

From the **Ground** Up



A Primer for Community Action on Kingston and Countryside's Food System

Prepared for the National Farmers Union,
Local 316 and Food Down the Road
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October 1st, 2007
Kingston, Canada

Primer Acknowledgements



The National Farmers Union Local 316 and Food Down the Road (FDTR) would like to thank the authors, Aric McBay and Holly Grinvalds. The authors would like to thank the many wonderful and dedicated people who made this primer possible. Though this project has benefitted from the efforts of more individuals and organizations than we can name, we would like to thank a number of contributors in particular. Thank you to Food Down the Road project coordinators Andrew McCann and Wendy Luella Perkins for all of your amazing work.

Thank you to FDTR Research Network members Svenja Belaoussoff, Alison Blay-Palmer, Dianna Bratina, Julia Bryan, Wendy Carman, Stacey Corcoran, Tibrata Gillies, David Hahn, Jim Hamilton, Sunny Lam, Kate Maddigan, Bruce Moore, Caulette McBride, Al Parkin, Kathy Rothermol, Marie Traynor, and Andrea Wilmot for your insightful direction and input.

Thank you to researchers and consultants Ann Armstrong, Louise Cooper, Dianne Dowling, Brian Osborne, Rebecca Martin and Alex Petty for all of your time and help.

Many thanks to our incredible copyeditors, Patrick Baud, Meredith Powell, Ian Rowberry, and Andrea Wilmot. Thank you to FDTR volunteer coordinators Stacey Corcoran and Sarah Smolkin for your hard work on short notice.

And thank you to all of our proofreaders, Ryan Barker, Jeremy Clarke, Emily Dowling, Emmett Macfarlane, Catherine Phillips, and others.

Thank you to Kingston, Frontenac and Lennox & Addington Public Health for printing the document.

Food Down the Road: Toward a Sustainable Local Food System for Kingston and Countryside is a National Farmers Union Local 316 initiative that relies on the generosity of many partners and volunteers. It is funded in part through contributions by the Government of Canada and the Province of Ontario under the Agricultural Management Institute (AMI), an initiative of the federal-provincial-territorial Agricultural Policy Framework designed to position Canada's agri-food sector as a world leader. The Agricultural Adaptation Council administers the AMI program on behalf of the Government of Canada and the Province of Ontario.

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Primer Summary

This primer is a project of Food Down the Road: Toward a Sustainable Local Food System for Kingston and Countryside. Food Down the Road (FDTR) is an initiative that emerged from years of work by the National Farmers Union (NFU) and others on sustainable farm and food issues, including the very popular NFU Feast of Fields. FDTR came into being at the end of 2006. Since then, FDTR has been networking, consulting and building partnerships with different sectors of the food system, giving numerous presentations and holding promotional events, including a successful Spring Speakers Series in 2007 that educated, inspired and challenged over 700 people who participated, and thousands more through dozens of media stories. A Community Council has also been created to help identify future directions and act as a champion of a local food system. In November of 2007 a local food summit in Kingston will bring together as many local food system participants as possible to explore and discuss the many facets of local markets and food system development.

This document is meant to serve as a primer for people working on local food issues in Kingston. In part, it is meant to build common ground and a common language for people coming from diverse backgrounds. It serves as a concise reference where information and perspectives about Kingston and countryside's local food system have been gathered from a range of academic and community sources. It does not suggest one way of solving our problems, but identifies many different models and opportunities for us to choose from. Gaps have been identified for further research. This is meant to be a living document – one that is added to and improved with time.

As eaters, we are all participants in the food system. However, today most eaters are far removed from, and know little about, the other parts of the larger food system. This document is meant to be accessible to all those interested, but it is especially written for more direct food system participants, from farmers to restaurateurs, food bank volunteers to policy-makers.

Food and agriculture in Canada, and in the larger world, are confronted by a set of converging challenges. Farmers around the world are facing an income crisis, with Canadian farmers making a lower realized net income over the past seven years than they did during the Great Depression. The population of farmers in Canada is aging and shrinking, and there are fewer farms now than ever before. Few young people want to farm, and those who do have great difficulty getting access to land, training, and start-up funding. Farmland is being lost to suburban sprawl.

At the same time, many ecological limits are being reached. Even oil companies admit that we are reaching the end of cheap oil supplies, and no renewable energy technology can match the power and portability of oil. The industrial food system is very energy inefficient, so that each calorie of food we eat requires many fossil fuel calories to produce. Supplies of energy will become tighter and more expensive in the coming years. Climate change also poses many challenges to the food system, with droughts and increased frequency of extreme weather events already affecting agricultural production around the world. Global grain stockpiles have been on the decline for years. Soil erosion and

▼ *A slide on converging ecological challenges from a Food Down the Road presentation.*



intensive industrial agriculture have resulted in the loss of fertile topsoil around the world. Water tables needed for agriculture are being polluted and drawn down in every agricultural area.

A growing global movement is underway to shift agriculture back to the local scale and to create sustainable, healthy food systems. Local food has the potential to address all of the problems noted above, and is gaining popularity in the Kingston area as well as elsewhere.

This document is broken into several parts. The Introduction sets out some main concepts and starting points. Part I discusses the current food system. Part II identifies and outlines alternative models. Part III brings the different threads together to identify opportunities for improvement and growth.

In our Introduction we outline a conceptual framework that views the food system as a cycle, with food moving from the producers, through processors and distributors, through retailers and other access points, to consumers, and then with food waste moving back to the soil. (See figure on page 7.) The primer is broken down by these different sectors to examine them one by one.

Also in the introduction, we respond to some of the general criticisms and concerns about local food. For example,

“I like local food, but I don’t want to give up my mangoes and bananas!” Supporting local food does not mean blockading imports. Currently only a tiny percentage of the food eaten in Kingston is produced locally. Doubling the amount of local food eaten would mean a dramatic difference for local producers and processors, but only a small difference in the amount of food imported. Immense progress can be made by simply eating the kinds of food that can easily be produced locally.

Next, **Part I: Our Food System Today** examines how our food system functions now. The focus is on the Kingston area and a 100 km radius, which Food Down the Road defines as “local food”. We look at the food system in a broad sense, but also examine specific pieces of information about Kingston and countryside, and look at each food sector in turn:

Production: This section answers questions like: how many farms are there in Frontenac County (answer: 672), what is the average age of farmers (answer: 52 and rising), and what is the average net income of a farm in our area after government assistance (answer:

\$8,628). This section looks at the trends in farming, such as a drop in net income, and increase in the size of farms and a decrease in the number of farms and farmers. It also discusses what food is actually being grown in the Kingston area; more than half of the farms in Frontenac and Lennox & Addington rely on beef. The trend has been towards a smaller number of farms growing a smaller number of crops.

Processing: Much of the previous food processing capacity in Kingston and countryside has been lost. Prince Edward County, for example, had the second largest canning industry in Canada from the 1950s until the early 1980s. It is now non-existent. Only a few abattoirs remain open in the area, and most cattle are sent elsewhere for finishing (the last months of feeding before slaughter), leaving the reduced capacity we have underutilized. Nevertheless, food processing is still a significant employer, unlike primary agriculture. However, much of the food processing in Eastern Ontario is done by large corporations which do not source food locally.

Distribution: Most of the food eaten by people in the Kingston area is imported and travels great distances. One local study noted that a “beef burger, topped with fresh tomatoes, onions, lettuce, and cheese, with roasted / boiled / baked potatoes on the side, traveled from production to the Kingston area an average of 4338 km.” Another estimate puts the average Canadian meal at approximately 2000 km. Moving food such great distances produces major greenhouse gas emissions, and means that food is often not fresh when it reaches us, reducing its nutritional value. Canada is the world’s 5th largest importer and 4th largest exporter of food.

Access, Retail & Marketing: Most food is purchased through large chain stores. About 60% of all grocery dollars go to five corporations, which is an increase from 50% ten years ago. Small independent grocers are going out of business. More than one out of ten people in Frontenac and Lennox & Addington Counties have trouble getting enough food or cannot afford to eat nutritious meals. At the same time, the popularity of fast food continues to rise dramatically, and Canadian households now spend nearly one third of their food budget on eating out.

Consumption: Some studies show that, on average, fruits and vegetables are actually less nutritious than they were 80 years ago, because of the industrialization

of farming. Families eat meals together less frequently, even though frequent family meals are associated with lower rates of teen and pre-teen smoking, drinking, and illegal drug use. At the same time, there is an increasing interest in local and ecologically grown food, with the organic food market growing at about 20% per year.

Waste & Recycling: Canadians waste more than 14 million tonnes of food annually. In the City of Kingston, more than half of municipal garbage (by weight) is organic matter. None of the nutrients in that organic matter are returned to fields, and organic matter in landfill degrades into methane, a potent greenhouse gas.

