

CITY OF KAWARTHA LAKES AND THE GREATER PETERBOROUGH AREA

- Agricultural Economic Impact & Development Study -

September 15, 2006



CITY OF KAWARTHA LAKES AND THE GREATER PETERBOROUGH AREA

- AGRICULTURAL ECONOMIC IMPACT AND DEVELOPMENT STUDY -

PLANSCAPE
104 Kimberley Ave.,
Bracebridge, ON P1L 1Z8

IN ASSOCIATION WITH:

REGIONAL ANALYTICS INC.
2377 Pathfinder Dr.,
Burlington, ON L7L 6N8

September 15, 2006



PLANSCAPE

BUILDING COMMUNITY THROUGH PLANNING

COPYRIGHT, 2006 PLANSCAPE
ALL RIGHTS RESERVED

**The City of Kawartha Lakes and The Greater Peterborough Area
acknowledges the financial contributions of the following:**

Kawartha Lakes Community Futures Development Corporation

Peterborough Community Futures Development Corporation

Peterborough County Federation of Agriculture

Victoria / Haliburton Federation of Agriculture

Greater Peterborough Area Economic Development Corporation

City of Kawartha Lakes

Workforce Development Board

Industry Canada



List of Funding Partners, Committee Membership and Affiliations

Funding Partners

Kawartha Lakes Community Futures Development Corporation
Peterborough Community Futures Development Corporation
Peterborough County Federation of Agriculture (PCFA)
Victoria/Haliburton Federation of Agriculture (VHFA)
Greater Peterborough Area Economic Development Corporation (GPAEDC)
City of Kawartha Lakes
Workforce Development Board
Industry Canada

Volunteer Steering Committee

Kawartha Lakes

Steve Bent	Victoria/Haliburton Federation of Agriculture
Evelyn Chambers	representing the Agricultural Development Advisory Board, City of Kawartha Lakes
Bill Hawman	Victoria/Haliburton Federation of Agriculture
Donna Villemaire	Councillor, City of Kawartha Lakes
Carolyn Puterbough	Agricultural Development Officer City of Kawartha Lakes Economic Development
Kelly Maloney	Agricultural Development Officer City of Kawartha Lakes Economic Development

Greater Peterborough Area

Ron Millen (Chair)	Reeve, Smith-Ennismore-Lakefield
Scott Stewart	Peterborough County Federation of Agriculture
Wayne Warner	Peterborough County Federation of Agriculture
Gord Evans	Workforce Development Board
Ann-Marie Kelleher	Manager, Rural Economic Development, Greater Peterborough Area Economic Development Corporation
Judy Coward	Economic Development Consultant Ontario Ministry of Agriculture, Food & Rural Affairs
Brian Hancock	Service Representative, Ontario Federation of Agriculture



PLANScape
BUILDING COMMUNITY THROUGH PLANNING



- Table of Contents -

City of Kawartha Lakes and the Greater Peterborough Area Agricultural Economic Impact and Development Study

TABLE OF CONTENTS

Chapter 1	Introduction	1.1
1.1	Background and Purpose	1.1
1.2	Study Objectives	1.1
1.3	Audience	1.2
1.4	Study Team	1.2
1.5	Study Area	1.2
1.6	Report Structure	1.3
1.7	Research Methodology	1.4
Chapter 2	Kawartha Lakes and Peterborough Land Base	2.1
2.1	Introduction	2.1
2.2	The Geographic Profile	2.1
2.3	Physiography	2.2
2.4	Soil Capability	2.5
2.5	Climate	2.6
2.6	Productivity Potential	2.7
2.6.1	Microclimate & Micro Soil Classification	2.7
2.6.2	Land Suitability Rating System	2.8
2.6.3	Land Evaluation and Area Review (LEAR)	2.8
2.7	Summary	2.9
Chapter 3	Land Use Planning Profile	3.1
3.1	Historical Context	3.1
3.2	Current City Initiatives	3.2
3.2.1	Existing Planning Policies	3.2
3.2.2	Development Issues	3.6
3.2.3	Future Direction	3.7
3.2.4	Current Issues	3.8
3.3	Provincial Policy	3.8
3.3.1	Provincial Policy Statement	3.9
3.3.2	The Greenbelt Plan	3.11
3.3.3	Places to Grow Act	3.11
3.3.4	Oak Ridges Moraine Conservation Act and Plan	3.12
3.3.5	Provincial Legislation	3.12
3.4	Summary	3.12



Chapter 4	Profile of Agriculture	4.1
4.1	Introduction	4.1
4.2	Total Number of Farms, Area of Farmland and Gross Farm Receipts	4.1
4.3	Change in Number of Farms and Farmland Acreage 1971 – 2001	4.3
4.4	Land Ownership	4.6
4.5	Farm Size	4.9
4.6	Farm Type	4.10
4.7	Gross Farm Receipts.....	4.12
4.8	Farm Operating Costs	4.17
4.9	Profiles.....	4.18
4.9.1	The Horse and Pony Sector; A Profile of the Equestrian Industry	4.18
4.9.2	The Livestock Sector	4.25
4.10	Summary	4.27
Chapter 5	Measuring the Economic Impact of Agriculture.....	5.1
5.1	Introduction	5.1
5.2	Economic Impact Analysis.....	5.1
5.2.1	Methodology	5.1
5.2.2	Direct, Indirect, Induced and Labour Income Impacts	5.3
5.2.3	Output Multipliers and Propulsiveness	5.5
5.2.4	Conclusion	5.6
5.3	A Review of Agriculturally Related Businesses	5.7
5.4	Business Profile	5.11
5.4.1	Food Processing	5.11
5.4.2	Tourism	5.11
5.4.3	Business Inventory.....	5.12
5.5	Agricultural Tax Base	5.13
5.5.1	Tax Contribution.....	5.13
5.5.2	“Value added” Contribution.....	5.14
5.6	Summary	5.14
Chapter 6	Societal and Environmental Benefits of Agriculture	6.1
6.1	Societal Benefits.....	6.1
6.1.1	Historical.....	6.1
6.1.2	Culture and Community Benefits.....	6.2
6.1.3	Education and Knowledge.....	6.4
6.1.4	Food Security, Quality and Safety	6.7
6.1.5	Reconnecting Urban Society with their Rural Roots	6.8
6.1.6	New Business Opportunities	6.9
6.1.7	Farm Organizations	6.9
6.2	Environmental Benefits.....	6.12
6.2.1	Environmental Farm Plans	6.13



6.2.2	Nutrient Management Plans	6.13
6.2.3	Stewardship Programs	6.13
6.2.4	Ecological, Organic and Alternative Agriculture	6.14
6.3	Summary	6.14
Chapter 7 – Human Resources		7.1
7.1	Introduction	7.1
7.2	Demographic Profile	7.1
7.3	Operator Employment Profile	7.4
7.4	Labour Force Characteristics	7.5
7.5	Employment Issues	7.7
7.6	Training Needs	7.8
7.7	Educational Programming	7.8
7.8	Summary	7.9
Chapter 8 Conclusions and Recommendations		8.1
8.1	Conclusions	8.1
8.2	Strengths	8.1
8.3	Concerns	8.2
8.4	Opportunities	8.4
8.5	Resources	8.6
8.6	Expectations	8.7
8.7	Recommendations	8.8
Glossary of Terms		Glossary 1 to 6
Bibliography		Bibliography 1 to 24

LIST OF APPENDICES (Under Separate Cover)

Appendix 1	Agricultural Related Business – Survey and Analysis
Appendix 2	Measuring the Economic Impact of Agriculture – Survey and Analysis
Appendix 3	Excerpts from “Ontario’s Countryside: A Resource to Preserve or an Urban Area in Waiting?”
Appendix 4	Profile of Agriculture (Figures)
Appendix 5	Agricultural Tax Base
Appendix 6	Kawartha Lakes, Haliburton Region and Peterborough County 4-H Clubs
Appendix 7	Human Resources (Figures)

City of Kawartha Lakes and the Greater Peterborough Area

Agricultural Economic Impact and Development Study

LIST OF FIGURES

- Figure 1.1 Kawartha Lakes/Peterborough - Location Map
- Figure 1.2 Kawartha Lakes/Peterborough - Political Boundaries by Township
- Figure 2.1 Kawartha Lakes/Peterborough - Physiography
- Figure 2.2 Principal Zones of Soil Limitations for Agriculture in Canada
- Figure 2.3 Kawartha Lakes/Peterborough - Agricultural Soil Classification and Crop Heat Units for Southern Ontario
- Figure 2.4 Kawartha Lakes/Peterborough - Agricultural Soil Classifications and Crop Heat Units
- Figure 3.1 Kawartha Lakes/Peterborough - Political Boundaries by Township - 2001
- Figure 4.1 Historical - Number of Farms in Ontario, Central Ontario Region, City of Kawartha Lakes and County of Peterborough (Percentage of Change), 1971 to 2001
- Figure 4.2 Historical - Farmland Area (ac) in Ontario, Central Ontario Region, City of Kawartha Lakes and the County of Peterborough (Percentage of Change), 1971 to 2001
- Figure 4.3 Kawartha Lakes/Peterborough - Farmland Area by Township (Percentage of Change), 1996 and 2001
- Figure 4.4 Historical - Farmland Acres Owned and Rented in Ontario, Central Ontario Region, City of Kawartha Lakes and the County of Peterborough, 1986-2001
- Figure 4.5 Farmland Area (ac) Owned and Rented in the City of Kawartha Lakes and County of Peterborough by Township, 2001
- Figure 4.6 Farmland Values for the Time Period July 1, 2004 to Jul 14, 2006
- Figure 4.7 Historical - Average Farm Size (ac) in Ontario, Central Ontario Region, City of Kawartha Lakes and the County of Peterborough (Percentage of Change), 1971 to 2001
- Figure 4.8 Number of Farms by Farm Types in City of Kawartha Lakes and County of Peterborough on Farms with Gross Farms Receipts of \$2,500 and over, 2001
- Figure 4.9 Kawartha Lakes/Peterborough - Number Farms by Farm Type, by Township, 2001
- Figure 4.10 Kawartha Lakes/Peterborough - Miscellaneous Specialty by Number of Farms by Township, 2001
- Figure 4.11 Percentage Breakdown of Gross Farm Receipts (excluding forest product sold) for City of Kawartha Lakes and the County of Peterborough by Township, 2001



- Figure 4.12 Kawartha Lakes/Peterborough - Gross Farm Receipts (\$55.7 million) by Township, 2001
- Figure 4.13 Gross Farm Receipts Per Acre for Ontario, Central Ontario Region and City of Kawartha Lakes by Former Township, 2001
- Figure 4.14 Gross Farm Receipts Per Acre for Ontario, Central Ontario Region and County of Peterborough by Township, 2001
- Figure 4.15 Kawartha Lakes/Peterborough - Gross Farm Receipts by Farm Type by Township, 2001
- Figure 4.16 Kawartha Lakes/Peterborough - Historical Trends of Gross Farm Receipts by Farm Type, 1986 to 2001
- Figure 4.17 Farm Capital Per Acre, a Comparison of Ontario and Various Municipalities, Counties and Districts, 2001
- Figure 4.18 Number of Farms and Horses in Ontario, Central Ontario Region and Counties, City, and Districts, 2001
- Figure 4.19 Kawartha Lakes/Peterborough - Equestrian Industry Profile
- Figure 4.20 General Demographic Profile Provincially
- Figure 4.21 Dairy Quota Statistics (Percentage of Change), 1996 to 2006
- Figure 5.1 Gross Farm Receipts for Operations in the Peterborough/Kawartha Lakes Region, 2001
- Figure 5.2 Output Multipliers for all Industries in the City of Kawartha Lakes and Peterborough County
- Figure 5.3 “An illustration of Economic Activity 2001”
- Figure 5.4 An Outline of the Contemporary Agri-Food System
- Figure 6.1 Kawartha Lakes/Peterborough - Connecting with Our Rural Roots - Agricultural Fairs, Events and Festivals
- Figure 6.2 Gaps in Service Displayed by Statistics Canada Population Dissemination Areas – Kawartha Lakes Broadband Gaps
- Figure 6.3 Gaps in Service Displayed by Statistics Canada Population Dissemination Areas – Peterborough Broadband Gaps
- Figure 6.4 Kawartha Lakes/Peterborough - Connecting with Our Rural Roots - Value-Added Farm Operations
- Figure 7.1 Characteristics of Farm Operators for Ontario, Central Ontario Region, City of Kawartha Lakes and the County of Peterborough, 2001



- Figure 7.2 Average Age of Farm Operators by Sales Class and Age Distribution for Ontario, Central Ontario Region, and the City of Kawartha Lakes and the County of Peterborough, 2001
- Figure 7.3 Average Hours Per Week Spent Working for Agricultural Operations and Non-Farm Work for Ontario, Central Ontario Region and County of Peterborough, 1996 and 2001
- Figure 7.4 Labour Force Information for Ontario, City of Kawartha Lakes and the County of Peterborough, 2001





CHAPTER 1

- Introduction -

City of Kawartha Lakes and the Greater Peterborough Area Agricultural Economic Impact and Development Study

Chapter 1 Introduction

1.1 Background and Purpose

Since the early settlers arrived, agriculture has traditionally been the dominant land use and one of the largest industries in both the City of Kawartha Lakes¹ and the Greater Peterborough Area². The combination of climate, soils, geography and location, has enabled the region to sustain an agricultural industry and community that is quite diverse. Agriculture and agriculturally related businesses generate significant economic activity through direct and indirect employment and through the buying and selling of products, goods and services.

To better understand the industry, and plan for its future, an Economic Impact and Development Study Steering Committee (E.I.S.S.C.) was formed and commissioned this study to identify the nature of agriculture within the geographical boundaries of the City of Kawartha Lakes and the County of Peterborough. In recognition of their common interests, the two regions agreed to work together on this important initiative.

The E.I.S.S.C.³ was comprised of:

- The Greater Peterborough Area Economic Development Corporation (GPA EDC);
- The City of Kawartha Lakes – Economic Development (CKL ED); and
- The Peterborough and Victoria/Haliburton Federations of Agriculture.

1.2 Study Objectives

The Steering Committee identified eight objectives which formed the basis for this study. These included:

- describing the current demographic profile of agriculture and transition requirements to adapt to the changing face of agriculture;
- measure the economic impact of agriculture in the City of Kawartha Lakes and the Greater Peterborough Area and analyze the direct, indirect and induced economic impacts of agriculture;
- identify human resource development issues;
- identify current trends in agriculture;
- identify agricultural business opportunities in the study area;

¹ Throughout this study, the City of Kawartha Lakes as created on January 1st, 2001, will be referred to as Kawartha Lakes or the City.

² Through the study, the County of Peterborough will be referred to as Peterborough or the County. Reference to the Greater Peterborough Area includes both the City and County of Peterborough.

³ See inside front cover for a complete list of Funding Partners, Committee membership, and affiliations.



- identify awareness of the impact of external factors such as Bovine Spongiform Encephalopathy (BSE), World Trade Organization (WTO), Greater Toronto Area (GTA) market, legislation, municipal drainage funding, on-farm safety, etc;
- to share findings with municipal, provincial and federal government's; and
- to start the planning process to develop a strategy identifying the strengths, concerns, opportunities, and resources and expectations affecting the agriculture industry; identify possible responses, key contacts, and next steps.

This report contains the results of meeting this unique and comprehensive challenge.

1.3 Audience

As a traditional activity, agriculture as an industry is often overlooked or under estimated in this day of technological change. The ties that historically existed between Canadians and agriculture are disappearing. In the past, many Canadians either grew up on or were only a generation removed from the farm. This is no longer true. Canada has changed to an urban based society and the understanding of rural life is declining. It is intended that this study will provide a base of information that can address this lack of knowledge and understanding of the role agriculture plays in the City of Kawartha Lakes and the Greater Peterborough Area.

For the City of Kawartha Lakes and the Greater Peterborough Area, this study will be the basis for moving forward with initiatives to support agriculture. These initiatives include preparation of land use planning policies, implementation of an integrated and multi dimensional economic development strategy and social planning. This study will be part of the foundation of knowledge required to guide these municipalities into the 21st century.

1.4 Study Team

The study team was structured in response to the specific requirements set out in the terms of reference. The project was coordinated by Margaret Walton, a partner in Planscape, a planning consulting firm specializing in planning for rural areas. The Planscape staff conducted research, both primary and secondary and were responsible for all planning, land use and qualitative components of the study.

Dr. Rick DiFrancesco, of Regional Analytics, an expert in economic input output analysis and professor at the University of Toronto was responsible for the economic analysis. Throughout the study, members of the Steering Committee, area businesses and area farmers provided invaluable input and assistance.




1.5 Study Area

The study area is comprised of the geographical area of the City of Kawartha Lakes and the Greater Peterborough area, as shown on **Figure 1.1**. The City of Kawartha Lakes was created on January 1st, 2001 from the municipalities that were part of the County of Victoria. These included:

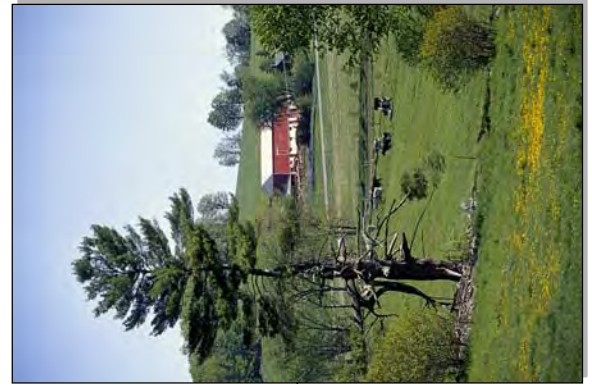
Figure 1.1

**City of Kawartha Lakes and
The Greater Peterborough Area
- Agricultural Economic Impact
& Development Study -**

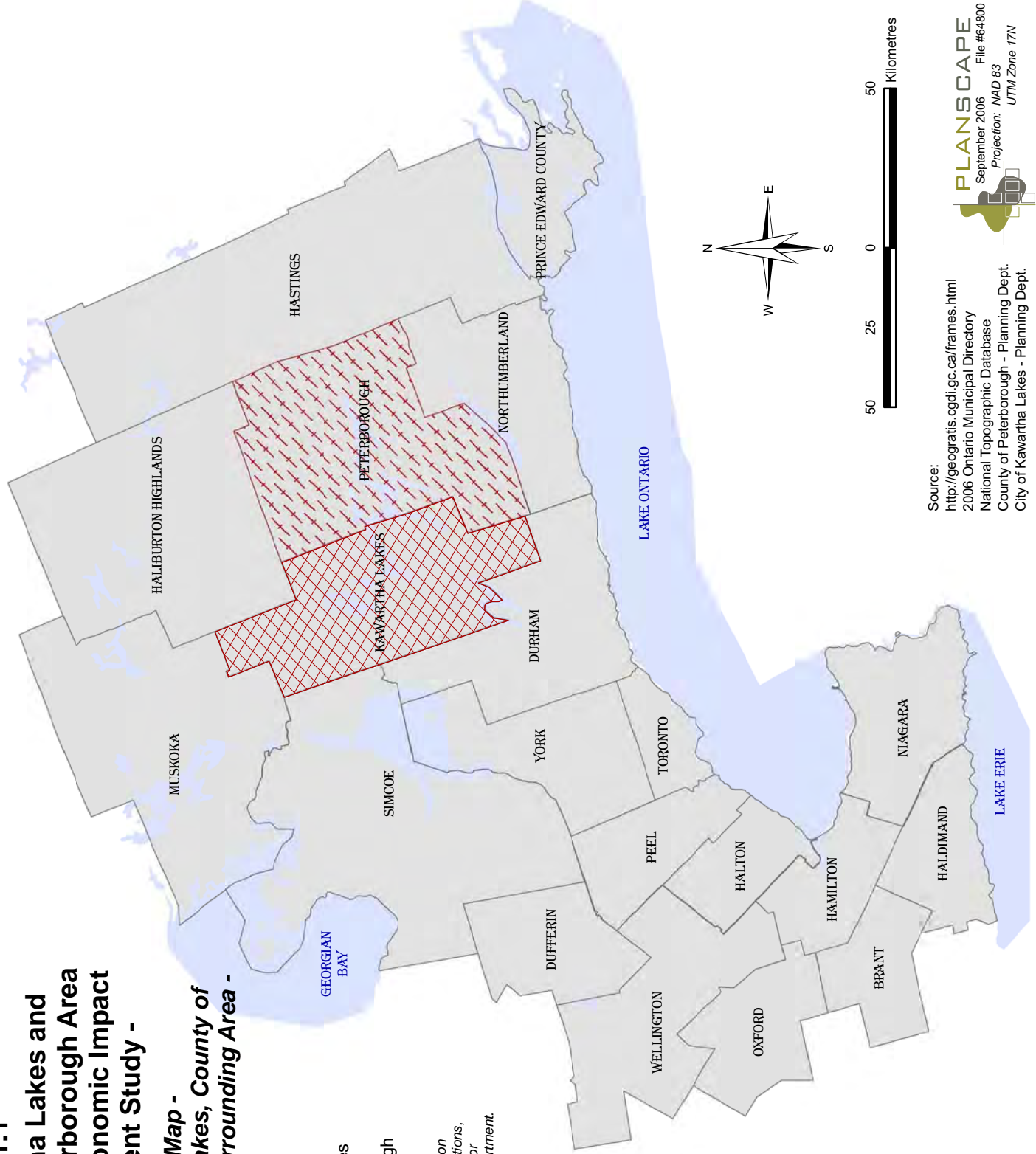
**- Location Map -
- City of Kawartha Lakes, County of
Peterborough and Surrounding Area -**

-  Regional Boundary
-  City of Kawartha Lakes Study Area
-  County of Peterborough Study Area

NOTE: This map is for general illustration purposes only. For boundary interpretations, please contact City of Kawartha Lakes or County of Peterborough Planning Department.



Sources: John Field, 2004.

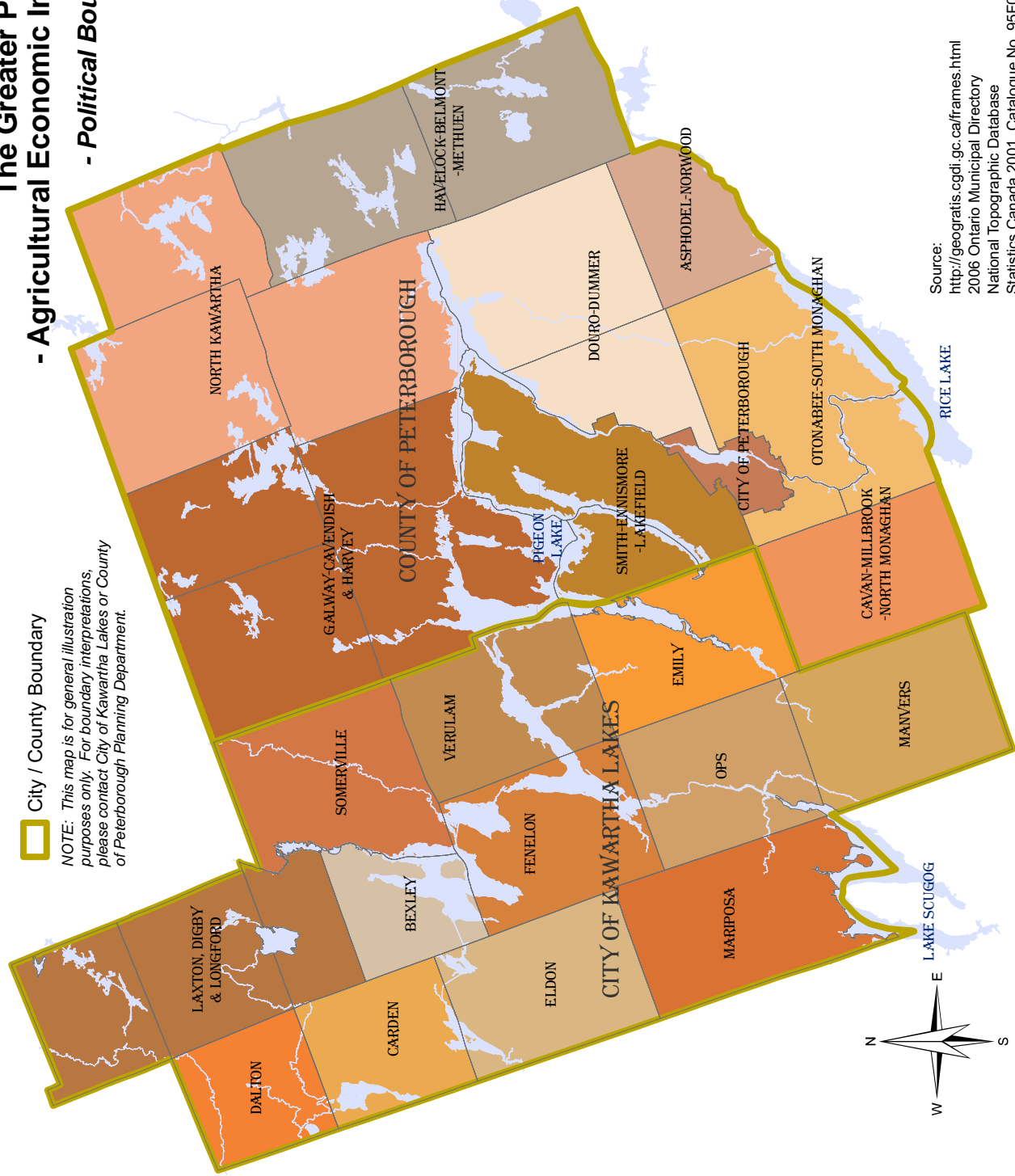


Source:
<http://geogratis.cgd.gc.ca/frames.html>
 2006 Ontario Municipal Directory
 National Topographic Database
 County of Peterborough - Planning Dept.
 City of Kawartha Lakes - Planning Dept.

Figure 1.2

City of Kawartha Lakes and The Greater Peterborough Area

- Agricultural Economic Impact & Development Study -
- Political Boundaries by Township -
- 2001 -



- Town of Lindsay;
- Municipality of Bobcaygeon and Verulam;
- Village of Fenelon Falls;
- Village of Omemee;
- Village of Sturgeon Point;
- Village of Woodville;
- Township of Bexley;
- Township of Carden and Dalton;
- Township of Eldon;
- Township of Emily;
- Township of Fenelon;
- Township of Laxton, Digby & Longford;
- Township of Manvers;
- Township of Mariposa;
- Township of Ops; and
- Township of Somerville.

The Greater Peterborough area includes both the City and County of Peterborough. The City of Peterborough is a separated City. The County of Peterborough includes the following Townships:

- Township of Asphodel-Norwood;
- Township of Cavan-Millbrook-North Monaghan;
- Township of Douro-Dummer;
- Township of Galway-Cavendish-Harvey;
- Township of Havelock-Belmont-Methuen;
- Township of North Kawartha;
- Township of Otonabee South Monaghan; and
- Township of Smith-Ennismore-Lakefield.

Detailed mapping of existing and former municipal boundaries is shown on **Figure 1.2**.

1.6 Report Structure

The report is structured in response to the terms of reference. Sequentially the chapters address:

- Description of the land base;
- The land use and development profile;
- Economic profile of agriculture in Kawartha Lakes and Greater Peterborough Area;
- Impact of agriculture in the Kawartha Lakes and Greater Peterborough Area economy;
- Nature of agriculturally-related businesses;
- Social, cultural, and environmental benefits of agriculture;
- Human resource development;
- Agricultural tax base; and
- Trends, issues, and conclusions.



1.7 Research Methodology

The research methodology used to complete the study included the use of primary and secondary sources. With respect to primary research, two surveys were completed: a general survey of agriculturally related businesses (#1); and a survey specifically designed to provide the data required for a sectoral input and output analysis of the agricultural economy (#2). Results from these surveys were used to formulate the conclusions documented in this study. A copy of survey #1 and a synopsis of its results are contained in **Appendix 1**; a copy of survey #2 and its findings are documented in Chapter 5 of the report and **Appendix 2**; the findings from Survey # 1 are addressed throughout the report.

Meetings were held with representatives of the industry and associated businesses. Throughout the process, the cooperation of all participants enhanced the quality of the results and was greatly appreciated.

The secondary statistical sources relied on for the study included Statistics Canada (Stats Can) and the Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA). Statistics Canada is the basis for the majority of the analysis. Because of this, the definitions used by Statistics Canada are the definitions that underlie the analysis. It should be noted that Stats Can has a number of different definitions of farm used for different purposes. Therefore the numbers used in this report may vary depending on the context in which they are being used. Footnotes and labeling has been used to clarify the nature of the statistics being used in different contexts. To assist in understanding the terms and references in the report, there is a glossary of terms and definitions and a detailed bibliography found at the end of this report.



Photo: John Field, 2004





CHAPTER 2

- Kawartha Lakes and Peterborough Land Base -

Chapter 2 Kawartha Lakes and Peterborough Land Base

2.1 Introduction

This chapter provides an overview of the physical characteristics of the study area. It describes the physiography, climate and soils that support the agriculture that characterizes Peterborough and Kawartha Lakes. It also addresses some of the techniques available to quantify and manage the resource.

2.2 The Geographic Profile

The City of Kawartha Lakes and the County of Peterborough are located in south-central region of Ontario, northeast of Toronto. The area is bordered by the District of Muskoka and the County of Haliburton on the north; Simcoe County and the Regional Municipality of Durham on the west with Durham extending down and around the southern border of the City of Kawartha Lakes; the County of Hastings on the east and Northumberland County on the south. The southern portion of the area is located within easy commuting distance of the Greater Toronto Area (GTA); the northern portion because of the presence of many lakes, is a popular cottaging and vacation area. The region includes the communities of Lindsay, Fenelon Falls, Bobcaygeon, Omemee, Lakefield, Peterborough, Millbrook, Norwood, and Havelock.

Kawartha Lakes with a population of 69,179¹ and an area of 306,690 hectares (ha) is primarily rural. Agriculture continues to be the biggest business in the City with tourism a close second. The proximity to the large, southern Ontario markets facilitates doing business in this municipality; its proximity to the GTA attracts a large population of commuters who work in the GTA and live in Kawartha Lakes.

Peterborough, with a total area 362,240 ha, has a permanent population of approximately 135,000. It is located in the heart of the Kawartha tourism region and has a diverse industrial, commercial and agricultural base. The City of Peterborough is a university town and has recently become a government centre. Strong transportation links with the GTA have resulted in the southern area of the County and the City of Peterborough itself, becoming desirable commuter locations.

The Trent Severn Waterway meanders through the region with numerous locks located along its route. The head offices for the Trent Severn Waterway are located in Peterborough. The Trent Severn facility is a major tourist attraction and an asset for the area.

Approximately half of the region's geographic area is on the Canadian Shield. Despite this, a significant portion of the land base is reported as farmland. Logically, a very high proportion of the agricultural land is located in the southern part of the region south of the rocks that characterize the Canadian Shield. However there is also agricultural land in the northern part of the City, where the type of agriculture is adapted to the physical conditions. The three primary rural influences in the region as a whole, are agriculture, forestry, and waterfront recreational uses.

¹ Statistics Canada 2001

To assess the status of Kawartha Lakes and Peterborough as an agricultural area from a resource perspective, three main factors were considered: physiography (study of the physical features of the earth); soil capability and climate.

2.3 Physiography

Landscape Features

The northern half of the Kawartha Lakes area is associated with the Precambrian Shield, while the southern portion of the municipality is underlain by limestone.

The topography of Kawartha Lakes is quite varied. In the south-east area, the soil materials are deep and roughly formed into steeply sloping large drumlins. The steepness of the slope in certain areas can limit the use of this land for agriculture. In the western part of the municipality there is another highland area but the slopes are generally not as steep and a larger proportion of the land can be cultivated. Between these two highland areas is the former lake bed of glacial Lake Schomberg. The undulating topography in the lake bed is broken by numerous small but steeply sloping drumlins.²

Kawartha Lakes is comprised of several physiographic regions as identified by Chapman and Putnam in "The Physiography of Southern Ontario".³ These physiographic regions are generally described as: Bare Rock Ridges & Shallow Till, Limestone Plain, Till Plain (drumlinized), Till Moraine, Clay Plain and Kame Moraine. Additional physiographic features that have been identified include: Eskers, Drumlins, Spillways, Sand Plain, and Peat & Muck. These features are shown on **Figure 2.1**.

More specifically, the region can be broken down into the following minor physiographic regions, by generally starting at the northern part of the municipality and moving south: Georgian Bay fringe, Carden plain, Simcoe lowlands, Dummer moraines, Peterborough drumlin field, Schomberg clay plains and Oak Ridges Moraine.

As in Kawartha Lakes, the northern half of the County of Peterborough is dominated by the Precambrian Shield, while the southern portion of the municipality is underlain by limestone formations. As a result, much of the northern portion of the County is under forest management.

Peterborough County is noted for its many drumlins, with the City of Peterborough occupying the geographic centre of the drumlin field. The drumlins are composed of highly calcareous glacial till containing great quantities of angular limestone and precambrian materials. Typical drumlins are less than 1.5 km in length, 400 m or less in width and 25 m in height. Many are closely spaced, averaging two or three to the square kilometre. Sometimes the drumlins are more widely separated and glacial spillway channels, sand or clay plains occupy the intervening space. Long sinuous gravel ridges (eskers) are also a feature of the drumlinized landscape. Most of the drumlinized till areas contain soils suitable for sustained crop production, and other soils best suited for long term improved pasture.⁴

² Soil Survey of Victoria County, Report No. 25 of the Ontario Soil Survey, prepared jointly by The Experimental Farm Service (J.E. Gillespie), Canada Department of Agriculture and the Ontario Agricultural College (N.R. Richards), 1957. p 15

³ Chapman, L. J. & Putnam, D. F. The Physiography of Southern Ontario, Third Edition, Ontario Geological Survey Special Volume 2, Ministry of Natural Resources, 1984.

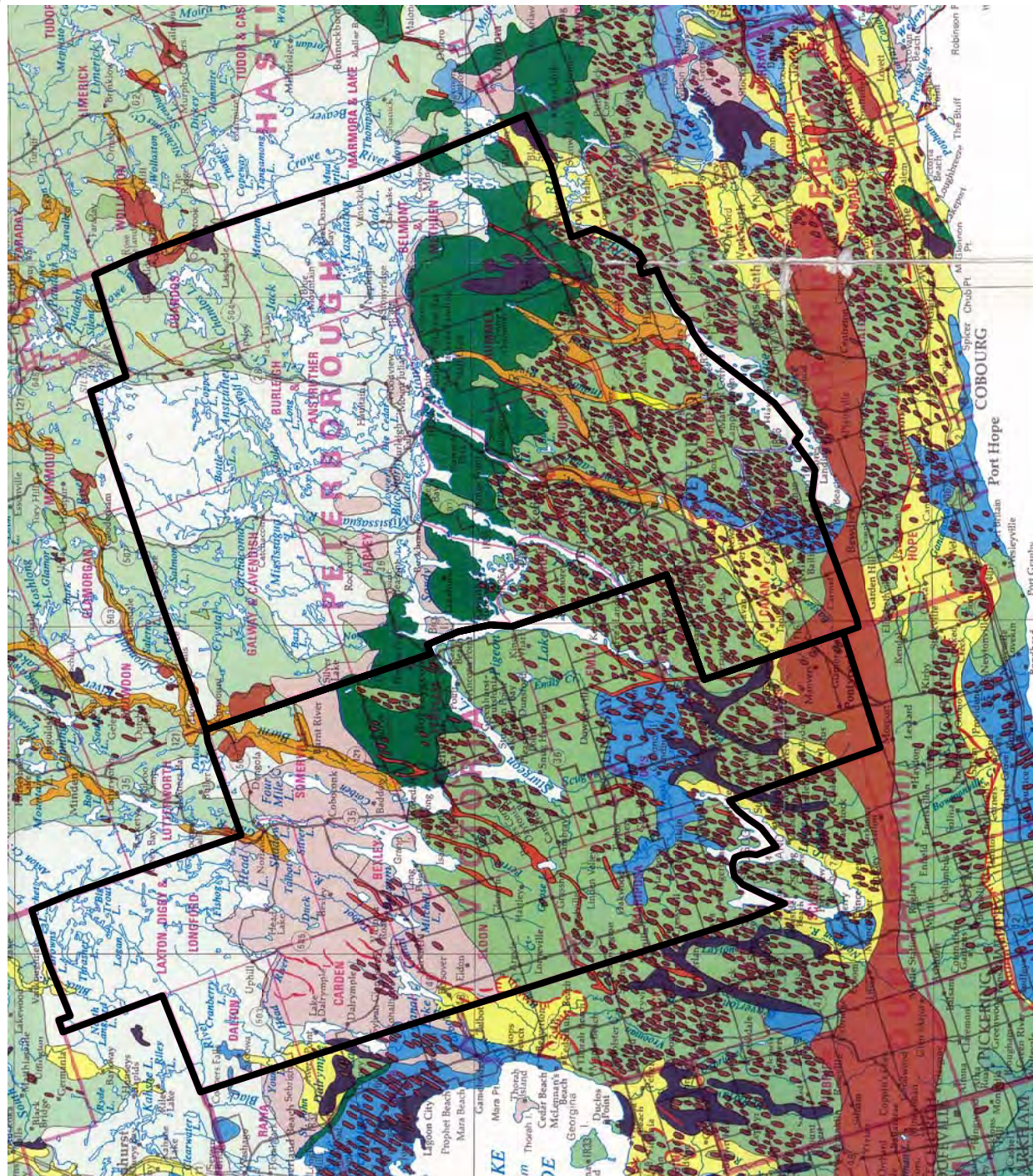
⁴ Soils of Peterborough County, Report No. 45 – Ontario Institute of Pedology. Gillespie, John E. & Acton, C.J., Agriculture Canada Research Branch, Ontario Ministry of Agriculture and Food, Department of Land Resource Science, University of Guelph, 1981. p 9



Figure 2.1

City of Kawartha Lakes and The Greater Peterborough Area - Agricultural Economic Impact & Development Study -

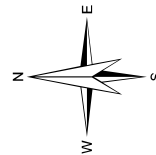
- Physiography -



Regional Boundary

NOTE: This map is for general illustration purposes only. For boundary interpretations, please contact the City of Kawartha Lakes or County of Peterborough Planning Department.

Till Moraine	Spillway
Kame Moraine	Beaches & Shorecliffs
Till Plain (drumlinized)	Escarpment
Drumlins	Limestone Plain
Till Plain (undrumlinized)	Shale Plain
Bevelled Till Plain	Peat & Muck
Shallow Till & Rock Ridges	International Boundary
Bare Rock Ridges & Shallow Till	Interprovincial Boundary
Clay Plain	County, District, Regional or Township Boundary
Sand Plain	Township Boundary, unsurveyed
Esker	Multilane Highway
	King's Highway
	Secondary Highway



Peterborough is comprised of several physiographic regions as identified by Chapman and Putnam in "The Physiography of Southern Ontario"⁵. These physiographic regions are generally described as: Bare Rock Ridges & Shallow Till and Shallow Till & Rock Ridges in the northern part of the County; with Till Moraine and Till Plain (drumlinized) dominating the southern part of the County. Additional physiographic features that have been identified include: Eskers, Drumlins, Spillways, small pockets of Sand Plain, Limestone Plain, Kame Moraine, Clay Plain and Peat & Muck. These features are shown on **Figure 2.1**.

More specifically, the area can be broken down into the following minor physiographic regions; generally starting at the northern part of the municipality and moving south: Algonquin Highlands, Georgian Bay fringe, Dummer moraines, Peterborough drumlin field, and Oak Ridges Moraine.

Natural Drainage

The entire drainage system in Peterborough County is part of the Trent River system, connected by a chain of lakes and rivers including: Pidgeon, Buckhorn, Stony and Rice Lakes and the Otanabee River. There is a large area comprised of poorly drained basins in the southern part of the County with water table levels at or near the surface for most of the year. These are valuable holding basins retaining large quantities of water which aid in maintaining groundwater levels in the area.⁶

Kawartha Lakes is also characterized by a wide network of rivers and lakes. The height of land between Cameron and Sturgeon lakes divides the municipality into two watersheds with the streams on the north flowing southwest and west and those on the south flowing northeast and east. Much of the water in the northern rivers originates in the Precambrian Shield. These rivers are swift flowing and fluctuate rapidly in volume with the amount of rainfall. Many of the streams in the southern part of the city are spring fed originating in the drumlinized areas of that region and in the sandy areas of adjacent counties. The slope of the land is such that there are few swampy areas.⁷

Algonquin Highlands

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

Georgian Bay Fringe

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

Carden Plain

This area stretches from the northern area of Kawartha Lakes across to Lake Couchiching and is comprised of limestone plain with very little overburden. This is a unique geographic area which

⁵ The Physiography of Southern Ontario, Chapman & Putnam.

⁶ Soils of Peterborough County, Gillespie & Acton. p 8

⁷ Soil Survey of Victoria County, Gillespie & Richards. p 15



attracts much attention from naturalists. Due to the nature of this area, the predominant agricultural activity is raising cattle.

Simcoe Lowlands

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

Dummer Moraines

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

Peterborough Drumlin Field

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

The drumlins are most typical in form and most densely distributed in the County of Peterborough. The Peterborough drumlin field is also notable for its eskers, which are not as important with respect to soils. The uniform slopes of most drumlins in Peterborough are amenable to contour cultivation and strip cropping, which is important to control erosion. Almost half of the farmland is used for grazing, and a little less than half of the cropland is used for hay. In this region of Peterborough, there is a mixture of beef cattle, dairy cattle, and pigs, with poultry becoming important in some areas. The northeast/southwest direction of the drumlins contrasts to the north-south/east-west lot lines of most properties, resulting in many triangular and diamond shaped fields, along with odd corners that have much value and appeal as residential building lots.

Schomberg Clay Plains

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

Oak Ridges Moraine

The Oak Ridges Moraine is one of the most distinctive physiographic regions of southern Ontario. It occupies the southernmost tip of Kawartha Lakes and a small pocket in the south-western corner Peterborough County. Generally, the surface is hilly, with a knob-and-basin relief, covered by a



composite of sandy or gravelly materials. Commonly, the hilly sandy soil is subject to blowing, resulting in unstable soil conditions. Cattle seem to thrive on the sparse pastures.⁸




2.4 Soil Capability

Figure 2.2 is a generalized map showing the principal soil zones with agricultural potential in Canada. This map does not factor in additional agricultural constraints such as climate and growing season and thus does not break down the specific capability of agricultural land. However it does provide a snapshot of the location of soils with agricultural potential throughout Canada. It is included to emphasize the point that only 5% of the Canadian land mass is classified as prime agricultural land. A significant portion of the land in southern portions of Kawartha Lakes and Peterborough are included in this 5%.

FIGURE 2.2 - Principal Zones of Soil Limitations for Agriculture in Canada



THE PRINCIPAL ZONES OF SOIL LIMITATIONS FOR AGRICULTURE IN CANADA

-  PREDOMINANTLY FROZEN GROUND
-  UNFROZEN, BUT WITH BEDROCK AT OR NEAR THE SURFACE
-  PRINCIPAL ZONES WITH SOIL POTENTIAL FOR AGRICULTURE

Source: <http://geogratis.cgdi.gc.ca/CLI/frames.html>

In Ontario, the Canada Land Inventory (CLI) is used as the starting point for establishing soil capability for agriculture. It ranks mineral soils in specific areas for the production of common agricultural crops. This system assigns classes and subclasses to land based on a standardized

⁸ The Physiography of Southern Ontario, Chapman & Putnam.

rating system. Organic soils are not rated within this system. Organic soils are unique soils that, depending on circumstances, may be extremely useful for agricultural production.

The Ontario Provincial Policy Statement (PPS)⁹ relies on the soil classification established in the CLI as the basis for identifying land to be protected for agriculture in the province. Class 1, 2 and 3 soils and specialty crop lands as defined in the document, are considered Prime Agricultural Lands and municipalities are required by the PPS to protect them for agriculture. This is a starting point for protection. Some municipalities expand the area to be protected to include Class 4. A detailed explanation of the various classes and subclasses under the CLI is provided in the **Glossary of Terms**.

Figure 2.3 is the CLI mapping for the majority of Ontario. It illustrates that the majority of the high capability land in Ontario is limited by geography to the central and south-western parts of the province, an area that includes portions of Kawartha Lakes and the Greater Peterborough Area. The supply and location of agricultural land as shown on **Figure 2.3**, is fixed.

A review of published mapping indicates that south of the Canadian Shield, Kawartha Lakes is comprised mainly of prime agricultural land, mixed with some Class 4, organic and lower capability soils. The northern portion of the municipality is characterized by Class 6 & Class 7 soils, the lowest capability to support agriculture, associated with the Precambrian Shield.

The mapping indicates that south of the Canadian Shield, Peterborough is comprised mainly of prime agricultural land, specifically Class 1, with limited pockets of organic, Class 4, and lower capability soils. The northern portion of the municipality is characterized by the Class 6 and Class 7 soils associated with the Precambrian Shield. The CLI classifications for Kawartha Lakes and Peterborough are shown on **Figure 2.4**.

2.5 Climate

Climate is the third factor that elevates the productive agricultural capability of an area. Crop heat units (CHU) is an indexing system that assists farmers in selecting appropriate plant and crop varieties for specific geographic areas. Calculations are based on average daily air temperature (daytime minimum 10° C; maximum of 30° C; night time minimum of 4.4° C) and the number of available planting days (based on air temperature calculations for earliest planting date to season ending date). Daily temperatures are influenced by altitude, elevations and locations (such as proximity to large waterbodies), which have a noticeable effect on the accumulated CHU's across southern Ontario. Other factors that influence temperature in a given area are slope and soil type. South-facing slopes tend to receive more heat than north facing slopes, and sandy soils heat up faster than clay soils¹⁰. The Crop Heat Units have been overlaid on the CLI Soil Classification map (**Figure 2.3**) and the map of Kawartha Lakes and Peterborough (**Figure 2.4**).

Heat units are important because plant germination and growth through to maturity depend largely on temperature. Lower overall temperatures impede crop growth whereas warmer temperatures support crop growth. Crop yield is also dependent on factors such as daily available daylight, soil fertility and water availability.

⁹ Provincial Policy Statement approved by the Lieutenant Governor in Council May 1996, revised March 1, 2005.

¹⁰ Ontario Ministry of Agriculture and Food, (October 1993), Factsheet 93-119, *Crop Heat Units for Corn and Other Warm-Season Crops in Ontario*.



