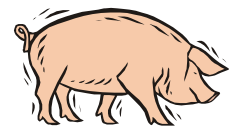
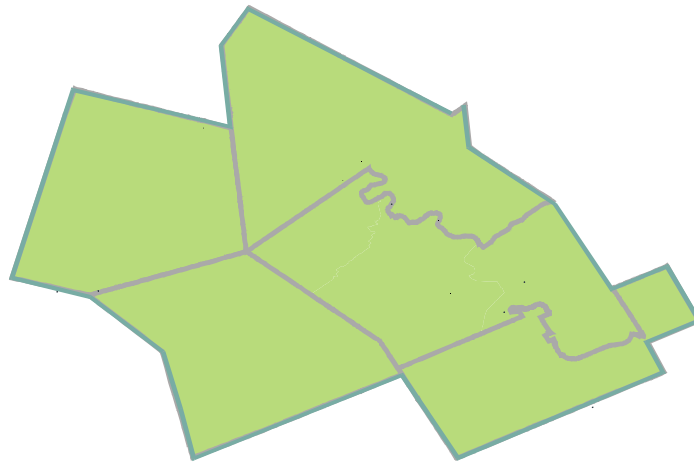


Region of Waterloo Food Flow Analysis Study

November 2005



Prepared for:

Region of Waterloo Public Health



Region of Waterloo
PUBLIC HEALTH

Prepared by:

HCA

HARRY CUMMINGS AND ASSOCIATES INC.

Executive Summary

Background

Over the past two years, the Region of Waterloo Public Health has been mapping and investigating aspects of the food system in Waterloo Region with a long term vision of improving food availability and food practices among residents, in order to reduce diet-related disease rates.

The Region initiated several studies to gain a better understanding of the local food system which included assessments of the agricultural economy, access to food, rural health, and consumer attitudes in relation to buying locally grown and processed food.

With the completion of this foundation research, Public Health initiated the Farms that Sell Locally Viability Plan in the Fall of 2004 to identify supports and barriers for farmers selling food locally (Region of Waterloo) in order to develop a plan for increasing local food production, processing, and consumption. The plan consists of five interrelated studies including:

- Food Flow Study
- Optimal Nutrition Environment Scenario (ONE)
- Food Miles Study
- The Marketing of Buy Local! Buy Fresh!
- Redundant Trade Study (RT)

An advisory committee was formed to provide input into each study's process, to provide links to specific contacts and sources of information, and to ground the work in the experiences of farmers, processors, and retailers in the local food system.

These five studies were reported on together in an abbreviated form in a paper entitled "Toward a Healthy Community Food System for Waterloo Region". More detailed stand-alone reports, such as this one, were also written for each study. This report describes the Food Flow Study.

In general terms, the purpose of the Food Flow Analysis Study is to track the flow of food into and out of the Region of Waterloo. More specifically, the Food Flow Study attempts to answer the following question:

- What percentage of food that is consumed in the Region of Waterloo has been grown, raised, and/or processed in the Region?

In December 2004, the Region engaged Harry Cummings and Associates (HCA) to develop a methodology and answer the research question. HCA worked closely with the Farms that Sell Locally Advisory Committee which was comprised of representatives from a variety of stakeholder groups including farmers, food retailers, Ontario Ministry of Agriculture Food and Rural Affairs, Region of Waterloo Public Health, and Region of Waterloo Planning, Housing and Community Services.

Methodology

The Food Flow Analysis Study used a mixed methodology consisting of a document/data review, key informant interviews, and site observation surveys. A key feature of the study was the development of a Waterloo Region Food Basket, which includes 20 locally produced food items that could be traced back from food retailers to food processors and producers. Selection criteria for the Food Basket was identified by the Advisory Committee and used to determine which food items to include in the Region of Waterloo Food Basket. The food items reflect the major food categories identified in the Food Expenditure Survey and Health Canada's National Nutritious Food Basket and represent agricultural products currently grown or raised in Waterloo Region (in significant quantity). The food items also reflect consumer food expenditure patterns.

The food items selected for the Region of Waterloo Food Basket include:

Ground beef	Pork chops	Chicken breasts
All beef wieners	Sliced cooked ham	2% milk
Non-fat fruit yogurt	Cheddar cheese	Eggs
Multigrain bread	Wholegrain crackers	Quick cooking oatmeal
Corn flakes	Fresh apples	Fresh carrots
Fresh tomatoes	Fresh strawberries	Apple juice
Strawberry jam	Potato chips	

The Food Basket was used as the reference point for implementing the other elements of the research methodology as follows:

1. Key informant interviews were conducted with food commodity representatives representing the Food Basket items to confirm/update 2001 census production data and identify current trends and challenges in agricultural production in the Region.
2. A small sample of supermarkets (16) and convenience stores (25) was randomly selected from a Region of Waterloo database and surveyed to determine the availability of the Food Basket items across the Region. The store survey also gathered information on the major food processors associated with the Food Basket items.
3. Key informant interviews were conducted with food processors to determine the extent to which they used agricultural products from Ontario and the Region of Waterloo in their food products.

Results

Agricultural Production in the Region of Waterloo

The Region of Waterloo has over 1,400 farms and 225,800 acres of farmland. Most of the farmland (80%) in the Region is used for crop production, which supports a large and diverse livestock and poultry sector. Indeed, approximately, 65% of all farms in the Region are primarily involved in livestock/poultry production compared to the provincial average of 45%. The value of agricultural production in the Region was \$380 million in 2000.

Commodity representatives from the various agricultural sectors reported on a number of production trends and challenges including:

- Ongoing farm income crisis associated with rising production costs and low commodity prices.
- Additional production costs associated with farm related legislation and regulations.
- Increasing development pressures and rising land values, which are impacting farm viability.
- Continuing recovery of the livestock industry from the BSE incident in 2003 and the resulting US border closure to Canadian cattle and other livestock.
- Limited production capacity for certain food products (e.g. tomatoes, carrots) relative to other parts of the province, which have more suitable growing conditions.
- Competition from California and Mexico fruit and vegetable producers who have lower labour costs and can produce year round.

Commodity representatives also commented on trends and challenges related to the food processing and retail sector including:

- Ongoing consolidation in the food processing sector of which recent examples include Cargill Foods and Better Beef, and Maple Leaf Foods and Schneider Foods.
- Loss of small-scale abattoirs in relation to stricter health regulations and inspection requirements.
- Limited direct marketing opportunities for local products through major retail channels.

Availability of Food Basket Items in Supermarkets and Convenience Stores

Results from the store survey revealed that all 16 supermarkets carried all 20 Food Basket items with the exception of two stores that were not carrying fresh strawberries on the day of the survey.

The availability of the 20 Food Basket items in convenience stores was much more varied. Potato chips and 2% milk were the only two Food Basket items that showed up consistently in all 25 convenience stores. Eggs and strawberry jam were available in about 80% to 90% of the stores while cheddar cheese, sliced cooked ham, apple juice, corn flakes, and wholegrain crackers were available in about 60% to 70% of the stores. Approximately half of the stores carried quick cooking oatmeal and pork wieners.¹ Fresh carrots, fresh tomatoes, fresh apples, non-fat fruit yogurt, all beef wieners, and hamburgers² were available in about 30% to 40% of the stores. Although most of the convenience stores carried enriched white bread, only about 36% of the stores carried multigrain bread. Less than 10% of the convenience stores carried chicken patties³ and none of the stores carried fresh strawberries.⁴

Availability of Food Basket Items at Local Farmers' Markets and Produce Auction

Waterloo Region features four established farmers' markets (Cambridge, Kitchener, Waterloo, and St. Jacobs) and three emerging markets (Elmira, Wellesley, and New Hamburg). The Cambridge and Kitchener farmers' markets were examined as part of the Food Flow study to determine the availability of Food Basket items. Both of these markets featured many of the Food Basket items including ground beef, pork chops, chicken breasts, sliced ham, cheddar cheese, eggs, multigrain bread, and fresh apples, carrots, tomatoes and strawberries. Food Basket items that were not observed at the markets at the time of the site visit include beef wieners, fruit yogurt, crackers, quick cooking oatmeal, corn flakes, apple juice, and potato chips.

The Elmira Produce Auction Cooperative was established in 2004 and is locally owned and operated by members of the farming community. There are about a 100 members in the cooperative and most of the growers are from Waterloo Region and Wellington County. The auction operates between May and October and caters mostly to local food distributors, restaurants, and retail operations. The auction offers a wide variety of fresh, locally grown fruits and vegetables in wholesale lots. At the time of the site visit in late August 2005, the auction featured a wide selection of produce including fresh field tomatoes and carrots. Fresh strawberries and apples were out of season at the time of the visit but are normally offered at the auction when in season.

Region of Waterloo and Ontario Content in Food Basket Items

The store survey revealed a short list of brands that dominate the retail marketplace including Maple Leaf and Cargill/Better Beef meat products; Neilson and Parmalat dairy products; Burnbrae Farms and Gray Ridge Farms eggs; Weston Foods and Canada

¹ The convenience store survey used pork wieners as a substitute for pork chops which were used in the in the supermarket survey.

² The convenience store survey used hamburger patties as a substitute for ground beef which was used in the in the supermarket survey.

³ The convenience store survey used chicken patties as a substitute for chicken breasts which were used in the in the supermarket survey.

⁴ Strawberries were out of season in Ontario at that time of the supermarket and convenience store survey.

Bread baked products; Quaker Oats and Kellogg's cereal products; A. Lassonde Inc. apple products; Kraft Canada and e.d. Smith jams and preserves; and Humpty Dumpty and Frito Lay snack foods.

Key informant interviews were conducted with representatives from these companies and others to try and determine the extent to which processors are using agricultural products produced in Ontario and the Region of Waterloo. While many of the companies were able to provide some general estimates on the amount of Ontario content in their products, it was much more difficult for companies to estimate the amount of agricultural products that are being sourced from the Region of Waterloo. This challenge is linked to consolidation in the food processing (and distribution) sector in Ontario which is characterised by centralized processing activities and large supply catchment areas. Many of the large-scale food processors in Ontario use agricultural products from across Ontario and Canada and in some cases from other countries.

Thus, while the researchers were able to establish that agricultural products from the Region of Waterloo contribute to many of the popular food brands in the Region of Waterloo Food Basket, the amount of local content that actually makes its way back to store shelves in the Region is rather limited and can only be approximated.

For meat products such as ground beef, pork chops, and beef and pork wieners the amount of Waterloo Region content was estimated at 1% to 10% while the amount of Ontario content was estimated at 10% to 30%. Currently the beef processing industry in Ontario is sourcing a significant amount of beef from Alberta (60% to 80%) while the pork processing industry is sourcing a significant amount of pork from Quebec and other provinces (50% to 70%). With respect to poultry products such as chicken breasts, Ontario content is estimated at 60% to 80% while Waterloo Region content is estimated at 1% to 10%.

For dairy products such as 2% milk and non-fat yogurt the amount of Waterloo Region content was estimated at 10% to 29% while the amount of Ontario content was estimated at 90% to 100%. Milk produced in the Region of Waterloo is shipped to approximately 15 different processing plants in Southern Ontario. Approximately 60% of the milk produced in Waterloo Region is shipped to fluid milk plants and 40% is shipped to industrial plants where it is processed into butter, sour cream, cottage cheese, etc. With respect to cheddar cheese, the Waterloo Region content is estimated at only 1% to 10% as a small proportion of milk (less than 10% of total local production) is shipped to cheese factories.

Egg farmers in the Region of Waterloo produce over 10 million dozen eggs annually, which represents about 5% of the provincial production. Eggs along with milk and chickens operate under national supply management systems. Production of these commodities is linked to national/regional consumption patterns. As a result, the amount of Ontario content in table eggs is very high (80%+). Given that Waterloo Region accounts for a small percentage of the total provincial production and the

absence of a large scale grading station in the Region (i.e. Gray Ridge, Burnbrae) the amount of Waterloo Region content for table eggs is estimated at 1% to 10%.⁵

With respect to processed grain products such as whole grain bread, information provided by one of the major bread producers in Ontario (Canada Bread) indicates that while the majority of wheat and flaxseed ingredients are sourced from Western Canada, Ontario provides over 80% of the oats, cornmeal and soybean ingredients. The Region of Waterloo content for these three ingredients is estimated at 1% to 5%.

Ontario oats are also used for the production of quick cooking oatmeal. Quaker Oats is the largest producer of oatmeal in Ontario and currently sources about 35% of its oats from Ontario with the balance coming from Quebec and New Brunswick (50%) and Western Canada (15%). The amount of Waterloo Region content is very limited as few farmers in the Region are currently growing the preferred Quaker oats variety.

Insufficient information was available to assess the amount of local grain content in wholegrain crackers and corn flakes.

Carrots and tomatoes are grown to a limited extent in the Region of Waterloo as the majority of production is concentrated in other areas of the province that feature more suitable growing conditions. Although none of the supermarkets or convenience stores carried carrots or tomatoes that were grown in Waterloo Region, fresh produce from neighboring counties was found in a select few supermarkets⁶ and Ontario grown carrots and tomatoes were available in about 30% and 60% of stores respectively.

Strawberries are also grown to a limited extent in the Region because of growing conditions. A further challenge faced by local strawberry growers is that they have to compete with producers in more southern parts of the province where berries are ready for market as much as 10 days in advance of local production. Local growers must also compete with large scale producers in California that are able to produce/market berries in large volumes that are available throughout the year. The only fresh strawberries available at the time of the store survey were from California as Ontario berries were out of season. The amount of Ontario strawberry content in jam was found to be very low as major processors source the bulk of their strawberries from outside Ontario.

Fresh apples from the Region of Waterloo were available in about 40% of the supermarkets while Ontario apples were found in over 80% of the supermarkets. Martin's Family Fruit Farm is one of the leading apple growers and packers in Canada and has over 1,000 acres of apples located in several locations across Southern Ontario including Waterloo, Vienna and Harrow. Martin's is also a major juice apple

⁵ Although there is at least one egg grader located in the Region of Waterloo (OK Egg farm, Elmira), eggs from this grader were not available in supermarkets and were only found in a small number of convenience stores and at local farmers' markets.

⁶ At the time the research was conducted several supermarkets including Zehrs, ValuMart, Foodland and IGA were carrying fresh produce such as apples and/or tomatoes that were produced in neighboring/nearby counties.

supplier to Golden Town Apple Products, which is the largest user of peeler and juice apples in Ontario and one of the top 3 apple processors in Canada. Ontario apple content in apple juice is estimated at 30% to 59% while Waterloo Region content is estimated at 1% to 10%.

Potatoes were examined in the form of potato chips. Humpty Dumpty Snack Foods is one of the leading potato chip manufacturers in Canada and about 75% of the potatoes used in their Ontario processing facilities come from Alliston (Simcoe County), Ontario. Potato growers must meet strict growing criteria for chip grade potatoes and only a very small amount of potatoes from Waterloo Region are being used for manufacturing potato chips.

Conclusions

Overall, the findings indicate that most of the items in the Region of Waterloo Food Basket are readily available in local supermarkets and convenience stores and most food items have a moderate to high degree of Ontario content. With respect to local content, none of the food processors that participated in the study source their agricultural products exclusively from the Region of Waterloo. While agricultural production in the Region of Waterloo is substantial, ongoing consolidation in the food processing and distribution sector is making it more difficult for commodities to retain their unique local identity as they make their way to the marketplace. In most cases the amount of Waterloo Region content found in food items is low as a result of processors sourcing their total agricultural product requirements from multiple regions of the province and Canada and/or local growing conditions, which limit the amount of production.

Consumers who are interested in maximizing Waterloo Region content in their food basket have the option of buying locally produced agricultural products from local growers who sell products direct from the farm and/or through local farmers' markets in the Region of Waterloo. Consumers can also buy locally grown produce from retail markets such as Herrle's Country Farm Market and Martins Family Fruit Farm Country Store, which supplement their own farm products with products purchased from the Elmira Produce Auction.

Locally grown produce is also available to a limited extent in some supermarkets. These products are typically incorporated into large display cases alongside products from other provinces/countries, which makes it more difficult for consumers to identify their local product options. Given that the bulk of consumer food purchases are made through supermarkets, any support that these stores can lend to promoting the 'local brand' would be beneficial to local producers. One option might be the creation of a specially designated display case that features local products. Supermarkets that have concerns about obtaining a consistent supply of high quality produce to feature in a 'Waterloo Region' display case should examine opportunities for working more closely with the Elmira Produce Auction.

Acknowledgements

Region of Waterloo Food Flow Analysis Study

Funded by: Region of Waterloo Public Health

The preparation of this report was guided by the Farms that Sell Locally Advisory Committee. The Committee assisted the external consultants (Harry Cummings and Associates) in designing the research methods, providing contact names of industry representatives, and providing feedback on research findings.

Members of the Advisory Committee included:

- Marc Xuereb and Barbara Zupko – Region of Waterloo Public Health
- John Lubczynski – Region of Waterloo Planning, Housing, and Community Services
- Gerry Horst – Ontario Ministry of Agriculture, Food, and Rural Affairs
- Mark Reusser and Jeff Stager – Waterloo Federation of Agriculture
- Peter Katona – Foodlink
- Rick Whittaker and Cathy Brosseau – Waterloo-Wellington Community Futures Development Corporation
- Carl Mueller – Elmira Farmers' Market
- Ron Laurie – Global Delights
- Rod MacRae – Food Policy Consultant
- Elsie Herrle and Trevor Herrle-Braun – Herrle's Country Farm Market
- Molly Hutchinson – Crystal's Tearoom
- Harry Cummings and Don Murray – Harry Cummings and Associates

Commodity representatives from the beef, pork, dairy, chicken, egg, grains, apple, carrot, tomato, potato, and strawberry sectors provided important insights into local and provincial production trends.

Supermarket and convenience store staff was very helpful in responding to general inquiries related to identifying product place of origin.

Representatives with major food processing/packaging companies including Maple Leaf, Cargill Foods, Quaker Oats Canada, Canada Bread, Thompson's Ltd., Pine River Cheese and Butter Cooperative, Gray Ridge Eggs, Burnbrae Eggs, OK Eggs, ED Smith, Martin's Family Fruit Farm, Golden Town Apple Products, Dominion Farm Produce, and Humpty Dumpty Snack Foods Inc. provided important information on the different locations they source their agricultural products from. Dairy Farmers of Ontario was very helpful in identifying the various processing plants where Waterloo Region dairy farmers ship their milk.

The researchers wish to thank the supporters and participants who made the Food Flow Study possible.

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Abbreviations

CPO	Chicken Producers of Ontario
CEMA	Canadian Egg Marketing Agency
DFO	Dairy Farmers of Ontario
EPAC	Elmira Produce Auction Cooperative
OAG	Ontario Apple Growers
OCA	Ontario Cattlemen's Association
OEP	Ontario Egg Producers
OMAFRA	Ontario Ministry of Agriculture, Food and Rural Affairs
OWPMB	Ontario Wheat Producers' Marketing Board

Region of Waterloo Food Flow Analysis Study

1.0 INTRODUCTION

1.1 Background

Over the past two years, the Region of Waterloo Public Health has been mapping and investigating aspects of the food system in Waterloo Region with a long term vision of improving food availability and food practices among residents, in order to reduce diet-related disease rates.

The following studies have been completed:

- ***Growing Food and Economy Study*** – provides a broad view of the food economy – “from field to plate” in Waterloo Region, concluding that our food economy is large and vibrant, and that opportunities exist for enhancing it (Harry Cummings and Associates. Oct. 2003).
- ***A Glance at Access to Food*** – describes the affordability and availability of food across the Waterloo Region (Region of Waterloo Public Health. Sept. 2004).
- ***The Rural Health Study*** – describes health from the perspective of rural residents and identifies stress experienced by farmers in the Region as an important health issue on smaller family farms (Region of Waterloo Public Health. March 2003).
- ***Local Food Buying Study*** – describes attitudes and intentions toward buying food grown and processed in the Region (Region of Waterloo Public Health. Feb. 2004).
- ***A Glance at Diet, Weight and Diabetes*** – describes the linkage between diet and these two conditions (Region of Waterloo Public Health. Oct. 2004).

With the completion of this foundation research, Public Health initiated the Farms that Sell Locally Viability Plan in the Fall of 2004 to identify supports and barriers for farmers selling food locally (Region of Waterloo) in order to develop a plan for increasing local food production, processing, and consumption. The plan consists of five interrelated studies including:

- Food Flow Study
- Optimal Nutrition Environment Scenario (ONE)
- Food Miles Study
- The Marketing of Buy Local! Buy Fresh!
- Redundant Trade Study (RT)

An advisory committee was formed to provide input into each study’s process, to provide links to specific contacts and sources of information, and to ground the work in the experiences of farmers, processors, and retailers in the local food system.

These five studies were reported on together in an abbreviated form in a paper entitled “Toward a Healthy Community Food System for Waterloo Region”. More detailed stand-alone reports, such as this one, were also written for each study. The following report describes the Food Flow Study.

In general terms, the purpose of the Food Flow Analysis Study is to track the flow of food into and out of Waterloo Region. More specifically, the Food Flow Study attempts to answer the following question:

- What percentage of food that is consumed in the Region of Waterloo has been grown, raised, and/or processed in the Region?

In December 2004, the Region engaged the consulting firm of Harry Cummings and Associates (HCA) to provide the requested services. In developing a methodology to answer the research question, HCA worked closely with the Farms that Sell Locally Advisory Committee. The role of the Committee was to provide input and advise to Public Health Staff and other researchers working on the other interrelated studies noted above. Stakeholders were appointed to the Advisory Committee by Region of Waterloo Public Health. The Committee was comprised of representatives from a variety of stakeholder groups including:

- Foodlink Waterloo Region
- Waterloo Federation of Agriculture
- Ontario Ministry of Agriculture and Food and Rural Affairs
- Agricultural Adaptation Council
- Farmers’ Markets
- Food Policy Consultant
- Agriculture Sector Consultant
- Region of Waterloo Public Health
- Region of Waterloo Planning, Housing and Community Services
- Food retailers

1.2 Structure of the Report

The Food Flow Analysis report is divided into four chapters. Chapter 2 outlines the research methodology used in the developing the report’s findings and conclusions including an explanation of the approach and an overview of the different data collection techniques used. Chapter 3 presents the results from the study while Chapter 4 presents the conclusions. An annotated bibliography is presented in Appendix A. The bibliography builds on the literature review that was initially established by the Region of Waterloo Public Health. The survey instruments that were developed for the study are presented in the Appendices.

2.0 METHODOLOGY

2.1 Introduction

The research methodology for the Food Flow Analysis Study was developed by HCA in consultation with the Advisory Committee and in reference to the project goals outlined in the RFP. The methodology was also informed by HCA's knowledge and experience working on assignments in food related sectors and the Region of Waterloo.

The research design uses a mixed methodology consisting of document/data review, key informant interviews, and site observation surveys. Combining different approaches is useful in triangulating results. The concept of triangulation is based on the assumption that any bias inherent in particular data sources, investigator, and method will be neutralized when used in conjunction with other data sources, investigators, and methods.

The research methodology consists of the following elements:

- Data/literature review
- Survey of commodity group representatives
- Development of Region of Waterloo Food Basket
- Survey of supermarkets and convenience stores
- Survey of food processors
- Data analysis and report writing

The following sections of the report provide specific details on the above research methods.

2.2 Review of Agricultural Production in the Region of Waterloo

As a first step in assessing local consumption of locally grown agricultural products, HCA conducted a review of agricultural production in the Region of Waterloo. A profile of the type and quantity of agricultural production in the Region was developed using data from the 2001 Census of Agriculture and information contained in recent studies (e.g. Growing Food and Economy Study, 2003). HCA also prepared an annotated bibliography.

2.3 Survey of Commodity Group Representatives

A survey of local commodity group representatives was conducted to confirm/update the 2001 census data. This included representatives from the following sectors: dairy, beef, pork, poultry and egg, wheat, apples, carrots and strawberries. Commodity representatives were identified with the assistance of the Advisory Committee.

As part of the survey, commodity representatives were asked to identify:

- general trends/challenges in agricultural production as well as trends/challenges specific to the Region
- assessment of the capacity of the processing/packaging industry in the Region to meet the needs of local producers
- assessment of producer reliance on processors/packagers located outside the Region
- identification of major processors/packagers located in the Region and the surrounding area
- general trends/challenges in the processing/packaging sector as well as trends/challenges specific to the Region

The commodity representative survey questionnaire is presented in Appendix B. The commodity group representative surveys were conducted between April and June 2005. Survey data was compiled in a spreadsheet for analysis.

2.4 Development of the Region of Waterloo Food Basket

In developing a manageable approach for tracing and measuring the availability of locally grown foods in the Region of Waterloo, it was decided to focus on a select group of some of the more commonly purchased food items that would represent the Region of Waterloo Food Basket. The food basket concept is based on Health Canada's National Nutritious Food Basket (NNFB), 1998. The NNFB consists of 76 food items, organized into 11 categories and represents "a nutritious diet which is consistent with the food purchases of ordinary Canadian households." (HRDC 2003)

The purpose of the Region of Waterloo Food Basket is to identify a small group of locally produced food items (15 to 20), which can be traced from retailers (e.g. supermarkets and convenience stores) back to processors and producers.

Selection criteria was identified by the Advisory Committee and used to determine which food items would be included in the Region of Waterloo Food Basket. The following selection criteria was adopted by the Advisory Committee:

1. The food items should be weighted by the consumer food expenditure patterns for medium sized cities in Ontario.⁷
2. The Region of Waterloo Food Basket should contain food items that are regularly purchased/consumed by most age, ethnic and income groups and selected from Health Canada's National Nutritious Food Basket.
3. Each food item should have a defined retail weight or unit.

⁷ Consumer food expenditure data for Waterloo Region was unavailable. The researchers used food expenditure data for medium sized cities in Ontario (population 240,000 to 499,999) as an alternate.

4. The Region of Waterloo Food Basket should contain at least one item from each of the four food groups as presented in Canada's Food Guide (grain products, vegetables and fruit, milk products, and meat and alternatives).
5. All items selected for the Region of Waterloo Food Basket should be foods that are currently grown or raised in Waterloo Region.
6. Processed foods and snack foods can be included in the Region of Waterloo Food Basket, however they must feature major ingredients that are currently grown or raised in the Region of Waterloo.

Data from the 2001 Food Expenditure survey was reviewed alongside 2001 Agricultural Census data for the Region of Waterloo. This provided the Advisory Committee a better understanding of the types of foods grown in the Region relative to food expenditure patterns.

Using the data sources and the selection criteria noted above HCA developed a draft version of the Region of Waterloo Food Basket. The Food Basket was reviewed and finalized by the Advisory Committee.

The food items selected for the Region of Waterloo Food Basket are presented in Table 2.1. These food items reflect the major food categories identified in the Food Expenditure Survey and Health Canada's National Nutritious Food Basket and represent agricultural products currently grown or raised in Waterloo Region (in significant quantity). The food items in the Waterloo Region Food Basket represent 43% of the total food items generally purchased by consumers on a regular basis.