Part II: Models for Change looks at various innovative models for different aspects of the food system. This section outlines the approaches, their benefits, and challenges of models more than a century old, and models that are still new. Again, this section is broken down into food system sectors. Some of the creative and important models discussed include:

- **Community Supported Agriculture (CSA):** In CSAs, eaters pay for a season of vegetables and other foods up front, and receive a “share” of the vegetables each week. In this way, both eaters and farmers share the risk – a good season will mean abundant veggies, a poor season fewer. Because of their unique approach, CSAs generate most of their own start-up funding, so the model can spread quickly.
- **New Farmer Training Programs:** Programs like FarmStart and the Collaborative Regional Alliance for Farmer Training (CRAFT) offer innovative ways to encourage and train new farmers in new techniques. Many new farmers are needed to meet demand for local food and replace the aging population of farmers.
- **Incubator Kitchens:** Incubator Kitchens share or rent professional kitchens to small business start-ups on a timeshare basis. This gives small and niche businesses a chance to get started. These businesses often have an interest in using or preserving local food.
- **Institutional Buying Programs:** Kingston is home to a number of large institutions, including the university and colleges, hospitals, prisons, and Canadian Forces Base Kingston. Many of these institutions have expressed interest in buying more local food. This section explores creative institutional buying practices used in other localities that benefit institutions, farmers, and eaters.

➤ **Third Party Certification and Local Food Logos:**

How do you recognize when food is local? And how do you know food is really local to the area? Local Food Logos and Third Party Certification offer recognition and extra credibility to local food, which means that local food sells more. Some Third Party Certifiers, like Local Food Plus, help to build links between farmers and buyers to further increase sales.

- **Community Kitchens:** In community kitchens people get together to cook, eat, and socialize. Community kitchens can buy, cook, and store in bulk. This makes healthy local food more accessible. Community kitchens also help to share and develop cooking skills that have been lost with the growth of less healthy convenience foods.

- **Food Policy Councils:** These councils can emerge out of the public health system or Social Planning Councils, and act to study and advise the municipality on food policy. Many interesting and exciting projects have emerged from Food Policy Councils.

- **Local Food Charters:** These charters are public statements of commitment to developing a local food system and using local food. In other municipalities they have been endorsed by municipal governments, the public health system, and other institutions. Charters act as guides and decision making aids for many different bodies.

The models identified in Part II, though far from an exhaustive list, emerge from the creativity, initiative, and perseverance of a wide variety of people from farmers to community and anti-poverty activists to public health workers. None of these models alone creates a single vision for a local food system, but together they offer a promising path to a better food system and a better future.

Part III: Bringing it Together takes the models discussed in Part II, and brings them together with knowledge of the Kingston area. The models are used to show ways of solving the problems identified in Part I. In this section, the real possibilities for an integrated, local food system in the Kingston area emerges.

For each food sector some of the key opportunities are identified. Short-term (“low-hanging fruit”) and the long term (“seeds to be nurtured”) opportunities are discussed. Some of those opportunities are to:

- Encourage the development and growth of CSAs and market gardens locally.
- Encourage community gardens and other forms of

urban food production.

- Link local growers with local processors, restaurants, and institutions through programs such as Local Food Plus.
- Develop a regional farmer training program, like CRAFT.
- Increase the finishing, processing, and marketing of local beef by increasing local usage and abattoir capacity; the local area already produces enough beef to feed the population, but local abattoirs are operating below capacity and cattle are being out of our area for finishing, slaughter, and sale.
- Consider the development of cooperatives which would own storage and distribution infrastructure.
- Adjust the food procurement contracts of public institutions toward local food.
- Promote the use of the “Eat from Kingston’s Countryside” logo to aid in the recognition and purchase of local food that is already available.
- Promote the “Eating Close to Home” local food directory so that local eaters and food buyers can find the local food they’re looking for.
- Create a Food Policy Council to study the food situation in the Kingston area, suggest visions for the future, and coordinate policies and projects.
- Draft a Local Food Charter that expresses commitment to local food and acts as a decision-making aid.

Finally, Part III identifies a list of “next actions” that can be taken by people in many walks of life, including the following:

- **Eaters:** Consider including at least some local foods in your weekly diet. There are a number of excellent seasonal recipe books that make this easier. (See **Further Reading**) The *Local Harvest* newspaper has information about where local food can be found and when different foods are seasonally available.
- If eating or shopping at a place where the food is not labeled, ask if there is local food available.
- Consider joining a CSA or shopping at the farmers’ market.
- **Students:** See if your school has an institutional buying program or policy to include local food in meals. Try to encourage them to adopt policies that will bring in more local food.
- **Teachers:** Try to incorporate information about the food system, and the benefits of local sustainable food, in your classes. Teachers in the Kingston area are already working on curricula for this (see page

57). Encourage your school to bring in more healthy, local food. Bring your students on field trips to visit places where food is grown, such as farms and community gardens, and consider growing some food at the school.

- **Institutional Purchasers and Administrators:** Consider adopting policies that would include more local food in your next food buying contract. Consider building relationships with local growers who can produce the kind of food you are looking for.
- **Health Care Workers including Doctors:** “Prescribe” healthy eating of fresh fruits and vegetables, especially local foods. Encourage your health care facilities to look at options like signing the Healthy Food in Health Care Pledge (see page 39), signed by a number of hospitals in the US which have agreed to prioritize fresh and local food.
- **Elected Officials and Civil Servants:** Support community gardens and urban agriculture. Encourage the use of local food in government cafeterias and food contracts. Consider supporting the creation of a Local Food Charter and a Local Food Council which would study local food issues and offer recommendations.

The current food system presents us with many problems and challenges. This document outlines some of the great variety of potential models and actions we have at our fingertips for improvement. Everyone in society, in every walk of life, can take action to help build a sustainable local food system if they choose. As more and more people choose to take action, we will all reap the rewards of a healthy, local food system, both in the short term and for generations to come.



Primer Introduction

The past century has seen dramatic changes in our food system. Canada and other wealthy industrialized countries have come a long way from the days of potato famines and scurvy. Today, we have a food system that provides us with a wide variety of product options, fresh and exotic produce any time of year, convenience foods that require little or no preparation. In 1961, Canadians spent almost 20 percent of their household budgets on food. Today, we spend half that (9.3 percent).¹ However, price and convenience are not all we want: surveys indicate that Canadians also want healthy foods such as fruits and vegetables, organic foods, and foods that are lower in calories and fat.² We are getting these, too. Statistics show we have been eating more fresh and frozen vegetables and fruits over the past decades,³ and buying more organic foods.⁴ At the same time, our farmers are more productive and efficient than ever in economic terms than ever. The economic sector with the largest efficiency gains in the last several decades has been agriculture and related services.⁵

There have indeed been many positive changes in the development of our food system, but unfortunately, as we have improved in some areas, we have made detrimental changes in others. Despite the efficiency gains in agriculture, there is a serious farm income crisis. For the past twenty years **realized net farm incomes** have dropped to levels not seen since the Depression. In fact, the average realized net farm income for the last ten years has been negative.⁶ As a result, many young people raised on farms are not carrying on the farming tradition and family members must seek work off the farm to pay the bills. In addition, large multi-national corporations control more and more of the food system, sometimes to the detriment of farmers and the land. The dominance of these large corporations poses a barrier to the involvement of smaller farmers.⁷ Food is no longer sold close to where it is grown or processed but shipped hundreds or thousands of miles, burning up fossil fuels in the process

and harming the environment. This global food system makes food plentiful in Canada, but its nutritional value is less than it was several decades ago, not only because our food is more processed, but also because the nutrient content of many supermarket produce items like tomatoes or potatoes have been decreasing.⁸ Food-related health problems like diabetes and obesity have reached epidemic proportions⁹. Yet even though food is so cheap and abundant, demand for food banks and similar programs continues to outstrip availability. Issues like these do not just involve farms and supermarkets, but have tendrils that wind their way through economics, ecology, government, health care, and society as a whole.

At the same time, creative ways of addressing many of the problems outlined above, such as organic agriculture, the Community Supported Agriculture movement and the Hundred Mile Diet, which seek to significantly change our relationship with food, are gaining great popularity. Why are these approaches growing so quickly? How can we navigate the complexities and challenges of a food system that we, as eaters, are often so isolated from? How can we develop food systems in our communities that will create meaningful employment, offer farmers and other food workers a living wage, produce healthy and fulfilling food, and do all that in a way that does not sacrifice the land, water and air that we ultimately depend on?



We need to take a closer look at our food system and its effects, and begin to envision a healthier, more sustainable food system.

This document is one of several projects of Food Down the Road (FDTR)¹⁰, an initiative of the National Farmers Union (NFU) Local 316. The aim of FDTR is to engage and empower all local food citizens to look ‘down the road’ towards a sustainable Kingston and countryside, towards vibrant farms and healthy food for our urban and rural communities. This document helps contribute to that aim, and it does so in several parts. The Introduction sets out some of our main concepts and starting points. Part I discusses the current food system. Part II identifies and outlines alternative models. Part III brings the different threads together to identify opportunities for improvement and growth.

