.0 |
| Rams | 8,124 | 9,926 | 22.2 | 19,683 | 29,539 | 50.1 |
| Ewes | 10,978 | 12,510 | 14.0 | 427,851 | 621,151 | 45.2 |
| Lambs[1] | 10,093 | 11,161 | 10.6 | 417,316 | 611,758 | 46.6 |
| **Ontario** | **1996** | **2001** | **1996 to 2001** | **1996** | **2001** | **1996 to 2001** |
| | Farms reporting | | | Animals | | |
| | number | | % change | number | | % change |
| **All farms in the province** | **67,520** | **59,728** | **-11.5** | **…** | **…** | **…** |
| Farms reporting sheep and lambs | 3,592 | 3,978 | 10.7 | 231,087 | 337,625 | 46.1 |
| Rams | 2,640 | 3,130 | 18.6 | 5,671 | 8,488 | 49.7 |
| Ewes | 3,404 | 3,808 | 11.9 | 123,031 | 176,818 | 43.7 |
| Lambs[1] | 3,104 | 3,375 | 8.7 | 102,385 | 152,319 | 48.8 |

… Not applicable.

1. Due to reporting difficulties, data for the two lamb categories — replacement lambs and market lambs — have been combined. The total number of lambs, however, was not affected, and the data are comparable with previous censuses.

**Source:** Statistics Canada, Census of Agriculture.

Last modified: May 6, 2002.

# Other livestock

| Canada | 1996 | 2001 | 1996 to 2001 | 1996 | 2001 | 1996 to 2001 |
|---|---|---|---|---|---|---|
| | Farms reporting | | | Animals | | |
| | number | | % change | number | | % change |
| **All farms in Canada** | **276,548** | **246,923** | **-10.7** | **…** | **…** | **…** |
| Horses and ponies | 56,707 | 53,925 | -4.9 | 443,889 | 460,569 | 3.8 |
| Goats | 8,252 | 7,706 | -6.6 | 125,819 | 182,851 | 45.3 |
| Wild boars | 296 | 505 | 70.6 | 37,659 | 33,131 | -12.0 |
| Mink | 219 | 218 | -0.5 | 1,306,961 | 1,349,412 | 3.2 |
| Fox | 309 | 145 | -53.1 | 41,997 | 15,346 | -63.5 |
| Bison (buffalo) | 745 | 1,887 | 153.3 | 45,437 | 145,094 | 219.3 |
| Llamas and alpacas | 1,180 | 3,190 | 170.3 | 8,669 | 25,782 | 197.4 |
| Deer (excluding wild deer)[1] | 714 | 809 | 13.3 | 50,859 | 53,258 | 4.7 |
| Elk | 443 | 1,172 | 164.6 | 19,024 | 74,478 | 291.5 |
| Rabbits | 6,394 | 1,859 | -70.9 | 285,366 | 255,762 | -10.4 |

… Not applicable.

1. Deer and elk inventories may include elk/red deer hybrids. Hybrids were reported most often as elk and reporting hybrids was most common in Ontario.

**Source:** Statistics Canada, Census of Agriculture.

Last modified: May 13, 2002.

| Ontario | 1996 | 2001 | 1996 to 2001 | 1996 | 2001 | 1996 to 2001 |
|---|---|---|---|---|---|---|
| | Farms reporting | | | Animals | | |
| | number | | % change | number | | % change |
| **All farms in the province** | **67,520** | **59,728** | **-11.5** | **…** | **…** | **…** |
| Horses and ponies | 11,829 | 11,258 | -4.8 | 76,553 | 83,337 | 8.9 |
| Goats | 2,521 | 2,342 | -7.1 | 45,258 | 62,310 | 37.7 |
| Wild boars | 35 | 58 | 65.7 | 2,007 | 1,499 | -25.3 |
| Mink | 74 | 59 | -20.3 | 449,327 | 351,226 | -21.8 |
| Fox | 32 | 18 | -43.8 | 3,798 | 1,466 | -61.4 |
| Bison (buffalo) | 46 | 58 | 26.1 | 2,344 | 3,755 | 60.2 |
| Llamas and alpacas | 161 | 437 | 171.4 | 1,114 | 2,554 | 129.3 |
| Deer (excluding wild deer)[1] | 234 | 234 | 0.0 | 14,377 | 14,464 | 0.6 |
| Elk | 34 | 100 | 194.1 | 1,358 | 5,902 | 334.6 |
| Rabbits | 1,952 | 730 | -62.6 | 120,801 | 117,925 | -2.4 |

… Not applicable.

1. Deer and elk inventories may include elk/red deer hybrids. Hybrids were reported most often as elk and reporting hybrids was most common in Ontario.

**Source:** Statistics Canada, Census of Agriculture.

Last modified: May 13, 2002.

# Poultry Inventory

| Canada | 1996 | 2001 | 1996 to 2001 | | 1996 | 2001 | 1996 to 2001 |
|---|---|---|---|---|---|---|---|
| | Farms reporting | | | | Birds | | |
| | number | | % change | | number | | % change |
| **All farms in the country** | **276,548** | **246,923** | **-10.7** | | **…** | **…** | **…** |
| Hens and chickens | 28,240 | 26,484 | -6.2 | | 102,255,149 | 126,159,529 | 23.4 |
| Broilers, roasters and Cornish hens | 10,752 | 10,875 | 1.1 | | 68,936,770 | 87,437,798 | 26.8 |
| Pullets under 19 weeks, intended for laying | 5,324 | 5,000 | -6.1 | | 10,467,364 | 12,470,143 | 19.1 |
| Laying hens, 19 weeks and over | 21,811 | 20,345 | -6.7 | | 22,851,015 | 26,251,588 | 14.9 |
| Turkeys | 4,603 | 4,176 | -9.3 | | 8,586,191 | 8,115,942 | -5.5 |
| Other poultry[1] | 10,851 | 7,456 | -31.3 | | 3,321,351 | 5,311,918 | 59.9 |

| Ontario | 1996 | 2001 | 1996 to 2001 | | 1996 | 2001 | 1996 to 2001 |
|---|---|---|---|---|---|---|---|
| | Farms reporting | | | | Birds | | |
| | number | | % change | | number | | % change |
| **All farms in the province** | **67,520** | **59,728** | **-11.5** | | **…** | **…** | **…** |
| Hens and chickens | 8,295 | 8,306 | 0.1 | | 35,596,946 | 43,624,696 | 22.6 |
| Broilers, roasters and Cornish hens | 2,870 | 3,167 | 10.3 | | 22,775,158 | 27,931,322 | 22.6 |
| Pullets under 19 weeks, intended for laying | 1,136 | 1,023 | -9.9 | | 4,152,491 | 5,390,118 | 29.8 |
| Laying hens, 19 weeks and over | 6,471 | 6,427 | -0.7 | | 8,669,297 | 10,303,256 | 18.8 |
| Turkeys | 1,197 | 1,159 | -3.2 | | 3,447,259 | 3,402,697 | -1.3 |
| Other poultry[1] | 3,160 | 2,305 | -27.1 | | 1,061,257 | 1,433,518 | 35.1 |

… Not applicable.

1. "Other poultry" includes geese, ducks, roosters, ostriches, emus, pheasants, quail, wild turkeys, etc.

**Source:** Statistics Canada, Census of Agriculture.

Last modified: May 6, 2002.

# Farms by gross farm receipts[1, 2]

| Canada | 1995 | 2000 | 1995 to 2000 |
|---|---|---|---|
| | Farms reporting | | |
| | number | | % change |
| **All farms in Canada** | **276,548** | **246,923** | **-10.7** |
| Gross receipts class:[3] | | | |
| Less than $10,000 | 71,175 | 54,166 | -23.9 |
| $10,000 to $49,999 | 85,608 | 76,284 | -10.9 |
| $50,000 to $99,999 | 42,587 | 35,255 | -17.2 |
| $100,000 to $249,999 | 51,221 | 47,079 | -8.1 |
| $250,000 to $499,999 | 17,579 | 21,396 | 21.7 |
| $500,000 and over | 8,378 | 12,743 | 52.1 |
| **Ontario** | **1995** | **2000** | **1995 to 2000** |
| | Farms reporting | | |
| | number | | % change |
| **All farms in the province** | **67,520** | **59,728** | **-11.5** |
| Gross receipts class:[3] | | | |
| Less than $10,000 | 20,143 | 15,370 | -23.7 |
| $10,000 to $49,999 | 20,184 | 19,240 | -4.7 |
| $50,000 to $99,999 | 7,478 | 6,542 | -12.5 |
| $100,000 to $249,999 | 11,616 | 9,587 | -17.5 |
| $250,000 to $499,999 | 5,625 | 5,493 | -2.3 |
| $500,000 and over | 2,474 | 3,496 | 41.3 |

1. Data are reported on Census Day for the preceding calendar or fiscal year.

2. As in previous censuses, response errors have resulted in an under-reporting of total gross farm receipts. However, the data are comparable with previous censuses.