Table 2.1: Region of Waterloo Food Basket

Food Basket Item	Percentage of Weekly Expenditure per Household on Food Purchased from Stores Locally and on Day Trips for Ontario Medium Sized City ^a (Population = 250,000-499,999)
Meat	
1 Ground beef, medium	Beef = 5.8%
2 Pork chops, loin	Pork = 2.6%
3 Chicken breast, boneless, skinless	Poultry = 5.4%
4 All beef wieners	Other meat preparations = 7.5%
5 Sliced cooked ham	Other meat preparations = 7.5%
Dairy Products and Eggs	
6 2% milk	Milk = 4.9%
7 Fruit yogurt, 0% fat	Yogurt = 1.2%
8 Cheddar cheese, medium	Cheese = 4.8%
9 Grade A large white eggs	Eggs = 1.1%
Bakery and Cereal Products	
10 Bread, multigrain	Bread = 2.7%
11 Whole grain crackers	Crackers and crisp bread = 0.9%
12 Oatmeal, regular/quick cooking	Breakfast cereal = 2.1%
13 Corn flakes	Breakfast cereal = 2.1%
Fruits	
14 Apples, fresh	Fresh apples = 0.8%
15 Apple juice, pure, vitamin C added	Apple juice = 0.3%
16 Strawberries, fresh	Fresh strawberries = 0.4%
17 Strawberry jam	Jams, jellys, etc. = 0.3%
Vegetables	
18 Carrots, fresh	Fresh carrots = 0.6%
19 Tomatoes, fresh	Fresh tomatoes = 0.9%
Other food materials and preparations	
20 Potato chips, regular flavour	Potato chips and similar products = 1.1%
Total percentage of food purchases	43%

^a Source: Statistics Canada, Food Expenditure in Canada, 2001, Cat. No. 62-554-XIE. Release Date: February 21, 2003.

2.5 Survey of Supermarkets and Convenience Stores

Using the Region of Waterloo Food Basket as a reference point, HCA conducted site observational surveys in supermarkets and convenience stores to determine the availability of the Food Basket items.⁸

⁸ Restaurants, cafeterias, institutions, etc. were not included in the survey. While this is a limitation of the study, the researchers believe that store based food items represent an adequate indication of food availability given that 71% of all food purchases in Ontario medium sized cities occur in retail outlets such as supermarkets and convenience stores (Statistics Canada, Food Expenditure in Canada, 2001, Cat. No. 62-554-XIE. Release Date: February 21, 2003).

Supermarkets and convenience stores were selected at random using a database of retailers compiled by the Region of Waterloo. There are approximately 25 supermarkets⁹ and 250 convenience stores¹⁰ (not including gas stations) in the Region of Waterloo.

While supermarkets account for just under 10% of the total number of food retail stores in the Region they account for 86% of the total food purchased by consumers (store bought food only).¹¹ For this reason it was decided to include a larger proportion of supermarkets in the survey.

A total of 16 supermarkets were surveyed. The randomized selection process ensured that the 16 supermarkets were divided proportionally among the major supermarket chains (e.g. Zehr's Markets, Food Basics, Sobeys) and the smaller chains found in the Region (e.g. Knechtel's, Price Chopper, IGA, etc.). The sampling procedure also ensured that the 16 supermarkets were distributed across the major urban centres (Kitchener, Waterloo, Cambridge) and smaller communities (e.g. St. Clements, New Hamburg, etc.).

A total of 25 convenience stores were surveyed. The randomized selection process ensured that the 25 convenience stores were divided proportionally among the major convenience chains (e.g. Little Short Stop, Farahs Food, etc.) and the smaller chains and independent stores (e.g. Mac's, 7-Eleven, Winks, Daisy Mart, etc.). The sampling procedure also ensured that the 25 stores were distributed across the major urban centres and smaller communities of the Region.

The following information was recorded during each store visit:

Store profile:

- name, type and location/address of store and hours of operation
- date and time of day the survey was conducted

Food item profile (for each item in the Region of Waterloo Food Basket):

- description of the food item including the purchase unit and price
- brand name and processor/packager name and address/website
- product place of origin (if available)

⁹ This includes 13 Zehr's Markets, 5 Food Basics, 5 Sobeys, and 2 Price Chopper stores located in Kitchener, Waterloo and Cambridge. Smaller communities throughout Waterloo Region including St. Clements, New Hamburg, Wellesley, New Dundee and Elmira are serviced by a variety of Grocery Store chains including Knechtel's, Dutch Boy, Commisso's and Foodland.

¹⁰ Several convenience chains have a large number of stores in Waterloo Region including Little Short Stop (29 stores), Farahs Food Mart (15), and Becker's (8). Waterloo Region also features a number of convenience chains with 5 or fewer stores including Mac's Milk, Big Bear Food Mart, 7-Eleven, Daisy Mart, Stop 2 Shop, and Winks. Approximately 1/3 of all convenience stores in Waterloo Region are independent stores.

¹¹ Based on total weekly food expenditure in supermarkets and convenience stores for Ontario medium sized city, population = 250,000-499,999. Statistics Canada, Food Expenditure in Canada, 2001, Cat. No. 62-554-XIE. Release Date: February 21, 2003.

Purchase units were determined based on standards used in Health Canada's National Nutritious Food Basket and the results of the store survey pre-test (see below for additional details), which identified some of the more common purchase units currently found in supermarkets and convenience stores.

Table 2.2: Region of Waterloo Food Basket and Target Purchase Unit

	Food Basket Item	Target Purchase Unit
	Meat	
1	Ground beef, medium ^a	To be determined in store (price per lb or kg)
2	Pork chops, loin ^b	To be determined in store (price per lb or kg)
3	Chicken breast, boneless, skinless ^c	To be determined in store (price per lb or kg)
4	All beef wieners	450gm
5	Sliced ham	175gm
	Dairy Products and Eggs	
6	2% milk	2 litre carton
7	Fruit yogurt, 0%BF	150-175gm ^d
8	Cheddar cheese, medium	200-227gm ^e
9	Grade A large white eggs	1 dozen
	Bakery and Cereal Products	
10	Bread, multigrain	675gm
11	Whole grain crackers	200-250gm ^f
12	Oatmeal, regular/quick cooking	1kg
13	Corn flakes	525gm
	Fruits	
14	Apples, fresh	3 lb bag
15	Apple juice, pure, vitamin C added	1.36 litre can
16	Strawberries, fresh	454gm carton ^g
17	Strawberry jam	500ml
	Vegetables	
18	Carrots, fresh	2 lb bag
19	Tomatoes, fresh	To be determined in store (price per lb or kg)
	Other food materials and preparations	
20	Potato chips, regular flavour	245-250gm

^a Hamburger patties were used as a substitute for ground beef in convenience stores.

^b Pork wieners were used as a substitute for pork chops in convenience stores.

^c Chicken patties were used as a substitute for boneless, skinless chicken breasts in convenience stores.

^d The original target purchase unit for this product was 450gm. After pre-testing the survey instrument it was determined that there was greater availability of this product in the 150-175gm sizes in both supermarkets and convenience stores.

^e The original target purchase unit for this product was 250gm. After pre-testing the survey instrument it was determined that there was greater availability of this product in the 200-227gm sizes in both supermarkets and convenience stores.

^f The original target purchase unit for this product was 450gm. After pre-testing the survey instrument it was determined that there was greater availability of this product in the 200-250gm sizes in both supermarkets and convenience stores.

^g The target purchase unit for this product was determined after pre-testing the survey instrument.

Given that supermarkets and convenience stores typically feature multiple brands of food products, HCA applied a standardized survey approach in selecting each of the individual food items from the Region of Waterloo Food Basket. Surveyors were asked to:

1. Locate the display case(s)/area(s) featuring the desired food item. In the event there is more than one display case featuring the desired food item, select the display case/area that features the greatest volume of the food item. Food items presented in special 'end of isle' food displays are not to be selected unless they represent the only available food item;
2. Starting from the right hand side of the display case, the surveyor will select the first item that fits the description of the desired food item; and
3. Once the food item is selected from the display case, the surveyor will record the relevant product information (i.e. brand name, processor/packager name and address, place of origin, etc.). Depending on the availability of information on the product label, it may be necessary for the surveyor to speak with store staff (i.e. meat manager, fresh produce manager, etc.).

HCA conducted a pre-test of the store survey in June 2005 to ensure that the tool was sensitive to product variation between supermarkets and convenience store and to ensure that the methodology could be consistently applied across different stores. A copy of the store survey instrument is presented in Appendix C.

The supermarket and convenience store surveys were completed between July 18 and August 19, 2005. Survey data was compiled in a spreadsheet for analysis.

2.6 Review of Farmers' Markets and Produce Auction

HCA conducted a site observational survey at two Farmers Markets (Cambridge and Kitchener) and the Elmira Produce Auction Cooperative (EPAC). The Region of Waterloo Food Basket was used as a guide to determine the availability of food items at these locations.

2.7 Survey of Food Processors/Packagers

HCA used the information obtained from the store survey to compile a list of processors. The processors were ranked in terms of the frequency their products were identified in supermarkets and convenience stores. The top ranking processors associated with each food item were selected for interviews.

HCA obtained contact information for the processors from the product label and by reviewing and researching company websites (where available). In many cases the processor contact information only identified the company headquarters and not the

actual processing facility. HCA initiated contact with the companies, explained the nature of the study, and requested to speak with the most appropriate company representative. Once the appropriate company representatives were reached, HCA attempted to determine the extent to which the relevant agricultural products from the Region of Waterloo was used in the manufacturing process.

Over 20 processors/growers/packers were contacted including:

- Cargill Foods, Sun Valley Foods
- Better Beef
- Schneider Foods
- Maple Leaf Pork, Poultry, and Consumer Foods
- Maple Lodge Farms
- Parmalat Canada
- Neilson Dairy
- Dairy Farmers of Ontario
- Pine River Cheese
- Kraft Canada
- Gray Ridge Eggs
- Burnbrae Eggs
- OK Eggs
- Canada Bread
- Weston Bakeries
- Dare Foods Ltd.
- Quaker Oats
- Thompson's Ltd.
- Kellogg's
- Dominion Farm Produce
- Martin's Family Fruit Farm
- Golden Town Apple Products
- E.D. Smith
- JM Smucker's
- Frito-Lay
- Humpty Dumpty Snack Foods

The processor survey was conducted between August 3 and September 2, 2005. A copy of the food processor survey instrument is presented in Appendix D.

The next chapter of the report presents the research findings starting with a brief overview of the agriculture sector in the Region of Waterloo.

3.0 RESULTS

This chapter of the report presents the research findings for the Region of Waterloo Food Flow study. It provides a general overview of agricultural production and industry trends in the Region of Waterloo based on an analysis of census data and information provided by agricultural commodity representatives. It also provides the results of the site observational surveys (supermarkets, convenience stores, farmers' markets, produce auction) and the survey of key informants in the food processing sector.

3.1 Agriculture in the Region of Waterloo

This section of the report presents a brief overview of the Agriculture Sector in the Region of Waterloo. Data for the analysis were drawn from the Census of Agriculture (Statistics Canada), Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA) and key informant interviews with commodity representatives. A more comprehensive review of agriculture in the Region, including a review of farm activity at the individual township level is available in the *Growing Food and Economy* economic impact study (Harry Cummings and Associates, October 2003).

3.1.1 Profile of Agricultural Production in the Region of Waterloo

In 2001, the Region of Waterloo reported a total of 1,444 farms¹² and 225,800 acres of farmland. The average farm size in the Region is 156 acres. Farms in the Region are considerably smaller than the provincial average of 226 acres (Statistics Canada 2001).

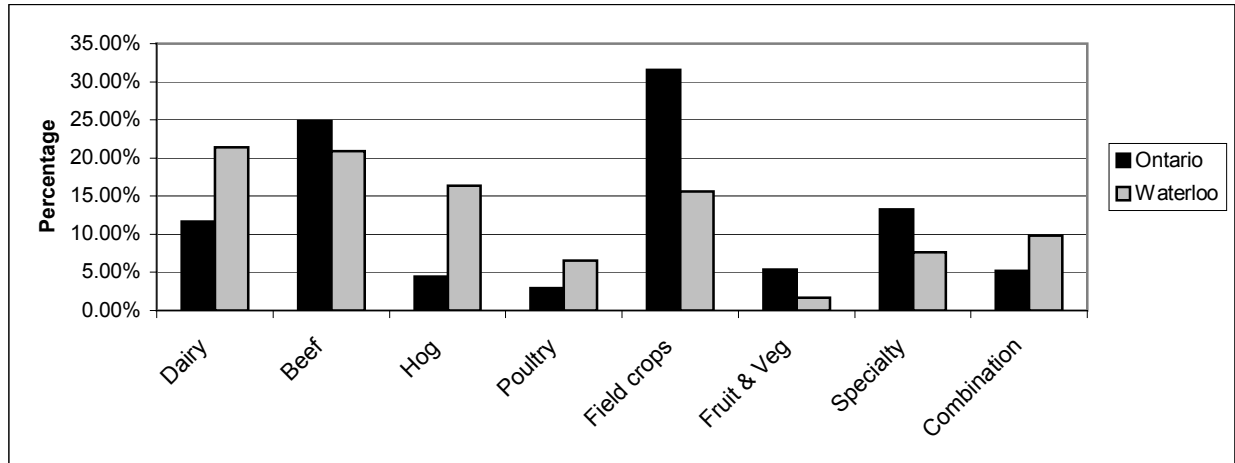
Farmland in the Region is used predominantly for crop production. In 2001, 80% of the total farmland base was used for crop production. A small percentage of farmland was reported as pastureland while just over 10% of the farmland base was used for other purposes (e.g. Christmas tree production, farm woodlots, land occupied by farm buildings/yards etc.).

The Region of Waterloo features a variety of different farm types. Dairy and beef are the most common type, each accounting for 21% of all farms in 2001. Hog farms represent the next largest share of farms at 16% followed by field crop farms at 15%. Approximately, 66% of all farms in Waterloo Region are primarily involved in livestock production compared to 45% in Ontario.

¹² Statistics Canada defines a census farm as an agricultural operation that produces at least one of the following products intended for sale: crops (field crops, tree fruits or nuts, berries or grapes, vegetables or seed); livestock (cattle, pigs, sheep, horses, exotic animals, etc.); poultry (hens, chickens, turkeys, exotic birds, etc.); animal products (milk or cream, eggs, wool, fur, meat); or other agricultural products (greenhouse or nursery products, Christmas trees, mushrooms, sod, honey, maple syrup products).

Graph 3.1 shows a comparison of the different farm types in Ontario and the Region of Waterloo. The Region features a higher percentage of dairy, hog, poultry and livestock/crop combination farms relative to the provincial profile.¹³

Graph 3.1: Farm Types by Percentage in Ontario and the Region of Waterloo, 2001

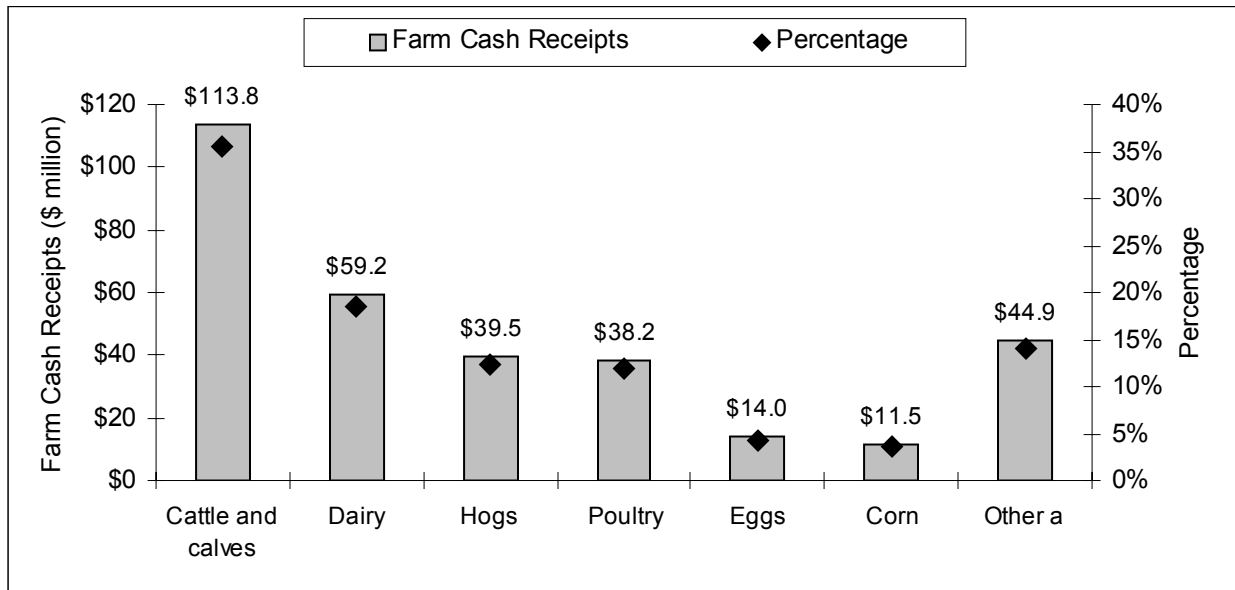


Source: Statistics Canada, 2001.

In terms of the total value of farm production, the Region of Waterloo reported \$380 million in total gross farm receipts in 2000. The top five ranking agricultural commodities in the Region of Waterloo in 2000 in terms of total gross farm receipts include cattle and calves (\$113.8 million), dairy (\$59.2 million), hogs (\$39.5 million), poultry (\$38.2 million), and eggs (\$14 million). The value of the livestock sector is significant in the Region of Waterloo accounting for approximately 80% of the total gross farm receipts generated in 2001 (see Graph 3.2).

¹³ 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. Farm type is based on farms reporting total gross farm receipts of \$2,500 or more. Field Crop farms include wheat, grain, oilseed and other field crops. Miscellaneous Specialty farms includes greenhouse flower and plant production, bulbs, shrubs, trees, sod, ornamentals, mushroom houses, honey production, maple syrup production, deer, mink, etc.

Graph 3.2: Farm Cash Receipts for Main Agricultural Commodities, Waterloo Region, 2001



^a 'Other' includes other livestock types including sheep and lambs and other crops including wheat, soybeans, dry white beans, oats, barley, hay, green peas, green beans, potatoes, apples, raspberries, strawberries, etc

Source: 2001 Census of Agriculture, Statistics Canada and Policy and Program Branch, OMAFRA

Table 3.1 presents the actual quantity of agricultural commodities produced in the Region in relation to the food items selected for the Region of Waterloo Food Basket. These figures represent the most current information available from OMAFRA, Statistics Canada and data provided by various commodity representatives.

Table 3.1: Region of Waterloo Agricultural Production for Food Basket Items

Agriculture Sector	Year	Production
Dairy	2004	111,529 kilolitres of milk
Beef	2004	85,700 cattle and calves ^a
Pork	2004	182,850 pigs (all weights combined) ^b
Chicken	2001	20 million kg of broilers, roasters, Cornish production
Eggs	2004	10.4 million dozen eggs
Grain corn	2004	123,400 tonnes of grain corn (from 47,900 acres seeded and 42,200 acres harvested)
Winter wheat	2004	25,000 tonnes of winter wheat (from 13,000 acres seeded and 13,000 acres harvested)
Spring wheat	2004	3,200 tonnes of spring wheat (from 2,400 acres seeded and 2,400 acres harvested)
Oats	2004	3,000 tonnes of oats (from 2,300 acres seeded and 2,300 harvested)
Apples	2003	2.9 million lbs. of apples (from 138 acres harvested)
Potatoes	2003	4.6 million lbs. of potatoes (from 250 acres harvested)
Carrots	2001	1.1 million lbs. of carrots (from 28 acres seeded) ^c
Field tomatoes	2001	190,000 lbs. of tomatoes (from 11 acres seeded) ^d
Strawberries	2003	345,000 lbs of strawberries (from 75 acres, bearing area)

^a Actual inventory of cattle and calves taken from the 2001 Census of Agriculture.

^b Actual inventory of hogs taken from the 2001 Census of Agriculture.

^c This estimate is based on the seeded area of carrots in the Region of Waterloo for 2001 and the 4-year average yield for carrots in Western Ontario, 1998-2002.

^d This estimate is based on the seeded area of tomatoes in the Region of Waterloo for 2001 and the 4-year average yield for tomatoes in Western Ontario, 1998-2002.

Source: Ontario Ministry of Agriculture, Food and Rural Affairs, 2001-2004. Statistics Canada, Census of Agriculture, 2001.

The next section of the report presents the survey findings from the key informant interviews that were conducted with various agricultural commodity representatives.

3.1.2 Trends and Challenges Related to Agricultural Production and Processing in the Region of Waterloo

A survey of local commodity group representatives (Appendix B) was conducted to confirm/update the 2001 census data. Commodity representatives were identified with the assistance of the Advisory Committee. Representatives from the following sectors responded to the survey: beef, pork, chicken, egg, dairy, wheat, tomatoes, carrots, apples, and strawberries.

Commodity representatives were also asked to identify general trends/challenges in agricultural production and provide an assessment of the capacity of the local processing/packaging industry to meet the needs of local producers. Information contained on provincial commodity websites was also reviewed for this section.

3.1.2.1 Beef Production

The Ontario Cattlemen's Association (OCA) is the provincial lobby organization for the beef producers. OCA is a grass roots organization governed by its members. Member participation is encouraged through 50 county/district Cattlemen's Associations in the province. The OCA constitution provides that any person who has paid an OCA license fee (check-off) deduction is a member of the OCA and the affiliated county or district branch in which he/she resides.

Under the Beef Cattle Marketing Act, a compulsory fee of \$2.25 per head sold by cattle producers is payable to the OCA to fund its programs and activities. Packing plant operators, auction market operators and livestock dealers purchasing cattle by private treaty are required to deduct the OCA fee from the proceeds payable to the seller and remit the fees to the OCA (www.cattle.guelph.on.ca/index.html).

Of the total fees collected, approximately 31% is contributed to the beef advertising programs which are coordinated by the Beef Information Centre, a branch of the national organization, the Canadian Cattlemen's Association. The balance of this amount is used to provide members with such services as:

- market information and analysis;
- production and marketing research;
- a regular industry publication - Ontario Beef;
- county promotional support;
- lobbying on issues at the provincial and national level;
- support for the Canadian Cattlemen's Association and other commodity/livestock interest groups and
- administration of OCA.

Trends and Challenges in Production

Beef producers, and their organizations such as the Beef Information Centre, do not set the price of beef. Beef producers produce the raw product and then sell that product which ultimately becomes packaged beef in the retail meat case.

Up until recent years Canada exported over half of its total beef production. In May 2003 most export markets for Canadian beef and cattle were closed when Canada's inspection and surveillance system diagnosed a single case of Bovine Spongiform Encephalopathy (BSE) in a Canadian cow. As a result of this single case of BSE, Canadian beef producers lost over half of their markets. In 2004, Canada exported 35% of the total beef and cattle produced in Canada compared to 60% in 2002 (Statistics Canada, Canfax, AAFC 2004). Because of the current trade situation the Canadian market now has a surplus of cattle, which severely impacts the price farmers receive for their cattle. Prices for finished cattle remain well below what they were prior to the BSE announcement (www.beefinfo.org/).

In 2002, the last normal year of trade for Ontario beef farmers, beef was the second largest commodity in terms of annual farm gate receipts with a value of approximately \$1.2 billion. Beef exports from Ontario to the U.S.A., in 2002, were valued at \$354 million in live cattle and an additional \$292 million in beef products. Since May 2003, cattle farmers in Ontario have lost over \$500 million as a result of the border closure (www.cattle.guelph.on.ca/index.html).

In March 2005 the United States reopened its border to live feeder and slaughter cattle under 30 months of age however the border remains closed to beef from older animals.

A representative of the beef sector in the Region on Waterloo reported that many farmers in the Region will likely continue to produce beef but they may diversify or expand into other farming activities.

Linkages Between Producers and Processors

On a five-point scale where 1 = "very poor" and 5 = "excellent", the beef industry representative rated the overall capacity of the processing industry in the Region of Waterloo in terms of its ability to serve the needs of local producers as "very good". The respondent stressed that this assessment is the result of the recent reopening of the Gencor Food Inc. (GFI) processing facility in Kitchener. Additional details on GFI are provided below. The respondent was unsure about the extent to which beef farmers rely on processors located outside the Region of Waterloo.

On a five-point scale where 1 = "not important" and 5 = "very important", the representative indicated that having local beef processing facilities located in the Region is important (4).

Trends and Challenges in the Processing Industry

A recently completed Senate Committee report on Cattle Slaughter Capacity in Canada (May 2005) provides a detailed overview of the processing industry leading up to the BSE announcement. Some of the major features of the industry as outlined in the report include:

- The meat packing business has been characterized by low margins, which have led to the consolidation of the industry. Even today in Canada, four facilities are responsible for processing close to 80% of the Canadian production of fed cattle, and two facilities process 90% of cull animals. According to the Canadian Meat Council, this consolidation, by allowing processors to increase efficiency and ultimately profitability, has enabled the Canadian industry to compete internationally.
- Prior to the discovery of BSE in May 2003, trade of live cattle and beef products occurred on a North American basis. In 2002, approximately half of the cattle sold in Canada were exported as either live animals or meat and the majority of the sales activity was destined for the United States.
- The cattle industry on both sides of the border became increasingly vulnerable as the packing industry developed into an integrated North American trade. While the size of the U.S. cattle herd declined by 8% over the past nine years, a growing supply of Canadian cattle allowed U.S. slaughter plants to continue operating at capacity. At the same time, under-capacity for slaughtering in Canada made Canadian beef producers increasingly dependent on American slaughterhouses.
- The border closure resulted in an immediate and substantial decline in the available supply of cattle for U.S. packers and an oversupply in Canada where cattle production greatly exceeded existing slaughter and processing capacity.
- In Canada, the packing industry responded to the new market conditions, principally by building domestic slaughter capacity. In 2004, capacity growth was driven in part by expansion of existing operations through the addition of extra shifts, Saturday kills, or routine overtime. In addition, Gencor Foods Inc. in Kitchener, Ontario, and Blue Mountain Packers in British Columbia reopened slaughter plants. As well, new packers entered the market. Notably, Atlantic Beef Products Inc., commenced operations in a new plant located in Prince Edward Island in December 2004.
- The Canadian slaughter rate in both federally and provincially inspected facilities was just over 3.9 million head in 2004; this was the highest rate since 1978, when 4 million head were processed.
- Slaughter capacity continued to grow during the first half of 2005 as the newly opened firms completed their set-up phase and kills expanded to maximum plant capacity. In addition, Tyson Foods and Cargill Limited both announced significant expansions. Depending on utilization rates within the plants, slaughter in 2005 is projected to range between 4.2 and 4.6 million head, an increase of between 21% and 33% compared to pre-BSE levels (2002). Other proposals currently under discussion could result in additional capacity over the next two

years, facilitating an annual slaughter target of 5 million animals by 2006. This would represent an increase of over 40% compared to the 2002 level.