▼ *Dave Perry and his son at Perry Maine-Anjou Farms near Harrowsmith.*



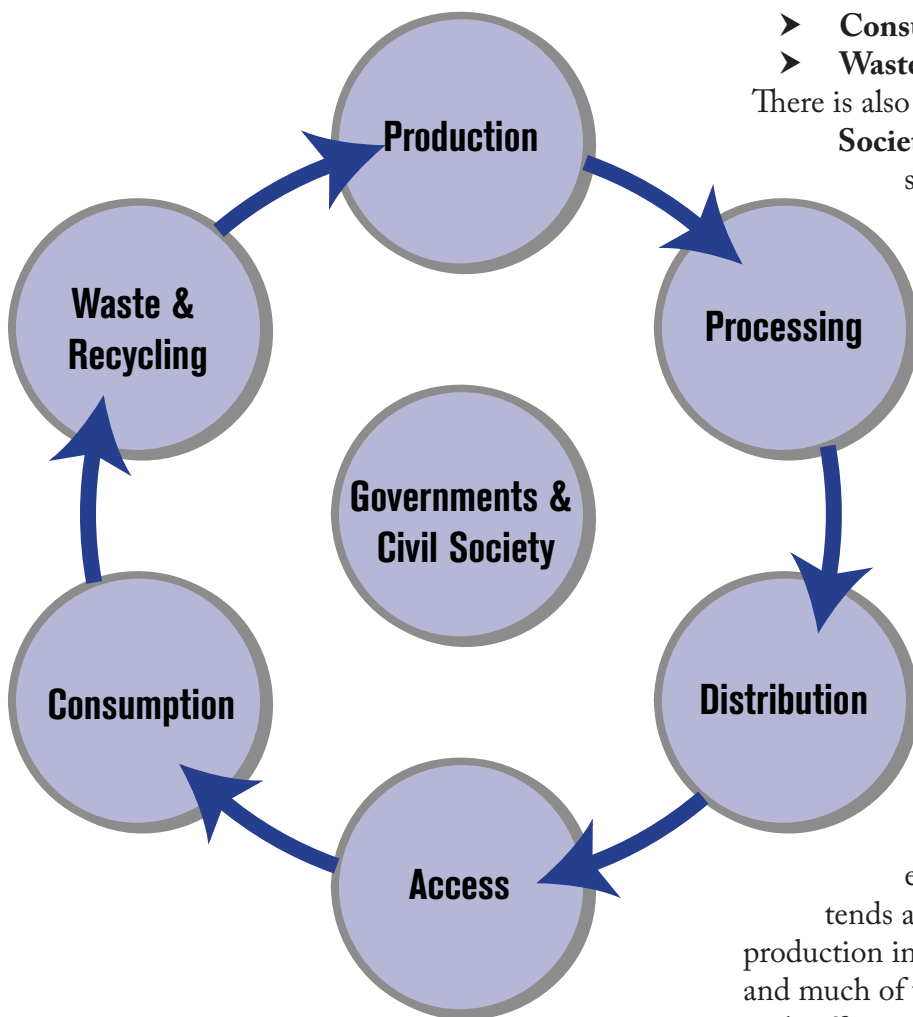
What is the purpose of this primer?

This primer is one step in the long-term process of building a sustainable local food system. It aims to develop the common ground we require to move forward, by making relevant information organized and accessible, and by raising questions and highlighting areas where more research and information are needed. It also aims to build a common language by defining and discussing useful terms. We do not claim to have all the answers, but aspire to provoke the critical thought and invite the dialogue that may lead to answers. As our community further assesses its needs, acquires new knowledge, and defines its collective goals, this document may be updated or replaced by other documents. At this stage, we aim to help individuals and groups take next steps, by inspiring action and providing suggestions for how they can meaningfully direct their energies.

This primer was produced with the advice and direction of a Local Food Research Network organized by Food Down the Road. The Research Network brings together researchers from Queen's University, St. Lawrence College, Kingston, Kingston, Frontenac and Lennox & Addington Public Health, Non-Governmental Organizations, municipalities, the Ontario Ministry of Agriculture, Food and Rural Affairs, and others who share an interest in building a sustainable local food system. The NFU and the Food Down the Road initiative are very grateful to the members of the Research Network for their input and time. This document draws on numerous academic and community sources, and, although the research process was thorough, it was not exhaustive. Gaps have been identified for further research. This is meant to be a living document – one that is added to and improved on over time. Food Down the Road welcomes feedback from experts and other interested people.

Who should read this primer?

As eaters, we are all participants in the food system. Today, however, most eaters are far removed from, and know little about, the other parts of the larger food system. This document is partly aimed at them. However, it is also written for all other food system participants, from farmers to restaurateurs, food bank volunteers to policy-makers. Whether you are a skeptic



▲ *A representation of our food system.*

tic, an enthusiast, an expert on ‘local food’ or simply curious, we invite you to read on.

What is a “food system”?

“Food system” is a very broad term for everything required to bring us food and deal with food waste. This includes growing food, processing and distributing it, eating it, and composting it. This means that the food system includes the field and tractor, the cannery, the transport truck and warehouse, the grocery store, even the microwave and the compost bin. Sometimes the term is used to include factories that build tractors or that manufacture fertilizers and pesticides.

Here we break the food system down into six main parts, as shown in the diagram opposite:

- **Production:** Farming and Gardening
- **Processing:** Dairies, Abattoirs, Mills, Preserves
- **Distribution:** Moving, Storing, Wholesaling
- **Food Access:** Stores, Restaurants, Food Banks

- **Consumption:** How We Eat
- **Waste & Recycling**

There is also a seventh part, **Governments and Civil Society**, which has a great impact on the food system but is not physically involved.

As depicted, the food system should be cyclical, as food and nutrients move from the land and back again. When nutrients are not returned to the land, they must be replaced by synthetic fertilizers. As we will see in this report, the food cycle is often broken when food ‘waste’ ends up in landfills, rather than as compost on a farmer’s field, or when individuals go hungry or malnourished because they cannot access healthy food.

What is a local food system?

As discussed in Part I, our current food system is both global and unsustainable. Every sector of the system is entangled in a web of activity that extends across the globe. Much of our agricultural production in Canada is exported to the world market, and much of what we eat is imported.¹¹ Corporations with offices and factories across the world produce the seeds, chemicals and farm machinery with which we grow, process and brand our foods, and ship our waste to landfills. International agreements and organizations partly determine our agricultural and food policies.

▼ *Some of the beans grown at the Heritage Seed Sanctuary in Kingston. (<http://www.providence.ca/seeds/>)*





▲ *Buying local food at the Kingston Farmers' Market.*

The shift in the food system over the past half century has been toward **globalization** and creating larger **economies of scale**. As Jack Kloppenburg has written, this process of globalization and distancing “has been driven by the demands of a competitive market economy that, as Murray Bookchin ... writes, ‘reduces the entire world of life, including humanity, to merchandisable objects, to mere commodities with price tags.’ Given historically inexpensive petroleum, the development of transportation technologies predicated on cheap oil, the mobility of capital, and the development of ‘controlled environment’ production technologies, the food system has an increasingly global reach. Agribusiness tends to gravitate to areas where government intervention is minimal and wages are low (e.g., production of broccoli in Guatemala) or in which costs can be reduced through mechanization and increases in scale (e.g., confinement production of broiler chickens in Arkansas), or both (e.g., mechanized tomato production in Mexico).”

The move towards larger scale and greater distance has changed the nature of food. In a global food system, flavour, nutrition, and crop diversity take a back seat to priorities like uniformity and simultaneous ripening, quantity, and durability required for long transport times. At the same time, global processing and distribution is mostly controlled by only a handful of corporations that are able to use their size to make immense profits largely at the expense of small producers and the environment.¹²

In contrast, a **local food system** is different in

that it brings farmers and eaters closer together, and operates on a different set of priorities. The Farm and Food Policy project writes that “local food systems have strong appeal for a number of reasons. Among the most compelling are fewer ‘food miles’ and fewer associated greenhouse gas emissions; more diversification and sustainable production; less vulnerability of the food supply to widespread contamination, intentional attacks, and disruption from natural catastrophes; better access to fresh produce; more stable farm incomes; and more jobs and wealth retained in the local economy.”¹³

Food Down the Road considers ‘local food’ to be food grown within a 100 km area of the eater. The 100 km radius around Kingston includes portions of Frontenac, Lennox & Addington, Hastings, Prince Edward, Leeds & Grenville and Lanark counties. The 100 km radius is not a strict one, but rather a guideline for sustainable food system development based on existing organizational networks, examples from elsewhere, and existing marketing initiatives in our area.

The guideline of 100 km is a good start, but suitable guidelines need to be developed for different farm and food products based on climate, soil, season, culture, population, travel routes, the US border, and other factors. For example, the vast majority of the vegetables eaten in the Kingston area could easily be grown within 100 km, but better fruit growing areas are further away.

What kind of food system do we want?

We all want a well-functioning food system that will nourish us now and in the future. But what does that food system look like? And what do we need to change about our current food system to achieve this?

We need to identify specific goals and ways of measuring how well we are meeting those goals. To develop broad consensus on the goals of our food system requires public discussion and dialogue. We can, however, help start that discussion by drawing upon research and literature on social well-being, community food security, and food system development, to determine what appear to be common goals for other communities.