Figure 2.3

City of Kawartha Lakes and The Greater Peterborough Area - Agricultural Economic Impact & Development Study -

- Agricultural Soil Classification and Crop Heat Units for Southern Ontario

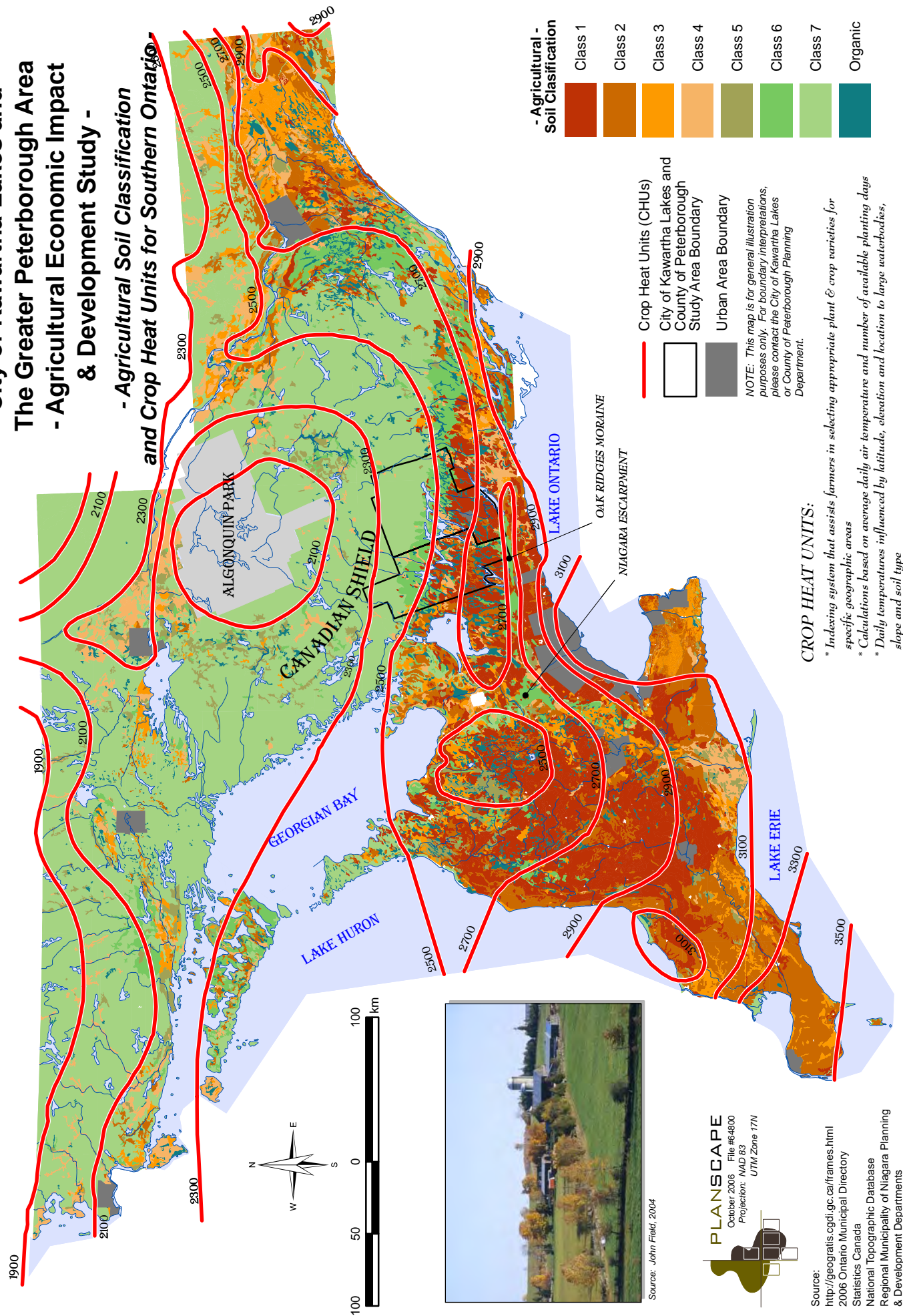
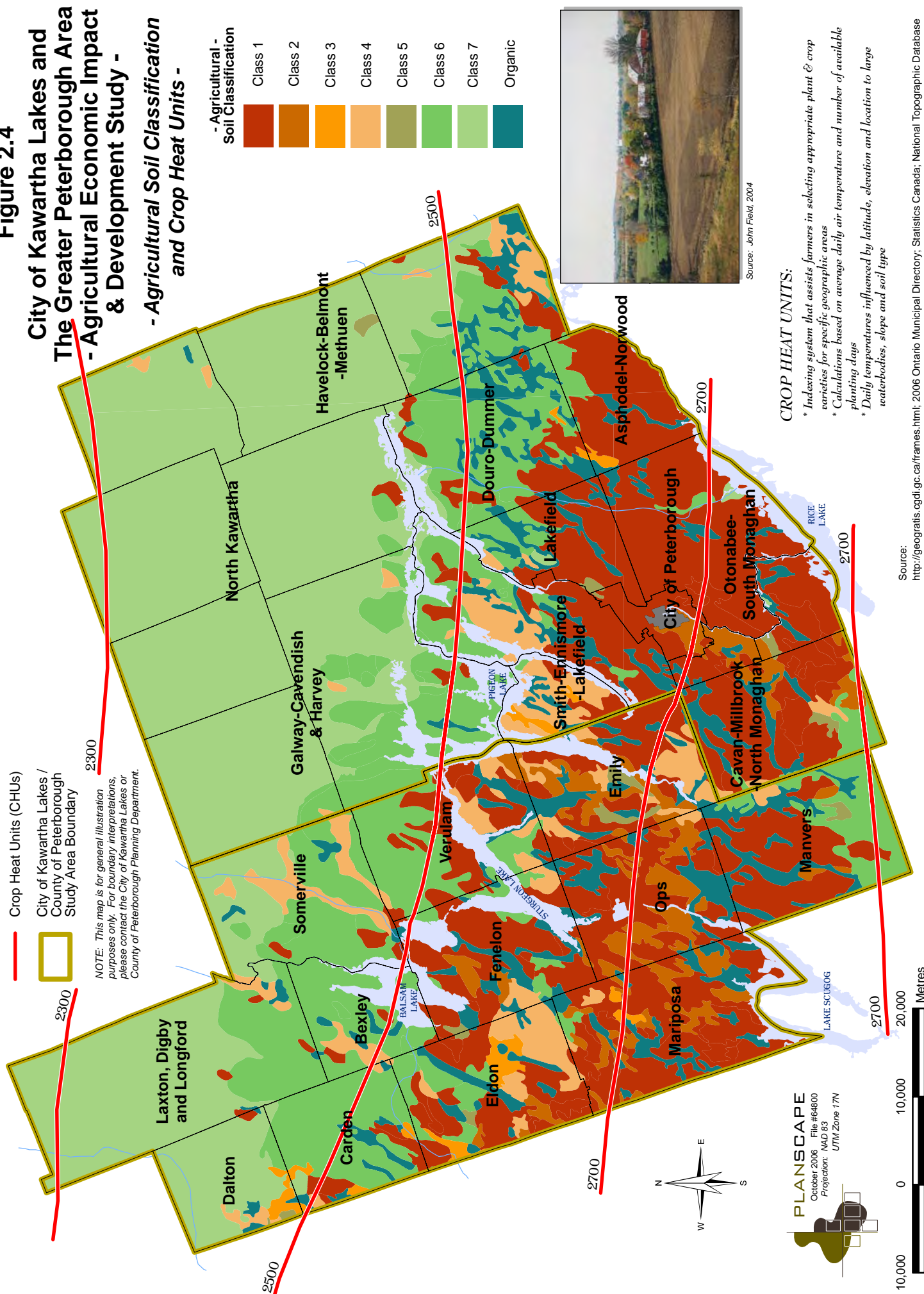


Figure 2.4

City of Kawartha Lakes and The Greater Peterborough Area - Agricultural Economic Impact & Development Study - - Agricultural Soil Classification and Crop Heat Units -



The heat units shown on **Figure 2.4** represent accumulated heat unit ratings for the period from earliest planting to the logical season ending date for an area. This figure illustrates higher growth potential for crops (CHU 2700 rating) in the southern parts of the study area. The available heat units decrease as you move north through Kawartha Lakes and Peterborough. Overall, the region falls within the CHU 2700 to 2300 rating range. The CHU 2500 and below rating range basically corresponds to the Precambrian Shield in the northern parts of Kawartha Lakes and Peterborough. In the southern parts of the study area where the prime agricultural lands are dominant, the CHUs increase from 2500 to 2700. This range of heat units is at the lower end of the range within which most of Ontario's Class 1 to 3 soils lie, the 3100 to 2500 range. Crop heat units contribute to the diversity of agricultural products and range of agricultural productivity in the area.

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

2.6 Productivity Potential

There are other systems available for assessing and ranking the productivity of agricultural lands which go beyond the CLI. These include:

- Microclimate & Micro Soil Classification (agroclimatic resource index);
- Land Suitability Rating System; and
- LEAR – Land Evaluation and Area Review.

Two of these have been applied in Kawartha Lakes and Peterborough.

2.6.1 Microclimate & Micro Soil Classification (agroclimatic resource index)

The Agroclimatic Resource Index (ACRI) evaluates the impact of three climatic restrictions on agricultural potential and provides an approximate method for comparing quality of the agroclimate for agriculture in different parts of Canada. It is calculated from information related to growing season length, temperature and moisture as related to forage yields.

This index is based on long-term records of hay yields, since hay is the only crop which is grown across Canada and can potentially use the full growing season. Index values range from 3.00 for the Kent-Essex counties in south-western Ontario to a low of 1.00 for the Northwest Territories. Farmlands with ACRI values of 2.0 or greater are considered valuable lands.¹¹ Forty-two percent of Canada's total farmland with ACRI values of 2.0 – 2.4 are located within Ontario. The result of combining the CLI system of soil capability and the ACRI index of climate restrictions reveals that southern Ontario has the most favourable soil and climatic conditions for successful agricultural production in Canada.¹² The values in Kawartha Lakes and Peterborough range from 2.0 to 2.4.

¹¹ Canada's Resource Lands. Map Folio No. 4, Environment Canada, 1982.

¹² Farmland in Ontario – Are we losing a valuable resource? Farmland Preservation Research Project, University of Guelph.

Micro soil characteristics include soil texture, drainage and topography. Many of the specialty crops require coarser soil types and thrive on the gravelly and sandy soil materials. Other specialty crops require loamy or sandy materials while other crops will grow well on a broad spectrum of soil textures.

Soil drainage and/or irrigation may play a prominent role in specialty crop production. Soil suitability/productivity ratings will decrease in areas of poorly drained soils due to water logging of soils and excess moisture limitations. Soil suitability/productivity ratings will also decrease with increasing slope due to erosion and topographic limitations. The rate of decrease varies, depending mainly on slope, soil texture and crop type.

2.6.2 Land Suitability Rating System

A Land Suitability Rating System for Spring Seeded Small Grains was completed as a working document in 1992, by the Centre for Land and Biological Resources. This document was created as a procedure for rating the suitability of land for production of spring-seeded small grains in Canada. The system was developed in response to a number of concerns regarding the CLI system, namely:

- the influence of climate on land suitability for crop production was not adequately considered;
- organic soils were not included; and
- lack of specificity in definitions and application guidelines resulted in inconsistent ratings among land rating practitioners.

While the system referred to above gives a rating for spring-seeded small grains, the underlying procedure can be applied to provide a basic framework for rating the land resource for any crop. It is based on land and environmental factors as they affect agriculture and it assumes current management practices.

Soil suitability ratings for spring seeded small grains in the south part of Kawartha Lakes and Peterborough area correspond to the lands classified with CLI ratings 1, 2 and 3. As such, these lands retain the designation of "Prime Agricultural Lands" under this rating system.

2.6.3 Land Evaluation and Area Review (LEAR)

The third evaluation system which a number of municipalities are using to evaluate the agricultural resources within their boundaries, is the Land Evaluation and Area Review (LEAR) system for agriculture. This system was created by the Ontario Ministry of Agriculture, Food and Rural Affairs for use by municipalities in identifying significant agricultural lands for long-term protection.

The LEAR system for agriculture involves inventorying lands with agricultural potential and identifying the highest priority lands in contiguous designations. The starting point for these studies is an evaluation of the land resource based on the Canada Land Inventory. However it goes well beyond the CLI to incorporate the many additional considerations that are part of the evaluation systems described above. Once this land evaluation is complete the area

review addresses other factors affecting the potential enhancement of agriculture, such as the addition of irrigation systems, tile drainage, the potential to diminish long-term agriculture through property fragmentation and the intrusion of non-farm uses. Kawartha Lakes and Peterborough may, at some point, consider a LEAR evaluation as part of the preparation of the new policies affecting agriculture.

2.7 Summary

The physiography, soil capability/suitability and climate that characterize Kawartha Lakes and Peterborough combine to create a valuable agricultural area. Specifically, the southern parts of Kawartha Lakes and Peterborough contain areas extremely well suited to supporting traditional agricultural commodities such as cash crops, livestock and dairy.

In making decisions that affect the land base, consideration must be given to the value of the resource. Other areas with lower capabilities for agriculture can be cultivated but more resources are required to obtain similar (or lower) production levels. These areas can however, be a critical component of the critical mass required to support an agricultural service sector. To make decisions concerning the removal of land from production, those responsible for the decision must be knowledgeable about the characteristics of the area. Only by understanding the implications of removing the land from production can decision makers properly evaluate the consequences of their decisions and determine if they are appropriate in the long term.



Source: Google Earth



CHAPTER 3

- Land Use Planning Profile -

Chapter 3 Land Use Planning Profile

3.1 Historical Context

There is a network of planning controls in place in the study region, regulating the use of land. Understanding how these controls have evolved over time is important because they have had and continue to have, a significant impact on the agricultural industry in the study region. This chapter contains a brief overview of this history and a summary of the current situation.

City of Kawartha Lakes

The City of Kawartha Lakes is a new, single tier municipality created on January 1, 2001 by the amalgamation of sixteen local municipalities that made up the former County of Victoria. These sixteen municipalities are shown on **Figure 3.1**.

Creation of the City of Kawartha Lakes in 2001 was part of a provincial initiative to restructure local government in Ontario thereby reducing the number of municipalities, primarily with the goal of increased financial efficiency. The amalgamation to form the City of Kawartha Lakes was the result of a restructuring commission appointed by the Province.

Historically, the political structure of the County of Victoria reflected the urban/rural split that characterizes the area. The former Towns of Lindsay, Fenelon Falls and Bobcaygeon, which dominate the county from a population and economic perspective, were contained within political units that allowed them to concentrate on more urban issues. The remaining municipalities all had strong rural constituencies. This arrangement established a balance between rural and urban interests. With the development of policies for the amalgamated City of Kawartha Lakes efforts are being made to carefully balance the approach to urban vs. rural issues in the City.

Under the previous county structure, there was a mix of a one and two tier planning policy system. The County of Victoria Official Plan applied to the entire county and provided the framework for the preservation of agricultural land. Three of the local municipalities, the Town of Lindsay, the Township of Ops and the Village of Fenelon Falls, also had approved Official Plans, thereby creating a two tier planning policy framework in those municipalities. The remaining municipalities functioned under a single tier planning policy framework. In the two tier system, the County Official Plan provided the broad policy framework and the local official plans provided specific policies for the local level.

Greater Peterborough Area

The Greater Peterborough Area consists of the County of Peterborough and its eight constituent municipalities and the separated City of Peterborough. Within the County of Peterborough there is a two tier system of planning; the City of Peterborough is a single tier system. The lower tier municipalities within the County and the City of Peterborough are shown on **Figure 3.1** and are the basis for the statistical analysis contained in this report.

The County of Peterborough was originally established in 1845 and included a much larger area. Parts of Peterborough County were subsequently removed to form other counties including Victoria County and Haliburton County. The area that is now the County of Peterborough has been in place



since 1974. Internally within the County, the period between 1998 and 2001 saw a number of amalgamations between the lower tier municipalities that reduced the number of lower tier municipalities to the eight (8) that currently exist.

The City of Peterborough was incorporated as a city in 1905 and has always remained separate, politically from the County of Peterborough. The separation of the City of Peterborough from the rural townships that constitute the County of Peterborough has allowed the political structure within the Greater Peterborough Area to reflect the urban/rural split that characterizes the area. This has established a balance between urban and rural interests wherein the City of Peterborough has concentrated on more urban issues, while the County and the lower tier municipalities have been able to retain their strong rural constituencies.

3.2 Current City Initiatives

City of Kawartha Lakes

The City of Kawartha Lakes is still in a transitional stage from a land use planning perspective. With the inception of the new City, the formulation of a new Official Plan for the City was initiated and is ongoing. Until such time as the new Official Plan is approved, the County of Victoria Official Plan will remain in effect. The three local Official Plans that were in effect have been recognized as subsidiary plans to the County Plan.

Greater Peterborough Area

The recent amalgamations of some of the local municipalities within the County of Peterborough have led to the ongoing development of Official Plans for the new municipalities. The County of Peterborough has also recently updated its Official Plan. These updates have provided an opportunity to ensure that the Official Plans continue to reflect the importance of agricultural to the economy of the Greater Peterborough Area and provide policies to ensure its protection.

3.2.1 Existing Planning Policies

City of Kawartha Lakes

Currently the Official Plan in effect in Kawartha Lakes is the County of Victoria Official Plan with the Official Plans for the Town of Lindsay, the Township of Ops and the Village of Fenelon Falls being Subsidiary Plans. The County of Victoria Official Plan was approved in 1979 and has been in effect since that time. The Subsidiary Plans are of varying ages. These plans will all be replaced by one plan for the entire City once the planning program is complete.

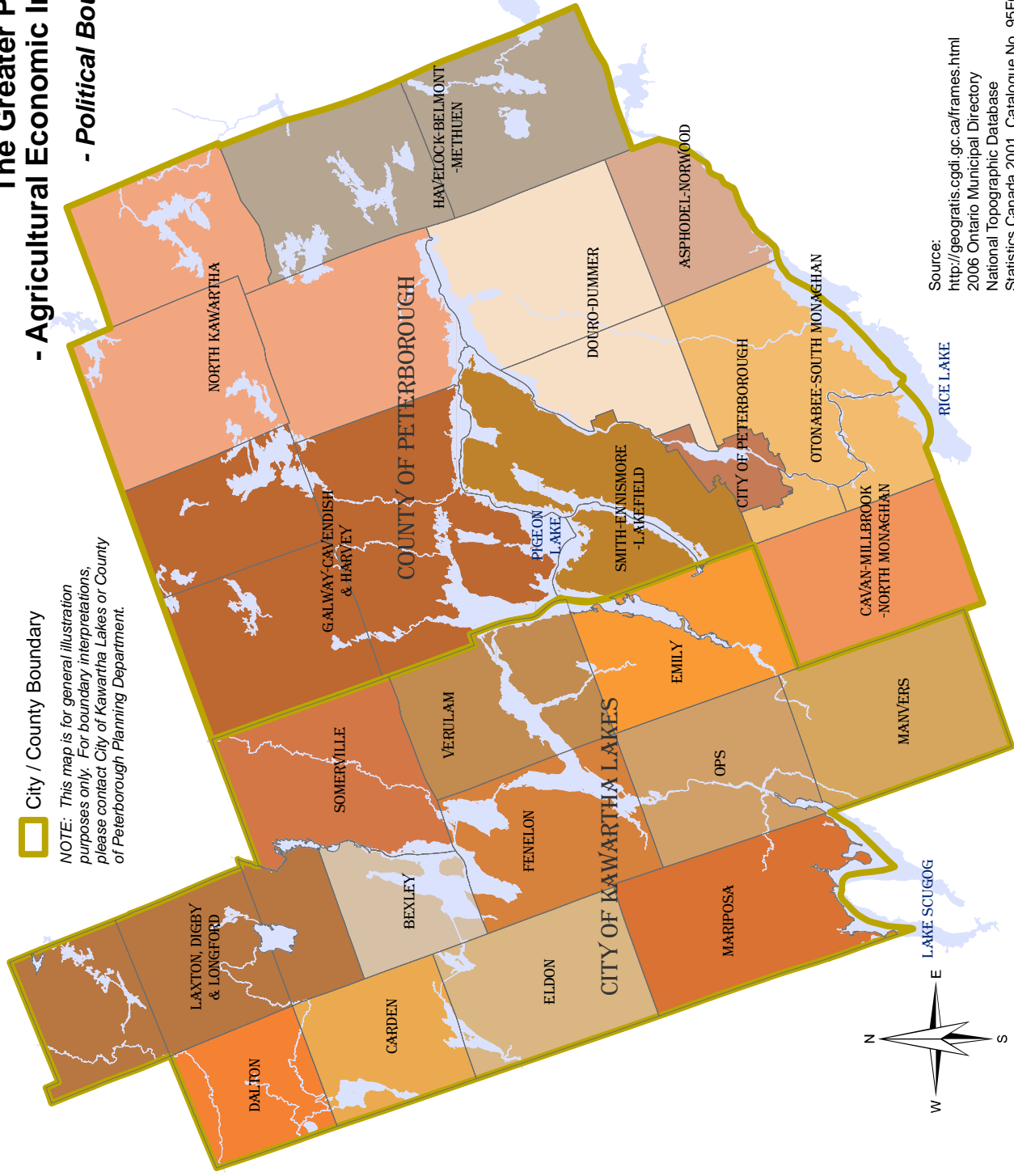
The existing County Official Plan sets the policy context for the protection of agricultural land. One of the basic principles of the Official Plan is the utilization of natural resources for agriculture, forestry, aggregate extraction and recreational uses on lands best suited for the specific purpose (Section 2.2.3). The Plan recognizes the southern portion of the City as supporting a strong agricultural industry based on high capability soils, suitable climate, and



Figure 3.1

City of Kawartha Lakes and The Greater Peterborough Area

- Agricultural Economic Impact & Development Study -
- Political Boundaries by Township -
- 2001 -



good access to major market areas while the northern portion of the City has lower potential for agricultural than the south (Section 4.1).

Agricultural areas under the County Official Plan are contained with a specific “Agricultural” designation where the predominant use of land is for agriculture and farm related uses. The existing “Agricultural” designation covers a large portion of the City of Kawartha Lakes, particularly the southern portion with the northern portion being a mix of “Agricultural” and “Rural” designations. The Plan attempts to protect the agricultural economy in the southern area by limiting non-farm related residential and other incompatible uses within the “Agricultural” designation. That said, there is some provision for limited severance activity provided it does not result in the fragmentation of land holdings within the “Agricultural” designation. In addition, the Plan provides for other uses within the “Agricultural” designation on a limited basis provided they are located on areas of low agricultural potential. Thus, although the Plan speaks to protecting the agricultural base of the area, some of the specific policies allow for the influx of non-agricultural uses that may lead to the fragmentation of the agricultural area, thereby leading to a reduction in the economic feasibility of the agricultural area. This could be due to the age of the document; indications are this approach will be adjusted in the new Official Plan.

Limited analysis was done of existing planning policies for this report since a comprehensive planning exercise is underway to replace them. It was determined that a critique of them would be less useful than focusing on the agricultural resource, its value, and the attributes that require protection in the long term. Nevertheless, this cursory review raises questions as to the strength of the existing Official Plan policies in protecting the City’s valuable agricultural areas.

The draft Official Plan that is currently being developed contains a strengthened commitment to the protection of agricultural land. In the most recent draft released in June 2006, the policies for the prime agricultural area included most notably:

- Restrictions on uses in the prime agricultural area to those that are compatible with and do not hinder agricultural uses;
- Permit value added uses that support agricultural operations;
- Discourage creation of residential lots and limit those permitted to the disposal of surplus dwellings;
- Discourage the removal of topsoil; and
- Recognition of the need to preserve less productive lands in the prime area to support the overall integrity of the agricultural area.

The draft plan also supports agriculture in the rural area with policies restricting new uses in farming areas to those that are compatible with and will not hinder agricultural operations. This approach has the dual effect of limiting incompatible uses while providing farmers with flexibility to establish value added uses that will enhance economic viability. Lot creation in the rural area is also limited to those that will not affect future or existing agricultural operations.



County of Peterborough

The Greater Peterborough Area is affected by a number of official plans. Besides the Official Plan of the County of Peterborough, the local municipalities within the Area have their own official plans. The City of Peterborough also has an Official Plan. These official plans vary in age and status.

The existing County Official Plan, approved in March 2006, sets the policy context for the protection of agricultural land. With respect to agriculture, the Plan states that

“Agriculture shall be encouraged and protected as an identifiable industry and cultural resource in Peterborough County”¹

Specifically, the Updated Official Plan limits the instances wherein severance applications will be permitted to:

- Agriculture uses as defined in the Provincial Policy Statement;
- Surplus farm dwelling;
- Infrastructure;
- Lot adjustments; and
- Infilling situations.

Farm retirement lots and lots for commercial and industrial purposes directly related to agriculture are no longer permitted on prime agricultural lands.

The policies within the “Agriculture” designation have also been strengthened and more responsibility for the protection of agricultural lands has been placed with the local municipalities. The terminology has been revised to strengthen the basis for agriculture by replacing “should” with “shall”.

The local municipalities are now required under the County Official Plan to designate prime agricultural areas within their Official Plans. In considering development on identified agricultural lands, the local municipalities must consider:

- Maintaining the identified agricultural areas and encouraging these areas for future agricultural expansion;
- Maintaining the viability of farm units; and,
- The existing character of the agricultural community.

A review of the existing local official plans has been limited to the Official Plans for the Township of Otonabee-South Monaghan and the Township of Cavan-Millbrook-North

¹ County of Peterborough Official Plan, Consolidated March 2006, Section 4.3.3.2.

Monaghan, as these are the Townships which contain the most land designated as “Agriculture” under the County Official Plan and are both relatively new.

Both of these plans contain policies that are intended to protect land designated for agricultural uses and contain goals/objectives and policies designed to:

- Protect the agricultural land base;
- Protect and enhance the agricultural industry;
- Protect agricultural lands from fragmentation; and,
- Protect agriculture from incompatible uses.

The Otonabee-South Monaghan Official Plan, for example, recognizes that agriculture will continue to be an important contributor to the economic and land use base of the Township. It also recognizes trends in agricultural operations that place additional emphasis on the need for strong land use planning to address issues both real and perceived dealing with impacts to the environment, the economy and society (Section 2.2.1). This is carried through into the objectives for the Official Plan with one of the objectives being, “to preserve prime agricultural lands for agricultural purposes, promote and protect the viability of the agricultural industry, and to preserve and enhance the rural characteristics of the Township”.

Similarly, the Township of Cavan-Millbrook-North Monaghan Official Plan contains the objective of maintaining the long-term availability of all natural resources including agricultural land to promote long term economic prosperity. Another objective of the Plan is, “to protect good agricultural lands in sufficiently large blocks to promote long term unrestrained agricultural use.” (Sections 2.2.3.6 and 2.2.4.1).

Both of these local plans contain mapping that identifies both “Agricultural” and “Rural” designations. The “Agricultural” designations in both Official Plans identify areas that contain soils primarily within Classes 1, 2 and 3 of the Canada Land Inventory of Soil Capability for Agriculture and other adjacent lands which form part of a large and contiguous block of better agricultural lands or areas where farms exhibit characteristics of ongoing viable agricultural operations.

Within the “Agricultural” designation, both of the Plans establish relatively strong policies for the protection of agricultural lands and somewhat more lenient policies for lands located within the “Rural” designation. Within the “Agricultural” designation, the policies in both Plans are in conformity with the policies established under the County Official Plan. Both Plans direct non-farm related development to locate within identified settlement areas and prevent scattered development that leads to the unnecessary fragmentation of farmland.

The City of Peterborough Official Plan does contain an “Agricultural” designation, although the extent of the designation is limited, restricted to a small area at the northwest corner of the City boundaries and another small area located in the south between the Peterborough Bypass and the Otonabee River.



3.2.2 Development Issues

Lot creation in the rural area is an issue that is often raised with respect to the ongoing preservation of agricultural land. Creation of residential lots in agriculture areas tends to fragment the area and introduces potentially conflicting uses. Within the agricultural community some will argue that the right to create a lot for retirement purposes or to deal with a surplus farm dwelling is appropriate and allows a farmer access to additional cash to support the farm operation. There are pros and cons to both side of this argument but it is clear that fragmentation of the land base and introduction of non-farm uses into agricultural areas does make it more difficult to farm. The Farming and Food Production Protection Act is designed to address some of these issues but is not always successful in resolving ongoing disputes between neighbours.

Introduction of additional population in agricultural areas through lot creation does more than create conflicts over noise, dust and odour. Examples of how urban invasion into agricultural areas negatively impacts the ability of farmers to carry out business include the introduction of additional traffic and congestion that makes it difficult to carry out the business of farming. Higher levels of road maintenance involving the use of salt can adversely impact agricultural land. Roads built to an urban standard are not conducive to the movement of farm equipment. The presence of curbs prevents use of the shoulder resulting in equipment occupying more than one lane and can ultimately render the road useless for agricultural traffic.

Generally across Ontario in the 1990's, the number of severances in agricultural areas has declined. In a study done by Dr Wayne Caldwell and Clair Weir of Guelph University², the number of severances was tracked for 34 counties and regions across the province. This research found that there were over 70,000 severance applications between 1990 and 2000 within these counties and regions. Of the severances, 22% resulted in the creation of a new lot on Ontario's agricultural land. The results tabulated for Kawartha Lakes and Peterborough is contained in **Appendix 3**. The study found that between 1990 and 2000, 1,669 and 2,246 severance applications were made in the City of Kawartha Lakes and the County of Peterborough respectively. Of those, 33% (Kawartha Lakes) and 19% (Peterborough) involved agricultural land; 469 (Kawartha Lakes) and 335 (Peterborough) of the lots created were for a residential use in an agricultural area.

The number of severances in Kawartha Lakes and Peterborough during the 1990's was not out of line with what was happening in the rest of the province. Over the ten year period, the number of applications declined, but the percentage of lots created in the agricultural area to applications submitted, remained relatively consistent.

Both the recently approved County of Peterborough and the draft Kawartha Lakes Official Plans recognize the problems created by non farm residential uses in the agricultural area and restrict the creation of residential lots. Unfortunately these more restrictive policies cannot address the numerous lots that have already been created.

² Dr. Wayne J. Caldwell & Claire Weir, *Ontario's Countryside: A Resource to Preserve or an Urban Area in Waiting?, A Review of Severance Activity in Ontario's Agricultural Land During the 1990s*, September 2002.



In both Kawartha Lakes and Peterborough there are many existing rural residential lots some of which are developed, some of which are not. The presence of these lots, fragments agricultural areas and can lead to conflicts. With the increased setback requirements imposed by nutrient management and other recent legislation, the presence of these lots can have serious implications for farmers wanting to expand their operations.

The future expansion of the boundaries of the City of Peterborough will also be an issue. As with many settlement areas in southern Ontario, the lands surrounding the City of Peterborough are for the most part prime agricultural lands. Thus, any expansion to the boundaries to accommodate future growth is likely to impact on the agricultural land base. The question of the annexation of lands to the City was considered in 1998, when a two phase approach was approved, the first phase being in 1998 and the second phase to occur in 2008. This phase affects lands immediately to the northwest of the City in the Township of Smith-Ennismore-Lakefield.

Imposition of the Green Belt in the GTA has resulted in increased development pressure in outlying areas. Adherence to the strong policies in the new Official Plan which anticipate these pressures and direct this growth to designated settlement areas, will be required.

Implementation of the Places to Grow Growth Plan will become apparent over time. Downtown Peterborough has been identified as a growth centre which is to be supported by improved transportation links and promotion of the area as a place to be. This may add pressure for development in the rural area.

3.2.3 Future Direction

Since the creation of the County of Victoria Official Plan in 1978, significant study has been undertaken on agriculture in the area and a stronger recognition of its importance to the economy of Kawartha Lakes has evolved. In Kawartha Lakes, Council has shown a commitment to protecting the agricultural community and ensuring its continued viability. This is reflected in the appointment by Council of The Agriculture Development Advisory Board with a stated mission to *“provide advice and assistance to Council and Economic Development to optimize economic opportunities available to and within the City by aggressively working towards the implementation of activities focused on the continued growth and prosperity of the rural areas and agricultural sector of the City of Kawartha Lakes.”*

In Peterborough, there is a commitment to developing new policies that will address the protection of agriculture, particularly in the southern municipalities of the area and the Official Plans that have recently been developed reflect this commitment. With the designation of downtown Peterborough as an urban growth centre in the Places to Grow, Growth Plan, adjustments may be required to implement this provincial direction.

In both Kawartha Lakes and Peterborough the agricultural sector is identified in economic development strategies as a major cluster of economic development. Both municipalities have shown a strong commitment to and understanding of the importance of the agricultural sector by establishing a specific, highly effective agricultural economic development function. This report is an outcome of that commitment and its results, in conjunction with other City and County initiatives, will be used to establish new policies to manage the sector. If these

commitments are acted upon, policies to support the future for the agriculture industry in the City/County should be strong.

3.2.4 Current Issues

Kawartha Lakes' and Peterborough's location, abutting the Golden Horseshoe and as part of the Greater Golden Horseshoe, means that it is subject to the growth management issues affecting much of the Golden Horseshoe. Already, portions of the study regions are a desirable residential option for people working in the GTA and seeking a rural or small town lifestyle. As development options in the Golden Horseshoe tighten, these pressures will intensify. Ongoing and recent initiatives such as the Oak Ridges Moraine Act, Places to Grow Act, and the new Provincial Policy Statement, all have the potential to significantly affect the region. These initiatives need to be considered, as definitive decisions on the future of Kawartha Lakes and the Greater Peterborough Area are made. As part of this process it will be important to ensure there is clear understanding of the implications of all decisions on the future of agriculture in the area and to ensure that there are policies in place to address potential pressures.

3.3 Provincial Policy

The late 1990's saw a resurgence of provincial interest in comprehensive planning controls. The first of the major initiatives grew out of the controversy associated with proposed development of the Oak Ridges Moraine, a landform that cuts through numerous municipal jurisdictions, including the southern portion of Kawartha Lakes and a portion of the Township of Cavan-Millbrook-North Monaghan in the southern portion of the Greater Peterborough Area. With the imposition of the Oak Ridges Moraine Conservation Plan, the Province once more became active in the implementation of planning controls. With this action came the acknowledgement that many of the problems caused by the rapid urban growth in the Golden Horseshoe could not be addressed without a comprehensive vision at the provincial level.

Re-engagement of the province in the planning process started with introduction of the Smart Growth initiative. This initiative was a process to create a vision for managing growth in the province, in essence, a provincial "official plan". With the change in the government in 2002, the focus of this initiative changed to managing growth in the Greater Golden Horseshoe, of which Kawartha Lakes and the Greater Peterborough Area are a part.

There have been a series of recent provincial initiatives that address growth management in the Greater Golden Horseshoe, which hold varying degrees of implications for Kawartha Lakes and Peterborough. These include:

- the new Provincial Policy Statement;
- the Greenbelt Plan
- the "Growing Strong Rural Communities" initiative;
- the "Places to Grow" plan;
- amendments to the Planning Act; and
- amendments to the Ontario Municipal Board.



It is not within the scope of this paper to comment on each of these provincial initiatives. However some general comments on how the more pertinent of these initiatives may impact on the status of agriculture in Kawartha Lakes and Peterborough are appropriate.

3.3.1 Provincial Policy Statement

The Provincial Policy Statement 2005 (PPS) which came into effect on March 1, 2005, increased the protection of agricultural lands in the Province. The increased protection of prime agricultural areas afforded by the new PPS responds to the need to protect the valuable agricultural resources of the Province that was voiced by many during the PPS review process. A significant change to the new PPS is the definition of prime agricultural area, which is defined as:

Areas where prime agricultural lands predominate. This includes: areas of prime agricultural lands and associated Canada Land Inventory Class 4-7 soils; and additional areas where there is a local concentration of farms which exhibit characteristics of ongoing agriculture. Prime agricultural areas may be identified by the Ontario Ministry of Agriculture, Food and Rural Affairs using evaluation procedures established by the Province as amended from time to time, or may also be identified through an alternative agricultural land evaluation system approved by the Province.

Prime agricultural land is defined as:

Land that includes specialty crop areas and/or Canada Land Inventory Classes 1, 2 and 3 soils, in this order of priority for protection.

The significance to the revised definition of prime agricultural area is that it recognizes the importance of an agricultural area as being more than just the class of soil but also recognizes the historical significance of an agricultural area. As shown on **Figure 2.4** and discussed previously, the City of Kawartha Lakes and the County of Peterborough contain significant prime agricultural areas and prime agricultural land.

However, the Provincial Policy Statement continues to contain a section that allows for the expansion of settlement areas through the redesignation and development of agricultural land if “there are no reasonable alternatives which avoid prime agricultural areas” (Section 1.1.3.9). This provision has been effectively used in the past, in some areas experiencing growth, to redesignate agricultural land despite the existence of prohibitive municipal policies. Although this provision remains, it is now required that the redesignation be supported by the municipality and under the revisions to the Planning Act cannot be appealed. The requirement for municipal concurrence should lend increased protection to agricultural areas.

Despite improvements to the PPS, there is still a concern with the changes to the PPS. References to “prime agricultural area” in the PPS as opposed to prime agricultural land may set up the conditions to justify taking bits of agricultural land off the edges and will fail to protect the land base in areas where smaller or discontinuous parcels are both viable and productive. Given that this is the very type of agricultural operation that thrives in proximity to

urban areas, the circumstances could be set for a continuation of the trend to spread out from the edges of existing communities.

Confirmation that the reference to “prime agricultural area” versus “prime agricultural land” is problematic is underlined in a recent decision of the Ontario Municipal Board in a case in Kawartha Lakes where this very issue was the matter for debate. In addressing the issue of area versus land the Board stated:

The issue of that agricultural use was controversial. It was agreed by both sides that the prospective residential development was on Class 1 agricultural land, but according to the developer's planner, that did not mean that the site was in an “agricultural area”:

The Provincial Policy Statement distinguishes between “agricultural lands” and “agricultural areas”.

The developer's planner argued, on the basis of provincial guidelines (Guide to Land Evaluation – LEAR), that an “area” should normally exceed 250 hectares, with a hard boundary. He recommended that Algonquin Road be treated as that boundary, with the area to the north deemed agricultural, and farmland to the south (which is under 250 hectares – and which happens to include the proposed development) viewed otherwise.

By that reasoning, the subject property would not be in an “agricultural area” covered by the Provincial Policy Statement, no matter how good its farmland was.

The appellants attacked that reasoning, arguing that the Official Plan has its own provisions pertaining to agricultural lands (independently of the Provincial Policy Statement). A lengthy debate ensued, as to where to locate the boundary of the “agricultural area”, whether lands in the vicinity were primarily agricultural or residential, whether the total surface dimensions reached the “threshold” of 250 hectares, etc.

The Board is not persuaded that this mathematical argument is germane. The appellants’ argument would have been more compelling, if the Ministry of Municipal Affairs and Housing had not issued an opinion that “the Agricultural Justification Report does not identify the subject lands to be part of a provincially significant agricultural area. We would like to confirm that we agree with this conclusion”. That is relatively forceful language by Ministry standards. On the other hand, the Board remains mindful of the logic of the appellants’ planner, when she argued that to fulfill the spirit of the Provincial Policy Statement, one must not only protect farmlands: one must also protect “the circumstances for farming”, otherwise all will be in vain.³

³ Ontario Municipal Board Decision, OMB Case No. PL040047, Decision/Order No: 0087 Issue Date: Jan. 18, 2005



In all, the new PPS provides a stronger provincial framework that will result in policies that address the need to protect the agricultural resources, direct growth away from these lands and defer to municipal policies where they are more rigorous. While it could be stronger, these changes do provide enhanced tools for protection if the municipality has, or implements agricultural policies. Hopefully the updated Kawartha Lakes Plan and the new Official Plans being created by the amalgamated municipalities within the County of Peterborough and updates to the County and City Official Plans will do this. Agricultural land needs to be managed as a non-renewable resource and viewed as a highest and best use in its own right, despite pressures for growth. Only by doing so, can balanced evaluations be done to assess whether it should be redesignated for development.

3.3.2 The Greenbelt Plan

The Greenbelt Plan is probably the provincial initiative that has progressed to the greatest degree. This very intense process focused on the issue of maintaining green space in the Greater Golden Horseshoe and in protecting resources including environmental features and agricultural land for future generations.

Although the Greenbelt only covers a small portion of the southern end of Kawartha Lakes and a small corner of south west Peterborough, there are several elements of the initiative that are of significance with respect to the ongoing health of the agricultural industry.

The Greenbelt Plan identifies and sets aside a significant contiguous area purportedly, for agriculture. This may have an indirect impact on agricultural areas in proximity to the greenbelt, including those in the study region, by increasing the pressure to accommodate those looking for a rural residential lifestyle within commuting distance of the GTA.

In establishing the Greenbelt the Task Force warned that for the industry to survive, not only must the land base must be protected, the conditions must be in place to support the economic feasibility of industry so farmers will continue to farm. Preceding the section on land use policy is a section of economic viability and articulation of the position that "land use planning alone is insufficient to ensure agricultural lands within the greenbelt will be farmed"⁴.

The province has responded to this by funding the development of strategic plans to support agriculture in regions affected by the greenbelt. Peterborough and Kawartha Lakes may want to monitor development of these plans to determine if there are ways they can benefit from the work being done.

3.3.3 Places to Grow Act

In June of 2005, the Places to Grow Act received Royal Assent. This legislation evolved from the Province's Smart Growth initiative that had been ongoing for several years. It is intended to enable the provincial government to plan for population growth, economic expansion and the protection of the environment, agricultural lands and other valuable resources in a coordinated and strategic way. The legislation is provincial in scope and allows for growth

⁴ Ontario 2004 Towards a Golden Horseshoe Greenbelt, Discussion Paper, Greenbelt Task Force Toronto. pg 15



plans in any part of Ontario. It designates downtown Peterborough as an urban growth centre, but does not address any portion of Kawartha Lakes.

Although the Act does speak to the protection of agricultural lands, it appears that measures to do so have been left primarily to the Greenbelt Act. The Growth Plan for the Greater Golden Horseshoe released in November of 2005 and recently approved does reference the need to identify Prime Agricultural Lands within the Greater Golden Horseshoe but reverts to the wording of the PPS in addressing protection of the resource.

3.3.4 Oak Ridges Moraine Conservation Act and Plan

In addition to provincial and local planning policies, the portions of Kawartha Lakes and the Greater Peterborough Area traversed by the Oak Ridges Moraine are also subject to the Oak Ridges Moraine Plan. As per the requirements of the Act, the City of Kawartha Lakes and the Township of Cavan-Millbrook-North Monaghan are required to bring their Official Plans into conformity with the requirements of the Oak Ridges Moraine Conservation Plan. This adds an additional layer of control on land uses located within the Plan area. While these policies are generally supportive of agriculture, they do impact the opportunity for value added businesses and commercial uses that may support the agricultural operation.

3.3.5 Provincial Legislation

There are a number of provincial statutes that have significant implications for agriculture. Many of them have been designed to protect the ability to carry on an agricultural operation. These include the Right to Farm Legislation and Minimum Distance Criteria. Others place additional burdens on farmers and can have a negative impact on the ongoing viability of agricultural operations. The recently approved Nutrient Management Act, and the proposed Clean Water Act, are ones which are of concern in the agricultural community. Considerable ongoing discussion is occurring to develop an acceptable balance between provincial and municipal control and between farmers' rights and the public interest.

3.4 Summary

Geographically and historically, the City of Kawartha Lakes and the Greater Peterborough Area has the characteristics that qualify it as a prime agricultural area. As noted in Chapter 2, the physiography, soils and climate of the region, allow production of many commodities.

There is an existing policy framework that addresses the preservation of agricultural land. As in other areas of the province, some of these policies are dated and are not always effective in the face of development pressure. However, unlike other areas of the province there is a unique opportunity in Kawartha Lakes and Peterborough to create a set of policies that will be effective in protecting agricultural land. The coincidence of a new Provincial Policy Statement, the Greenbelt Plan, the Places to Grow Act, a new County Official Plan, the amalgamation of some of the local municipalities - thereby requiring new official plans, and an ongoing political commitment to the agricultural community, creates an environment where new directions are possible.

Although not all of Kawartha Lakes and the Greater Peterborough Area are currently subject to the same intense pressure for growth as some of the other areas of the Greater Golden Horseshoe, the



southern portion of the municipalities are facing these pressures and it is in the southern portion where the highest quality agricultural areas are located. A growth management strategy that addresses protection of agricultural land and is consistently applied, is urgently required.

The process by which Kawartha Lakes and Peterborough is proceeding to develop new policies is positive. Coordination of infrastructure planning, capital planning, land use planning, human resource planning and an economic development strategy will allow these municipalities to avoid many of the mistakes made when these processes proceed independently.

An agricultural advisory committee has been struck to advise the City of Kawartha Lakes on matters that can affect agriculture. Effective use of the agricultural advisory committee can ensure that agricultural issues are understood and addressed.

As the process to update the policy framework throughout for Kawartha Lakes and the Greater Peterborough Area unfolds, agriculture needs to be a major factor in decision making. Hopefully, by providing this snapshot of the industry at a point in time, and quantifying its contribution to the area's economy, this report will be an effective tool in establishing policy to support agriculture.





CHAPTER 4

- Profile of Agriculture -

Chapter 4 Profile of Agriculture

4.1 Introduction

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

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

In 2001, there were:

- 2,718 farms¹ in Kawartha/Peterborough (1,516 farms in Kawartha Lakes²; 1,202 farms in Peterborough);
- occupying 619,332 acres (360,690 acres in Kawartha Lakes; 258,642 acres in Peterborough);
- generating \$155,694,972 in gross farm receipts.³ (\$86,119,375 in Kawartha Lakes and \$69,575,597 in Peterborough).

Combined, Kawartha Lakes and Peterborough form one of the largest municipalities in Ontario. Of the 49 regions, counties and districts in Ontario; the combined Kawartha Lakes/Peterborough area ranks 3rd in geographic size⁴. Individually, Kawartha Lakes and Peterborough rank 20th and 9th respectively.

With respect to agriculture, in 2001, the study area ranked 3rd in number of farms, 3rd in number of acres farmed and 21st in the value of the gross farm receipts generated. Individually, Kawartha Lakes ranked 17th in number of farms and farmland acres and 21st in gross farm receipts. Peterborough ranked 22nd in number of farms and farmland areas and 28th in gross farm receipts. According to Statistics Canada, of their total land base, approximately 48% of Kawartha Lakes and 26% of Peterborough, was farmed in 2001. **Figure A4.1** summarizes provincial rankings in terms of number of farms; acres farmed, and gross farm receipts (additional charts are located in **Appendix 4** and are referred to in the body of the report as Figure A4.#).

In 2001, Kawartha Lakes/Peterborough generated approximately 2%⁵ (1.7%) of the total gross farm receipts in Ontario, on a land area that comprises almost 6% (5.7%) of the province's total area.

¹ Census Farm is defined in the Glossary of Terms. Note that a census farm is any operation reporting the production of certain commodities and includes all operations regardless of scale. Most of the analysis in this report uses only statistics for farms generating in excess of \$2,500 in gross farm receipts per annum. Therefore for most of the analysis, unless otherwise specified, the farm total used will be 1,069 operations generating total gross farm receipts of \$69,405,293. The number of farmland acres remains the same because Statistics Canada does not provide a breakdown on the area occupied by operations generating less than \$2,500 in gross farm receipts per annum.

² Kawartha Lakes refers to the geographic area of the former Victoria County.

³ This value represents gross farm receipts from all farms reporting.

⁴ Municipal Directory 1995 based on Ministry of Municipal Affairs & Housing information for 1993.

⁵ Data based on all farms reporting.



Figure A4.2 summarizes the gross farm receipts on a provincial, central Ontario region⁶, and local basis. The average gross farm receipts per acre in Ontario in 2001 were \$675, in the Central Ontario Region, \$431 and in Kawartha Lakes/Peterborough, \$251.

The lower average values for Kawartha Lakes and Peterborough are attributable to several factors. While the southern half of Kawartha Lakes and Peterborough contain relatively high quality agricultural lands, the northern half is on the Canadian Shield where there are virtually no large areas of prime land, as defined under the Canada Land Inventory. Farming in this area tends to be focused on land extensive operations such as ranching.

This underlines the value of the southern area. Virtually all of the land in Kawartha Lakes and in Peterborough that qualifies as prime land is concentrated in the southern part of the municipality. In that area, there is more diversity in production.

The type of farming that occurs will also affect gross farm receipts per acre. Higher values per acre are associated with more intensive agriculture such as greenhouse, nursery, vegetable and fruit where high value crops are produced on relatively small acreages. In Kawartha Lakes and Peterborough, as is explained in detail later in this chapter, the type of agriculture is more land extensive thereby reducing average per acre yields.

City of Kawartha Lakes

Kawartha Lakes generated 0.9% of the total gross farm receipts in Ontario in 2001, on a land area that comprises 2.2% of the province's total area. The average gross farm receipts per acre in Kawartha Lakes are \$239.

As recorded on **Figure A4.2**, in Kawartha Lakes 2001, Mariposa had the highest number of farms at 294 and the highest total gross farm receipts at \$26,288,844. This is to be expected since the area accounts for almost 20% of the farmland area and the greater part of the prime Class 1 to 3 lands in the City as classified by the Canada Land Inventory (CLI).

Emily, Ops, Manvers, Mariposa, Eldon, and Fenelon are located in the southern portion of the City of Kawartha Lakes. This area contains the highest number of farms and total gross farm receipts which in turn generated the highest gross farm receipts per acre. Located within a predominately prime Class 1 to 3 agricultural areas and combined with higher Crop Heat Units (CHU's) these areas tend to produce higher yields on smaller acreages than are produced in the north part of the City.

Verulam, Somerville, Bexley, Carden, Dalton, and Laxton, Digby and Longford are located on the Canadian Shield in the northern area of the City. These lands are generally classified as Class 4 to 7 agricultural lands. Farms in this area are predominately larger with a lower gross farm receipts per acre that is generally attributed to the type of agriculture prevalent in the area. Farms in these areas generally concentrate on predominately grazing livestock (dairy, cattle, goat, and horse & pony), and field crops. This point is discussed in more detail in Section 4.5 and 4.6, which describes the breakdown of commodity production within each area of the City of Kawartha Lakes.

⁶ The Central Ontario Region, refer to Glossary of Terms.