- In the United States, the impact of border restrictions was greater in regions where packing plants relied heavily upon Canadian cattle imports for capacity utilization. Canadian imports represented 30% of cattle slaughter in Utah, 19% in Washington and 10% or more in Minnesota, Michigan and New Jersey. As a result, many U.S. slaughter plants are facing financial difficulties, and have stopped production and laid-off workers.
- The U.S. border remains closed to all live cattle and meat from animals older than 30 months but it's expected that the border will eventually reopen to all age classes. For many industry stakeholders, confronting U.S. competition when the border fully reopens has become the next major challenge for the industry. At that time, it is expected that U.S. packers will try to regain their lost share of the Canadian cattle supply by offering more competitive prices to producers, thus making it less profitable to process cattle in Canadian plants.
- Industry stakeholders believe that returning to the same dependence on exports of live cattle is not an option for the long-term sustainability of the beef industry, and they are examining options for sustaining the recent increased processing capacity in Canada.

As noted above, one of the outcomes from the BSE crisis and the sudden under-capacity of Canadian processing facilities, was the reopening of some processing facilities including Gencor Foods Inc. (GFI). Gencor purchased the former MGI facility in Kitchener to provide an Ontario solution to the cull cow crisis resulting from export bans, and to establish an integrated link in the meat industry from the farm gate to the consumer's plate (www.gencorfoods.ca/index.asp). GFI is a producer-owned processing plant, which has a target goal of processing 300 head per day or 1,500 per week (Ontario Beef, October 2004).

Availability of Locally Grown Foods

The beef industry representative noted that it's difficult and costly for large scale processing facilities to maintain the local identity of beef once it reaches the de-boning table. It was suggested that small-scale abattoirs still possess this ability but the capacity of these facilities is insufficient to handle all of the local production. The respondent reported that many of the smaller abattoirs are generally at capacity and may not be interested in expanding as the marketplace is still adjusting from the border closing and uncertainties remain about how processors in the United States will react when the border reopens to cull cows.

3.1.2.2 Pork Production

Ontario Pork is the provincial lobby organization for the pork industry and represents approximately 3,600 producers who market hogs in the province of Ontario. The

organization represents pork producers in many areas, including hog marketing, consumer education, research, government representation, environmental issues, animal care and food quality assurance. The organization is also responsible for arranging for payment of hogs and, working cooperatively with the processors, and arranging the trucking. There are 29 county or regional pork producer associations. The activities of the county groups include the promotion of pork on a local level (www.ontariopork.on.ca).

Some facts about the Ontario pork industry in 2004 as provided on the Ontario Pork website:

- 45% of Ontario's pork producers market less than 500 hogs per year.
- Pork producer numbers, like all farm numbers, have continually declined, down by 80% from the highest number of 20,354 pork producers in 1979.
- The largest numbers of producers have decreased from the '0-50' hogs per year marketing range as today's farmers tend to specialize in one commodity, rather than the mixed farming of the past.
- Ontario's share of the North American hog market was 3.7%.
- Ontario exported 2.1 million weanling pigs (pigs weighing less than 50 kg) in 2003, up 32% from 2002.
- Ontario meat processors handled 78.5% of all hog sales; while U.S. purchased 10.5% and Quebec 11%.
- Canada imported 86.8 million kg of pork, up 8.9% from 2003. Canada exported 960 million kg of pork, steady with 2003.
- The U.S. was our major pork export market with a 44% share, Japan at 23%, Mexico 8%, China 4%, & other countries 21%.

Trends and Challenges in Production

A representative with Ontario Pork noted that approximately 50% of the pork produced in Canada is exported and 50% is consumed in Canada. It's believed the trend toward increased exports will continue since consumption of pork in Canada will probably not change greatly.

The respondent identified several challenges that the pork industry in Ontario is currently facing including environmental regulations, urban encroachment into prime agricultural regions, profitability, and the ability of new farmers to enter the industry. It was suggested that current hog production levels in the Region of Waterloo might decline as a result of these challenges and pressures.

Linkages Between Producers and Processors

On a five-point scale where 1 = "very poor" and 5 = "excellent", the hog industry representative rated the overall capacity of the processing industry in the Region of Waterloo in terms of its ability to serve the needs of local pork producers as "very poor".

On a five-point scale where 1 = "never" and 5 = "always", the representative indicated that hog farmers rely on processors located outside the Region of Waterloo "most of the time".

The respondent declined to comment on the importance of having local hog processing facilities located in the Region of Waterloo.

Local and regional pork processors identified by the industry representative include Reist and Weber (St. Jacobs), Conestoga Meats (Breslau), Maple Leaf Foods (Mississauga), and Quality Meats (Burlington).

Trends and Challenges in the Processing Industry

Trends in the processing industry are linked to consumer trends (i.e. busy lifestyles and less time to prepare meals). Consumers now require more case ready products or pre-cooked products. Supermarkets have moved away from cutting meat in-store and are increasingly relying on processors to ship case ready products, which can immediately go to the store display case. The respondents noted that the days of the small butcher are gone and consumers have less knowledge about preparing and cooking various cuts of meats.

The hog industry representative noted that the profile of the processing industry in the Region of Waterloo has changed in recent years as a result of inspection requirements. Approximately 4 small processors have ceased to operate in the Region over the last 5 to 7 years, which has resulted in reduced slaughter capacity in the Region.

Availability of Locally Grown Foods

Collectively, pork producers are interested in increasing pork sales across Ontario. However, as noted by the industry representative, Region of Waterloo producers would also be interested in promotional activities that promote locally grown foods in markets and grocery stores.

3.1.2.3 Chicken Production

The chicken industry in Canada operates under a supply-management system. The production and marketing of chickens in Ontario is controlled through a quota system by the provincial commodity marketing board, Chicken Farmers of Ontario (CFO).

CFO is a farmer-run, non-profit organization representing more than 1,100 Ontario chicken farmers. The CFO Board of Directors consists of nine elected chicken farmers who set policy for all Ontario chicken farmers. CFO is accountable to the Ontario Farm Products Marketing Commission (OFPMC), which is a supervisory body that is part of the Ontario Ministry of Agriculture, Food and Rural Affairs. CFO informs individual producers of the volume of product they can produce and/or market in each production period. The board also sets or negotiates the minimum prices paid to producers by primary processors (www.cfo.on.ca).

Some facts about the Ontario chicken industry in 2004 as provided by CFO and OMAFRA:

- The province of Ontario is the largest producer, processor and consumer of chicken in Canada.
- Approximately 40% of Canada's 2,800 chicken farmers live in Ontario and produce more than 303 million kilograms of chicken meat annually.
- Processors tend to contract with the same producers each production period, those that they have found to be dependable, are able to produce to the individual company's specifications, are close to the processing plant, etc. (www.omafra.gov.on.ca/english/farmproducts/factsheets/allocation.htm).

Trends and Challenges in Production

A representative with CFO noted that chicken production in Ontario has followed consumption patterns. In recent years the production and consumption of chicken (including retail and fast food sector) has increased by 25%. Other major trends associated with the industry include heavier birds that grow faster than before and with less feed requirement. There are also changes related to imports of chicken. Whereas most imports of chicken were US focused the market now has trade agreements with Brazil. No trends specific to the Region of Waterloo were noted.

In terms of challenges, the CFO representative identified several challenges that the Ontario chicken industry is currently facing including farm related legislation and regulations, profitability, international pressures to remove tariffs, and efforts to protect the local industry. According to the respondent one of the greatest obstacles to increasing Ontario production of chickens is that national production allocations result in Ontario being a net importer of chickens, with 33% of chicken being imported.

As for challenges that are specific to the Region of Waterloo, it was noted that urban centres are expanding and coming into closer proximity with established agricultural operations. This is driving up land values and leading to greater complaints from neighbours about farming practices.

Linkages Between Producers and the Processing Industry

On a five-point scale where 1 = "very poor" and 5 = "excellent", the chicken industry representative rated the overall capacity of the processing industry in the Region of Waterloo in terms of its ability to serve the needs of local chicken producers as "fair".

On a five-point scale where 1 = "never" and 5 = "always", the representative indicated that chicken farmers rely on processors located outside the Region of Waterloo "most of the time".

On a five-point scale where 1 = "not important" and 5 = "very important", the representative indicated that having local chicken processing facilities located in the Region is somewhat important (2).

Local and regional chicken processors identified by CFO representative include Schneider Foods (Kitchener), Elmira Poultry (Elmira), Maple Lodge Farms (Norval), Maple Leaf Foods (Mississauga), Sun Valley Foods (London) and Grand River Poultry (Paris).

Trends and Challenges in the Processing Industry

The CFO representative was unable to comment on trends and challenges associated with the processing industry.

Availability of Locally Grown Foods

The Ontario chicken industry is primarily interested in increasing sales across Ontario rather than focusing on any particular region of the province.

3.1.2.4 Egg Production

The Ontario egg industry operates under a supply-management system. The production and marketing of eggs is controlled through a quota system by the provincial commodity marketing board, Ontario Egg Producers (OEP). OEP informs individual producers of the volume of product they can produce and/or market in each production period. The board also sets or negotiates the minimum price paid to producers by primary processors.

OEP is an independent, self-governing farming organization funded entirely by egg producers. OEP represents over 430 egg producers and pullet growers in Ontario who account for 40% of total egg production in Canada, or 200 million dozen eggs annually. OEP administers programs such as the distribution of production, advertising and promotion, agriculture awareness and education, poultry and egg research and development and quality control. Each producer pays a fee on every dozen eggs sold and these funds are used to support the activities of the Ontario and Canadian egg system.

An important function of OEP is the accurate forecasting of annual demand so that production levels can be set to provide an adequate supply of eggs to meet the demand. Demand for eggs is determined by looking at the two markets for the eggs produced in Ontario - the table market and the industrial product market.

OEP has an aggressive marketing and promotion program to stimulate demand which includes consumer advertising, recipe brochures, nutrition booklets for consumers and health professionals, sampling and cooking demonstrations at shows and fairs, publicity, school visits and literature, restaurant promotions and branded promotional items (www.eggsite.com).

Ontario egg producers ship to the grader of their choice, generally the closest one. Graders pay producers the regulated price for all eggs. In Ontario, eggs not required for table use are purchased from the graders by either the Canadian Egg Marketing Agency (CEMA) or OEP and are redirected to processing plants for the industrial

market. Egg processing includes the production of whole egg, albumen and egg yolks in frozen, dried or liquid form. Processed eggs are used in the manufacturing of various foods including mayonnaise, noodles, cake mixes and baked goods. They are also used to make other items such as shampoo, pet foods and adhesives.

The prices for both of these latter transactions are set through formulas. The price paid by processors is based on the landed price of U.S. eggs. Producers pay levies to fund the movement of eggs from the higher-priced table market to the lower-priced industrial market. Historically, the industrial market was viewed as a surplus market but has now evolved to a distinct and increasingly important market. Approximately 78% of the 6.8 billion eggs produced in Canada each year are sold as table eggs. The remaining 22% are processed into liquid, frozen or dried form (Canada's Egg Industry. Agriculture and Agri-Food Canada, October 2001. http://atn-riac.agr.ca/supply/3300_e.htm).

In recognition of this change, CEMA now guarantees processors that they will receive a large percentage of the eggs they require to meet their industrial market needs. If there are not enough domestic eggs to meet the guaranteed level, CEMA will import the additional eggs (www.omafr.gov.on.ca/english/farmproducts/factsheets/allocation.htm).

Trends and Challenges in Production

As noted by representative with OEP, a major trend associated with the Canadian egg industry is the increased number of eggs going to the industrial market for processed foods. Another significant trend is the decline in the total number of egg producers and an industry that is increasingly being managed by fewer producers. The OEP representative was unable to identify any trends that are specific to the Region of Waterloo.

In terms of challenges, one of the major threats to the industry is opening the Canadian market to world trade. As noted by the OEP representative, the Canadian government needs to continue to support supply management and prevent reductions in import quota tariffs. At the local level the respondent indicated that urban growth and nutrient management regulations present the greatest barriers to increasing production of this commodity in the Region of Waterloo.

Linkages Between Producers and the Processing Industry

On a five-point scale where 1 = "very poor" and 5 = "excellent", the egg industry representative rated the overall capacity of the grading/processing industry in the Region of Waterloo in terms of its ability to serve the needs of local egg producers as "very poor".

On a five-point scale where 1 = "never" and 5 = "always", the representative indicated that egg producers rely on graders/processors located outside the Region of Waterloo "most of the time".

On a five-point scale where 1 = “not important” and 5 = “very important”, the representative indicated that having local egg grading/processing facilities located in the Region is somewhat important (3).

Local and regional egg graders/processors identified by OEP representative include Lashbrook Produce Inc. (Elmira), OK Eggs (Elmira), Gray Ridge Egg Farms (Strathroy), Burnbrae (Mississauga).

Trends and Challenges in the Processing Industry

Trends in the processing industry are linked to consumer trends (i.e. busy lifestyles and interest in food convenience). As noted by the OEP representative, processors are developing more convenient packaging and eggs are being further processed into value-added products. The respondent was unable to identify any processing trends that are specific to the Region of Waterloo.

The industry commodity representative declined to comment regarding any general challenges for egg processors and packagers and did not feel that there were any challenges that would be specific to processors and packagers in the Region of Waterloo.

Availability of Locally Grown Foods

The Ontario egg industry is primarily interested in promoting increased sales across Ontario rather than focusing on any particular region of the province.

3.1.2.5 Dairy Production

The Ontario dairy industry operates under a national milk supply-management system. The production and marketing of milk is controlled through a quota system by the provincial commodity marketing organization, Dairy Farmers of Ontario (DFO). Ontario’s share of the total Canadian market is approximately 32%. If the total Canadian dairy market grows, irrespective of whether the growth is in the consumption of existing or new dairy products, that growth is shared between all provinces.

DFO is owned, operated, and completely financed by the more than 5,800 dairy farms in Ontario. DFO informs individual producers of the volume of product they can produce and/or market in each production period. DFO markets milk and cream on behalf of all Ontario dairy farms to the processing industry. DFO also sets or negotiates the minimum price paid to producers by primary processors.

Every dollar collected from processors by DFO is returned to milk producers, less deductions for promotion of milk and dairy products, the costs to transport milk from their farms to the dairies, and administration of DFO, as well as deductions for research. In total these deductions amount to about 6% of the price paid to the farmer. Transportation and promotion costs are pooled among five provinces—Ontario, Quebec, New Brunswick, Nova Scotia, and Prince Edward Island—which have formed a regional pool known as the P5. This means producers in each of these five provinces

pay the same amount per hectolitre for transportation, promotion and nutrition education programs (www.milk.org).

Raw milk used to make fluid milk and cream (i.e. milk and cream that consumers drink) is supplied on demand to primary processors in Ontario. There are no supply constraints on processors wanting to produce these products. Milk for some industrial products (e.g. ice cream, yogurt, and cottage cheese) is also supplied on demand to processors. Other industrial products (primarily cheeses, butter, and evaporated and powdered milks) are made from the residual milk supply.

The regulated price that primary processors pay for milk varies with the end use of the milk. For example, processors pay less for milk that ultimately goes into the manufacture of ice cream than for milk that is processed into fluid milk (www.omafra.gov.on.ca/english/farmproducts/factsheets/allocation.htm).

Trends and Challenges in Production

As noted by the representative with the Waterloo Region Milk Producers Committee, a major trend associated with the Canadian dairy industry is the decline in the total number of dairy farms and the increase in average herd size.

In terms of challenges, nutrient management regulations could potentially add more costs to production while urban growth in the Kitchener/Waterloo area could increase land prices and impact farm viability. The respondent noted that at present the greatest restriction to increasing production of milk in the Region of Waterloo is access to milk quota and the high cost of quota.

Linkages Between Producers and the Processing Industry

The dairy industry representative was unable to comment on the capacity of the processing industry in the Region of Waterloo in terms of its ability to process milk produced in Waterloo Region.

On a five-point scale where 1 = “never” and 5 = “always”, the representative indicated that dairy farmers rely on processors located outside the Region of Waterloo “most of the time”.

On a five-point scale where 1 = “not important” and 5 = “very important”, the representative indicated that having local dairy processing facilities located in the Region is somewhat important (3).

Local and regional dairy processors identified by the industry representative include Steens Dairy (Erin), Neilson Dairy (Georgetown) and Gay Lea (Guelph).

Trends and Challenges in the Processing Industry

The dairy industry representative was unable to comment on trends and challenges associated with the processing industry.

Availability of Locally Grown Foods

The Waterloo County Milk Producers' Committee is primarily interested in promoting local milk as an Ontario commodity rather than focusing on any particular region of the province.

3.1.2.6 Wheat Production

The Ontario Wheat Producers' Marketing Board (OWPMB) represents Ontario wheat producers by providing strategic leadership initiatives that promote and improve Ontario wheat. Traditionally, the Board has been the single desk seller of all commercially marketed wheat in Ontario but during the past decade the Board has moved to reduce its monopoly selling by increasing producer marketing choices (www.ontariowheatboard.com/).

Today the Board is no longer a single desk seller but is a provider of marketing and selling services, and research and advocacy to producers. There are over 15,000 wheat producers in Ontario but the number of producers varies from year to year as wheat is used in crop rotations. The Board has no authority to require producers to plant a fixed acreage of wheat or direct the type or class of wheat produced. Producers select future wheat crops based on market demand and price return per acre. The value of variety specific markets has also been a determining factor in production. Because wheat is used as a rotational crop the acreage planted varies from 400,000 acres to 1 million acres.

Approximately 30% of the wheat producers produce 70% of the production in Ontario and about 80% of the wheat crop is delivered to an elevator or processor at the time of harvest. Ontario is a surplus producer of wheat but the total production amounts to only about 5% of national production.

Annually, Ontario processor demands consist of approximately 450,000 tonnes of soft winter wheat, 150,000 tonnes of hard red winter wheat, and 100,000 tonnes of hard spring wheat. Ontario's flourmills process about 1.5 million tonnes of wheat each year of which approximately 60% is bought from the Canadian Wheat Board (mostly hard spring wheat and Durham wheat grown in Western Canada).

The major types of processed wheat products include cereal grain, flour mixes, cereal foods, biscuits, and bread and other bakery products. Ontario's share of Canadian shipment as a percentage is as follows:

- Cereal grain flour – 40% and declining
- Flour mixes and cereal foods – 90% and rising
- Biscuits – 70% and rising
- Bread and other bakery products – 40% and rising

Ontario Wheat Producers' Marketing Board. Corporate Plan Summary, June 2002. (www.ontariowheatboard.com/Guidlines/Corporate%20Plan.pdf)

Trends and Challenges in Production

A representative with the Ontario Wheat Producers' Marketing Board identified several general trends in wheat production in Ontario including larger producers, increased production of soft red wheat and decrease in soft white production, expanded marketing options for producers, and increase in the amount of production being shipped directly to the processor. The respondent did not note any trends in wheat production specific to the Region of Waterloo.

With respect to challenges, the commodity representative noted that wheat crops often provide low returns to producers due to increasing costs and low commodity prices. The respondent also pointed to competition for agricultural land with developers as a barrier to increasing production of wheat and other field crops in the Region of Waterloo.

Other challenges associated with wheat production and handling include:

- Crop quality and grade can change within a crop year due to disease and weather conditions
- Change in yearly crop sizes
- Insufficient storage to market the crop through out the whole marketing year
- Excess supply in some wheat classes and insufficient supply in other wheat classes

(Ontario Wheat Producers' Marketing Board. Corporate Plan Summary, June 2002. www.ontariowheatboard.com/Guidlines/Corporate%20Plan.pdf)

Linkages Between Producers and the Processing Industry

On a five-point scale where 1 = "very poor" and 5 = "excellent", the wheat industry representative rated the overall capacity of the processing industry in the Region of Waterloo in terms of its ability to serve the needs of the wheat producers as "fair".

On a five-point scale where 1 = "never" and 5 = "always", the representative indicated that wheat producers rely on processors located outside the Region of Waterloo "most of the time".

On a five-point scale where 1 = "not important" and 5 = "very important", the representative indicated that having local wheat processing facilities located in the Region is somewhat important (3).

Local and regional wheat processors identified by the industry representative include Dover Flour (Cambridge), New Life Mills (Hanover), Hayhoe Mills (Woodbridge), Kraft (Niagara Falls), Nabisco (Mississauga).

Trends and Challenges in the Processing Industry

A major trend in the wheat processing industry as identified by the commodity representative is the consolidation of processing companies such as the recent acquisition of Halton Flour Milling by Dover Flour Mills. The industry representative also noted that processors are purchasing more wheat directly from producers. The

respondent noted that processors face ongoing challenges in obtaining a consistent quality of wheat of from producers in Ontario, which is partly related to variations in growing conditions from year to year.

Availability of Locally Grown Foods

The respondent did not have any concerns about the availability of locally grown grains in stores located in the Region of Waterloo.

3.1.2.7 Tomato Production

Trends and Challenges in Production

A tomato producer in the Region of Waterloo noted that tomato production continues to be largely concentrated in Southern Ontario in Kent and Essex counties where soil and climate conditions provide more ideal production conditions.

With respect to challenges the producer noted that one of the main challenges for growers in the Region of Waterloo was finding varieties of tomatoes that grow well in an area where the growing season is shorter compared to regions further south in the province. Another barrier for local growers relates to the availability marketing channels and the need to further educate farmers about specializing in vegetable crops. The producer suggested that the recently established Produce Auction in Elmira is providing local farmers with a new opportunity to market large volumes of production and may eventually serve to stimulate more farmers to explore vegetable crops as an alternative to traditional field crops.

Linkages Between Producers and the Packaging Industry

The tomato producer noted that the local market for tomatoes is very good given the amount of local production and the different markets available to farmers including farm sales and farmers' markets. Local growers are also supplying some of the smaller grocery stores and can now market their produce through the Elmira Produce Auction. The producer noted that most tomato growers rely on local sales for the bulk of their production.

Local and regional tomato packers identified by the producer include Stuart Hearst (Woolwich Township) and Ivan Martin (Wellesley Township). The producer indicated that there are numerous other packers in Southern Ontario where the growing industry is concentrated.

Trends and Challenges in the Packaging Industry

The tomato producer was unable to comment on any general trends or challenges associated with the tomato packing industry. At the local level the Elmira Produce Auction has been educating producers about standardized packaging requirements that retailers and wholesalers demand.

Availability of Locally Grown Foods

The producer suggested that Region of Waterloo residents are interested in buying locally grown produce and that the Elmira Produce Auction is providing growers with a new opportunity to increase the presence of locally grown products on store shelves.

3.1.2.8 Carrot Production

Trends and Challenges in Production

A carrot producer in the Region of Waterloo noted that carrot production continues to be largely concentrated in the Holland Marsh area (York Region and Simcoe County) where soil and climate conditions provide more ideal production conditions. In terms of trends in the Ontario carrot industry the producer noted that growers are marketing their carrots in shorter time spans and selling more produce to the United States. The producer also noted an increase in the cut and peeled baby carrots market (with consumers willing to pay the extra handling and processing cost) and a related decline in table carrots (i.e. 2lb bags). The producer reported that the Ontario produce market is largely driven by market trends in California.

With respect to challenges the producer noted that the climate conditions are one of the main challenges for growers in the Region of Waterloo who have to adapt their management practices. Another barrier for growers relates to 'price pressure' and growers receiving less for their produce than they did 15 years ago while production costs continue to increase.

The producer reported that a limitation to carrot production in the Region of Waterloo in addition to less than ideal soils is the availability of land in rotation for carrot production. As noted by the respondent, farmers in 'successful' sectors including dairy and hogs are disinterested in trying vegetable production, which is viewed to have greater risks. The producer also suggested that conventional growers are not as competitive as organic growers.

Linkages Between Producers and the Packaging Industry

On a five-point scale where 1 = "very poor" and 5 = "excellent", the carrot producer rated the overall capacity of the packing industry in the Region of Waterloo in terms of its ability to serve the needs of producers as "fair". The producer was unable to comment on the extent to which local carrot growers rely on packers located outside the Region of Waterloo.

On a five-point scale where 1 = "not important" and 5 = "very important", the respondent indicated that having local carrot packing facilities located in the Region is somewhat important (2).

Regional carrot packers identified by the industry representative include Streefs (Princeton) and a baby carrot processor in London.

Trends and Challenges in the Packaging Industry

The major trend in carrot packaging/processing noted by the producer is the movement from table carrots to baby carrots. The producer reported that packers face challenges associated with the cost of packaging and meeting labour requirements.

Availability of Locally Grown Foods

The producer would like to see more locally grown produce on store shelves but at present does not have any personal issues or concerns about the availability of locally grown foods in stores located in the Region of Waterloo as they aggressively market their own produce.

3.1.2.9 Apple Production

In 2004, Ontario Apple Growers (OAG), a new marketing board was established by regulation under the *Farm Products Marketing Act* to help apple growers plan for the future. The new organization was formed about three years after the provincial government dissolved the Ontario Apple Marketing Commission in 2001. The new board has the:

- authority to negotiate the price of apples for juice with processors;
- leadership responsibility for activities related to research, promotion and education;
- a board of directors comprised of 10 elected producers;
- authority over all producers who own or rent 10 or more acres of apple trees; and
- the ability to assess and collect an annual license fee of \$20 per acre.

Apple marketers and processors are not regulated under the marketing regulation, but are required to co-operate with the new board by providing information on the industry and, if necessary, deduct outstanding acreage fees for the board. As well, while not covered by the board, growers with less than 10 acres of apple orchard are able to access and benefit from board activities. OAG is responsible for the collection of acreage fees and any enforcement that might be required to collect these fees. The activities of the new board will be supervised by the Ontario Farm Products Marketing Commission (OMAFRA, May 14, 2004.

www.omafra.gov.on.ca/english/infores/releases/2004/051404.html).

The former commission had the authority to set the price of fresh market and juice apples, but it had difficulty enforcing the price of fresh apples because of imports. The OAG's authority extends only to determining the minimum price of juice apples through negotiations with the juice processors. The negotiations are held each year in August and if the two sides can't agree on the price, it goes to arbitration.

Under the former commission fees were collected from every apple farmer who grew 2.5 acres or more. The OAG only collects fees from farmers with 10 acres or more, which are viewed as serious commercial growers. There are 320 commercial farmers with 10 acres or more growing 15,000 acres of apples in Ontario. Smaller growers can belong to OAG as well if they voluntarily submit their fees.

Ontario is Canada's largest apple-producing province, with about 44% of the national production. Now in its second year OAG is already facing a formidable challenge. After several years of good apple prices, the Ontario market was flooded with imports last year from Washington and California states, which resulted in prices dropping by 40% below normal. Apple growers are currently considering an anti-dumping action against the United States (Better Farming. August/September 2005. p.66).

Trends and Challenges in Production

An apple grower in the Region of Waterloo noted that one of the major trends in the apple industry in Ontario is the steady decline in apple acreage. In some areas of the province the decline in acreage hasn't impacted total production as the density of production has actually increased. Another major trend is that apples have become a global commodity with higher percentages of apples traveling longer distances between orchards and markets. At the local level, the respondent noted that most of the producers in the Region of Waterloo are relatively small operations (a few acres in size) while only one or two growers have substantial orchards. As well, it was reported that very few growers in the Region are planting new trees, which will have production implications as existing orchards age and progressively decline in yield.