A well-functioning food system contributes to well-being and health in the broadest sense. The food system is not purely economic in nature – there are social, economic, and ecological spheres that con-

tribute to our well-being which are not separate, but intimately related. For each of these spheres we can identify specific indicators that will help us to assess how well our food system is functioning. In assessing our food system, we need to identify, develop, validate and use these indicators.

Social Indicators

Social indicators include:

- **Access.** The more easily people are able to access food, the better that food system is at doing its job. Food must be locally available and accessible and eaters must be able to afford food. (This overlaps with our economic indicators.)
- The **health and nutrition** of people using a food system. How healthy (or unhealthy) are they?
- **Social equality.** Does the food system promote equal and fair relations between people, or does it cause inequity and power imbalances?
- **Inclusiveness and democracy.** Since everyone needs to eat, everyone should have a say in how the food system is structured. Is the food system receptive to input from the larger community, or is it primarily controlled by a small number of people or businesses?
- There are also a variety of “**gastronomic**” considerations. Do people enjoy what they are eating? Does the food benefit culture and community? Does the food have a specific local identity, or a corporate brand?

▼ **Below:** Chef Steven Johnston in Verona cooks with local ingredients.

► **Right:** Charlie Cumpson on the tractor.



Economic Indicators

At its core, an economy is a way of making and moving products to ensure that humans have what they want or need. Our economic indicators include:

- **Productivity.** Does the food system produce enough for everyone?
- **Economic viability.** Are economic enterprises self-sustaining?
- How **fair and equitable** is the distribution of products – does everyone have their basic needs met?
- Do workers and farmers receive **fair compensation** for their labour?
- Is the system **diverse and robust** enough to deal with emergencies or disruptions?
- By definition, any economy must be **socially and ecologically sustainable** if it is to continue to exist. Can the food system continue to function indefinitely without depleting finite resources? On a related note:
- Does the system take in more **energy** than it yields in food, or does it give more energy than it consumes?



Ecological Indicators

Ultimately, a healthy society and economy depends on a healthy environment. This is especially true when talking about agriculture. Our ecological indicators include:

- **Weather and climate**, which themselves are affected by **greenhouse gas emissions** and other forms of **air pollution**.
- Supplies of **clean fresh water**, which can be an issue in regions like the prairies and in California, where much of our food is grown.
- **Healthy soil**, with plentiful microbial life and nutrients. Depleted soils require synthetic fertilizers to produce high yields.
- Healthy **biodiversity**, since a lack of ecological diversity can lead to the explosion of agricultural pest populations.

Of course, all of these indicators are important not just to agriculture, but to human beings and other living creatures in general.

“ *If food needs are met through exploiting non-renewable resources or degrading the environment there is no guarantee of food security in the longer-term.* ”

– Food and Agriculture Organization of the United Nations, 1996

▼ Below: Shopping at Tara Natural Foods.



▼ Below: Household composting in Kingston.



Responding to critics

A number of concerns and criticisms have been made of local food in general. We feel it is important to respond to these and clarify some of the aims of Food Down the Road:

“Isn’t local food a form of protectionism?” Protectionism refers to the practice (usually by countries) of intentionally creating economic barriers to trade. These barriers are intended to benefit certain business by limiting outside competition. However, the purpose of supporting local food is not to erect barriers to trade, but to encourage economic activity here. In fact, enhancing opportunities for local food would involve removing barriers that prevent local growers from accessing local markets. In addition, local food does not mean isolating a region to trade. While we advocate a more seasonal local diet, Food Down the Road also supports the fair trade of sustainably grown products which cannot be grown in our region.

“Why should we support small farmers if they can’t compete in the free market?” First of all, a healthy local food system has value beyond that which can be expressed in financial terms. We cannot rely solely on a system designed to maximize profit if we also want to maximize equality, sustainability, or other non-monetary benefits of a local food system. Secondly, we require time to build up local production and food infrastructure. In the event of sudden interruptions in the food system resulting from energy or climate disruptions, a food system solely based on the free market would not be able to respond rapidly enough to compensate. We need to build a robust and sustainable food system far in advance.

And thirdly, it’s questionable whether the *current* food system operates on the free market. Corporate industrial agriculture is heavily subsidized, both directly by governments and indirectly by access to finite supplies of cheap energy. The chair of one of the world’s largest grain processors, Archer Daniels Midland Co., once told a reporter: “There isn’t one grain of anything in the world that is sold in a free market. Not one! The only place you see a free market is in the speeches of politicians.”¹⁴

“I like local food, but I don’t want to give up my mangoes and bananas!” As discussed above, supporting local food does not mean blockading imports. Currently only a tiny percentage of the food eaten in

Kingston is produced locally. Doubling the amount of local food eaten would mean a dramatic difference for local producers and processors, but only a small difference in the amount of food imported. Immense progress can be made by simply eating the kinds of food that can easily be produced locally.

“Won’t it cause more pollution for many small producers to be driving their food into town?” Some critics have pointed out that it’s more fuel efficient to move large amounts of food in a small number of transport trucks than to move small amounts of food in a large number of private vehicles. The second case might occur if large numbers of people drove out to country farms to buy small amounts of food, or if a number of small producers drove small amounts of food into cities in their own vehicles. This criticism has a certain amount of validity in the short term, but fails to consider the situation in a more mature local food system. As the local food system grows, it will make economic sense for local producers to make use of shared, and perhaps cooperatively owned, distribution infrastructure such as trucks and storage. Also, as the number of farms and gardens serving the local area grows, the distance between producers will become shorter and shorter, making it easier to share transport and distribution routes. And more local access points will mean that eaters will be able to walk, cycle, or take mass transit to get local food. As these trends progress, the local food system will become undeniably more fuel efficient than the global one.

“Small-scale and organic agriculture won’t produce the yields needed to ‘feed the world.’” Recent research suggests that, in fact, organic agriculture can indeed have sufficient yields to feed the global population. A 22-year-long study by Cornell University showed that organic agriculture produces the same yields of soybeans as conventional agriculture, but does so using less energy and water.¹⁵ A different study, run in partnership with Iowa State University, actually showed higher yields for organic corn and soybeans.¹⁶ Some studies have shown significantly higher yields of various crops, especially in years with extreme weather.¹⁷ Numerous studies of a variety of different crops have shown similar yields between organic and conventional agriculture.¹⁸

Furthermore, the current system is designed to

maximize yields *per farmer*, while some intensive gardening techniques claim much higher yields *per acre*. And again, supporting local food does not mean the immediate and total abolition of the global food system. Even in a future of totally localized food systems, it would still be useful to have long-distance food transport systems to move food into areas experiencing unexpected hard times.

“Not everyone wants to farm.” That’s okay, because not everyone needs to farm! In the Kingston area less than 2% of people are actually involved in farming. Even if the number of farmers doubled or tripled, which would be a tremendous success for local food, the vast majority of people would still not be involved in farming. Also, an increase in the number of people who grow at least some of their own food, at home and in community gardens, could make a big difference.

“People, especially young people, don’t want to farm.” The lack of new farmers has a number of different causes. Certainly a major one is the farm income crisis. Few people will deliberately choose an occupation that offers little or no income. Another cause may be that farming is sometimes perceived as an occupation of isolated drudgery that doesn’t involve much stimulation or creativity. The growth of a healthy local food system will address all of these problems. Solving the farm income crisis will make farming a more attractive occupation financially. A growing community of new and innovative growers locally will offer an exciting and stimulating environment. And the spread of new and innovative approaches to farming and food (see Part II: Models for Change) will make it clear that there is much opportunity for creativity and a need for intelligent problem-solving.

“Local food is elitist because it is more expensive and harder to get.” Farmers around the world are in the midst of a long-term income crisis. Negative realized net farm incomes have become the norm in Canada. Farmers deserve justice, and so do eaters. It is not an either-or situation. By building an equitable and sustainable local food system, we can help address the problems of both groups. Not surprisingly, families with more disposable income are more able to give monetary support to a local food system, whether that is through buying local food or through other means. However, everyone can participate in building a local food system regardless of their income, and everyone will reap the rewards.

Furthermore, food in Canada is already among the cheapest in the world. Low-income families encounter problems paying for food because their already small income is used up on their high rent and utilities costs. According to the Daily Bread Food Bank in Toronto, the average food bank user has slightly more than \$4 remaining after paying their rent and utilities each month.

“We don’t have enough land to feed Kingston.” Again, building a healthy local food system does not mean eliminating food from other areas. Rather, our first steps are to eat the food we already produce enough of locally, such as beef, and to encourage the farming of other foods that grow well in this area.¹⁹ There is no research about how far from Kingston we would have to reach to get all of Kingston’s food from as close as possible. However, a recent study suggested that we could meet as much as 70% of our fruit and vegetable needs just from within the City of Kingston.²⁰

Part I: Our Food System Today

Introduction

What do we need to know about the food system in Kingston and Countryside? What do we need to know about the food system in Canada? Who farms in Kingston region, how do they farm, and how is that changing? Where do we get our food from, and how far does it travel? What happens to the food grown here in the Kingston area? What are we eating, and how healthy is it?