3. At 2000 prices.

**Source:** Statistics Canada, Census of Agriculture.

# Farms with gross farm receipts of $2,500 or more, by farm type,[1, 2]

| Canada | 1996 | 2001 | 1996 to 2001 |
|---|---|---|---|
| | Farms reporting | | |
| | number | | % change |
| **All farms in Canada** | **252,839** | **230,540** | **-8.8** |
| Farm type:[3] | | | |
| Dairy | 24,411 | 18,574 | -23.9 |
| Cattle (beef) | 67,531 | 67,814 | 0.4 |
| Hog | 8,063 | 7,148 | -11.3 |
| Poultry and egg | 4,833 | 4,394 | -9.1 |
| Wheat | 29,526 | 15,249 | -48.4 |
| Grain and oilseed (except wheat) | 51,577 | 52,648 | 2.1 |
| Field crop (except grain and oilseed) | 16,245 | 17,286 | 6.4 |
| Fruit | 7,107 | 6,560 | -7.7 |
| Vegetable | 3,607 | 2,890 | -19.9 |
| Miscellaneous specialty | 28,715 | 28,315 | -1.4 |
| Livestock combination | 6,217 | 4,991 | -19.7 |
| Other combination | 5,007 | 4,671 | -6.7 |

1. Each census farm is classified according to the commodity or group of commodities that accounts for 51% or more of the total potential receipts. Since the farm numbers include only those with receipts of $2,500 or more, the data differ from totals shown in other tables.

2. Data are reported on Census Day for the preceding calendar or fiscal year.

3. To make comparisons between the two years possible, the farm typing categories are based on the historical classification structure, not the North American Industrial Classification System (NAICS) farm typing categories introduced in 2001.

**Source:** Statistics Canada, Census of Agriculture.

Last modified: May 6, 2002.

| Ontario | 1996 | 2001 | 1996 to 2001 |
|---|---|---|---|
| | Farms reporting | | |
| | number | | % change |
| **All farms in the province** | **59,887** | **55,092** | **-8.0** |
| Farm type:[3] | | | |
| Dairy | 8,320 | 6,414 | -22.9 |
| Cattle (beef) | 14,172 | 13,669 | -3.5 |
| Hog | 2,677 | 2,454 | -8.3 |
| Poultry and egg | 1,686 | 1,609 | -4.6 |
| Wheat | 466 | 395 | -15.2 |
| Grain and oilseed (except wheat) | 12,250 | 12,863 | 5.0 |
| Field crop (except grain and oilseed) | 4,965 | 4,531 | -8.7 |
| Fruit | 2,016 | 1,733 | -14.0 |
| Vegetable | 1,428 | 1,233 | -13.7 |
| Miscellaneous specialty | 8,547 | 7,301 | -14.6 |
| Livestock combination | 2,030 | 1,617 | -20.3 |
| Other combination | 1,330 | 1,273 | -4.3 |

1. Each census farm is classified according to the commodity or group of commodities that accounts for 51% or more of the total potential receipts. Since the farm numbers include only those with receipts of $2,500 or more, the data differ from totals shown in other tables.

2. Data are reported on Census Day for the preceding calendar or fiscal year.

3. To make comparisons between the two years possible, the farm typing categories are based on the historical classification structure, not the North American Industrial Classification System (NAICS) farm typing categories introduced in 2001.

**Source:** Statistics Canada, Census of Agriculture.

Last modified: May 6, 2002.

# Gross farm receipts and expenses,[1]

| Canada | 1995 | 2000 | 1995 to 2000 | | 1995 | 2000 | 1995 to 2000 |
|---|---|---|---|---|---|---|---|
| | Farms reporting | | | | Amount | | |
| | number | | % change | | current $ | | % change |
| **All farms in Canada** | **276,548** | **246,923** | **-10.7** | | **…** | **…** | **…** |
| Operating expenses | 276,548 | 246,923 | -10.7 | | 26,669,926,814 | 33,213,077,917 | 24.5 |
| Gross farm receipts[2, 3] | 276,548 | 246,923 | -10.7 | | 32,230,356,237 | 38,298,728,817 | 18.8 |
| Sales of forest products[4] | 17,735 | 13,227 | -25.4 | | 180,061,841 | 117,437,428 | -34.8 |

| Ontario | 1995 | 2000 | 1995 to 2000 | | 1995 | 2000 | 1995 to 2000 |
|---|---|---|---|---|---|---|---|
| | Farms reporting | | | | Amount | | |
| | number | | % change | | current $ | | % change |
| **All farms in the province** | **67,520** | **59,728** | **-11.5** | | **…** | **…** | **…** |
| Operating expenses | 67,520 | 59,728 | -11.5 | | 6,545,516,325 | 7,829,246,574 | 19.6 |
| Gross farm receipts[2, 3] | 67,520 | 59,728 | -11.5 | | 7,778,476,483 | 9,115,454,790 | 17.2 |
| Sales of forest products[4] | 3,343 | 2,903 | -13.2 | | 19,717,541 | 20,587,058 | 4.4 |

… Not applicable.

1. Data are reported on Census Day for the preceding calendar or fiscal year.

2. "Gross farm receipts" excludes forest products sold.

3. As in previous censuses, response errors have resulted in an under-reporting of total gross farm receipts. However, the data are comparable with previous censuses.

4. Due to response errors in previous censuses, the sales of forest products may have been overstated. Changes to this question for 2001 limit the comparability of the data to previous censuses.

**Source:** Statistics Canada, Census of Agriculture.

Last modified: May 6, 2002.

# Land tenure

| Canada | 1996 | 2001 | 1996 to 2001 | 1996 | 2001 | 1996 to 2001 |
|---|---|---|---|---|---|---|
| | Farms reporting | | | Area[1] | | |
| | number | | % change | hectares | | % change |
| **All farms in Canada** | **276,548** | **246,923** | **-10.7** | **68,056,445** | **67,503,924** | **-0.8** |
| Area owned | 262,152 | 235,131 | -10.3 | 43,061,905 | 42,266,632 | -1.8 |
| Area rented, leased or crop-shared from all sources other than government | 97,202 | 91,839 | -5.5 | 15,140,675 | 15,837,148 | 4.6 |
| Area leased from government | 26,710 | 21,530 | -19.4 | 9,853,865 | 9,400,144 | -4.6 |
| **Ontario** | **1996** | **2001** | **1996 to 2001** | **1996** | **2001** | **1996 to 2001** |
| | Farms reporting | | | Area[1] | | |
| | number | | % change | hectares | | % change |
| **All farms in the province** | **67,520** | **59,728** | **-11.5** | **5,616,983** | **5,466,352** | **-2.7** |
| Area owned | 64,354 | 57,156 | -11.2 | 3,951,682 | 3,793273 | -4.0 |
| Area rented, leased or crop-shared from all sources other than government | 23,359 | 21,616 | -7.5 | 1,593,814 | 1,626,787 | 2.1 |
| Area leased from government | 1,836 | 1,041 | -43.3 | 71,487 | 46,292 | -35.2 |

1. Conversion factor: 1 hectare is equivalent to 2.471 acres.

**Source:** Statistics Canada, Census of Agriculture.

Last modified: May 7, 2002.

# Computer Use

| Canada | 1996 | 2001 | 1996 to 2001 | 2001 |
|---|---|---|---|---|
| | Farms reporting | | Change | As a proportion of all farms using computers |
| | number | | % | |
| **All farms in Canada** | **276,548** | **246,923** | **-10.7** | **…** |
| Farms using computers | 58,724 | 97,378 | 65.8 | … |
| Use:[1] | | | | |
| Bookkeeping | … | 75,522 | … | 77.6 |
| Livestock/crop record-keeping | … | 39,854 | … | 40.9 |
| Word processing | … | 62,874 | … | 64.6 |
| Internet | … | 68,549 | … | 70.4 |
| E-mail | … | 61,507 | … | 63.2 |
| Other uses | … | 537 | … | 0.6 |
| **Ontario** | **1996** | **2001** | **1996 to 2001** | **2001** |
| | **Farms reporting** | | **Change** | **As a proportion of all farms using computers** |
| | number | | % | |
| **All farms in the province** | **67,520** | **59,728** | **-11.5** | **…** |
| Farms using computers | 14,131 | 23,552 | 66.7 | … |
| Use:[1] | | | | |
| Bookkeeping | … | 17,832 | … | 75.7 |
| Livestock/crop record-keeping | … | 9,031 | … | 38.3 |
| Word processing | … | 15,184 | … | 64.5 |
| Internet | … | 17,371 | … | 73.8 |
| E-mail | … | 15,681 | … | 66.6 |
| Other uses | … | 139 | … | 0.6 |

… Not applicable.