A major challenge in the Ontario apple industry as noted by the producer is that market prices are not keeping pace with the costs of apple production. Another challenge for local farmers is that the Region lacks a good supplier for orchard equipment and supplies. It was suggested that this barrier is strongly linked to the limited number of commercial growers in the Region.

Linkages Between Producers and the Packaging Industry

On a five-point scale where 1 = "very poor" and 5 = "excellent", the apple grower rated the overall capacity of the packing in the Region of Waterloo in terms of its ability to serve the needs of producers as "excellent" and it was suggested the most growers rarely rely on packers from outside the area.

On a five-point scale where 1 = "not important" and 5 = "very important", the respondent indicated that having local apple packing facilities located in the Region is important (4).

Regional apple packers/processors identified by the industry representative include Martins Family Fruit Farm (Waterloo), Norfolk Fruit Growers (Simcoe), Bay Growers (Thornbury), Algoma Orchards (Whitby), and Golden Town Apples (Thornbury).

Trends and Challenges in the Packaging Industry

A significant trend in the industry is the increased export market for apples and the competition that Ontario growers/packers face from U.S. and global producers. The respondent also pointed to the increasing food safety issues, which is forcing apple producers to join regulatory organizations and practice more record keeping.

Availability of Locally Grown Foods

The apple producer reported several concerns regarding the availability of locally grown foods in stores located in the Region of Waterloo. It was suggested that more locally grown produce should be featured when in season. However, it was noted that the supermarket chains that supply the majority of the consumers do not provide producers with a lot of retail options. The respondent suggested replicating a model from the United States where the government allows growers to set up collective roadside stands for community products to be sold without a lot of government “red tape”. Farmers would be able to buy each other’s produce in slow years to maintain their client base. It was suggested that this approach would boost business and production significantly.

3.1.2.10 Strawberry Production

Trends and Challenges in Production

As noted by a local strawberry grower, local producer trends include slight steady growth each year with very stable growth in pre-picked berries and some growers moving out of wholesale into retail. An ongoing challenge for local growers is competing with growers from more southern parts of the province where berries are ready for market as much as 10 days in advance of local berries. Strawberries have traditionally represented a small crop in the Region because of challenges associated with weed control and limited research on varieties suited to local conditions (e.g. wet conditions which lead to mold).

The greatest barrier to increasing production as reported by the grower is linked to supply and demand. Strawberries have a relatively short and intense season in Ontario and there are limited buyers. Major processors typically want consistent volume and quality of strawberries, which is provided by California growers who have better climate conditions.

Linkages Between Producers and the Processing Industry

On a five-point scale where 1 = “very poor” and 5 = “excellent”, the strawberry grower rated the overall capacity of the processing industry in the Region of Waterloo in terms of its ability to serve the needs of producers as “very poor” and it was suggested the local growers rarely rely on processors for marketing purposes. The respondent indicated that there are no commercial processors located in the Region.

On a five-point scale where 1 = “not important” and 5 = “very important”, the respondent indicated that having local strawberry processing facilities located in the Region is not important (1).

Trends and Challenges in the Processing Industry

The respondent was unable to comment on trends in the strawberry processing industry but suggested that local processors in Ontario may have to rely on strawberries from outside the province to meet their processing needs (e.g. California).

Availability of Locally Grown Foods

A major concern of the strawberry producer in relation to the availability of locally grown foods in the Region of Waterloo is the lack of influence that producers have in the retail sector. It was noted that grocery stores desire to have berries available in the store every day and tend to rely heavily on berries grown outside the province. Local growers sometimes see their produce going to waste when the local season is late and stores resort to contracting outside growers to supply strawberries.

3.2 Availability of Food Basket Items in Stores and Processor Profiles

This section of the report presents the research findings from the supermarket and convenience store survey. An individual profile of the availability and price for each of the Food Basket items is provided. The price data is specific to the period when the supermarket and convenience store surveys were completed (July 18 to August 19, 2005). The Food Basket items are presented under the following major commodity headings: meat, dairy products and eggs, bakery and cereal products, and fruits and vegetables.

This section also documents the follow-up that was conducted with food processors, which attempted to identify the extent to which processors are sourcing their agricultural products from the Region of Waterloo.

The researchers have used the above information to produce fact sheets for a select few commodities (pork, milk, eggs, grain, and apples) to illustrate the complexity of the agri-food system and the challenge of tracing food from producers to consumers. The fact sheets are presented below with the relevant food item results.

3.2.1 Meat

3.2.1.1 Ground Beef (medium) or Hamburgers

Retail

All of the supermarkets carried fresh medium ground beef. The price for fresh medium ground beef in supermarkets ranged from \$5.26/kg to \$8.14/kg with an average price of \$6.50/kg.

As shown in Table 3.2, 'in store' varieties of ground beef represent the most commonly identified brand of ground beef in supermarkets.

Table 3.2: Availability of Ground Beef in Supermarkets

Processor/Brand	Supermarkets	
	# of stores	% of stores
Loblaws in store brand (Butchers Choice)	7	43.8%
Food Basics in store brand	3	18.8%
Sobeys in store brand	2	12.5%
Foodland in store brand	2	12.5%
IGA in store brand	1	6.3%
Canadian Select	1	6.3%
Total Stores	16	100.0%

Meat managers with Sobeys and Zehrs stores identified Cargill (Toronto) as the primary supplier of fresh meat. Foodland stores receive their fresh meat from Better Beef (Guelph). Sobeys also receives some of its fresh meat supplies from Better Beef.

Hamburgers were chosen as a substitute for ground beef in convenience stores. Approximately 40% of the convenience stores (10 of 25 stores) carried hamburgers. As shown in Table 3.3, two brands of hamburgers were identified at the convenience stores that were surveyed: Schneider’s Beef Steakettes (454gm) and Cardinal Roadhouse Burgers (5lbs). The average price for Schneider’s Beef Steakettes (454gm) was \$3.99 and the average price for Cardinal Roadhouse Burgers (5lbs) was \$15.99.

Table 3.3: Availability of Hamburger Patties in Convenience Stores

Processor/Brand	Convenience Stores	
	# of stores	% of stores
Schneiders Beef Steakettes	6	60.0%
Cardinal Roadhouse Burgers	4	40.0%
Total Stores	10	100.0%

Processing

Cargill Limited is one of Canada's largest agricultural merchandisers and processors with interests in meat, egg, malt and oilseed processing, livestock feed, salt manufacturing, as well as crop input products, grain handling and merchandizing. The company employs approximately 6,000 across Canada (www.cargill.ca). Cargill Foods, located in High River, Alberta, is a fully integrated beef processing facility, with slaughter, fabrication, rendering and hide operations all under one roof. The plant employs 2,000 and processes 4,000 head of cattle each day. Approximately 60% of product is exported and 40% is sold to the Canadian market. Cargill Foods has sales offices in High River and Toronto, Ontario. Regional meat consultants are located across Canada (www.cargill.ca/business/beef.htm).

Cargill Foods also operates a case ready meat packaging facility in Toronto, which produces case ready beef, ground beef, pork, poultry and sausage products.¹⁴ This facility employs approximately 800 employees and services retail stores throughout Ontario (www.cargill.ca/business/case.htm). A representative with Cargill indicated that the Toronto case ready facility sources approximately 20% of its ground beef from Better Beef in Guelph and 80% from High River, Alberta.¹⁵

Under its **Sun Valley Foods** division, Cargill Limited operates beef patty processing facilities in Brampton, Ontario and Spruce Grove, Alberta. Each facility employs approximately 100 people and the two facilities combined produce approximately 1 million pounds of beef patties each week. A company representative with Sun Valley Foods indicated that all of the beef products processed at the Ontario facilities are produced for the food service industry (e.g. quick service restaurants). As such, the beef Cargill provides to Ontario supermarkets largely originates from Western Canada.

¹⁴ Case ready meats (also referred to as consumer ready or kitchen ready) are prepackaged in plants and delivered to supermarkets eliminating further handling, cutting, or processing at the store level.

¹⁵ With respect to whole muscle beef, Cargill sources 50% of its beef cuts from Ontario (including Better Beef in Guelph and St. Helen’s Meat Packers in Toronto) and 50% from High River, Alberta.

Better Beef is one of Canada's largest beef processing companies. Better Beef's main processing plant is located in Guelph, Ontario. The main plant is responsible for cattle receiving, primary processing, grading, fabrication and distribution. Within a kilometer of the main plant is Watson Foods a division Better Beef which is devoted exclusively to ground beef and tray ready products. Most of the beef producers that supply Better Beef are within a two-hour drive of the processing facilities in Guelph.¹⁶

Better Beef provides beef products to major retailers, wholesalers, further processors and to the food service industry. Beyond providing for the domestic market, Better Beef also exports products to the United States, the Caribbean, Mexico, the Middle East and the Pacific Rim (www.betterbeef.ca).

At the time this report was completed, company representatives with Better Beef had not responded to our requests for information. Given that Better Beef has 80% of the beef packing capacity in Ontario (Better Farming. October 2005. p.8), and the Region falls within the catchment area of the plant, producers in the Region of Waterloo are likely supplying Better Beef.

Schneider Foods develops, manufactures and markets more than 1,000 varieties of branded prepared meat products including wieners, bacon, packaged luncheon and deli meats, poultry, sausage, ham, specialty meats and frozen grocery products. Other brands manufactured and sold by Schneider Foods include Mitchells, Olympic, and Fleetwood (www.schneiderfoods.ca). Schneider Foods is a division of **Maple Leaf**. Maple Leaf has a meat products group of companies, which includes Schneider Foods, Maple Leaf Pork, Maple Leaf Poultry, and Maple Leaf Consumer Foods. The Maple Leaf Consumer Foods division is similar to the Schneider division in that it produces branded value-added prepared meat products such as bacon, ham, wieners, and cooked and sliced meats.

According to a company representative, Maple Leaf Consumer Foods/Schneider Foods have processing facilities located in Hamilton, Brantford, Mississauga, Toronto, Etobicoke, Kitchener, Ayr, Guelph, Port Perry, and St. Marys. The Maple Leaf meat products group employs approximately 4,620 employees (includes salaried employees working at head office and regional facilities).

According to a company representative with Maple Leaf, Maple Leaf Consumer Foods/Schneider Foods (MLCF/SF) do not process cattle from primary producers at their processed meat operations. These companies obtain raw materials (e.g. beef, pork, chicken) from slaughter plants including other Maple Leaf Food operations (Maple Pork, Maple Poultry) as well as other suppliers. In the case of beef:

- 27% of the beef used by MLCF/SF is obtained from Ontario slaughter plants and is further processed in MLCF/SF facilities located in Ontario
- 9% of the beef used by MLCF/SF is obtained from Ontario slaughter plants and is further processed in MLCF/SF facilities located in other provinces

¹⁶ In 2005, Cargill Limited acquired Better Beef.

- 16% of the beef used by MLCF/SF is obtained from slaughter plants in other provinces and is further processed in MLCF/SF facilities located in Ontario
- 20% of the beef used by MLCF/SF is obtained from slaughter plants in other provinces and is further processed in MLCF/SF facilities located in other provinces
- 20% of the beef used by MLCF/SF is obtained from slaughter plants outside Canada and is further processed in MLCF/SF facilities located in Ontario
- 8% of the beef used by MLCF/SF is obtained from slaughter plants outside Canada and is further processed in MLCF/SF facilities located in other provinces

3.2.1.2 Pork Chops (loin)

Retail

All of the supermarkets carried fresh pork chops (loin cut). The price for fresh pork chops in supermarkets ranged from \$8.80/kg to \$15.41/kg with an average price of \$10.76/kg. As shown in Table 3.4, 'in store' varieties of pork chops represent the most commonly identified brand of pork chops in supermarkets.

Table 3.4: Availability of Pork Chops (loins) in Supermarkets

Processor/Brand	Supermarkets	
	# of stores	% of stores
Loblaws in store brand (Butchers Choice, Presidents Choice)	7	43.8%
Food Basics in store brand	2	12.5%
Sobeys in store brand	3	18.8%
Foodland in store brand	2	12.5%
IGA in store brand	1	6.3%
Food Basics in store brand (Master Choice)	1	6.3%
Total Stores	16	100.0%

Pork wieners were chosen as a substitute for pork chops in convenience stores. Approximately 52% of the convenience stores (13 of 25 stores) carried pork wieners. Only one brand of pork wieners was identified at the convenience stores that were surveyed: Schneider Red Hots (450gm). The average price for Schneider Red Hots was \$2.99.

Processing

Maple Leaf Pork is the largest processor of hogs in Ontario and Western Canada. Maple Leaf Pork produces fresh, frozen and value-added pork products (e.g. ham, wieners, cooked meats, sliced meats, canned meats, etc.) for retail stores, foodservice establishments, and industrial customers for further processing for both domestic and export markets.

Maple Leaf Pork operates five processing plants throughout Canada with sales organizations across Canada and in the United States. The company head office is located in Oakville, Ontario and a hog processing plant is located in Burlington, Ontario. The Oakville and Burlington operations employ approximately 1,375 people in total.

Nearly half of Maple Leaf Pork's annual production is consumed domestically and the balance is exported to more than 25 countries. The largest export markets are the United States and Japan (www.mapleleaf.com).

According to a company spokesperson, the Maple Leaf hog processing facility in Burlington processes (slaughters) approximately 2.25 million hogs (all weights) annually. Approximately 28% of the hogs (630,000) are sourced from Ontario and 72% are sourced from other provinces including Alberta, Saskatchewan, Manitoba, Quebec, Nova Scotia, and Prince Edward Island. In Ontario, the majority of hogs come from Southwestern Ontario (London/Stratford/Kitchener/Waterloo area, Bruce County, Niagara Region and over to Lindsay). Approximately 35% of the Ontario hogs (220,500) come from the Region of Waterloo, which represents 10% of the total hogs processed at the Burlington facility. The company representative with Maple Leaf Pork indicated that the amount of hogs sourced from the Region of Waterloo has remained stable.

Maple Leaf Consumer Foods and **Schneider Foods** (a division of Maple Leaf) also operate value-added processing facilities, which produce a variety of processed pork products including sliced meats, wieners, etc. According to a company representative with Maple Leaf, the Maple Leaf Consumer Foods/Schneider Foods (MLCF/SF) operations obtain raw materials (e.g. beef, pork, chicken) from slaughter plants including other Maple Leaf Food operations (Maple Leaf Pork, Maple Leaf Poultry) as well as other suppliers. In the case of pork:

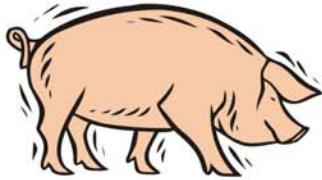
- 15% of the pork used by MLCF/SF is obtained from Ontario slaughter plants and is further processed in MLCF/SF facilities located in Ontario
- 7% of the pork used by MLCF/SF is obtained from Ontario slaughter plants and is further processed in MLCF/SF facilities located in other provinces
- 3% of the pork used by MLCF/SF is obtained from slaughter plants in other provinces and is further processed in MLCF/SF facilities located in Ontario
- 68% of the pork used by MLCF/SF is obtained from slaughter plants in other provinces and is further processed in MLCF/SF facilities located in other provinces
- 1% of the pork used by MLCF/SF is obtained from slaughter plants outside Canada and is further processed in MLCF/SF facilities located in Ontario
- 5% of the pork used by MLCF/SF is obtained from slaughter plants outside Canada and is further processed in MLCF/SF facilities located in other provinces

Cargill Foods operates a case ready meat packaging facility in Toronto, which produces case ready pork products. This facility services retail stores throughout Ontario (www.cargill.ca/business/case.htm). A representative with Cargill indicated that the Toronto case ready facility sources approximately 50% of its pork from Maple Leaf Pork in Ontario and 50% from Quebec.

Figure 1 illustrates some of the food flow features associated with pork production in the Region of Waterloo.

Figure 1: Pork Food Flow in the Region of Waterloo

Region of Waterloo pork producers marketed over 260,000 pigs in 2004.



This represents about 5% of the total pigs marketed by Ontario producers.

The average household in the Region of Waterloo purchases about 15kg of fresh or frozen pork products from stores each year.

This translates into about 2.4 million kg for all households in the Region of Waterloo.

Maple Leaf Pork is the largest processor of hogs in Ontario. The hog processing plant in Burlington processes 2.25 million hogs annually.

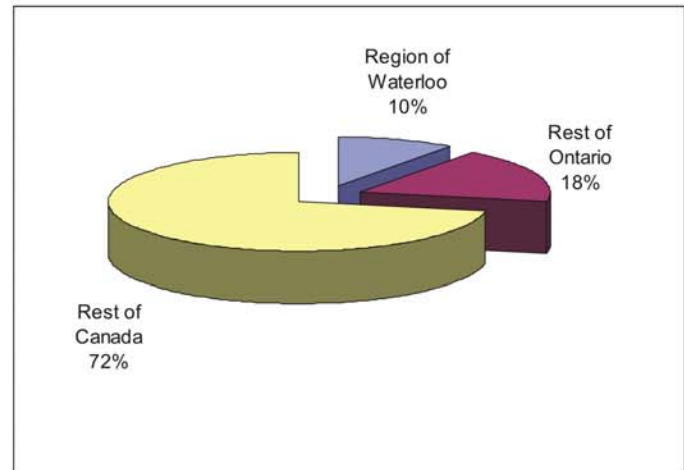
About 630,000 hogs or 28% of the total hogs processed at the Burlington plant come from Ontario.

The majority of Ontario hogs come from Southwestern Ontario including the Region of Waterloo which ships over 200,000 hogs annually to the Burlington plant.

Ontario meat processors handle about 79 % of all hog sales in Ontario.

The remainder is handled by the United States (10%) and Quebec (11%).

Approximately 220,000 hogs or 10% of the total hogs processed at Maple Leaf Pork in Burlington come from the Region of Waterloo.



Source: Maple Leaf Pork, 2005.

Pork products including loin chops and processed pork wieners are readily available in stores across the Region of Waterloo.

Hogs produced in the Region of Waterloo along with hogs produced elsewhere are being used by the major pork processors and distributed through local supermarket chains and convenience stores.

Supermarkets

The most common brand of pork cuts (loin chops) identified in supermarkets in the Region of Waterloo are in store varieties such as Butchers Choice, Master Choice, and Presidents Choice.



Major supermarket chains including Zerhs and Sobeys source their pork cuts from Cargill Foods in Toronto.

Cargill Foods sources about 50% of its pork from Maple Leaf in Ontario and 50% from other processors in Quebec.

Convenience Stores

Approximately 52% of convenience stores in the Region of Waterloo featured pork wieners with Schneider Red Hots being the only brand available.



Schneider Foods in Kitchener is a division of Maple Leaf Consumer Foods (MLCF) and sources its pork from Maple Leaf Food operations in Ontario and elsewhere.

About 15% of the pork used by MLCF processing plants in Ontario is obtained from Ontario slaughter plants.

3.2.1.3 Chicken Breast (boneless, skinless) or Chicken Patties

Retail

All of the supermarkets carried fresh boneless, skinless chicken breasts. The price for chicken breasts in supermarkets ranged from \$11.00/kg to \$19.82/kg with an average price of \$15.52/kg.

As shown in Table 3.5, 'in store' varieties of chicken breasts represent the most commonly identified brand of chicken breasts in supermarkets.

Table 3.5: Availability of Chicken Breast (boneless, skinless) in Supermarkets

Processor/Brand	Supermarkets	
	# of stores	% of stores
Maple Leaf Prime	5	31.3%
Loblaws in store brand (Presidents Choice, Sunfresh, etc.)	6	37.5%
Foodland in store brand	2	12.5%
Sobeys in store brand	2	12.5%
Maple Lodge	1	6.3%
Total Stores	16	100.0%

Chicken patties were chosen as a substitute for chicken breasts in convenience stores. Only two of the 25 convenience stores surveyed carried chicken patties. The two brands of chicken patties identified were Schneider's and Equality.

Processing

Maple Leaf Poultry is Canada's third largest poultry processor. Maple Leaf Poultry processes fresh, frozen and value-added chicken and turkey products under its brand name and supports a number of unique private label offerings in both retail grocery chains and food service chains across the country. Maple Leaf Poultry also markets fresh whole or cuts to food service operators and distributors as well as fresh or frozen product sold to other industrial manufacturers for further processing, or value-added, or as an ingredient to another product.

Maple Leaf Poultry operates four processing plants throughout Canada. The company head office is located in Mississauga, Ontario and the Ontario processing facilities are located in Toronto, Brampton and St. Marys. Maple Leaf Poultry also owns two hatcheries, one in Wetaskiwin (Alberta) and one in New Hamburg (Ontario) that sell broiler chicks to producers who raise the chickens for slaughter. Maple Leaf Poultry processing operations employ approximately 1,125 employees in Ontario.

Given that the Canadian poultry industry is supply managed, the primary market for Maple Leaf poultry products is Canada with limited sales into the United States and abroad (www.mapleleaf.com).

A Maple Leaf Poultry company representative indicated that the Ontario operations process (slaughter) approximately 75 million chickens annually. Approximately 75% of

all chickens processed by the Ontario facilities are sourced from Ontario while 25% comes from other provinces including Prince Edward Island, Nova Scotia, and Alberta. In Ontario, the catchment area Maple Leaf Poultry sources its chickens from includes Eastern Ontario (e.g. Cobourg/Trenton) through to the Bruce Peninsula and the Niagara Region. This catchment area includes the Region of Waterloo. Data on the actual amount of chickens sourced from the Region of Waterloo was unavailable. However, the company representative noted that the Maple Leaf processing facilities are increasing their use of chickens raised in Ontario including Waterloo Region.

Maple Leaf Consumer Foods and **Schneider Foods** (a division of Maple Leaf) also operate value-added processing facilities, which produce a variety of processed chicken products including sliced meats, chicken patties, etc. According to a company representative with Maple Leaf, the Maple Leaf Consumer Foods/Schneider Foods (MLCF/SF) operations obtain raw materials (e.g. beef, pork, chicken) from slaughter plants including other Maple Leaf Food operations (Maple Leaf Pork, Maple Leaf Poultry) as well as other suppliers. In the case of chicken:

- 82% of the chicken used by MLCF/SF is obtained from Ontario slaughter plants and is further processed in MLCF/SF facilities located in Ontario
- 12% of the chicken used by MLCF/SF is obtained from Ontario slaughter plants and is further processed in MLCF/SF facilities located in other provinces
- 4% of the chicken used by MLCF/SF is obtained from slaughter plants in other provinces and is further processed in MLCF/SF facilities located in Ontario
- 1% of the chicken used by MLCF/SF is obtained from slaughter plants in other provinces and is further processed in MLCF/SF facilities located in other provinces
- 1% of the chicken used by MLCF/SF is obtained from slaughter plants outside Canada and is further processed in MLCF/SF facilities located in Ontario

Maple Lodge Farms is the largest independently owned poultry processing plant in Canada. The company processes fresh, frozen and value-added chicken products under its brand name. Maple Lodge employs approximately 2,200 people and operates two processing facilities: one in Norval, Ontario and one in St. Francois, New Brunswick. Other operations in Ontario include two hatcheries, two feed mills and a modern laboratory, which supports the processing facility. Maple Lodge processes 400,000 chickens a day and delivers 2.5 million kilograms of poultry products around the world each week, exporting approximately 17,000 million tonnes of chicken products annually to 30 countries world-wide.

Maple Lodge products are available at a variety of retail stores including A&P, Food Basics, Ultra Mart, Loblaws, Zehrs, Fortinos, No Frills, Valumart, Commissos, Sobeys, IGA, Price Chopper, Highland Farms, Longos, Rabba Fine Foods, The Barn, Loeb Canada, Giant Tiger, Foodland, Knechtels, 7-11, and various other independent retailers (www.maplelodgefarms.com)

Under its **Sun Valley Foods** division, **Cargill Limited** operates a chicken processing facility in London, Ontario. The London plant employs approximately 800 people and

processes 80,000 chickens each day. Sun Valley Foods also operates a chicken hatchery in Jarvis, Ontario. The hatchery employs approximately 70 people and hatches 725,000 chicks each week, which are sold to Ontario chicken farmers. Chickens hatched at the Jarvis facility are processed in the London plant (www.cargill.ca/business/chicken.htm).

A company representative with Sun Valley Foods indicated that all of the poultry products processed at the London facility is produced for the food service industry (e.g. quick service restaurants) and not retail grocery chains.

Cargill Foods also operates a case ready meat packaging facility in Toronto, which produces case ready poultry products. This facility services retail stores throughout Ontario (www.cargill.ca/business/case.htm). A representative with Cargill indicated that the Toronto case ready facility sources most of its poultry from Quebec and the Niagara region in Ontario.

3.2.1.4 All Beef Wieners (450gm)

Retail

All of the supermarkets except 1 carried all beef wieners in the 450gm size. Only 28% of the convenience stores (7 of 25 stores) carried all beef wieners.

The price for a 450gm pack of all beef wieners in supermarkets ranged from \$1.99 to \$3.49 with an average price of \$2.81. The price for a 450gm pack of all beef wieners in convenience stores ranged from \$2.95 to \$3.49 with an average price of \$3.05.

As shown in Table 3.6, the most commonly identified brand of all beef wieners found in supermarkets was Schneider's (67% of stores) followed by Maple Leaf and Sunfresh No Name (each at 13%). In convenience stores the most commonly identified brand of all beef wieners was Schneider's (86%) and Maple Leaf (14%).

Table 3.6: Availability of All Beef Wieners (450gm) in Supermarkets and Convenience Stores

Processor/Brand	Supermarkets		Convenience Stores		Total Stores	
	# of stores	% of stores	# of stores	% of stores	# of stores	% of stores
Schneider	10	66.7%	6	85.7%	16	72.7%
Maple Leaf (Shopsey, Top Dog all beef)	2	13.3%	1	14.3%	3	13.6%
Presidents Choice Loblaws	1	6.7%	-	-	1	4.5%
No Name Sunfresh	2	13.3%	-	-	2	9.1%
Total Stores	15	100.0%	7	100.0%	22	100.0%

Processing

Maple Leaf Consumer Products and **Schneider Foods** develop, manufacture and market a variety of branded prepared meat products including all beef wieners. Additional details on where the company operations are located and where they source their beef products from is provided in section 3.2.1.1.

3.2.1.5 Cooked Ham (175 gm sliced)

Retail

All of the supermarkets carried sliced cooked ham while 64% of the convenience stores (16 of 25 stores) carried sliced cooked ham. Most of the stores featured the 175gm pack of sliced cooked ham. Several stores carried cooked ham in 125gm packs.

The price for a 175gm pack of sliced cooked ham in supermarkets ranged from \$1.79 to \$2.99 with an average price of \$2.60. The price for a 175gm pack of sliced cooked ham in convenience stores ranged from \$2.39 to \$3.89 with an average price of \$3.06

As shown in Table 3.7, the most commonly identified brand of sliced cooked ham found in supermarkets was Schneider's (44% of stores) followed by Pillers (19%) and Sunfresh No Name (13%). In convenience stores the most commonly identified brand was Schneider's (81%) and Pillers (13%).