Here we will take a look at our current food system, sector by sector. Wherever possible we use information from the Kingston area to gain a clearer picture about what is going on here. We will also keep in mind the indicators we outlined in the introduction. Discussion also touches on broader issues that affect the food system, such as energy and Peak Oil (see the sidebar on the following page).

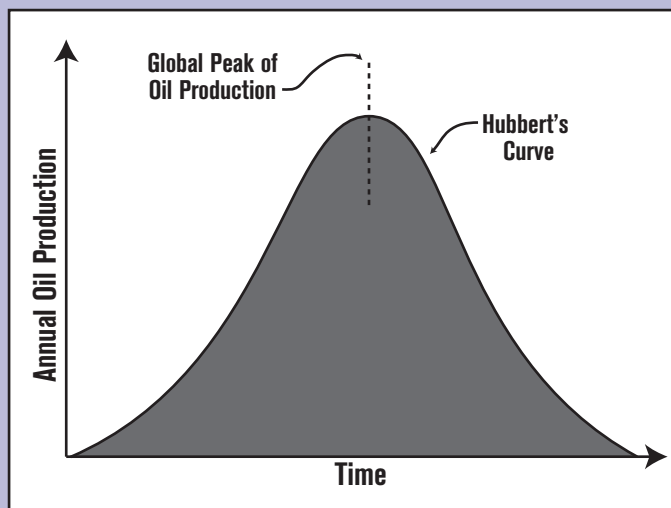
For each section we make note of “research gaps” – important questions that we do not yet have answers to.

Notes: It is important to remember while reading that information and statistics from sources such as Statistics Canada are often presented by province or by county. A one hundred kilometre radius around Kingston, what is referred to in this report as “Kingston and countryside”, our community, region, or area, includes parts of Frontenac, Lennox & Addington, Leeds & Grenville, Hastings, and Prince Edward counties. Readers will therefore have to remain alert to what geographic space a particular statistic applies. Furthermore, ‘City of Kingston’ with a capital ‘C’ refers to the official area inside the city limits of Kingston which includes 53% agricultural land. Whenever possible, local information is provided, and gaps in available research are highlighted at the end of each section.

▼ A map of Kingston and countryside with a 100 km circle centered on Kingston.



Peak Oil and Energy Issues



Peak Oil is a theory about global oil production which has gained popularity and credibility in recent years. Originally proposed more than half a century ago by geophysicist Marion King Hubbert, the Peak Oil theory suggests that global oil production over time follows the shape of a bell curve (as illustrated) — slow at the beginning, increasing to an eventual peak, and then declining again.

Since oil is a finite, non-renewable resource, it's obvious that it will eventually run out. But the curve of production, and the actual amount of oil in the ground, is in debate. However, as more data has become available, and as we have neared Hubbert's predicted peak, the Peak Oil phenomenon has been gaining more and more interest. A number of geologists and other researchers now believe that we have reached, or are about to reach, the all time peak of oil production. After the peak occurs, oil production will begin to decline, an almost unimaginable situation in an economy based on perpetual growth.

The implications for food and agriculture are wide reaching. Industrial agriculture is highly energy-intensive, demanding oil to run tractors and transport trucks, to manufacture "inputs" like fertilizers and pesticides, and to process and package food in plastics made from oil. In fact, for every food calorie we eat, an average of 7-10 fossil fuel calories were spent to grow that food and bring it to us. In some cases, such as pork, the ratio is more like one to sixty. *For a food system to be sustainable, food*

would actually have to provide more energy than was required to grow it.

Population and consumption are continuing to increase, so a decline (or even a plateau) in production will mean increasing oil prices. Even now, some fertilizer factories have closed because of climbing energy costs. Although the relationship is not always direct, increasing energy costs will eventually translate into increasing food costs because of higher costs for farming and distribution. Attempts to replace even a small amount of oil consumption with biofuels (made from corn or soy, for example) have already resulted in an increase in food prices in some parts of the world.

Although there are a growing number of renewable energy options, none of them offer the power, portability, or versatility of oil. Some fertilizers and pesticides are literally made from the carbon in oil, and the electricity made from wind or solar does not offer carbon. Moreover, the existing infrastructure is designed to use oil and oil-derived products, and replacing that infrastructure would be extremely costly. Currently, none of the renewable alternatives is growing at a rate nearly fast enough to compensate for the expected energy decline Peak Oil will create. And options like biofuels are of questionable ecological sustainability. Furthermore, some options do not seem to produce much more energy than is required to create them. Moreover, turning food into fuel at a time when food yields themselves may be stretched is hardly a solution.

Adapting the food system to Peak Oil will require a number of significant changes. One of the most effective would be a shift to more local food, since most of the fossil fuel calories spent in the food system involve transporting food long distances. And shifting towards ecological and organic food production, which minimize the use of synthetic inputs, is another important step.

For further reading on food and Peak Oil, please see the articles on Peak Oil in *The Local Harvest* volumes 1 and 2 (authored by Aric McBay and Rick Munroe, respectively) as well as references in the "Further Reading" section.

Production: Farming and Gardening

Farming in Kingston's countryside has been changing dramatically, as it has in many places around the globe. This section examines changes in who is

farming and what is being farmed, as well as trends that are affecting the environment, our rural communities, and life on the farm.

Key Points

- Farms are continuing to decrease in number and increase in size.
- The average age of farmers continues to increase (average age is now over 52). Few young people are taking up farming.
- The realized net farm income in Canada is negative, and has been at or below levels not seen since the Great Depression for two decades. About half of farmers in Frontenac work off-farm to make ends meet.
- Organic farming is increasing in popularity. The number of certified organic farms in Ontario has doubled in the last ten years.
- Half of farms in Frontenac and Lennox & Addington raise beef cattle.

How much land is being farmed? How has this been changing?

The trend in much of Canada is fewer, but bigger farms. Total agricultural land in Canada between the 2001 and 2006 census remained the same, but the number of farms dropped. Those farms that remained got bigger, and the average size of farms rose.¹ Some of that national trend can be seen locally. In all of the six counties that fall within a 100 km radius of Kingston, the number of farms has been dropping.² In Frontenac County the number of farms fell from 733 to 672 between 1996 and 2006. In that same time in Lennox & Addington, the number of farms went from 753 to 617. The trend towards fewer and fewer farms is even more dramatic, however, if we take a longer-term perspective. Since 1921, the number of farms in Ontario has fallen from nearly 200,000 to just under 60,000 in 2001. The number of acres farmed has also declined.³

Like the trend for Canada, the average farm size has increased. In Frontenac county the average farm size grew from 278 acres to 294 acres from 1991 to 2001.⁴ In Lennox & Addington, average farm size grew from 273 to 314 acres.⁵ Overall, in 2001, in both counties, 17.5% of farms were under 70 acres in size, 69% of farms were between 70 and 560 acres and the remainder (13.5%) were over 560 acres. These figures suggest that farming is still a family-sized operation in our region.

The majority of farms in the City of Kingston and Frontenac, Leeds & Grenville, and Lennox & Addington counties have operated under sole proprietorship, and only around one percent of farms are non-family corporations, which indicates that, for the most part, farms in this area are still family-run operations.⁶

Who is farming in the Kingston area? How has that been changing?

Another trend seen across Canada, as well as in the Kingston countryside, is the aging of the average farmer. In 2001, the average age of farmers in Frontenac County and the City of Kingston was just under 53 years.⁷ In contrast, the average age of the labour force in the City of Kingston in 2001 was 38.7 years.⁸ Related to this, fewer and fewer people under 35 are farming. The latest census reports that the number of farm operators under the age of 35 in Canada fell by 25.1% from 2001 to 2006, so that today they make up only 9.1% of all farmers.⁹ Clearly, not as many young people as before are choosing to continue the family farm or to take up farming. The exception might be Community Supported Agriculture farms, which in particular are attracting young or new farmers.

What do we produce locally?

Today in the City of Kingston, the predominant use of agricultural land is for field crops and vegetables, as well as cattle farms.¹⁰ *(Continued on page 18)*

Agriculture in the Kingston Region, 1673-2007

Lands into Farms, Farms to Markets, Markets onto Tables

Professor Brian S. Osborne, Queen's University

Preparing the Groundwork

The following impressionistic essay is intended to endorse a major conclusion from my years of studying Kingston's history: we live in a distinctive "georegion." The Kingston region owes much of its character to a particular landscape that has evolved through many generations of people working with nature, and adapting to dynamic economic, social, and cultural contexts.

We are now living in one such period of dynamism as people look to supporting local agricultural production as part of a complex calculus of rural economics, community protection, quality of life, health concerns, and even geopolitics. Perhaps there is some wisdom to be gained by placing the present developments in a longer local trajectory. But what does my title mean?

Of course, it all starts with "the land." At one time we talked about "nature" and then about "ecosystems," and "earth" was scientifically transformed into categories of soil, and complex vegetations into biomes. But at the base of the whole pyramid of agricultural production is the land.