County of Peterborough

Peterborough generated approximately 1% (0.77%) of the total gross farm receipts in Ontario in 2001, on a land area that comprises almost 3% (2.77%) of the province's total area. The average gross farm receipts per acre in Peterborough are \$269.

As recorded on **Figure A4.2**, in Peterborough in 2001, Otonabee-South Monaghan had the highest number of farms at 285 and the highest total gross farm receipts at \$19,428,397. This is to be expected since that Township accounts for almost 25% of the farmland area and contains a significant amount of the County's prime farmland.

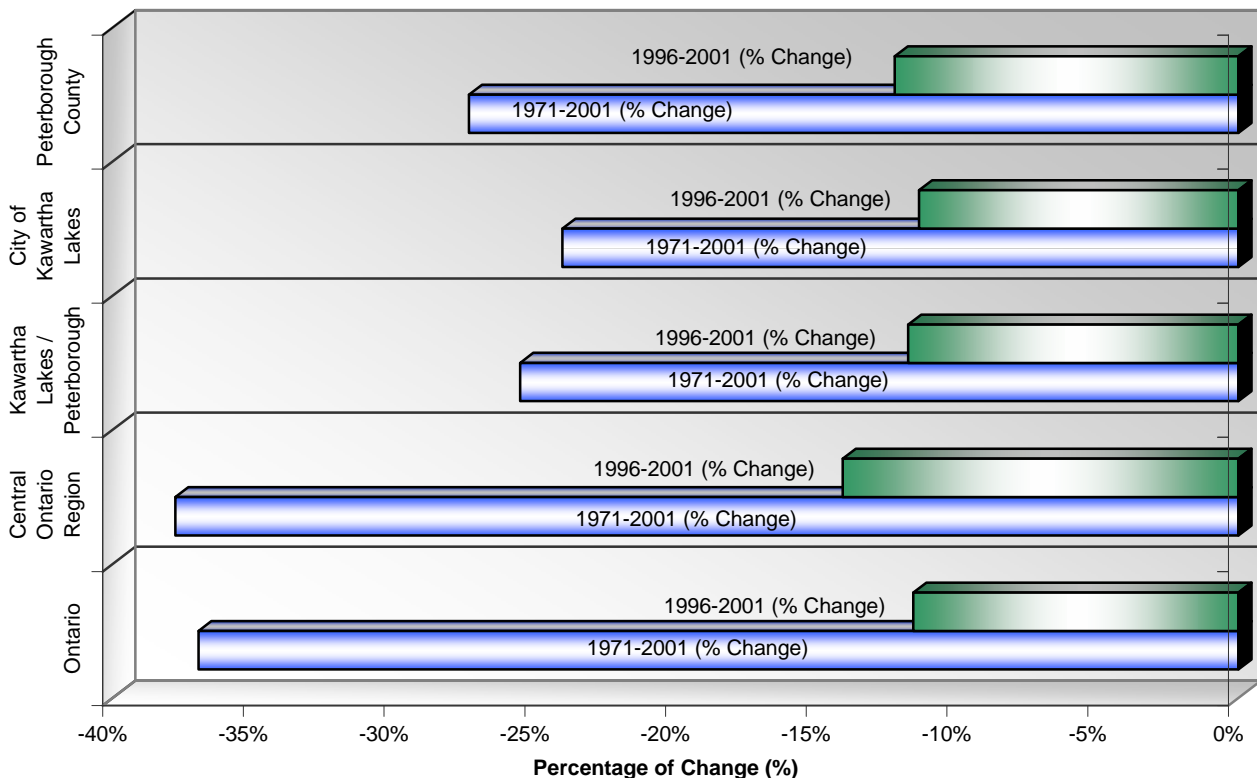
The Townships of Asphodel-Norwood, Otonabee-South Monaghan, Cavan-Millbrook-North Monaghan and Smith-Ennismore-Lakefield are located in the south and south-western portion of the County of Peterborough. These Townships have the largest number of farms which generate the highest gross farm receipts per acre and account for 54% of the County's total gross farm receipts. This is not surprising given that the majority of this area, located south of the band of lakes dissecting the County, is predominately prime land. The quality of the land, combined with higher Crop Heat Units (CHU's) because of a more southerly location, results in higher yields.

The Townships of Havelock-Belmont-Methuen, Douro-Dummer, and Galway-Cavendish & Harvey are located on the Canadian Shield in the northern and north-eastern area of the County. These lands are generally classified as Class 4 to 7 agricultural lands. Farms in this area are predominately larger with lower average gross farm receipts per acre. The type of production that predominates in this area is generally grazing livestock (dairy, cattle, and horse & pony), and field crops. This point is discussed in more detail in Section 4.5 and 4.6, which describes the breakdown of commodity production within each of the local municipalities.

4.3 Change in Number of Farms and Farmland Acreage 1971 – 2001

There was a consistent decline in the number of farms across Ontario during the period from 1971 to 2001. This decline was slightly less pronounced in Kawartha Lakes and Peterborough, where between 1971 and 2001, 931 farms disappeared (479 farms in Kawartha Lakes and 452 farms in Peterborough). This represents a 25.5% decline, as compared to a 37% decline at the provincial level and a 38% decline for the Central Ontario Region. Historically, in Kawartha Lakes and Peterborough, the number of farms fluctuates up and down in small increments indicating that these areas are predominately stable farming communities. Between the census years of 1996 and 2001 data shows a decline of 361 farms. This represented an 11.7% decline, somewhat higher than in Ontario as a whole where the number of farms declined by 11.5% during the same period, and somewhat lower than in the Central Ontario Region where the decline was 14.1%. The change in number of farms is summarized in **Figure A4.3** and **Figure 4.1**.

Fig 4.1 Historical - Number of Farms in Ontario, Central Ontario Region, City of Kawartha Lakes and County of Peterborough (Percentage of Change), 1971 to 2001



A review of the change in the number of farms from 1971 to 2001 does not necessarily provide a true indication of changes in the scale of the industry. Rather it provides an indication of the shift that is taking place in the size of farm operations. Overall there is a trend in agriculture toward larger farms and rationalization of operations. Therefore an assessment of the change in farm acres, as listed in **Figure A4.4** is more representative of actual change in production.

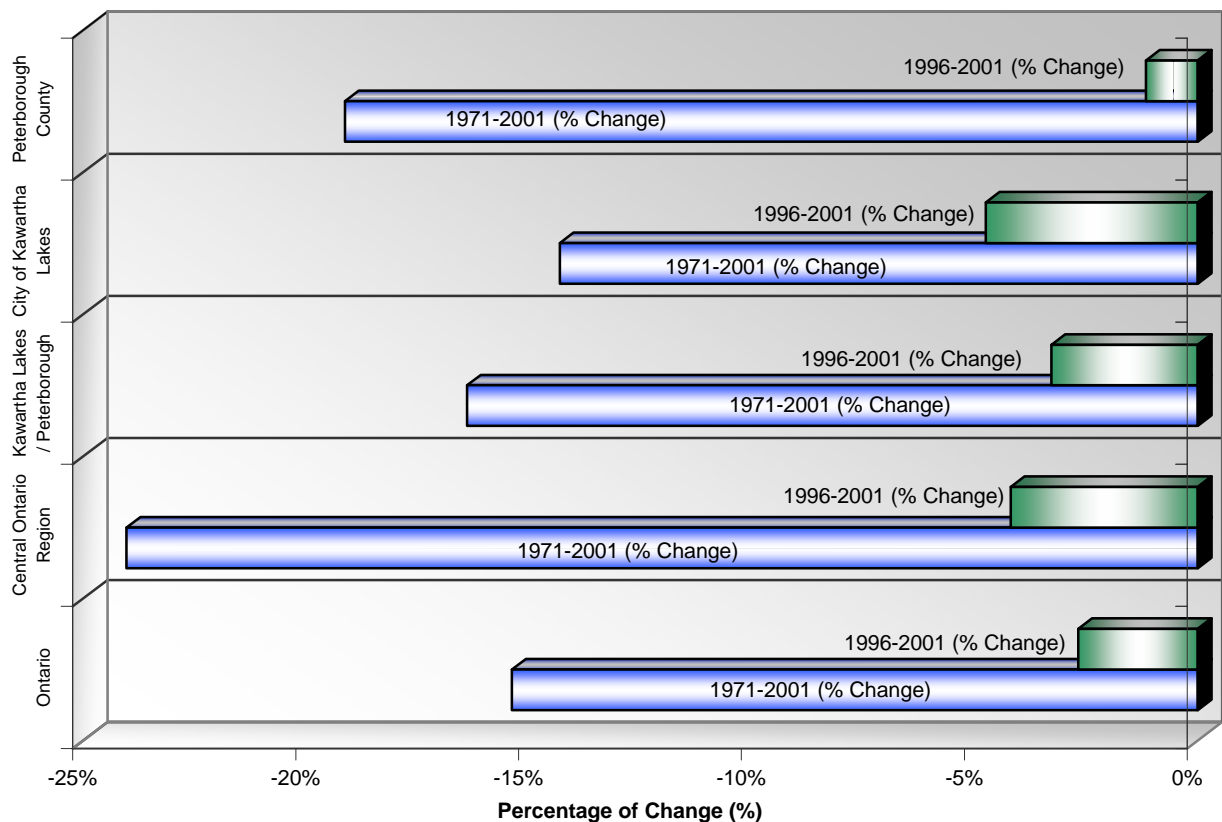
In the combined area of Kawartha Lakes/Peterborough between 1971 and 2001, the number of acres classified as farmland declined by 121,418 acres. This represents a 16.4% decline as compared to the provincial decline of 15.4% and a 24.0% decline in the Central Ontario Region.

Between 1971 and 2001, the number of acres classified as farmland declined by 60,239 acres in Kawartha Lakes and 61,179 acres in Peterborough. The loss in terms of actual area for Kawartha Lakes is similar to the provincial average and lower than the Central Ontario average; whereas in Peterborough the loss is greater than the provincial average but lower than in the Central Ontario region. The numbers reflect that fact that neither area experienced extraordinary changes in comparison to other parts of the province.



Comparisons of the rates of change between 1996 and 2001 do reveal some interesting patterns. Kawartha Lakes had a higher rate of decline (5%) than Ontario (3%), the Central Ontario Region (4%) and Peterborough (1%). The rate of change in farmland acres is graphically depicted in **Figures A4.4** and **Figure 4.2**.

Fig 4.2 Historical - Farmland Area (ac) in Ontario, Central Ontario Region, City of Kawartha Lakes and the County of Peterborough (Percentage of Change), 1971 to 2001



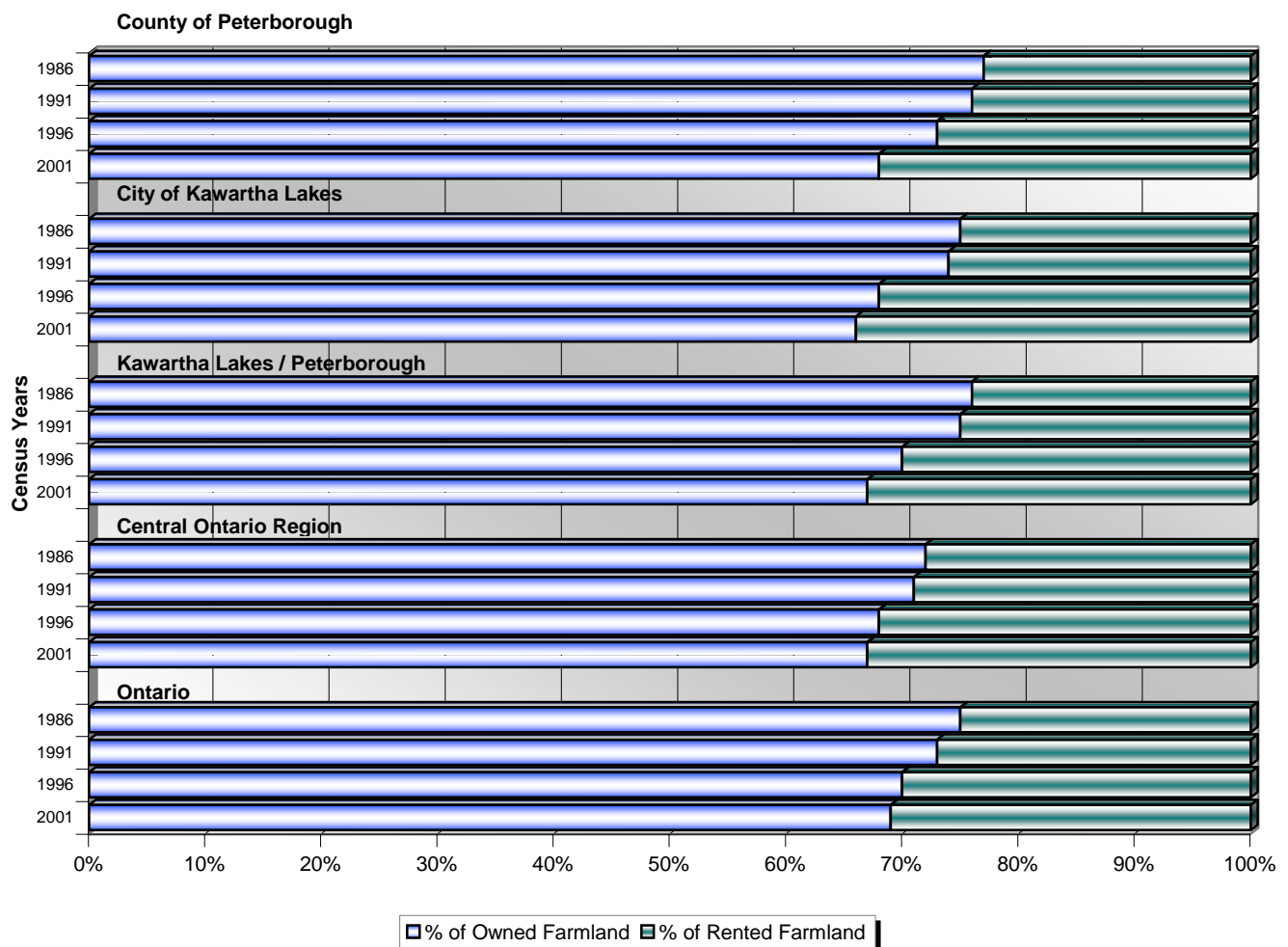
Within the City there is no apparent pattern. Verulam and Fenelon saw the largest decreases at 18.2% and 12.7% (7,587 and 4,948 acres) respectively. The northern area generally experienced notable decline, not surprising given the marginal nature of the agricultural land in the area and the economic pressures experienced by the industry during that period. During the same period Mariposa, which contains the highest incident of prime land, experienced a 4.7% (3,285 acres) increase in farmland and Eldon experienced a 3% (1,204 acres) increase. Bexley experienced an increase in the area under production of 1,385 acres. This could be partly due to the establishment of an Amish community in Kawartha Lakes during the period. The Amish who have located in an area east of Woodville and south of Glenarm have been bringing land into production as they have settled in the area.

In Peterborough, Otonabee-South Monaghan experienced a 4.2% (2,502 acres) increase in the area under production between 1996 and 2001. Cavan-Millbrook-North Monaghan and Smith-Ennismore-Lakefield also recorded increases of 5.1% and 4.2% (1,917 and 1,801 acres) respectively. These municipalities all contain significant amounts of prime land. Havelock-Belmont-Methuen and Galway-Cavendish & Harvey saw the largest decreases at 14.8% and 12.4% (2,439 and 2,333 acres) respectively. These townships are dominated by Class 4 to 7 lands. The actual increase and decline in acreage are listed on **Figure A4.5** and graphically depicted on **Figure 4.3**.

4.4 Land Ownership

In 2001, 33% of the land being farmed in Kawartha Lakes and Peterborough was rented. This percentage is on par with the provincial average of 31% and the Central Ontario Region average of 33%. The percentages of rented lands are significantly lower than in other areas within the Golden

Figure 4.4 Historical - Farmland Acres Owned and Rented in Ontario, Central Ontario Region, City of Kawartha Lakes and the County of Peterborough, 1986-2001

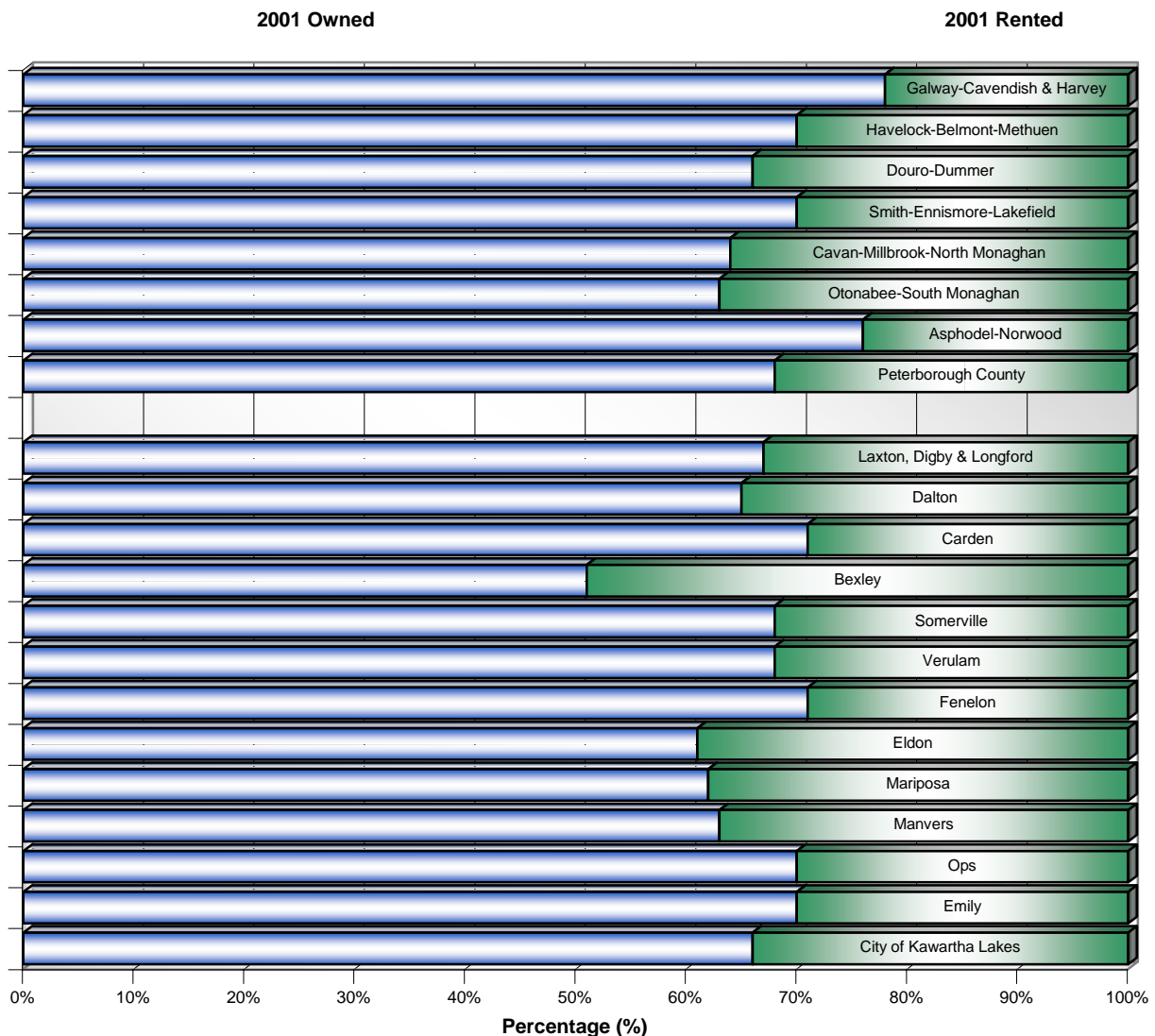


Horseshoe, for example in the Greater Toronto Area (GTA) where the percentage of rented land in

2001 was 54% in Halton and Peel and 57% in York. The percentage of rented land in the Kawartha Lakes/Peterborough area has been increasing in small increments since 1986 which is consistent with what has been occurring in Ontario generally. These statistics are summarized **Figure A4.6** and graphically depicted on **Figure 4.4**.

Looking at the average rental rates for the City/County as a whole is misleading. In Kawartha Lakes, when broken down by townships, as is done on **Figure A4.7**, it becomes apparent that in Bexley, Eldon, Mariposa, and Manvers the incidence of rental land is higher than the City average. It is the lower rental rate in Emily, Ops, Fenelon, and Carden that reduces the City wide average. When broken down by townships in Peterborough, it becomes apparent that in Otonabee-South Monaghan (37%), Cavan-Millbrook-North Monaghan (36%), and Douro-Dummer (34%) rental land is higher than the County average. The lower incidence of rental land in Galway-Cavendish & Harvey reduces the County wide average. The breakdown of rental land by townships is shown graphically on **Figure 4.5**.

Figure 4.5 Farmland Area (ac) Owned and Rented in the City of Kawartha Lakes and County of Peterborough by Township, 2001



There are generally a variety of reasons for the incidence of rental land. Higher land values, resulting from a variety of circumstances, can make it difficult for farmers to acquire land at a price that makes farming economically viable. Land may be held by retired farmers, by speculators or by people seeking a rural lifestyle who do not want to farm. Qualification for the farm property tax rate which is lower than other tax rates, is a huge incentive for renting out rural land for agricultural production. Only land under production qualifies for the farm property tax rate. Often the rental arrangement is short-term and informal and gives the farmer use of land at a reasonable price while allowing the owner to qualify for the agricultural property tax rate.

A higher incidence of rented land often results in a less stable agricultural community and the deterioration that can result if land is not properly managed. Farmers are less inclined to make the capital improvements required to maintain land if they do not own it or if the right to use is short-term and informal. The type of commodity grown on rented land tends to be limited. A farmer with a year-to-year rental agreement is not going to make expensive improvements to the land or plant a crop that requires capital investment and a number of years to reach full production.

In areas of high growth pressure or where growth is anticipated, agricultural land often lies idle or is underutilized. This leads to deterioration of the land base as the investment required to retain productive value is not made. Deterioration of the land base is often used as proof that the land is not productive and as justification for removing it from an agricultural designation. Land lying idle can fragment an agricultural area and make the business of farming more difficult. The longer land lies idle, the more costly it will be to bring back into production and therefore there is less chance that this will happen.

In Kawartha Lakes, the fact that the incidence of land rental is less marked than in the GTA area may be a good indicator of the stability of the industry. It may also be an indication that land prices are lower and thus acquiring land for expansion is not an issue. In Peterborough, the incidence of land rental is lower than other areas in Central Ontario, an indicator of the stability of the industry in this County. There is not the pressure for growth in Peterborough that there is closer to the GTA and therefore there may not be the same incentive to buy and hold agricultural land for speculative purposes.

Mariposa and Manvers in Kawartha Lakes and Cavan-Millbrook-North Monaghan and Otonabee-South Monaghan in Peterborough are at the south end of the Region and within commuting distance of the GTA. In those areas higher incidence of rental land may be indicative of land speculation. Research for this report included a review of land values in the study area between 2004 and 2006 (**Figure A4.6**) Values are only given for areas with a significant incidence of sales. This data confirms that for cultivated lands, the highest number of sales were in Mariposa, Emily and Ops in Kawartha Lakes and in Otonabee-South Monaghan in Peterborough County.

The planning policies that are in place can also affect the land tenure. If the policies are strongly supportive of agriculture, prohibit re-designation of agricultural land, are rigorously applied and supported politically, there is usually less speculative activity. As noted in Chapter 3, with the recent changes to the Provincial Policy Statement, the strengthened agricultural policies in the County of Peterborough Official Plan and the proposed new Kawartha Lakes Official Plan, a stronger commitment to the preservation of land agriculture is being made. This may have the effect of reducing the optimism of those holding land for development. It should be remembered that the



statistics relied on in this report are from 2001. It will be interesting to assess the changes that occur in the rate of rental land in the 2006 census, which may start to reflect the tightening of the planning policies.

Figure 4.6 Farmland Values for the Time Period July 1, 2004 to Jul 14, 2006

Geographic Location	Cultivated Land - All Uses						Number of Historical Records
	Maximum		Average		Minimum		
	\$ Per Acre	\$ Per Hectare	\$ Per Acre	\$ Per Hectare	\$ Per Acre	\$ Per Hectare	
City of Kawartha Lakes							
Emily	\$2,943	\$7,272	\$2,222	\$5,492	\$1,356	\$3,350	6
Ops	\$3,000	\$7,413	\$2,537	\$6,268	\$2,000	\$4,942	8
Manvers	Not Available						
Mariposa	\$3,875	\$9,575	\$2,896	\$7,156	\$2,167	\$5,354	7
Eldon	\$3,260	\$8,055	\$2,967	\$5,135	\$1,365	\$3,387	3
Fenelon	\$2,011	\$4,969	\$1,787	\$4,416	\$1,600	\$3,954	3
Verulam	\$3,431	\$8,477	\$2,507	\$6,194	\$1,662	\$4,108	4
Somerville	Not Available						
Bexley	Not Available						
Carden	Not Available						
Dalton	Not Available						
Laxton, Digby and Longford	Not Available						
Peterborough County							
Asphodel-Norwood	Not Available						
Otonabee-South Monaghan	2943	7272	2093	5172	1356	3350	8
Cavan-Millbrook-North Monaghan	Not Available						
Smith-Ennismore-Lakefield*	Not Available						
Douro-Dummer	Not Available						
Havelock-Belmont-Methuen	Not Available						
Galway-Cavendish & Harvey*	Not Available						

Source: Farm Credit Canada - Land Values Online

4.5 Farm Size

According to Statistics Canada the average farm size in Ontario has increased steadily. Between 1971 and 2001 the average farm size in Ontario grew from 169 acres to 226 acres. The change in average farm size in the study area is consistent with what has occurred in the province. In the Central Ontario Region it grew from 181 acres to 221 acres; in the Kawartha Lakes/Peterborough area from 203 to 228 acres.

The average farm size, which has consistently been slightly larger in Kawartha Lakes than in Peterborough, has grown at approximately the same rate in both municipalities (221 to 238 acres in Kawartha Lakes, and 191 to 215 acres in Peterborough). **Figure 4.7** summarizes the average farm size for Ontario, the Central Ontario Region, City of Kawartha Lakes, and the County of Peterborough. In Kawartha Lakes, the average farm size ranges from a low of 187 acres in Emily and Fenelon to a high of 513 acres in Carden. In Peterborough, the average farm size ranges from a low of 189 acres

in Cavan-Millbrook-North Monaghan to a high of 294 acres in Galway-Cavendish & Harvey (**Figure A4.2 -2001**).

Figure 4.7 Historical - Average Farm Size (ac) in Ontario, Central Ontario Region, City of Kawartha Lakes and the County of Peterborough (Percentage of Change), 1971 to 2001

Geographic Location	Average Farm Size							Percentage of Change	
	1971	1976	1981	1986	1991	1996	2001	1971-2001	1996-2001
Ontario	169	174	181	192	196	206	226	33.7%	9.7%
Central Ontario Region	181	182	187	198	196	198	221	22.1%	11.6%
Kawartha Lakes / Peterborough	203	200	203	206	202	208	228	12.3%	9.6%
City of Kawartha Lakes	211	209	213	215	212	221	238	12.8%	7.7%
Peterborough County	193	189	192	195	189	191	215	11.4%	12.6%

Central Ontario Region includes the Regions of Durham and York; Counties of Haliburton, Hastings, Northumberland, Peterborough and Prince Edward, District of Muskoka and Parry Sound; and the City of Kawartha Lakes (former Victoria County).

Data for farmland area is calculated on all farms reporting.

Source: 1996 & 2001 Statistics Canada - Catalogue No. 95F0301XIE & No. 95-177-XPB; 1981 & 1991 Agricultural Statistics for Ontario - OMAFRA - Publication 20

The average farm sizes in the various townships are generally consistent with the type of commodity group that dominates. Throughout the Kawartha Lakes / Peterborough area, cattle, dairy, horse and pony, wheat/grain & oilseed, and field crops tend to dominate the commodity types. These types are generally produced on larger acreages.

In Kawartha the large average farm sizes that dominate in the northern part of the City are characteristic of the livestock operations located there.

Within Peterborough, Cavan-Millbrook-North Monaghan contains a mix of commodity types which probably accounts for the somewhat smaller average size. Although there are a large number of cash crop operations that are normally located on larger acreages, there are also numerous hog, vegetable, and horse and pony operations which are usually located on smaller properties.

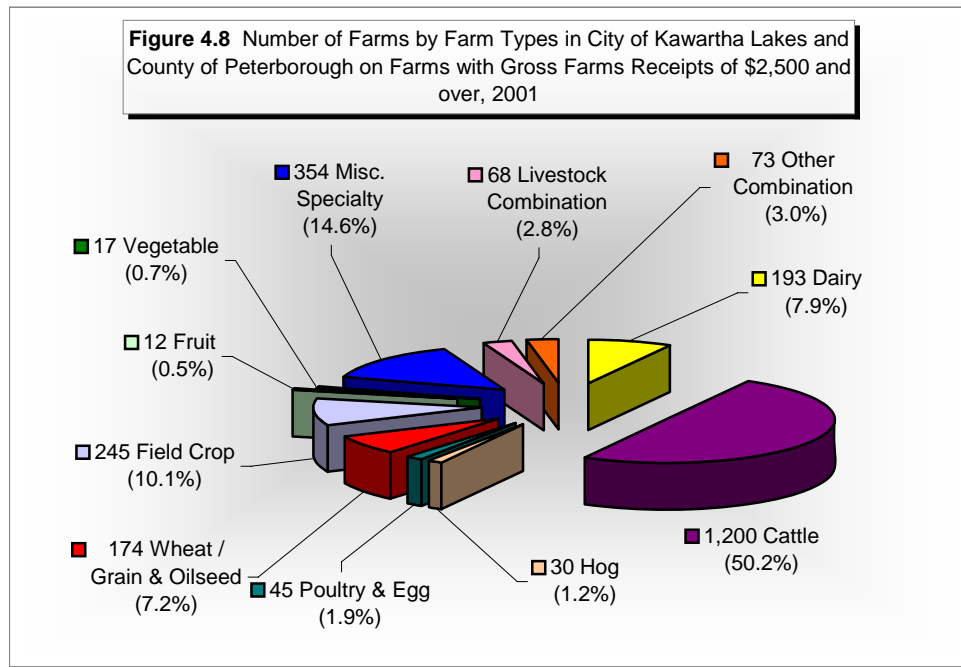
The nature of the topography which would have influenced development patterns and dictated the layout of fields may also have influenced the size and configuration of farming operations. As noted earlier, Peterborough is dominated by drumlins which can influence field layout and make large scale operations difficult. The marginal nature of the land in north Kawartha Lakes means larger acreages are required to support operations.

4.6 Farm Type

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

To clearly illustrate the agricultural industry in Kawartha Lakes and Peterborough, farm types were analysed from a variety of different perspectives. Later in this chapter there is a detailed assessment of the commodity breakdown based on gross farm receipts. However, before that was done, an assessment was carried out of the numbers of operations in each of the commodity groups, in each of the local townships in the City and County.

Because of the diversity in size of operations, a profile of farm type based on number is often quite



different from the profile based on gross farm receipts. Statistics Canada defines farm type on the basis of the commodity, or group of commodities that represents more than 50% of the gross farm receipts generated.

Figure A4.8 provides a breakdown of the different numbers of types of farms by commodity in each of the areas of the study region. **Figure 4.8** shows graphically the distribution of farm types generally found within Kawartha

Lakes/Peterborough, and (**Figure 4.9**) breaks it down by local township.

The most dominant farm type in terms of number of farms is cattle, which accounts for 50% of the farms. The second most dominant group which accounted for almost 15% of the farms is “miscellaneous specialty”. This is the grouping that includes horse and pony operations, greenhouse products, nursery and sod operations, sheep and lambs, goat and livestock specialty (ratites, camelids, bison, etc.). All of these operations are present in low to significant numbers in Kawartha Lakes/Peterborough.

Following in ranking after miscellaneous specialty by number of farms, is field crops at 10%. The balance of production is divided amongst dairy and wheat/grain & oilseed which account for 7% of the farm types; and other combination, livestock combination, and poultry & egg which account for 3%, 2.8% and 2% respectively. It should be noted that these numbers are from the 2001 census. Given the problems that the agricultural sector has experienced with Bovine Spongiform Encephalopathy (BSE) and falling commodity prices, this profile could be different in the 2006 census.

The breakdown in number of farms by farm type by township are mapped on **Figure 4.9**. This graphic representation shows that in 2001, the 1,202 cattle operations located within Kawartha Lakes and Peterborough were the dominate commodity group by number of farms both for the City/County and

townships⁷. Grain and oilseed and field crops were another dominate commodity with all of the townships reporting a high number of grain and oilseed and field crop operations (**Figure A4.8**).

Dairy is a significant commodity group, ranking third in number of operations in Kawartha and fourth in Peterborough. Dairy operations are located in the south part of the region where they occur in all townships with the exception of Manvers. There were no dairy farms reported in Laxton, Digby & Longford, Dalton, Carden, Somerville or Galway-Cavandish & Harvey in 2001.

The miscellaneous specialty sector is dominant in all of the areas. A breakdown of this sector by commodity and township is found in **Figure A4.9** and mapped on **Figure 4.10**.

The commodities classified as miscellaneous specialty have been growing in importance in Ontario agriculture generally over the past several census periods. Kawartha Lakes and Peterborough are no exception; this classification of operation is well represented in the City and County. Miscellaneous specialty commodities tend to do well in proximity to urban markets and on smaller acreages. Mushroom growers, greenhouses, and nurseries all benefit from the “just in time” delivery opportunities and a large and sophisticated market. These types of operations are well represented in Peterborough.

The existence of a large number of horse and pony operations in Kawartha Lakes/Peterborough is consistent with both the growth that has been experienced in this sector over the past decade and the presence of several large racetracks, Kawartha Downs, Picov Downs, and Quinte Exhibition, within close driving distance. As is discussed under the equine profile at the end of this chapter, the introduction of casino facilities at race tracks in the late 1990's led to a resurgence in the standard bred industry in Ontario. The statistics for Peterborough / Kawartha Lakes confirm that this area was part of this trend.

The grain and oilseed and field crop operations tend to be found in the areas that are removed from the urban areas. These operations require the larger acreages found in predominantly rural areas. Grain and oilseed and field crops represent a significant component of agricultural production in the County and the City. There are some large cash crop operations in Kawartha Lakes/Peterborough. Of the 619,332 farmland acres that existed in 2001, 286,632 acres, or 46% of it was in field crops. **Figure A4.10** provides a breakdown of the field crop statistics. **Figure A4.11** shows how the production fluctuated during the period between 1998 and 2005.

4.7 Gross Farm Receipts

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

⁷ Given the issues related to BSE since the last census, numbers for cattle operations may have changed.

Figure 4.9

City of Kawartha Lakes and The Greater Peterborough Area - Agricultural Economic Impact - & Development Study -

- Number of Farms by Farm Type
by Township, 2001 -

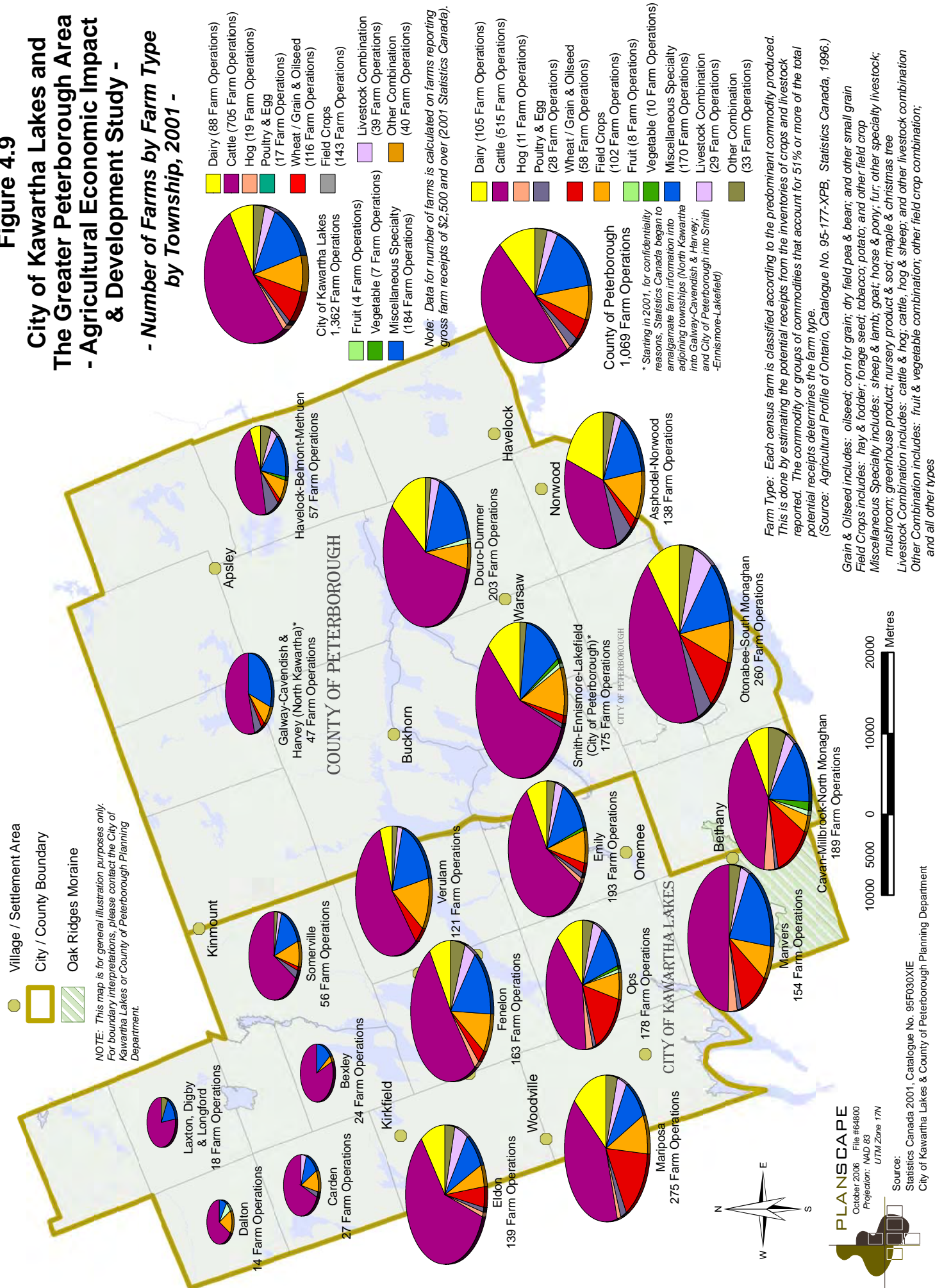


Figure 4.10

City of Kawartha Lakes and The Greater Peterborough Area - Agricultural Economic Impact & Development Study -

- Miscellaneous Specialty by Number of Farms by Township, 2001 -

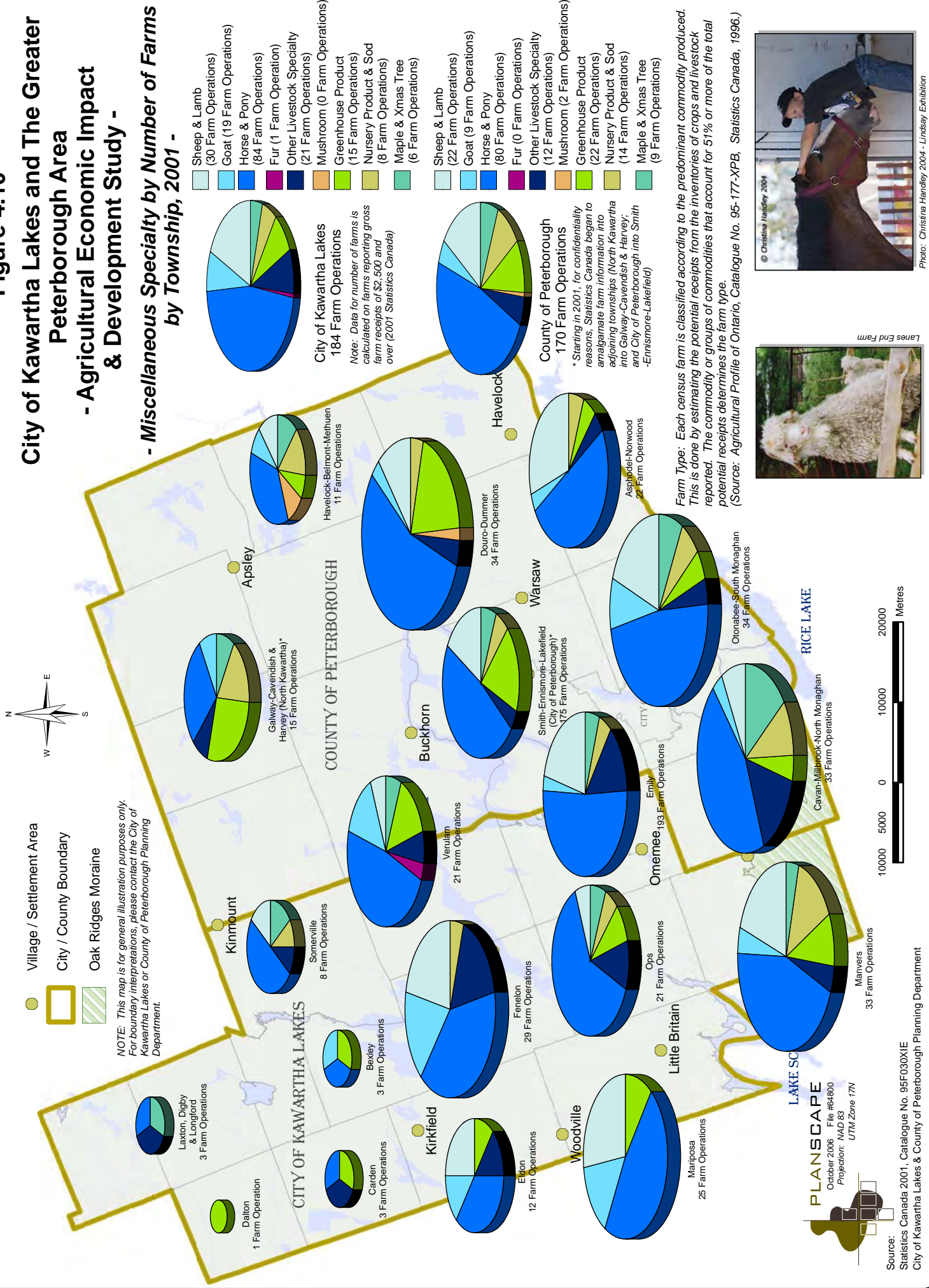


Figure 4.11 provides a breakdown of the gross farm receipts generated in Kawartha Lakes and Peterborough. In 2001 the area as a whole generated \$155,694,972⁸ in gross farms receipts; the City of Kawartha Lakes generated gross farm receipts of \$86,119,375⁹ and Peterborough generated \$69,575,597¹⁰. Within the City of Kawartha Lakes almost 31% of gross farm receipts were generated in Mariposa, 15% in Ops, 13% in Emily, 12% in Eldon, and 11% in Manvers. Within the County of Peterborough 28% of gross farm receipts were generated in Otonabee-South Monaghan, 21% in Asphodel-Norwood, and 19% in Cavan-Millbrook-North Monaghan. **Figure 4.12** shows the distribution of gross farm receipts by township. Once again the distribution tends to relate to the geographic location, northern or southern within the City; south-western or north/north-eastern within the County.

Figure 4.11 Percentage Breakdown of Gross Farm Receipts (excluding forest product sold) for City of Kawartha Lakes and the County of Peterborough by Township, 2001

<i>Geographic Location</i>	<i>Gross Farm Receipts</i>	<i>%</i>	<i>Geographic Location</i>	<i>Gross Farm Receipts</i>	<i>%</i>
Kawartha Lakes / Peterborough	\$155,694,972		Peterborough County	\$69,575,597	
City of Kawartha Lakes	\$86,119,375		Asphodel-Norwood	\$14,581,534	21.0%
Emily	\$11,033,542	12.8%	Otonabee-South Monaghan	\$19,428,397	27.9%
Ops	\$12,952,397	15.0%	Cavan-Millbrook-North Monaghan	\$12,970,724	18.6%
Manvers	\$9,642,529	11.2%	Smith-Ennismore-Lakefield*	\$10,755,637	15.5%
Mariposa	\$26,288,844	30.5%	Douro-Dummer	\$9,200,943	13.2%
Eldon	\$10,052,326	11.7%	Havelock-Belmont-Methuen	\$1,535,570	2.2%
Fenelon	\$8,393,848	9.7%	Galway-Cavendish and Harvey*	\$1,102,792	1.6%
Verulam	\$4,258,180	4.9%			
Somerville	\$1,020,300	1.2%			
Bexley	\$546,069	0.6%			
Carden	\$1,321,334	1.5%			
Dalton	\$327,689	0.4%			
Laxton, Digby & Longford	\$282,317	0.3%			

* Starting in 2001, for confidentiality reasons, Statistics Canada began to amalgamate farm information into adjoining townships (North Kawartha into Galway-Cavendish & Harvey; City of Peterborough into Smith-Ennismore-Lakefield). Data for gross farm receipts is calculated on total number of farms reporting.
Source: Census of Agriculture, Statistics Canada, 2001; Special Order

Figure A4.12 provides a breakdown of average gross farm receipts per acre by township within the City of Kawartha Lakes and the County of Peterborough. The distribution of gross farm receipts is depicted on **Figure 4.13 and 4.14**. In Kawartha Lakes, Mariposa generates the highest average gross farm receipts per acre at \$359, followed by Ops at \$327, and Emily and Manvers at \$272 and \$271 respectively. Eldon, Fenelon, and Verulam ranged between \$125 and \$246 per acre. The northern portions of the City ranged between \$32 and \$76 average gross farms receipts per acre. In Peterborough, Asphodel-Norwood generates the highest gross farm receipts per acre at \$482, followed by Cavan-Millbrook-North Monaghan at \$327, and Otonabee-South Monaghan at \$312. The north/north-eastern portions of the County ranged between \$67 and \$181 gross farm receipts per acre.

⁸ Based on all Census farms reporting.

⁹ Based on all Census farms reporting.

¹⁰ Based on all Census farms reporting.