1. This question was first asked in 2001. Respondents could choose more than one use.

**Source:** Statistics Canada, Census of Agriculture.

# What's new for 2001

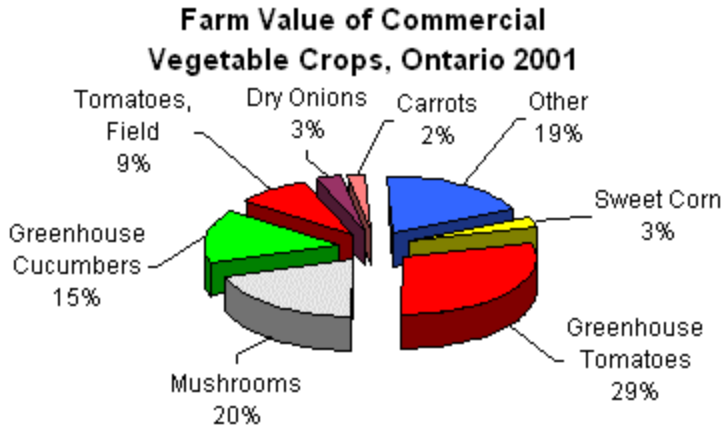
New Topics for 2001

Computer use for farm management
As it has since 1991, the Census of Agriculture will have data on the number of farmers using a computer to manage their farm. In 2001 however, data will also be available for the first time on whether they are using it for accounting, inventory control, word processing, Internet, e-mail or some other application.

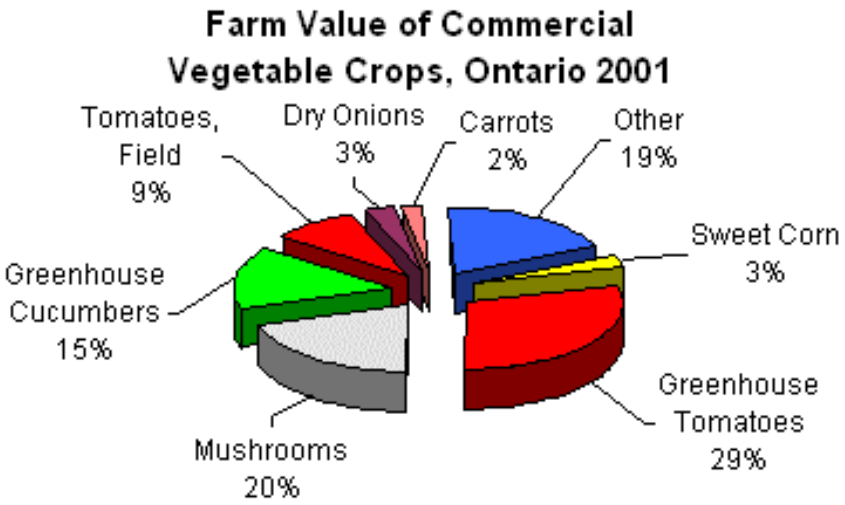
Leased machinery
In 2001, the Census of Agriculture asked respondents to distinguish between "owned" and "leased" for each type of farm machinery and equipment. Past censuses have not made this distinction.

Certified organic products
2001 data also include information on how many farmers are producing certified organic commodities and categorizes them by type (fruit, vegetables, greenhouse products, field crops, animals or animal products, or "other").

| Fruit Crop | $'000 |
|---|---|
| Apples | 97,430 |
| Peaches | 27,370 |
| Pears | 4,725 |
| Grapes | 50,700 |
| Strawberries | 17,500 |
| Other | 23,610 |
| Total | 221,335 |



| Vegetable Crop | $'000 |
|---|---|
| Sweet Corn | 20,300 |
| Greenhouse Tomatoes | 210,238 |
| Mushrooms | 143,045 |
| Greenhouse Cucumbers | 107,667 |
| Tomatoes, Field | 63,466 |
| Dry Onions | 22,150 |
| Carrots | 15,575 |
| Other | 134,115 |
| Total | 716,556 |



## 2001 Census of Agriculture - Canadian farm operations in the 21st century

The 2001 Census of Agriculture counted 246,923 farms in Canada on May 15, 2001, down almost 11% since 1996. All provinces shared the decline, with 8 of the 10 showing decreases over 10%.

Farms have been getting bigger. The average farm in 2001 was 676 acres, compared with 608 acres in 1996. Those with gross receipts of $250,000 or more accounted for 13.8% of all farms in 2001, compared with 9.4% in 1996 (at 2000 prices). The average farm size in that sales class was 1,620 acres.

Farmers are expanding their crop area and are switching to different crops for economic reasons. In 2001, for every acre in wheat, 2.3 acres were in other field crops, compared with 1.8 in 1996. Wheat still represents the largest crop area but has declined 12.6%. Pulses, which include crops such as dry field peas, lentils and beans, showed significant increases.

Livestock numbers have increased substantially to reach a new high. The number of cattle on Canadian farms has risen again - as it has in every census since 1986. Hog numbers are approaching the level of cattle numbers for the first time.

The portion of a dollar represented by expenses is getting bigger. In 2000, farmers spent 87 cents on operating expenses (not including depreciation) for every dollar received in gross farm receipts. In 1995, the ratio was 83 cents in expenses for each dollar in receipts. Farmers are having to manage their expenditures even more carefully to remain competitive.

Environmentally friendly land management practices have surpassed conventional tillage methods in popularity and are now used on 60% of land tilled, double what it was in 1991. Practices such as conservation tillage minimize the number of passes farmers make over their fields, which in turn decreases fuel costs and lowers carbon dioxide emissions.

## 1996 Highlights

Almost two-thirds (63%) of Canada's 276,550 census farms enumerated in 1996 were operated by one operator. On the remaining 37%, the day-to-day management decisions were the responsibility of two or more people. This situation remained unchanged from 1991.
*Profile of Canadian Farm Operators – Stats Can 1996*

There were 385,610 farm operators in Canada in 1996, down 1.3% from 1991. As expected, this decrease in the number of operators directly relates to the 1.2% decrease in the number of agricultural operators over the same period.
*Profile of Canadian Farm Operators – Stats Can 1996*

One-quarter (25.2%) of all agricultural operators in Canada in 1996 were women, virtually unchanged from 1991 (25.7%). The proportion of female operators varied considerably by province. British Columbia had the highest proportion, with 35.5% of all operators being women, while Prince Edward Island reported the lowest proportion, at 14.2%
*Profile of Canadian Farm Operators – Stats Can 1996*

Female operators tended to be younger than their male counterparts in 1996, with an average age of 46.7, compared with 49.0 years for men. Since 1991, the average age of farm operators has increased approximately one year for both mean and women.
*Profile of Canadian Farm Operators – Stats Can 1996*

Operators aged 55 and over accounted for 32.3% of all operators in 1996, virtually unchanged from 1991. However, shifts occurred between the other two age categories. While 19.9% of farm operators were under 35 years of age at the time of the 1991 Census of Agriculture, this proportion fell to 15.8% by 1996. This decrease was matched by an increase in the 35 to 54 year age category, from 48% in 1991 to 51.9% in 1996. This aging of farm operators reflects the overall graying of the working population identified by the 1996 Census of Population.
*Profile of Canadian Farm Operators – Stats Can 1996*

During the 75 years between 1921 and 1996, the number of census farms in Canada rose gradually from 711,090 in 19921 to a high of 732,832 in 1941, then fell steadily to 366,110 in 1971, and finally decreased gradually to 276,548 census farms in 1996.
*Historical Overview of Canadian Agriculture – Stats Can 1996*

Total farm area in Canada rose from 140.9 million acres (57.0 million hectares) in 1921 to 168.2 million acres (68.1 million hectares) in 1996. The consolidation of farm operations over the years, coupled with the increase in total farm area, resulted in an increase in the average farm area from 198 acres (80 hectares) in 1921 to 608 acres (246 hectares) in 1996.
*Historical Overview of Canadian Agriculture – Stats Can 1996*

The total area of land in crops in Canada increased 72% to 86.3 million acres (34.9 million hectares) between 1921 and 1996.
*Historical Overview of Canadian Agriculture – Stats Can 1996*

The total area of greenhouse products in Canada of 137.1 million square feet (12.7 million sq metres) in 1996 was nearly double the area reported in 1981. The 51% increase in total area of greenhouse products between 1991 and 1996 was the largest intercensal increase reported since 1981.
*Historical Overview of Canadian Agriculture – Stats Can 1996*

Commercial fertilizer use in Canada increased 35% between 1981 and 1996 to 61.6 million acres (24.9 million hectares). In the same period, the number of farms applying commercial fertilizer decreased 14% to 162,000.
*Historical Overview of Canadian Agriculture – Stats Can 1996*

The use of herbicides in Canada increased 53% between 1981 and 1996 to 57.5 million acres (23.3 million hectares) The number of farms applying herbicides fell by 12% since 1981 to 137,000 in 1996.
*Historical Overview of Canadian Agriculture – Stats Can 1996*

The area of no-till land in Canada increased 135% between 1991 and 1996 to 11.3 million acres (4.6 million hectares). This represented 16% of all land prepared for seeding. The area tilled retaining most of the crop residue on the soil surface increased 24% since 1991 to 21.7 million acres (8.8 million hectares), representing 31% of the total land prepared from seeding in 1996.
*Historical Overview of Canadian Agriculture – Stats Can 1996*

### Structural Change – Slow and Steady

(Structural change is a slower process than the biological and economic production cycles of most agricultural commodities. It evolves in response to the changes in technology and growth and distribution of the population.)

There are two principal structural changes in Canadian agriculture occurring during this century. The first is specialization. Specialization refers to the degree to which farm operators specialize in the production of one product (eg. milk) or group of related products (small grains).