What organizes the land into the production of food is "the farm." No mere nostalgic concept, the farm is the locus of human labour, shifting technologies and science, and the economic varieties of revenues and expenses expressed in the market-place.

Often rendered as a nebulous term, "the market" was originally a material place and fundamental urban organism where local rural producers met local urban consumers face-to-face. As the scale of demand increased, and as new communication technologies developed, towns' "foodsheds" extended to other regions nationally and globally, articulated by complex and extended distribution structures.

And, finally, "the table" is the metaphor for the ultimate demand mechanism for food – domestic consumption. People's need for food is basic and their requirements fundamental: reliability of provision; affordability; quality. Over time, these became skewed through advertising, branding, exotic tastes, and thoughtlessness. Recently, issues of health, ecology, social justice, and even geopolitics is now motivating people to be aware of what is on the table, where it came from, and how it was produced.

These are the factors underpinning the evolution of agriculture in the Kingston region. So how did it evolve through time?

Beginnings: 1673-1763

While the lands behind Kingston had experienced some horticulture under the hands of the Iroquois, they were most typically seen as hunting lands by the Mississauga and Algonquins. When the French first established themselves at Cataraqui in 1673, their main interests were the fur trade and geopolitics. By the time they

handed over their lands to the British in 1763, Fort Frontenac also had some 500 acres of cleared land associated with it.

Foundations: 1783-1851

More extensive organization of these lands followed the arrival of the Loyalists in 1783 after the American Revolution. Districts, counties, and townships were laid out along the front of the Upper St. Lawrence and Lake Ontario as far west as the Bay of Quinte. The townships were divided into concessions and lots, and settlers were awarded land-grants with the intention that they transform the virgin forests into cultivable land. The first cash crops were bi-products of this process (lumber, pot-ash, and pearl-ash) with the intended staple for imperial production being wheat. But there was a problem: the land. Kingston's back-country was dominated by limestone covered by glacial clays and sands while, to the east, much of Pittsburgh township lay on the igneous-metaphoric granite-gneiss lands of the Frontenac Axis of the Canadian Shield.

Of course, this is too simple a generalization. Throughout the southern limestone plains, there was often too little sand and clay and too much limestone pavement! And throughout the rocky knobs and swamps of the Shield there was often a tantalising scattering of glacial clays and sands and beaver meadows to entice an optimistic settler! To be sure, there were always the realists around to remind potential farmers of the essential problem. As early as 1792, the surveyor of Pittsburgh Township, Alex Aitken, abandoned his task as "I would be putting Government to a useless expense to Survey lands that will never be settled." By 1822, the visiting social commentator, Robert Gourlay declared that "Kingston is subject to one local advantage, the want of a populous back country" and, by the 1840s, objectors to Kingston's claim to being capital complained that the "Country around is unproductive." But there were always the "boosters" and the Midland District Land Company urged immigrants to go beyond the "gloomy woods" of Portland and encounter the "fine lands" of Hinchinbrook, Olden, and parts of Loughborough "with their small crystal lakes of countless numbers, their rivers and rivulets, and springs, not of muddy and stagnant waters,...and all abounding with fish." Not content to stop there, even the "very sight of the timber itself, without putting a spade in the ground is sufficient to convince any judge of the fertility of the soil."

Clearly, many prospective settlers were persuaded to explore these options, and colonise the new lands being opened everywhere. Motivated by ambition, energy, and the ethic of progress, hundreds of family turned wilderness into property, and forests into ashes, lumber, and, eventually crops. However, the local pattern deviated from the provincial pattern of wheat production fostered by the protected access to British markets ensured by the Corn Laws. However, by 1851, whereas wheat accounted for 50% of cultivated land in some counties, only 15% of Frontenac's cropland was devoted to it. Oats, peas, and hay were more prevalent as they were better suited to the wet and cold soils, as was the raising of cattle, horses, pigs, and sheep.

And much of this was directed to the demands of the people of Kingston and the substantial military presence there. While some form of marketing commenced at the commencement of settlement in 1783, a formal market was established in 1801 and the 1847 regulations of approved commodities give an insight into its role: “corn, grain, flour, meal, bran, fruit, vegetables, eggs, butter, cheese, lard, poultry, game, farmstock, and other animals whether live or dead, shell or other fish, hay fodder, boards, scantling, staves, shingles, lath, fuel, or other woods, coal or lime.” Surely, any enterprising local farmer could sell something here! But there was a problem. The roads were atrocious all the year round and the lakes froze in winter. That is, the hinterland was limited and even more restricted because of the tyranny of snow and ice. But winter was a mixed blessing. While supplies of fresh produce decreased and people relied on preserved foodstuffs or occasional game supplied by Mississauga hunters, the frozen lake allowed some supplies to come in from as far as Upper New York. But it was essentially a local and easily disrupted system of supply and demand.

Transformations: 1851–1945

The second half of the nineteenth century witnessed two major trends.

The first was the expansion of agricultural settlement north from the Lake Ontario front into the Mississippi and Mattawa tributaries of the Ottawa Valley. This was effected by the passage of the Public Lands and Colonisation Roads Act (1853) and the Free Grant and Homestead Act (1868). The intent of settlement along the colonisation roads, together with the construction of colonisation railroads such as the Kingston–Pembroke and the Napanee–Tamworth was to nurture a symbiosis between agricultural settlement and the lumbering economy throughout the Shield and to link this region with Lake Ontario navigation. By 1881, 810 farms had been established north of Bedford and Hinchinbrook townships, this number increasing to 935 by 1911, but dropping to 616 by 1941.

Another development took place in the southern tier of townships. Ontario's staple-wheat economy was hit by several factors: the end of the British trade preference in wheat; the opening up of better croplands in western U.S. and Canada; and outbreaks of disease (Hessian Fly, weevil) affecting wheat crops. Of course, farmers adapted and, indeed, the six southern townships experienced their peak population of some 19,000 persons in 1871. However, the number of farm units dropped from 2,523 in 1881 to 1,798 in 1941. More significant was the shift in specialisation. Ontario's 1861 production of 24 million bushels of wheat decreased to 12 million by 1911, while the number of milk cows doubled from 451,640 to over a million head. Frontenac demonstrated a similar trend between 1861 and 1911: cultivated land decreased from 250,650 to 188,647, while the number of dairy cows quadrupled from 9,582 to 29,250, and to 34,367 by 1941. This first phase of dairying was associated with the phenomenon of cheese factories, the first one established in the county in 1874, increasing to 36 in 1901, and 68 in 1910.

An important dimension of all of this was a major shift in transport technology. Steam ships improved the frequency and

reliability of lake-communication, albeit in the navigational season. But, more importantly, the advent of rail communication in 1856 allowed year-round movement of people and commodities, and connection with a continental-wide network connected to other agricultural regions. When this was accompanied by refrigerated rail-boxcars, the impact on local imports and exports was tremendous. The local market-square was soon competing with commercial butcher-shops and grocery stores able to supply exotic produce all year round. For farmers seeking new markets, cheese, and later bulk milk, were produced for the insatiable demands of an urbanising and industrialising world. For others, where soils and microclimate permitted it, orchards and fruits were the produce of choice.

New Verities: 1945–2008

However, by 1973, the trends for the local agricultural economy were clear. In 1941, Frontenac County could boast 561,970 acres of farmland but this was halved to just over a quarter of a million acres by 1973. Similar decreases were recorded in the numbers of cattle, swine, and sheep, although accompanied by an increase in average farm yields of barley, oats, and milk. These trends have continued into the twenty-first century with the steady erosion of the domestic agricultural economy as global marketing of cheap foodstuffs has asserted itself everywhere in the form of road-based trucking of external produce everywhere at anytime. Industrialised and globalised agriculture have undercut the productivity of what was always a marginal agricultural region.

However, a renaissance of local market demand is emerging with a growing demand for the availability of locally produced foodstuffs. It is a complex phenomenon motivated by a “greening” society, a concern over health, an appreciation for social justice, and a recognition of local heritage, landscapes, and quality of life. Thus, Italy's Slow Food/Slow Cities movement is essentially challenging the increasingly frenetic pace of modernity, cherishing local traditions and diversity, and resisting the insidious globalization of culture. In particular, by encouraging the production of local food-stuffs by natural, eco-compatible techniques which exclude transgenic products, the Slow Food/Slow City movement vitalizes the local rural economy at a time when food producers are being challenged by global producers and industrialized mass-production and distribution. By encouraging the creation of occasions and spaces for direct contacts between consumers and quality producers in towns; they create profitable niche-marketing for restaurateurs and ensure the supply of interesting food-stuffs for discerning diners sensitive to the threats posed by distant producers. Clearly, the aim is to preserve local traditions and sustain the local economy. It forges an equilibrium between the modern and the traditional, the city and the country, and improves the quality of urban life by nurturing a distinct landscape, distinct cities, and distinct people. This could be an important dimension of Kingston's search for a new economy and enhanced Quality of Life in a Quality Place.

The references for this history can be seen on page 68.