Table 3.7: Availability of Sliced Cooked Ham (450gm) in Supermarkets and Convenience Stores

Processor/Brand	Supermarkets		Convenience Stores		Total Stores	
	# of stores	% of stores	# of stores	% of stores	# of stores	% of stores
Schneider	7	43.8%	13	81.3%	20	62.5%
Pillers	3	18.8%	2	12.5%	5	15.6%
Maple Leaf	1	6.3%	-	-	1	3.1%
No Name Sunfresh	2	12.5%	1	6.3%	3	9.4%
Master Choice A&P	1	6.3%	-	-	1	3.1%
Olympic Fine Meats	1	6.3%	-	-	1	3.1%
Ziggy Loblaws	1	6.3%	-	-	1	3.1%
Total Stores	16	100.0%	16	100.0%	32	100.0%

Processing

Maple Leaf Consumer Products and **Schneider Foods** develop, manufacture and market a variety of branded prepared meat products including sliced cooked ham. Additional details on where the company operations are located and where they source their pork products from is provided in section 3.2.1.2.

3.2.2 Dairy Products and Eggs

3.2.2.1 2% Milk (2 litre carton)

Retail

All of the supermarkets and convenience stores that were surveyed carried 2% milk in 2 litre cartons.

In the supermarkets the price for a 2 litre carton of 2% milk ranged from \$2.05 to \$3.89 with an average price of \$3.40. In the convenience stores the price for a 2 litre carton of 2% milk ranged from \$2.09 to \$3.89 with an average price of \$3.71.

As shown in Table 3.8, the most commonly identified brand of 2% milk found in supermarkets was Neilson (63% of stores) while Parmalat was the most commonly identified brand found in convenience stores (80% of stores).

Table 3.8: Availability of 2% Milk (2 litre carton) in Supermarkets and Convenience Stores

Processor/Brand	Supermarkets		Convenience Stores		Total Stores	
	# of stores	% of stores	# of stores	% of stores	# of stores	% of stores
Parmalat / Beatrice	4	25.0%	20	80.0%	24	58.5%
Neilson	10	62.5%	2	8.0%	12	29.3%
Natrel / Sealtest	2	12.5%	3	12.0%	5	12.2%
Total Stores	16	100.0%	25	100.0%	41	100.0%

Processing

Parmalat Canada is a subsidiary of **Parmalat Finanziaria S.p.A.**, Italy. Parmalat Canada produces milk and dairy products, fruit juices, cultured products, cheese products and table spreads with such brands as Beatrice, Lactancia, Astro, and Black Diamond. Parmalat has several milk processing facilities in Ontario including Brampton, Niagara on the Lake, and Mitchell (www.parmalat.ca)

Neilson Dairy is a division of **Weston Foods Ltd.** Neilson's produces milk and dairy products, fruit drinks, and cultured products. Neilson has two milk processing facilities in Ontario: Georgetown and Ottawa. The Ottawa plant supplies Eastern Ontario as well as Western Quebec while the Georgetown plant supplies the Greater Toronto Area and the rest of Ontario. The two plants combined produce millions of litres of milk products annually (www.neilsondairy.com).

Representatives with Parmalat and Neilson were contacted to determine the extent to which they use milk produced in the Region of Waterloo. In both cases the researchers were advised to contact **Dairy Farmers of Ontario**.

Milk processors in Ontario must purchase all unpasteurized milk from Dairy Farmers of Ontario (DFO). DFO is owned and operated by the more than 5,800 dairy farm families in Ontario and it markets milk and cream on behalf of all Ontario dairy farms to the processing industry (Dairy Farmers of Ontario. www.milk.org).

A representative with DFO provided figures on the location and respective percentage volume received of the milk produced in Waterloo Region. As shown in Table 3.9, approximately half of the milk produced in the Region of Waterloo is shipped to Gay Lea in Guelph while 23% is shipped to Neilson in Georgetown and 3% is shipped to Parmalat in Brampton.

Milk is processed for two markets: fluid (table milk and cream) and industrial (dairy products such as butter, cheese, ice cream and yogurt). Approximately 40% of the milk produced in the Region of Waterloo is shipped to fluid plants and 60% is shipped to industrial plants.

Table 3.9: Distribution of Region of Waterloo Milk to Processing Facilities

Company	Location	Percentage Volume Received of Milk Produced in the Region of Waterloo ^a	Approximate Annual Volume Received of Milk Produced in the Region of Waterloo (kilolitres of milk)
Gay Lea	Guelph	49.2%	54,872
Neilson	Georgetown	23.1%	25,730
Natrel	Don Mills	6.4%	7,171
Saputo	Brampton	6.7%	7,461
Parmalat	Brampton	3.3%	3,647
Oak Grove	New Hamburg	1.3%	1,483
Other	9 processors	10.0%	11,142
Total	15 processors	100.0%	111,529

^a This data is based on the month of July 2005 and according to DFO is fairly representative of shipments that occur on an annual basis.

^b This data has been projected based on the total milk shipments reported in the Region of Waterloo for 2004.

Source: Dairy Farmers of Ontario, 2005

Milk that processors receive from the Region of Waterloo is pooled with milk from other areas of the province. As a result, representatives with Parmalat and Neilson were unable to estimate the amount of Waterloo milk that is being distributed through supermarkets and convenience stores in the Region. However, it can be said that milk produced in the Region of Waterloo contributes to the Parmalat and Neilson dairy products that are available through local supermarkets and convenience stores.

Given that Neilson is receiving a substantially higher volume of milk from the Region of Waterloo compared to the other fluid milk processors it is possible that Neilson products may contain a greater proportion of milk that originated in the Region. As well, considering that Neilson and Parmalat products are well represented in supermarkets where consumers spend 86% of their average weekly food expenditure, it appears that consumers have reasonable access to locally produced milk.¹⁷

Gay Lea Foods Co-operative Ltd. receives close to 50% of the total milk produced in the Region of Waterloo. Gay Lea produces butter, aerosol whipped toppings, cottage cheese, sour cream, dips and lactose-free milk. Gay Lea headquarters, main distribution centre and cultured products plant is located in Weston, Ontario. Milk and cream are processed at the Teeswater, Ontario plant. Teeswater is also the location of the retail outlet for Gay Lea products. Butter, skim milk powder and aerosol whipped topping are produced at Gay Lea's Guelph, Ontario plant. (www.gaylea.com).

Figure 2 illustrates some of the food flow features associated with milk production in the Region of Waterloo.

¹⁷ Refers to the proportion of weekly food expenditure made in stores excluding restaurants. Statistics Canada, Food Expenditure in Canada, 2001, Cat. No. 62-554-XIE. Release Date: February 21, 2003

Figure 2: Milk Food Flow in the Region of Waterloo

Region of Waterloo dairy farmers produced 111.5 million litres of milk in 2004.



This represents 4.4% of the total milk production in Ontario.

The average household in the Region of Waterloo purchases about 200 litres of fluid milk products from stores each year.

This translates into about 32 million litres for all households in the Region of Waterloo.

Processor	Annual distribution of Region of Waterloo milk to processing plants. Each bucket = 10 million litres
Gay Lea (Guelph, ON) - butter, cottage cheese, sour cream, etc.	
Neilson (Georgetown, ON) - fluid milk, yogurt	
Saputo (Brampton, ON) - cheese	
Natrel (Don Mills, ON) - fluid milk	
Parmalat (Brampton, ON) - fluid milk, yogurt	
Oak Grove (New Hamburg, ON) - cheese	
Other (9 other processors in Southern Ontario)	

About 60% of the milk produced in the Region of Waterloo is shipped to fluid milk plants and 40% is shipped to industrial plants (e.g. butter, sour cream, cottage cheese, etc.)

Source: Dairy Farmers of Ontario, 2005.

Milk produced in the Region of Waterloo is processed and marketed under several brands. A randomized survey of 16 supermarkets and 25 convenience stores across the Region of Waterloo found that the following brands of fluid milk are readily available to local consumers.

Supermarkets	Convenience Stores
<p>62.5% of supermarkets in the Region of Waterloo feature Neilson 2% milk</p> <p>25% of supermarkets in the Region of Waterloo feature Parmalat 2% milk</p> <p>12.5% of supermarkets in the Region of Waterloo feature Natrel 2% milk</p>	<p>80% of convenience stores in the Region of Waterloo feature Parmalat 2% milk</p> <p>12% of convenience stores in the Region of Waterloo feature Natrel 2% milk</p> <p>8% of convenience stores in the Region of Waterloo feature Neilson 2% milk</p>

3.2.2.2 Non-fat Fruit Yogurt (150-175gm)

Retail

All of the supermarkets carried individual 150-175gm servings of non-fat fruit yogurt while only 32% of the convenience stores carried 150-175gm servings of non-fat fruit yogurt. Two additional convenience stores carried 175gm fruit yogurt but not the non-fat variety.

The price for a single serving of non-fat fruit yogurt in supermarkets ranged from \$0.61 to \$0.99 with an average price of \$0.81. The price for a single serving of non-fat fruit yogurt in convenience stores was consistent at \$0.99 in each of the stores where it was found.

As shown in Table 3.10, the most commonly identified brand of non-fat fruit yogurt found in supermarkets was Parmalat (38% of stores) followed by Neilson and Danone (each at 31%). In convenience stores the most commonly identified brand was Parmalat (75%) and Neilson (25%).

Table 3.10: Availability of Fruit Yogurt (150-175gm, 0% fat) in Supermarkets and Convenience Stores

Processor/Brand	Supermarkets		Convenience Stores		Total Stores	
	# of stores	% of stores	# of stores	% of stores	# of stores	% of stores
Parmalat (Astro / Beatrice)	6	37.5%	6	75.0%	12	50.0%
Neilson	5	31.3%	2	25.0%	7	29.2%
Danone (Silhouette)	5	31.3%	-	-	5	20.8%
Total Stores	16	100.0%	8	100.0%	24	100.0%

Processing

Parmalat Canada produces the Astro and Beatrice brands of yogurt. **Neilson Dairy** produces yogurt under the Neilson brand name. Details on both of these companies are provided in the previous section of the report.

Danone Canada produces a variety of yogurt products including its Silhouette brand. The company head office and production plant is located in Boucherville, Quebec. Danone also has a depot in Toronto, Ontario. Production at the Boucherville plant has doubled in the past four years and continues to increase. Danone now produces over 50,000 tons (340 million pots) of yogurt annually.

As noted in the previous section of the report, Parmalat and Neilson dairy processing facilities in Ontario receive milk produced in the Region of Waterloo. The milk from the Region is pooled with milk from other areas of the province, which makes it difficult to establish how much Waterloo milk is being used in the yogurt products produced by these companies. However, it can be said that milk produced in the Region of Waterloo contributes to the Parmalat and Neilson yogurt products that are available through local supermarkets and convenience stores. Danone does not use milk from Waterloo Region.

Considering that Neilson and Parmalat products are well represented in supermarkets where consumers spend 86% of their average weekly food expenditure, it appears that consumers have reasonable access to locally produced milk.

3.2.2.3 Medium Cheddar Cheese (200-227gm block)

Retail

All of the supermarkets carried medium cheddar cheese blocks in 200-227gm sizes while 72% of the convenience stores (19 of 25 stores) carried medium cheddar cheese blocks in 200-227gm sizes.

In supermarkets the price for a 200-227gm block of medium cheddar cheese ranged from \$2.50 to \$4.97 with an average price of \$3.82. In convenience stores the price for a 200-227gm block of medium cheddar cheese ranged from \$1.49 to \$5.79 with an average price of \$3.63.

As shown in Table 3.11, the most commonly identified brand of medium cheddar cheese found in supermarkets was Parmalat (25% of stores) followed by Kraft, Pine River and Sunfresh No Name (each at 19%). In convenience stores the most commonly identified brand was Sunfresh No Name (37%) followed by Our Compliments (26%) and Parmalat (16%).

Table 3.11: Availability of Medium Cheddar Cheese (200-227gm) in Supermarkets and Convenience Stores

Processor/Brand	Supermarkets		Convenience Stores		Total Stores	
	# of stores	% of stores	# of stores	% of stores	# of stores	% of stores
Parmalat (Black Diamond)	4	25.0%	3	15.8%	7	20.0%
Kraft (Cracker Barrel)	3	18.8%	2	10.5%	5	14.3%
Pine River	3	18.8%	-	-	3	8.6%
Our Compliments / Smart Choice - Sobeys	1	6.3%	5	26.3%	6	17.1%
No Name Sunfresh	3	18.8%	7	36.8%	10	28.6%
Equality A&P	2	12.5%	-	-	2	5.7%
Brights Cheese House	-	-	2	10.5%	2	5.7%
Total Stores	16	100.0%	19	100.0%	35	100.0%

Processing

Parmalat Canada produces the Black Diamond brand of cheeses. As noted in the previous section of the report, Parmalat processing facilities in Ontario receive milk produced in the Region of Waterloo. The milk from the Region is pooled with milk from other areas of the province, which makes it difficult to establish exactly how much Waterloo milk is being used in Parmalat cheese products.

Pine River Cheese and Butter Co-operative is owned and operated by the dairy farmers of Bruce County. The processing facility is located in Ripley, Ontario (6km south of Kincardine) and employs approximately 45 full-time and part-time employees.

Pine River produces a variety of cheddar cheese including mild, medium, old and premium cheddar. Pine River also produces mozzarella, havarti, marble, and flavoured cheeses. At the end of the 1990's the operation shifted its cheese focus from bulk production to retail and wholesale. Pine River manufactures and sells over 2.25 million lbs. of cheese, annually. The company markets cheese from its on-site retail store and distributes to stores across Ontario (www.pinerivercheese.com).

A company representative with Pine River was contacted to determine whether the company uses milk produced in the Region of Waterloo. The company relies primarily on milk produced in Brant County and surrounding region. The company representative advised the researchers to contact **Dairy Farmers of Ontario** to determine if any milk from Waterloo Region was being shipped to the plant. The information provided by DFO suggests that if the Pine River is receiving milk from Waterloo Region, it represents less than 1% of the total production.

Kraft Canada produces the Cracker Barrel brand of cheeses. Kraft Canada is a division of Kraft North America Commercial of Northfield, Illinois. Kraft Canada headquarters are located in Toronto and it operates 20 plants and bakeries in Ontario, Quebec and British Columbia. Kraft Canada cheese operations process approximately 890,000 litres of milk each day (www.kraftcanada.com). A company representative with Kraft Canada indicated that the company is not sourcing its milk from the Region of Waterloo.

3.2.2.4 Eggs (dozen)

Retail

All of the 16 supermarkets carried eggs while 92% of the convenience stores (23 of 24 stores) carried eggs.

The price for a dozen eggs in supermarkets ranged from \$1.85 to \$3.43 with an average price of \$2.51/dozen. The price for a dozen eggs in convenience stores ranged from \$2.29 to \$2.99 with an average price of \$2.45/dozen.

As shown in Table 3.12, the most commonly identified brand of eggs found in supermarkets was Gray Ridge (38% of stores) followed by Burnbrae (31%) and Our Compliments (19%). In convenience stores the most commonly identified brand of eggs was Gray Ridge (39%) followed by Burnbrae, OK Eggs, and Loblaws No Name (each at 17%).

Table 3.12: Availability of Eggs (dozen) in Supermarkets and Convenience Stores

Processor/Brand	Supermarkets		Convenience Stores		Total Stores	
	# of stores	% of stores	# of stores	% of stores	# of stores	% of stores
Gray Ridge	6	37.5%	9	39.1%	15	38.5%
Burnbrae	5	31.3%	4	17.4%	9	23.1%
OK Eggs	-	-	4	17.4%	4	10.3%
No Name - Loblaws	2	12.5%	4	17.4%	6	15.4%
Our Compliments - Sobeys	3	18.8%	1	4.3%	4	10.3%
Equality A&P	-	-	1	4.3%	1	2.6%
Total Stores	16	100.0%	23	100.0%	39	100.0%

Processing

Gray Ridge Egg Farms produces, grades and distributes egg products across Ontario. The company headquarters are located in Strathroy, Ontario. Gray Ridge farming facilities are located at Ridgetown, Moorefield and Winchester, Ontario. The company grading facilities are located in Strathroy and Listowel, Ontario. Grading equipment at these facilities can process up to 120,000 eggs per hour (www.grayridge.com). Representatives with Gray Ridge Farm Eggs were unable to provide any information about the extent to which they source eggs from the Region of Waterloo.

Burnbrae Farms produces, grades and distributes egg products in almost all provinces of Canada. The company headquarters are located in Lyn, which is near Brockville in Eastern Ontario. Burnbrae farming operations are located in Lyn and St. Zotique, Quebec. Burnbrae's Ontario grading stations are located in Lyn, Strathroy (located just outside of London) and Mississauga. The Lyn grading station grade eggs from the Burnbrae farming operation as well as eggs from local outside producers. The Strathroy operation grades eggs from local producers and the Mississauga operation grades eggs from Western Ontario. Eggs from the Ontario grading stations are distributed to stores and wholesalers across Southern, Western and Eastern Ontario. The St. Zotique operation also serves some of the market in Eastern Ontario. Burnbrae operations in Winnipeg and Calgary receive eggs from local producers and distribute eggs to stores from Northwestern Ontario to British Columbia (www.burnbraefarms.com). A company representative indicated that the Strathroy operation does not receive eggs from the Region of Waterloo. The representative was unsure if eggs from the Region of Waterloo were being shipped to the Mississauga operation and was continuing to investigate at the time this report was prepared.

OK Egg Farm grades and distributes eggs in Ontario. The company is located in Elmira. A company representative indicated that OK Eggs source much of their eggs from the Region of Waterloo but was unable to identify the specific amount. OK Eggs distributes eggs to stores and also markets eggs through local Farmers' Markets including Cambridge and Kitchener.

Figure 3 illustrates some of the food flow features associated with egg production in the Region of Waterloo.

Figure 3: Egg Food Flow in the Region of Waterloo

Region of Waterloo egg farmers produced 10.4 million dozen eggs in 2004.



This represents about 4.7% of the total eggs produced by Ontario egg farmers.

The average household in the Region of Waterloo purchases about 24 dozen eggs from stores each year.

This translates into about 3.9 million dozen eggs for all households in the Region of Waterloo.

Ontario egg producers ship to the egg grading station of their choice, generally the closest one.

OK Egg Farm in Elmira grades and distributes a sizable portion of table eggs from the Region of Waterloo.

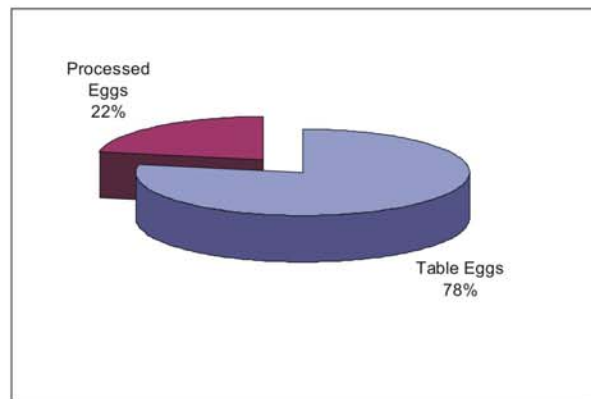
OK Eggs are found in select convenience stores and in local Farmers' Markets.

Other grading stations in close proximity to the Region of Waterloo include: Gray Ridge (Listowel) Burnbrae (Mississauga)

Lashbrook Produce Ltd. in Elmira is a local egg processor.

Products manufactured by Lashbrook include frozen and liquid eggs (whole, white, yolk)

Approximately 78% of the total eggs produced in Canada are sold as table eggs. The remaining 22% are processed into value-added eggs (liquid, frozen or dried form) and used in the manufacturing of many foods.



Source: Canada's Egg Industry. Agriculture and Agri-Food Canada, 2001.

Table eggs produced in the Region of Waterloo are marketed under several brand names. A randomized survey of 16 supermarkets and 25 convenience stores across the Region of Waterloo found that the following brands of table eggs are readily available to local consumers.



Supermarkets

38% of supermarkets in the Region of Waterloo feature **Gray Ridge** eggs

31% of supermarkets in the Region of Waterloo feature **Burnbrae** eggs

31% of supermarkets in the Region of Waterloo feature **in store/no name** brand eggs



Convenience Stores

39% of convenience stores in the Region of Waterloo feature **Gray Ridge** eggs

17% of convenience stores in the Region of Waterloo feature **Burnbrae** eggs

17% of convenience stores in the Region of Waterloo feature **OK Farm** eggs

26% of convenience stores in the Region of Waterloo feature **in store/no name** brand eggs

3.2.3 Bakery and Cereal Products

3.2.3.1 Multigrain Bread (675gm)

Retail

All of the supermarkets carried 675gm loaves of multigrain bread. Approximately 36% of the convenience stores (9 of 25 stores) carried 675gm loaves of multigrain bread. In supermarkets the price for a 675gm loaf of multigrain bread ranged from \$1.79 to \$2.39 with an average price of \$2.13. In convenience stores the price for a 675gm loaf of multigrain bread ranged from \$2.29 to \$2.79 with an average price of \$2.58.

As shown in Table 3.13, the most commonly identified brand of multigrain bread found in supermarkets was Weston (56% of stores) and Canada Bread (44%). Approximately 36% of the convenience stores featured multigrain bread and in each case the brand identified was Weston. Convenience stores that were not carrying multigrain bread usually featured enriched white bread and/or whole wheat bread. Weston was the dominant producer of these brands (e.g. Wonder, Mealtyme).

Table 3.13: Availability of Multigrain Bread (675gm) in Supermarkets and Convenience Stores

Processor/Brand	Supermarkets		Convenience Stores		Total Stores	
	# of stores	% of stores	# of stores	% of stores	# of stores	% of stores
Weston (Country Harvest)	9	56.3%	9	100.0%	18	72.0%
Canada Bread (Dempsters Whole Grains)	7	43.8%	-	-	7	28.0%
Total Stores	16	100.0%	9	100.0%	25	100.0%

Processing

A major ingredient of bread is wheat flour. The majority of wheat flour milling occurs in eastern Canada although milling capacity in western Canada is steadily increasing (Agriculture and Agri-Food Canada, 2002). Two large milling companies account for most of the wheat flour milling capacity in Canada: ADM Milling and Robin Hood Multifoods. ADM's Ontario wheat flour milling facilities are located in Mississauga, Strathroy, Midland, and Port Colborne. Robin Hood's wheat flour milling facility is located in Port Colborne. In Ontario Dover Flour operates a wheat flour mill in Cambridge and Acton. The wheat flour produced by these and other mills is purchased by bread manufacturers to produce their brand name and private label breads.

George Weston Limited (Weston) is one North America's largest food processing and distribution groups. Weston has two operating segments: Weston Foods and Food Distribution, which is operated by Loblaw Companies Ltd. The Weston Foods operating segment is primarily engaged in the baking and dairy industries within North America. Loblaw, the largest food distributor in Canada, concentrates on food retailing while increasing its offering of general merchandise products and services.

Weston Foods sells through a variety of customer channels within the North American food retailing market including supermarkets, mass merchandisers, discount retailers, food service distributors and outlets as well as other food retailing customers and

spends a considerable amount of effort in building and maintaining consumer brand awareness. Weston Foods is also a provider of control label products to retailers and consumer food companies. Weston Foods Ltd. has 13 production facilities located in Ontario including Weston Bakeries in Kitchener, which has approximately 350 employees (www.weston.ca).

A company representative with Weston Bakeries indicated that Weston's purchases all of its wheat flour from ADM Milling in Mississauga, Ontario. The researchers were advised to contact ADM to determine if ADM was receiving wheat from the Region of Waterloo. A company representative with ADM Milling indicated that individual producers' deliveries are generally mixed at the elevators where the wheat is initially graded. The wheat is then shipped in bulk lots, which makes it very difficult for mills to identify individual producers. The company representative was unable to comment on the extent to which it receives wheat or other grains from the Region of Waterloo.

Canada Bread Company Ltd. produces and distributes freshly baked products including: sliced breads (white, whole wheat, whole-grain, organic and low carbohydrate varieties), artisan breads, breakfast and snack products (bagels, English muffins, fruit breads and waffles), sweet goods (cakes, pies, tarts, donuts and cookies) and flatbreads (tortillas, pitas, naan). Canada Bread is a division of **Maple Leaf Foods**.

Canada Bread headquarters are located in Etobicoke, Ontario. The company has a number of bakeries located across Ontario including Etobicoke, Hamilton, North Bay, Concord and Toronto. Distribution centres are located in Ancaster, Barrie, Cambridge, London, Markham, Etobicoke, Ottawa, Peterborough, St. Catharines, Mississauga, and Windsor. Canada Bread employs approximately 1,130 people in all of its operations of which 700-800 are employed in processing facilities. Canada Bread serves major grocery chains, retail outlets and food service operators across Canada and in the Northeastern and Northwestern United States. The company distributes branded products including Dempsters and is the leading producer of whole-grain breads. Canada Bread also produces private label products for grocery and food service outlets (www.mapleleaf.ca).

A company representative noted that Canada Bread produces approximately 225 million units of bread from its Ontario facilities. Canada Bread sources 5% of its wheat and 100% of its oats, cornmeal and soybeans from Ontario. The company sources 95% of its wheat from Saskatchewan and Manitoba and 100% of its Flaxseed from Saskatchewan, Manitoba and Alberta. In Ontario, Canada Bread sources its grains from Southwestern Ontario including the Region of Waterloo. Of the total grains sourced by Canada Bread in Ontario, the Region of Waterloo accounts for 2% of the wheat, 3% of the oats, 5% of the cornmeal, and 2% of the soybeans. The company representative with Canada Bread indicated that the amount of grains used from the Region of Waterloo has remained stable.

Figure 4 illustrates some of the food flow features associated with grain production in the Region of Waterloo.

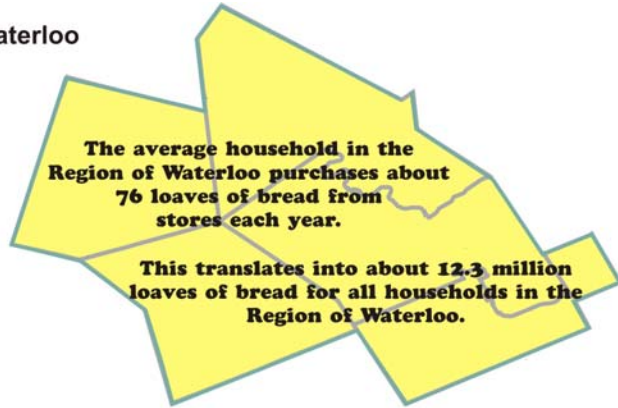
Figure 4: Grain Food Flow in the Region of Waterloo

In 2004, Region of Waterloo grain farmers produced:

- 123,400 tonnes of grain corn
- 36,300 tonnes of soybeans
- 25,000 tonnes of winter wheat
- 3,200 tonnes of spring wheat
- 3,000 tonnes of oats



This represents about 2.3% of the grain corn, 1.5% of the soybeans, 1.7% of the winter wheat, 2% of the spring wheat and 3% of the oats produced by Ontario grain farmers.