Prior to World War 1, most families lived on farms. The farms produced a variety of products primarily for consumption by the farm operator's household, while any surplus production might be sold. As the population became more urban and the farm population shrank, farms began to specialize in the production being sold. This process was largely complete by 1960 when almost 90% of farms reported that one product or group of products accounted for at least 50% of total farm sales.

The second major structural change is characterized by a concentrated industry sharing most of the production among only a few large operators. The incentives for greater concentration stem from economies of scale and developing technology. An example of this would be the

greenhouse industry. Operators with revenues above $0.5 million represent over 70% of the sales but less than 15% of the farms.

The sheep industry is an example that exhibits very little concentration. Only 1% of producers have sales over $0.5 million and they produce less than 10% of sales.

*Data for this article were collected from the Whole Farm Database. Farming Facts 1995 – Stats Can.*

**Social Change – In Step with Structural Change**

The population living on farms continues to decline. By 1991, 867,000 persons lived on farms, most of them in rural areas. This is about a quarter of the population living on farms in 1931.

One reason for this decline can be traced to the increasing value of human time over the last century. Capital (incorporating new technologies) has been substituted for labour. With more machinery and less labour operating on a fixed land base, farms become larger and fewer in number.

The other principal reason for the decline in population living on farms is the shrinking average size of families; a trend equally prevalent in the general population.

Farm family income is similar to non-farm family income. The boom in farm prices in the 1972 to 1974 period boosted average farm family income above the income of the average non-farm family (plus unattached individuals). It has remained so since that time although now it is due more to the increasing contribution of off-farm income)

The grouping of non-farm families and unattached individuals weakens this comparison somewhat as the increasing proportion of unattached individuals (e.g. grandmothers, university students, etc.) typically has a lower average income. Comparing just husband/wife families in the farm and non-farm sectors reveals that farm family income is about 90% of non-farm family income in recent years.

*Data for this article were collected from the Census of Population and the Consumer Finance Survey. Farming Facts 1995 – Stats Can.*

## The Environment – Not to be Ignored

Today, more than ever, Canadian farmers are becoming more aware of the need for environmentally friendly farming practices. Trying to balance environmental concerns with the need to increase productivity and maintain economic viability makes these goals all the more challenging. The loss of soil due to erosion and the depletion of soil nutrients due to land degradation are just two of the problems farmers constantly battle to preserve the quality of their land.

For the agricultural community, erosion and land degradation are new concerns. The 1930's Dust Bowl taught farmers a bitter lesson about the vulnerability of their land. In the Prairies, years of agricultural activity using traditional tillage methods left the intensively farmed topsoil unprotected and vulnerable to wind and rain. Prolonged drought conditions aggravated the situation and led to widespread soil erosion. To combat this crisis, and in the years since, farmers have adopted land management practices aimed at promoting soil conservation and preserving soil quality.

In 1991, for the first time in the history of the Census of Agriculture, Canadian farmers were asked to provide information on soil conservation practices. The top five land management practices for soil erosion control reported for 1991 were forage-based crop rotation, grassed waterways, contour cultivation, winter cover crops and strip cropping.

In preparing the land for seeding, careful seedbed preparation is another way that farmers battle soil erosion and land degradation. The census revealed that about one-quarter of the land in Canada prepared for seeding was cultivated using a method referred to as conservation tillage, as opposed to conventional tillage. It is important to note that some crops required conventionally tilled fields. As well, not all types of land are susceptible to erosion or require conservation practices varies by region and farm type.

Using conventional tillage, farmers prepare land for seeding by turning and mixing the soil, creating a relatively flat, bare seeding surface. Unfortunately, such a surface is vulnerable to rain and wind and loose topsoil can be easily carried away.

In contrast to the conventional method, farmers who practice conservation tillage tend to cultivate the fields less often and use equipment that does not actually turn the soil. This leaves crop residues, such as stubble from grain crops, on the surface where they can trap water and protect the loose soil, reducing soil erosion and organic matter loss.

Some crops can be planted with no prior tillage. Although less common, this no-till method is considered to be the most environmentally friendly.

According to the 1991 Census of Agriculture, almost 29 million hectares of land were prepared for seeding in Canada. Conventional tillage methods were used on 69% of that area. Although the majority of farmers still depend on traditional methods to prepare their fields for seeding, conservation tillage and no-till are significant alternatives. Conservation tillage was used on 24% of land prepared for seeding while no-till was used on 7%.

With the risk of soil erosion by wind greater in the flat, wide open and often dry Prairies, farmers have adopted conservation tillage to a greater degree than their eastern counterparts, who must contend with heavier, wetter soils. Just 16% of land seeded in Ontario and Quebec was tilled using such a method.

Canadian farmers know that employing sustainable agricultural methods is becoming an essential element for their survival and future success. The Census of Agriculture shows that farmers are putting those environmental concerns into practice.

*Data collected from 1991 Census of Agriculture. Farming Facts 1995 – Stats Can.*

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On a clear day, over one-third of Canada's best agricultural land can be seen from the top of Toronto's CN Tower.
*Kim Bristow-Callahan, Statistics Canada – Canadian Agriculture at a Glance – Dec 1999*

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In 1956, 14,400 beekeepers were maintaining 330,000 bee colonies in Canada. In 1996, 11,000 beekeepers were maintaining almost 500,000 bee colonies. There are an estimated 30 billion honeybees in Canada.

The long summer days of Canada's northern climate, the country's vast amounts of clover, alfalfa and canola and Canadian beekeepers' sophisticated management practices give Canada one of the highest honey yields in the world.

Canada is one of the top five honey producers in the world. Average production in Canada is about 60kg per hive, twice the world average.

*Canadian Agriculture at a Glance – Dec 1999*

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Taking sap from a tree does rob it of some nourishment, but because less than one-tenth of a tree's sugar is removed during tapping, most trees are unharmed. Some maples have been tapped for more than 100 years and are still going strong.

An average tree yields 68L to 90L of sap a year. It takes an average 40L of sap to make 1L of syrup.

80% of the world's supply of maple syrup is produced in Canada.

*Canadian Agriculture at a Glance – Dec 1999*

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## Where do farms receipts go (the pie)

According to 'Canadian Agriculture at a Glance' llamas are the all-round winners of alternative livestock. Llamas are thought to be the easiest to care for of all livestock. They are clean, quiet and intelligent animals. So ple1asant is their temperament that they are sometimes taken to hospitals and nursing homes to interact with patients.

Llamas can carry loads weighing 25% to 30% of their body weight for 8km to 13km. On some Canadian golf courses, you'll see them in place of golf carts!

Llama breeding stock and, of course, llama wool are all very marketable commodities. Some people even find that a llama makes a good pet! Alpacas, the close cousins of llama, share these same gentle and desirable characteristics.

Number of alternative livestock in Ontario 1996

| | |
|---|---|
| Bison | 2,344 |
| Deer | 14,377 |
| Elk | 1,358 |
| Llama | 1,114 |
| Wild Boar | 2,007 |

Both bison and elk are hardier than cattle, although they may fall ill from diseases indigenous to their breed. Unlike cattle, bison have the ultimate in low-cost diets. Because they are native to North America, they can also survive outdoors in all seasons without farmers having to provide a barn or other kind of shelter. Bison also have a longer reproductive life than cattle. As well, According to Health Canada a 100 grams serving of bison meat has 2 grams of fat compared with an average of 6 grams for beef. Bison meat sells for up to three times the price of beef with live animal prices consistently higher than for cattle. About two-thirds of Canada's bison meat is exported to Europe, particularly Germany and France. But bison has it's downside. They are slower to reach slaughter weight and reproductive maturity than cattle, so increasing herd size is slow business, and the demand for bison meat remains greater than the supply. But as the supply grows, their may be a shift as it usually takes longer for consumers eating habits to change. Hides, which are used to make gloves and robes and the horns are popular decorative items. Bison hair is also collected and processed into bison wool.

**Elk** are also very hardy, and require little or no calving assistance. An elk's metabolism slows during the winter so the animal requires less feed. Three to five elk cows can thrive on the same amount of pasture as it takes to support one beef cow.

**Deer** The demand for antler velvet in Asian countries is the driving force behind elk and deer farming. Bull elk and deer produce antlers every year. Before the antlers become hard, they are removed in the "velvet" stage. Asian countries have used antler velvet and its products for thousands of years to treat ailments ranging from high cholesterol to arthritis.

An important secondary product of elk and deer is the meat commonly called venison. Venison is great as steaks, roasts, meatballs and burgers. Most farmed deer in 1996 were in British Columbia and Ontario. The number of domestic elk in Canada is less than half the number of deer.

In Canada, ostriches didn't appear on the agricultural scene until the late 1980's, when Canadian breeders interested in raising ostriches were the main market. Now the majority of ostriches go to slaughter. The 1996 Census of Agriculture reported 833 ostrich farms in Canada with a total of 15,502 ostriches.

Did you know?