▲ *Pattypan squash and zucchini fresh from the garden.*

Traditionally, Kingston has been a dairy farming area,¹¹ and today, 14% of farms in Frontenac and Lennox & Addington counties rely on dairy production.¹² Though there has been some increase in the City of Kingston (an increase of 15.53% between 1991 and 2001), dairy farming in Ontario as a whole has seen much greater increases in that same period (30.86%).¹³ In Leeds & Grenville, Lennox & Addington, and Frontenac counties, the number of dairy cattle has decreased significantly.¹⁴

There have been other areas without growth as well. There has been no growth in the number of pigs in the City of Kingston or Leeds & Grenville and Frontenac counties, despite large growth in Ontario generally.¹⁵ The number of farms with chickens in the City of Kingston also fell.¹⁶

On the other hand, there have been some areas of growth, most notably in beef farming, which has increased in both the City of Kingston and Frontenac county.¹⁷ In fact, the majority of farms (51%) in the two counties of Frontenac and Lennox & Addington rely on beef for their livelihoods¹⁸. In Leeds & Grenville and Lennox & Addington counties there has been an increase in hens and chickens.¹⁹ Sheep farming has also increased in our area.²⁰

In terms of crops, land dedicated to summer fallow, pasture land, barley, mixed grain, corn for silage and vegetables has decreased since 1991.²¹ Meanwhile, the area under hay and corn has increased. In fact, corn showed considerable growth, increasing 73.66% from 1991 to 2001, compared to only 5.89% in Ontario as a whole.²²

How are we farming?

The practice of farming is constantly evolving. One major change, among many, is the increasing reliance by farmers on large multi-national agrichemical corporations for products that, twenty years before, farmers obtained from local sources at low or no financial cost. An illustrative example is seeds. Until quite recently, many farmers saved the seeds from a good crop for use in next season's planting. (See our sidebar on Terminator seeds.) Seed is but one recent example; ever since the development of the tractor to replace the horse, farmers have had to spend more and more on farm **inputs** (seeds, fertilizers, weed herbicides, and a host of other chemicals, including hormones and antibiotics for livestock). A study on the economic impacts of agriculture showed that for Frontenac, Lennox & Addington, and Leeds & Grenville, farm expenses are 85.6 per cent of farm receipts.²³

Two concerns are raised by this trend. The first is that additional input costs can mean a lower net income for farmers. As we will examine soon, farmers are experiencing an income crisis even as the corporations selling inputs have experienced record profits. A second concern is that, when farm inputs become big business, health and safety, farmer self-sufficiency and environmental sustainability may be undermined, in favour of a drive toward greater economic efficiency and profits.

Farmers and numerous public interest groups have been raising concerns about the safety of genetically modified seeds, including the use of **Terminator technology**. Terminator technology is a type of genetic modification which prevents plants from producing fertile seeds. This means that farmers cannot save seed each year, but instead must buy new seed from seed companies. Their concern about these technologies is further multiplied by the fact that seed companies have the power and resources to implement them with little consultation and to create farmer dependence on these technologies. This is possible because of increasing corporate concentration in the seed industry, the reduction in publicly funded plant breeding, and the increasing use of legal measures such as patents, contracts, Plant Breeders' Rights legislation, or even law suits, which have shifted power from farmers to seed companies.

Very little is known about how our local farms are affected by this trend towards increasing reliance on large farm input corporations. Interviews carried out for the Kingston Agricultural Study did indicate that “suppliers to the farming community once located locally are now much more regionally oriented.”²⁴ For example, “farms located in the Former Kingston Township tend to look westerly to the Napanee and Belleville area for farm supply services. Farms located in the Former Pittsburgh Township tend to look easterly to Gananoque, Brockville and points east.”²⁵ However, more research is needed to understand how our local farmers are affected by changes to farming inputs. Where are local farms purchasing their inputs? At what financial and ecological cost? Are farmers paying a price with their health? How might farmers return to more self-sufficient farming practices that allow them to use, for example, saved seed or organic fertilizers created right on the farm or in the local farming community?

A second major change in farming is the move towards **industrial farming**. This change has resulted in increasing yields over the past fifty years, as seen in the graph below of grain yields.

The movement towards mechanization, synthetic inputs and large-scale irrigation around the middle of the twentieth century is often called the “Green Revolution”. This change has had a great many social and ecological implications. The increased production of food has been accompanied by the contamination

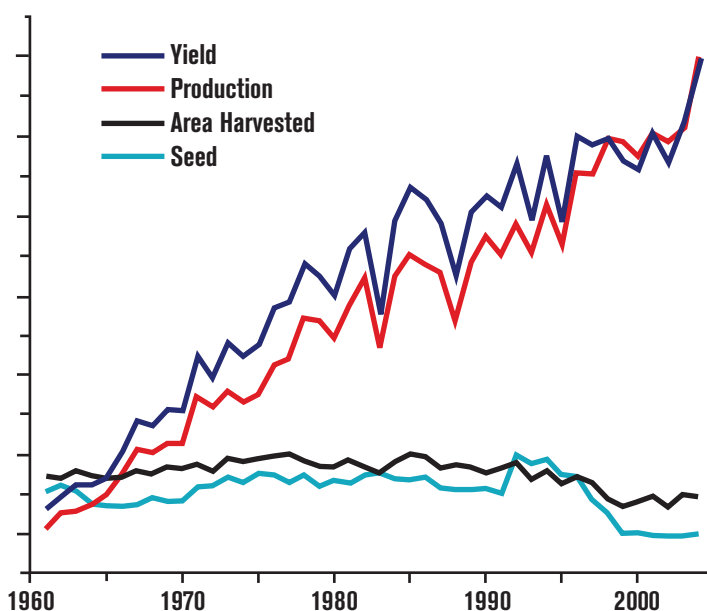
of waterways, soil depletion and the spread of carcinogens (cancer-causing agents) from pesticides and herbicides.²⁶

Industrial farming has altered crop production as well. Some farms now practice **monocultural** production by growing a single crop over a huge expanse of land, often season after season. To rid the crop of pests attracted to a large area of food, pesticides are used. According to the U.S. Environmental Protection Agency, many of these pesticides (organochloride pesticides) are probable human carcinogens – cancer-causing agents – which can accumulate in the body and in our food system.²⁷

Another farming trend in response to these health, safety and environmental concerns is a move toward organic and ecological growing. **Organic farming** “is a holistic production system designed to optimize productivity and fitness of diverse communities within the agroecosystem, including soil organisms, plants, livestock and people.”²⁸ Organic agriculture does not use synthetic pesticides or fertilizers, hormones or antibiotics, irradiation, or genetically modified organisms.²⁹ Instead, it focuses on the long term health of animals, plants, and the land, especially through building the soil and adopting preventative health measures. According to Statistics Canada, an increasing number of farms are becoming certified organic, and in Ontario in 2005, there were approximately 500 certified organic farms with over 90,000 acres of certified land. This is more than double the number of organic farms in 1996.³⁰ No doubt the huge growth in the sales of organic food products is helping spur this change.³¹ The sales of certified organic foods in supermarkets grew by 28% from 2005 to 2006.³² And in the US, between 1993 and 2003, organic food sales grew by about 20% each year.³³ Locally, in Frontenac and Lennox & Addington counties, 67 (44 and 23 respectively) certified organic, transitional and non-certified organic farms were counted in the 2006 census.³⁴ The reported number of certified organic farms in 2006 is up from the 2001 level.³⁵

Other changes in agricultural production include an increasing move from the deep, wide furrows of conventional tillage to no-till techniques, which disturb the soil less,³⁶ and the growth in greenhouses (nationally, a 21.1% increase in square footage in five years), with over half of the increase occurring in Ontario alone. More of them are devoted to vegetable

Total World Production of Coarse Grain, 1961-2004



production rather than flowers.³⁷ In Frontenac and Lennox & Addington counties the growth in greenhouses has been equally strong, with a 25.5% growth in square footage in Frontenac, and a 20.9% growth in Lennox & Addington between 2001 and 2006.³⁸ Though the square footage has increased, the number of farms with greenhouses has not.³⁹

How many jobs are created by the farming sector?

Despite its clear importance in the process of food production, farming does not make up a significant part of the employment in the City of Kingston.⁴⁰ The Agricultural Study estimates that there are 1,173 jobs in the City of Kingston related to agriculture, which includes both agriculture-related industries and on-farm employment. As a percentage, employment in agriculture and other resource-based industries make up 1.25% of the labour force in the City of Kingston.⁴¹ The study also notes that “even with the agriculture-related industries in Frontenac County this would have only reflected approximately 2% of the total labour force.”⁴² In one sense, agriculture has been a victim of its own success, in that agriculture has “led the Canadian economy in productivity growth. While the value of real production has tripled in the past 45 years, the number of farms has declined by 50 percent”.⁴³

Is the farming sector prosperous? Is rural life prospering?

The aging of the farming community and the decline in the number of farms in our area demonstrate that farming is no longer an attractive livelihood for many. One possible reason for this is the drop in farm income. As the graph at right shows, realized net farm income has steadily decreased since the late-1970s and early-1980s in Canada.⁴⁴ Amid record high demand, large production efficiency gains and consumption that out-stripped production, “farmers have posted their largest losses in history.”⁴⁵ Though particular events such as fluctuations in the value of the Canadian dollar, or a ban on Canadian beef by international trading partners will have an effect on farm income, the income crisis has existed for decades. One or two particular events cannot explain a decades-long situation that extends beyond the borders of Canada.