Figure 4.13 Gross Farm Receipts Per Acre for Ontario, Central Ontario Region and City of Kawartha Lakes by Former Township, 2001

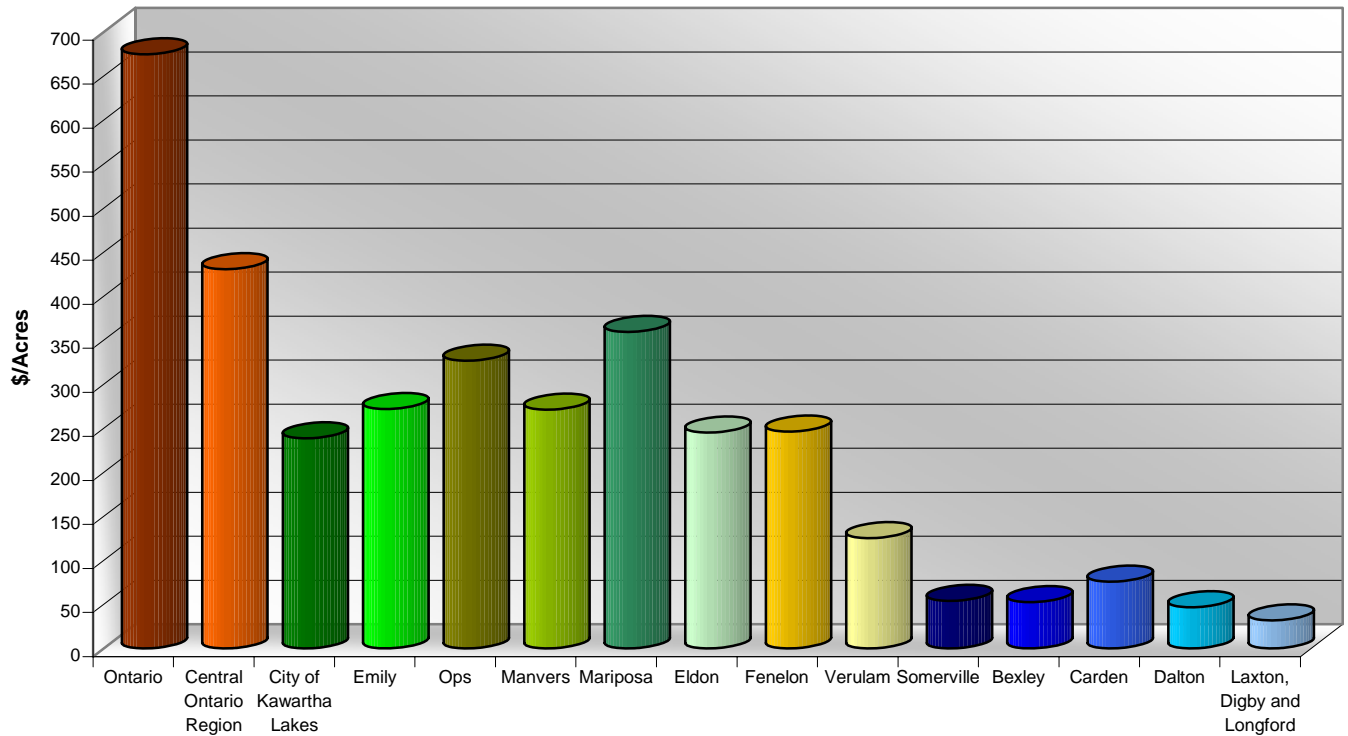


Figure 4.14 Gross Farm Receipts Per Acre for Ontario, Central Ontario Region and County of Peterborough by Township, 2001

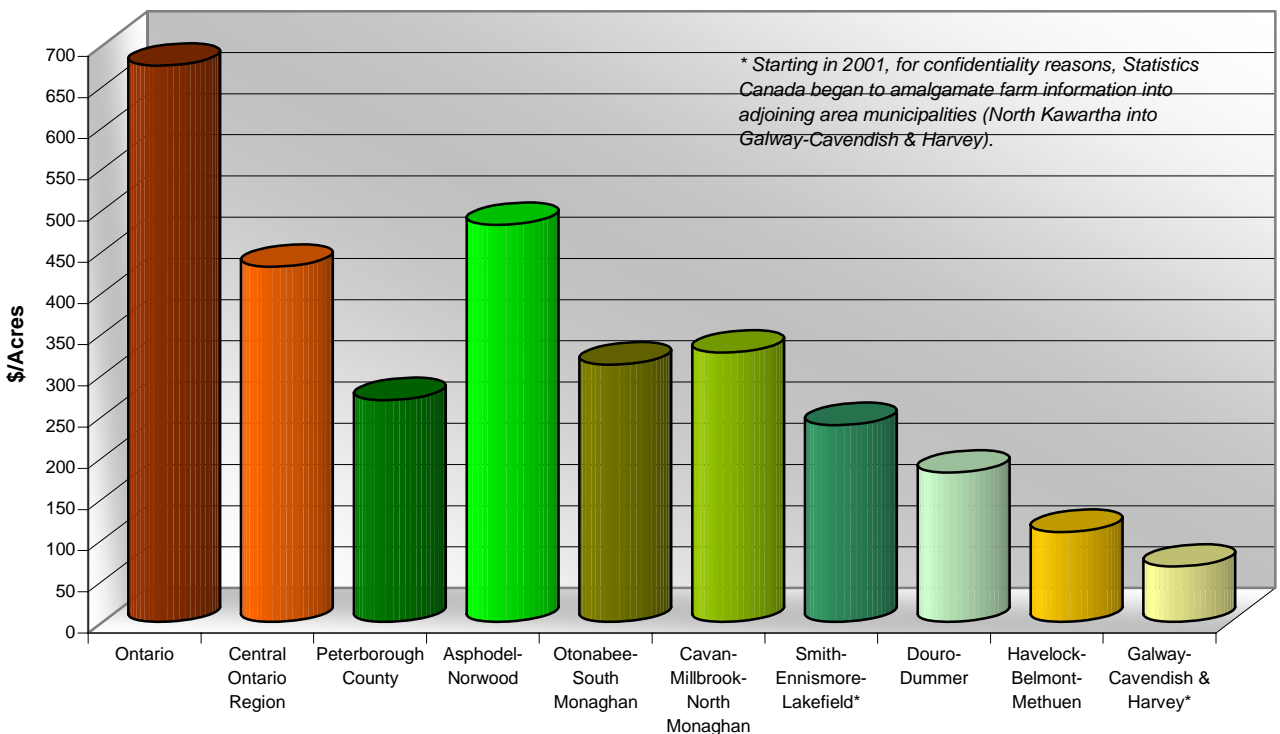
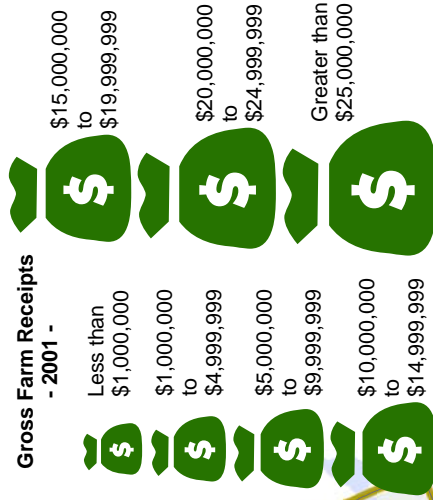


Figure 4.12

City of Kawartha Lakes and The Greater Peterborough Area - Agricultural Economic Impact & Development Study -

**- Gross Farm Receipts (\$55.7 million)
by Township, 2001 -**



* Starting in 2001, for confidentiality reasons, Statistics Canada began to amalgamate farm information into adjoining townships (North Kawartha into Galway-Cavendish & Harvey; City of Peterborough into Smith-Ennismore-Lakefield).

Note: Data for total gross farm receipts is calculated on all farms reporting (2001 Statistics Canada)



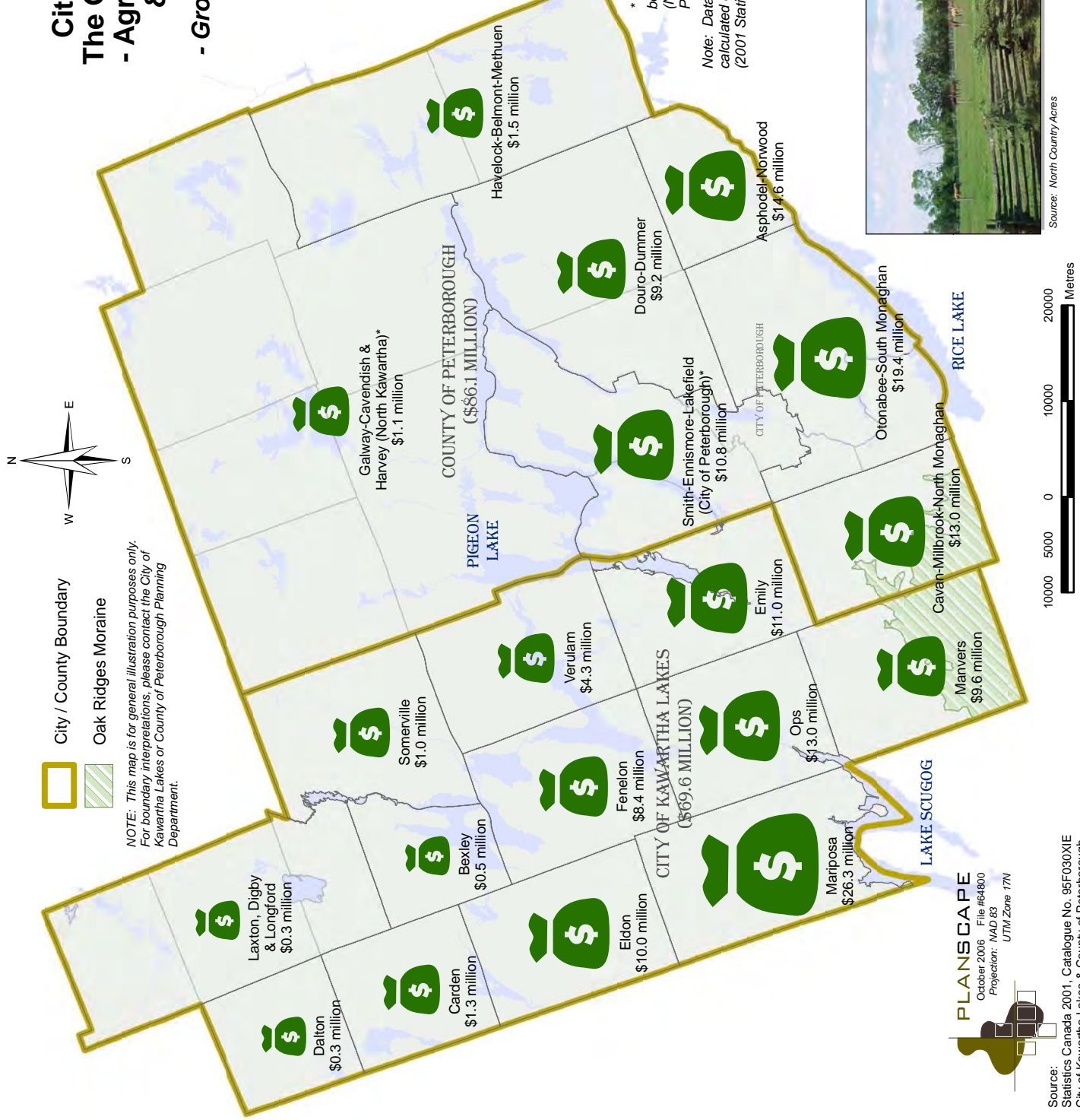
Source: www.pickseed.com



Source: www.pickseed.com



Source: North Country Acres



A review of the source of the gross farm receipts provides some insight into the variations in value. In areas with higher per acre values the farming mix tends to be strong, characterized by a production of a variety of commodities including dairy. Areas with lower per acre values tend to be on marginal land with operations limited to cattle and field crop.

The breakdown by commodity group is provided graphically on **Figure 4.15** and listed in a chart on **Figure A4.13-Figure A4.14**. These statistics confirm a traditional type of farming community across the City and County. The top commodity grouping for the Kawartha Lakes/Peterborough area as a whole in 2001 was cattle based on gross farm receipts of \$49,798,652 or 32% of the total gross farm receipts. Dairy followed closely at \$42,889,329 or 27.6% of the total gross farm receipts. Following in ranking was poultry and egg, wheat/grain and oilseed, and horse and pony at \$12,664,165 (8%), \$11,877,376 (7.6%), and \$6,616,049 (4.3%) respectively.

The top commodity grouping for the City of Kawartha Lakes in 2001 was also cattle. By area breakdown in terms of gross farm receipts generated, cattle also ranked as the top commodity group in each township except Manvers and Mariposa where grain and oilseed and dairy ranked as the top, respectively.

In value of gross farm receipts generated, dairy ranked second in the City and in Emily, Ops, Eldon, Fenelon, and Verulam. In the third to fifth placing, rankings were evenly distributed between the grain and oilseed, field crops, horse and pony, goat, hog, and other combination.

In Bexley and Laxton, Digby & Langford only one commodity entered the ranking (cattle). This is not unexpected, given the nature of the areas. In Carden and Dalton, field crops ranked second in top commodity groupings after cattle. In Somerville, the top three commodities were cattle, horse and pony, and field crops. All data from the other commodities were suppressed for confidentiality reasons in these municipalities due to the low number of operations.

The top commodity grouping for County of Peterborough in 2001 based on gross farm receipts was dairy, amongst the townships it also ranked as the top commodity group in all the townships with the exceptions of Cavan-Millbrook-North Monaghan and Galway-Cavendish & Harvey where cattle ranked as the top.

Second, third and fourth rankings were evenly distributed between the cattle, poultry & egg, greenhouse products, horse & pony, field crops, and hog. Poultry and egg is particularly significant in Asphodel-Norwood and Otonabee-South Monaghan. The only area where vegetable production is notable is Mariposa.

The horse & pony is a sector that is sometimes questioned as being a bona fide agricultural operation. Given the complexity and diversity of agriculture today, this is not warranted. With the resurgence of harness racing, Standardbred operations are flourishing and profitable. Horse and pony operations support other components of agriculture by buying feed and supplies. They use agricultural services such as veterinarians, feed mills, implement dealers, and agricultural supply depots thereby ensuring there is sufficient trade to keep them in business.



Horse and pony is a sector that tends to be under reported in the agricultural census. In recognition of this and in acknowledgement of the contribution the horse and pony sector makes to agriculture, a separate analysis was conducted of the sector and is included at the end of this chapter.

Sheep & lamb, goat, horse & pony, specialty livestock, greenhouse products, and nursery products & sod are significant throughout the study region. These commodities are generally included as part of the miscellaneous specialty group. However because of their prominence in the Kawartha Lakes and Peterborough agricultural economy, they have been broken out for the purposes of assessing the distribution of gross farm receipts. The miscellaneous specialty category that is left only includes the commodities listed in the note on **Figure A4.13 and Figure A4.14**.

Figure A4.15 provides a breakdown of number of farms by category of gross farm receipts. These statistics reveal that the number of farms producing more than \$500,000 of gross farm receipts per year is increasing steadily. The smaller operations (under \$10,000) are declining. The category which produces between \$5,000 and \$50,000 is holding steady, or increasing. A majority of the agricultural operators (754 or 27.7%) in Kawartha Lakes/Peterborough have operations that generate in excess of \$10,000 in gross farm receipts per annum with 113 (4.2%) operations generating in excess of \$250,000 and 45 (1.7%) operations generating in excess of \$500,000 per year. Only 23% or 588 of the 2718 census farms reported generating in excess of \$50,000 per annum in gross farm receipts in 2000.

These numbers are indicative of the fact that Statistics Canada's reporting on agricultural operations tends to be skewed by the inclusion of many small lifestyle or hobby farmers.

Historical Gross Farm Receipts

Figure 4.16 depicts how the City of Kawartha Lakes and the County of Peterborough agricultural economy has changed over the years. **Figure A4.16** charts the total gross farm receipts by commodity type over a 15-year period, 1986 to 2001. Cattle ranked number one in 1986, 1991, and 2001 followed closely by dairy. In 1996, dairy edged out cattle for top ranking. Gross farm receipts for the cattle sector increased from \$44 million to almost \$50 million between 1986 and 2001. It should be noted that the statistics end in 2001. Given the problems that the agricultural sector has experienced since 2003 with BSE and falling commodity prices, this profile could be quite different in the 2006 census.

Dairy consistently ranked second in value except in 1996 when it ranked first. The gross farm receipts for this commodity sector increased from \$38 million in 1986 to a high of \$46 million in 1996, then declined in 2001, by \$3 million, to \$43 million.

Poultry and egg and field crops have more than doubled in value over the past 15 years. Poultry and egg and field crops ranked 5th and 11th in 1986 and over the past three census periods have shown a steady growth to rank 3rd and 8th respectively in 2001 with an increase in gross farm receipts from \$5.5 million to \$12.6 million for poultry and egg and \$400 thousand to \$4.7 million for field crops.

Hog ranked 4th in 1986 with gross farm receipts of just over \$10 million then declined slightly in 1991 to 5th place with \$7.6 million in gross farm receipts. A drastic drop off in growth and gross farm receipts in 1996 (\$3.7 million) is consistent with the agricultural climate during that period when Canadian hog producers were, for several years, under economic pressure from the U.S. government



Figure 4.15

City of Kawartha Lakes and The Greater Peterborough Area - Agricultural Economic Impact & Development Study - - Gross Farm Receipts by Farm Type by Township, 2001 -

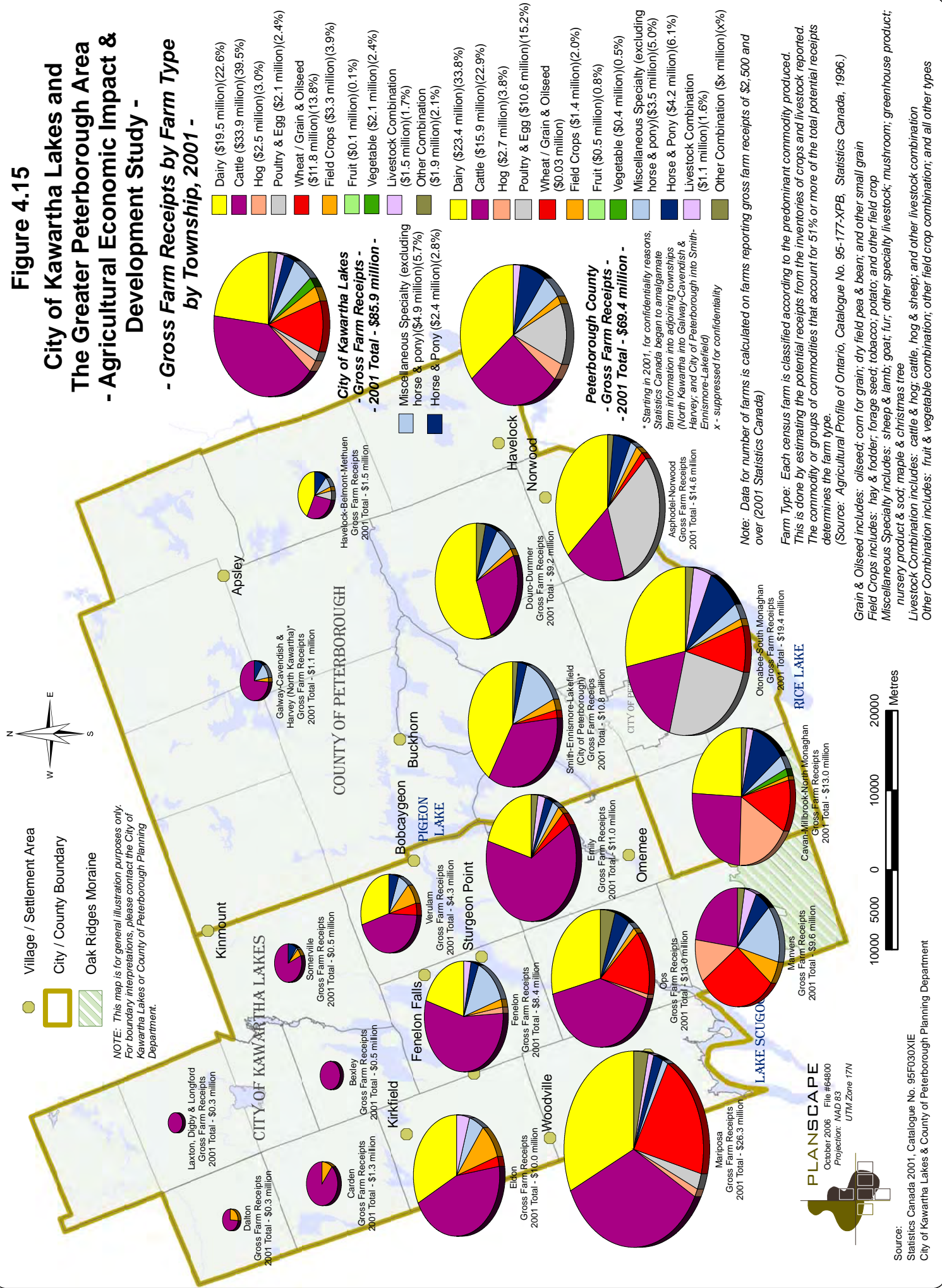
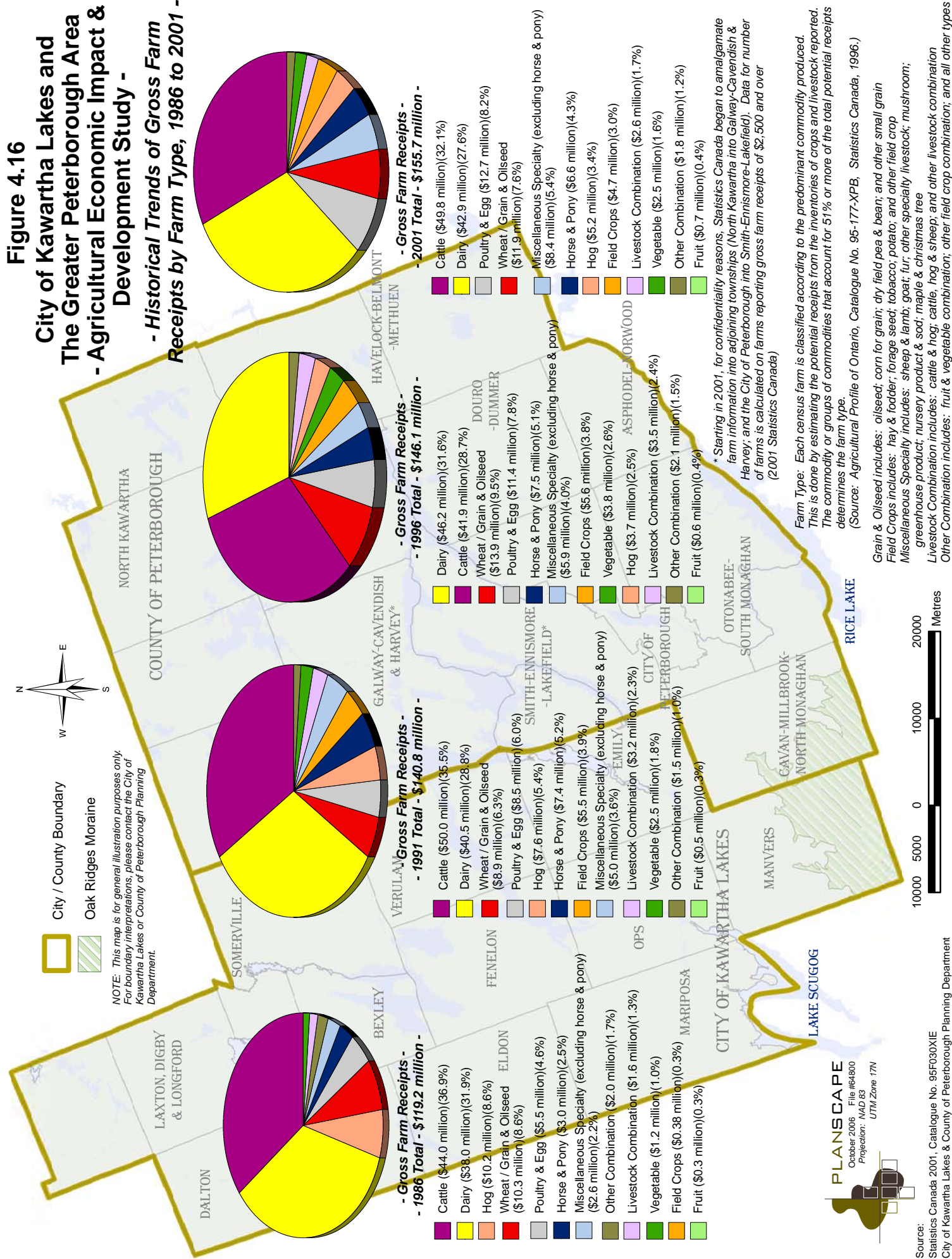


Figure 4.16
City of Kawartha Lakes and
The Greater Peterborough Area
- Agricultural Economic Impact &
Development Study -
- Historical Trends of Gross Farm
Receipts by Farm Type, 1986 to 2001 -



which was charging countervailing duty on all Canadian hog imports. During this timeframe, hog prices were extremely low because of a worldwide abundance of product. With the lifting of the U.S. countervail, and an increase in demand, the hog industry has made a small comeback with an increase in gross farm receipts to \$5.2 million and an overall ranking of 7th within the Kawartha Lakes/Peterborough area in 2001.

4.8 Farm Operating Costs

Farm operating costs represent the contribution farms make to the broader community through the purchase of goods and services. In 2001 the average operating cost per farm in the Kawartha Lakes / Peterborough area was \$53,713 (per farm reporting total farm expense) and the average operating cost per acre was \$236. (**Figure A4.17**) The latter figure is considerably lower than the average cost per acre in Ontario, (\$580 per acre) or in the Central Ontario Region, (\$383 per acre).

Figure 4.17 Farm Capital Per Acre, a Comparison of Ontario and Various Municipalities, Counties and Districts, 2001

<i>Geographic Location</i>	<i>Total Farm Capital</i>	<i>Average Farmland Area (ac)</i>	<i>Average Farm Capital Per Acre</i>
Regional Municipality of Durham	\$1,577,423,794	330,286	\$4,776
Simcoe County	\$2,081,575,843	540,870	\$3,849
Ontario	\$50,529,783,505	13,507,357	\$3,741
Central Ontario Region	\$6,663,976,981	1,973,104	\$3,377
Bruce County	\$1,591,157,380	611,461	\$2,602
Northumberland County	\$643,785,728	253,665	\$2,538
Grey County	\$1,470,509,861	593,121	\$2,479
Peterborough County	\$609,214,583	258,642	\$2,355
City of Kawartha Lakes	\$773,233,853	360,690	\$2,144
District Municipality of Muskoka	\$64,325,287	34,779	\$1,850
County of Hastings	\$504,562,251	306,068	\$1,649
County of Lennox & Addington	\$308,527,006	197,441	\$1,563
Haliburton County	\$19,231,200	13,976	\$1,376
County of Renfrew	\$534,765,566	402,978	\$1,327
District of Parry Sound	\$120,525,022	95,810	\$1,258

Note: Data for farmland area is calculated on total number of farms reporting.

Source: 2001 Statistics Canada - Catalogue No. 95F0301X1E

Farm capital as documented on **Figure 4.17** gives the total value of capital held by farms. It is not a measure of capital investment but rather the total value of all capital from machinery to land and buildings as well as livestock and poultry. It does not include the cost of quota for supply management systems, which can be expensive.

The numbers in **Figure A4.18** are calculated based on what each farmer gives Statistics Canada as an assessment of their value, the value of livestock and poultry inventories is calculated based on

commodity prices. In 2001, the total farm capital value for Kawartha Lakes and Peterborough combined was \$1,382,448,436. In 1996, this value was assessed at \$1,246,369,419. Between 1996 and 2001, the increase in total farm capital value for Kawartha Lakes and Peterborough combined was \$136,079,017.

Total farm capital values for Kawartha Lakes and Peterborough fit in the mid range when compared with other regions of the province. This is not surprising given its farm profile and defining characteristics including the topography, areas of lower production capability in the northern section and prime areas in the south.



4.9 Profiles

There are certain characteristics of agriculture in the study area that are not captured by Census Canada statistics or which have evolved since the 2001 census. To provide a more detailed glimpse into some of these evolving trends, profiles of several sectors and information about changing trends is provided in the following sections.

4.9.1 The Horse and Pony Sector; A Profile of the Equestrian Industry

The horse and pony sector is a significant sector in the study area that ranked 6th in the production of gross farm receipts in 2001. The Census of Agriculture compiled by Statistics Canada reported that in 2001 there were 2,251 horses on 330 farms in the City of Kawartha Lakes and 1,798 horses on 264 farms in the County of Peterborough. However, Statistics Canada Agriculture Census reports include only those animals reported by their farm classification and does not include performance or recreational horses owned by the non-farming community.

A study of the horse industry conducted by Dr Robert Wright, Chief Veterinarian for the Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA) and Jim Cation, Executive Director of the Ontario Equestrian Foundation, found that Statistics Canada generally underestimates the size of the Ontario industry by a factor of 3.9¹¹. Since the publishing of the Wright report, Statistics Canada has acknowledged their propensity to undercount and points to the Wright Study as a more accurate indication of the overall status (in terms of number of farms and estimated number of horses) of the horse industry in Ontario.¹²

When it was released, Dr. Wright's report estimated that in 1996, there were 6,287 horses on 1,420 farms in Victoria County and 6,306 horses on 1,240 farms in Peterborough County. The report went on to estimate that in each county, the horse sector generated an annual economic impact of \$11.2 million (\$1,781/horse); based on investments in fixed assets of \$114.7 million (\$18,250/horse) in Victoria County; and \$115.1 million (\$18,250/horse) in Peterborough County.

The Wright report was updated in 2001. The results of this update and the corresponding Statistics Canada numbers for the horse sector are listed in **Figure 4.18**. These statistics confirm that the horse sector is of much greater importance than the census information would indicate¹³; the combined area of Peterborough and Kawartha Lakes is home to approximately 4.5% of the horses in the province.

¹¹ Dr Robert Wright and Jim Cation. 1996 Ontario Horse Industry Report, Ontario Ministry of Agriculture Food and Rural Affairs, August, 1996.

¹² *Personal communication with Dr. Robert Wright, August, 1999 and June 2006.*

¹³ In recognition of the under representation of the industry, the economic impact analysis contained in Chapter 5 of this report used numbers generated using the Wright approach.



Figure 4.18 Number of Farms and Horses in Ontario, Central Ontario Region and Counties, City, and Districts, 2001

Geographic Location	Horses and ponies					
	Statistics Canada		Estimates based on Dr Robert Wright (OMAF)		Annual Economic Impact (\$1,781 / horse) \$Million	Investment in Fixed Assets (\$18,250 / horse) \$Million
	# of Farms	# of Horses	# of Farms	# of Horses		
Ontario	11,258	83,337	48,196	293,015	\$567.0	\$5.5 B
Central Ontario Region	2,053	16,346	9,426	64,061	\$114.1	\$1.2
Hastings County	260	1,422	1,045	4,688	\$8.3	\$85.6
Prince Edward County	105	588	406	2,165	\$3.9	\$39.5
Northumberland County	225	1,440	1,119	6,443	\$12.5	\$127.7
County of Peterborough	264	1,798	1,376	6,998	\$11.2	\$115.1
City of Kawartha Lakes	330	2,251	1,576	6,976	\$12.4	\$127.3
Durham Region	413	4,100	2,028	16,528	\$29.4	\$301.6
York Region	279	3,608	1,365	17,612	\$31.4	\$321.4
Muskoka District	56	520	257	1,541	\$2.7	\$28.1
Haliburton County	19	79	117	698	\$1.2	\$12.7
Parry Sound District	102	540	429	1,794	\$3.2	\$32.7

Source: Statistics Canada, 2001

Economic Impact of Horse Industry Ontario 2001 (Dr. Robert Wright, DVM, OMAF)

There are different components to the horse sector all of which are present in the study area. These include performance, recreational and work horses (**Figure 4.19**). The presence of horses in large numbers supports other agricultural sectors. Many owners board their horses on existing farms which provides alternative income to the farm owner. Many horse owners do not actively farm; they rent their properties to active farmers and purchase feed and bedding. Horse owners require agricultural services in the form of veterinarians, feed outlets, equipment dealers, etc. All of these factors combined mean that horse operations make a significant contribution to the agricultural economy and strengthen the availability of services to the farm sector generally.

In 1998, a National Horse Industry Study was completed by Strategic Equine Marketing. The study produced the following demographic profile (**Figure 4.20**):

TYPICAL HORSE OWNER/PARTICIPANT:

- Female (76.53%);
- "Baby-boomer" generation (median age 40 to 49);
- Well-educated (60.39% have attended college or university);
- Living in households with an annual household income at the national "norm" for double-income households (median household income \$40,000 to \$60,000 per annum range);
- Living in households where more than one person is involved in riding or driving horses. Survey results show that, in households with one adult rider, an average of 1.54 adults in the household ride or drive, and 0.68 children ride or drive horses; and
- Has been riding or driving horses for more than 10 years (83.37% of those surveyed).¹⁴

¹⁴ Strategic Equine Marketing, 1998 National Horse Industry Study, developed for CFBMC and CEF, 1998.

Figure 4.20 General Demographic Profile Provincially

<i>Province</i>	<i>Median Age</i>	<i>Median Household Income (p.a.)</i>	<i>Avg. # of Riders / Drivers / Household</i>	<i>Avg. # of Horses Owned</i>	<i>Avg. # of Other Peoples' Horses Cared For</i>
Canada	40 – 49	\$40,000 - \$60,000	2.22	7.66	10
British Columbia	40 – 49	\$40,000 - \$60,000	2.22	5.74	5
Alberta	40 – 49	\$40,000 - \$80,000	2.53	15.38	10
Saskatchewan	40 – 49	\$40,000 - \$60,000	2.26	9.47	16
Manitoba	30 – 39	\$40,000 - \$60,000	2.14	5.99	7
Ontario	30 – 39	\$40,000 - \$80,000	1.93	5.12	12
Quebec	50 – 59	\$40,000 - \$60,000	2.50	6.42	9
New Brunswick	40 – 49	\$40,000 - \$60,000	2.13	4.89	9
Prince Edward Island	40 – 49	\$40,000 - \$60,000	1.60	4.43	3
Nova Scotia	40 - 49	\$40,000 - \$60,000	1.95	4.60	6
Newfoundland	20 – 29	\$40,000 - \$60,000	1.40	2.78	4

The Canadian horse industry is in a growth phase - growth in herd size, as well as number of participants. Horse owners in Ontario reported a net increase in the number of non-owning riders using their horses for lessons, trail rides, or competition. Ontario reported a net increase in herd size since 1993.

Results produced from the National Horse Study regarding industry trends with regards to growth found that approximately 80% of Canadian horse owners surveyed expected to own the same number, or more horses in five years time; only 20% of horse owners surveyed expected to own fewer horses by 2002.

Continued expectation for growth is being driven by 'new participants' those who have owned horses for less than ten years -- and non-owners who expect to buy their first horse within the next five years. The study produced the following demographic profiles:

TYPICAL NEW PARTICIPANT:

- An adult beginner, often a woman, entering the ranks of horse ownership, after having ridden for ten years or more;
- Rides with one or more other members of her household either one other adult, or one junior rider/driver. (The attraction of equestrian sport as a 'family' activity is an excellent harbinger of long-term growth).

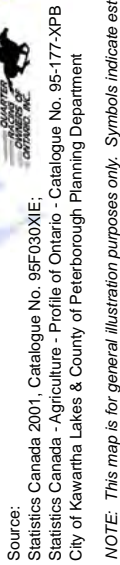
TYPICAL FIRST TIME HORSE OWNER:

- Female;
- Involved as a pleasure rider, and is likely to purchase her first horse for recreational riding and quite likely for competing; and
- Between 30 and 49 years of age.¹⁵

During the first five years of horse ownership, a new owner is likely to increase her participation in competitive sport, and increase personal herd ownership to 3+ horses. She will expand her herd,

¹⁵ Strategic Equine Marketing, 1998 National Horse Industry Study, developed for CFBMC and CEF, 1998

Typical Horse Owner/Participant:
 * Female (76.53%);
 * "Baby-boomer" generation (median age 50);
 * Well-educated (60.39% have attained a college degree);
 * Living in households with an annual income of \$25,000 or more;
 * Living in households (median household income \$35,000) where more than 10% of the household income is derived from the horse industry;
 * results show that, in households where the horse owner/manager is the driver of the household ride or drive, and that the horse owner/manager has been riding or driving for 10 years or more, 83.37% of those surveyed.
 (Strategic Marketing - Excerpt from 1998 National Horse Industry Survey)



either through syndicate partnerships, or for her own diversifying participation (breeding, coaching, etc.), or for other family members to ride or drive. She most likely boards her horses at a local stable, or employs other people to care for her horses.

During the next five years of ownership, she will maximize her participation in competitive sport, and increase her personal herd ownership to an average of 4+ horses. During this ownership phase, she will diversify her participation to include responsibility for horses belonging to others, and probably purchase the property on which she will maintain her horses.

Once she has passed the tenth anniversary of horse ownership, her participation in the industry has reached its maximum diversity. She is still active in the competitive sector, but is less likely to define herself as a 'competitor' than she was in the previous five years. In addition, 17% of the horses she owns will now be used by other riders for riding lessons, trail rides, or competition, and up to sixteen different people will ride each of these horses during the year.

Several other studies have examined the economic impact of the horse racing and breeding sector in Ontario. These other studies were less focused on understanding the contribution of this industry to the agricultural sector *per se* than the Wright Report. However, they do provide another perspective into the overall impact of the horse racing and breeding industry.

One of the most often cited reports on the horse industry in Ontario is the 2004 Economic Impact of Horse Racing and Breeding conducted by Econometric Research Limited. This study is a five-year review of the economic impact of horse racing and breeding in Ontario pre and post introduction of slot machines.

Excerpts from the Executive Summary list key findings as follows:

- *Over 10 million patrons attended horse races in Canada. Of the \$1,791 million wagered in 2004, approximately \$1,177 million of that was in Ontario. These patrons also spend sizable amounts on transportation, food, beverage and lodging outside the racetracks pouring "new" money into many local communities. Furthermore, the money horsepeople receive from racing is credited with supporting a large agricultural infrastructure and a way of life in the rural economy.*

The links of this industry to the rural economy are substantive and complex. A significant horse breeding industry is needed to produce the horses for the racing phase. Thousands of acres of agricultural land and many workers are needed to care, train and groom the animals and maintain the farms where they reside. The gestation period of horses is over 11 months and horses do not race until they reach the age of two. This means that about three years of time and resources are spent on producing and training each horse before it ever reaches the track. It is also true that most of the veterinarians, blacksmiths, farriers, hay and grain suppliers, transportation workers, harness and saddle makers and many others who provide services and products needed to breed, maintain and train the horses are located in the rural parts of the province.

Ultimately, many racehorses fill the ranks of pleasure horses, jumpers, and dressage animals, thus continuing the need for labour, feed and supplies.

- *The horse racing and breeding industry besides being an agricultural based industry has also contributed to the diversification of the economic base of many rural communities and expanded the tourism, entertainment and export economic base of Ontario.*



- *Wagering in Ontario, which peaked in 1995 at \$1,179 million (\$638 million on thoroughbred and \$541 million on standardbred) declined slightly to \$1,143 million in 1999, but managed to recoup its losses and rise to \$1,193 million in 2000 and to \$1,244 million in 2002. In 2003, the wagering declined slightly to \$1,205 million and further in 2004 to \$1,177 million. Wagering today is in nominal terms at the same level it achieved a decade ago. In constant 1992 dollars, total wagering has declined significantly as nominal wagering did not keep up with inflation. In constant dollars wagering peaked at \$1,107 million in 1995 but declined to \$979 million in 1998 which represents a decline of 8.5% over the period. Wagering in constant dollars recovered slightly to \$1,045 million in the year 2000 only to decline slightly to \$1,029 million in 2002 and significantly to \$986.8 million in 2003 and to even lower levels in 2004 with only \$946.4 million. Wagering on standardbred horses also peaked in nominal and constant dollars in 1995 but declined thereafter. In 1992 dollars, wagering on standardbred horses declined from \$508 million in 1995 to \$417 million in 2002 further to \$392 in 2003 but increased slightly to \$402. Wagering on thoroughbred horses remained almost constant (over \$600 million) in real dollars at its peak value between 1995 and 2002, but declined by 2.8% in 2003 to \$595 million and further declined to \$545 million in 2004.*
- *The horse racing and breeding industry in Ontario is credited with \$2.1 billion of recurrent expenditures in 2004 dollars. This represents almost no increase from the 2003 level, and is pale in comparison to the 25% increase between 2002 and 2003 or the increase from the \$1.2 billion in the year 2000.*
- *Today the Ontario horse racing industry is hi-tech, a vibrant partner in the entertainment business and is a key node in the New Economy. It combines slot machines with live racing, receives and transmits racing signals to/from the rest of the world, and wagers are accepted over the telephone and the Internet and are made into many teletheatres managed by the industry at almost 100 locations outside the tracks.*
- *Over 40,040 Ontarians owed their permanent jobs to the horse racing and breeding industry in the province in 2004 (only 30,940 Ontarians owed their jobs to the industry in the year 2000). In fact, many more Ontarians work in the industry on a part-time basis. A total of about 65,000 people are employed in this industry when part-time and casual labour are included.*
- *All three levels of government realise substantial revenues on the horse racing and breeding industry expenditures (\$1.9 billion compared to \$576 million in the year 2000, a fourfold increase in less than 5 years). The Federal government realises \$454.7 million, whereas the Provincial government realises \$1.23 billion (inclusive of the slot machine profits at the tracks). The remaining \$189.3 million goes to local governments in the province (this total is inclusive of the slot machine revenues paid to host municipalities).*
- *A total of \$1.6 billion in wages and salaries in Ontario are sustained annually by the total expenditures of the provincial horse racing and breeding industry. This total was slightly over \$1 billion in the year 2000.*
- *The effective average direct wage in the slot operations exceeds \$50,734 annually which dominates other wages in the horse racing industry and is among the highest industrial wages in Ontario.*
- *The employment impacts of the horse racing and breeding industry in Ontario are diffused and cover almost the full spectrum of activities. Many of the jobs reflect the strong linkages of horse racing with agriculture, the agricultural manufacturing sector, the agricultural services sector, and the rural*



economy. A total of 4,448 person years of employment are sustained by the industry in the agricultural sector. This under estimates the total employment impacts as many more jobs are created in the rural services sectors.¹⁶

Relevance of the findings of the Econometrics report in the study area was borne out by discussions with area participants in the horse industry. The Director of Racing for Kawartha Downs¹⁷ confirmed that there are 106 race days per year with an average of 100 to 120 horses racing per day. It was his observation that approximately 75% of the horses that race are local. The fact that there is no overnight stabling tends to dictate this.

In an interview with Dr Wright, he noted that his research has confirmed that for each horse racing, there need to be 3 horses on farms to feed into the system. All of these horses require food, care and services.

A farmer in the Peterborough area¹⁸ who is actively involved in the ownership and racing of Standardbreds noted that for each horse that races, a groom is required to care for that horse during the day. Although not necessarily tracked as part of employment trends for the area this practice provides a significant amount of part time local employment with related impacts in the local economy. He also pointed out the positive contribution that the racing industry has made to the agricultural sector. In addition to the benefits of horse owners purchasing food and supplies and supporting the agricultural infrastructure, the Ontario Harness Horse Association has set up a registered retirement plan (RRSP) for farmers participating in the horse industry. A percentage of the revenue from slot machines is used to match contributions that the participants make to an RRSP. In an industry where pension plans are generally non existent, this is a significant benefit.

Other studies have examined the impact of various equestrian horse shows on local economies in Canada. A study conducted by the Professional Horsemen's Association of Canada¹⁹, analyzed the economic expenditures based on the show size. These expenditures include direct show expenses; hospitality expenses; administrative expenses; additional income/expenses; concessions, and other purchases (hay, shavings, feed, tack and equipment, gasoline purchases, shipping, etc.). The study concluded that the total economic expenditure impact on a local economy based on show size was as follows:

- 550 horses & 14,000 spectators – expenditures of \$3.9 million
- 400 horses & 5,000 spectators – expenditures of \$2.7 million
- 300 horses & 3,000 spectators – expenditures of \$1.9 million
- 200 horses & 1,500 spectators – expenditures of \$1.4 million
- 130 horses & 150 spectators – expenditures of \$573 thousand

Obviously there are variations depending on the show and location. The fact that the horse shows vary in size (anywhere from primary shows with 14 horses to over 800 at the larger 'A' shows) and many shows are not registered makes it very difficult to assess the impact of horse shows on the local economy in the combined Kawartha / Peterborough area. However given the potential for economic

¹⁶ Econometric Research Limited. The Economic Impacts of Horse Racing and Breeding in Ontario, 2004. March, 2005.

¹⁷ Dave McGee, Director of Racing, Kawartha Downs.

¹⁸ Gary Smith, Farmer Smith-Ennismore-Lakefield.

¹⁹ E.H. Hols and A.J. Keith. Impact of Various Size Horse Shows on Local Economies in Canada. Prepared for the Professional Horsemen's Association of Canada. 1996.



spin-offs from the hosting of shows it may be appropriate to investigate the potential for developing horse shows, or events such as pony club, schooling shows and trillium circuit competitions (provincial circuit level).

Pony Club Events

In 1928 the Institute of the Horse started a scheme of Sub-Branched throughout England to encourage riding. In 1934, Pony Club came to Canada with the establishment of the Eglinton Pony Club. In 1947, the Institute of the Horse and Pony Club amalgamated with the National Horse Association of Great Britain, and became known as the British Horse Society and the parent organization and headquarters of the Pony Club. Today the Pony Club is represented in 30 countries with approximately 2,000 Branches and 100,000 members.

The Central Ontario Region (COR) of the Canadian Pony Club currently has 29 branches with a membership of just under 500. Kawartha Lakes and Peterborough are home to three regional branches of COR, namely, Kawartha Pony Club, Victoria Pony Club, and Waussnodae Pony Club. COR hosts its own competitions in partnership with their regional branches. Educational programs such as quizzes, clinics, workshops, upgrading requirements for pony club level tests are generally hosted at a local stable but in some instances require a larger meeting place such as a conference room for events lasting anywhere from an one-day to a weekend event. Performance competitions in the form of event rallies, Prince Philip Games (PPG), show jumping, dressage and tetrathlon are again often hosted by an area stable or local fairground.

Being host to area pony clubs as well as COR events provides an opportunity for members to broaden their base of training in horsemanship as well as providing direct economic spin offs to the local area.

Currently the only COR events being hosted in the Kawartha Lakes / Peterborough area for the 2006 season is the Working Rally (a 3-day educational camp) at Saddlewood Equestrian Centre in Bethany, and the COR Year End Banquet hosted by the Waussnodae Pony Club in the Peterborough area.

Schooling Shows

Schooling shows are generally one-day events which have a multi-purpose within the horse industry. Young performance horses are shown at the schooling show level in order to provide show mileage and experience before moving these horses up to the Trillium or 'A' circuit level. These events provide an area of competition for the beginner rider by offering young riders / new riders a safe place to compete with others at their level. Usually the judges at these events are "Equine Canada" recognized officials or a well-known horseman who take the time to offer assistance to these riders to help them gain knowledge and experience in the show ring. Often these series offer a year-end banquet or BBQ and an award presentation. Opportunities for sponsorship for these events are an opportunity to market and focus on local area businesses.

The Trillium Circuit

In 1983, the Trillium Circuit was created to bridge the gap between schooling shows and the 'A' circuit, and to offer exhibitors an inexpensive and viable alternative to pursue their horse interests.



Twenty years later, the Trillium circuit is still growing, and has seen hundreds of horses and riders develop through its ranks. The Trillium Circuit has developed into a flourishing series of competitions and boasts a high standard of competition.

The Trillium Circuit is broken down into seven zones. Both Peterborough and Kawartha Lakes are located within the highly competitive Central East zone. Currently any owner/rider wishing to compete on the hunter / jumper circuit must travel to areas within the Durham and York Regions. The 2006 season is host to 12 events located in the Newmarket, Pickering, Palgrave, and Markham area. For the 2006 season, the Kawartha Lakes Dressage Association is hosting three Trillium dressage competitions.

Hosting of these events would benefit the local economy. Once again, opportunities for sponsorship for these events are an opportunity to market and focus on local businesses. For one-day competitions, local businesses could set-up concessions to cater to competitors and their horses. Events that offered stabling for overnight competitors would produce revenues within the local business area. Trainers and competitors are generally accompanied by grooms, family members and all would require food and overnight accommodations.

The final component of the equine industry in the study area that has seen some growth is trade in work horses. The Amish and Mennonite communities that have been established in Kawartha Lakes have generated a demand for horses for use on the farm.

This profile confirms the depth of the equine industry in Peterborough/Kawartha Lakes. It is not only a significant sector in its own right; it supports many other components of the agricultural economy and adds strength to the sector as whole. There are opportunities for growth and expansion in this sector that could support both the agricultural sector and the local economy generally.

4.9.2 The Livestock Sector

Livestock production whether dairy or beef cattle, hog, sheep or goat has consistently been an important component of the agricultural profile in the study area. Dairy and beef have always been the lead commodity groups; other livestock sectors have fluctuated over time. To gain an understanding of the trends and changes, livestock population numbers over time have been compiled and are summarized in **Figure A4.19**.

In reviewing the numbers in **Figure A4.19** it can be noted that there was a consistent decline in livestock numbers of all types between 2004 and 2005. This in part will reflect the impact of the BSE crisis but may also be due to the selling of herds, issues associated with managing quota or the changes that are affecting agriculture generally.

Hog production has seen a significant decline in both areas since 1998. Although the numbers are higher for 2005 than they were in 2001, they have not returned to 1998 numbers. This is confirmed in the historic gross farm receipt trends. In 1986, hog production represented 8.6% of the value of production. This fell to a low of 2.5% in 1996 with a slight recovery to 3.4% in 2001.

The changes in the numbers for hogs are not surprising. As noted earlier in the report, international actions led to very difficult times for hog producers, and many reduced production. The issues and publicity associated with upgrading or building new facilities has also become increasingly difficult.



Sheep production peaked in Kawartha Lakes in 2000 and increased dramatically in Peterborough in 2001. Since then it has continued to increase in Peterborough but levelled off in Kawartha Lakes. The sheep sector appears to be strong. There is a good network of businesses supporting sheep production in the area and a strong grower organization. This type of production lends itself to the topography of the area which tends to dictate smaller, discontinuous fields.