- An ostrich burger or steak - with a fat content of about 2% - is a very healthy menu choice.
- Ostrich feathers, because they are barbless and don't generate static electricity, make excellent dusters for electronic circuit boards and microchips.
- A 100kg ostrich yields about 41kg of edible lean red meat.
- Ostrich leather makes high-quality boots, handbags, jackets, wallets and other leather accessories because of its strength and suppleness.
- Crushed ostrich shells make an excellent calcium supplement in powdered form.
- At 2.0 m to 2.7 m tall and an average 140 km at maturity, ostriches are the largest living bird in the world.
- Ostriches can live to be 75 years old and can run as fast as 65 km per hour.
- A mature ostrich will lay an average of 40 to 50 eggs per year. It takes 42 days for ostrich eggs to hatch. One ostrich egg is equal to 24 chicken eggs. Remember that the next time you want an omelette for six!

*Jay Champion, Canadian Ostrich Association. Canadian Agriculture at a Glance – Dec 1999*

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### Organic farming: the trend is growing!

As Canadians become more concerned with their health and the environment, many are turning to organic food, typically produced without using commercial fertilizers or pesticides.

In 1998, the Canadian Organic Advisory Board (COAB) reported that the organic food market held approximately 1% of the total retail food market and estimated that sales are increasing by 15% to 25% annually.

Many varieties of fruits, herbs, vegetables, grains, beef, pork, and poultry are produced organically in Canada today. Organic products are typically more expensive as many producers require a high price to cover their production costs and compensate for lower yields (Some farmers have reported drops in yields from 30-50% in the early stages of

conversion from conventional to organic farming) Consumers can pay anywhere from 10% to 50% more for chemical-free food due to limited supply.

### The Canadian Organic Advisory Board (COAB): A non-profit organization for the development of a Canadian standard for organic agriculture.

What does "organic" mean? "Organic' implies that no commercial fertilizers or pesticides were used to produce or store the food. Organic food production replenishes the soil's fertility by treating it as a living and dynamic entity.

The aim of organic farming is to produce food without chemicals in an environmentally friendly manner. Plant and animal growth regulators, antibiotics, hormones, preservatives, colouring or artificial additives are not used in organic food production or processing. Conventional farming uses many of these tools to aid production and prevent pest and disease problems. Natural pesticides and composted manure are permitted, but with restrictions. Antibiotics are allowed only when disease cannot be controlled by other means, and require the authorization of the certifying agency.

Without some standard of quality, it is difficult for consumers to be sure that what they are eating is truly chemical-free. A product certified "Canada organic" assures customers that the product was produced in Canada and meets basic standards of organic production. It is not always obvious whether products labeled "organic," but not bearing the logo of a certification agency, meet the same criteria**. In June 1999, the federal government unveiled a new national standard to clarify just what "organic" means. Until then, standards varied according to the different provincial certifying agencies.**

To market products labeled "certified organic" farmers must meet standards such as:

- Not using herbicides and pesticides of commercial fertilizers for at least three years before receiving initial certification. During this transition period – as long as five years- foods can be advertised as "transitional organic."
- Feeding animals 100% organic feed and not giving them hormones or growth promoters and unnecessary medications. The animals must be raised in humane conditions.
- Being committed to following soil-building management techniques.
- Providing an annual production plan when being converted to organic that describes the organic details of the soil management, rotation practices, fertilization, crop protection, harvests, post-harvest treatments and livestock practices.
- Segregating organic products to avoid contamination from pesticides used to protect conversional products from insects, rodents and fungi during transportation and storage.
- Providing clear records of all materials applied to fields and crops or used in processing, production, handling or sales.
- Allowing a third-party inspector hired by the certification agency to assess the farm on site and submit a comprehensive report to the certification committee. The inspector may also conduct spot checks at any time.

*Heather Archibald, Stats Canada*
*Canadian Agriculture at a Glance – Dec 1999*

## The Canadian greenhouse industry: a growing concern

Visit any garden center in our region around the May long weekend and you'll understand why Canada's greenhouse industry is showing dramatic growth in all provinces.

Whether flowers or vegetables, the demand for freshness, quality and convenience in out-of-season products has prompted tremendous growth in Canada's greenhouse industry. Between 1997 and 1997 the total greenhouse area under plastic and glass more than tripled. In terms of gross farm receipts, the greenhouse industry increased its share of total agricultural receipts from less than 2% in 1981 to 3.2% in 1996. And while the number of census farms overall has decreased by 13% since 1981, the number of greenhouse operations increased by 24% across the country.

Not surprisingly, this growth is reflected in the employment figures. In 1997, nearly 35,000 Canadians had part-or full-time employment in greenhouse operations. In 1977, just over 9,000 people worked in the sector.

Unlike most other types of farming, greenhouse operations need very little land and the land doesn't necessarily have to be "good." Greenhouses tend to establish in urban areas tend to be close to their markets even though land cost per hectare are higher. Compared with farms where crops and livestock are raised directly on the land, greenhouse production is highly intensive, resulting in more return per hectare and less outlay for heavy machinery. The investment in buildings and some operating costs, such as energy, are considerable. Greenhouse growing also provides a much longer growing season – defraying some of those costs.

Flowers and plants, most of them ornamental, make up the lion's share of greenhouse products grown and sold in Canada, but, sales of fresh salad vegetables are increasing at a greater rate. In 1977, vegetables accounted for 15% of greenhouse sales; by 1976, this figure had risen to 24%. Tomatoes, cucumbers, peppers and lettuce are the main types of produce grown in Canadian greenhouses. In 1996, tomatoes brought in over half of the national revenue from hothouse vegetables with Ontario reaping 50% of Canadian tomato sales.

In 1977, 61% of greenhouse space was protected by glass, but its popularity has been declining. Operators have been showing a marked and growing preference for plastic – in most cases, a double layer of polyethylene know in the trade as 'double poly" – because it requires a smaller capital outlay and is more versatile than glass. Plastic is easier and less expensive than glass to put up and maintain; plastic side walls can be rolled up to harden off bedding plants in spring or to ventilate the greenhouse in warm weather. In 1984 plastic moved ahead of glass. By 1997, it was warming some 65% of the existing greenhouse area.

Today's tempered greenhouse glass, however, is a far cry from the small, breakable panes that characterized greenhouses in the past. It is very strong and comes in large bendable sheets, providing excellent light transmission and cutting down on heat loss, but it does tend to be very expensive compared with double poly.

*Elizabeth Irving, Statistics Canada*
*Canadian Agriculture at a Glance – Dec 1999*

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**Summerfallow:** The practice of tilling but not seeding land during the summer to control weeds and store moisture in the soil for a crop planted the next year.

**Chemical summerfallow:** Also know as "chemfallow," this process controls vegetative growth during the fall or summer with one or more herbicide applications. It may eliminate three to four tillage operations and reduce the risk of soil erosion.

## Soil conservation practices

**Contour cultivation:** cultivating the field across the slope to reduce soil erosion from rapid water run-off.

**Crop rotation:** alternating crops each year, or in a multi-year cycle, for soil conservation or disease control purposes.

**Grassed waterways:** either natural or constructed to control soil erosion. The waterway is permanently grassed and consists of a shallow cannel designed to slow down run-off water. The grass stabilizes the soil and prevents it from being washed away. Waterways are usually shaped so farm machinery can cross easily.

**Low-till:** preparing the land for seeding by leaving most of the crop residues (or trash) on the surface of the soil. Also know as conservation tillage or mulch tillage.

**No-till:** Leaving soil completely undisturbed between harvest and planting the next crop. Also know as zero till, no-till includes seeding directly into crop stubble and seeding into permanent "ridges".

**Permanent grass cover:** keeping a field, or land, in grass cover indefinitely to prevent soil erosion.

**Strip-cropping (or strip-farming, field strip-cropping or wind strip-cropping):** controlling soil erosion by dividing the farm into narrow fields of different crops, with or without fallow. If used to control wind erosion, the strips are usually planted at right angles to the prevailing winds.

**Windbreaks/Shelterbelts:** consists of trees either planted or present naturally. This practice is used predominately in Western Canada where farmland is more susceptible to wind action and where trapping snow for moisture is important.

**Wintercover crops:** crops, such as fall rye, seeded in the fall to protect against soil erosion. The plants protect the soil from wind erosion as they germinate in the fall, while the roots hold the soil together, protecting it against water erosion.

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**The Effects of Electricity**

Many remember the ice storm of 1998. Farmers across much of eastern Canadian have vivid memories as the suffering was widespread. In the poultry barn, chickens died without electric light, cooling fans, regular feed and water. Trout farmers were unable to oxygenate their tanks and young fish died. Slippery surfaces led to injuries for farmers and animals alike. Many animals were lost, especially young lambs, piglets and calves. The loss of young animals for meat markets (sheep, swine, and beef) meant the loss of a year's potential earnings for farmers.

As 1,300 steel transmission towers toppled under the weight of the ice and almost 35,000 wooden utility poles were brought down. Some Ontario residents were without power for 21 days. While the electrical loss was devastating for everyone, rural communities were without power the longest. Dairy and maple industries were particularly hard hit.