Canada Bread Company Ltd and George Weston Ltd are the two largest bread producers in Ontario.

George Weston has 13 production facilities located in Ontario including Weston Bakeries in Kitchener.

Canada Bread has several bakeries in Ontario including Etobicoke & Hamilton.

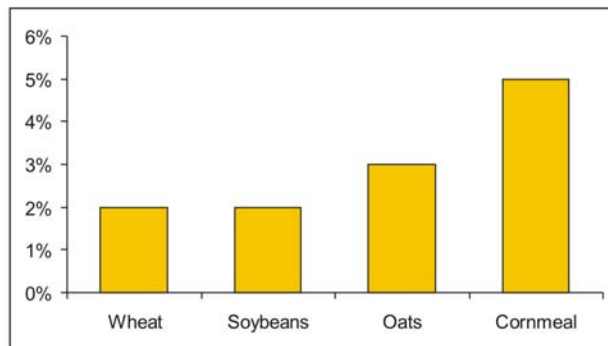
Both companies produce a variety of bread products including multigrain breads.

Canada Bread sources 5% of its wheat and 100% of its oats, cornmeal and soybeans from Ontario.

Canada Bread sources 95% of its wheat from Sask and Manitoba and 100% of its flaxseed from Alberta, Sask and Manitoba.

Canada Bread produces approximately 225 million units of bread from its Ontario facilities.

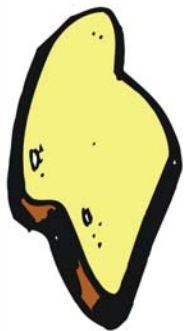
Of the total grains sourced by Canada Bread in Ontario, the Region of Waterloo accounts for 2% of the wheat and soybeans, 3% of the oats and 5% of the cornmeal.



Source: Canada Bread Company, 2001.

Multigrain bread is marketed under several brand names in the Region of Waterloo. A randomized survey of 16 supermarkets and 25 convenience stores across the Region of Waterloo found that 100% of supermarkets and 36% of convenience stores carry multigrain bread.

Supermarkets



56% of supermarkets in the Region of Waterloo feature **Weston's Country Harvest** brand multigrain bread

44% of supermarkets in the Region of Waterloo feature **Canada Bread's Dempster's Whole Grains** brand of multigrain bread

Convenience Stores

Almost all of the convenience stores carry enriched white bread but only 9 of the stores surveyed feature multigrain bread.



All 9 stores that feature multigrain bread carry **Weston's Country Harvest** brand multigrain bread.



Canada Bread's brand of multigrain bread was not identified in the convenience stores that were surveyed but some stores did carry Canada Bread's brand of enriched white bread.

3.2.3.2 Whole Grain Crackers (200-250gm)

Retail

All of the supermarkets carried whole grain crackers while approximately 68% of the convenience stores (17 of 25 stores) carried whole grain crackers.

The price for a 200-250gm box of whole grain crackers in supermarkets ranged from \$1.99 to \$2.99 with an average price of \$2.62. The price for a 200-250gm box of whole grain crackers in convenience stores ranged from \$2.69 to \$2.99 with an average price of \$2.97.

As shown in Table 3.14, the most commonly identified brand of crackers found in supermarkets was Kraft (50% of stores) and Dare (44%). In convenience stores the most commonly identified brand of crackers was Dare (77%) and Kraft (23%).

Table 3.14: Availability of Whole Grain Crackers (200-250gm) in Supermarkets and Convenience Stores

Processor/Brand	Supermarkets		Convenience Stores		Total Stores	
	# of stores	% of stores	# of stores	% of stores	# of stores	% of stores
Dare (Bretton, Vinta)	7	43.8%	13	76.5%	20	60.6%
Kraft (Mr. Christie, Nabisco)	8	50.0%	4	23.5%	12	36.4%
Presidents Choice – Loblaws	1	6.3%	-	-	1	3.0%
Total Stores	16	100.0%	17	100.0%	33	100.0%

Processing

Dare Foods Ltd. makes crackers under the Breton, Vinta, Vivant, and Cabaret brands. Dare's Canadian bakery manufacturing plants are located in Ontario (Kitchener) and Quebec (www.darefoods.com). At the time this report was completed, Dare Foods Ltd. had not responded to our information requests.

Kraft Canada produces Mr. Christie and Nabisco brands of crackers. Kraft Canada operates 20 plants and bakeries in Ontario, Quebec and British Columbia (www.kraftcanada.com). A representative with Kraft Canada declined to participate in the study.

3.2.3.3 Quick Cooking Oatmeal (1kg bag)

Retail

Most of the supermarkets carried quick cooking oatmeal in the 1kg size. Two supermarkets featured quick cooking oats in a 1.35kg bag. Approximately 52% of the convenience stores (13 of 25 stores) carried quick cooking oatmeal in the 1kg size. An additional 5 convenience stores featured 375gm variety packs of Quaker Oats quick cooking oatmeal.

In supermarkets the price for a 1kg bag of quick cooking oatmeal ranged from \$1.99 to \$2.99 with an average price of \$2.40. In convenience stores the price for a 1kg bag of

quick cooking oatmeal in convenience stores ranged from \$2.49 to \$3.29 with an average price of \$2.79.

As shown in Table 3.15, the most commonly identified brand of quick cooking oats found in supermarkets was Quaker Oats (81% of stores) followed by Robin Hood (13%) and Sunfresh No Name (6%). In convenience stores the most commonly identified brand of quick cooking oats was also Quaker Oats (83%).

Table 3.15: Availability of Quick Cooking Oatmeal (1-1.35kg bag) in Supermarkets and Convenience Stores

Processor/Brand	Supermarkets		Convenience Stores		Total Stores	
	# of stores	% of stores	# of stores	% of stores	# of stores	% of stores
Quaker Oats	13	81.3%	11	84.6%	24	82.8%
Robin Hood Multifoods (Old Mill)	2	12.5%	1	7.7%	3	10.3%
No Name Sunfresh	1	6.3%	1	7.7%	2	6.9%
Total Stores	16	100.0%	13	100.0%	29	100.0%

Processing

The processing capacity of Ontario milling oats has expanded in recent years. Historically, Quaker Oats in Peterborough was the only miller in the province. In recent years Robin Hood Multifoods Inc. constructed a new mill near Port Colborne and a new processing plant constructed by ADM at Midland also began operations. The combined oat milling capacity of facilities in Ontario is estimated at about 100,000 tonnes per year (OMAFRA. 1998).

Quaker Oats Canada produces a variety of oat products including large flake oats, quick oats, one minute oats and instant oatmeal. Quaker Oats has two plants located in Ontario in Peterborough and Trenton. The Peterborough plant specializes in cereals and the Trenton plant specializes in rice cakes and frozen muffin batter.

A representative with Quaker Oats Canada provided details on the amount of production at the Peterborough plant and where the company sources its oats. The Peterborough plant produces 6 million cases of Quaker Oats on an annual basis. Approximately 35% of the oats used by Quaker Oats Canada are sourced from Ontario while 50% are sourced from eastern provinces (Quebec and New Brunswick) and 15% are sourced from western provinces (Saskatchewan and Manitoba).

Oats that are produced for human consumption (milling oats) must meet high quality milling standards. Producers who decide to grow oats for the milling market must use careful production, harvesting and handling practices. Oats that meet the standards of the milling trade can potentially gain a higher return for the grower.

The Quaker Oats representative was uncertain if the company uses oats from the Region of Waterloo and whether growing conditions in the region were conducive to producing the variety and quality of oats that the company requires. A referral was provided to Thompsons Ltd., which provides oats to the Peterborough plant.

Thompsons Ltd. has a network of grain elevators across Ontario which receive, process and ship grain and edible beans for domestic and export markets. Thompsons is also involved in plant breeding through its Hyland Seeds division, which produces corn, soybeans, and cereal grains. A representative with Thompsons Ltd. indicated that the supply of milling oats grown in Ontario has increased substantially over the years and it was noted that some areas in the Region of Waterloo feature good growing conditions for oat seed varieties preferred by millers. While exact production figures are unavailable, there are currently some producers in the Region growing varieties that are preferred by Quaker Oats. This indicates that the Region of Waterloo has some capacity to supply this food sector.

3.2.3.4 Corn Flakes (525gm)

Retail

All of the supermarkets and 72% of the convenience stores (18 of 25 stores) carried corn flakes cereal. Approximately half of the supermarkets and convenience stores surveyed featured the 525gm box of corn flakes. The next most common size was 400gm followed by 750gm, 475gm and 200gm.

The price for a 525gm box of corn flakes in supermarkets ranged from \$2.97 to \$4.29 with an average price of \$3.42. The price for a 525gm box of corn flakes in convenience stores ranged from \$2.69 to \$3.99 with an average price of \$3.48.

As shown in Table 3.16, Kellogg’s is the dominant brand of corn flakes found in supermarkets and convenience stores. The Kellogg’s brand was identified in 94% of supermarkets surveyed and it was the only brand of corn flakes found in convenience stores.

Table 3.16: Availability of Corn Flakes (200-750gm) in Supermarkets and Convenience Stores

Processor/Brand	Supermarkets		Convenience Stores		Total Stores	
	# of stores	% of stores	# of stores	% of stores	# of stores	% of stores
Kellogg’s	15	93.8%	18	100.0%	33	97.1%
Presidents Choice - Loblaws	1	6.3%	-	-	1	2.9%
Total Stores	16	100.0%	18	100.0%	34	100.0%

Processing

Kellogg’s produces a variety of ready-to-eat cereals that use corn as an ingredient. Kellogg’s has one processing facility in Ontario located in London. The London plant produces more than 30 brands of cereal for the Canadian market and exports approximately 30% of the plant’s production to its parent company in the United States. Approximately 750,000 cartons of cereal are produced at the plant each day (www.Kelloggs.ca). Representatives with Kellogg’s did not respond to our requests for information.

3.2.4 Fruits and Vegetables

3.2.4.1 Fresh Apples (3lb bag)

All of the supermarkets carried fresh apples. Approximately 81% of the supermarkets carried apples in 3 or 4 lb bags. All of the apples sold in 3 or 4 lb bags in supermarkets were grown in Ontario. The remaining supermarkets carried bagged apples in varying weights and these apples came from outside the province of Ontario (e.g. British Columbia, New Zealand).

Only 2 of the convenience stores surveyed carried apples in 3lb bags. These apples were grown in Ontario. Another 5 convenience stores sold apples in 4 or 6 packs which did not feature place of origin labels.

In supermarkets the price for a 3lb bag of fresh apples ranged from \$2.27 to \$2.99 with an average price of \$2.87. In the 2 convenience stores that carried 3lb bags of apples the price was \$2.99.

As shown in Table 3.17, the most commonly identified brand of fresh apples in 3 or 4lb bags identified in supermarkets were from Martins Family Fruit Farm and Norfolk Fruit Growers. The only 3lb bags of apples identified in convenience stores were from Norfolk Fruit Growers.

Table 3.17: Availability of Fresh Apples (3-4lb bag) in Supermarkets and Convenience Stores

Processor/Brand	Supermarkets		Convenience Stores		Total Stores	
	# of stores	% of stores	# of stores	% of stores	# of stores	% of stores
Martins Family Fruit Farm (Waterloo)	5	38.5%	-	-	5	33.3%
Norfolk Fruit Growers (Simcoe)	3	23.1%	2	100.0%	5	33.3%
Baygrowers Coop (Clarksburg)	1	7.7%	-	-	1	6.7%
Binkley Apples (Georgian Bay)	1	7.7%	-	-	1	6.7%
Algoma Orchards (Whitby)	1	7.7%	-	-	1	6.7%
Arkona Orchards (Arkona)	1	7.7%	-	-	1	6.7%
No Name	1	7.7%	-	-	1	6.7%
Total Stores	13	100.0%	2	100.0%	15	100.0%

Growers/Packers

Martin's Family Fruit Farm is one of the leading apple growers and packers in Canada. The company produces Empire, Red & Golden Delicious, McIntosh, Gala, Ida Red, Cortland, Crispin (Mutsu), Empire, Spartan, Fuji and other varieties of Ontario apples. The company headquarters are located in Waterloo. Martin's has over 1,000 acres of orchards in several locations in Ontario including Waterloo, Vienna, and Harrow. Martin's markets apples through supermarket chains and wholesalers under a variety of brand names including "Martin's", "Vienna Farms", and "St. Jacobs Homestead Farms". Martin's also markets its apples through its retail store located in Waterloo. The company exports to the United States, Mexico, Europe, Central America, Trinidad, Dominican Republic and other parts of the world (www.martinsapples.com).

A representative with Martin's indicated that the company operates the largest orchard in the Region of Waterloo, accounting for over 40% of the total apple acreage. Other orchards in the Region are typically under 10 acres.

3.2.4.2 Apple Juice (1.36 litre can)

Retail

All of the supermarkets carried 1.36 litre cans of apple juice while 72% of the convenience stores (18 of 25 stores) carried 1.36 litre cans or 1.89 litre cartons of apple juice.

In supermarkets the price for a 1.36 litre can of apple juice ranged from \$0.97 to \$1.39 with an average price of \$1.23. In convenience stores the price for a 1.36 litre can of apple juice ranged from \$1.36 to \$1.99 with an average price of \$1.55.

As shown in Table 3.18, the most commonly identified brand of apple juice found in supermarkets was Lassonde (94% of stores). In convenience stores the most commonly identified brand of apple juice was Lassonde (77%) followed by Beatrice (9%) and Sunpac (6%).

Table 3.18: Availability of Apple Juice (1.36-1.89 litre can) in Supermarkets and Convenience Stores

Processor/Brand	Supermarkets		Convenience Stores		Total Stores	
	# of stores	% of stores	# of stores	% of stores	# of stores	% of stores
Lassonde (Allens, Rougemont, Martins, Fairlee)	15	93.8%	11	61.1%	26	76.5%
Beatrice	-	-	3	16.7%	3	8.8%
Sunpac	-	-	2	11.1%	2	5.9%
Delango	-	-	1	5.6%	1	2.9%
Equality A&P	1	6.3%	1	5.6%	2	5.9%
Total Stores	16	100.0%	18	100.0%	34	100.0%

Processing

Golden Town Apple Products is a division of **A. Lassonde Inc.** (Rougemont, Quebec). Golden Town is the largest user of peeler and juice apples in Ontario and one of the top 3 apple processors in Canada. The company is located near Thornbury, Ontario.

A company representative indicated that Golden Town processed approximately 125 million lbs of apples from the 2004 apple crop. Juice apples are purchased from some 250 Ontario, New York, Michigan, and Quebec apple growers. Approximately 4 million lbs (5% of the total apples processed) originated from the Region of Waterloo. Martin's Family Fruit Farm in Waterloo was described as a crucial supplier in the Ontario juicing industry.

Additional observations provided by the company representative:

- Ontario is a prime growing area for apples producing approximately 8.3 million bushels of apples. However, the Ontario market is flooded by imported apples from Washington State which produces 180 million bushels and China which produces 2 billion bushels of apples. China is the largest apple producer in the world and is expected to increase production by 30% by 2010.
- Due to the flooding of the Ontario market with imported apples it takes an average of 10 months to move Ontario apples.
- The average age of Ontario apple trees is 30 years, which is 15 years beyond the peak production period. As a result the quality and yield of Ontario apples is steadily declining.
- The average age of apple growers is 60+ and is not being replaced by a younger generation of growers.
- Due to changing climate conditions adjustments must be made to production techniques to sustain the industry (e.g. irrigation during hot, dry summers, growing new varieties). However, these changes are not happening as current growers are quickly moving toward retirement and avoiding making major investments in the industry.

Figure 5 illustrates some of the food flow features associated with apple production in the Region of Waterloo.

Figure 5: Apple Food Flow in the Region of Waterloo

Region of Waterloo apple farmers marketed 1.3 million kg of apples in 2004.



This represents about 1% of the total apples marketed by Ontario apple farmers.

The average household in the Region of Waterloo purchases about 19 kg of fresh apples & 13 litres of apple juice from stores each year.

This translates into about 3 million kg of fresh apples & 2 million litres of apple juice for all households in the Region of Waterloo.

Golden Town Apple Products is the largest user of peeler and juice apples in Ontario & one of the top 3 apple processors in Canada.

Golden Town is located in Thornbury, Ontario and is a division of A. Lassonde Inc.

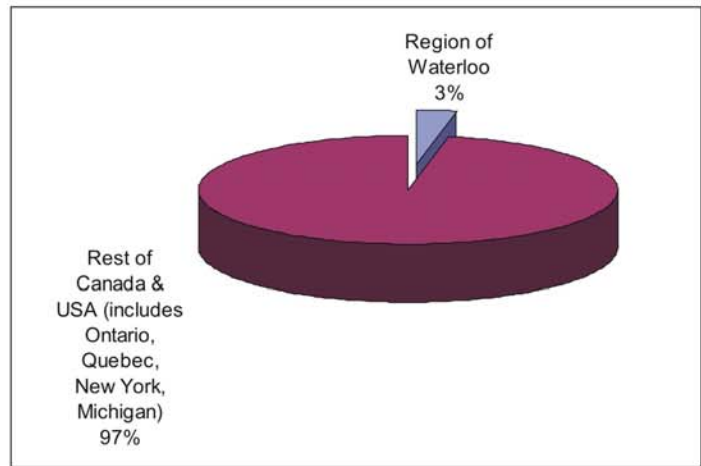
Golden Town processed approximately 57 million kg of apples from the 2004 apple crop.

Golden Town produces apple juice under a variety of brand names including Allens, Martins, and Fairlee.

Martin's Family Fruit Farm based in Waterloo is one of the leading apple growers & packers in Canada.

Martin's has over 1,000 acres of orchards in Ontario including Waterloo, Vienna, & Harrow and is an important supplier of apples to Golden Town Apple Products.

Approximately 1.8 million kg or 3% of the total apples processed by Golden Town Apples come from the Region of Waterloo and surrounding area.



Source: Golden Town Apple Products, 2005.

Apples produced in the Region of Waterloo are available in fresh and juiced format. A randomized survey of 16 supermarkets and 25 convenience stores across the Region of Waterloo found that Allens brand of apple juice is readily available to local consumers.



Apple Juice

100% of supermarkets and 72% of convenience stores in the Region of Waterloo feature apple juice (1.36-1.89 litre can or carton).

94% of supermarkets in the Region of Waterloo feature the Allens brand of apple juice.

61% of convenience stores in the Region of Waterloo feature the Allens brand of apple juice. Other brands identified in convenience stores include Beatrice, Sunpac, and Delango.

Fresh Apples

81% of supermarkets and 8% of convenience stores in the Region of Waterloo feature fresh apples in 3 or 4 pound bags.

38% of supermarkets feature fresh apples from **Martins Family Fruit Farm** (Waterloo). Other growers found in supermarkets include: **Norfolk Fruit Growers**, Simcoe (23%) **Baygrowers Coop**, Clarksburg (8%) **Binkley Apples**, Georgian Bay (8%) **Algoma Orchards**, Whitby (8%) **Arkona Orchards**, Arkona (8%)



Only 2 convenience stores featured fresh apples in 3 pound bags. The apples were from **Norfolk Fruit Growers**.

3.2.4.3 Fresh Carrots (2lb bag)

Retail

All of the supermarkets carried fresh carrots in 2lb bags with the exception of 1 supermarket, which carried fresh carrots in 3lb bags. Approximately 31% of the supermarkets featured bagged carrots that were grown in Ontario. The remaining 69% of supermarkets featured bagged carrots that were grown in the USA (e.g. California).

Approximately 32% of the convenience stores (8 of 25) surveyed carried carrots in 2lb bags. Half of the carrots identified in these stores were produced in Ontario and the other half in the USA. Another 3 convenience stores carried baby/minnie peeled carrots in varying sizes (454-900gm), which were grown in Ontario (Princeton) and USA (California).

The price for a 2lb bag of fresh carrots in supermarkets ranged from \$0.97 to \$1.99 with an average price of \$1.55. In the 8 convenience stores that carried 2lb bags of carrots the price for a 2lb bag of fresh carrots ranged from \$1.79 to \$1.99 with an average price of \$1.93.

As shown in Table 3.19, the most commonly identified brand of carrots in 2lb bags identified in supermarkets was Farm Fresh (USA), Equality, and Bolthouse Farms. The most commonly identified brand of carrots in 2lb bags identified in convenience stores was Pier 27 Produce and Country Fresh.

Table 3.19: Availability of Fresh Carrots (2lb bag) in Supermarkets and Convenience Stores

Processor/Brand	Supermarkets		Convenience Stores		Total Stores	
	# of stores	% of stores	# of stores	% of stores	# of stores	% of stores
Farm Fresh (USA)	3	18.8%	-	-	3	12.5%
Equality (USA)	3	18.8%	-	-	3	12.5%
Bolthouse Farms (USA)	3	18.8%	-	-	3	12.5%
Farm Fresh (Bradford, ON)	2	12.5%	-	-	2	8.3%
Dominion Farm Produce (Bradford, ON)	2	12.5%	-	-	2	8.3%
Bradford's Best (Bradford, ON)	1	6.3%	-	-	1	4.2%
Snoboy (USA)	1	6.3%	-	-	1	4.2%
Boathouse (USA)	1	6.3%	1	12.5%	2	8.3%
Pier 27 Produce (Chatham, ON)	-	-	4	50.0%	4	16.7%
Country Fresh (USA)	-	-	3	37.5%	3	12.5%
Total Stores	16	100.0%	8	100.0%	24	100.0%

Growers/Packers

A representative with **Dominion Farm Produce** (Bradford, Ontario) indicated that the company does not source any of its carrots from the Region of Waterloo.

3.2.4.4 Fresh Tomatoes

Retail

All of the supermarkets except 1 carried fresh tomatoes. Most supermarkets featured loose pick hothouse tomatoes, which were priced by the pound. The price for fresh hothouse tomatoes in supermarkets ranged from \$0.87/lb to \$1.99/lb with an average price of \$1.73/lb. Approximately 40% of the loose pick hothouse tomatoes identified in the store survey originated from Ontario (e.g. Leamington, Kingsville), while 40% originated from Canada, and 20% did not feature place of origin labels.

Only 4 supermarkets featured 3 litre baskets of field tomatoes. The price for a 3 litre basket of field tomatoes in supermarkets ranged from \$2.99 to \$5.99 with an average price of \$4.61. The 3 producers of field tomatoes as identified in supermarkets include Nightingale Farm (Lasalette, ON), Procyk Farms (Wilsonville, ON), and Thames River Melons (Innerkip, ON). Approximately 40% of the convenience stores (10 of 25 stores) carried fresh tomatoes. The tomatoes were sold in 8 stores as 4-packs and 2 stores as 6-packs. The 4-packs of tomatoes were all priced at \$2.99/pack.

Growers/Packers

Most of the tomatoes featured in supermarkets were produced in the Windsor Essex region of Ontario. Ontario field tomatoes were just coming into season at the completion of the store survey. Two field tomato growers from Norfolk County (located in Lasalette and Wilsonville) and one grower in Oxford County (located in Innerkip) were identified in the store survey. No growers from the Region of Waterloo were identified in the survey.

3.2.4.5 Fresh Strawberries (454gm)

Retail

All of the supermarkets except for two carried fresh strawberries. The most common strawberry sales container featured in supermarkets was the 454gm plastic container. The price for a 454gm container of fresh strawberries in supermarkets ranged from \$1.99 to \$3.99 with an average price of \$3.14. None of the convenience stores that were surveyed carried fresh strawberries. As shown in Table 3.20 all of the strawberry producers as identified in the survey of supermarkets are located in California.

Table 3.20: Availability of Fresh Strawberries (454gm) in Supermarkets

Processor/Brand	Supermarkets	
	# of stores	% of stores
Driscoll (California)	5	35.7%
Beach St. Farms (California)	3	21.4%
Wellpict (California)	3	21.4%
Berry Bowl (California)	2	14.3%
Valley Fresh Produce (California)	1	7.1%
Total Stores	14	100.0%

Growers/Packers

There were no Canadian strawberry growers identified in the supermarkets and convenience stores at the time of the survey. It's important to note that Ontario strawberries were out of season at the time of the store survey which likely accounts for their absence from local retail outlets.

3.2.4.6 Strawberry Jam (500ml)

Retail

All of the supermarkets and 84% of the convenience stores (21 of 25 stores) carried strawberry jam. All of the supermarkets had the 500ml size while only 7 of the convenience stores carried strawberry jam in this size. A total of 12 convenience stores carried strawberry jam in the 250ml size and two other convenience stores carried jam in the 750ml size.

The price for a 500ml jar of strawberry jam in supermarkets ranged from \$2.29 to \$4.29 with an average price of \$3.54. The price for a 500ml jar of strawberry jam in convenience stores ranged from \$1.99 to \$2.99 with an average price of \$2.82.

As shown in Table 3.21, the most commonly identified brand of strawberry jam found in supermarkets was ED Smith (44% of stores) followed by Kraft (25%). In convenience stores the most commonly identified brand of strawberry jam was ED Smith (36%) followed by Kraft (27%) and Smuckers (14%).

Table 3.21: Availability of Strawberry Jam (250-750ml) in Supermarkets and Convenience Stores

Processor/Brand	Supermarkets		Convenience Stores		Total Stores	
	# of stores	% of stores	# of stores	% of stores	# of stores	% of stores
ED Smith	7	43.8%	8	36.4%	15	39.5%
Kraft	4	25.0%	6	27.3%	10	26.3%
Smuckers	2	12.5%	3	13.6%	5	13.2%
Value Plus Sunfresh	-	-	3	13.6%	3	7.9%
Presidents Choice Loblaws	2	12.5%	1	4.5%	3	7.9%
Master Choice A&P	1	6.3%	-	-	1	2.6%
No Name Loblaws	-	-	1	4.5%	1	2.6%
Total Stores	16	100.0%	22	100.0%	38	100.0%

Processing

e.d. Smith is a leading Canadian manufacturer and marketer of premium quality branded and private label foods sold at retail and foodservice in North America. The company head office and plant are located in Winona, Ontario, at the centre of Ontario's fruit belt. The company's products range from fruit-based products, which include jams (including jellies, marmalades and spreads), pie fillings and ketchup, to sauces, which include pasta sauces, salsa, barbeque sauces, specialty sauces and syrups (www.edsmith.com).

A representative with e.d. Smith indicated that the company sources its strawberries from Mexico and California. According to the representative, the company is unable to secure a sufficient volume of Ontario strawberries for processing as it prefers to source its berries from several large volume producers who can guarantee consistency in production and quality. It was also noted that it is easier to manage quality control when working with fewer suppliers.

A representative with **J.M. Smucker’s Canada** indicated that the company does not source any of its strawberries from the Region of Waterloo.

A representative with **Kraft Canada** indicated that the company does not source its strawberries from Ontario.

3.2.4.7 Potato Chips (245-250gm natural flavour)

Retail

Potato chips along with 2% milk were the only items in the Waterloo Region Food Basket that were carried by all of the supermarkets and convenience stores that were surveyed. Approximately 56% of the supermarkets and 64% of the convenience stores carried potato chips in 245-250gm sizes. The next most common size was 300gm followed by 235gm, and 170gm.