Compiling numbers on goat production was challenging. The detailed accounting available from 1998 to 2005 for other livestock sectors was not available for goats. This was disappointing since there is evidence that this sector is undergoing growth and some interesting developments.



Photo: Embree Farm
<http://www.nexicom.net/~mbfarm/>

The numbers that were available from 1981 to 2001 reveal a doubling of the goat population in a 20 year period. From interviews with goat producers it was concluded that this production is fairly evenly split between milk and meat production. The meat is sold for the ethnic market in Toronto. There is one very large producer in Kawartha Lakes who has dramatically increased his herd in the past 5



years. This increase will not be reflected in the numbers in **Figure A4.19** since the increases have taken place largely since 2001. This producer is focused on milk production. He established a dairy on site to process the milk but with the increase in his production the dairy has been relocated to Lindsay.

The Amish also focus on goat production in part because it is not subject to quota. It seems that the growing ethnic market of the GTA is creating an opportunity for niche production which is being responded to in the study area. With the trends that were identified in interviews, it will be interesting to see how the numbers for livestock types, particularly goats which seem to be becoming a focus in the area, have changed in the 2006 agricultural census.

Given the BSE crisis and the resultant pressure Canadian beef producers have experienced over the past few years, the cattle numbers have stayed relatively stable. The numbers in Peterborough declined slightly between 2001 and 2005; the numbers in Kawartha Lakes rose during the same period. These trends are consistent with those at the provincial level.

In an interview with a farmer in Peterborough County, the impact of the BSE crisis on cattle production was characterized as a shifting of production rather than a decline. For operators with strong resources, the crisis was an opportunity to expand their herds. However for new operators or those carrying significant debt, the crisis was devastating.

Dairy numbers with respect to number of animals vary between the two regions. Kawartha Lakes has experienced an increase of 1,050 animals since 1998. Peterborough County on the other hand has seen a decline of 1,550.

To better understand these changes, quota numbers were reviewed. **Figure 4.21** summarized changes in quota during the period between 1996 and 2006. These numbers were referenced against statistics from the Dairy Farmers of Ontario released in 2005²⁰. These numbers reflect some interesting trends. The numbers of producers has declined significantly since 1996; from 114 to 70 in Kawartha Lakes, from 124 to 68 in Peterborough. Licensed milk production units have also seen a consistent decline in the two areas since 1995. However when the statistics for milk marketed are reviewed they show an increase in Peterborough between 1994/1995 then a constant decline to 2003/2004. In milk marketed, Victoria County has shown a slow but steady increase between 1994/1995 to 2003/2004.

Figure 4.21 Dairy Quota Statistics (Percentage of Change), 1996 to 2006

<i>Geographic Location</i>	<i>Number of Producers</i>	<i>1996 - Quota (kg)</i>		<i>Bought in Last 13 Mths</i>	<i>Sold in Same Period</i>
		<i>Total Daily</i>	<i>Avg Daily</i>		
Kawartha Lakes / Peterborough	238	7,234.0	60.6	146.9	533.9
City of Kawartha Lakes	114	3,141.0	27.6	102.1	137.7
Peterborough County	124	4,093.0	33.0	44.8	396.2
		<i>2006 - Quota (kg)</i>		<i>Percentage of Change 1996-2006</i>	
Kawartha Lakes / Peterborough	138	5,912.5	86.3	-32.7%	88.1%
City of Kawartha Lakes	70	3,091.6	44.8	-1.6%	62.3%
Peterborough County	68	2,820.9	41.5	-31.1%	25.8%

Source: Dairy Farmers of Ontario

4.10 Summary

From the agricultural profiles contained in this chapter a picture is drawn of a diverse industry based on a strong resource. The commodity mix in Kawartha Lakes and Peterborough is reflective of a traditional agricultural area. Cattle, dairy and cash crops are dominant with a mix of other commodity types.

There are indications that, as in other parts of the country, agriculture as an industry in the area is under some stress. The predominance of livestock as a commodity group could be contributing to this stress. Issues such as BSE and Nutrient Management have placed considerable pressure on these sectors over the past few years. The value of production seems to be static, also an issue faced by other agricultural areas.

However agriculture in the City of Kawartha Lakes and the Greater Peterborough area has a long, well-established history. It appears to be weathering the crisis affecting agriculture by relying on existing strengths, adjusting production to focus on the commodities and pursuing alternative markets such as the emerging ethnic market in the GTA.

The conclusion that can be reached in evaluating this profile is that agriculture in Kawartha Lakes and Peterborough is strong, has the potential to get stronger but currently is vulnerable to pressures affecting the agricultural industry generally. Given its dominance and importance in the study area, it will be important for local authorities to work to support and foster the industry while encouraging senior levels of government to address the larger issues affecting the industry.

²⁰ J. MacDonald, *DFO Statistical Handbook*, Dairy Farmers of Ontario, March 2005.



CHAPTER 5

- Measuring the Economic Impact of Agriculture -

Chapter 5 Measuring the Economic Impact of Agriculture

5.1 Introduction

The purpose of this chapter is to examine some of the business opportunities and issues associated with agriculture in the study region and to present the results of an economic impact analysis of agriculture for the Greater Peterborough Area and the City of Kawartha Lakes. The degree to which the agricultural clusters in Peterborough and Kawartha Lakes stimulate economic impacts throughout the rest of the respective economies is estimated and the extent to which agricultural production in each of these regions generates spin-off economic benefits for other industries and ultimately residents, in the two regions, is measured.

The economic impact assessment is supported by a review of the agriculturally related businesses in the region. A profile of agriculturally related businesses in the study area is provided and the results of a survey of business operators are assessed. Commentary is provided on the strength of related businesses and possible opportunities to support and enhance it. Vulnerabilities revealed through the analysis are identified and discussed.

The approach taken in this study of dealing with the City of Kawartha Lakes and the Greater Peterborough Area as a single economic region strengthens the statistical validity of data reviewed and permits a more detailed analysis of the agricultural sector. The agricultural profiles of both regions are similar and there are many interconnections between the two regions that result in benefits not being specific to either. Many businesses and services are used by residents in both areas and as evidenced by this study, the municipalities tend to work together. Major transportation linkages run east and west and the area has traditionally be referred to jointly as a one tourist and recreation destination, “the Kawarthas”.

5.2 Economic Impact Analysis¹

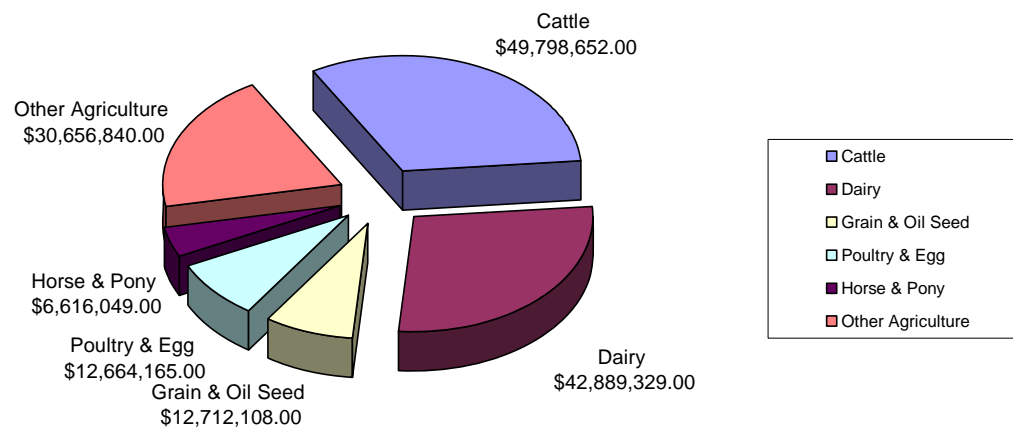
5.2.1 Methodology

Agricultural activities in the study region generated more than \$155 Million in gross farm receipts (GFR) in 2001. **Figure 5.1** shows that, as detailed in Chapter 4, this agricultural production was dominated by cattle farming (\$49.8 Million or 32 percent of total GFR), dairy farming (\$42.9 Million or 28 percent of total GFR), grain and oilseed farming (\$12.7 Million or 8 percent of total GFR), poultry and egg farming (\$12.7 Million or 8 percent of total GFR), and horse and pony operations (\$6.6 Million or 4 percent of total GFR). Together, these 5 commodity groups accounted for 80 percent of total GFR in the study region in 2001.

¹ The detailed economic impact study including the data base is attached as **Appendix 2**.



Figure 5.1: Gross Farm Receipts for Operations in the Peterborough/Kawartha Lakes Region, 2001



With revenues exceeding \$150 Million, it is assumed that the region is home to a substantial agricultural industrial complex, which generates a significant economic impact in the region, and beyond. To quantify this impact, an economic impact analysis was conducted on a commodity-specific basis for the six agricultural components shown in **Figure 5.1**².

This assessment was completed in several stages including:

1. Estimation of region-specific input and output structures for each of the agricultural components shown in **Figure 5.1**;
2. Development of a regional economic impact model capable of estimating the region-specific direct, indirect and induced impacts of agricultural activities in the PKL region; and
3. Implementation of the impact model using the estimated input and output profiles for the six agricultural components shown in **Figure 5.1**.

The first step in assessing the economic impact on a commodity-specific basis, involved the administration of a questionnaire to a sample of farmers in the region. This questionnaire was designed to elicit information on the nature of the inputs used by farmers in each of the top-five commodity groups shown in **Figure 5.1**. The questionnaires were designed to provide information on the degree to which farmers were purchasing their inputs and selling their outputs locally. The data

² The six components of agriculture shown in **Figure 5.1** represent the entire agricultural industry in the PKL region. The top-five commodities are split-out and treated individually, while the remainder of the industry is allocated to the "Other Agriculture" component.

gathered through the questionnaires provided a preliminary look at the input mix used by farm operators in the region, to produce their products.

In addition to the questionnaires, detailed tax-filer data provided by the Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA) was used. The tax filer database consists of detailed information on revenue sources and expenses by individual farm in Ontario for 2003. From this material, OMAFRA staff provided a detailed set of expense and revenue reports for each of the top-four commodity groups.

The fifth top-ranked component of agriculture, the horse and pony sector, proved to be the most elusive in terms of quantifying input and output structures. For this component, data was taken from a report on the impact of horse racing and breeding operations in Ontario conducted by Econometric Research Ltd. in 2005.³ This report contains very detailed information on expenses and revenues associated with the racing and breeding of horses in Ontario.

Information from the three sources was combined to produce detailed expense and revenue summaries for the top-five commodity groups which were then mapped onto the commodity groupings used in the Provincial Input-Output Accounts.⁴ The end result of this process was a set of input and output structures for each of the five agricultural components. These structures represented the best estimate of how each of the five commodities links with the broader economy of the region through the purchase of inputs and the sale of output.

Using this set of input-output structures, a model was then developed to determine the economic impacts that result from activity in each of the commodity sectors. The economic impact model:

- Is based on a synthetic Input-Output database for the study region;
- Estimates economic impacts associated with any economic activity within the confines of the region defined by Peterborough County and the City of Kawartha Lakes only; and,
- Is capable of measuring the total economic impact of any economic activity in the region in terms of direct, indirect and induced industry output and labour income effects.

Simply stated, the economic impact model takes the 2001 gross farm receipt values for each of the agricultural components shown in **Figure 5.1** and determines the economy-wide economic impacts in terms of direct, indirect and induced industry outputs and labour income effects, which stem from this level of activity.

5.2.2 Direct, Indirect, Induced and Labour Income Impacts

The total economic impact of any industry is defined as the sum of its direct, indirect and induced economic impacts in the host economy. Direct impacts are those which stem from the direct input requirements of the industry in question. For example, a beef farmer may have to purchase the services of a veterinarian to produce beef. The payment for veterinary services by the farmer would

³ Econometric Research Limited (2005). "The Economic Impacts of Horse Racing and Breeding in Ontario, 2004". A report submitted to the Ontario Ministry of Public Infrastructure Renewal in 2005.

⁴ IO accounts are available for Canada and for each of the provinces and territories at three levels of sector and commodity aggregation. While the small level data used here is the most aggregate in terms of commodity and industry detail, it is the only IO data available for public use in Canada.



constitute a direct impact. The direct impacts represent the first component of the total impact associated with any economic activity.

The additional rounds of spending triggered by the first direct input purchases are the indirect effects. In the example of the beef farmer, the purchases made by the veterinarian with the money paid for services by the beef farmer would represent indirect impacts. It is the additional rounds of spending that are made possible by the first direct round of spending, that constitute the *income multiplication process* in a regional economy.

In addition to direct and indirect effects of expenditures, there is the impact that is created by wages paid to employees in the agricultural sector. When workers in the agricultural sector are paid they spend their pay on items such as food, lodging and other consumables. These expenditures generate direct and indirect expenditures in other sectors of the economy to respond to demand and are referred to as induced impacts.

The induced impacts represent the additional rounds of spending that stem from income earned by workers in the various industries in the economy which are impacted directly and indirectly by the initial expenditure or “shock” to the economy (i.e., by the activities of the industry in question – in this case, the cattle farm).

In simple terms, the direct, indirect and induced impacts are similar to the dropping of a stone in a pool. The initial shock creates ripples which in turn create ripples which in turn produce more ripples. This is the effect that is created in the economy by the generation of the gross farm receipts and it is the impact of these expenditures that are measured to calculate the contribution a particular sector makes to a regional economy. The multiplier, which will be referred to later, represents the size of the stone which influences the size of the impact.

Application of the model, as explained in detail in **Appendix 2** confirms that the \$155 million in gross farm receipts generated in Peterborough / Kawartha Lakes in 2001, results in a total direct, indirect and induced regional economic impact of approximately \$353 million. This \$353 million impact in annual economic activity is comprised of \$85 million in direct impacts, \$207 million of indirect impacts and \$62 million of induced impacts. This conclusion confirms that agriculture has a significant economic impact in the study region.

A more detailed analysis of the relationships between the various agricultural sectors and the regional economy as a whole confirms that in terms of direct impacts, \$155 million in gross farm receipts generated approximately \$85 million in direct impact. In this category the dominance of “Other Agriculture” is notable. This category includes all agricultural production not included in the top five groups (cattle, dairy, grain and oilseed, poultry and egg and horse and pony). Field crop operations producing forage seed hay and fodder are part of this category which, given the reliance of other commodity producers on this type of input, may account for its dominance.

With reference to direct impacts, all components of the agricultural economy are heavily linked to manufacturing, financial services and professional services. These linkages mean that in addition to linkages within the industry, agriculture is strongly linked with the broader regional economy and changes in the agricultural economy will have a corresponding impact on the regional economy as a whole.

The model calculates that the \$155 in direct expenditures generates approximately \$207 in indirect impacts. These impacts are spread more evenly across the economy than the direct impacts and account for the largest share of the total impact across all components of the agriculture.

The induced impact is created by the labour income earned by workers in the agricultural sector. Not surprisingly the approximately \$62 million in induced impacts is concentrated in those industries that typically cater to consumer demand including the manufacturing, retail trade, financial, insurance, real estate and information and cultural sectors.

In addition to the impacts of agricultural activity in terms of industry output, the total labour income earned in the economy as a whole was also calculated. When applied, the model confirmed that in addition to the \$353 million in total impact, the \$155 million in gross farm receipts stimulated an additional \$56 million in labour income throughout the region. This is the impact attributed to the employment created to support the demands generated by the direct, indirect and induced activity in the agricultural sector.

5.2.3 Output Multipliers and Propulsiveness

While the magnitude of an industry's total economic impact is important to understand, the extent to which an industry can generate output in other sectors is perhaps more important to economic development programs. In determining where support is needed to foster a healthy regional economy, understanding the ability of an industry to stimulate other economic activity, is critical. Certain industries may employ many people but be isolated from other sectors of the local economy and therefore not generate much activity in them. The ability of sector to stimulate or multiply activity in other parts for the economy is called propulsiveness and is measured by a "multiplier". In the example of the "ripples", the multiplier represents the size of the stone.

There are two forms of multipliers commonly referred to, the simple output multiplier and the total output multiplier. The simple output multiplier calculates the direct and indirect impact on all industries in a region, of the expenditure of \$1 in a particular sector. The total output multiplier calculates the impact of the expenditure of \$1 in terms of direct, indirect and induced impacts. **Figure 5.2** summarizes the simple and total output multipliers components of the study area economy. These values confirm that the five agricultural sectors specifically analysed, and the combination of all other agricultural activities, have relatively high multipliers. The horse and pony sector has the highest total output multiplier of all sectors listed. Therefore programs to encourage increased agricultural activity will generate a larger positive impact on the regional economy as a whole than programs focused on certain other sectors. This fact is important for economic development officers to understand when they are designing programs to strengthen a regional economy.

Figure 5.2 Output Multipliers for all Industries in the City of Kawartha Lakes and Peterborough County

	SOM	TOM
1 Beef Farming	1.9	2.2
2 Dairy Farming	1.9	2.2
3 Grain & Oil Seed Farming	1.8	2.2
4 Poultry & Egg Farming	2	2.5
5 Horse & Pony Farming	2	2.7
6 Other Agriculture	1.8	2.2
7 Forestry and Logging	1.6	2.2
8 Fishing, Hunting and Trapping	1.5	2.2
9 Support Activities for Agriculture and forestry	1.5	2.3
10 Mining and Oil and Gas Extraction	1.5	2
11 Utilities	1.3	1.7
12 Construction	1.4	2.1
13 Manufacturing	1.6	2
14 Wholesale Trade	1.4	2.2
15 Retail Trade	1.4	2.2
16 Transportation and Warehousing	1.5	2.2
17 Information and Cultural Industries	1.5	2.1
18 Finance, Insurance, Real Estate and Rental and Leasing	1.3	1.7
19 Professional, Scientific and Technical Services	1.4	2.3
20 Administrative and Support, Waste Management and Remediation Services	1.4	2.3
21 Educational Services	1.3	2.1
22 Health Care and Social Assistance	1.2	1.8
23 Arts, Entertainment and Recreation	1.6	2.4
24 Accommodation and Food Services	1.5	2.2
25 Other Services (Except Public Administration)	1.4	2.2
26 Operating, Office, Cafeteria and Laboratory Supplies	1.8	2
27 Travel, Entertainment, Advertising and Promotion	2	2.5
28 Transportation Margins	2.1	2.6
29 Non-Profit Institutions Serving Households	1.3	2.5
30 Government Sector	1.4	2.4
Average across all industries	1.6	2.2

5.2.4 Conclusion

This analysis confirms that agricultural activities represent a very propulsive and important component of the study area's economy. With multipliers as high, or higher, than most other industries in the regional economy, each of the top-five commodity groups represent significant growth engines in their own right. All of the components isolated in this analysis appear to be highly interwoven with the broader regional economy, giving rise to substantial multiplier effects in the region.

Agriculture in the Peterborough / Kawartha Lakes generated more than \$155 Million in gross farm receipts in 2001. Assuming this to be a benchmark for current activity in the region, it can be concluded that agricultural activities will generate the following impacts on an annual basis:

- a total impact in excess of \$353 Million (\$85 Million in direct impacts, \$207 Million in indirect impacts and \$62 Million in induced impacts); and,
- a labour income impact in excess of \$56 Million.

(Figure 5.3)

The analysis has also revealed that all agricultural components considered in this study, possess output multipliers that are in excess of 2.0 and on par or higher than average multiplier sizes for all industries in the region. Multiplier size, as noted above, is a reflection of the degree to which an industry is interconnected with the rest of the host economy, and hence is a main criterion for an industry to be classified as a “key sector”. Agriculture in the study region clearly qualifies as a key sector, in this regional context.

The importance of agriculture in Peterborough / Kawartha Lakes is even more clearly illustrated when the output multipliers are interpreted in reverse. That is, for each one dollar reduction in the output of any of the top five commodity groups there will be, at minimum, a two dollar reduction in total regional economic output.

Any industry with a multiplier in the neighbourhood of 2.0 should qualify for significant policy attention. Agriculture and its various components in the Peterborough / Kawartha Lakes region all possess such multipliers, and as such, this industry represents a key sector in the regional economy, and one which should be monitored, nurtured and protected.

5.3 A Review of Agriculturally Related Businesses

The agricultural economy in Peterborough / Kawartha Lakes is made up not only of farms (primary producers) but also of businesses associated with agriculture. These businesses can be providers of agriculturally related goods and services or processors of agricultural product. Broadly defined, these include manufacturers, wholesalers and retailers of agricultural products. Although not involved in primary production, these businesses are an integral part of the agricultural economy. The strength of the local agricultural sector can have direct implications for their businesses. Conversely the strength and diversity of the agriculturally related business sector can have implications for the primary producers. Many of these other services have dealings with other sectors of the economy, are not exclusively devoted to agriculture and have connections that are extra regional.

Figure 5.4 is an outline of the contemporary Agri-Food System⁵. This figure reinforces the complexity of the agri-food system, and demonstrates the linkages between inputs to farming activities and outputs from the farming community. It also illustrates the linkages to regulatory agencies, service and training facilities and ultimately consumption of food products. All of these various businesses are ultimately affected by, or affect, the success of agriculture in the two regions.

To gain additional insight into the relationship between the farm community and the associated business community in Peterborough / Kawartha Lakes, a survey of farm organizations and agriculturally-related businesses was undertaken. The economic development officers for both municipalities provided listings of all agriculturally related business and surveys were sent out. 431

⁵ Walton and Hunter, “GTA Agricultural Economic Impact Study, 1998”, Fig 4.1.



surveys were mailed to businesses identified as having some relationship to agriculture. 84 were returned; 70 were completed in sufficient detail to allow analysis. This represents a 16% response rate which is sufficient to be statistically significant. The responses from these 70 surveys were tabulated and analyzed to provide insight into the agri-business economy of the area. A copy of the survey and a summary of the results are contained in **Appendix 2**.

The observations that were drawn from the survey and associated research done into businesses in the areas are outlined below.

Peterborough and Kawartha Lakes contain numerous businesses that service the agricultural sector, many of which have been in businesses for considerable time. The majority of business respondents opened their businesses in the 1980's but 40% of the businesses were older. 8% of businesses have been in operation for more than 80 years. The breadth and depth of the agricultural service sector is striking. This is important since a healthy support sector is a critical element in supporting the ongoing prosperity of agricultural operations.

There are some very large corporations with either head offices or national head offices located in the study area. When asked why this was the case, the responses noted the attractiveness of the area as a place to live and work and the well established nature of the agricultural industry. Also cited as important was the acceptance of agriculture and agricultural practices as an important part of the environment.

The Peterborough / Kawartha Lakes area is well serviced by farm service industries such as feed and farm supply, large animal veterinarians, farm equipment and services. In fact the comprehensive nature of the service sector is striking. Some comments indicating that services are not being accessed to the same degree as in other years were received but overall businesses are secure and there is a general expectation that business will improve.

The employment profile reveals that the majority of employees are full time. This is notable since one of the issues affecting some other agricultural areas is the seasonal nature of agriculturally related employment and the problems associated with finding sufficient, part-time labour. This was not identified as a problem in Peterborough / Kawartha Lakes.

For part time workers the average time of employment was four months. There were no problems identified in accessing the required part time labour.

Distribution of gross sales reflected a strong relationship with the farm community. However there were also significant sales to other agricultural related businesses and to the non agricultural sector. This sales profile is healthy as it ensures that if there is a decline in one sector there will be alternative customers to support the operation until the decline is rectified.

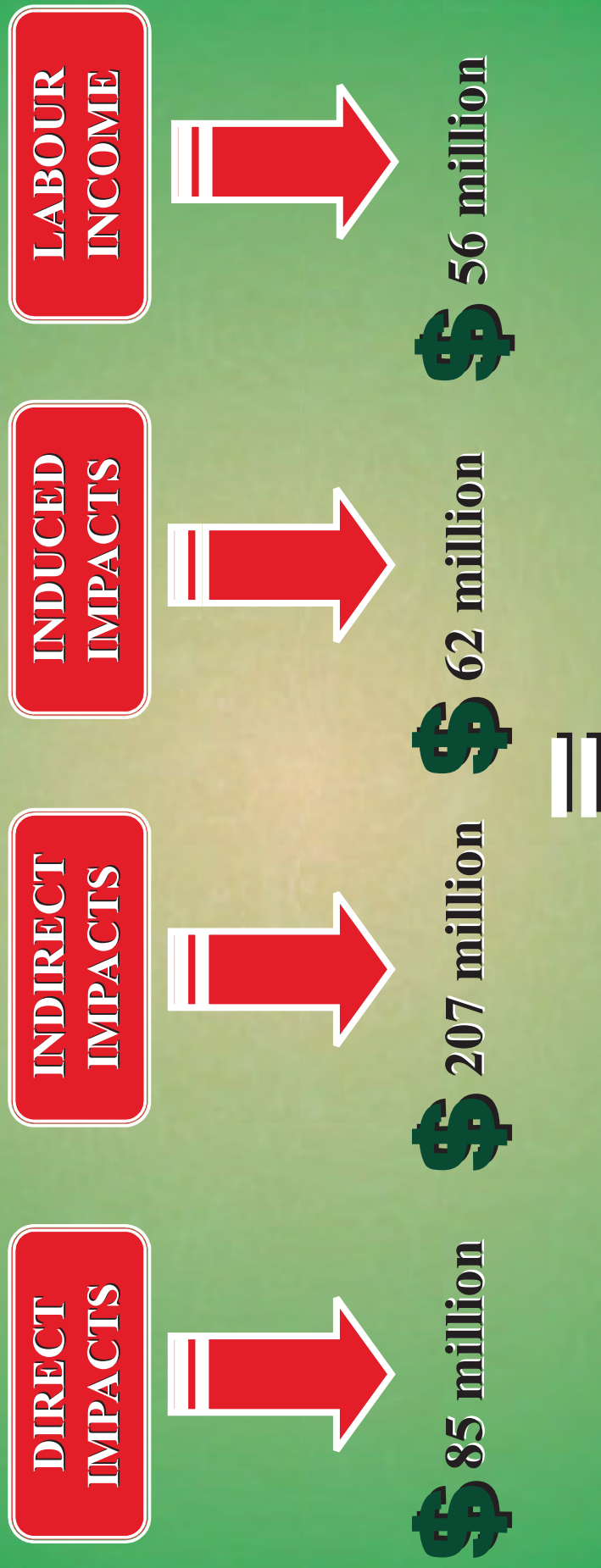
The responses regarding the location of customers was interesting. The responses confirm that there is a strong market for goods and services outside of the Peterborough / Kawartha Lakes area. This is important as it reinforces the importance of the study region as an agriculturally focused economy that other areas rely on. Part of this external dependence could relate to the fact that the eastern portion of the study area is in close proximity to the commuter shed of the GTA. In the GTA, agricultural businesses are being squeezed out as competition for land forces prices up and declining farm populations reduce customer base. In agricultural studies done in the GTA, it was found that



Figure 5.3

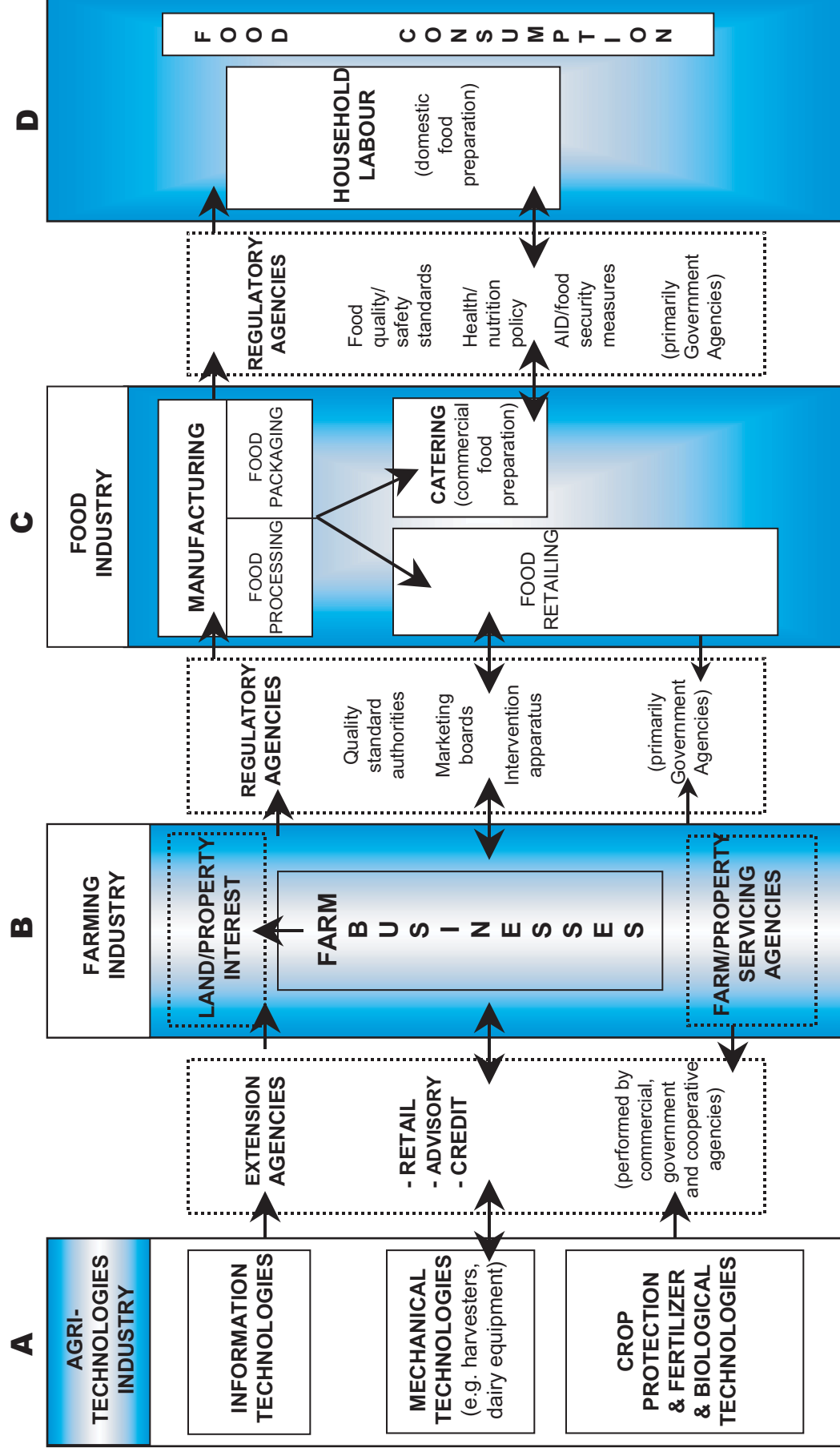
\$155 Million in Farm Gate Receipts

Stimulates



\$
2001

FIGURE 5.4
AN OUTLINE OF THE CONTEMPORARY AGRI-FOOD SYSTEM



Source: Adapted in part from Whatmore (1995).

farmers from the area had to travel long distances for services. Apparently one of the places they are traveling to is Peterborough / Kawartha Lakes.

The rationale for the movement of agriculturally related businesses out of the GTA was confirmed by a comment made by a representative of Pickseed. When operating in Richmond Hill was becoming expensive and difficult because of conflicts between an agricultural business and neighbours, and lack of expansion area, Pickseed chose Lindsay as a new location for a variety of reasons which included the strength of the agricultural community, the level of acceptance of agricultural practices, its attractiveness as a place to live and its relative proximity and ease of access to markets.

Another indicator that Kawartha Lakes / Peterborough is a desirable location for farm services is the fact that it is home to services that are required by farmers but are not necessarily found in all agricultural areas.

For example, Kawartha Lakes is home to a sales barn with another virtually on its border in Campbellford. Although there was concern when the sales barn in Lindsay was closed and amalgamated with the one in Woodville, the reality is that the study area is relatively well served by sales barns compared to other areas of the province. Similarly, Peterborough / Kawartha Lakes contain two of the 14 wool depots listed in Ontario⁶ and 5 of the 33 sheep shearers⁷.

The two areas in which businesses reported the highest operating expenses were in the purchase of raw materials and equipment and supplies. This is consistent with other studies done in the area where a weak link has been identified between the large food processing cluster in Peterborough and local producers. The results of the questionnaire supported this conclusion and confirmed that it is also the case with some of the larger seed producers. There appears to be potential to establish stronger linkages between producers and processors. The process being followed to establish the new ethanol plant near Havelock has the potential to address this issue if initial commitments to buy local corn are implemented.

Again with expenditures, a significant portion is spent in the study area but there is also a significant amount spent outside the area. The economic development officers may wish to pursue this leakage to determine if stronger internal markets can be fostered.

Given the uncertainties that have affected the agricultural sector in the last few years it is reassuring to find that over half of the businesses responding to the survey have plans to expand. Very few, only 1.4% are planning to discontinue services to farm businesses. There appears to be an underlying strength in the agricultural sector which supports local business.

Some concern was expressed about the lack of profitability in the agricultural sector. Over 50% of respondents identified this factor as a limitation to expansion plans. The second most significant concern was regulation constraints. In personal interviews with industry representatives, comment was made that taxation at the municipal level is a concern and that the recent amalgamation in Kawartha Lakes created difficulties in dealing with municipal regulations. This situation should ease as the adjustment to amalgamation is made and rules are updated.

⁶ www.wool.ca Ontario Wool Depots, updated October 2005.

⁷ www.wool.ca Canadian Co-operative Wool Growers Limited, October 2005.



Another concern that was raised is lack of major conference and accommodation facilities in Kawartha Lakes. It was noted by an industry spokesman that meetings had to be scheduled elsewhere and participants accommodated at considerable distance because of lack of facilities in Lindsay.

Relationships with the agricultural sector and other agriculturally related businesses are important within each of Peterborough and Kawartha Lakes but there is a surprising strength in the relationships outside of the area, provincially nationally and internationally. This bodes well for expansion of businesses and attraction of new businesses to the area.

Questions regarding reliance on other agricultural related businesses confirmed a strong inter-relationship within this sector. This is not surprising. Based on the findings of other studies conducted by the authors it has become apparent the ability to do business and access services locally is critical to the success of the agricultural sector.

At the conclusion of the survey, participants were asked to make general comments on agriculture, business and the relationships. The comments made revealed interesting patterns. There seems to be a general level of concern that the traditional family farm is disappearing and there is a trend to more corporate farms. While regret is expressed about this change, there is also confidence that the changes will be positive.

There is recognition that many of the difficulties being experienced by agriculture are global in nature.

There seems to be a general consensus that the support structures for agriculture are strong in the study area.

The agri-food system is global in nature. Although both study areas, and Peterborough specifically, are home to a large cluster of food processing industries, inputs, goods and services are not



Pickseed Head Office (Lindsay) www.pickseed.com

necessarily obtained from the local area. The connections between food processing and the agricultural industry do not appear to be particularly strong.

Regulations, increased paperwork and the increasing complexity of doing business were identified as barriers to business success. As in most recent agricultural studies, the Nutrient Management Act and related environmental regulations were identified as a problem. The problem is not with the regulation of impacts, the problem is the complexity, expense and time required to address various regulations that

developed with no consideration of their cumulative impact.

Overall the responses to the questionnaire confirmed that there is a strong infrastructure of agri related businesses that have the capacity to survive and expand.



5.4 Business Profile

A review of the business profile in Peterborough and the City of Kawartha confirms that agriculture, food processing and tourism are leading sectors. Therefore linkages between these sectors will be mutually supportive and will support the local economy generally.

5.4.1 Food Processing

There are five identified food processing clusters in Ontario.

- Greater Toronto Area
- Grand River Region
- Southwest Ontario
- Niagara Region, and
- Eastern Ontario.

The eastern Ontario cluster is characterized by a predominance of large scale operations. Peterborough is a major focus of this industry being the home to PepsiCo (Quaker), Minute Maid, Baskin Robbins, Unilever Bestfoods and United Canada Malt. Support services for the industry include Sysco Food Services and National Grocers. Competitive costs, skilled workers and desirable locations are amongst the reasons cited for the strength of the industry in Peterborough.

The food processing industry is international in scope and may not have a strong connection the local agricultural industry. However with rising transportation costs there may be opportunities to create or enhanced linkages. In a report conducted for the Greater Peterborough Area Economic Development Corporation (GPAEDC) this issue was addressed:

Relatively little raw material is sourced form Eastern Ontario. This is one less tie to the region and it also implies an opportunity that could be exploited if the economic factors make sense.⁸

The report also identified opportunities for establishment of small food processing operations that connect to local producers and link with the tourism sector. The GPAEDC has responded to this with a strategic plan that responds to this recommendation. This response is typical in the area where there is an apparent commitment to initiatives to support and foster the agricultural sector.

5.4.2 Tourism

Tourism has always been strong in Peterborough and Kawartha due to the presence of multiple lakes. Linkages between tourism and agriculture have also traditionally been strong with summer residents taking advantage of opportunities to access local produce. The two regions have obviously recognized and acted on this fact. The agri-tourism activities and value added agricultural businesses are multiple and are well supported. Kawartha Lakes promotes attractions, events and services

⁸ WCM Consulting, Eastern Ontario Food-processing Sector Competitiveness Study March 2004, pg 5.

including farm markets, “pick your own” operations and farm gate markets through “Kawartha Farm Fresh”. Peterborough has a similar program with “Kawartha Choice”. As discussed in Chapter 6, both programs are well developed and showcase the depth and quality of the agricultural product that is available.

The main issue that was identified with these initiatives was the confusion that appears to have been created by the similarity in names. It may be appropriate and enhance the critical mass of the two initiatives if they were merged and promoted as one.

The presence of Kawartha Downs also provides a strong linkage between agriculture and tourism. Horse racing has seen resurgence as a result of the upgrading and renovations that have been carried out at racetracks. The offering of larger purses for the races has been a tremendous boost for the horse industry. According to one horse operator, the increased purses have saved the standardbred industry and resulted in significant expansion in this component of agriculture. As noted in Chapter 4, strength in this sector has significant spin-offs in the balance of the agricultural industry as horse operators purchase supplies and services and generate activity that supports local economies. This provides direct benefits for farmers who sell goods to the horse industry and indirect benefits to all because it creates additional demand for, and strengthens the availability of agricultural services.

One time only agriculturally related events can also boost the economy. Peterborough this year, is hosting the international plowing match, an event that attracts over 100,000 people and has a significant economic impact on host areas.

The nature of the study area, with its historic farm parcels and small communities is in and of itself a tourist attraction. As growth changes the faces of communities in southern Ontario, the character of traditional small town and rural landscape is disappearing. Urban residents enjoy visiting areas where they can reconnect with rural roots and experience landscape reflective of Ontario’s agricultural heritage.

Peterborough and Kawartha Lakes have done a good job linking tourism and agriculture thereby maximizing the financial benefit to both sectors. While there may be additional opportunities in this area, at present both sectors seem to be well serviced.

5.4.3 Business Inventory

In preparation for conducting the survey of agriculturally related businesses, the economic development officers in each area provided a list of businesses. This list in and of itself was an interesting summary of the agricultural sector. It demonstrates the depth and breadth of the industry and confirms that there is a comprehensive support structure for agriculture.

This is important. In other areas in southern Ontario, one of the biggest challenges facing the agricultural sector is lack of services. Peterborough / Kawartha Lakes appears not be affected by this. In fact the area may have the potential to act as a service area for farmers in surrounding jurisdictions. This in itself could be a development initiative to encourage the links that will attract farmers to the area. Initiatives such as strengthened transportation links and advertising of available services should be investigated to capture this potential.



5.5 Agricultural Tax Base

5.5.1 Tax Contribution

The agricultural community makes a significant contribution to the local taxation base of many of the municipalities within Kawartha and Peterborough County. This review estimates the contribution of agricultural farm properties to the local tax base in selected municipalities in the County of Peterborough and the City of Kawartha Lakes.

There have been few studies in Canada that have attempted to measure the impact of agriculture on the local tax base, or the relative costs of providing local services to agricultural and non-agricultural uses. Some studies conducted in the 1990's attempted to measure the costs and revenues of certain specific types of development (e.g., estate residential development) in specific municipalities. Other studies, particularly in the United States through the American Farmland Trust, have attempted to evaluate costs and revenues of municipal activities and allocate them to specific land uses (e.g., agricultural and residential lands uses). The conclusions from these studies consistently indicate that the agricultural community more than "pays its own way" from a municipal taxation perspective.

Appendix 5 provides a detailing of the approach utilized in this review to estimate the relative contribution of the agricultural community to the local tax base.

From an agricultural perspective, there are three components of the property assessment system, and ultimately the municipal taxation, that contribute to the local tax base:

- The contribution of the farm dwelling (in the same fashion as any residential use);
- The taxation of the farmland and related farm structures; and
- The "value added" activities that may be assessed as commercial activities.

The following information provides an estimate of the total contribution to the local taxation for the farm dwelling and the farmland property classes. The discussion on "value added" activities is more general, since the detailed assessment information was not available to provide a breakdown on commercial taxation.

In all municipalities, the Residential taxation represents by far the largest single contribution to municipal tax revenues. Most municipalities attempt to increase their non-residential assessment, with the intention of reducing the percentage of taxes that comes from residential uses. Usually, these attempts are focused on increasing industrial or commercial assessment, since the tax rates applied to these property classes are higher than the corresponding rate for residential uses. It is noted that the farmland component of the tax system is taxed at 25% of the residential rate; however, this can still represent a large contribution to the municipal tax base.

Appendix 5 provides the estimates for the property tax contributions of the farm community, excluding any commercial (or taxed "value added") activities on the farms.

In the City of Kawartha Lakes, the Residential property class represents approximately 86% of the total taxes collected. The Farmland property class accounts for 1.6% of the taxes, which is larger



than the Industrial taxation in the City. The Commercial property class accounts for 5.7%. If the farm community's Farmland and Farm Residential components are included, they represent approximately 5.3% of the total taxation in the City. As such, the farm community contributes the third largest component to the City's tax structure.

For selected municipalities in the County of Peterborough (for which data was available), the contribution of the farm community to the local taxation varied widely, from an estimated 12.2% in Otonabee-South Monaghan and 11.4% in Asphodel-Norwood, to 3% in Smith-Ennismore-Lakefield and 2% in Havelock-Belmont-Methuen. In Asphodel-Norwood, the farmland class is the second largest tax contributor, behind the residential sector. In Otonabee, the farmland class represented the third largest, behind the residential and the commercial.

5.5.2 "Value added" Contribution

The management of value added activities is an important consideration in supporting agriculture. Value added operations often allow farmers to increase their income through relegated on-farm processing or related activities. The challenge for municipalities is to maintain a balance between the farm operation and the value added activity so the agricultural use continues to be the primary use.

According to assessment records, both in the City of Kawartha Lakes and in Peterborough County, approximately 18% of farm properties had a portion of their assessment identified as Commercial. While the actual assessment (and hence tax) numbers were not available, it is reasonable to conclude that the commercial activities will contribute to the commercial tax base. This represents a significant contribution to the local tax base, particularly in the smaller rural/agricultural communities.

5.6 Summary

Overall, the conclusion of this study is that the agricultural economy of the study area is strong. It is a critical part of the economic structure of the area, agriculture and tourism being the leading economic sectors.

There is no one action that should be taken to enhance the agricultural economy. However there is an opportunity to take multiple steps that will enhance it in different ways.

In developing programs to foster economic growth in the agricultural sector, attention should be paid to the economic impact analysis. The multipliers associated with different sectors provide direction on where the biggest impact can be generated by an increase in activity. Conversely attention should be paid to areas where a decline in activity will have the largest negative impact.





CHAPTER 6

**- Societal and Environmental
Benefits of Agriculture -**

Chapter 6 – Societal and Environmental Benefits of Agriculture

In addition to the economic impacts, it is important to recognize the broad range of non-economic benefits associated with agriculture, which contribute to a healthy society and a sustainable environment. All residents of Peterborough and Kawartha Lakes benefit from the presence of a dynamic and productive agricultural sector.

6.1 Societal Benefits

6.1.1 *Historical*

From the late 18th century to the late 19th century, agriculture was the driving force behind the establishment of many of the settlements and communities in Ontario. Kawartha Lakes and Peterborough were no exception. The southern townships in each area were surveyed and settled in the early 1800's. The more rugged and remote northern regions were not settled until later in the century when colonization roads such as the Victoria and Burleigh Roads opened the area to settlement.

During this period, the majority of the population was involved in agriculture. Land was divided into 100 acre blocks and granted to the settlers based upon their ability to clear and farm it. Farming activities required the efforts of the entire family and the participation of the local community, helping to sustain close-knit families and communities. The subsequent development of communities, roads, infrastructure, and services was driven primarily by the growth and development of agriculture.

The development pattern of 100 acre blocks forming large agricultural areas, interspersed with towns and villages geared to servicing the farming community, is still apparent in both regions today. As noted in Chapter 5, a significant component of the regional economy is based on agriculturally related businesses.

The growth and development of agriculture evolved over time. Tractors replaced horses, and new machines were invented, often by farmers themselves, making cultivating, planting, harvesting and processing agricultural produce more efficient. Extension, research and training facilities, centered at Guelph, Ridgetown, New Liskeard, Kemptville, and Vineland with strong support for research at the federal, provincial and university levels resulted in rapid development of new agricultural technologies and knowledge. Research and development of rust resistant winter wheat, early and high yielding corn and soybean varieties, and winter hardy alfalfa are examples. Red fife wheat, spring wheat, recognized for its high yields and excellent bread making qualities, was developed in Peterborough County. Today, Kawartha Lakes is home to Pickseed, the largest forage seed producer in the country.

As technologies advanced, farmers were able to increase production using less labour. This transformation not only resulted in increased availability of less expensive food, but freed up labour for other tasks. A strong multi-sectoral economy in Ontario developed from an increasingly efficient agricultural base. Farmers began to specialize and specific types of commodity production began to dominate in certain areas.



Today, agriculture in Ontario is among the most efficient in the world, with low cost of production, high safety and quality standards. Over 200 agricultural commodities are produced in the province, offering the consumer enormous diversity and choice, and supplying both domestic and foreign markets. In 2001, the agri-food industry contributed \$32.1 billion to Ontario's economy, employed more than 650,000 people across the province¹ and exported \$7.8 billion of agricultural products around the world, a 13.5% rise over the previous year.² The study area is a significant part of this economy with Peterborough being home to a well developed cluster of food processing industries and Kawartha Lakes being home to a significant number of seed companies.

6.1.2 Culture and Community Benefits

This agricultural heritage has shaped many of Canadian's cultural and social values. Farmers in Ontario have been drawn from a wide variety of cultures and traditions. The early settlers from France and the British Isles were soon joined by Eastern European immigrants, including Polish, German, and Russian families. In Kawartha Lakes and Peterborough, the origin of many of the original settlers was the British Isles.

The churches, schools and farm buildings, and the diversity of Ontario's rural communities remind us of these rich cultural traditions. The agricultural heritage in many urban families is sustained through parents or grandparents who grew up on farms, through celebrations of agriculturally based festivals such as Thanksgiving, and in the ability of urban families to escape to their rural roots, in the farmlands and rural communities that are still accessible from our cities.

The recent arrival of Amish and Mennonite farmers in Kawartha Lakes is adding a new dimension to the cultural profile of the agricultural community and creating some challenges. The Amish have established a new church group comprised of 21 families which is located in the area west of Lindsay. This group, with its tradition of sharing farms and establishing separate schools and churches, is testing some of the planning controls put in place to support a more modern farming sector. Their reliance on horses rather than mechanised equipment means that they farm smaller parcels and more compact development characterizes their communities.

To date eleven Mennonite families have relocated to Kawartha Lakes. The Mennonites, who are settling in areas to the north and east of Lindsay, have a tradition of combining agricultural with unrelated manufacturing activities. These practises are challenging policies designed to prevent non farm related development in agricultural areas and protect the integrity of agricultural areas.

The arrival of both groups has resulted in the revitalization of a significant number of farm properties and expansion in the production of certain commodities such as vegetables. The Amish are actively involved in goat production both for milk and for meat which is consistent with trends in other farms in the area. Both groups have established farm gate sales operations of different types which add to the attraction of the area as an agri tourism destination.

¹ Quote from Jack Wilkinson, President OFA, Speech at Queen's Park breakfast on October 8, 2002.

² Census of Agriculture, 2001

Agricultural fairs are an essential part of Ontario's heritage. In addition to providing an economic benefit to communities, fairs are an important vehicle for connecting urban and rural residents. As shown on **Figure 6.1**, Peterborough / Kawartha Lakes is home to many fairs. In Kawartha Lakes, Carden, Bobcaygeon, Fenelon Falls, Lindsay and Oakwood all host fairs. The Bobcaygeon fair has been taking place for 145 years, and the Lindsay Central Exhibition, one of the premiere events in Ontario, has been being held since 1854.