Without power, the animals suffered and the modern automated farm became a collection of useless machinery. Without regular milking , feeding and plentiful water, the animals lost weight and were susceptible to disease, dehydration and stress.

*Roland Beshiri, Statistics Canada*
*Canadian Agriculture at a Glance – Dec 1999*

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**Small farms –**

Once experienced, life on the farm - working outdoors, eating and perhaps selling your home-grown fruit and vegetables, or listening to the sound of lambs bleating in the a spring meadow - is hard to give up. Across Canada's countryside unique rural farm experiences often keep people on the land.

Based on revenue verses expenses, many small farms are not making money. After subtracting operating expenses from the gross farm revenue, the result is a financial loss.

In 1991 a slight majority of small farms in four provinces reported gross receipts greater than operating expenses. By 1996, after a 15% increase in the number of small farms that lost money, none of the provinces could make that claim.

Across Canada, 64% of all small farms were losing money: almost $9,500 on average in 1996, or a loss $1,400 greater than in 1991. Conversely, 39% of all census farms in Canada were losing money in 1996.

Many farmers work off their farms and 64% of small-farm operators reported non-farm wages or employment income in 1996, either to augment their farm income or support it as a hobby, or to pursue another profession – or for all of those reasons. The average income from non-farm sources for these operators was $29,600, $6,300 more than for operators of larger farms. The gap has widened by $1,200 since 1991.

The total number of small farms is declining.

Small farms, both in area and number, are giving way to large farms. In 1991, small farms accounted for 25% of the total farmland in Canada. By 1996, they accounted for only 20%

The number of small farms decreased by 5.6% from 1991 to 1996. Saskatchewan's loss was the greatest.

Four provinces actually bucked the trend and increased their small farm numbers: Newfoundland by 5.6%, New Brunswick by 9.3%, British Columbia by 14%, and Nova Scotia by 18%.

In British Columbia, more farmers are selling their produce to farmers' markets or direct to customers. As for consumers, their interest in alternative commodities - products typically of interest to new farmers on small farms - continues to grow.

Including Christmas tree farms in the 1996 Census of Agriculture accounts for much of Nova Scotia's and New Brunswick's increase. Newfoundland has seen gains as farmers look for alternatives to fishing to make a living.

About 67% of census farms reporting alternative commodities (for example, garlic, currants, and ostriches) were small farms. Their small scale and flexibility gives them an advantage in developing commodities or specialized or newly emerging markets. Four significant alternative commodities differed from the rest: caraway, oriental vegetables, ginseng, and deer and elk were reported mainly by large farms.

Small farms figure greatly in their predilection for alternative commodities, but not in their production. In terms of area, small farms accounted for almost 70% of garlic and wild rice, and for about 50% of the alternative berries (currants, blackberries and Saskatoon berries). For animals, small farms accounted for 81% of beefalo (a cross between beef cattle and buffalo), almost 70% of emu and rhea, 60^ of goats and approximately 50% of rabbits and llamas.

Roughly three-quarters of small farms growing alternative commodities reported a financial loss. Some may have been relatively new and still developing their markets.

Despite the difficulties – non-profitable farms, working at another job off the farm, and continually search for new markets for alternative agriculture produce – small-farm operators do persist. What helps keep these people on the farm is an appreciation for the land and their rural way of life.

*Roland Beshiri, Statistics Canada*
*Canadian Agriculture at a Glance – Dec 1999*

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**Interesting tidbits**

What type of farming operating most likely had a **computer in** 1996?

| Type of farm | % |
|---|---|
| Mushroom | 44.7 |
| Greenhouse | 36.7 |
| Poultry and egg | 33.7 |
| Hog | 33.5 |
| Potato | 33.4 |
| Other field crops | 32.7 |
| Nursery | 32.1 |
| Dry field pea and bean | 29.5 |
| Other animal specialty | 28.8 |
| Fruit and vegetables | 27.9 |
| All other farm types | 19.9 |

*Canadian Agriculture at a Glance – Dec 1999*

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Mushroom operations are the most urbanized. In Ontario, 78% of all area where mushrooms are grown is urban. 1996

*Canadian Agriculture at a Glance – Dec 1999*

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**Manure: asset and liability**

For farmers, manure is nature's original fertilizer. It also provides organic matter that improves soil's texture so it retains more moisture. Manure from Larger livestock operations is sometimes dried and sold to greenhouse and nursery operations. Gardeners can also buy manure to use on their flowers and vegetables.

Plant nutrients in both manure and commercial fertilizers are essential to agricultural operations. Different crops can have very different nutrient requirements. Corn requires high levels of nitrogen, while alfalfa, which produces its own nitrogen, uses large amounts of phosphorus and potassium. The nutrient content of manure can vary dramatically depending on many factors, including the type and age of the animals, the feeding program, the type and amount of bedding,

the extent of manure decomposition and the way it is stored. Commercially produced fertilizers are usually added to provide the nutrients manure doesn't fully supply. Farmers are increasingly aware of manure's value as a fertilizer and are taking more care in storing and using it.

How much would one animal produce in a year?

| Animal | Nitrogen (kg) | Phosphorus (kg) | Potassium (kg) |
|---|---|---|---|
| Dairy cow (545 kg) | 64 | 30 | 80 |
| Beef feeder (182 – 500 kg) | 32 | 15 | 40 |
| Feeder Hog (14 kg to 90kg) | 11 | 6 | 4.5 |
| Sow and litter, to weaning | 16 | 9 | 5.5 |
| Caged layer hen | .53 | .42 | .23 |
| Broiler | .35 | .16 | .14 |
| Sheep (ewe) | 7.3 | 2.6 | 6.2 |
| Horse | 45 | 18 | 33 |
| | | | |

*Ontario Ministry of Agriculture and Food - Ontario Factsheet #538*

Since farm animals are usually kept in confined areas, natures' original fertilizer can also become a problem. If not managed and stored properly, it can be malodorous, contaminate ground water and surface water, and be dangerous to plant and animal life.

Excessive application of manure over an extended period of time can lead to high nitrogen levels in crops like forages, which can cause nitrate poisoning in cattle. Also, manure run-off can pollute surface water with phosphorous and/or nitrogen (in the form of ammonia), which is toxic to fish and other aquatic animals. In order to minimize manure's potential for pollution, many farmers are adopting waste management programs to collect, transfer, store and apply manure as well as restrict livestock's access to bodies of water.

*Charlene Lonmo, Statisics Canada*
*Canadian Agriculture at a Glance – Dec 1999*

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Food consumption patterns into the next decade will continue to be influenced by:

- Active families seeking convenience foods that taste good and are healthy and nutritious.

- People looking for more variety in their diets. Many people have moved from larger urban areas and have experience a more varied diet than is traditional in a region like ours.

- Eating out. As incomes rise, so does spending on food from restaurants. In 1996, Canadian spent 28% of their weekly food dollar on food purchased from restaurants.

- An aging population – low in fat, salt caffeine, cholesterol and sugar, high in fibre. Easy-to-use packaging, smaller portion sizes and convenience will also be important considerations.
- A growing ethnic population – They will introduce new foods and cooking techniques.

*Canadian Agriculture at a Glance – Dec 1999*

# 1961

1961

| | | |
|---|---|---|
| Total number of census farms | 391 | |
| | | |
| Under 3 acres | 4 | |
| 3-9 | 5 | |
| 10-69 | 19 | |
| 70-129 | 81 | |
| 130-179 | 47 | |
| 180-239 | 95 | |
| 240-399 | 87 | |
| 400-559 | 30 | |
| 560-759 | 17 | |
| 760 – 1119 | 6 | |
| | | |
| Total area of all farms | 92,749 acres | |
| | | |
| Total population | 26,705 | |
| Population on all census farms | 1,579 | |
| | | |
| Small fruits | | |
| | | |
| Strawberries | 8 acres | 16 farms reporting |
| Raspberries | 13 acres | 15 farms reporting |
| | | |
| Greenhouses | 2,200 sq feet | 2 farms reporting |
| | | |
| Cattle | 6,502 # | 333 farms reporting |
| Pigs | 972 | 108 |
| Sheep | 894 | 23 |
| Goats | 68 | 11 |
| Hens and chickens | 38,510 | 194 |
| Turkeys | 47,177 | 5 |
| Ducks | 123 | 13 |
| Geese | 84 | 10 |

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# National Occupational Classification - Statistics
# 2001 (NOC-S 2001)

## Structure

**I** **Occupations Unique to Primary Industry**

**I0** **Occupations Unique to Agriculture Excluding Labourers**

**I01** **Contractors, Operators and Supervisors in Agriculture, Horticulture and Aquaculture**

I011 Farmers and Farm Managers
I012 Agricultural and Related Service Contractors and Managers
I013 Farm Supervisors and Specialized Livestock Workers
I014 Nursery and Greenhouse Operators and Managers
I015 Landscaping and Grounds Maintenance Contractors and Managers
I016 Supervisors, Landscape and Horticulture
I017 Aquaculture Operators and Managers

**I02** **Agriculture and Horticulture Workers**

I021 General Farm Workers
I022 Nursery and Greenhouse Workers

# (NOC-S 2001)

## I011 Farmers and Farm Managers

Farmers and farm managers manage the operations and functions of a farm. They are responsible for growing crops, raising and breeding livestock, poultry and other animals and marketing farm products.