In supermarkets the price for a 245-250gm bag of natural flavour potato chips ranged from \$1.66 to \$2.99 with an average price of \$2.50. In convenience stores the price for a 245-250gm bag of natural flavour potato chips ranged from \$2.50 to \$3.79 with an average price of \$2.88.

As shown in Table 3.22, the most commonly identified brand of potato chip found in supermarkets was Frito Lay (50% of stores) followed closely by Humpty Dumpty (44%). In convenience stores the most commonly identified brand of potato chips was Frito Lay (80%) followed by Humpty Dumpty (12%) and Family Best (8%).

Table 3.22: Availability of Natural Flavour Potato Chips (170-300gm) in Supermarkets and Convenience Stores

Processor/Brand	Supermarkets		Convenience Stores		Total Stores	
	# of stores	% of stores	# of stores	% of stores	# of stores	% of stores
Frito Lay (Lays Classic, Ruffles)	8	50.0%	20	80.0%	28	68.3%
Humpty Dumpty	7	43.8%	3	12.0%	10	24.4%
Family's Best	-	-	2	8.0%	2	4.9%
Equality A&P	1	6.3%	-	-	1	2.4%
Total Stores	16	100.0%	25	100.0%	41	100.0%

Processing

Humpty Dumpty Snack Foods Inc. manufactures, markets and distributes potato chips and other salty snack food products under the Humpty Dumpty brand name in eastern Canada and the northeastern United States. The company also supplies a full

line of private label snack food products to leading retail chains. Humpty Dumpty operates four modern manufacturing facilities, with locations in Ontario (Brampton), Quebec, New Brunswick and Prince Edward Island (www.humptydumpty.com).

According to a representative with Humpty Dumpty, the Ontario processing facility refines 60 million lbs of potatoes each year. Approximately 75% of the potatoes come from Alliston, Ontario. The company also sources Ontario potatoes from Shelburne, Flamborough, Leamington, Port Stanley, Brantford and Ancaster. A very small amount of potatoes comes from St. Jacobs and the Mennonite farms. Humpty Dumpty has reduced the number of potatoes being sourced from St. Jacobs because producers are not meeting Humpty Dumpty's potato growing criteria. Potato seeds are mostly imported from outside Ontario. Potatoes have a better chance of survival if the seeds are not from the area they originated.

Frito Lay Canada is the largest manufacturer of chip snacks in Canada. The company produces a variety of potato chip brands including Lays, Hostess, and Ruffles. The company has six manufacturing facilities in Canada. Two of the facilities are located in Alberta, two in Quebec and one in Cambridge, Ontario (www.fritolay.ca). A representative with Frito Lay Canada declined to participate in the study.

3.3 Farmers' Markets and Produce Auction

3.3.1 Farmers' Markets

Farmers' Markets in Ontario are experiencing a resurgence in popularity. A recent provincial study on Farmers' Markets found that customers strongly identify the local farmers' market as a key community icon that offers both economic and social benefits (Cummings et al. May 1999. p.66). Customers identified Markets as important venues that provide opportunities for interacting directly with farmers and learning more about where food comes from and the work involved in producing it (p.67). Consumers are particularly attracted by the "freshness" of the food offered at farmers' markets.

Waterloo Region features four Farmers' Markets: Cambridge, Kitchener, Waterloo, and St. Jacobs.¹⁸ The Cambridge and Kitchener farmers' markets were examined as part of the Food Flow study. Site visits were conducted in August 2005 to determine the availability of food items from the Region of Waterloo Food Basket and the extent to which vendors are offering locally grown products.

The Kitchener Farmers' Market has been in operation since 1869. It is located at 300 King St. East in downtown Kitchener. The Kitchener Market hours are 7:00am to 2:00pm every Saturday year round. Between June and October the market is also open on Wednesdays from 8:00am to 2:00pm. In November 2002, two customer counts revealed that the number of people visiting the Kitchener Farmers' Market ranged from 9,700 people to 13,400 people (Adventus Research, 2002. p.3). The Kitchener Market features approximately 75 vendors on Saturday and 15 vendors on Wednesday.

The Cambridge Farmers' Market has been in operation since 1830. It is located at the corner of Ainslie and Dickson Streets. The Cambridge Market hours are 6:00am to 1:00pm every Saturday year round. Between June and September the market is also open on Wednesdays during the same hours. The Cambridge Farmers' Market has an estimated customer base of approximately 3,000 individual shoppers (Cummings et al., 1999. p.7) and features between 35 and 45 vendors during the year.

As shown in Table 3.23, the Kitchener and Cambridge Farmers' Markets feature most of the Region of Waterloo Food Basket items and many of these items are offered by multiple vendors.

Food Basket items not observed at the markets at the time of the site visit include beef wieners¹⁹, fruit yogurt, crackers, quick cooking oatmeal, corn flakes, apple juice²⁰, and potato chips²¹.

¹⁸ Additional details on the four markets are provided in Growing Food and Economy: Economic Impact Study of the Agriculture and Food-Related Sectors in Waterloo Region. October 2003. Region of Waterloo.

¹⁹ Pork wieners were available at the Kitchener Market and both markets featured specialty sausages.

²⁰ Apple cider was available at both markets.

²¹ Fresh potatoes were available at both markets.

Table 3.23

Food Item	Availability ✓		Price Range
	Kitchener Market	Cambridge Market	
Ground beef	✓	✓	\$5.48 - \$7.25 per kg
Pork chops	✓	✓	\$8.12 - \$10.98 per kg
Chicken breast	✓	✓	\$9.88 - \$10.98 per kg
Sliced ham	✓	✓	\$8.78 - \$10.98 per kg
2% milk, 2 litre carton (Parmalat)	✓		NA
Cheddar cheese	✓	✓	\$10.98 per kg
Eggs, grade A, large	✓	✓	\$2.30 per dozen
Bread, multigrain	✓	✓	\$2.20 - \$ 3.80 per loaf
Apples, fresh	✓	✓	\$3.00 - \$5.50 per 3 litre basket
Carrots, fresh	✓	✓	\$1.00 - \$1.50 per 2lb
Tomatoes, fresh	✓	✓	\$2.50 - \$4.50 per 3 litre basket
Strawberries, fresh	✓		\$2.00 per 454gm carton

All of the items listed in Table 3.23 originated from Ontario or Canada. Although the Ontario fresh strawberry season was over at the time the market site visit, at least one vendor was selling strawberries labeled as Ontario grown. A number of other vendors were selling California strawberries.

The largest number of vendors at the Cambridge and Kitchener Farmers' Market were fruit and vegetable vendors. Fruit and vegetable vendors at the markets came from a number of communities in the Region of Waterloo including Breslau, Kitchener, Wellesley, and Waterloo. Fruit and vegetable vendors also came from Beamsville, Blyth, Burford, Burlington, Delhi, Downsview, Forest, Harley, Niagara on the Lake, Scotland, St. George, Stoney Creek, Tillsonburg, and Waterford.

Meat vendors at the Cambridge and Kitchener markets came from a number of communities in the Region of Waterloo including Cambridge, Kitchener, New Hamburg and Waterloo. Meat vendors also came from Brantford, Downsview, Hamilton, St. George, and Tillsonburg.

Cheese vendors were fewer in number than meat vendors but they also came from a number of different communities in the Region of Waterloo including Kitchener and New Hamburg. Egg vendors were from Elmira.

Bread and baked goods vendors came from a variety of local communities including Baden, Kitchener, and Waterloo. Bread and baked goods vendors also came from Guelph, Etobicoke and Simcoe.

3.3.2 Produce Auction

Elmira Produce Auction Cooperative Inc. (EPAC) is located in Elmira (Reid Woods Drive). The auction was established in 2004 and is locally owned and operated by members of the farming community. The auction operates between May and October and is open three days a week (Monday, Wednesday and Friday) during peak harvest periods and two days a week during the early and late harvest season.

During the early season (May-June) the wholesale market features a variety of produce including asparagus, rhubarb, beets, lettuce, strawberries, peas, broccoli, and cucumbers. During the full season (July-August) the market features strawberries, raspberries, watermelon, cantaloupe, peaches, pears, sweet corn, cucumbers, tomatoes, zucchini, potatoes, cauliflower, peppers, lettuce, onions, green and yellow beans, carrots, broccoli, peas, etc. During the late season (Sept.-Oct.) the market features apples, squash, pumpkin, gourds, onions, potatoes, watermelon, tomatoes, peppers, sweet corn, etc.

EPAC was established to support local growers by creating a new market for regional produce. EPAC is a live, public market that caters to wholesale buyers who are interested in buying fresh, high quality, locally grown fruits and vegetables in wholesale lots. Lot sizes vary from ½ bushel to full bushel, pallets and field bins.

EPAC established eligibility criteria for selling at the auction as part of its commitment to promoting local growers and top quality product. Growers are required to be within a 75km radius of Elmira and must use standardized packaging to maintain product uniformity. There are about a 100 members of the cooperative and most of the growers are from Waterloo Region and Wellington County (The Farm Journalist, Sept. 2004: p.7).

Buyers consist of food distributors, restaurants, and retail operations. While conducting a visit to the market in August 2005 the researchers noted purchasing agents from Herrle's Country Farm Market (Waterloo), Martins Family Fruit Farm Country Store (Waterloo), and L&M Food Markets²² among others. Farm stands and farmers' market vendors also purchase commodities at the auction that they don't grow themselves but that appeal to their clientele.

In terms of the availability of food items from the Region of Waterloo Food Basket, the auction featured an abundance of fresh field tomatoes and carrots during the site visit in late August 2005. Strawberries were out of season at the time of the visit but are normally offered at the auction when in season. Likewise, apples were not in season at the time of the visit but are normally available at the auction when in season.

²² L&M Food Markets have stores located in Arthur, Durham, Elora, Fergus, Harriston, Palmerston, Dundalk and Markdale.

4.0 SUMMARY AND CONCLUSIONS

One of the primary objectives of the Food Flow Analysis study was to answer the following question:

- What percentage of food that is consumed in the Region of Waterloo has been grown, raised, and/or processed in the Region?

With input from the Farms that Sell Locally Advisory Committee, the researchers designed a methodology that included a review of Statistics Canada data (Census of Agriculture, Food Expenditure Survey, etc.) a site observational survey of supermarkets and convenience stores, and key informant interviews with agricultural commodity representatives and major food processors.

In developing a manageable approach for tracing and measuring the availability of locally grown foods in the Region of Waterloo, it was decided to focus on a small 'food basket' of items purchased in supermarkets and convenience stores. As part of the selection criteria for the Region of Waterloo Food Basket, the food items had to be representative of foods that are currently grown in the Region and they had to reflect current consumer food expenditure patterns.

A total of 20 food items were chosen for the Region of Waterloo Food Basket. As shown in the following list the Basket includes a mix of fresh and processed foods:

- Ground beef, medium (hamburger patties were used as a substitute for convenience stores)
- Pork chops, loin (pork wieners were used as a substitute for convenience stores)
- Chicken breast, boneless, skinless (chicken patties were used as a substitute for convenience stores)
- Cooked ham, sliced (175 gm)
- Milk, 2% (carton)
- Yogurt, 0% fat, fruit (150-175gm)
- Cheddar cheese, medium age (200-227gm)
- Eggs, Grade A, large, white (1 dozen)
- Bread, multigrain (675gm)
- Crackers, whole grain (200-250gm)
- Oatmeal, quick cooking (1kg)
- Corn flakes (525gm)
- Apples, fresh (3lb bag)
- Apple juice (1.36 litre can)
- Strawberries, fresh (454 gm carton)
- Strawberry jam (500ml)
- Carrots, fresh (2lb bag)
- Tomatoes, fresh
- Potato chips, regular flavour (245-250gm)

A site observational survey was carried out in 16 supermarkets and 25 convenience stores (selected at random across the Region of Waterloo) to determine the availability of the Region of Waterloo Food Basket items and to identify the major processors.

The results of the store survey revealed a short list of brands that have dominant positions in the retail marketplace including Maple Leaf and Cargill/Better Beef meat products, Neilson and Parmalat dairy products, Burnbrae Farms and Gray Ridge Farms eggs, Weston Foods and Canada Bread baked products, Quaker Oats and Kellogg's cereal products, A. Lassonde Inc. apple products, Kraft Canada and e.d. Smith jams and preserves, and Humpty Dumpty and Frito Lay snack foods.

Key informant interviews were conducted with company representatives to try and determine the extent to which agricultural products produced in Ontario and the Region of Waterloo were being used by the processors. Many of the processors found it difficult to identify the exact amount of agricultural products they use from the Region of Waterloo. None of the processors single source their agricultural products/ingredients from the Region of Waterloo and in most cases the amount of product that originates from the Region represents a small percentage of the total agricultural products/ingredients sourced from Ontario, other provinces and in some cases other countries.

Based on the data provided by processors and industry data from other sources including commodity representatives and Statistics Canada it is possible to provide a very general indication of the degree of Ontario and Waterloo Region content in the Food Basket items. For the purposes of this analysis we used the following scale to assess the degree of availability of Food Basket items in supermarkets and convenience stores and the degree of Ontario and Waterloo Region content associated with specific food brands identified in the store study:

- Very low less than 10%
- Low 10-29%
- Moderate 30-59%
- High 60-79%
- Very high 80% or more

- Fresh ground beef has a very high degree of availability in supermarkets. Fresh ground beef is not available in convenience stores but frozen hamburger patties have a moderate degree of availability in convenience stores.²³ Fresh ground beef has a low to moderate degree of Ontario content and a very low degree of content from the Region of Waterloo.
- Fresh pork chops have a very high degree of availability in supermarkets. Fresh pork chops are not available in convenience stores but pork wieners have a moderate degree of availability in convenience stores.²⁴ Fresh pork chops have a low to moderate degree of Ontario content and a very low degree of content from the Region of Waterloo.
- Fresh chicken breasts have a very high degree of availability in supermarkets and are not available in convenience stores. Fresh chicken breasts have a moderate to high degree of Ontario content and a low degree of content from the Region of Waterloo. Frozen chicken patties have a low degree of availability in convenience stores and feature a moderate to high degree of Ontario content and a low degree of content from the Region of Waterloo.
- Beef wieners have a very high degree of availability in supermarkets and a low to moderate degree of availability in convenience stores. Beef wieners have a low degree of Ontario content and a very low degree of content from the Region of Waterloo.
- Sliced cooked ham has a very high degree of availability in supermarkets and a high degree of availability in convenience stores. Sliced cooked ham has a low degree of Ontario content and a very low degree of content from the Region of Waterloo.
- 2% milk has a very high degree of availability in supermarkets and convenience stores. It has a very high degree of Ontario content and a low degree of content from the Region of Waterloo.
- Non-fat fruit yogurt has a very high degree of availability in supermarkets and a moderate degree of availability in convenience stores. It has a very high degree of Ontario content and a low degree of content from the Region of Waterloo.
- Cheddar cheese (medium age) has a very high degree of availability in supermarkets and a high degree of availability in convenience stores. It has a high degree of Ontario content and a very low degree of content from the Region of Waterloo.

²³ Frozen hamburgers have a low to moderate degree of Ontario content and a low degree of content from the Region of Waterloo.

²⁴ Pork wieners have a low to moderate degree of Ontario content and a low degree of content from the Region of Waterloo.

- Eggs have a very high degree of availability in supermarkets and convenience stores. They have a very high degree of Ontario content and a very low degree of content from the Region of Waterloo.
- Multigrain bread has a very high degree of availability in supermarkets and a moderate degree of availability in convenience stores. It has a very high degree of Ontario content in terms of oats, cornmeal and soybeans but a very low degree of Ontario wheat content. It has a very low degree of content from the Region of Waterloo.
- Wholegrain crackers have a very high degree of availability in supermarkets and a high degree of availability in convenience stores. Insufficient information was available to assess the Ontario and Region of Waterloo content.
- Quick cooking oatmeal has a very high degree of availability in supermarkets and a moderate degree of availability in convenience stores. It has a moderate degree of Ontario content and a very low degree of content from the Region of Waterloo.
- Corn flakes have a very high degree of availability in supermarkets and a high degree of availability in convenience stores. Insufficient information was available to assess the Ontario and Region of Waterloo content.
- Fresh apples (as sold in 3 or 4 pound bags or small packs of 4 or 6) have a very high degree of availability in supermarkets and a low degree of availability in convenience stores. They have a very high degree of Ontario content and a moderate degree of content from the Region of Waterloo.
- Apple juice (as sold in 1.36-1.89 litre cans or plastic containers) has a very high degree of availability in supermarkets and a high degree of availability in convenience stores. Apple juice has a moderate degree of Ontario content and a very low degree of content from the Region of Waterloo.
- Fresh carrots (as sold in 2 pound bags) have a very high degree of availability in supermarkets and a moderate degree of availability in convenience stores. They have a moderate degree of Ontario content. None of the carrots identified in the store survey originated from the Region of Waterloo.
- Fresh tomatoes have a very high degree of availability in supermarkets and a moderate degree of availability in convenience stores. They have a moderate to high degree of Ontario content. None of the tomatoes identified in the store survey originated from the Region of Waterloo.
- Fresh strawberries have a very high degree of availability in supermarkets but are not available in convenience stores. At the time the store survey was

conducted fresh strawberries were out of season in Ontario. All of the fresh strawberries identified in the store survey originated from California.

- Strawberry jam has a very high degree of availability in supermarkets and convenience stores. It has a very low degree of Ontario content and there is no content from the Region of Waterloo.
- Potato chips have a very high degree of availability in supermarkets and convenience stores. They have a high degree of Ontario content and a very low degree of content from the Region of Waterloo.

Table 4.1 and 4.2 provide a graphic presentation of the above information.

Overall, the findings indicate that most of the items in the Region of Waterloo Food Basket are readily available in local supermarkets and convenience stores and most food items have a moderate to high degree of Ontario content. With respect to local content, none of the food processors that provided information use agricultural products that are exclusively produced in the Region of Waterloo. While agricultural production in the Region of Waterloo is substantial, ongoing consolidation in the food processing and distribution sector is making it more difficult for commodities to retain their unique local identity as they make their way to the marketplace. In most cases the amount of Waterloo Region content found in food items is low as a result of processors sourcing their total agricultural product requirements from multiple regions of the province and Canada and/or local growing conditions, which limit the amount of production.

Consumers who are interested in maximizing Waterloo Region content in their food basket have the option of buying locally produced agricultural products from local growers who sell products direct from the farm and/or through local farmers' markets in the Region of Waterloo. Consumers can also buy locally grown produce from retail markets such as Herrle's Country Farm Market and Martins Family Fruit Farm Country Store, which supplement their own farm products with products purchased from the Elmira Produce Auction.

Locally grown produce is also available to a limited extent in some supermarkets. These products are typically incorporated into large display cases alongside products from other provinces/countries, which makes it more difficult for consumers to identify their local product options. Given that the bulk of consumer food purchases are made through supermarkets, any support that these stores can lend to promoting the 'local brand' would be beneficial to local producers. One option might be the creation of specially designated display cases that feature local products. Supermarkets that have concerns about obtaining a consistent supply of high quality produce to feature in the 'Waterloo Region' display case should examine opportunities for working more closely with the Elmira Produce Auction.

Table 4.1: Availability of Food Basket Items in Supermarkets & Convenience Stores

Food Basket Item	Availability in Stores					
	Not available	Very low 1-9%	Low 10-29%	Moderate 30-59%	High 60-79%	Very high 80% or more
Ground beef	■					■
Pork chops	■					■
Chicken breasts	■					■
Beef wieners			■			■
Sliced ham					■	■
2% milk						■
Non fat yogurt				■		■
Cheddar cheese					■	■
Eggs						■
Multigrain bread				■		■
Wholegrain crackers					■	■
Oatmeal				■		■
Corn flakes					■	■
Fresh apples			■			■
Apple juice					■	■
Fresh carrots				■		■
Fresh tomatoes				■		■
Fresh strawberries	■					■
Strawberry jam						■
Potato chips						■

	Supermarkets
	Convenience stores

Table 4.2: Ontario and Waterloo Region Agricultural Product Content in Food Basket Items

Food Basket Item	Degree of Ontario and Waterloo Region Content					
	Limited or no local content	Very low 1-10%	Low 10-29%	Moderate 30-59%	High 60-79%	Very high 80% or more
Ground beef		Waterloo Region	Ontario			
Pork chops		Waterloo Region	Ontario			
Chicken breasts		Waterloo Region			Ontario	
Beef wieners		Waterloo Region	Ontario			
Sliced ham		Waterloo Region	Ontario			
2% milk			Waterloo Region			Ontario
Non fat yogurt			Waterloo Region			Ontario
Cheddar cheese		Waterloo Region			Ontario	
Eggs		Waterloo Region				Ontario
Multigrain bread ^a		Waterloo Region				Ontario
Wholegrain crackers				na		
Oatmeal		Waterloo Region			Ontario	
Corn flakes				na		
Fresh apples				Waterloo Region		Ontario
Apple juice		Waterloo Region		Ontario		
Fresh carrots	Waterloo Region			Ontario		
Fresh tomatoes	Waterloo Region				Ontario	
Fresh strawberries ^b	Waterloo Region	Ontario				
Strawberry jam	Waterloo Region	Ontario				
Potato chips		Waterloo Region			Ontario	

^a Refers to oat, cornmeal and soybean content only, not wheat.

^b Local strawberries were out of season at the time of the study.

References

Agriculture and Agri-Food Canada. July 19, 2002. Canada: Primary Processing of Grains, Oilseeds, Pulses and Special Crops.

Adventus Research with Strategic Research Associates & CIC Innovation Consultants Inc. 2002. *A Market Study For the New Kitchener Market*. Corporation of the City of Kitchener.

Better Farming. August/September 2005. Farmer-only apple board faces import challenge as it moves into its second year.

Better Farming. October 2005. Ontario producers have no beef with Cargill acquisition.

Cummings and Associates. October 2003. *Growing Food and Economy: Economic Impact Study of the Agriculture and Food-Related Sectors in Waterloo Region*. Region of Waterloo.

Cummings, H., G. Kora and D. Murray. 1999. *Farmers' Markets Ontario Economic Impact Study 1998: Cambridge Farmers' Market (with the Support of Farmers' Markets Ontario)*.

Interim Report of the Standing Senate Committee on Agriculture and Forestry. *Cattle Slaughter Capacity in Canada*. May 2005.

Ontario Beef, October 2004. Gencor Foods now processing cows.

Ontario Wheat Producers' Marketing Board. *Corporate Plan Summary*, June 2002.

Region of Waterloo Public Health. October 2004. *A Glance at Diet, Weight and Diabetes*.

Region of Waterloo Public Health. September 2004. *A Glance at Access to Food*.

Region of Waterloo Public Health. February 2004. *A Fresh Approach to Food: Local Food Buying in Waterloo Region*.

Region of Waterloo Public Health. March 2003. *Rural Health Study in Waterloo Region*.

Statistics Canada. 2001. *Census of Agriculture*.

Statistics Canada. 2001. *Food Expenditure in Canada*. Cat. No. 62-554-XIE. Release Date: February 21, 2003.

The Farm Journalist. 'New farmers' auction helps struggling producers.' Sept. 2004.

Appendices

- A. Annotated Bibliography**
- B. Questionnaire for Commodity Group Representatives**
- C. Store Survey**
- D. Questionnaire for Food Processors**

Appendix A: Annotated Bibliography

Davis, et al. 2004. Toward a Sustainable Food System: Assessment and Action Plan for Washtenaw County, Michigan. Joint Master's Thesis Project (Natural Resources and Environment), University of Michigan.

Document Type: Thesis

Speaks To: Local food system assessment, economic development, social development

Approach: assessment and 'strategic intervention'

Description:

The purpose of this thesis project was "to strengthen the links in the local food system in order to minimize the distances, both physical and perceived, between food production and consumption in Washtenaw County, Michigan."

The research methodology included an extensive literature review, case study analysis of existing local food system initiatives in North America and Japan, assessment of the existing local county food system and an analysis of system stakeholders. The researchers employ a systems framework to produce an action plan for local food system improvement based on findings from the initial research components.

The action plan identifies six "issue areas" where food system localization could be improved through intervention: Information, training and education; economic infrastructure, social networks, local producer viability; policy; and, vision and goals. The authors argue that systematic and strategic intervention is more effective in improving the local food system as opposed to intervention focussing on "symptom" issues.

Greenburg, Quinlan, Rosner Research, Inc. 2002. FoodRoutes Network Report: Building Support for Buying Local. A research report prepared for the FoodRoutes Network "buy local" campaign.

Document Type: Research report

Speaks to: The promotion of local food systems and local food purchasing

Approach: Provides tangible techniques for improving "buy-in" to the consumption of local food, supported by quantitative information from local food consumer surveys.

Description:

The report provides 4 concise and tangible methods to increase support for buying locally produced products:

1. Tap into existing values.
2. Make the link to food safety.
3. Go where you find the consumers.
4. Target groups.

These methods are: “predicated on a three-step process: raising awareness about where to find and how to identify locally grown food, communicating a message about why it is important to buy local, and removing the obstacles to buying local,” and are based on the analysis of 400 consumer surveys conducted in March 2002.

Hendrickson, Mary. 2001. *Community Food Systems: Visions of a Different Food System*. Prepared for Food Circles Networking Project, University of Missouri Outreach and Extension

Document Type: University Outreach Program Brief/Report

Speaks To: Description of alternative food systems – definition and attributes; the nature of alternative food systems.

Approach: Qualitative description.

Description:

The author attempts to describe and explain the “vision” of alternative food systems. One key point she makes is that, with the relatively recent and rapid rise in interest in alternative food systems, articulating a definition of an “alternative food system” is extremely difficult. Instead, she suggests that researchers and practitioners think in terms of key attributes rather than hard definitions. From Hendrickson’s perspective, alternative food systems are:

- Community-centered
- Relational
- Place-based
- Participatory
- Healthy
- Include citizen-eaters
- Supportive of the local economy

Hendrickson also points out that alternative food systems are built from the “ground-up,” which is not surprising given that they are alternative—fighting the inherent resistance and multiple barriers imposed by the dominant conventional system. She suggests that the effort involved is significant and requires both substantial knowledge development and the rebuilding of infrastructure (and/or perhaps the reorganization existing infrastructure).

Hendrickson, Mary. 1999. *Face-to-Face Farming and Eating: Personal Relationships in Alternative Food Systems*. Prepared for Food Circles Networking Project, University of Missouri Outreach and Extension

Document Type: University Outreach Program Brief/Report

Speaks To: Promoting awareness of alternative systems; urban-rural linkages; consumer awareness/perception; marketing strategies for alternative food systems.

Approach: Some quantitative analysis in support of a qualitative description of the characteristics/motivations of alternative (local) food system consumers.

Description:

This document is oriented to existing or potential participants in alternative food systems (producers/processors and sellers). The author provides a brief description of what “alternative” means relative to the globalized industrialized food system. She then categorizes some common characteristics and motivations of consumers who are attracted to alternative food systems and strategies that producers/sellers can employ to improve the marketability of their products to this consumer group.