The Lindsay Central Exhibition is the fourth largest fair in Ontario and one of the few true "Class A" agricultural fairs remaining in Ontario.³ In addition to the five day event that is held in September each year, the Lindsay Agricultural Society maintains a major facility which hosts numerous other events including the annual Ontario Summer Holstein Show, one of the premiere breed events in Ontario. This event celebrated its 10th anniversary in 2006.

In recognition of the need for land to expand the Lindsay hospital, the Agricultural Society is in the process of moving from its historic home in the heart of Lindsay to a new, 122 acre site on the outskirts of town. The new facility will be larger, all-season, fully serviced and well able to both host existing events and attract new ones⁴. It will allow the Society to continue to host the single largest annual event in Kawartha Lakes, the Lindsay Exhibition.

In work done to support the financial viability of this move, the Lindsay Agricultural Society prepared a report that summarized the contribution fairs make to the Canadian economy which include:

- Average annual national attendance at fairs of 23.2 million;
- Average annual attendance at non fair events held at fair facilities exceeding 27 million;
- Employment of approximately 21,800 Canadians with a full time employment equivalency of 7000 full time jobs;
- Annual estimated spending at fairs of \$347.59 million; and
- A \$1.32 billion economic impact from annual direct expenditures at fairs of \$54.8 million.⁵

Peterborough is home to fairs in Lakefield, Norwood and Millbrook. The Lakefield Fair was established in 1861, the Millbrook Fair has been held for more than 155 years. The Peterborough Agricultural Society has been hosted the Peterborough Exhibition for 161 years. In the past few years the exhibition has been facing competition from other well established and well received events that occur in Peterborough.

It is important for events such as these to continue both as a show case for the agricultural sector and to allow urban residents to connect with their agricultural roots. As the Lindsay Agricultural Society pointed out in its justification for relocating and expanding their facility,

³ Class of fair is assigned on the basis of the amount of prize money paid to agricultural exhibitors.

⁴ The Lindsay Agricultural Society, "A Celebration of Rural Life that Educates & Entertains", July 2006.

⁵ Ibid., pg 7-8



fairs play a vital role in “educating those who might otherwise not have the chance to make the connection between the food they eat and the lives of individuals and communities responsible for its production”⁶.

In the fall of 2006 Peterborough is hosting the International Plowing Match and Farm Machinery Show. This event, which lasts for 5 days and attracts in excess of 100,000 visitors, is an annual event which moves around the province. It is a major showcase for the agricultural community and brings with it a huge economic boost to an area.

The event is a major undertaking being co-ordinated by over 1600 local volunteers in partnership with the Ontario Ploughman’s Association. It is a major event for the provincial agricultural community and an opportunity for the non-farm community to gain a better understanding of modern agriculture.

6.1.3 Education and Knowledge

In addition to an understanding of the complex biological processes that farmers have always needed for sustaining soils, crops, and animals, today’s farmers operate complex enterprises that require intensive management skills. These skills include accounting, maintaining quality and safety standards, accessing information, evaluating and implementing new technology, labour management and machinery maintenance. Increasingly agricultural operations are mechanized with very sophisticated computerized equipment. For example, DeLaval Inc., suppliers of dairy equipment with their Canadian head sales office located in Peterborough, introduced a robotic milking system in 1999 that is starting to be installed in dairy operations across the province.

In response to these changes, an increasing number of farm operations are becoming computerized. In 2001, Census Canada determined that approximately three quarters of Ontario’s farmers used computers to access information and for farm management.⁷ Since that time it can be expected that this number has increased.

Unfortunately, access to internet continues to be a problem in the rural area. Recently, a comprehensive GAP analysis was completed for Eastern Ontario assessing the availability of internet in the region. Mapping showing the results of the survey for Peterborough and Kawartha Lakes are included as **Figures 6.2 and 6.3**.

The GAP analysis confirmed that the southern portion of Kawartha Lakes, with the exception of Manvers, and the majority of the central area in Peterborough are relatively well served. However there are notable the gaps in the service particularly in the northern portions of the study region. As in any industry, use of computer technology is important for conducting the business of agriculture so efforts to ensure all rural areas have access to broadband communications should be continued.

Many agriculturally based educational facilities have now broadened to include related disciplines. The University of Guelph is a recognized leader in the environmental sciences with programs built on their strong agricultural sciences base. The development of statistics,

⁶ Ibid., pg 2

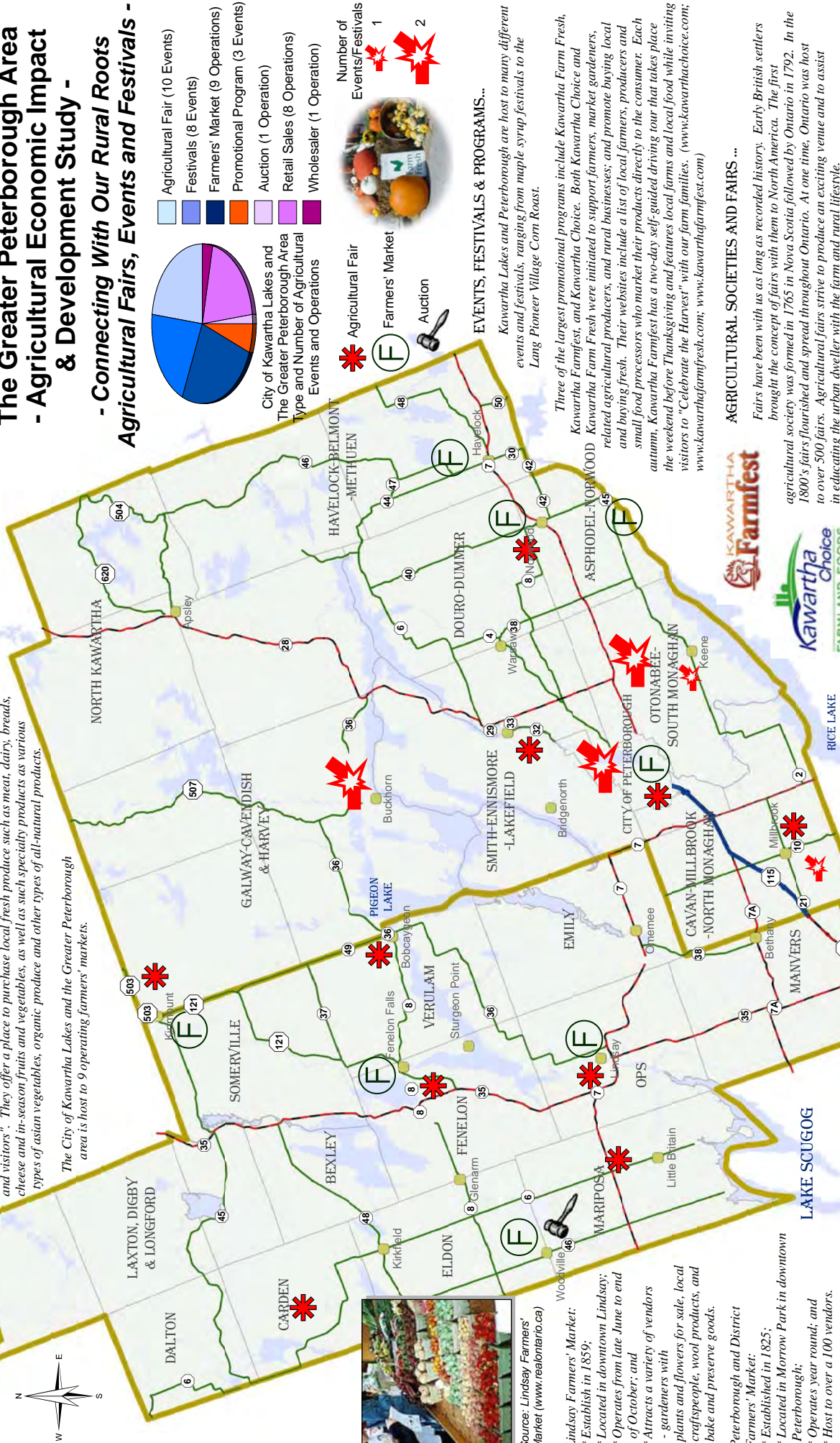
⁷ Census of agriculture, 2001

FARMERS' MARKETS ...

Farmers' Markets have been a mainstay in Ontario for close to two centuries.

The Farmers' Market of today continues to serve as a "meeting place for local farmers, residents, and visitors". They offer a place to purchase local fresh produce such as meat, dairy, breads, cheese and in-season fruits and vegetables, as well as such specialty products as various types of asian vegetables, organic produce and other types of all-natural products.

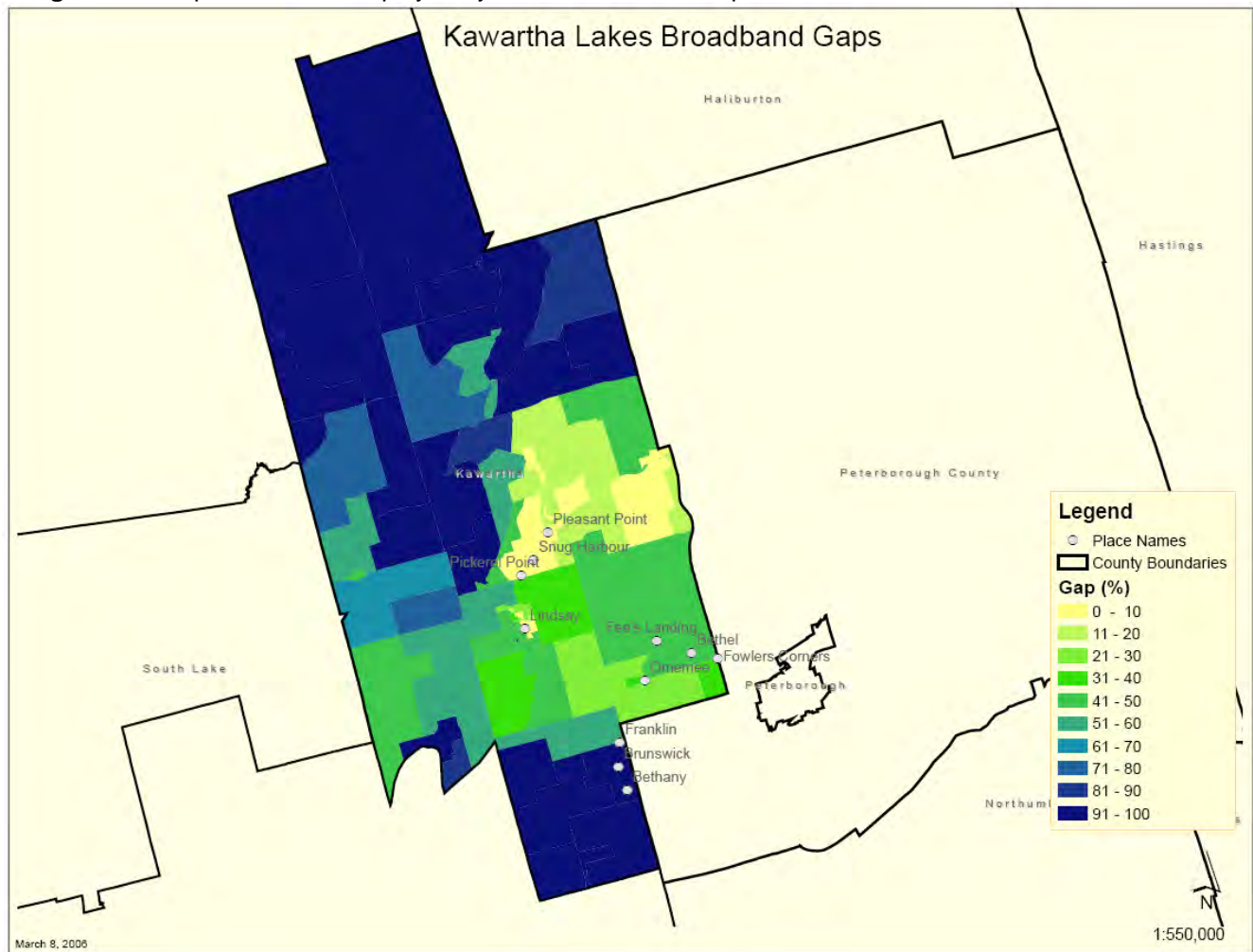
The City of Kawartha Lakes and the Greater Peterborough area is host to 9 operating farmers' markets.



genetics, and certain fields of economics, has been driven by the demand for farm, crop and animal improvement. Ontario has produced many recognized world experts in these specialized disciplines whose work has had profound impact in other sectors, and around the world.

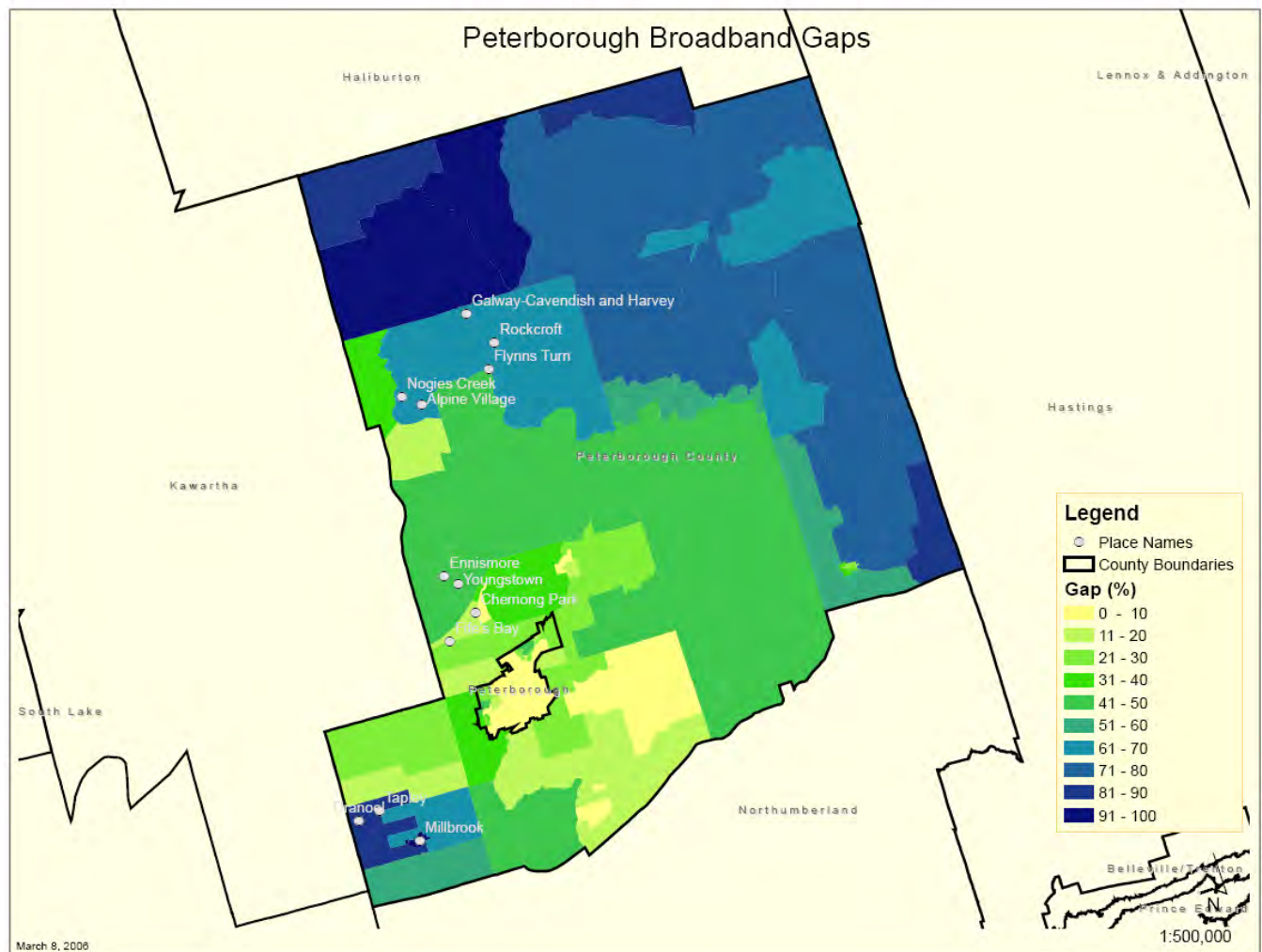
Although Trent University does not have programs directly related to agriculture, the research on DNA being done there could result in the creation of a research cluster in which agriculture could play a role.

Figure 6.2 Gaps in Service Displayed by Statistics Canada Population Dissemination Areas



Source: Eastern Ontario Broadband Coalition and the Technology Alliance Group Kawartha Lakes. *A Comprehensive Broadband GAP Analysis of Eastern Ontario*. Ontario: 2006.

Figure 6.3 Gaps in Service Displayed by Statistics Canada Population Dissemination Areas



Source: Eastern Ontario Broadband Coalition and the Technology Alliance Group Kawartha Lakes. *A Comprehensive Broadband GAP Analysis of Eastern Ontario*. Ontario: 2006.

Sir Sandford Fleming College, which has campuses in both Peterborough and Lindsay, offers many programs associated with resource management and the environment. Although currently there appear to be no programs geared to agriculture there may be potential to develop curriculum that links environmental stewardship with agricultural practises. The agricultural sector has always been a leader in managing resources for production and protection; this expertise could form the basis for new programs at the college which build on the agricultural sector's established reputation as a leader in environmental management.

Peterborough houses the head offices for the Ministry of Natural Resources. Many of the programs supported by the Ministry are of interest to farmers who are also in the business of managing land and resources for production purposes. The programs offered by the Peterborough County and Victoria Land and Water Stewardship Councils offer an excellent

example of farmers and naturalists working together on projects that support agriculture while protecting, managing or enhancing the natural environment.

6.1.4 Food Security, Quality and Safety

Food security has been defined as “the secure access by all people at all times to the food required for them to lead a healthy life”.⁸ Food is considered by the United Nations to be a fundamental right. Ontario agriculture provides for food security in a number of ways.

The transformation of agriculture has occurred alongside the development of extensive food handling, processing and distribution networks, extending across Canada and the United States. These networks provide the supermarket shopper with greater convenience and choice of food than ever before - strawberries from California in December, or a choice of potatoes from Idaho or Ontario - throughout the year. A wide selection of processed foods reduces the time the consumer must spend in preparing food. Peterborough is home to one of the significant food processing clusters in Ontario.

As the food industry has evolved, the links between the consumer and the producer have become more tenuous. The practise of bulk shipping with centralized distribution has resulted in less and less connection between local growers and consumers. On average, food items travel 1,300 miles before reaching the consumer⁹. At the same time, Canadians continue to spend less of their income on food. Food costs have dropped from 20 cents per dollar of income in 1965, to approximately 12 cents today.¹⁰ All of this has put pressure on the local producer who is competing in an increasingly globalized market for a consumer who often does not consider the origin of food products.

Despite these trends there are an increasing number of consumers, concerned about the freshness, quality and safety of their food, who are turning to locally produced food. Farmers' markets in Ontario have doubled in the past decade. Approximately 120 markets now regularly operate, visited by approximately a million consumers, who spend over \$500,000,000 yearly.¹¹ The study area is no exception. As **Figure 6.1** illustrates farmers' markets are well represented in Peterborough and Kawartha Lakes.

Direct sales of farm-produced food to consumers who visit the farm, through pick-your-own operations or farm roadside stalls, are also rapidly increasing. Over 400 Ontario farms offer pick-your-own berries. The demand for organic foods, which have been produced without chemical pesticides or fertilizers, continues to grow.

Enactment of legislation such as the Food Safety and Quality Act 2001, which provides for the implementation of comprehensive food safety standards from “field to fork”, assuring consumers that Ontario’s food is produced with the highest standards of quality and safety¹² are important in supporting initiative that promote the advantages of “eating locally”.

⁸ Definition used by the Food and Agriculture Organization of the United Nations

⁹ <http://www.ssu.missouri.edu/faculty/jiker/papers/BRSM1-95.htm>

¹⁰ Ontario Farm Animal Council <http://www.ofac.org/>

¹¹ www.farmersmarketsontario.com/history.php

¹² <http://www.gov.on.ca/OMAFRA/english/infores/foodsafety/bill87page.htm>



Kawartha Lakes and Peterborough County are no exception to the trend to more local consumption. Both areas host a significant number of operations and outlets designed to connect the producer and the consumer. The status and history of “The Kawarthas” as a tourism and recreation destination means there is a large market of consumers seeking out local experiences which include the farm related activities shown on **Figure 6.4**. This figure graphically depicts that extent of these operations and provides insight into the variety of operations available to the public.

The programs that have been developed to promote local product, Kawartha Farm Fresh and Kawartha Farmfest in the City of Kawartha Lakes and Kawartha Choice in Peterborough, are well done and extensive. The two areas are to be commended on these programs. Many other regions are just recognizing the value of programs to promote consumption of local produce and connections with the local farm community. These two areas are leaders in this area.

The only comment that could be made about these programs is that the similarity in names tends to be confusing. Consideration could be given to a merging these programs to create one strong central “Kawartha” initiative to promote agricultural products and activities across both areas. This would address any confusion with the names and create a larger cluster of activities to attract both transient and local residents.

In spite of the availability of inexpensive food, an increasing number of low-income families find it difficult to afford sufficient food. An expanding Food Bank network in communities, towns and cities across Ontario, assembles food donations for approximately 300,000 needy families. Ontario farmers routinely donate a variety of produce directly to local food banks, as well as providing thousands of pounds of pork and half a million litres of milk annually through arrangements with Ontario’s Agricultural Marketing Boards.

World hunger continues to plague mankind. Around the world, nearly a billion people are without access to sufficient food. For years, Canadian farmers have been donating part of their produce to the Canadian Food Grains Bank, which collects their donations, and insures that it is distributed to those most in need. Since its formation in 1983, over 500,000 tons of food grains have been distributed. In Ontario, farmers in over 100 Community Growing Projects have made donations to the Canadian Food Grains Bank.¹³

6.1.5 Reconnecting Urban Society with their Rural Roots

As a consequence of the rapid population shift to non-farm occupations, many urban families have lost direct access to farms, yet retain nostalgia for rural life. Urban children often have no knowledge of the origin of their food beyond the supermarket shelves. Increasingly Ontario farmers welcome urban visitors, through farm visits, school tours, bed and breakfast stays, or short hands-on apprenticeships for urban dwellers to experience work on farms.¹⁴ Direct farm sales and farmers markets also provide the opportunity for urban dwellers to meet farmers, and to gain a “farm experience” along with a better understanding of farm issues. As noted previously, fall fairs have been an important activity in rural communities for over a

¹³ <http://www.foodgrainsbank.ca/>

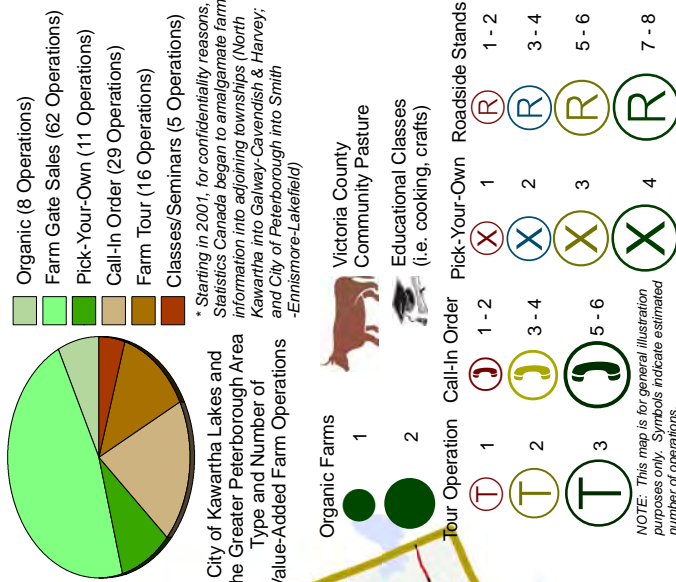
¹⁴ <http://www.harvestontario.com/toreast.html>



Figure 6.4

**City of Kawartha Lakes and
The Greater Peterborough Area
- Agricultural Economic Impact &
Development Study -**

- Connecting with our Rural Roots -
- Value-Added Farm Operations -



NOTE: This map is for general illustration purposes only. Symbols indicate estimated number of operations.

AGRI-TOURISM ...

No clear definition of agri-tourism exists. "Agri-tourism is an all encompassing term, which embraces a wide range of activities and operations but essential to all of them is an interaction between the agricultural producer, his/her products and the tourist". (Newfoundland & Labrador Agriculture)

Farmers are no longer just producing a product to sell to a processor, manufacturer or livestock yard. As trends continue to change towards a healthier lifestyle, the public is more than ever looking towards the purchase of fresh locally grown produce and the opportunity to experience the rural and farming lifestyle. To this end, farmers are looking towards value-added farm products in the form of tours, tasting, retail, and pick-your-own operations that cater to the rural life experience for visitors, making it an event that keeps them returning.

Demographics provided by Harvest Ontario shows a typical agri-tourist as:

- * Moderate to high-income urban families and mature/senior couples;
- * 65% female, 35% male, with an average of 2 children;
- * Principle food buyer for their household;
- * Enjoy spending quality time with family/partner;
- * High interest in outdoor/nature-oriented/learning activities;
- * Enjoy exploratory day-trip style experiences with a country theme;
- * 38% of consumers visit an on-farm market 2-6 times a year; and
- * 37% of consumers who visit a farm are between the ages of 35-49.

Source: Hemp Products (www.lanesendfarm&fibre.com)

ORGANIC AND SPECIALTY FARM GATE SALES ...

Organic and Specialty Livestock meat and other products in the past 5 to 10 years has grown in popularity with consumers.

Specialty livestock includes ratites, camelids, boar, elk, and buffalo.

Most farm producers in organics and specialty livestock also have a value-added factor to their organization in the form of tours and farm gate sales. Many farms offer free-range meat that is free from pesticides and most antibiotics and fresh produce such as cheese, honey, maple syrup, fruits, and vegetables. Retail sales often include leather, wool and hair products in the form of clothes, bedding, blankets, and outdoor apparel. Fragrances, oils, perfumes, natural soaps and skin products are also offered for sale.

bedding, blankets, and our
and vegetables. Retail sales
are also offered for sale.

Source: www.salema/pacas.com

PLANSCAPE

October 2006 File #64800

VAD 83

JTM Zone 17N

Catalogue

Canada - Agric

County of Peter
No. 95-17

boundary of a cluster

SPECIALTY

to Livestock

ity *Lives* stock

...grown in [

includes rural

• **•**

forms of organizations

form of four

most antibiotic

in sales of

and outdoor

ale.

1111

century, providing an opportunity to bring together rural and urban dwellers, highlighting the achievements of local agriculture.

Farm-based activities provide a range of opportunities for recreation for urban and rural dwellers, as well as visitors from around the world. They benefit both urban and rural residents by increasing the understanding of agricultural production. The variety and quality of farms in the study area supports tourism as many urban dwellers enjoy the opportunity to experience rural landscape and the charm of smaller rural communities. A range of festivals, and farm entertainment, from herb fests, strawberry socials, maple syrup and pancake festivals, haunted barns and pumpkins for Halloween, to corn mazes, sleigh rides and Christmas tree harvesting are attracting an increasing number of people to visit farms. Over the years, some agricultural festivals have grown to include entire communities or regions.

Figure 6.4 features a sampling of Kawartha Lakes and Peterborough attractions related to agriculture.

6.1.6 New Business Opportunities

Ontario farmers have been highly innovative in identifying and developing new farm activities. While such activities directly increase farm income, they also have multiple spin-off effects in providing new business opportunities. New crops and the revival of traditional crops, has required the development of related processing businesses and increased the market for product.

Woodlots, while traditionally an integral part of agricultural operations, are gaining recognition as another source of revenue for farmers. They also support the retention of interior woodland habitat and biodiversity, contributions of considerable importance specifically in southern Ontario. Organizations such as stewardship councils are promoting the importance of maintaining large woodland habitat and preserving woodlots.

Implementing sound management practise for woodlots not only ensures their ongoing health and viability, it also provides an important additional source of income for farmers. In a study completed recently of a 100 acre bush on a beef farm in Huron County it was determined that during the period from 1975 to 2004, the inflation adjusted income from lumber was \$7,775 per acre compared to \$3,148 per acre for a typical corn-soybean-wheat rotation in the same area over the same period. In a similar study done on a farm in Kawartha Lakes it was determined that from 1982 to 2004 the inflation – adjusted income from timber and firewood sales added up to \$2,599 per acre as compared to \$571 for a corn-soybean–wheat rotation.¹⁵

6.1.7 Farm Organizations

Ontario's farmers belong to a large number of agriculturally based organizations and farmers in Peterborough/Kawartha Lakes are no different. Farm organizations help regulate production and marketing of agricultural products; provide farmers and communities with technical advice and support; and increase public awareness about food, farming and environmental issues.

¹⁵ Ontario Farmer, "The Best Cash Crop", July 2, 2006 reviewing studies completed by Terry Schwann, Steve Bowers and Dave Pridham of the Ministry of Natural Resources.

Ontario's 21 marketing boards, which market 60% of all agricultural products produced in Ontario, are primarily governed by farmers themselves. The different boards vary in their degree of control over the marketing process. Boards that market commodities such as soybean, and potatoes can negotiate prices with buyers; those responsible for marketing wheat, tender fruit and hogs have the authority to set annual prices that the buyers must pay; while the boards that market poultry, eggs, milk and tobacco can limit production by setting quotas to maintain uniform supply and price. These boards can help locate markets, promote agricultural products, and help to insure that consumers enjoy a reliable supply of food at reasonable and stable prices.¹⁶

In addition to belonging to a marketing board, most farmers are members of other agricultural associations. Organizations such as the Ontario Soil and Crop Improvement Association, work with farmers and the Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA) to develop improved technologies that can sustain soils, improve crop production, and management practices. Farm organizations often send members to sit on Board of other organizations to ensure that the farm voice is heard, or to offer agricultural expertise. An example of this is the farm membership on the Peterborough and Victoria Land and Water Stewardship Councils where they work to coordinate agricultural practices with environmental initiatives.

The Victoria County Community Pasture is a somewhat unique example of a farm organization. Located in the northwest corner of the City of Kawartha Lakes, it is one of only 11 community pastures in existence in Ontario. These pastures were created in the 1960's under the Federal Agricultural Rehabilitation and Development Act (ARDA) to support agriculture during a difficult economic period. The pasture consists of 2200 acres located around the community of Glenarm. It is run by a Board of Director's comprised of farmers who decide who can use the pasture.

In 2006, 1,140 cattle including yearling steers and heifers were out on the pasture. Payment for use of the pasture is based on the difference between spring and fall weight with the 2006 charge being \$.33 per lb. Victoria County farmers with cattle on the pasture are eligible to attend the annual general meeting and to vote for the Board of Directors.

The Ontario Federation of Agriculture (OFA) is the largest grassroots farm organization in Ontario, with 51 local level federations across the province. The OFA takes on a strong advocacy role aimed at improving the economic and social well being of farmers. The OFA is presently undertaking a broad range of policy and environmental initiatives, often in collaboration with other farm groups, and government bodies.¹⁷ These initiatives include an agricultural land use policy statement, information to farmers on funding opportunities, gas and hydro costs, and support for farm well water safety.¹⁸ The OFA's success at fulfilling its motto of 'Farmers Working for Farmers' will likely rest on its ability to adjust its strategies in defending agricultural interest within a changing political and economic context.¹⁸ The Victoria/Haliburton Federation of Agriculture and the Peterborough County Federation of Agriculture are active in their communities and are one of the main partners in this study.

¹⁶ http://www.gov.on.ca/OMAFRA/english/farmproducts/factsheets/ag_market.htm

¹⁷ <http://www.ofa.on.ca/>

¹⁸ <http://www.ofa.on.ca/top%20menu/milestones/history.htm>

Several farm organizations provide information to farmers, policy makers and consumers. For example, the Ontario Corn Producers Association produces an extensive series of articles and news releases that address policy changes and their impacts on farmers; corn production in Ontario; pesticides, crop inputs and biotechnologies; corn in the classroom; and corn and the environment.¹⁹ The Ontario Farm Animal Council²⁰ brings together 12 producer organizations in order to address concerns related to animal welfare, the environment, and food safety.

The nature of support provided by the Ontario Ministry of Agriculture, Food and Rural Affairs has changed along with changes in Ontario agriculture. The extensive network of agricultural representatives and technical specialists, based in counties and districts across Ontario, resulted in personal contact and support to farmers on a wide range of technical and policy issues. Centrally based programs and staff, and electronic communication have now largely replaced this network. Research activities, formerly conducted by specialists at the local level, as well as in provincial research stations across the province, are now being centralized under the University of Guelph.

On a positive note, OMAFRA has increased its support in a number of other areas, such as market promotion, economic development, food and environmental safety. For example, Foodland Ontario, a program of the Ministry, carries out market promotion of Ontario-grown produce that has been successful in encouraging the consumer to choose the freshness and quality of Ontario-grown food over imports.²¹ The current Liberal government has initiated a round table on agriculture and made changes and adjustments to OMAFRA designed to improve service to farmers.

As direct government technical assistance to farmers declines, farmers must increasingly rely on the private sector- including companies selling seed, fertilizer, pesticide, biotechnology products and farm equipment- for the technical information and advice they require. While extensive information is available to the farmer on the promotion and use of these inputs, there is increasing concern that the farmers have access to unbiased and comparative information generated by both private and public sectors.

The 4-H organization is an active and effective organization for youth which in 2005, celebrated its 90th anniversary in Ontario. The Kawartha Lakes, Haliburton Region and Peterborough County have very active 4-H Associations. 4-H provides an opportunity for 10 to 21 year olds to explore a wide array of topics through the organization's motto: *Learn to do by Doing*. Participants are offered the opportunity to learn about food production, processing and marketing systems, heritage and culture in Ontario, in such areas as livestock and crop production, financial management, food preparation, nutrition, recreational activities, career development, and many more. The possibilities are endless.

4-H has garnered a reputation for building community leaders as it helps members to develop their skills in communications, leadership, problem solving, and goal setting. Members are also encouraged to develop self confidence, a sense of responsibility, and a positive self-image. The youth are guided through various projects by screened volunteers who have a

¹⁹ <http://www.ontariocorn.org/>

²⁰ <http://www.ofac.org/agrifood.html>

²¹ <http://www.foodland.gov.on.ca/history1.htm>



passion for working with young people. 4-H also opens up many doors beyond the local area for these members. Scholarship, camp, and travel opportunities are available for those who wish to take full advantage of the program. Each summer, Peterborough Exhibition is host to Peterborough Junior Day, a regional 4-H judging competition which involves approximately 150 members each year. Statistics regarding the type and number of 4 H projects in the study area, are included in **Appendix 6**.²²

6.2 Environmental Benefits

There is growing understanding about the effect of human activities on the environment, particularly how our activities affect the air, water, soil and life forms that make this planet habitable. As our knowledge about the environment increases, we are acquiring a better understanding about the effects of agriculture on the environment and improved management practices that can help sustain it.

Despite the positive role that agriculture plays in the management and protection of the environment recently there has been a growing public perception that agriculture may have an adverse impact on the environment. This is something the agricultural community needs to counter by ensuring that accurate information about current agricultural practices is circulated and understood.

As environmental controls tighten, farmers are expected to take an increased role in implementing some of the controls. This can become a burden and can lead to conflicts between public enjoyment of the environment and onerous requirements that reduce a farmer's ability to operate effectively. Programs such as environmental farm plans and legislation protecting farming and food production do address these concerns but as the concerns grow, additional measures are required to ensure that environmental controls are not be enforces at the expense of the farmer.

Farmers in Ontario are closely involved in the development and promotion of alternative fuel sources that reduce GHG emissions and improve air quality. Ethanol as an alternative fuel source is now produced from corn on a commercial scale in Ontario. Products include ethanol- blended gasoline, and "neat" ethanol (fuels containing at least 85% ethanol).²³ Not only is ethanol a biologically renewable resource, it is a cleaner fuel. Upon combustion it produces less carbon monoxide and is less dependence on toxic compounds used to increase the octane level of automotive fuels. Increased use of Ethanol would reduce the overall carbon dioxide emissions caused by the burning of fossil fuels and increase the market opportunities for Ontario farmers. If all Ontario gasoline contained 10% ethanol, the province would realize an elimination of annual CO₂ emissions equal to that released by about 400,000 cars. The Final Report of the Select Committee on Alternative Fuel Sources for Ontario recommended that the use of ethanol and methane among others be seriously considered in order to ensure that Ontario become a leader in the field of renewable energy.²⁴

Kawartha Ethanol Inc. recently announced plans to develop an ethanol plant on the former 3M plant near Havelock in the Township of Havelock-Belmont-Methuen. This plant, which is proposed to have 45 full time employees, will use locally grown corn to produce ethanol. The President and CEO of Kawartha Ethanol Inc., has been meeting with area producers to discuss supply. At full production the plant is expected to produce 80 million litres of ethanol annually from 7.5 million bushels of corn. In addition it will produce up to 60,000 tonnes of specially designed grain that will be sold to farmers

²² Material and statistics regarding 4H provided by Melanie Hare, Association Support Representative Region 3, 4-H Ontario.

²³ <http://www.ontariocorn.org/ethahome.html>

²⁴ <http://www.newswire.ca/releases/June2002/05/c2919.html>



as cattle feed.²⁵ This project would convert Ontario corn to ethanol helping the environment and adding value to local crops.

6.2.1 Environmental Farm Plans

The Environmental Farm Plan initiative was a farmer driven program that grew out of interest in increasing environmental awareness on farms. Participants work through a workbook designed to highlight the various issues. The workbook consists of 23 chapters that address various environmental issues associated with farm operations including water quality in farm wells, streams, barnyard run-off; storage systems for fuel, pesticides, manure and silage; livestock, crop, woodlot and wetland management systems; and noise, odour and other potential sources of pollution. Once completed the farm plan is submitted to a committee of locally appointed farmers for review and approval. Once approved plans are implemented by the individual property owners. There is funding associated with various components of the plan which can be applied for once the plan has been submitted and approved.

This program has been implemented in phases with the first round of plans having been completed between 1993 and 2004. During this time in Peterborough there were over 900 participants in the workshops in Peterborough and over 600 plans were submitted, peer reviewed and finalized. In the third phase there have been approximately 120 participants and 82 plans approved. Approximately 60% of these completed plans are from participants in the first two phases of the program²⁶. In Kawartha Lakes 256 plans were completed and finalized during the first two phases. In the third round approximately 66 plans have been completed²⁷. Although completion of a plan is important, the main benefit of the program lies in the education and discussion about environmentally sound practises that takes place during the workshops.

6.2.2 Nutrient Management Plans

The Nutrient Management Act, passed by the Ontario Government in June 2002, “provides for province-wide standards to address the effects of agricultural practices on the environment, particularly relating to land-applied nutrients”.²⁸ The farm community had numerous concerns about the impact of the legislation on their operations and during the development of the legislation, extensive consultations were held to respond to these concerns. Hopefully the changes that have been made have minimized the negative effects of the legislation on operators.

6.2.3 Stewardship Programs

Farmers have always been stewards of the environment. Their close relationship with the land allows them to appreciate and work with the subtle nuances of nature. In the study area farmers are active partners in both the Peterborough and the Victoria Land and Stewardship

²⁵ Peterborough Examiner, July 21, 2006, pgs A1 & A6.

²⁶ Pat Learmonth Program Representative/Workshop Leader, Peterborough County, Ontario Soil and Crop Improvement Association email May 15, 2006.

²⁷ Dave Pridham Program Representative/Workshop Leader, Durham and City of Kawartha Lakes, Ontario Soil and Crop Improvement Association, Email April 7, 2006.

²⁸ <http://www.gov.on.ca/OMAFRA/english/agops/>



Councils. These Councils are community based organization comprised of volunteer representatives from agriculture and forestry organizations, land interest groups and representatives of resource agencies. Both councils work together on land stewardship with private property owners to the benefit of the community as a whole.

6.2.4 Ecological, Organic and Alternative Agriculture

There is growing interest in implementing agricultural systems based on biological processes, rather than relying on external chemical or mechanical inputs. A large number of groups around the world embrace this ideal, with more than a dozen groups active in Ontario. The Innovative Farmers Association of Ontario, for example, works with government organizations and agribusiness to develop and promote new innovations that advance environmentally and financially sound agriculture.²⁹ The Ecological Farmers' Association of Ontario, with bases in Eastern, Central and Western Ontario, educates farmers about ecological methods of farming, through short course training, farm tours, and a regular newsletter to members.³⁰

Many of these groups endorse the principles of organic agriculture, which has been defined as *"... a holistic system of crop and livestock production designed to optimize the productivity, and fitness of diverse communities within the agroecosystem, including soil organisms, plants, livestock and people. The principle goal of organic agriculture is to develop productive enterprises that are sustainable and harmonious with the environment"*. Certified Organic produce must be grown without chemical fertilizer or pesticides. The demand for organic produce in Ontario is growing at 20% annually. Five organizations in Ontario can provide organic certification, and Canadian organic standards have been set for produce, which can be exported with the organic label.³¹ The Canadian Organic Growers are developing a local chapter in Kawartha Lakes, and there are a number of organic operations in the area, some of which are included on **Figure 6.4**.

6.3 Summary

This chapter has attempted to demonstrate the breadth of the agricultural sector and the many benefits, both economic and otherwise, that agriculture provides – benefits which are essential to the well being of our society and the health of our environment. Unless a productive and sustainable agriculture industry is maintained, these benefits will be lost.

It is critically important that both urban and rural dwellers understand that a healthy and productive agriculture is critical to societal health. An informed citizenry, including all levels of government, that understands and supports the farming community, is essential, if agriculture in this province is to be sustained. It is also important to understand the complexity of the support structure associated with agriculture and the many benefits to sector and to society in general that this structure provides.

²⁹ <http://www.ifao.com/>

³⁰ <http://www.gks.com/efao/>

³¹ <http://www.gov.on.ca/OMAFRA/english/crops/facts/01-027.htm>





CHAPTER 7

- Human Resources -

Chapter 7 – Human Resources

7.1 Introduction

The purpose of this chapter is to provide details on the demographic profile of farm operators and to address human resource issues relating to training and the labour market. The information presented in this chapter was compiled through a combination of statistical sources, secondary research, and the surveys of farm related businesses. Given the complexity of labour issues it is not intended as a detailed review but rather as an introduction to the human resource issues related to agriculture in Kawartha Lakes and Peterborough.

7.2 Demographic Profile

In 2001 there were 3,795 farm operators in Kawartha Lakes and Peterborough (2,095 in Kawartha Lakes and 1,700 in Peterborough). Of these operators, 2,765 were male, 1,030 female. Their average age in 2001 was 52.2 years. **Figure 7.1** provides a breakdown of operators by age. For comparison purposes, the average age in Canada and Ontario in 2001 was 35.8 years.

Figure 7.1 Characteristics of Farm Operators for Ontario, Central Ontario Region, City of Kawartha Lakes and the County of Peterborough, 2001

Geographic Location	Total Number of Operators*	Gender		Age			Average Age of Operators
		Male	Female	Under 35 Yrs	35 - 54 Yrs	55 Yrs & Over	
Ontario	85,020	62,215	22,800	8,975	44,150	31,890	50.7
Central Ontario Region	12,680	9,215	2,465	985	6,450	5,230	52.5
City of Kawartha Lakes	2,095	1,520	575	160	1,110	830	51.7
County of Peterborough	1,700	1,245	455	125	830	740	52.7
Kawartha Lakes / Peterborough	3,795	2,765	1,030	285	1,940	1,570	52.2

Central Ontario Region includes the Regions of Durham and York; Counties of Haliburton, Hastings, Northumberland, Peterborough and Prince Edward, District of Muskoka and Parry Sound; and the City of Kawartha Lakes (former Victoria County).

* This is a count of distinct operators; hence, operators of two or more separate farms were included only once in the total.

Source: 2001, Statistics Canada, Farm Operator Data, Average Age Special Order, 2001

There is no question that the average age of farm operators generally and in the study region far exceeds the average age of the Canadian population. However in assessing this situation, there are a number of factors that need to be considered. Statistics Canada defines a farm operator as “those persons responsible for the day to day management decisions made in the operation of a census farm”. Up to three operators can be reported per farm. Farmers as a group tend to continue in the business as long as they are able. Their level of productivity or involvement with the farm may drop, but their status as operator remains constant. Therefore operators who have essentially handed the farm over to a younger generation often continue to be counted as operators. Their inclusion can skew the age profile and result in a higher average age for operators.

With respect to the decline in the number of operators the rate of decline can be partially attributed to the decline in the number of farms. As technology improves, fewer operators are running larger operations. Statistics provided in Chapter 4 confirmed that between 1996 and



2001 the number of farms in Kawartha Lakes and Peterborough decreased by 11.7% (11.3% in Kawartha Lakes and 12.2% in Peterborough) but the number of acres being farmed only decreased by 3.3% (decreased 4.8% in Kawartha Lakes and 1.2% in Peterborough). Correspondingly, the average farm size in Peterborough / Kawartha Lakes increased by 10% (7.7% in Kawartha Lakes, 12.6% in Peterborough). These statistics confirm that fewer operators are farming larger land areas.

To obtain a more realistic understanding of the age profile, statistics on age were considered in reference to sales class. These statistics are included as **Figure 7.2** and breakdown number of farm operators into three age categories: under 35 years; 35 to 54 years; and over 55 years. Statistics show that in Kawartha Lakes and Peterborough as the value of the sales class rises, the number of farm operators within the 35 to 54 years of age increases. The number of farm operators in the 35 to 54 years category generating sales between \$100,000 and \$249,000 per year is 195 (average age - 45.2 years), in the class generating sales between \$250,000 and \$499,000 105 (average age - 45.5 years); and sales in excess of \$500,000 45 (average age - 43.3 years). In the higher categories, a larger percentage of operators were in the 35 to 54 year age category.

While these statistics are somewhat reassuring, the age profile and declining number of operators still remains a concern. In questionnaires that have been administered to farmers in other municipalities by the authors of this report, many respondents indicated that they would not encourage their children to enter farming. As the age of farmers' rises, if there are no young operators coming into the industry and if current farmers are not encouraging their descendents to enter farming, the future of the industry will be bleak.