### Exclusions

- Farm supervisors are classified in unit group I013 - Farm Supervisors and Specialized Livestock Workers

animal breeder
animal farmer
apiarist
apiculturist
apple grower
apple producer
bean sprout farmer
bean sprout grower
beef cattle farmer
beef producer
beekeeper
bird breeder
breeder, dogs
breeder, domestic animals
breeder, goat
breeder, pheasant
breeder, rabbit
broiler chicken producer
broiler producer
cat breeder
cattle rancher
cereal and oilseed grower
cereal and oilseed producer
cereal farm manager
cereal grower
cereal producer
chicken farmer

cow-calf operator
crop farmer
dairy cattle breeder
dairy farm manager
dairy farmer
dog breeder
domestic animal breeder
egg producer
farm business manager
farm manager
farmer (except nursery and fish farm)
farmer, beef cattle
farmer, grain and oilseed
farmer, hog
farmer, poultry - egg production
farmer, sheep
farmer, sugar beet
feedlot farmer
feedlot manager
feedlot operator
forage crop farmer
fruit farm operator
fruit farmer
fruit grower
fruit producer
fur farmer
fur-bearing-animal farmer
ginseng grower
goat breeder
grain and oilseed farmer
grain and oilseed grower
grain and oilseed producer
grain farm manager
grain farm operator
grain farmer
grain grower
grain producer
grape grower
grower, ginseng
grower, hop
hatchery manager

hatchery operator
hog breeder
hog farmer
hog producer
hop grower
hop producer
horse breeder
kennel operator
livestock farmer
manager, farm
maple syrup producer
market gardener
mixed farmer
mushroom grower
mushroom producer
pheasant breeder
potato farmer
potato grower
potato producer
poultry breeder
poultry breeder - egg production
poultry farm manager
poultry farmer - egg production
poultry producer
producer, poultry
rabbit breeder
rancher
ranchman/woman
rodent raiser
seed farmer
seed grower
seed producer
sheep farm operator
sheep farmer
sod farmer
sugar beet farmer
tobacco farmer
tomato grower
tropical fish breeder
truck farmer
turf farmer

turkey producer
vegetable gardener
vegetable grower
vineyard manager
wheat farmer
wheat grower
wheat producer

# (NOC-S 2001)

## I012 Agricultural and Related Service Contractors and Managers

Contractors and managers in this unit group operate establishments that provide agricultural services such as livestock and poultry breeding, soil preparation, crop planting, crop spraying, cultivating or harvesting.

### Exclusions

- Farm workers are classified in unit group I021 - General Farm Workers
- Farm supervisors and skilled livestock workers are classified in unit group I013 - Farm Supervisors and Specialized Livestock Workers
- Farmers are classified in unit group I011 - Farmers and Farm Managers
- Kennel workers and pet groomers and related occupations are classified in unit group G923 - Pet Groomers and Animal Care Workers
- Veterinarians are classified in unit group D014 - Veterinarians

# Search of Alphabetical Index in NOC-S 2001

I012 aerial crop dusting service manager
artificial insemination service manager
artificial inseminator
caponizing service contractor
contractor - agricultural service
crop dusting contractor
crop dusting service manager
crop harvesting contractor

crop harvesting service manager
custom combine contractor
custom combine operator
custom harvester
custom operator, farm machinery
dehorning service contractor
egg grading station manager
farm irrigating system contractor
farm produce grading service contractor
farm produce packing service manager
fertilization service manager - agriculture
grain custom harvester
livestock breeding service manager
livestock exchange manager
manager, artificial insemination service
manager, crop harvesting service
manager, farm produce packing service
manager, fertilization service - agriculture
manager, weed control service - agriculture
milking services contractor
planting and cultivation contractor
poultry-hatching services contractor
seed cleaning service contractor
seeding contractor
sheep shearing contractor
soil preparation contractor
soil-testing service contractor
station manager, egg grading
weed control service manager - agriculture
wool shearing contractor

# National Occupational Classification - Statistics 2001 (NOC-S 2001)

## I013 Farm Supervisors and Specialized Livestock Workers

Farm supervisors supervise the work of general farm workers and harvesting labourers and perform general farm duties. Specialized livestock workers carry out feeding, health and breeding programs on dairy, beef, sheep, poultry and hog farms and may also supervise general farm workers and harvesting labourers.

### Exclusions

- Labourers who pick row and orchard crops are classified in unit group I211 - Harvesting Labourers
- General farm workers are classified in unit group I021 - General Farm Workers
- Farmers and farm managers are classified in unit group I011 - Farmers and Farm Managers
- Pet groomers and animal care workers are classified in unit group G923 - Pet Groomers and Animal Care Workers

agriculture
foreman/woman

animal farm foreman/woman
animal husbandry foreman/woman
apple orchard foreman/woman
beef cattle herdsperson
cattle feedlot foreman/woman
cattle herdsperson
cattle ranch foreman/woman
corral boss
dairy farm foreman/woman
dairy farm workers foreman/woman
dairy herdsperson
dressage and stunt horse trainer
farm boss
farm business foreman/woman
farm foreman/woman

farm operation foreman/woman
farm operation supervisor
farm supervisor
farm workers supervisor
feedlot foreman/woman
feedlot herd attendant
field crop and vegetable workers foreman/woman
field crop foreman/woman
field-grown crop foreman/woman
field-grown crop workers foreman/woman
foreman/woman, apple orchard
foreman/woman, dairy farm workers
foreman/woman, farm
foreman/woman, feedlot
foreman/woman, field crop and vegetable workers
foreman/woman, fruit farm
foreman/woman, fruit farm workers
foreman/woman, hatchery workers
foreman/woman, livestock farm workers
foreman/woman, orchard
foreman/woman, poultry farm workers
foreman/woman, ranch
foreman/woman, vegetable farm workers
foreman/woman, vineyard
fruit farm foreman/woman
fruit farm workers foreman/woman
grain crop foreman/woman
hatchery foreman/woman
hatchery workers foreman/woman
herd attendant
herd attendant, feedlot
herd superintendent
herdsman/woman
herdsperson
hog farm foreman/woman
hog farm supervisor
hog farm workers supervisor
hog operation supervisor
hop farm foreman/woman

horse stable foreman/woman
horse trainer
irrigation supervisor - agriculture
livery stable foreman/woman
livestock attendant
livestock farm workers foreman/woman
livestock foreman/woman
livestock raising foreman/woman
maple products foreman/woman - agriculture
orchard foreman/woman
pasture-managing supervisor
pork production technician
pork production technician apprentice
poultry farm foreman/woman
poultry farm workers foreman/woman
poultry operation supervisor
racehorse trainer
ranch foreman/woman
sheep handler
sheep herdsperson
shepherd
stable boss
stockyard and herdsmen foreman/woman
sugarbush operation foreman/woman
supervisor, hog farm workers
swine herdsperson
tobacco farm foreman/woman
tobacco farming workers foreman/woman
trainer, horse
trainer, racehorses
turkey farm foreman/woman
turkey farming workers foreman/woman
vegetable farm foreman/woman
vegetable farm workers foreman/woman
vineyard foreman/woman
vineyard workers foreman/woman

# (NOC-S 2001)

## I014 Nursery and Greenhouse Operators and Managers

Nursery and greenhouse operators and managers plan, organize, direct and control the activities of nursery and greenhouse staff who grow and market trees, shrubs, flowers and plants.

### Exclusions

- Supervisors of nursery and greenhouse workers are classified in unit group I016 - Supervisors, Landscape and Horticulture
- Landscaping contractors are classified in unit group I015 - Landscaping and Grounds Maintenance Contractors and Managers
- Managers of retail garden centres are classified in unit group A211 - Retail Trade Managers

Christmas tree farm operator
evergreen grower
flower grower
greenhouse farmer
greenhouse manager
greenhouse operator
grower, evergreens
grower, flower
grower, hothouse flowers
grower, plants - nursery
grower, roses
grower, shrubs
grower, trees - nursery
horticultural contractor
horticultural greenhouse operator
hothouse flower grower
hydroponic greenhouse operator
hydroponics grower
hydroponics operator
manager, greenhouse
manager, nursery
nursery farmer

nursery manager
nursery operator
nurseryman/woman
operator, greenhouse
operator, horticultural greenhouse
operator, hydroponic greenhouse
operator, nursery
operator, tree nursery
plant grower - nursery
rose grower
shrub grower
tree grower - nursery
tree nursery operator

# (NOC-S 2001)

## I017 Aquaculture Operators and Managers

Aquaculture operators and managers manage operations of facilities which cultivate and harvest fish, shellfish or marine plants for replenishment of wildlife stocks or for commercial sale. They are employed by public or private fish hatcheries and commercial aquatic farms, or they may be self-employed.