Hora, Mathew, and Jody Tick. (?). *From Farm to Table: Making the Connection in the Mid-Atlantic Food System* (Online summary). Commissioned by the Capital Area Food Bank of Washington D.C.

Document Type: Non-Profit Sector Report

Speaks To: Food system awareness/education, local food system sustainability; food security

Approach: Employs a food system model similar to J. Dixon’s “Cultural Economy Model;” Also a deliberate attempt to go beyond the standard quantitative analysis of food production, processing, and distribution.

Description:

This report examines the pathways taken by fresh fruits and vegetables consumed in the Mid-Atlantic States. The authors use an analysis of the flow of fresh fruits and vegetables as a means of both describing and educating/raising awareness about the region’s overall food system, the globalization/industrialization of food systems generally. Their stated objectives are twofold:

- To create an educational resource explaining the basic operations of the food system for use by the general public and food system stakeholders.
- To analyze the productive capacity of regional fruit and vegetable production and the nature of the region’s reliance on imported fresh produce.

Clearly the authors hope to promote informed consumption and consideration of food system alternatives that promote regional (local) food production and distribution and improve food system sustainability and local food security.

In describing their purpose and methodological approach, the authors point to the lack of regional level food system research and analysis.

Pirog, R., T. Van Pelt, K. Enshayan, and E. Cook. 2001. *Food, Fuel, and Freeways: An Iowa perspective on how far food travels, fuel usage, and greenhouse gas emissions*. Leopold Centre for Sustainable Agriculture, Iowa State University, Ames, Iowa.

Document Type: Research Paper

Speaks To: Environmental impacts - long-distance transportation – external environmental costs, sustainability.

Approach: Quantitative analysis of transportation costs and transportation related pollution emissions.

Description:

This paper discusses transportation from farm to point of sale within local, regional, and conventional food systems. Using fresh produce and other foods as examples, the authors consider travel miles, the consumption of fossil fuels, the production of carbon dioxide emissions, and make an assessment of the overall potential environmental costs.

This paper shows that fresh produce transported to Iowa consumers under the current conventional food system travels longer distances, uses more fuel, and releases more CO than the same quantity of produce transported in a local or Iowa-based regional food system. Given that fuel expenses are only a small percentage of total transportation and distribution costs, however, fuel energy costs will need to rise significantly if they are the only factor considered in determining whether local and regional systems are economically competitive with the conventional system. Economic value must be assigned to the external environmental cost of burning more fossil fuels and releasing more CO. The authors strongly urge that more baseline research be conducted comparing the energy efficiency and external environmental costs of production, processing, packaging, and transportation sectors of conventional, regional, and local food systems.

Region of Waterloo Public Health. 2004. A Fresh Approach to Food: Local Food Buying in Waterloo Region.

Document Type: Local government research report

Speaks To: Consumer awareness/attitudes/perceptions,

Approach: Quantitative and qualitative survey research and analysis

Description:

This fact sheet provides information on consumer awareness, perception, and activity with respect to the local food system based on six questions included in the 2003 Kitchener-Waterloo Metropolitan Area Survey.

The findings portrayed and analyzed in the fact sheet include the reality that most consumers are aware of the importance of buying locally produced food, the most often cited reason for purchasing local food was to support local farmers, and that purchases made at farmers markets and local vendors was the most common method of obtaining locally produced food. The fact sheet also provides information of barriers consumers experience or perceive in attempting to purchase local food, and their willingness to support a 'local' food label.

Region of Waterloo Public Health. 2003. Growing Food and Economy: Economic Impact Study of the Agriculture and Food-Related Sectors in Waterloo Region. Prepared by Harry Cummings and Associates Inc.

Document Type: Local government research report

Speaks To: Assessment of local agricultural production, processing, and distribution

Approach: Extensive quantitative analysis of census data; quantitative and qualitative survey research and analysis; trend and issue identification.

Description:

A major study commissioned by the Region to explore the role of agriculture, agribusiness, and food-related sectors in the regional economy to inform regional government policymaking and further research, particularly within Public Health.

The study methodology was comprehensive, with extensive use of both primary and secondary data, supported by qualitative research and stakeholder feedback. The research explores the economic impact of agriculture and food-related activity within the region across the primary, secondary, and tertiary activity divisions.

In addition to providing useful valuation of the agricultural and food-related economic activity within the region, including its contribution to employment, the study report presents a number of themes that emerge from the research and are worthy of further consideration. These include the complexity of the food system within the region and its relationship to provincial, national, and international food flows; the unique aspects of regional food production, processing, and distribution; the impact of global economic pressures on all the components of the local system, especially the ever-present demand for improved productivity, the disconnect from 'local' in the food system, accompanied by a resurgence in interest in reconnecting this relationship; the need for better information, more research, and improved training; the impact of changing consumer behaviour, and the need to address the food system in regional land-use planning, economic development, and overall regional policy development.

Region of Waterloo Public Health. 2003. How the Food System Contributes to the Quality of the Air We Breathe: A Literature Review. Prepared by Kim Lamers-Bellio and Christina Fuller, Health Determinants, Planning and Evaluation division.

Document Type: Local government research report

Speaks To: Environmental impacts of food production, processing, and distribution

Approach: Literature review – analysis of secondary information on food system environmental impacts.

Description:

This literature review identifies and describes the impact that the modern Canadian food system has on air quality. The mechanisms of impact explored in the literature review include the contributions that food production, processing, distribution and consumption make to greenhouse gas emissions (and thus global warming), including atmospheric

carbon dioxide, methane, and nitrous oxide, as well as food system related emissions of other substances with negative impacts on air quality. The authors conclude that the food system makes a major contribution to reduced air quality, and that the profit motive inherent in the industrialized Canadian food system means that it is not conducive to recognizing or addressing the substantial negative impacts on environmental quality and human health. They also suggest that some components of the overall impact have not been adequately researched (e.g., processing activity).

Region of Waterloo Public Health. 2003. Rural Health Study in Waterloo Region: Interim Report. Prepared by Barbara Zupko, Judy Shearer, and Christina, Vermeulen, Health Determinants, Planning and Evaluation division.

Document Type: Local government research report

Speaks To: Health, social cohesion, awareness/attitudes/perceptions, economic viability, urban-rural links, community sustainability.

Approach: Extensive qualitative research (focus groups and key informant interview), issue identification and trend analysis.

Description:

This document reports on a rural health study conducted by Waterloo Region Public Health. The purpose of the study was to “gain a better understanding of the factors that affect the health of residents in the rural areas of Waterloo Region in order to identify ways to improve and maintain health.”

Study methodology included extensive use of focus groups and key informant interviews, with a deliberate emphasis on qualitative information collection, and analysis using Nvivo, a qualitative analysis computer software program. Findings from the research were grouped into seven major themes: rural culture; rural life as different; the changing face of rural life; the changing nature of farming; the physical environment; support, services & access; and rural voices.

Smith, D. and M. Trant. 2002. *Performance in the Food Retailing Segment of the Agri-Food Chain*. Agriculture and Rural Working Paper Series. Working Paper No. 56. Agriculture Division. Statistics Canada. Ottawa, Ontario.

Document Type: Federal Government Research Paper

Speaks To: Economic conditions and trends in the retail food sector in Canada, comparisons with the same sector in the United States.

Approach: Review of methods of profitability analysis; Quantitative analysis – Statistics Canada Annual Survey of Financial Statements

Description:

This paper provides measurement and analysis of the Canadian food-retailing sector between 1990 and 1998, using profitability as a measure of performance for the sector. The emphasis of the research is on economic performance, and profit margins in other retail sectors are used for comparison. The study finds that while rates of return for

large companies in the food-retailing sector are considerably higher than for large firms in non-food other retail sectors, this higher level of profitability cannot be correlated directly with the rate of increase in food prices (which declined in real terms) relative to the rate of increase for consumer goods generally. The authors suggest that much of the profit differential (food retail to other retail) is likely the result of higher efficiency in the food retail sector, which itself is the result of concentration of activity within a small number of very large firms.

Soots, Lena K. 2003. Home Grown: Local Food System Development in Waterloo Region. Masters Thesis (Environmental Studies). University of Waterloo.

Document Type: Thesis

Speaks To: Local food system analysis; analytical barriers/challenges; economic viability

Approach: Qualitative analysis; issue/trend analysis (including research/information issues); preliminary local food system improvement strategies.

Description:

This thesis examined the current state of the local food system within the Waterloo Region and the potential for further development. The perspective presented is primarily one of local farmers, and the study explores both barriers to, and opportunities for, improving the local food system (production, distribution and consumption of “local” food).

Clearly the author finds (or perceives) that discussion and investigation of a “local” food system is considered alternative (a heavily industrialized global food system being the mainstream), although she argues in her discussion that the global versus local dichotomy is false and that the relationship should be seen as a continuum rather than a polarization.

The thesis presents one comprehensive strategy for improving the local food system, with an emphasis on sustainability and explicit roles for consumers. The major recommendation made by the thesis is that more local consumer research needs to be undertaken to understand the role of the consumer in local food system development. This additional research needs to incorporate the diversity of local consumer perspectives, needs, and priorities with respect to their motivation for purchasing locally produced food.

Statistics Canada. 2001. Food Expenditure in Canada. Prepared by the Expenditure Surveys Section, Income Statistics Division.

Document Type: Federal Government Research Paper

Speaks To: Consumer food expenditures; expenditure trends

Approach: Quantitative analysis of food expenditure data from the Food Expenditure Survey.

Description:

This publication contains information collected via the Food Expenditure Survey in 2001 that was carried out in the 10 provinces of Canada, as well as Whitehorse, Yellowknife and Iqaluit. Throughout 2001, households were asked to record, in detail, their expenditures on food for a period of two weeks.

The primary reason for collecting food expenditure data is to monitor and periodically update the weights used in the computation of the Consumer Price Index (CPI). In addition to this, food expenditure data classified by variables such as income, household type and province, provide the basis for a variety of analytical investigations of the food purchasing habits of households in Canada. For example, the survey data are used for market analysis and nutritional studies.

The report provides useful provincial level data for determining total household expenditures on food, as well as food purchased in restaurants versus in stores (for in-home consumption). The food expenditure data is also tabulated for a number of other household characteristics include age and income. Restaurant purchases are broken down by restaurant type and meal. Store purchases are broken down both by major food group and by specific food categories, and average purchased quantities are also provided broken down by region.

Thunder Bay Food Action Network. 2004. *Community Food Assessment for Thunder Bay: A Closer Look at our Local Food System.*

Document Type: Local study

Speaks To: Local food system assessment; food security, economic viability, consumer awareness and perceptions.

Approach: qualitative research – focus groups and key informant interviews; GIS mapping of food access for selected population sub-groups.

Description:

The food action network attempted to develop a community profile of the local food system in Thunder Bay, and to act as a benchmark for improvement in local community food security. In this case food security refers to:

. . . a strategy for ensuring secure access to adequate amounts of safe, nutritious, culturally appropriate food for everyone, produced in an environmentally sustainable way, and provided in a manner that promotes human dignity. It features cooperation among all contributors in a regional food system. It addresses issues in economic, environmental, and social aspects of the food system.

The study's stated objectives included acting as a catalyst for positive change in the local food system and encouraging community residents to actively participate in the local food system. Methodology included key informant interviews and focus groups

with stakeholders ranging from those vulnerable to food insecurity, through service providers to local agricultural producers. The study included GIS-based mapping of specific population densities (e.g., seniors and Aboriginals) within the City of Thunder Bay in relation to proximity/access to food services (e.g. grocery stores) and selected food programs (e.g., hot-meal programs, and nutrition programs).

From a food flow/local food system analysis perspective, the most significant finding of the research was that a significant barrier to increasing consumption of locally produced food is lack of awareness of where food comes from.

Wen, Jean-Francois. 2001. *Market Power and Grocery Retailing: Assessing the Evidence for Canada*. Competition Bureau: Calgary.

Document Type: Research Paper

Speaks To: Economic analysis of food retailing; vertical and horizontal integration; food retailing trends

Approach: Quantitative analysis of Statistics Canada general retail and food retail data.

Description:

This study is one of three commissioned by the Competition Bureau on the topic of market power and the potential for anti-competitive behaviour in the food retailing industry in Canada.

The author concludes that, based on the (Canadian) data, there was no evidence of increased retailer concentration resulting in higher food prices for consumers, although he also cautions that more concentration in the retail food sector has occurred since 1998. He also points out that similar studies from the United States have produced mixed results, with some research suggesting retail food market power has increased, while others suggest that this has not been the case.

Appendix B: Questionnaire for Commodity Group Representatives

Date: _____

Name of Key Informant: _____

Gender: Male Female

Name of Commodity Organization: _____

Hi, my name is _____. I'm conducting a study which is being sponsored by Waterloo Region Public Health and is supported by the Waterloo Federation of Agriculture.

We're trying to gain a better understanding of how much food is produced in the Region of Waterloo and how much of this food is making its way to local processors, packagers, food stores and consumers.

As part of the research process, we're contacting representatives with the major commodity organizations in Waterloo Region and asking for their insights on the trends and challenges facing producers as well as their insights on the relationship between producers and the processors and packagers that they deal with.

The information will help us in developing a more up to date profile of the local agricultural sector than is currently available in the 2001 Agricultural Census. Mark Reusser, President of the Waterloo Federation of Agriculture provided us with your name (519-696-3782).

Given your close involvement with _____ producers, it would be appreciated if you could answer a few questions about this commodity. Would you be willing to participate in a short survey?

- *If 'Yes'... continue to the next page of the questionnaire.*
- *If 'Yes but later'...arrange another time to call.*
- *If 'No'... thank the respondent for his/her time.*

Before we begin I want to emphasize that your input on this study is important and appreciated. Some of the information you provide during this interview may be reproduced as part of the final report, particularly as it relates to production data and any insights you can offer on the trends and challenges facing the agri-food industry. As a way of ensuring that we accurately capture your thoughts and comments, we'd like to share our notes with you following the interview and allow you the opportunity to identify any errors or omissions.

If there is any information you wish to remain confidential, please indicate this and we will respect your wishes.

The first few questions relate to your role in the commodity organization and the importance of the organization to farmers in the Region of Waterloo.

1. To begin with, can I confirm that you're a member of the _____ *(insert name of the organization)?*

2. Can you tell me how many years you've been with this organization?

Years:

3. How did you become involved with the organization?

4. What is your current role in the organization? *Check the appropriate box.*

- | | |
|---|--|
| <input type="checkbox"/> President | <input type="checkbox"/> Past President |
| <input type="checkbox"/> Vice-President | <input type="checkbox"/> Secretary |
| <input type="checkbox"/> Treasurer | <input type="checkbox"/> Board of Directors member |
| <input type="checkbox"/> Executive Director | <input type="checkbox"/> Administrative Assistant |
| <input type="checkbox"/> Chair | |

Other, please specify...

5. What are the major services/products that your organization provides to producers?
Check all the responses that apply. After allowing the respondent an opportunity to self-identify services/products, the list can be used to prompt responses.

- Provide local leadership
- Lobby on behalf of Region of Waterloo farmers
- Develop programs and activities to enhance the public image of farmers (e.g. press releases, brochures, farm visits for the public, etc.
- Produce a newsletter featuring current events/issues for Region of Waterloo farmers
- Conduct and/or support research projects
- Promote best management practices
- Offer mediation services to members
- Conduct monthly or regularly scheduled meetings throughout the year.
- Conduct annual general meeting
- Offer networking opportunities for members
- Promote leadership training and development

Other, please specify...

6. How many members does your organization have in the Region of Waterloo?

Number of members:

The next few questions relate to trends and challenges associated with the production of this commodity.

The most recent production data available from the **Ontario Ministry of Agriculture and Food** and **Statistics Canada** indicates that the Region of Waterloo produced a total of _____ (insert applicable production values from the following table) in _____ (insert the applicable year from the following table).

Region of Waterloo Agricultural Production		
Commodity	Year	Crop Production and Inventory of Livestock and Poultry
Dairy	2004	111,529 kilolitres of milk
Beef	2004	85,700 cattle and calves
Pork	2004	182,850 pigs (all weights combined)
Chicken	2001	20 million kg of broilers, roasters and Cornish production
Eggs	2004	10.4 million dozen eggs
Grain corn	2004	123,400 tonnes of grain corn (from 47,900 acres seeded and 42,200 acres harvested)
Winter wheat	2004	25,000 tonnes of winter wheat (from 13,000 acres seeded and 13,000 acres harvested)
Spring wheat	2004	3,200 tonnes of spring wheat (from 2,400 acres seeded and 2,400 acres harvested)
Oats	2004	3,000 tonnes of oats (from 2,300 acres seeded and 2,300 harvested)
Soybeans	2004	36,300 tonnes of soybeans (from 35,400 acres seeded and 34,600 acres harvested)
Apples	2003	2.9 million lbs. of apples (from 138 acres harvested)
Potatoes	2003	4.6 million lbs. of potatoes (from 250 acres harvested)
Carrots	2001	1.1 million lbs. of carrots (from 28 acres seeded)
Field tomatoes	2001	190,000 lbs. of tomatoes (from 11 acres seeded)
Strawberries	2003	345,000 lbs of strawberries (from 75 acres, bearing area)

7. Is this the most current and accurate production data that you're aware of?

Yes No

If 'No' go to Question #8

If 'Yes' go to Question #9

8. What is the most current production data that you have for the Region of Waterloo?

Commodity	Year	Production

9. What are some of **general trends and/or changes** that you've noticed in the production of this commodity over the last ten years? This includes international, national and provincial trends and changes.

10. Are there any **trends and/or changes** you've noticed in the last ten years that are specific to the **Region of Waterloo**?

No

Yes, please specify...

11. What are some of the **general challenges** for farmers in this commodity group?

12. Are there any **challenges** for farmers in this commodity group that are specific to the **Region of Waterloo**?

No

Yes, please specify...

--

13. Compared to the most recent production data for the Region of Waterloo, what do you expect to happen to production levels in 2005? Will they increase, decrease or remain the same -- and what are the factors that you think will contribute to this result? *Check the appropriate box and ask for details.*

	What factors do you think will contribute to this result?
<input type="checkbox"/> Increase	
<input type="checkbox"/> Decrease	
<input type="checkbox"/> Remain the same	
<input type="checkbox"/> Unsure/Don't know	

14. What do you consider to be the greatest barrier to increasing production of this commodity in the Region of Waterloo?

--

The next few questions relate to the linkages that producers have with the processing and packaging industry.

15. Overall, how would you rate the capacity of the processing/packaging industry in the Region of Waterloo in terms of its ability to serve the needs of your members in the Region of Waterloo? Would you say that the capacity of the local processing/packaging industry is: very poor, poor, fair, very good, or excellent? *Check the appropriate box.*

<input type="checkbox"/> Unsure	<input type="checkbox"/> Very Poor	<input type="checkbox"/> Poor	<input type="checkbox"/> Fair	<input type="checkbox"/> Very Good	<input type="checkbox"/> Excellent
---------------------------------	------------------------------------	-------------------------------	-------------------------------	------------------------------------	------------------------------------

16. To what extent do farmers from this commodity group in the Region of Waterloo rely on processors and packagers **located outside the Region of Waterloo**? Would you say that farmers rely on outside processors and packagers: never, rarely, sometimes, most of the time, or always? *Check the appropriate box.*

<input type="checkbox"/> Unsure	<input type="checkbox"/> Never	<input type="checkbox"/> Rarely	<input type="checkbox"/> Sometimes	<input type="checkbox"/> Most of the time	<input type="checkbox"/> Always
---------------------------------	--------------------------------	---------------------------------	------------------------------------	---	---------------------------------

17a. On a scale of 1 to 5 where 1 = 'not important' and 5 = 'very important', how important do you think it is to have local processing/packaging facilities for your commodity group located in the Region of Waterloo? *Circle the response.*

Not important					Very important
1	2	3	4	5	

17b. Why is it important or unimportant?

18. Can you list the processors/packagers for your commodity group that have operations located in the Region of Waterloo? As a next step in our study we hope to interview several processors to gain a better understanding of how much local production they handle – would you be able to provide us with a contact person and phone number for any of the processors you've identified?

	Name of Processor/Packager	Location in Waterloo Region (address/phone)	Contact person (if available)
1			
2			
3			

19. Can you identify some of the processors/packagers that are located outside the Region of Waterloo?

	Name of Processor/Packager	Location outside Waterloo Region (address/phone)	Contact person (if available)
1			
2			
3			

20. What are some of the **general trends and/or changes** that you've noticed in the **processing/packaging industry** for this commodity over the last ten years? This includes international, national and provincial trends and challenges.

21. Are there any **trends and/or changes** that you've noticed in the processing and packaging industry that are specific to the **Region of Waterloo**?

No

Yes, please specify...

22. What are some of the **general challenges** for processors and packagers in this commodity group?

23. Are there any **challenges** for processors and packagers in this commodity group that are specific to the **Region of Waterloo**?

No

Yes, please specify...

24. Does your organization have any issues/concerns about the availability of locally grown foods in stores located in the Region of Waterloo?

25. Would your organization be interested in promoting the presence of locally grown foods in Waterloo markets and grocery stores?

Yes

No

26. Do you have any additional comments?

--

27. Would you like to receive a summary report of the study? We hope to have a final report completed in October 2005.

Yes No

Can you provide us with an address and email where we can send you the notes from this interview and the summary report?

Street:		Unit #:
City/Town:		
Province:	Postal Code:	
Telephone:	Fax:	
Email:		

Thank you for participating in the study.

***If you would like more information on the study you can contact:
Barbara Zupko
Public Health Planner, Health Determinants, Planning & Evaluation
Region of Waterloo Public Health
99 Regina Street South, Waterloo ON. N2J 4V3
Phone: (519) 883-2004 ext. 5511 / Fax: (519) 883-2241 / Email:
zbarbara@region.waterloo.on.ca***

Appendix C: Store Survey

Name of store:				
Type of store:	Supermarket	Convenience	Farmers' Market	Produce Auction
Address:				
Date of store visit (dd/mm/yy):				
Time of store visit:				
<i>Days and hours of store operation...</i>				
Day	AM	to	PM	Notes
Monday				
Tuesday				
Wednesday				
Thursday				
Friday				
Saturday				
Sunday				
Notes:				

MEAT									
Food Item	Purchase Unit	Availability <input checked="" type="checkbox"/>		Price \$	Brand Name	Processor Name	Processor Address	Product place of origin	Notes
		Yes	No						
Ground beef, medium	To be determined in store								Substitute with hamburger patties in convenience stores.
Pork chops, loin	To be determined in store								Substitute with pork wieners in convenience stores.
Chicken breast, boneless, skinless	To be determined in store								Substitute with chicken patties in convenience stores.
All beef wieners	450gm								
Sliced cooked ham	175gm								
NOTES:									

DAIRY PRODUCTS AND EGGS

Food Item	Purchase Unit	Availability <input checked="" type="checkbox"/>		Price \$	Brand Name	Processor Name	Processor Address	Product place of origin	Notes
		Yes	No						
2% milk	2 litre carton								
Fruit yogurt, fat free	175gm								
Cheddar cheese, medium	225gm								
Grade A large white eggs	1 dozen								

NOTES:

BAKERY AND CEREAL PRODUCTS

Food Item	Purchase Unit	Availability <input checked="" type="checkbox"/>		Price \$	Brand Name	Processor Name	Processor Address	Product place of origin	Notes
		Yes	No						
Multi grain bread	675gm								
Whole grain crackers	450gm								
Quick cooking oatmeal	1kg								
Corn flakes	525gm								

NOTES:

FRUIT AND VEGETABLES

Food Item	Purchase Unit	Availability <input checked="" type="checkbox"/>		Price \$	Brand Name	Processor Name	Processor Address	Product place of origin	Notes
		Yes	No						
Apples, fresh	3 lb bag								
Apple juice, pure, vitamin C added	1.36 litre can								
Carrots, fresh	2 lb bag								
Fresh tomatoes	To be determined in store								
Fresh strawberries	To be determined in store								
Strawberry jam	500ml								

NOTES:

OTHER FOOD MATERIALS AND PREPARATIONS

Food Item	Purchase Unit	Availability <input checked="" type="checkbox"/>		Price \$	Brand Name	Processor Name	Processor Address	Product place of origin	Notes
		Yes	No						
Potato chips, regular flavour	250gm								

NOTES:

Appendix D: Questionnaire for Food Processors

Date: _____ Name of Key Informant: _____

Company Name: _____ Company Address: _____

Hi, my name is _____ . I'm calling on behalf of the Regional Municipality of Waterloo.

The Region of Waterloo is trying to gain a better understanding of the local food system and the extent to which locally grown products are being consumed by the local population.

As part of this process we developed an inventory of the major agricultural commodities produced in Waterloo Region. For example, beef, milk, corn, eggs, apples, etc.

We then identified a selection of the 20 most common food items purchased by consumers (using food expenditure data from Statistics Canada) and we conducted a survey of supermarkets and convenience stores across Waterloo Region to determine the availability of these items.

In the case of _____ (e.g. eggs, cheese, yogurt, apple juice, etc.) we found that your products have a major presence on store shelves across the Region.

We're now following up with processors to try and determine the extent to which they're using products that have been grown/raised in Waterloo Region.

Is there someone in your company I can speak to who would be able to help me with this inquiry? (*perhaps a purchasing agent*) Record contact information:

Name: _____ Position: _____

Phone Number: _____

Before we begin I want to emphasize that your input on this study is important and appreciated. Some of the information you provide during this interview may be reproduced as part of the final report. As a way of ensuring that we accurately capture your thoughts and comments, we'd like to share our notes with you following the interview and allow you the opportunity to identify any errors or omissions. If there is any information you wish to remain confidential, please indicate this and we will respect your wishes.

1. To begin with can you tell me a little about the history of your company?
 - Where and when was the company established?
 - Major products produced?
 - Which of your processing facilities is closest to the Region of Waterloo?

2. Is it possible for you to tell me a little about the size and scale of your operations?
 - Number and location of processing plants in Ontario
 - Closest processing plant to Waterloo
 - Number of employees
 - Total gross sales
 - Total amount of production: for example, number of eggs packaged annually, number of litres of milk processed annually, number of tonnes of wheat used annually, etc.).
 - What is the size and scale of the operation closest to Waterloo Region?

3. We recognize that many food processors and packagers typically obtain their agricultural products from a wide geographic area – be it province wide, across Canada or international.
 - Is it possible for you to describe the approximate catchment area that you obtain your agricultural products from? As it specifically relates to _____ (beef, milk, corn, eggs, apples, etc.)
 - Do you know if your company is using agricultural products produced by Waterloo Region producers?
 - Is it possible to estimate the approximate quantity of product that your company uses from Waterloo Region?

4. How important is the quantity (and quality) of agricultural production coming out of Waterloo in relation to your operations?

5. What opportunities and challenges do you see in relation to obtaining agricultural products produced in Ontario? Waterloo Region?

6. Are there any other comments you'd like to provide?

Would you be interested in receiving a copy of the final report?
If 'yes', record mailing information.

Thank you for your assistance.