Source: Goat Milking Parlour – Ontario Goat Milk Producers' Association
www.ontariogoatmilk.org/



Figure 7.2 Average Age of Farm Operators by Sales Class and Age Distribution for Ontario, Central Ontario Region, and the City of Kawartha Lakes and the County of Peterborough, 2001

Geographic Location	Gross Farm Receipts (Under \$2,500)										Gross Farm Receipts (\$2,500-\$4,999)									
	All		Under 35		35 - 54 Yrs		Over 55 Yrs		Total #	Avg Age	All		Under 35		35 - 54 Yrs		Over 55 Yrs		Total #	Avg Age
	Total #	Avg Age	Total #	Avg Age	Total #	Avg Age	Total #	Avg Age			Total #	Avg Age	Total #	Avg Age	Total #	Avg Age	Total #	Avg Age		
Ontario	6,250	52.6	560	29.5	3,090	45.5	2,590	66.2	4,575	53.1	365	29.2	2,215	45.4	1,995	66.3				
Central Ontario Region	1,415	53.1	130	26.2	700	45.6	575	66.7	970	53.0	75	30.1	490	46.2	430	66.0				
City of Kawartha Lakes	210	52.2	15	28.2	115	45.2	80	67.1	145	53.6	10	30.4	70	45.3	65	66.2				
County of Peterborough	180	53.4	10	27.9	105	45.3	65	67.7	125	53.6	5	28.9	65	46.0	60	65.4				
Kawartha Lakes / Peterborough	390	52.8	25	28.1	220	45.3	145	67.4	270	53.6	15	29.7	135	45.7	125	65.8				
Gross Farm Receipts (\$5,000-\$9,999)																				
Ontario	9,960	52.9	760	29.1	4,925	45.5	4,290	65.6	15,315	53.0	1,300	29.1	7,135	45.4	6,890	65.5				
Central Ontario Region	2,220	53.6	150	22.9	1,105	46.1	965	65.6	2,800	53.8	165	29.2	1,295	45.8	1,350	65.7				
City of Kawartha Lakes	410	51.8	35	29.7	220	45.0	150	66.1	560	52.6	35	28.7	280	45.5	245	64.9				
County of Peterborough	305	52.8	25	28.5	160	46.7	125	64.4	450	54.5	25	27.8	200	46.0	230	64.6				
Kawartha Lakes / Peterborough	715	52.3	60	29.1	380	45.9	275	65.3	1,010	53.6	60	28.3	480	45.8	475	64.8				
Gross Farm Receipts (\$25,000-\$49,999)																				
Ontario	10,730	52.6	960	28.9	4,990	45.4	4,785	64.9	9,060	50.9	990	29.1	4,445	45.0	3,615	64.2				
Central Ontario Region	1,485	48.3	95	17.4	725	46.0	665	65.2	1,095	51.4	100	21.1	555	45.5	440	44.6				
City of Kawartha Lakes	285	52.8	20	30.5	140	45.6	130	64.2	195	50.6	15	27.5	90	45.6	80	61.4				
County of Peterborough	210	53.6	10	28.2	105	45.6	95	65.4	145	51.9	15	29.8	65	45.9	70	62.5				
Kawartha Lakes / Peterborough	495	53.2	30	29.4	245	45.6	225	64.8	340	51.3	30	28.7	155	45.8	150	62.0				
Gross Farm Receipts (\$100,000-\$249,999)																				
Ontario	14,220	47.8	1,945	29.2	8,225	44.4	4,060	63.5	8,940	46.6	1,280	29.2	5,470	44.1	2,200	62.9				
Central Ontario Region	1,345	38.8	145	20.5	770	35.3	445	51.0	855	38.5	130	19.7	510	35.4	235	44.5				
City of Kawartha Lakes	160	47.3	20	28.5	105	44.6	35	63.4	90	49.6	10	26.6	55	45.1	30	65.4				
County of Peterborough	140	49.0	10	28.2	90	45.8	40	62.5	100	47.6	20	27.2	50	45.9	30	63.6				
Kawartha Lakes / Peterborough	300	48.2	30	28.4	195	45.2	75	63.0	190	48.6	30	26.9	105	45.5	60	64.5				
Gross Farm Receipts (\$500,000 and Over)																				
Ontario	5,945	46.9	830	29.5	3,665	44.5	1,450	62.9	85,020	50.7	8,980	29.2	44,150	44.9	31,890	64.8				
Central Ontario Region	475	38.8	30	14.9	290	36.8	125	44.7	12,680	52.5	985	29.3	6,450	45.6	5,230	65.2				
City of Kawartha Lakes	40	49.1	5	29.3	25	42.9	10	67.2	2,095	51.7	160	28.9	1,110	45.2	830	64.9				
County of Peterborough	30	50.8	0	0.0	20	43.6	10	60.5	1,700	52.7	125	28.3	830	45.9	740	64.6				
Kawartha Lakes / Peterborough	70	50.0	5	29.3	45	43.3	20	63.9	3,795	52.2	285	28.6	1,940	45.6	1,570	64.8				

Central Ontario Region includes the Regions of Durham and York; Counties of Haliburton, Hastings, Northumberland, Peterborough and Prince Edward, District of Muskoka and Parry Sound; and the City of Kawartha Lakes (former Victoria County). * This is a count of distinct operators; hence, operators of two or more separate farms were included only once in the total. Source: 2001, Statistics Canada, Farm Operator Data, Average Age Special Order, 2001

7.3 Operator Employment Profile

Figure 7.3 provides a breakdown on the number of hours worked on the farm in 2001. Almost 37% of operators reported working more than 40 hours per week in the farm operation and 48% indicated that they did not work off the farm. Eight hundred and eighty operators or 23% reported working more than 40 hours per week off the farm.

Figure 7.3 Average Hours Per Week Spent Working for Agricultural Operations and Non-Farm Work for Ontario, Central Ontario Region and County of Peterborough, 1996 and 2001

Geographic Location	Total # of Operators		Avg Hrs/Wk Working for Agriculture Operation In Previous Calendar Year							
			< 20		20 - 40		> 40			
	Census Year									
	1996	2001	1996	2001	1996	2001	1996	2001		
Ontario	96,940	85,015			27,565	23,845	25,485	23,625	43,885	37,545
Central Ontario Region	32,720	28,140			4,465	3,765	4,170	3,850	6,005	5,055
City of Kawartha Lakes	2,350	2,100			690	625	775	700	885	775
County of Peterborough	1,865	1,695			570	500	545	565	750	625
Kawartha Lakes / Peterborough	4,215	3,795			1260	1125	1320	1265	1635	1400
Geographic Location	Total # of Operators		Average Hours/Week of Non-Farm Work in Previous Calendar							
			None		< 20		20 - 40		> 40	
	Census Year									
	1996	2001	1996	2001	1996	2001	1996	2001	1996	2001
Ontario	96,940	85,015	66,105	46,360	6,575	6,745	13,305	15,260	10,955	16,655
Central Ontario Region	32,720	28,140	9,940	6,470	825	950	2,110	2,550	1,765	2,700
City of Kawartha Lakes	2,350	2,100	1,450	965	145	150	400	475	360	505
County of Peterborough	1,865	1,695	1,185	845	115	145	315	335	245	375
Kawartha Lakes / Peterborough	4,215	3,795	2,635	1810	260	295	715	810	605	880

Central Ontario Region includes the Regions of Durham and York; Counties of Haliburton, Hastings, Northumberland, Peterborough and Prince Edward, District of Muskoka and Parry Sound; and the City of Kawartha Lakes (former Victoria County).

Source: Farm Operators Data, Statistics Canada 2001.

These statistics confirm that farm employment is the main occupation for the majority of operators. However it should be noted that a significant number of operators augment their farm income with employment off the farm; 8% of operators reported working up to 20 hours per week off the farm; 21% reported working 20 to 40 hours per week off the farm, and 23% reported working more than 40 hours per week off the farm. In comparison, the percentage of operators working more than 40 hours in off-farm employment in 1996 was 14%.

While these statistics do raise some concerns it must be remembered that Statistics Canada defines a farm as any operation generating in excess of \$2500 per annum in gross farm receipts. This approach means that the statistics capture many hobby farmers and rural residents seeking a quasi agricultural lifestyle. This can skew the profiles that emerge.



7.4 Labour Force Characteristics

Section 7.3 dealt only with statistics related to farm operators. Statistics Canada also provides a breakdown of labour force characteristics which include all persons directly employed in agriculture. Under the North American Industrial Classification System (NAICS), Statistics Canada divides the labour force into seven categories, one of which is "Agriculture and Other Resource Based Industries". There is no separate category for agriculture. In Kawartha Lakes and Peterborough, agriculture will represent a significant component in this category. There will be some employment in other resource sectors such as forestry. However for the purposes of this analysis these labour figures were relied on to provide insight into employment in agriculture within the Kawartha Lakes and Peterborough areas.

Figure 7.4 shows the breakdown of the 2001 labour force information by category for Ontario, the City of Kawartha Lakes and the County of Peterborough. **Appendix 7** contains the tables showing the breakdown of the City of Kawartha Lakes and the County of Peterborough by Township. In 2001, of a total Kawartha Lakes / Peterborough labour force of 93,845 people, 4,780 representing 5.1% of the total labour force, were employed in the Agriculture and Other Resource-Based Industries category. This was more than the provincial average, where the Agriculture component accounted for 3.2% of the labour force. The agricultural labour force ranks sixth out of the seven labour employment sectors in the Kawartha Lakes and Peterborough area.

Figure 7.4 Labour Force Information for Ontario, City of Kawartha Lakes and the County of Peterborough, 2001

Industry Group	Ontario	City of Kawartha Lakes	County of Peterborough	Kawartha Lakes / Peterborough
	Number of Persons Employed In Sector			
Agriculture and Other Resource-Based Industries	191,020	2,235	2,545	4,780
% Employed	3.2%	6.8%	4.2%	5.1%
Manufacturing and Construction Industries	1,316,580	7,645	12,090	19,735
% Employed	22.0%	23.2%	19.9%	21.0%
Wholesale and Retail Trade	950,730	5,405	9,710	15,115
% Employed	15.9%	16.4%	16.0%	16.1%
Finance and Real Estate	401,445	1,355	2,830	4,185
% Employed	6.7%	4.1%	4.7%	4.5%
Health and Education	902,990	5,400	12,090	17,490
% Employed	15.1%	16.4%	19.9%	18.6%
Business Services	1,145,910	4,660	8,825	13,485
% Employed	19.1%	14.1%	14.5%	14.4%
Other Services	1,084,090	6,300	12,755	19,055
% Employed	18.1%	19.1%	21.0%	20.3%
Total Experience Labour Force*	5,992,765	32,995	60,850	93,845

* Refers to persons 15 years and over, excluding institutional residents, who were employed or unemployed during the week (Sunday to Saturday) prior to Census Day, and who had last worked for pay or in self-employment in either 2000 or 2001.

Source: Statistics Canada, 2001 Community Profiles



PLANScape

BUILDING COMMUNITY THROUGH PLANNING

City of Kawartha Lakes

In Kawartha Lakes in 2001, of a total labour force of 32,995 people, 2,235 people representing 6.8% of the total were employed in the Agriculture and Other Resource-Based Industries category. This was more than the provincial average, where the Agriculture component accounted for 3.2% of the labour force. The agricultural labour force ranks sixth out of the seven labour employment sectors in Kawartha Lakes.

Agricultural employment varies considerably throughout the City. The following provides some highlights of the labour force characteristics in selected areas of Kawartha Lakes where the majority of farms are located.

- In Emily, Agriculture accounts for 7% of the labour force, and represents a larger labour force than Finance and Real Estate;
- In Manvers, Agriculture accounts for 11% of the labour force, and represents a larger labour force than Finance and Real Estate;
- In Mariposa, Agriculture accounts 10% of the labour force, and represents a larger labour force than Finance and Real Estate;
- In Eldon, Agriculture accounts for 12% of the labour force, and represents a larger labour force than Finance and Real Estate and Wholesale and retail;
- In Fenelon, Agriculture accounts for 6.5% of the labour force, and represents a larger labour force than Finance and Real Estate; and
- In Verulam, Agriculture accounts for 8% of the labour force, and represents a larger labour force than Finance and Real Estate.

County of Peterborough

In Peterborough in 2001, of a total labour force of 60,850 people, 2,545 representing 4% of the total labour force were employed in the Agriculture and Other Resource-Based Industries category. This was higher than the provincial average, where the Agriculture component accounted for 3.2% of the labour force. The agricultural labour force represents the smallest sector of the labour categories for Peterborough.

Agricultural employment varies considerably throughout the County. The following provides some highlights of the labour force characteristics in areas of Peterborough reporting higher numbers of farms.

- In Otonabee-South Monaghan Agriculture accounts for 12% of the labour force, and represents a larger labour force than Finance and Real Estate;
- In Cavan-Millbrook-North Monaghan Agriculture accounts for 9% of the labour force, and ranks ahead of Finance and Real Estate;



- In Asphodel Norwood, Agriculture accounts for 16% of the labour force and is the second largest category after manufacturing;
- In Douro Drummer, Agriculture accounts for 7% of the labour force, and represents a larger labour force than Finance and Real Estate;
- In Smith-Ennismore-Lakefield, Agriculture accounts for 4% of the labour force; and
- In the rest of the townships in the County agriculture accounted for less than 1% of employment.

7.5 Employment issues

From past research it has been determined that employment in the agricultural sector tends to be divided into primary operators, full time employees and labourers. With respect to the primary operators and skilled employees, employment issues tend to be associated with the aging of the farm population, lack of succession planning, unreliable income, cost of getting into farming, ability to offer competitive wage rates, and difficulty in attracting people with a non farm background to jobs in the agricultural sector.

The research done in the past did not reveal significant difficulty in attracting and retaining full time employees. Although the skills required for work in agriculture are significant and varied, as with principal operators, skilled workers in the sector seem to view a job in agriculture as a desirable life style choice rather than as just a job. If the employment is full time and pays a reasonable wage, employees want to work in the sector. However the issue of competitive wage rates is raised repeatedly. The uncertainty that has affected the agricultural sector in the last decade, contributes to difficulty in sustaining competitive wage rates. While employees in the sector are not “looking to get rich” and often prefer a job in agriculture to equivalent jobs in other sectors, they still require a reasonable return for their services. In a summary of wages for the Ontario labour force in 2004, wages for general farm workers were amongst the lowest quoted, at \$11.52 per hour¹. In Kawartha Lakes and Peterborough, wages for general farm workers were similar to the provincial hourly rate, they ranged from \$8.35 to \$12.00 per hour².

There are a number of initiatives that would help link potential employees and operators with jobs in agriculture. Primarily, more publicity is required to educate potential workers about employment opportunities in the field. The skills required for agricultural work are varied and sometimes not associated with agriculture. Examples include skills such as heavy equipment operation and repair, business management, sales promotion, laboratory technician and pesticide management and application.

In linking up entry-level employees with agricultural jobs, lack of transportation is an issue. Employees at this level often do not have the resources to have their own transportation. Public transit outside large urban centres is basically non-existent; access to the rural area must be gained by automobile.

For all levels of employees, the opportunity to become an owner operator is limited by financial resources. Moving from the position of employee to farm operator requires significant financial

¹ Statistics Canada Labour Force Survey, February 2005

² Peterborough Human Resources Skills Development Centre Canada Labour Information Unit, Labour Market Information, 2004.

resources which are often out of reach of employees. If the sector is supply managed, purchasing quota is an additional cost.

Individuals wishing to pursue a career in agriculture are faced with huge capital requirements to get started, a lending environment that is not friendly to agriculture, a sustained period of low income before productive capacity is established, the lack of a reliable pay check and the uncertainties of weather, commodity prices, disease (BSE being a significant example) and other factors. Given these circumstances it is surprising that there are any new operators.

In addition to employment opportunities in the agricultural industry there is also potential for employment in agri-related business. As indicated in Chapter 5, Kawartha Lakes and Peterborough contain a significant number of agriculturally related businesses. Eastern Ontario is home to a large food processing cluster and Peterborough is home to a significant cluster of food processing operations. Kawartha Lakes is a leader in seed production. Both areas have healthy farm service sectors that attract business from outside of the areas. Linkages should be made between agriculture, related business and employment and initiatives should be implemented to support these operations.

7.6 Training Needs

Agriculture has tended to be an industry where training occurs on the job and is supplemented by external programs. The capital investment required to start a farm means that many operators move into an existing family operation. This tends to affect the types of training that are needed and makes it difficult for certain portions of the labour force to enter the field. To increase interest in agriculture as a career, efforts should be made to include educational programs that introduce students to agriculture as a potential career in the provincial curriculum.

Another area where training programs are important is in the ongoing job related training required to remain current with changing requirements in agriculture. Farmers require an increasingly complex bundle of skills. Initiatives such as farm management plans, nutrient management and pesticide application require ongoing upgrading. Much of this training used to be provided by OMAFRA. However, over the past few years, the training responsibility has increasingly been transferred to suppliers. There is a concern that those who supply the products should not be doing the training. An arms length training resource or coordination of industry sponsored training would be appropriate.

7.7 Educational Programming

Many of the educational programs geared to agriculture are either offered by or coordinated through the University of Guelph. Guelph has developed partnerships with the Ontario Ministry of Agriculture, Food and Rural Affairs and with various community colleges to provide a broad range of agricultural programs. Agricultural programs are not a focus at Trent University although there may be links with the industry through the work being done on issues related to DNA. Sir Sandford Fleming College offers programs in natural resource management. There may be opportunities for overlap with agriculture in application of some of the skills taught in these programs.

The presence of significant educational institutions in Peterborough and Kawartha Lakes represents an opportunity to broaden programs to link with the agricultural sector. There is an increasing recognition that agriculture can provide more than food products. Pharmaceutical products based on



agricultural product and alternative energy sources are two examples of potential for non traditional use of agricultural products. With the dominance of the livestock sector in the study region, there may be potential for partnerships with the genetics programs at Trent. As farmers are increasingly required to implement new approaches to managing environmental features, partnerships with the Ministry of Natural Resources which is based in Peterborough and programs through Sir Sandford Fleming which has campuses in both Peterborough and Lindsay could be investigated.

The University of Guelph has developed partnerships with the Ontario Ministry of Agriculture, Food and Rural Affairs and with various community colleges to provide a broad range of agricultural programs. There are also apprenticeship programs offered through the Ontario Ministry of Colleges and Universities. A review of the programs offered confirmed programs for arborists, dairy herdspersons, fruit growers, farriers, and saddler and harness makers. All of these programs require a Grade 12 education which, as noted by previously, can be a barrier for many who are interested in this type of work. This issue should be addressed since there are willing participants for this program both from the operator and the employee side.

One of the problems in encouraging students with a non-farm background to consider a career in agriculture is the lack of opportunity to learn about, or be exposed to, agriculture as an industry. The curriculum Ontario schools use does not include units on this industry and, with the continuing urbanization of the Ontario population; fewer students have any contact with the rural community.

Attempts are being made to overcome this lack of understanding. The Ontario Federation of Agriculture cooperated in the establishment of the Centre for Rural Leadership which will play a role in promoting agriculture and leaders for the industry.

Dealing with the agricultural sector is not like dealing with more structured sectors. Agriculture requires a diverse bundle of skills. More work is required to determine how to structure apprentice and cooperative programs so they respond to these needs. Training opportunities for farmers once in the industry need to be ongoing and flexible.

7.8 Summary

This chapter has raised a number of human resource issues relating to agriculture. The age of farmers is an issue of ongoing concern. However, although older farm operators may continue to remain active, there are younger operators in the system and they tend to operate the more productive farms. The issue of the aging farm population should be monitored, but if the economic issues associated with farming can be resolved so it remains profitable this, coupled with a program to promote career opportunities in agriculture, and assist in entry into the industry will help address the issue. For many, agriculture is a challenging career that is a satisfying lifestyle choice. If it is supported by the opportunity to make a reasonable living and access to labour programs that address agricultural needs, the future for agriculture should be bright.

The potential of agriculture as a career needs to be promoted. With fewer family links to agriculture, it can be overlooked as a career choice. Increased information about agriculture in the school system, practical training courses, accessible apprenticeship programs and training programs in agri-related businesses will help maintain an effective agricultural work force.

Succession planning is an issue which needs to be addressed. The cost of entering farming for those without help is prohibitive. This issue should be studied and creative ways to address it, devised.



Attention to issues such as lack of transportation in rural areas, access to apprenticeship programs and promotion of agriculture as a career should be promoted. Providing the support services through programs such as these strengthens the agricultural sector and opens permanent higher level job opportunities for Canadians.

The study area has the advantage of being home to several well established post secondary educational institutions. Appropriate partnerships between those institutions and the agricultural sector should be encouraged.

Agriculture is a sector that has training and human resource needs that differ from the main stream. Attention needs to be paid to the needs of this sector to ensure that this very desirable and productive sector continues to be strong.



Various Photos from the "Photo Gallery" on the Lindsay Central Exhibition website (<http://www.lindsayex.com/gallery.htm>)





CHAPTER 8

- Conclusions and Recommendations -

Chapter 8 Conclusions and Recommendations

8.1 Conclusions

In conducting this study, a number of observations were made about the agricultural sector and related industries in the Greater Peterborough area and the City of Kawartha Lakes. These observations have been categorized as strengths, concerns, opportunities, resources and expectations and form the basis for recommendations on actions to support agriculture in the study area.

8.2 Strengths

Agriculture in Peterborough / Kawartha Lakes is a major component of the economy. There is a strong, well-established agricultural industry that developed as part of the historic settlement of the area and has evolved into the leading sector of the regional economy. The agri business network associated with the industry is comprehensive and services an area much wider than the study region.

Agriculture in the Peterborough / Kawartha Lakes generated in excess of \$155 Million in gross farm receipts in 2001. Assuming this to be a benchmark for current activity in the region, it can be concluded that agricultural in Peterborough / Kawartha Lakes generates the following impacts on an annual basis:

- A total economic impact in excess of \$353 Million
 - \$85 Million in direct impacts,
 - \$207 Million in indirect impacts, and
 - \$62 Million in induced impacts;
- A labour income impact in excess of \$56 Million.

For the purpose of this study, based on the agricultural profile of the area, an economic impact assessment was conducted for the five leading commodity groups:

- cattle (beef);
- dairy;
- grain and oilseed;
- poultry and egg; and
- horse and pony.

Each of these commodity groups possesses output multipliers that are in excess of 2.0; for each dollar spent by farmers, two dollars of activity is stimulated in the regional economy. This multiplier is on par or higher than the average multiplier sizes for all other industries in the region. Multiplier size is



a reflection of the degree to which an industry is interconnected with the rest of the host economy and hence is a main criterion for an industry to be classified as a “key sector”. Agriculture in the study region clearly qualifies as a key sector in this regional context.

The agricultural sector is an established part of the regional economy with experienced, successful operators. Many of the farms have been handed down through families from generation to generation with current operators benefiting from a wealth of accumulated knowledge about their industry and their land.

Agriculture in the study region has a significant profile. It is consistently acknowledged in municipal plans and strategies as one of the leading economic sectors in the area. The fact that it is recognized and granted a place of importance in municipal decision making bodes well for the industry. The fact that there are economic development officers who deal exclusively with rural issues, serves the industry well.

The diversity that characterizes the agricultural sector in Peterborough / Kawartha Lakes means there is underlying strength that supports the industry through difficult times. With some of the more traditional sectors experiencing negative pressures, the shift to other less traditional commodities supports the ongoing viability of the agricultural economy.

The depth and breadth of the agriculturally related business sector in the study region is important for several reasons. It provides the primary producers with the services they require in a timely manner; attracts other producers to the area to do business; and provides a market for the commodities produced.

The strength of the agri business sector in Peterborough / Kawartha Lakes has allowed it to resist many of the pressures that have negatively impacted this sector and agricultural generally in other parts of the province. For example, equipment operators in the area have tended to resist corporate pressure to amalgamate. This has allowed the smaller operators to prosper and stay in touch with the local community. Access to numerous smaller operators facilitates better response to service requirements and fosters ties between producers and service providers.

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

8.3 Concerns

Decisions on land use issues can have a significant impact on the strength of the agricultural industry. The presence of non farm lots in agricultural areas leads to fragmentation of the land base and conflicts between land owners. Purchase or occupation of farms by non farmers can result in deteriorating fences, failure to control weeds or maintain drains, disputes over farm practices and disappearance of farm services. Use of agricultural property for non farm uses can reduce the critical mass of actual farm operations thereby making the economic viability of the sector less stable. Annexations eat away at the fringes of the agricultural area often removing the best land from



production and adding uncertainty to long term survival. The attitude that agricultural land is “development land in waiting” has a corrosive impact on the agricultural community. All of these factors negatively impact the business of farming and all are present in the study area. Strong land use policies, rigorously implemented and coupled with strong defense of farmers rights to farm are required to counter these pressures.

The environmental impacts of agriculture have been the subject of recent debate. In response to this,



there has been increasing pressure on the agricultural community to implement measures to protect environmental features. While this debate does not seem to have been as negative in the study area as in some other parts of the province, it is important to emphasize the positive contributions agriculture makes to the environment and the steps that are taken to manage potentially negative impacts. Farmers have always been good stewards of the land. Their role as stewards needs to be emphasized, appreciated and compensated as they are increasingly called upon to act as stewards in the public interest. There are some very good organizations

such as the Stewardship Councils, that are working with farmers to coordinate agricultural practices and environmental stewardship. Farmers in the study area are participating in the environmental farm plan initiative in meaningful numbers. The success of these programs and farmers’ willingness to participate, should be broadcast.

The average age of farmers is rising in the study area as it is across Canada. To address this, it is important to encourage young people to enter farming. Unfortunately present conditions do not support this. Those not involved in agriculture are often not aware of the opportunities the sector can offer. The capital investment required to enter the industry is high. The economic conditions that have adversely impacted farming discourage new participants. The study area is better off in this regard than some other areas of the province. The agricultural organizations including those oriented to youth such as 4-H, are strong and the population is still predominantly rural. However it is inevitable given its proximity to the GTA and its attractive characteristics, that the area will attract new growth. Care must be taken to ensure that as this growth occurs, the rural community continues to have a strong voice that is heard and answered. Assistance should be provided to encourage new operators to enter the industry.

As service providers amalgamate and grow larger it is often harder for small operators to access services. It is often not cost effective for large service providers to service smaller farm operations. Marketing boards can contribute to this problem promoting larger volume operations. In an area such as the study region, where geography dictates a smaller farm size, this trend can be problematic. Farm organizations must be sensitive to this concern, recognize the contribution of smaller producers and encourage conditions to support them.

Agriculture in Peterborough / Kawartha Lakes is heavily focused on livestock production. With the BSE crisis this sector, specifically cow / calf operations, has been subject to excessive pressures. Avian flu is now on the horizon with potential negative impacts for the poultry sector. Issues such as these, which are out of the control of individual operators, can have a devastating impact on

successful operations. This in turn will impact businesses that rely on, or service the livestock sector. In response to these issues there have been adjustments in the sector and it appears that the strength of the fundamental agricultural infrastructure has not been affected. However vigilance is required to monitor this.

Problems such as the ones created by BSE are symptomatic of an endemic problem for farmers, the lack of income stability. For many producers there is no safety net, no guaranteed income when a crisis hits. This lack of stability is what forces many operators or members of their families to seek off farm employment. If a crisis hits or a crop fails, there must be an alternative source of income to support the farm and the family until the problem is solved.



Due to past planning practices there are numerous residential lots scattered throughout the agricultural area. It is important to enforce policies to prevent more lots from being created. For lots already existing, the farmers' ability to farm needs to be protected from non farm complaints about agricultural practices. Legislation such as the Farming and Food Protection Act must be upheld and enforced.

8.4 Opportunities

The more traditional agricultural sectors, dairy and cattle (beef), dominate in the study area. However there is growth in other areas including other livestock, miscellaneous specialty and horse and pony; sectors that the economic impact assessment identified as particularly "propulsive" in stimulating the area economy. There is evidence of increased activity in catering to newly evolving and niche markets, a healthy sign of the entrepreneurship that characterizes agriculture. The importance of these sectors should be considered in making decisions that affect agriculture and policies should be flexible enough to allow the industry to capitalize quickly on new trends. Flexibility and the ability to respond are essential to the economic health of the sector.

The economic development programs in place for Peterborough and Kawartha Lakes demonstrate a clear understanding of the value and role of agri-tourism and have incorporated it as a major component in their tourism strategy. Area farmers in turn, seem to have a clear understanding of what is meant by agri tourism and how it can be used to their advantage. Most see it as a supplementary source of income through direct sale to the consumer and as a way to educate and connect society with agriculture. This is an area where relationships between the municipalities, local businesses and the agricultural community are productive.

Agriculture benefits urban dwellers. In addition to the obvious role of providing fresh, high quality food, it provides attractive landscape, habitat, wildlife corridors and carbon sinks to improve air quality. As pressures for urban development grow, the positive contribution of agriculture becomes increasingly valuable and needs to be factored into land use decisions. This is being done in the study area. The draft City of Kawartha Lakes Official Plan proposes stronger policies to support agriculture and recent updates in Peterborough do the same. The key will be to ensure that these policies are effectively implemented and enforced.

Kawartha Lakes is at a unique point in its history. Its status as a recently amalgamated, single tier municipality provides an opportunity to implement planning policies to manage the land base in a progressive manner. The City of Peterborough has been identified as an urban growth centre in the provincial “Places to Grow” plan. In managing the implications of this, attention should be paid to the rural area to ensure that its role as an agricultural area is supported.

In addition to economic spin offs, the benefits of maintaining a strong agricultural community include:

- Preservation of history and traditions;
- Control over food security, quality and safety;
- Ability to respond to changing cultural demands for variety in food;
- Enhancement of the environment through careful agricultural management techniques;
- Preservation of biodiversity;
- Opportunities for alternative lifestyle and employment choices that are land based; and
- Provision of recreational opportunities for non-rural residents.



Victoria Feeds – Horse & Hound

These benefits are not easily quantifiable and are often ignored in economic analysis. However these are benefits that improve quality of life and make an area a desirable place to live. They should be factored into decision making at all government levels.

To provide a better understanding of agriculture, and to expose younger people to the opportunities in the industry, material regarding agriculture should be included in school curriculum. This could be supported by mentoring or co-operative programs to introduce non farm based students to agriculture.

There are well established, post secondary institutions in the study area including Sir Sandford Fleming College and Trent University, which offer programs that are relevant to agriculture. Potential partnerships with these institutions to support agriculture through enhanced programming should be explored.

There is a strong agri business network in Peterborough / Kawartha Lakes. To enhance this, actions should be taken to address any issues that have been identified. Efforts should be made to ensure there are good facilities for meetings and conferences in Kawartha Lakes as well as Peterborough. Efforts to connect food processors with local producers should continue. As transportation costs rise, these forms of partnerships should be attractive to processors.

Fairs and exhibitions have, throughout Ontario's history, been an important part of the rural economy. Fairs are extremely effective in educating urban residents about agriculture. They support the agricultural community by providing an opportunity for it to celebrate its achievements. They continue to thrive and provide an excellent venue to connect the country to the city. With the relocation of the Lindsay Exhibition there is potential to expand this leading agricultural event and offer additional

agricultural shows and programs. This opportunity and the opportunities offered by the other fairs and exhibitions in the region should be captured.

8.5 Resources

Peterborough and Kawartha Lakes benefit from the presence of a very strong agricultural resource. The physical attributes of the area have supported the establishment of an extensive industry with well developed infrastructure, knowledgeable operators and a strong service industry. The importance of this resource should not be underestimated. Care must be taken to protect this infrastructure and ensure that any decisions made, contribute to it. Opportunities should be provided for established operators to share their knowledge with new operators so the existing bank of knowledge is shared and handed on.

There is potential for agriculture to make a meaningful contribution to the search for alternative sources of energy. Ethanol produced from corn is now being produced as an alternative fuel and there is an initiative in the study area to capitalize on this opportunity. If successful, this could have the benefit of helping the environment, providing local producers with a large local market and adding value to local crops.

Woodlots are often not considered as part of agricultural production but do have the potential to add significantly to farm income. Many farmers in the area are already tapping the market for wood, others could do so.

As the wholesale market becomes increasingly concentrated it is more difficult for primary producers to negotiate reasonable prices for produce. A number of farmers are establishing co-operatives and “direct to consumer” networks to address this. In both Kawartha Lakes and Peterborough there are active programs to promote farm gate sales which benefit both producer and consumer. These types of solutions should be aggressively pursued and supported so farmers can break the agricultural dilemma of “buying retail and selling wholesale” and reduce their dependence on large retailers.

There is growing understanding that agricultural land provides a critical habitat for the conservation of biodiversity. Farmland provides linkages for wildlife corridors and critical habitat for all species. To maintain a healthy ecosystem there must be opportunity for landscape biodiversity. This important contribution to the environment should be promoted and farmers should receive credit for acting as environmental stewards.

In developing policies, the basic agricultural characteristics of various regions within the study region need to be understood. For example, Mariposa contributed 31% of the total gross farm receipts generated in the City of Kawartha Lakes in 2001. Obviously this is an important agricultural area and requires specific attention in the design and implementation of policies that affect it. In the southern portion of Peterborough, certain commodity sectors dominate. Different policies will be required in response to different circumstances. This study includes a detailed profile of the characteristics of agriculture in the study area. Hopefully it will become a major resource for use in understanding and responding to the variations in the area.

Kawartha Lakes and Peterborough are characterized by certain features that impact the type of agriculture that will thrive. The varied topography makes large cash crop operations difficult. The

availability of range land, including a very large community pasture, supports livestock operations. The strong agricultural heritage attracts non rural residents to experience the rural lifestyle. These features should be the building blocks upon which programs to support agriculture are based. Threats such as non farm development in agricultural areas must be controlled.

The study area has a valuable resource in its agricultural sector which is and should continue to be, a major element in economic development strategies. In developing these strategies, issues such as growth management and extension of infrastructure and transportation corridors must be planned for in consultation with the agricultural community.

8.6 Expectations

The observations made and conclusions reached in conducting this study are intended to provide a base for moving forward with decisions affecting agriculture in the area. The expectation is that with appropriate support, the agricultural sector will continue to be a leading economic sector in the study region.

Governments in the study regions have supported the agricultural industry through the establishment of agricultural advisory committees. It is important to maintain these forums in the long term to ensure that the farm voice is heard. In Kawartha Lakes, the agricultural advisory committee is assisting in the adjustment to the new municipal structure.

The province has recently approved a series of new documents that collectively establish a new growth strategy for the Golden Horseshoe. Peterborough has been identified as an urban growth centre. Residential development has been restricted in the greenbelt around Toronto. This will place additional pressure on the areas of the study region that are within commuting distance of the GTA but outside the greenbelt. Policies must be developed and implemented to manage this pressure in a way that will support agriculture and protect the resource.

This impact analysis has confirmed that different components of the agricultural sector have differing abilities to generate economic activity. Attention should be paid to the propulsiveness of various sectors in developing economic development programs to support agriculture. However in doing so, it must be remembered that the strength of the whole is critical to the strength of the parts and that what is a minor sector today, may be a growth sector tomorrow. Policies must support the industry as a whole, foster the propulsive sectors but be flexible to allow new sectors to evolve.

The agri business network in the study area is strong and varied. There are strong linkages with areas outside of Peterborough and Kawartha Lakes. Efforts should be made to enhance the study area's ability to act as an agricultural service centre to a larger service area.

Flexibility is critical to managing agriculture. We may not even be aware today, of a commodity that will be a leader tomorrow. Therefore comprehensive decisions must be made that will allow agriculture to grow and evolve. Choices must be made that will maintain flexibility so that as the market evolves, the land base is available to accommodate the activity and the circumstances are right to respond to changing trends.

One of the largest challenges for the agricultural community is to ensure that there is an informed understanding of modern agriculture in society generally. As Canada has moved from a rural to an urban-based society, the understanding of the rural lifestyle and the opportunities it has to offer declined. This acts as a natural barrier to the involvement of non-rural residents in the agricultural industry. Efforts must be made through educational initiative to address this. Farm programs such as 4-H should be promoted to non farm participants as a vehicle for providing education about agriculture.

The study area is well positioned to continue its role as a strong agricultural area. There is a healthy and diverse agri business network that both supports and deals with the agricultural sector. Farmers in the area have shown themselves willing to move into new areas to capture evolving markets arising from the changing demographics and ethnic profile of southern Ontario. They continue to be actively involved in politics and willing and able to make their voices heard. This bodes well for the industry.

Farmers are effective stewards of the environment. While this is appropriate, there are costs to farmers for the stewardship they perform in the public interest. Support should be given to farm groups who are lobbying the provincial and federal governments to provide compensation for stewardship. This could be coordinated through the environmental farm plan program that is currently operating effectively in the study area.

The programs to promote farm gate products should be amalgamated. The various Kawartha Lakes initiatives now in place are excellent but the difference in the thrust of each is difficult to grasp given the similarities in programming and name. All of these programs could possibly support each other if they were combined.

There are gaps in technology that limit farmers' access to the internet. The expectation is that these gaps will be addressed quickly.

The solution to the lack of stability in farm income is neither simple nor one dimensional. However if Canadians agree that it is important to maintain the ability to produce food, then there should be a debate about how to support the operators who are responsible for food production. Steps that could be taken at the local level to provide this support include compensation for environmental stewardship that serves the public interest, funding for required research, technical support for alternative production or low interest loans for operators who wish to expand. Industry cooperation in establishing retirement funds such as are emerging in the horse industry, providing mentors for new operators and sharing resources, should be encouraged. Some of this is already occurring, there should be consideration of what more can be done.

Overall the agricultural economy in Peterborough / Kawartha Lakes is stable and has considerable depth. Farmers in the area have shown an ongoing ability to react to and adapt to change. The agri business sector is extensive and delivers services to an area much larger than the study area. These factors should be the building blocks for programs to support the industry as it moves forward.

8.7 Recommendations

To capture the potential and prevent decline in the agricultural sector in Peterborough / Kawartha Lakes, the following actions are recommended.

Economic Development

- Strengthen the economic development function that is specific to agriculture.
- Compile a comprehensive inventory of available farm services to be used as the basis for a campaign to promote Peterborough / Kawartha Lakes as a farm service area for farmers outside of the region. Monitor this inventory on an ongoing basis to ensure that the service sector continues to meet the needs of area farmers. Where problems or weaknesses are noted; take immediate steps to address them.
- Encourage partnerships between local producers and local processors.
- Identify alternative and niche markets and assist local producers in catering to and accessing them.
- Co-ordinate the various agri tourism programs in the area to prevent confusion and duplication. Make efforts to promote agri tourism as a priority.

Land Use Planning

- Implement strong land use policies to support the agricultural industry and respond to growth pressures from the Greater Toronto area.
- Co-ordinate planning and economic development initiatives so they are mutually supportive of the agricultural sector.
- Do not permit non farm uses and residential development in predominantly agricultural areas. Rigorously uphold both the right to farm and to follow standard agricultural practises in rural areas where there are existing non farm uses or lots.
- Designate large contiguous agriculture areas in planning policy to prevent fragmentation of the land base. Where non prime land is located in proximity to prime land include it in the agricultural designation to protect the integrity of the agricultural area.
- Permit agriculturally related, value added operations on farms subject to controls to ensure the agricultural use dominates.
- Vet land use and other decisions affecting agriculture through agricultural advisory committees to ensure that the needs of the agricultural sector are addressed.
- Strengthen the role of agricultural advisory committees where they currently exist; and create them where they do not.

Extension

- Encourage senior levels of government to implement programs to improve financial stability for farmers and provide access to affordable investment capital, retirement funds and entry level support for new operators.
- Maintain an up-to-date inventory of farm oriented programs, workshops, seminars and information sessions. Work together with Provincial farm agencies and government to co-ordinate programming.
- Establish mentoring programs linking experienced farmers with new farmers.

Education

- Encourage educational institutions at the elementary, secondary and post secondary levels to offer programs related to agriculture in their curriculum both to inform their students and to promote careers in agriculture.
- Work with post secondary institutions to identify and implement research and training programs that draw on and support the local agricultural sector.

Awareness and Promotion

- The information contained in this study should be widely disseminated so it becomes the base for programs and policies to support agriculture.
- This report and the recommendations contained within it should be endorsed by the Councils of Kawartha Lakes and Peterborough as the basis for a strategic plan to support agriculture in the area.



Sheep Milking – DeLaval (<http://en.delaval.ca>)





- Glossary of Terms -

Glossary of Terms

Census Farm

Statistics Canada's definition of a census farm has not remained constant over the years. In 1996 and 2001, a census farm was defined as an agricultural operation that produces at least one of the following products intended for sale: crops (hay, field crops, tree fruits or nuts, berries or grapes, vegetables, seed); livestock (cattle, pigs, sheep, horses, game animals, other livestock); poultry (hens, chickens, turkeys, chicks, game birds, other poultry); animal products (milk or cream, eggs, wool, furs, meat); or other agricultural products (Christmas trees, greenhouse or nursery products, mushrooms, sod, honey, maple syrup products).

Commodity (Product Type)

Statistics Canada tracks 31 commodity types by gross farm receipts (\$2,500 and over). Often for confidentiality reasons this produces suppressed figures. Therefore, to provide more meaningful information these 31 types are generally combined in similar product groupings and reported on as 12 commodity categories.

The 31 commodity types are combined into the following 12 categories

- 1) Dairy
- 2) Cattle (beef)
- 3) Hog
- 4) Poultry & Egg
- 5) Wheat
- 6) Grain & Oilseed includes: oilseed; corn for grain; dry field pea & bean; and other small grain
- 7) Field Crops includes: hay & fodder; forage seed; tobacco; potato; and other field crop
- 8) Fruit
- 9) Vegetable
- 10) Miscellaneous Specialty includes: sheep & lamb; goat; horse & pony; fur; other livestock; mushroom; greenhouse product; nursery product & sod; and maple & Christmas tree
- 11) Livestock Combination includes: cattle & hog; cattle, hog & sheep; and other livestock combination
- 12) Other Combination includes: fruit & vegetable; other field crop; and all other types

NOTE: Because horse & pony are a significant commodity group in both Kawartha Lakes and Peterborough, it is



	usually broken out and reported on as a separate category in the report.
<i>Farm Capital</i>	Statistics Canada's definition: Farm capital includes the value of all farmland, buildings, farm machinery and equipment (including passenger vehicles used in the farm business), and livestock and poultry. Respondents report the value of their land, buildings, farm machinery and equipment as of Census Day. Values for livestock and poultry inventories reported in the census are calculated using data on average farm prices for the various types of livestock and poultry. Farm capital does not include the value of crops in the field or in storage, or farm inputs on hand, such as fertilizer and seed.
<i>Farmland Acres (area farmed; farmland)</i>	Includes all land owned as part of the operations including land for crops hay grazing or pasture, summer fallow, buildings and barnyards, woodlands, and marshes.
<i>Farm Operators</i>	Statistics Canada defines "farm operators" in 2001, 1996 and 1991, as those persons responsible for the day-to-day management decisions made in the operation of a census farm or agricultural operation. Up to three farm operators could be reported per farm. Prior to the 1991 Census of Agriculture, the farm operator referred to only one person responsible for the day-to-day decisions made in running an agricultural operation.
<i>Farm Type</i>	Farm typing is a procedure that classifies each census farm according to the predominant type of production. This is done by estimating the potential receipts from the inventories of crops and livestock reported on the questionnaire and determining the product or group of products that make up the majority of the estimated receipts. For example, a census farm with total potential receipts of 60% from hogs, 20% from beef cattle and 20% from wheat, would be classified as a hog farm. This farm type classification, referred to as "historical," is based on the Standard Industrial Classifications (SIC).
<i>Gross Farm Receipts</i>	Includes all receipts for agricultural products sold, marketing board payments, program and rebate payments, GST refunds, dividends from co-operatives, receipts from custom work and all other farm receipts.
<i>NAICS</i>	North American Industrial Classification System
<i>Number of Farms</i>	Throughout this report there are discrepancies in the number of farms figures. That is because Statistics Canada uses different classifications for reporting different sets of



statistics. The two classifications of farms that were used in this report were:

1. The number of farms based on the definition of “Census Farm”.
2. The number of farms reporting generation of more than \$2500 in gross farm receipts per annum.

A **Note** is included on each figure to indicate which of the two definitions of farm were used in that particular figure. In all cases the farmland acres, area of farmland is based on the definition of census farm.

Central Ontario Region

Region includes: Regions of Durham and York; Counties of Haliburton, Hastings, Northumberland, Peterborough and Prince Edward, District of Muskoka and Parry Sound, and the City of Kawartha Lakes (former Victoria County).

x

When used in the report indicates that data was suppressed for confidentiality reasons.

Canada Land Inventory (CLI)¹:

Classes:

Class 1 Soils have no significant limitations; generally level or very gentle slopes, deep, good water holding capacity, and are well to imperfectly drained.

Class 2 Moderate limitations that restrict the range of crops or require moderate conservation practices. Soils are deep with good water-holding capacity. Limitations are moderate (*i.e.* adverse regional climate, poor soil structure, low fertility, moderate erosion) and are generally easily correctable.

Class 3 Moderately severe limitations that restrict the range of crops or require special conservation practices, but are considered fair to moderately high in productivity for a wide range of field crops. Limitations may be a combination of those found under Class 2 or may include one or more of the following:

- Moderate climatic limitations
- Moderately severe erosion
- Intractable soil mass or very slow permeability
- Correctable low fertility
- Moderate to steep slopes

¹ Department of Regional Economic Expansion, *Soil Capability Classification for Agriculture, The Canada Land Inventory, Report #2, 1969*; and Environment Canada (Lands Directorate), *Land Capability for Agriculture, Preliminary Report, Canada Land Inventory, Report #10, 1978*.



- Frequent runoff accompanied by crop damage
- Stoniness necessitating some clearing

Class 4 Severe limitations that restrict the range of crops or require special conservation practices. This class is generally considered suitable for only a few crops (yield for a range of crops low/crop failure high). Productivity is low to medium for narrow range of crops with a higher productivity for specially adapted crop types. Limitations include the following: steep slopes, severe past erosion, frequent surface runoff, severe salinity or aridity, and extreme stoniness.

Class 5 Very severe limitations that restrict their capability in producing perennial forage crops, and improvement practices are feasible. This soil class generally includes serious physical, climatic and other limitations that make it incapable of sustaining production of annual field crops.

Class 6 These soils are capable only of producing perennial forage crops, and improvement practices are not feasible. Improvement practices on these types are not economical due to serious climatic and other physical limitations. Soils are marginal for agricultural use though they are generally used for periodic rough grazing for farm animals.

Class 7 No capacity for arable culture or permanent pasture. With a low economic feasibility caused from a combination of severe climatic and physical limitations this class is not suitable for agricultural use. All classified areas not including organic are placed in this Class including areas of exposed rock and small water bodies.

Organic Soils Not placed in capability classes.

Capability Subclasses:

Subclasses are divisions within classes that have the same kind of limitations for agricultural use. There are 13 recognized types of limitations as follows:

C Adverse climate

- Significant adverse climate for crop production which limits maturity of field crops from insufficient precipitation and less than optimal high growing-season temperatures causing partial or total crop failure.



D Undesirable Soils Structure and/or Low Permeability

- Soils difficult to till, or absorb water slowly, or where depth of rooting zone is restricted
- Not including high water table or consolidated bedrock

E Erosion

- Where damage caused from erosion limits agricultural use
- Damage assessed on loss of productivity and on difficulty of farming land with gullies

F Low Fertility

- Correctable with careful management or difficult to correct in a feasible way
- Limitations include lack of available plant nutrients, high acidity or alkalinity, low exchange capacity, high levels or carbonates or presence of toxic compounds

I Inundation by Streams or Lakes

- Restricted agricultural use or crop damage from inundation

M Moisture Limitations

- Soils with generally low water-holding capacity characteristics which adversely affects crops

N Salinity

- These soil types are limited to Class 3 to 7
- Restrictions in the range of crops that may be grown due to high content of soluble salts

P Stoniness

- Soils which contain stones to adversely affect or hinder tillage, planting and harvesting
- These soils are generally less productive than comparable soils without stones

R Consolidated Bedrock

- The presence of bedrock on or near the surface restricts agricultural use



- Not considered as a limitation where consolidated bedrock is located at depths of over three feet from the surface, however, greater depth of soil is required for irrigated lands

S Combination of Subclasses

- Includes one or more of the following subclasses: D, F, M, and N

T Topography

- Limitation factors which increase the cost of farming over that of smooth land, include percent of slope and pattern or frequency of slopes in different directions
- Topography may decrease the uniformity, growth and maturity of crops and may increase the likelihood of erosion from water

W Excess Water

- Not including inundation by streams or lakes
- Limitations include inadequate soil drainage, high water table, seepage or runoff from surrounding area

X

This Subclass is comprised of soils having a limitation resulting from the cumulative effect of two or more adverse characteristics





- Bibliography -

BIBLIOGRAPHY

- Agriculture and Agri-Food Canada. Agri-Food Policy in Canada. April, 1998.
- Agriculture and Agri-Food Canada. All About Canada's Dairy Industry. June, 1999.
- Agriculture and Agri-Food Canada. Best Management Practices Booklets. 1997.
- Agriculture and Agri-Food Canada. Canadian Food Safety and Quality Program: Systems Development Component. Ottawa. 2003.
- Agriculture and Agri-Food Canada. Canadian Ornamental Situation and Trends (2004). Ottawa. December, 2005.
- Agriculture and Agri-Food Canada. Exports – Agri-Food for January to November 2005. Monthly Statistical Report. Ottawa. 2005.
- Agriculture and Agri-Food Canada. Leveraging Consumer Interest in Health and Nutrition to Increase the Market for Canadian-grown Fruits and Vegetables. Executive Summary of Phases, One, Two & Three. Power Point Presentation. Ottawa. November, 2005.
- Agriculture and Agri-Food Canada. Map of Plant Hardiness Zones (Canada). 2000.
- Agriculture and Agri-Food Canada. Managing Agricultural Drains to Accommodate Wildlife. Ottawa. 1997.
- Agriculture and Agri-Food Canada. Profile of the 2000 Farm Financial Survey. Strategic Policy Branch, April 2001.
- Agriculture and Agri-Food Canada. Profile of the Canadian Greenhouse Tomato Industry. Ottawa. Revised. 2005.
- Agriculture and Agri-Food Canada. Profile of the Preliminary 2000 Taxfiler Data. December 2001.
- Agriculture and Agri-Food Canada. Managing Agricultural Drains to Accommodate Wildlife. Printed 1997.
- Agriculture and Agri-Food Canada and Statistics Canada. Economic Overview of Farm Incomes Vol. 2, No. 1, December 2001
- Agricultural Odyssey Group: The Odyssey Report – An industry quest for solutions. September 9, 2002.
- Agriculture Canada. Agroclimatic Resource Index: The Land Potential Data Base for Canada Users' Handbook. Land Resource Research Centre. Technical Bulletin 1983-4E, LRRC Contribution No. 86-29.