### Exclusions

- Aquaculture support workers are classified in unit group I213 - Aquaculture and Marine Harvest Labourers
- Hydroponics operators are classified in unit group I014 - Nursery and Greenhouse Operators and Managers
- Aquaculture technicians are classified in unit group C121 - Biological Technologists and Technicians

# Search of Alphabetical Index in NOC-S 2001

I017 aquaculture manager
aquaculture operator
eel farmer
fish culture manager
fish culture operator
fish farm manager

fish farm manager
fish farm operator
fish farmer
fish hatchery manager
fish hatchery operator
lobster farmer
manager, fish culture
manager, fish farm
manager, fish hatchery
mussel farmer
mussel grower
operator, fish culture
operator, fish farm
operator, fish hatchery
oyster farmer
oyster grower
salmon farmer
salmon grower
trout farmer

# (NOC-S 2001)

## I02 Agriculture and Horticulture Workers

Occupations in this minor group are primarily concerned with general farm work and with planting, cultivating and harvesting plants, flowers, trees and shrubs in a nursery or greenhouse.

## I021 General Farm Workers

General farm workers plant, cultivate and harvest crops, raise livestock and poultry and maintain and repair farm equipment and buildings. This group includes operators of farm machinery. General farm workers are employed on crop, livestock, fruit, vegetable and specialty farms.

### Exclusions

- Labourers who pick row and orchard crops are classified in unit group I211 - Harvesting Labourers
- Tree surgeons are classified in unit group I022 - Nursery and Greenhouse

Workers

- Skilled livestock workers are classified in unit group I013 - Farm Supervisors and Specialized Livestock Workers
- Workers that provide agriculture services such as custom harvesting are classified in unit group I012 - Agricultural and Related Service Contractors and Managers

apiary worker
artificial breeding worker
attendant, livestock yard
attendant, stockyard
baler - agriculture
baling machine operator - farm
barn worker
beef cattle farm worker
binder operator - agriculture
cattle ranch labourer
cattle ranch worker
chick sexer
chicken catcher
chore hand - agriculture
cleaner, poultry yard
combine operator
cowboy/cowgirl
cowhand
cowherd
cowpuncher
crewperson, custom harvest
cropsprayer machine operator
cultivator operator
curer, tobacco
custom harvest crewperson
dairy farm labourer
dairy farm worker
dairy hand
driver, livestock
egg candler
egg gatherer
egg grader

egg grading machine tender
egg grading station labourer
egg processing machine tender
examiner, fruit - agriculture
exerciser, racehorse
farm equipment operator
farm hand
farm labourer
farm labourer, grain
farm machinery operator
farm worker
farm worker, fruit
farm worker, general
farm worker, grain
farm worker, hogs
farm worker, mushrooms
farm worker, pheasants
farm worker, poultry
farm worker, sugar-beets
farm worker, tobacco
farm worker, vegetables
feedlot assistant
feedlot worker
feedyard assistant
feedyard worker
field and vegetable crop labourer
field crop and vegetable-growing worker
fruit examiner - agriculture
fruit farm labourer
fruit farm worker
fruit farming labourer
fruit tree pruner
fruit tree thinner
fur farm worker
fur farming worker
fur ranch labourer
general farm worker
grafter - orchard
grain farm labourer
grain farm worker
grain thresher

groom - farm
harvester machine operator
hatchery worker
hay baler operator - agriculture
herder - stockyards
hog farm worker
hop-picking machine operator
horse breaker
incubator tender - agriculture
irrigation worker
irrigator sprinkler system
irrigator wheel line system
irrigator, rows
labourer, cattle ranch
labourer, dairy farm
labourer, egg grading station
labourer, farm
labourer, field and vegetable crops
labourer, fruit farming
labourer, fur ranch
labourer, grain farm
labourer, livestock
labourer, poultry farming
lamb feedlot worker
livestock driver
livestock labourer
livestock weigher
livestock yard attendant
livestock yardman/woman
maple syrup maker
maple tapping worker
market garden worker
milk production labourer
milking machine tender
mushroom farm worker
oilseed crop worker
operator, baling machine - agriculture
operator, farm machinery
operator, harvester machine
operator, hop-picking machine
operator, threshing machine

operator, tobacco harvesting machine
orchard worker
pasture rider
penrider
pheasant farm worker
poultry farm labourer
poultry farm worker
poultry yard cleaner
primer, tobacco
pruner, vineyard
racehorse exerciser
ranch hand
ranch labourer, fur
ranch worker
row irrigator
sexer, chicks
sheep feedlot worker
sheep shearer
soya bean crop worker
stable assistant
stable hand
stable worker
stableman/woman
stock attendant
stockyard attendant
sugar bush worker
sugar-beet farm worker
tender, egg processing machine
tender, incubator - agriculture
tender, milking machine
threshing machine operator
tobacco curer
tobacco farm worker
tobacco harvesting machine operator
tobacco primer
tractor operator, farming
vegetable farm worker
vegetable thinner
vineyard pruner
weigher, livestock
worker, artificial insemination

worker, farm
yard attendant, livestock
yard cleaner, poultry
yardman/woman, livestock

## I022 Nursery and Greenhouse Workers

Nursery and greenhouse workers plant, cultivate and harvest trees, shrubs, flowers and plants, and serve nursery and greenhouse customers. They are employed in indoor and outdoor nurseries and greenhouses.

### Exclusions

- Bulb planters and landscaping labourers are classified in unit group I212 - Landscaping and Grounds Maintenance Labourers
- Nursery and greenhouse operators are classified in unit group I014 - Nursery and Greenhouse Operators and Managers

Christmas tree shearer
Christmas tree trimmer
forest assistant nursery
forest nursery worker
greenhouse worker
hand sprayer - greenhouse
hothouse worker
hydroponics worker
interior plantscaper
nursery worker
plant propagator - greenhouse or nursery
sprayer, hand - greenhouse
stadium groundskeeper
tree grafter - nursery

# North American Industry Classification 1997 (NAICS 1997)

**Structure**

Agriculture, Forestry, Fishing and Hunting

Crop Production

### Oilseed and Grain Farming

Soybean Farming
Soybean Farming
Oilseed (except Soybean) Farming
Oilseed (except Soybean) Farming
Dry Pea and Bean Farming
Dry Pea and Bean Farming
Wheat Farming
Wheat Farming
Corn Farming
Corn Farming
Rice Farming
Rice Farming
Other Grain Farming
Other Grain Farming

### Vegetable and Melon Farming

Vegetable and Melon Farming
Potato Farming
Other Vegetable (except Potato) and Melon Farming

### Fruit and Tree Nut Farming

Orange Groves
Orange Groves
Citrus (except Orange) Groves
Citrus (except Orange) Groves
Non-Citrus Fruit and Tree Nut Farming
Non-Citrus Fruit and Tree Nut Farming

### Greenhouse, Nursery and Floriculture Production

Food Crops Grown Under Cover
Mushroom Production
Other Food Crops Grown Under Cover
Nursery and Floriculture Production
Nursery and Tree Production
Floriculture Production

### Other Crop Farming

Tobacco Farming
Tobacco Farming
Cotton Farming
Cotton Farming
Sugar-Cane Farming
Sugar-Cane Farming
Hay Farming
Hay Farming
All Other Crop Farming
Fruit and Vegetable Combination Farming
All Other Miscellaneous Crop Farming

## Animal Production

### Cattle Ranching and Farming

Beef Cattle Ranching and Farming, including Feedlots
Beef Cattle Ranching and Farming, including Feedlots
Dairy Cattle and Milk Production
Dairy Cattle and Milk Production

### Hog and Pig Farming

Hog and Pig Farming
Hog and Pig Farming

### Poultry and Egg Production

Chicken Egg Production
Chicken Egg Production
Broiler and Other Meat-Type Chicken Production
Broiler and Other Meat-Type Chicken Production

Turkey Production
Turkey Production
Poultry Hatcheries
Poultry Hatcheries
Other Poultry Production
Combination Poultry and Eggs Production
All Other Poultry Production

### Sheep and Goat Farming

Sheep Farming
Sheep Farming
Goat Farming
Goat Farming

### Animal Aquaculture

Animal Aquaculture
Animal Aquaculture

### Other Animal Production

Apiculture
Apiculture
Horse and Other Equine Production
Horse and Other Equine Production
Fur-Bearing Animal and Rabbit Production
Fur-Bearing Animal and Rabbit Production
All Other Animal Production
Livestock Combination Farming
All Other Miscellaneous Animal Production

## Forestry and Logging

### Timber Tract Operations

Timber Tract Operations
Timber Tract Operations

### Forest Nurseries and Gathering of Forest Products

Forest Nurseries and Gathering of Forest Products

Forest Nurseries and Gathering of Forest Products

### Logging

Logging
Logging (except Contract)
Contract Logging

## Fishing, Hunting and Trapping

### Fishing

Fishing
Salt Water Fishing
Inland Fishing

### Hunting and Trapping

Hunting and Trapping
Hunting and Trapping

## Support Activities for Agriculture and Forestry

### Support Activities for Crop Production

Support Activities for Crop Production
Support Activities for Crop Production

### Support Activities for Animal Production

Support Activities for Animal Production
Support Activities for Animal Production

### Support Activities for Forestry

Support Activities for Forestry
Support Activities for Forestry