Alliance of Ontario Food Processors. Workforce Ahead Summary – A Labour Study Of Ontario's Food Processing Industry. Ontario. 2005.

Alliance of Ontario Food Processors. Food Processing Industry Labour Study – Media Alert. Ontario. 2004.

Bain, J. Poultry in motion.” Toronto Star 3 Jul. 2002: Life-Food Section D.

Bauder, Harald and Margot Corbin. Foreign Farm Workers in Ontario: Representations in the Newsprint Media. University of Guelph: 2002.

Brethour, Cher and others. Facts About Canadian Farm Income. April 2001.

Brethour, Cher and others. Retiring Marginally Profitable Sections of Agricultural Fields in Ontario Economically Justified – Case Studies of Typical Fields In Ontario.. Final Report. 2001.

Brown, Wayne (OMAFRA). A Profile of the Ontario Greenhouse Floriculture Industry. Toronto: Queen's Printer. 2004.

Bryant, C. and T. Johnston. Agriculture in the City's Countryside. Toronto, University of Toronto Press. 1992.

Butrik, S. M. The Input-Output Structure of The Niagara Region. August, 1979.

Caldwell, Wayne (Dr.) and Claire Weir. Ontario's Countryside: A Resource to Preserve or an Urban Area in Waiting? A review of severance activity in Ontario's agricultural land during the 1990s. September 2002.

Calvin, Linda and Roberta Cook. North American Greenhouse Tomatoes Emerge as a Major Market Force. Vol. 3. Issue 2. California. 2005.

Carpenter, J. The Cost of Community Services in Frederick County, Maryland. Frederick, Maryland, American Farmland Trust. 1997.

Carroll, Jack. Ontario Greenhouse Industry Issues Resolution Study. Guelph: 2001.

Chapman, L. J. and. Putnam, D.F. The Physiography of Southern Ontario. Toronto, Ontario Ministry of Natural Resources. 1984.

Clark Consulting Services. The Corporation of The Township of Cavan-Millbrook-North Monaghan Official Plan. Ontario. 2005.

Colville, Brian. Crop Specialist, Oakwood Ag Centre (Division of Sunderland Co-operative, Inc.). Interview. July 11, 2006.

DMA Planning & Management Services. Parks, Recreation and Culture Strategic Plan. Final Report. Ontario. 2004.



- Dalrymple, Jim. Biosecurity Fundamentals for Visitors to Livestock Facilities. OMAFRA. Agdex #400/10. Ontario: Queen's Printer. 2004.
- Diven, E. and J. McKay. Consumer Trends Analysis for Canada's Agri-food Industry. Guelph, University of Guelph Department of Agri-Economics and Business. 1992.
- Eastern Ontario Broadband Coalition and the Technology Alliance Group Kawartha Lakes. A Comprehensive Broadband GAP Analysis of Eastern Ontario. Ontario: 2006.
- Econometric Research Limited and Deloitte and Touche. The Economic Impact of Horse Racing and Breeding in Ontario, 2004. 1995.
- Econometric Research Limited and Deloitte and Touche. The Economic Impact of Slot Machines on Horse Racing and Breeding in Ontario: Benchmarking the Industry, 1992-2004. 1995.
- Evans, Vel (Strategic Equine Marketing). 1998 National Horse Industry Study. Ontario: 1998.
- Flowers Canada (Ontario). FLORNAMENTECH. Proceedings of the National Strategic Planning Workshop on Floriculture and Ornamental Horticulture Research. August 23-24, 2001, Toronto, ON. Guelph. 2001.
- Foreign Agricultural Resource Management Services. The Quest for A Reliable Workforce in the Horticulture Industry. 1995 and Annexes.
- Foreign Agricultural Resource Management Services. 1996 Field Study – A Follow up to The Quest for A Reliable Workforce in the Horticulture Industry. 1996.
- Found, W. C. Agriculture in a World of Subsidies. Canada and the Global Economy: the Geography of Structural and Technological Change. J. Britton. London, McGill-Queen's University Press. 1996.
- Freedgood, J. Does Farmland Protection Pay? Washington, D.C., American Farmland Trust. 1992.
- Freedgood, J. Is Farmland Protection a Community Investment? Washington, D.C., American Farmland Trust. 1997.
- George Morris Centre. Draft – Executive Summary, Possible Incremental Measures to Address Horticulture Sector Concerns with Pesticide Regulation in Canada. Guelph. 2005.
- Government of Ontario. Ontario's Food Industry we've got it all. Ontario: Queen's Printer. 2003.
- Greenhouse and Processing Crops Research Centre. Introduction to the Greenhouse Industry. Ottawa. Revised 2004.



- Greenwood, J. K. W., Jennifer A. Property Tax Treatment of Agricultural and Forest Land in Canada: Implications for Land Use Policy. Cambridge, Mass., Government of British Columbia. 1991.
- Guenkel, Rogers & Associates. City Of Kawartha Lakes Forest Management Plan. Ontario. 2003.
- Hancock, Brian. Ontario Federation of Agriculture. Interview. July 25, 2006.
- Hardaker, J. B. Guidelines for the Integration of Sustainable Agriculture and Rural Development into Agricultural Policies. FAQ. 1997.
- Hamilton, Carm. Victoria County Community Pastures. Interview. August 2, 2006.
- Harry Cummings & Associates. Economic Impact of Agriculture on the Huron County Economy, University of Guelph, unpublished report. 1998.
- Harry Cummings & Associates. Economic Impact of Agriculture on the Economy of Simcoe County. 1999.
- Harry Cummings & Associates. Economic Impact of Agriculture on the Economy of Prescott, Russell, Stormont, Dundas and Glengarry Counties. Unpublished report. 1999.
- Harry Cummings & Associates, The Economic Impacts of Agriculture on the Economy of the Frontenac, Lennox & Addington and the United Counties of Leeds and Grenville, Final Report. June, 2000.
- Harry Cummings & Associates, The Economic Impacts of Agriculture on the Economy of the New City of Ottawa, Final Report. December, 2000.
- "Herd on the Move, etc." Highlights: Holland Genetics. 5. 1998.
- Hilts, S. "Countryside in Ontario". Environments 24(3): 11-16. 1997.
- Heimlich, Ralph E. and William D. Anderson, Economic Research Service Development at the Urban Fringe and Beyond: Impacts on Agriculture and Rural Land. November 27, 2002.
- Hols, E. H., Keith A.J. Impact of Various Size Horse Shows on Local Economies in Canada. Nepean, Ont. 1996.
- Hughes, John (OMAFRA). Starting a Commercial Greenhouse Business. Fact Sheet. Toronto: Queen's Printer. 2003.
- Human Resources and Skills Development Canada. Area Labour Market Update – Unemployment Rate Increases. Ottawa. September 9, 2005.
- Human Resource Development Canada. Agriculture Programs and Services Overview – Caribbean & Mexican Seasonal Agricultural Workers Program – Overview. Ottawa. Modified 2004.



- Human Resource Development Canada. HRSDC Assessment Under the Seasonal Agricultural Worker Program. Ottawa. Modified 2003.
- Human Resources Development Canada. Labour Market Information – Wage Book 2004 For The Peterborough Area. Ottawa. 2004.
- Human Resources Development Canada. Notes on Trends in the Food and Beverage Services Industry. Toronto. 1997.
- Hunter, Melanie. 2001 Statistical Information for Peterborough & Kawartha Lakes 4-H Clubs. Electronic Submission. April 26, 2006.
- Ilbery, B. Agricultural Geography. Oxford, Oxford University Press. 1985.
- Irving, Elizabeth (Statistics Canada). “The Canadian greenhouse industry: a growing concern”. Excerpts from Canadian Agriculture at a Glance 1999. Ottawa, 1999.
- “Is there anything not made with corn byproducts?” Port Colborne Leader 22 May 2002.
- JRG Consulting Group. A Profile of the Horticulture Sector and Associated Economic Contribution. Various Power Point Presentations. Ottawa. October, 2005.
- Jansen, A., Hetsen, H. “Agricultural Development and Spatial Organization in Europe.” Journal of Rural Studies 7(3): 143-151. 1991.
- Johnson & Associates International. Specialty Food Processing Study for the Municipalities of York and Toronto and the Province of Ontario. 1994.
- Johnson & Associates International. Survey of Small and Medium Sized Firms: Food Production in the Cities of Toronto and York. 1995.
- Johnson, Mary Alice. Pure Produce?” Healthy Living Organics.
- Kamenz, G., Ontario Federation of Agriculture. “Kyoto and Ontario Farmers.” Weekender 20 Sept. 2002.
- Kaplan, R. and S. Kaplan. The Experience of Nature: A Psychological Perspective. New York: 1989.
- Ker, Kevin & K.R. Wilson, What You Should Know About Fruit Production in Ontario. OMAFRA, Fact Sheet 98-063, 1998.
- Lindsay, D. A Road Map to Prosperity Ontario Jobs & Investment Board, Toronto. 1999.
- Lindsay Agricultural Society, The. A Celebration of Rural Life that Educates & Entertains. July 2006.
- Lindsay, Joanne. Goat Industry. Interview. July, 2006.



- Llewellyn. 2002 Profile of the Ontario Nursery Industry. OMAF Report. 2002.
- MacDonald, J. DFO Statistical Handbook, 2003-2004. Ontario. 2005.
- MacKenzie, D. "Waste not: More and more human sewage is being spread on farmland." New Scientist 159(2149): 26-30. 1998.
- Mahoney, E. Finding the Common Ground to Develop Products, Grow Markets and Provide Uncommon Experiences. Michigan State University: Feb. 2001.
- Mahoney, E. "The end of the beginning." Rural Tourism Conference. Michigan State University: Feb. 2001.
- Mailvaganam, Siva (OMAFRA). Farm Value and Harvested Area of Vegetables Crops, Ontario 1979-2004. Stats Sheets. Toronto, Queen's Printer. 2005.
- Mailvaganam, Siva (OMAFRA). Fresh Market Sales and Sales to Processors of Specified Commercial Vegetable Crops, Ontario 1998 to 2004. Stats Sheets. Toronto, Queen's Printer. 2005.
- Mailvaganam, Siva (OMAFRA). Greenhouse Flower and Plant Production, by Type and Total Value, Ontario and Canada, 2002 to 2004. Stats Sheet. Toronto, Queen's Printer. 2005.
- Mailvaganam, Siva (OMAFRA). Greenhouse Industry Statistics, Ontario and Canada, 2002 to 2004. Stats Sheet. Toronto, Queen's Printer. 2005.
- Mailvaganam, Siva (OMAFRA). Nursery Trades Industry Statistics, Ontario and Canada, 2002 to 2004. Stats Sheet. Toronto, Queen's Printer. 2005.
- Mallot Creek Strategies Inc. Ontario Cattlemen's Association – Packing Plant Feasibility Review. Ontario. 2004.
- Mann, S. Agricultural Workers and the Right to Strike article.
- Marchard, Lynn. Ontario Data Analysis Project – Swine – Farm Summary – For 2003 Tax Year. Economics and Business Section. Ontario: Ridgetown College, University Of Guelph. 2004.
- Marsden, T. and others. Constructing the Countryside. London, University College London. 1993.
- Marvis, C., Deslauriers, P., Bryant, C. "A review of the scientific literature about urban sprawl and about urban agricultural interactions within the urban fringe: the case of the Montreal metropolitan region within the N.A. context." Espace Population Societes 2: 325-334. 1991.
- Martin, Hugh. Organic Farming in Ontario. Agdex #100/10 – OMAFRA.. Ontario: Queen's Printer. 2003.
- McGee, Dave. Director of Racing, Kawartha Downs. Interview. July 7, 2006.



- McLaren, E. A. W., C.D. Vision of the Countryside. Toronto, Rural GTA Working Group for the GTCC. 1999.
- Miller, Norm, M.P.P. Queen's Park Report by Norm Miller, M.P.P., "Agriculture plays a vital role in provincial economy.", Queen's Park Report. Bracebridge Examiner-Banner 18 Sept. 2002.
- Miller-Sandford, B. Corn...One of Three Sisters. Ontario Corn Producers' Association. 1999.
- Municipal Property Assessment Corporation (MPAC). Guide to Property Assessment in Ontario. Toronto. 2003.
- National Farmers Union. Canadian Policy and the Farm Crisis. Saskatoon: Saskatchewan. 2001.
- National Farmers Union Region 7 (Alberta). The Effects of Hog Mega-Barns on Communities, the Environment, and Independent Hog Producers. Alberta: Hardisty. October 6, 2000.
- National Round Table on the Environment and the Economy. Urban Sustainability Program, Multistakeholder Workshop: September 26-27, 2002.
- Nelson, R. R. National Innovation Systems: a comparative analysis. Oxford, Oxford University Press. 1993.
- Net Success Inc. Trends, Opportunities and Priorities Report – Workforce Development – A Community Priority in Southwestern Ontario. Windsor. 1994.
- OATI Learning Group. The Ontario Greenhouse Alliance Human Resources Survey. Guelph. 2004.
- OGVG. Ontario Greenhouse Vegetable Growers Annual Report 2003. 2003.
- OMAFRA. Acreages of Soil Capability Classes for Agriculture in Ontario. ARDA Report No. 8.
- OMAFRA. A Profile of the Ontario Greenhouse Floriculture Industry. November, 1999.
- OMAFRA. Control of Soil Erosion. Fact Sheet 95-089. Queen's Printer. January, 1996.
- OMAFRA. Crop Heat Units for Corn and Other Warm-Season Crops in Ontario. Fact Sheet 93-119. Queen's Printer. October, 1993.
- OMAFRA. Food Industry Competitiveness Branch. Your Guide to Food Processing in Ontario.
- OMAFRA. Growing Greenhouse Vegetables. Publication 371. Toronto: Queen's Printer. 2005.
- OMAFRA. Organic Farming in Ontario. Fact Sheet 98-029. Queen's Printer. June, 1998.



OMAFRA. Rural Economic Development Program, Application Guidebook. Rural Investments Branch. Ontario: Queen's Printer. 2005.

"Ontario celebrates the season, Fairs, festivals offer feasts of fresh air, colour, entertainment."
The Globe and Mail 16 Aug. 2002.

Ontario Farm Environmental Coalition. Ontario Environmental Farm Plan. Revised, 1999.

Ontario Farm Animal Council, "You were asking about...How animals are part of everyday life". O.F.A. Council. Pamphlet: 1998.

Ontario Farm Animal Council "You were asking about...Agriculture and the Environment."
O.F.A. Council. Pamphlet: 1998.

Ontario Farm Environmental Coalition. "OFEC issues position on Nutrient Management."
News Release. 2002.

Ontario Farm Environmental Coalition. "OFEC applauds Province's approach." News
Release. 24 August 2002.

Ontario Federation of Agriculture: The Property Tax Treatment of On-Farm Value-Added Activities. Discussion Paper. June 2000.

Ontario Horticultural Crops Research and Services Committee. Report Given At Annual General Meeting of the Ontario Agricultural Services Co-ordinating Committee Report.
Guelph, ON. December, 2004.

Ontario Jockey Club. Ontario Jockey Club Annual Report. 1998.

Ontario Ministry of Citizenship and Ministry of Tourism, Culture & Recreation, various
pamphlets from Arlene White, August 2002.

Ontario Ministry of Municipal Affairs and Housing. South Central Ontario: Patterns & Profiles – February, 2001. Provincial Planning and Environmental Services Branch Office for the
Greater Toronto Area. March, 2001.

"Outdoor Segmentation." Travel Activities & Motivation Survey. September, 2001.

Peters, Doug (AAFC). "Greenhouse Exports Figures to the US 2003 to 2005". Ottawa. 2005.

Petersen, G., Yampolsky, H. Urban Development and the Protection of Metropolitan Farmland. Washington, The Urban Institute. 1975.

PLANSCAPE. City of Hamilton – Agricultural Economic Impact & Development Study.
Bracebridge: ON. August, 2003.

PLANSCAPE. Greenhouses Grow Ontario – An Economic Impact Study of the Greenhouse Industry in Ontario. Bracebridge: Ontario. 2006.



- PLANSCAPE. NEPTIS – Agriculture in South Central Ontario – It's Status, It's Future,. Draft Report. Bracebridge: ON. January, 2005.
- PLANSCAPE. Regional Municipality of Niagara – Regional Agricultural Economic Impact Study. Bracebridge: ON. June, 2003.
- Porter, M. E. "Clusters and the New Economies of Competition." Harvard Business Review (Nov-Dec.): 77-90. 1998.
- Porter, M.E. Innovation: Work in Progress. Lecture Notes. Netherlands. 2001.
- Putting Canada First, An Architecture for Agricultural Policy in the 21st Century. A Federal-Provincial-Territorial Initiative. July, 2002.
- Qualman, D. "Hog Mega-Barns." Canadian Dimensions 32(No.1): 19-20. 1998.
- Raad, R., Kenworthy, J. "The US and Us." Alternative Journal 24(No.1): 14-22. 1998.
- Redfern, P. Resources Strategy Study: Regional Municipality of Peel. 1994.
- Rees, W. Why Urban Agriculture? Notes for the IDRC Development Forum on Cities Feeding People: A Growth Industry. University of British Columbia. 1997.
- Ridgetown College (University of Guelph). Food Industry Growth Trends in Ontario's Southwest Region. Ridgetown. September, 2003.
- Simpson, Gaylene. Ontario Farm Income A Review of Declining Farm Income and Long-Term Solutions. Canadian Federation of Independent Business (CFIB). September 2005.
- Sinclair, Barry (OMAFRA). 2005 Farm Property Class Tax Rate. Fact Sheet. Toronto: Queen's Printer. 2005.
- Sinclair, Barry (OMAFRA). The Farm Property Class Tax Rate Program Questions and Answers. Fact Sheet. Toronto: Queen's Printer. 2005.
- Smith, Dr. I., Flowers Canada (Ontario). Floriculture Industry. Economic Impact Report Submitted to the Regional Municipality of Niagara, Planning and Development Department. March 2002.
- Smith, Gary. Interview. July 11, 2006.
- Sommers, P. and J. Smith. Promoting Urban Agriculture: A Strategy Framework for Planners in North America, Europe and Asia, The Urban Agriculture Network. Presentation to Habitat 94. Edmonton: 20 September 1994.
- Staciwa, Anna, Siva (OMAFRA). Ontario Agri-food Trade by Commodity Group, 1999 to 2005. Stats Sheets. Toronto, Queen's Printer. 2005.
- Statistics Canada. Agriculture Profile of Ontario. Catalogue No. 95-177-XPB. Ottawa. 1996.



Statistics Canada. Canada Agricultural Census. Ottawa. 1996.

Statistics Canada. "Farm population: bucking the trend in a country shaped by immigrants".
2001 Census of Agriculture.
www.Statcan.ca/English/agcensus2001/first/socio/immigration.htm . Ottawa. 2003.

Statistics Canada. Farming Facts. Catalogue No. 21522-XPE. Ottawa. 1997.

Statistics Canada. Niagara and Hamilton: 11-TDP-Tax, Operating Revenues & Expenses; 42-June Crops Survey; 43-July Livestock Survey; 36-FFS, Financial Structure. 11 March 2002.

Statistics Canada. Your Guide to the Consumer Price Index. Catalogue No. 62-557-XPB. 1996.

Stein, D. "Home boom spreads beyond urban fringe. No one controlling growth as big cities eat up countryside". Toronto Star. Toronto: A1. 1998.

Stein, D. "Growth slower than predicted. 121,000 fewer could 'shake up' official plans." Toronto Star. Toronto: E1. 1998.

Stale, Alvin. Pamphlet. Sunnyview Dorsets and Black Angus. 2005.

UNDP. Urban Agriculture: Food, Jobs and Sustainable Cities. New York. 1996.

University of Guelph. Ontario Dairy Farm Accounting Project – Annual Report 1999. Co-operative Project with Canadian Dairy Commission, Dairy Farmers of Ontario, and OMAFRA. September, 2000.

Vandenberg, Bruce. Goats. Interview. July 26, 2006.

Veale, Alan and others. Regional Niagara, Two Alternatives for Revising the Agricultural Land Base Map – A Discussion Paper for Good General Agricultural Areas. Pub. 87-1. Planning and Development Department. October 1993.

WCM Consulting Inc. Eastern Ontario Food-processing Sector Competitiveness Study. Final Draft Revision D. Ontario. 2004.

WCM Consulting Inc. Food Industry Outlook – A Report for OMAF & TED. Ontario. 2002.

WCM Consulting Inc. – A Study Of Mobile Abattoir Feasibility For Eastern Ontario. Draft Summary Report. Prepared for the Prince Edward County/Lennox & Addington Community Futures Development Corp. Ontario. March 2005.

Walton & Hunter Planning Associates. Greater Toronto Area – Agricultural Economic Impact Study. November, 1999.

Warnock, J. "Industrial Agriculture in the Era of Free Trade." Canadian Dimensions 22 (No.142): 12-13. 1998.



- Watson, Garry R. "Overview of the Canadian Ornamental Industry". Flowers Canada (Ontario). Guelph.
- Wedley, Brendan. "Ethanol plant to be built in county." Peterborough Examiner. Friday, July 21, 2006.
- Whatmore, S. From Farming to Agribusiness: The Global Agro-Food System. Geographies of Global Change. R. J. Johnston, Taylor, P.J. and Watts, M.J. Oxford, Blackwell. 1995.
- Wright, Dr. Robert. OMAFRA. – Horse Industry. Interview. July 7, 2006.
- Wright, Dr. Robert, Cation, Jim. 1996 Ontario Horse Industry Report. Ontario Ministry of Agriculture, Food and Rural Affairs. Pub. #712. Ontario: Queen's Printer. 1996.
- Wright, Dr. Robert. OMAFRA. Economic Impact of the Horse Industry. Ontario: 2005.
- Wright, Dr. Robert. OMAFRA. Economic Impact of Ontario Members of the Ontario Equestrian Federation. Ontario: Queen's Printer. 1997.
- Wright, Dr. Robert. OMAFRA. Biosecurity for Horse Farms. AGDEX 460/667. Ontario: Queen's Printer. 2000.
- Wolfe, Christian. (Statistics Canada). "What exactly is "value added" anyway? Excerpts from Canadian Agriculture at a Glance 1999. Ottawa, 1999.
- Women of the National Farmers Union. The Employment Practices of Farm Families in the Year 2001-2002: A Research Project Proposal. Revised March 16, 2001.

Municipal Plans, Catalogues, Directories

- Agriculture and Agri-Food Canada. An Overview of the Canadian Agriculture and Agri-Food System. Research and Analysis Directorate, Strategic Policy Branch. Publication 10066E. Catalogue A38-1/1-2005E-PDF. Ottawa. May, 2005.
- Agriculture and Agri-Food Canada. Agri-Food Network: Directory to Ontario's Agri-Food Industry. 1995. Ottawa. 1995.
- ABC Internet, Encyclopedia Britannica, and Western Fairs Association. A History of Fairs 1999. 1995.
- ABS Global Incorporated. Catalogue. Jersey Update. Catalogue. Deforest, WI. 1998.
- Advance Genetics Inc. Holstein Directory. 1998/1999.
- Amish Directory. Aylmer/Lindsay Amish Directory. Ontario: Pathway Publishers. 2005.



"Bullish on Dairy, etc." Alliance: The Semex Alliance publication of Canadian dairy genetics. 1998.

Catalogue. Continuing 60 years of Genetic power: Sire Power Inc. Georgetown, Ontario. 1998.

City of Kawartha Lakes. By-Law 2005-84.

City of Kawartha Lakes. By-Law 2005-128.

City of Kawartha Lakes. By-Law 2005-118.

City of Kawartha Lakes. Schedule 'A' to By-Law 2005-118.

City of Kawartha Lakes Economic Development. Business Brief. Issue No. 7. 2004.

City of Kawartha Lakes Economic Development. Business Brief. Issue No. 8. 2004.

City of Kawartha Lakes. Community Vision 2002 – 2012. 2002.

Company Listings. Global Opportunities 1999 Source Guide: 49-90. 1999.

Gordon, J., Dagg. Economic Development Strategic Plan – County Of Peterborough.
Economic Development/Planning Committee. January 1991.

County of Peterborough. By-Law #26-2005.

County of Peterborough. Property Tax Codes.

County of Peterborough. Tax Rate Calculation. 2005.

Development Services, Planning Division. City Of Kawartha Lakes Draft Official Plan. 2006.

Farmers' Markets Ontario: Directory by Foodland Ontario. 1997/1998.

Farming Income and NISA (Net Income Stabilization Account). Joint Forms and Guide. 2001.

Greater Peterborough Area Economic Development Corporation. Agricultural Sector Focus Group. February 2000.

Greater Peterborough Area Economic Development Corporation. "Agricultural Statistics".

Greater Peterborough Area Economic Development Corporation. Pamphlets & Brochures regarding New Business Opportunities.

Greater Peterborough Area Economic Development Corporation. "Site Selection Opportunities in Peterborough". Brochure.

Greater Peterborough Area Economic Development Corporation. "The Home Advantage". Brochure.



Greater Peterborough Area Economic Development Corporation. Township 2005 Tax Rate Summary.

Greater Peterborough Area Economic Development Consultants (Advisory Services). Peterborough County Strategy Enhancement Plan: Food Processing Cluster. Ontario. 2004.

MPAC. Property Assessment – Farm Operation Code. 2002.

Marshall Macklin Monaghan Limited. Official Plan – County of Peterborough. Ontario. 1994.

Ontario Agri-Food Education Inc. Community Evolution Project – Huron (research@sustainablehuron.com www.sustainablehuron.com) Fall 2000.

Ontario Equestrian Federation. Ontario Horse Directory. Ontario. 2006.

OMAFRA. Agricultural Statistics for Ontario 1941-1978. Publication 20. Toronto: Queen's Printer. 1979.

OMAFRA. Agricultural Statistics for Ontario 1971. Publication 20. Toronto: Queen's Printer. 1972.

OMAFRA. Agricultural Statistics for Ontario 1976. Publication 20. Toronto: Queen's Printer. 1977.

OMAFRA. Agricultural Statistics for Ontario 1981. Publication 20. Toronto: Queen's Printer. 1982.

OMAFRA. Agricultural Statistics for Ontario 1986. Publication 20. Toronto: Queen's Printer. 1987.

OMAFRA. Agricultural Statistics for Ontario 1991. Publication 20. Toronto: Queen's Printer. 1992.

OMAFRA. Agricultural Statistics for Ontario 1995. Publication 20. Toronto: Queen's Printer. 1996.

OMAFRA. Consultation on Nutrient Management Regulations. August 2002.

OMAFRA. Nutrient Management Act. Information Sheet. December, 2002.

OMAFRA. Export Directory Agriculture and Food Products Ontario Canada. Toronto: Queen's Printer. 1981.

Ontario Federation of Agriculture. Policy Handbook. 1999.

OMAFRA. Field Crop Budgets Publication 60. Ontario. 2006.

Ontario Ministry of Municipal Affairs. Ontario Municipal Directory. Toronto: Queen's Printer. 2001.



Ontario Ministry of Municipal Affairs. Ontario Municipal Directory. Toronto: Queen's Printer. 1995.

Ontario Municipal Board Reports. Ben Gardiner Farms Inc. v. Township of West Perth et al, Court File No. 1155, Judgement Rendered: November 7, 2001.

Ontario Racing Commission. Annual Report 2004-2005.

Pickseed. 2007 Eastern Canada Product Guide.

Regional Niagara. Background Information on Agri-Tourism. No. 27.

Sire Power Inc. Continuing 60 years of Genetic power. Catalogue. Georgetown, Ontario. 1998.

Statistics Canada. 2001 Census Dictionary, Reference. Catalogue No. 92-378-XIE. Ottawa. revised edition. December, 2004.

Statistics Canada. 2001 Census Handbook, Reference. Catalogue No. 92-379-XIE. Ottawa. February 2003.

Statistics Canada. Agriculture Profile of Ontario. Catalogue No. 95-177-XPB. Ottawa. 1996.

Statistics Canada. Canadian Agriculture at a Glance – Little Bees, Big Potential. Catalogue No. 96-325-XPB. Ottawa. 1996.

Statistics Canada. Canadian Agriculture at a Glance – What's Growing Under Glass. Catalogue No. 96-325-XPB. Ottawa. 1996.

Statistics Canada. Farm Financial Survey. Catalogue No. 21F0008XIB. Ottawa. 2004.

Statistics Canada. Food Statistics. Vol. 4, No. 2. Catalogue No. 21-020-XIE. Ottawa. 2004

Statistics Canada. Fruit and Vegetable Production. Catalogue No. 22-003-XIB. Ottawa. June, 2005.

Statistics Canada. Greenhouse, Sod and Nursery Industries. Catalogue No. 22-202-XIB. Ottawa. 1998.

Statistics Canada. Greenhouse, Sod and Nursery Industries. Catalogue No. 22-202-XIB. Ottawa. 1999.

Statistics Canada. Greenhouse, Sod and Nursery Industries. Catalogue No. 22-202-XIB. Ottawa. 2000.

Statistics Canada. Greenhouse, Sod and Nursery Industries. Catalogue No. 22-202-XIB. Ottawa. 2001.

Statistics Canada. Greenhouse, Sod and Nursery Industries. Catalogue No. 22-202-XIB. Ottawa. 2002.



Statistics Canada. Greenhouse, Sod and Nursery Industries. Catalogue No. 22-202-XIB. Ottawa. 2003.

Statistics Canada. Greenhouse, Sod and Nursery Industries. Catalogue No. 22-202-XIB. Ottawa. 2004.

Statistics Canada. People, Products and Services. Agriculture Division. Catalogue No. 21F0003GIE. Ottawa. 2005

Statistics Canada. Your Guide to the Consumer Price Index. Catalogue No. 62-557-XPB. 1996.

Township of Asphodel Norwood. Assessment Comparison.

Township of Asphodel Norwood. By-Law 2005-32.

Township of Asphodel Norwood. Schedule 'A' 2005 Tax Rates.

Township of Galway-Cavendish-Harvey. Tax Summary Rates.
www.galwaycavendishharvey.ca/news/htm

Township of Havelock-Belmont-Methuen. Schedule 'A' to By-Law 2005-21

Township of North Kawartha. By-Law 23/06.

Township of Otonabee-South Monaghan. By-Law #2005-34.

Township of Otonabee-South Monaghan. Schedule 'A' to By-Law #2005-34.

Township of Smith-Ennismore-Lakefield. Assessment Summary – 2005 Tax Roll.

Township of Smith-Ennismore-Lakefield. By-Law 2005-47.

University of Guelph. E-Learning Catalogue 2002 – Independent Study. 2002.

Electronic Sources

4-H Club Ontario. www.4-hontario.ca

Advanced Agricultural Leadership Program. The Centre for Rural Leadership.
<http://www.ruralleadership.ca/>

A Dynamic Economy – Ontario Has A Varied Manufacturing Sector
http://www.2ontario.com/welcome/bcei_206.asp

Agricultural Adaptation Council. <http://www.adaptcouncil.org/>



- Agriculture and Agri-Food Canada. CANSIS. <http://sis.agr.gc.ca/cansis/>
- Agri-Food Canada. 2002-2003 Canadian Vegetable Situation and Trends. www.agr.ca
- Agri-Food Canada. Canadian Food Inspection Agency. Animal Health – Fact Sheet - Bovine Spongiform Encephalopathy (BSE).
<http://www.inspection.gc.ca/english/anima/heasan/disemala/bseesb/bseesbfse.shtml>
- Agri-Food Trade Service. Canada's Agriculture, Food and Beverage Industry. http://ats-sea.agr.ca/supply/3316_e.htm
- Agri-Food Trade Service. Canada's Functional Food and Nutraceutical Industry. http://ats-sea.agr.ca/supply/3312000_e.htm
- Agroclimatic Resource Index. <<http://www.esricanada.com/k-12/metadata2/1pdb/acri.html>>
- Alliance of Ontario Food Processors. <http://www.aofp.ca/About.html>
- All Points Horse Transportation. www.allpointshorsetransport.com
- Alpaca Ontario. <http://www.alpacaontario.ca/>
- American Farmland Trust. <http://www.farmland.org/>
- Aurora Andalusians. www.auroraandalusians.com
- Back Forty Sheep Camp. <http://www.icelandicsheep.ca/index.html/>
- Bed & Breakfast Inns ONLINE. <http://www.bbonline.com/canada/html>
- Bethany Hills Boer Goat Farm. <http://www.pipcom.com/~goatsrus/index.html>
- Bethany Hills School. www.bethanyhills.on.ca
- CADORA. Kawartha Lakes Dressage Association. <http://www.klda.ca/>
- The Canadian Association of Miniature Equine Owners. www.canadianminis.org/
- Canadian Aberdeen Angus Association. www.cdnangus.ca
- Canadian Co-operative Wool Growers Limited. <http://www.wool.ca/english/default.asp>
- Canadian Dairy Commission. http://www.cdc-ccl.gc.ca/cdc/index_en.asp?caid=85
- Canadian Food Inspection Agency. Registered Establishment List – Food Of Animal Origin.
<http://active.inspection.gc.ca/active/reglst/RegResults.asp?l=E>
- Canadian Hereford Association. <http://www.hereford.ca/>



- Canadian Limousin Association. <<http://www.limousin.com/>>
Canadian Meat Council. http://cmc-cvc.com/english/index_e.asp
- Canadian Pony Club. www.canadianponyclub.org
- Canadian Pork Council. www.canpork.ca/
- Cause for Applause Farms. www.causeforapplausefarms.com
- Central East Trillium Hunter/Jumper Association. www.centraleastzone.com/showdates.htm
- Chamber of Commerce. www.peterboroughchamber.ca
- Cheesemaking Business Information Bundle. www.serviceontario.ca/
- Chestnut Ridge Breeding Farm. www.chestnutridgestables.com
- Chicken Farmers of Ontario. www.cfo.on.ca
- Christina Hanley Photography. www.christinahandley.com
- Christmas Tree Farmers of Ontario. www.christmastrees.on.ca
- City of Brantford. Economic Development.
<http://www.brantfordbrant.com/sectors/food.php?template=print>
- Coast to Coast Bed And Breakfast Registry. www.bbregistry.com/
- Coca-Cola Ltd. www2.coca-cola.com
- Crosshill Emu Farm Inc. & Kalaya Investments. <http://www.imagitek.com/xhillemu/oil.html>
- Dairy Farmers of Ontario. www.milk.org/
- Davis, Nicole. National Geographic News. "Turkey Fuel? Factory to Turn Guts Into Crude Oil".
November 25, 2003.
http://news.nationalgeographic.com/news/2003/11/1125_031125_turkeyoil.html
- DeLaval Canada. <http://www.delaval.ca/default.htm>
- Devolin, Barry. Why I Focus On Farmers And Food. <http://www.travel-net.com/~barrydevolin/Mar23pr.htm>
- Devolin, Barry. Agricultural Fairs Are The Heart Of Small Communities. <http://www.travel-net.com/~barrydevolin/Aug11pr.htm>
- Devolin, Barry. Crisis In Canadian Cattle Industry Far From Over. <http://www.travel-net.com/~barrydevolin/Jul28pr.htm>



Devolin, Barry. Devolin Make Agriculture A Priority. <http://www.travel-net.com/~barrydevolin/070904b.html>

Devolin, Barry. Welcomes 30 Area Farmers At The First Meeting For The Local Farm Council. <http://www.travel-net.com/~barrydevolin/083004.html>

Devolin, Barry. Devolin Welcomes Andy Mitchell To Farm Council. <http://www.travel-net.com/~barrydevolin/022405.html>

Devolin, Barry. Devolin: \$1 Billion For Canadian Farmers Should Have Been Made Months Ago. <http://www.travel-net.com/~barrydevoling/032905.html>

Devolin, Barry. Devolin Announces "Canadian Food Strategy" Proposal..<http://travel-net.com/~barrydevolin/091305.html>

Devolin, Barry. Devolin Supports Proposed Meat Packing Facility In Lindsay. <http://www.travel-net.com/~barrydevolin/090804c.html>

Devolin, Barry. Devolin Attends Durham Plow Match. <http://www.travel-net.com/~barrydevolin/090804b.html>

Devolin, Barry. Devolin Says Federal Dollars For Farmers Are Too Little Too Late. <http://www.travel-net.com/~barrydevolin/091004c.html>

Dundas Soil and Crop Bus Tour to Peterborough and Lindsay Area. www.agrinewsinteractive.com/archives/article-4187.htm

Eastern Ontario Quarter Horse Association. <http://www.eoqha.com/>

Equestrian Management Group Inc. www.equiman.com

Equine Canada. <http://www.equinecanada.ca/>

Equine Research Centre. www.erc.on.ca/

Endless Journey Farm. www.endlessjourneyfarm.com

Farm Credit Canada. Farmland Values Online. www.fcc-fac.ca

Farming & Food Production Protection Act.
<http://192.75.156.68/DBLaws/Statutes/English/98f01_e.htm>

Farmers' Markets Ontario. www.fmo.reach.net/

Finley, Diane. Delay In BSE Assistance Inexcusable. <http://www.travel-net.com/~barrydevolin/091004b.html>

Foodland Ontario. Guide to Pick-Your-Own, Ontario Fruit and Vegetable Farms, Farmers' Markets & Christmas Tree Farms. www.foodland.gov.on.ca



Flowers Canada <<http://www.flowerscanada.ca/>>

Franzs Meat Market. www.franzs.com

George Morris Centre. <http://www.georgemorris.org/GMC/Home.aspx>

Government of Canada. AVHRR Land Cover Data. www.geogratis.cgdi.gc.ca/

Government of Canada. Canada Land Inventory and Heat Crop Units.
www.geogratis.cgdi.gc.ca

Government of Canada. National Atlas Bases Data. www.geogratis.cgdi.gc.ca

Government of Ontario. Archives – “Strength in the Community”.
www.archives.gov.on.ca/english/exhitis/agriculture/strength.htm

Greater Peterborough Area – 2005 Community Profile – Greater Peterborough Area Economic
Development Corporation – www.investpeterborough.ca

Greenhouse Industry Trade Show On-Line <http://www.greenhouse-bbs.com/bbs/grower.htm>

Harco Enterprises Ltd. www.harco.on.ca

Harvest Ontario. <<http://www.harvestontario.com/>>

Hoekstra Dressage Inc. www.hoekstradressage.com

Horse Publication Group. 2003. <<http://www.horse-canada.com>>

Icelandic Sheep Breeders of North America. <http://www.isbona.com/>

International Association of Fair & Expositions. www.test.fairsandexpos.com

International Plowing Match. www.plowingmatch.org

Kawartha Choice. www.kawarthachoice.com

Kawartha Country Wines. www.kawarthacountrywines.ca

Kawartha Farmfest. www.kawarthafarmfest.com

Kawartha Farm Fresh. www.kawarthafarmfresh.com

Kawartha Lakes.net [www.kawartha lakes.net](http://www.kawarthalakes.net)

Lanes End Farm. www.lanesendfarmandfiber.com

Lang Pioneer Village. www.lanpioneervillage.com

Lindsay Central Exhibition. www.lindsayex.com



Lindsay Chamber of Commerce. www.irmweb.irm-systems.com/

Lindsay Farmers' Market. www.lindsayfarmersmarket.ca

The Little Fat Wino. Home Page. <<http://www.littlefatwino.com/growers.html>>

Lovgren, Stefan. National Geographic News. "Pig Manure Converted to Crude Oil". July 2, 2004. http://news.nationalgeographic.com/news/2004/07/0701_040702_pigoil.html

McGill University. Profitable Pasture Management.
www.eap.mcgill.ca/magrack/sf/Winter%2090%20E.htm

Milky Way Farm. <http://www.sheepmilk.com/index.php>

Minute Maid. www.minutemaids.com

Montgomery's Line of Defense Against the Suburban Invasion. 8/30/2002
<http://www.washingtonpost.com/wp-srv/local/longterm/library/growth/part4/post4.htm>

NJ Pinelands Comprehensive Management Plan. 8/30/2002
<http://www.state.nj.us/pinelands/cmp.htm>

National Geographic News – Science & Space News.
<http://news.nationalgeographic.com/news/science.html>

National Farmers Union. <http://www.nfu.ca/hogbarn-brief.htm>

Northern Cattle Sales Network – <http://www.northerncattlesales.com/aboutus.htm>

Nu-Gro Corporation. www.nu-gro.com

OMAFRA. Agricultural Food & Rural Associations (database).
<<http://www.gov.on.ca/omafra/english/index.html>>

OMAFRA. Agri-Food Research Magazine. <<http://www.gov.on.ca/omafra/english/index.html>>

OMAFRA. Food Inspection Branch, Food Safety Division. Branch Meat Inspection Operations Unit. http://www.omafra.gov.on.ca/english/food/staff/meat_operations.htm

OMAFRA. Free Standing Meat Processors.
<http://www.omafra.gov.on.ca/english/food/inspection/meatinsp/fsmp/fsmp.htm>

OMAFRA. Gleanings. <<http://www.gov.on.ca/omafra/english/index.html>>

OMAFRA. Introduction to Agri-food Education in Ontario.
<<http://www.gov.on.ca/omafra/english/index.html>>



OMAFRA. Licensed Abattoirs By Name.

http://www.omafra.gov.on.ca/english/food/inspection/meatinsp/prod_type/abattoirs_all_name.htm

OMAFRA. Food Industry Division. Licensed Deadstock Operators, 2004.

<http://www.omafra.gov.on.ca/english/food/inspection/deadandisp/deadstock.htm>

OMAFRA – Ontario Agri-food Trade

<http://www.gov.on.ca/OMAFRA/english/stats/trade/agrifoodtrade.html>

OMAFRA. Ontario Beef Cow Summary 2004. John Molenhuis.

<http://www.omafra.gov.on.ca/english/busdev/download/onbeef03.htm>

OMAFRA. Ontario Dairy Summary 2004. John Molenhuis.

<http://www.omafra.gov.on.ca/english/busdev/download/ondai04.htm>

OMAFRA.. The Maple Syrup Industry in Ontario.

<<http://www.gov.on.ca/omafra/english/index.html>>

OMAFRA. Food Industry Division. Rail Grade Plants.

http://www.omafra.gov.on.ca/english/food/inspection/rail_grade_plants.htm

OMAFRA. Publications. <<http://www.gov.on.ca/omafra/english/index.html>>

OMAFRA. Statistics. <<http://www.gov.on.ca/omafra/english/index.html>>

OMAFRA. Suggested Feed Inventory and Transfer Values, 2005. John Molenhuis.

<http://www.omafra.gov.on.ca/english/busdev/download/2005invsht.htm>

OMAFRA. Town & County Ontario. <http://www.omafra.gov.on.ca/english/tco/tcohome.html>

Ontario Agricultural Training Institute. The Canadian Farm Business Management Program.

<<http://www.oati.com/web/>>

Ontario Auction Market Reports –

http://www.cattle.guelph.on.ca/markets.auction_markets/auction_markets.asp

Ontario Beekeepers' Association (OBA). <http://www.tcc.on.ca/~ontbee/>

Ontario Bee.com Home Page. <<http://www.ontariobee.com/>>

Ontario Cheese Society. <http://www.ontariocheese.org/index.php>

Ontario Corn Producers' Association. <<http://www.ontariocorn.org/>>

Ontario's Dynamic Workforce – Average Hourly Wages By Occupation

http://www.2ontario.com/welcome/oolf_310.asp

Ontario's Dynamic Workforce – Average Hourly Wages In All Industrial Sectors –

http://www.2ontario.com/welcome/oolf_309.asp



Ontario's Dynamic Workforce – Proven Work Experience In All Industrial Sectors –
http://www.2ontario.com/welcome.oolf_303.asp

Ontario's Dynamic Workforce – A Multi-Skilled Workforce –
http://www.2ontario.com/welcome/oolf_308.asp

Ontario Elk Breeders Association. www.oeba.ca

Ontario Equestrian Federation. www.horse.on.ca/

Ontario Fairs. www.ontariofairs.com/

Ontario Farm Grown Christmas Trees. <http://www.christmastrees.on.ca/>

Ontario Farm Products Marketing Act.
<http://192.75.156.68/DBLaws/Statutes/English/90f09_e.htm>

Ontario Federation of Agriculture. <http://www.ofa.on.ca/site/home.asp>

Ontario Fruit and Vegetable Growers' Association. <http://www.ofvga.org/communications.php>

Ontario Goat Milk Producers' Association. <http://www.ontariogoatmilk.org/>

Ontario Greenhouse Vegetable Growers <http://www.ontariogreenhouse.com/nutrition.cfm>

Ontario High School Rodeo Association. <http://www.ohsra.ca/>

Ontario Maple Syrup Producers Association. <<http://tdg.ca/ontag/omspa/>>

Ontario Quarter Horse Association. <http://www.oqha.on.ca/>

Ontario Retailers – Tack Stores. www.foxrunhorseproducts.com/ontario.html

Ontario Rodeo Association. <http://www.ontariorodeoassoc.com/>

Ontario Sheep Marketing Agency. www.sheep.org

PPD Technologies Inc. – Market Research and Analysis for the Specialized Livestock
Industries, 1998. <http://www.agr.gov.sk.ca/afif/Projects/966000322/>

Parliament of Canada – Debates of the House of Commons of Canada.
http://www.parl.gc.ca/35/2/parlbus/chambus/house/debates/084_96-10-09/084OQ1E.html

PEI Hog Commodity Marketing Board – 1999 Annual Report – Canadian Pork Council Activity
Report. <http://www.peipork.pe.ca/annual99.htm>

Pepsico. www.pepsico.com

Peterborough & The Kawarthas: 2005 Travel Guide – www.thekawarthas.net



Pickseed. <http://www.pickseed.com/en/corporate.php>

Power Seeds Inc. www.powerseeds.net

Quaker. www.quakeroats.com

Real Ontario Travel Website. www.realontario.ca/

Roach, John. National Geographic News. "Vegetable Oil – The New Fuel?" April 22, 2003.
http://news.nationalgeographic.com/news/2003/04/0422_030422_veggiefuels.html

Roping Association of Ontario. <http://www.ropingontario.com/>

Royal Agricultural Winter Fair. www.royalfair.org

Salam Alpacas. www.salamalpacas.com

Schmale, Jamie. Devolin Calls On Peter and Mitchell to "Show Farmers The Money".
<http://www.travel-net.com/~barrydevolin/082604.html>

Statistica Canada. 2001 Census of Agriculture: Profile of farm operators.
www.statcan.ca/Daily/English/021120/d021120a.htm

Statistics Canada. Other Livestock and Colonies Of Bees, By Province, Census Agricultural Region (CAR), Census Division (CD) and Census Consolidated Subdivision (CCS), May 15, 2001.
<http://www.statcan.ca/registered/IPS/00j5qC5LSS7mo/english/95F0302XIE/01002/tables/html/01001/Table22Ont.htm>

Statistics Canada. Special Order – 2001 Agricultural Census. <http://www.statcan.ca/cgi-bin/downpub/subscribe.cgi?catno=95F0302XIE>

Statistics Canada Website. <http://www.statcan.ca>

Statistics Canada. "Who's minding Ontario's farms?"
www.statcan.ca/english/agcensus2001/first/profiles/03ont.htm

Sticklings Bakery. www.sticklingsbakery.com

Sysco Food Services of Central Ontario. www.syscocentralontario.com

The College of Veterinarians of Ontario. <http://www.cvo.org/>

The Ontario Greenhouse Alliance
<http://www.theontariogreenhousealliance.com/consumerinfo.htm>

The Tack Box. www.thetackbox.com



Transferable Development Rights Program in Boulder County, The. Colorado. 8/30/2002
http://www.landuselaw.edu/tdr_boul.html

Transferable Development Rights: A Market Approach to Preserving Farmland and Open
Space. Richard James & Associates. 8/30/2003 http://www.citebc.ca/NO94_TDR.HTML

Trent Riders Website. www.trentriders.com

Trent University. www.trentu.ca

United States Department of Agriculture. <http://www.ars.usda.gov/Main/docs.htm?docid=3153>

U.S. Department of Energy – Energy Efficiency and Renewable Energy – Biomass Program.
<http://www1.eere.energy.gov/biomass/>

University of Guelph. Campus News: Farm Leaders Stress. News Release. August, 1999.
www.uoguelph.ca/mediarel/archives/001339.html

Victoria Land and Water Stewardship Council.
www.ontariostewardship.org/ontarioStewardship/home/osVLWSCIndex.asp





PLANScape

BUILDING COMMUNITY THROUGH PLANNING