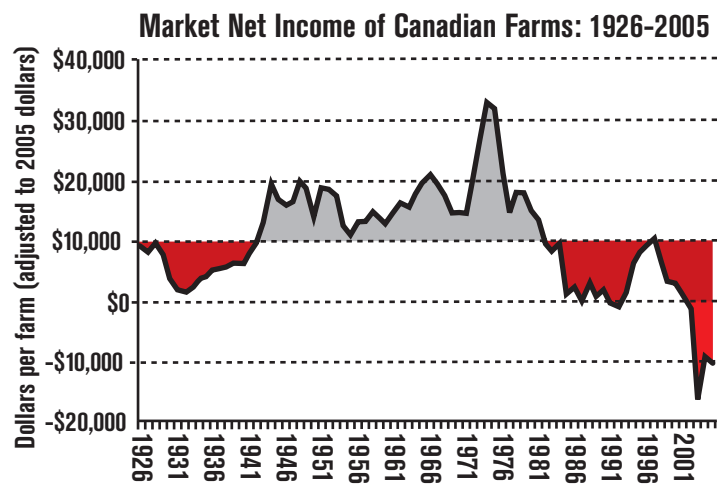
Some analysts have observed that even as farmers have been posting record losses, large agri-food com-

panies including seed companies, food processors, and retailers, have been posting record profits.⁴⁶ According to a National Farmers Union study, there is an “imbalance in the allocation of profits within the agri-food chain”, and that “farmers are making too little because powerful corporations are taking too much.”⁴⁷ These large corporations control most of their respective markets, allowing them to use their economic and lobbying muscle to elicit government policies that favour them. At the same time, the market power of individual farms is diminished.

In Frontenac, Lennox & Addington and Leeds & Grenville the average net farm income (after government payments) is only \$8,628 compared to an Ontario average farm income of \$18,261 and an Eastern Ontario Region average of \$14,277.⁴⁸ Our region’s average net income is particularly low, but none of these figures are very high. These numbers demonstrate why off-farm income is so important – because it provides the majority of income to a farming family.

A further cause for concern is the increase in off-farm work by farmers, which becomes more and more necessary as farm income falls short. In Frontenac County in 2001, nearly 50% of farm operators reported off-farm work, with 40% reporting more than 20 hours per week.⁴⁹ We also know that total farm capital has declined in Kingston by 5.13% while it has risen in Ontario by 24.14%.⁵⁰

These trends are having a negative effect on the way of life for farmers and for rural communities in general. In Canada, in 2001, only a small portion of the rural economy was derived from agriculture, and only 11% of Canada’s rural population lived in a farming household.⁵¹ Many farm families, up until



the 1970s, were largely self-sufficient and produced much of their own food, even producing and processing it themselves. Today, most farmers no longer live this way.⁵² Those who remember know that “30 or 40 years ago there was a thriving farm community on the outskirts of the then City of Kingston which provided food directly to the City to processors within the

urban area.”⁵³ Today that situation is much different as those farmers who remain are fewer and further between and distributors and processors are hundreds of kilometers away.

Production Research Gaps:

- What are some of the main reasons for the lack of new farmers? What will be the effects locally of a retiring farming population?
- What are other farming trends perhaps not captured by Statistics Canada, such as in micro-producers and sprout-growers?
- What are the effects of local agriculture on our environment?
- Where do farmers get their inputs in Kingston currently? What are the costs of this?

Processing: Dairies, Abattoirs, Mills, Preservers

Key Points:

- There has been a shift from a large number of small processors to a small number of large processors over the last several decades.
- Although small local processors still exist, the majority of processing in our region is done by large corporations that do not necessarily source their food locally.
- There are no mills remaining, except at a very small scale. Three cheese factories remain (Wilton, Forfar, and Black River).
- Farmers must now move livestock greater distances to access abattoirs.

What kinds of processing do we do locally? How has this changed in the last 50 years?

Just as there have been major changes in farming, there have been dramatic changes in food processing capacity in our region. Prince Edward County, for example, had the second largest canning industry in Canada from the 1950s until the early 1980s. Only 25 years later, it is non-existent.⁵⁴

Unlike primary agriculture, however, food processing is still a major employer. In Ontario, food-processing is the second largest manufacturing sector.⁵⁵ In Eastern Ontario in particular, the food industry is a key sector in that it employs approximately 4.3% of the population, which is a greater percentage than in other regions of the province including the Greater Toronto Area.⁵⁶ However, while food processing employment predominates in Hastings (21%), Stormont and Dundas & Gengarry counties (both 14%), Frontenac (4%), Prince Edward (3%) and Lennox & Add-

ington (2%) counties have a much lower percentage of the total employment in food processing.⁵⁷

Food processing is also highly profitable, or at least it is for the giant corporations that dominate the industry. Food processors such as Tyson, Pepsico (Pepsi and Quaker Oats), ConAgra, Anheuser-Busch, General Mills, Coca-Cola, Kellogg's, and Cargill are making record profits of hundreds of millions or even billions per year.⁵⁸

In Eastern Ontario, multinational corporations, such as Kraft, General Mills and Coca-Cola, make up a much larger proportion of food processors than other regions in Ontario. In fact, the ratio of large to medium-sized companies is four times greater than the rest of Ontario.⁵⁹

According to a study prepared for the Ontario East Economic Development Commission, the scarcity of medium-sized companies can be explained by the lack of a concentrated population base. The abundance

of larger multinational subsidiaries can be explained by several factors including:

- the comparatively low labour and benefit cost in this region;
- the lack of other industries of this scale competing for available workforce; an experienced workforce in food production;
- comparatively low plant operating costs (including land, property taxes and electricity rates);
- the relatively low price of world-market raw sugar in Canada;
- excellent transportation routes available; and
- the presence of Loyalist College in Belleville with “arguably the most effective and tailored food-processing training curricula in the Province.”⁶⁰

These large companies source very little of their raw material from Eastern Ontario, and thus are not providing the region with that additional economic benefit.⁶¹ The Ontario East Economic Development study noted that interviews with food processing companies seemed to suggest “that sourcing from Eastern Ontario was not a priority. Anecdotally, the respondents suggest that Eastern Ontario today is not a significant source of food industry raw material. For example, in the past, Eastern Ontario would have been a larger source of raw vegetables.”⁶²

Because of the lack of locally-sourcing small-scale

processing plants in our region, farmers report that the processing of local agricultural products is “widely dispersed.”⁶³ For example, “milk produced locally is now processed in either Winchester or Belleville, or smaller plants between.”⁶⁴ The closure of the local cattle auction has meant higher transportation costs for local farmers as their cattle are shipped longer distances to be sold.⁶⁵ There are currently only a few cattle abattoirs in Kingston and Countryside, including Wallace Meats, Quinn’s Meats, and Lynch’s Slaughterhouse.

Declining capacity for the processing of local produce does more, however, than just increase the cost of transportation and add to greenhouse gas emissions, it also drives down local production. According to Statistics Canada, the latest census shows a decline in the area of land planted to vegetables, particularly in Ontario and Quebec. They link this phenomenon to the decrease in vegetable processors in Canada who have closed as a result of increasing off-shore competition and the high Canadian dollar.⁶⁶

Overall, the processing capacity in Eastern Ontario is dominated by multi-national subsidiaries and while it provides a significant number of jobs, the reduced local processing capacity and the lack of local sourcing of ‘raw materials’ does not provide further economic benefits to our agriculture sector.

There are still some small local producer / processors, as discussed on page 37.

Processing Research Gaps:

- What local processing capacity do we have?
- What benefits, such as locally sourcing raw materials, do small local processors offer?
- What challenges do small processing companies face and how can these be overcome?
- What opportunities exist to finish and process more cattle in the region to serve local markets?

▶ *Turkeys in stacked cages on a transport truck.*



Distribution: Moving, Storing, Wholesaling Food

Key Points

- The average Canadian meal travels thousands of kilometers. The ingredients of a hamburger with a side of potatoes in Kingston travelled an average of 4338 km.
- Most of the organic food eaten in Canada is imported.
- The international trade in food has tripled in the past 40 years.
- Shipping food over great distances is a major source of greenhouse gases. Food-related greenhouse gas emissions can be significantly reduced by sourcing food locally.
- Canada is the world's 5th largest importer and 4th largest exporter of food.

As discussed, processed foods today must travel many kilometers because of trends toward centralized processing and distribution. Even non- or minimally processed foods such as fruits and vegetables are also shipped great distances. A walk through the produce section of any local grocery store will reveal garlic from China or tomatoes from Mexico, perhaps even when these products are being harvested locally. The distance that food travels from the point of production to the point of consumption can be calculated as **food miles**. According to a local study, a “beef burger, topped with fresh tomatoes, onions, lettuce, and cheese, with roasted / boiled / baked potatoes on the side, traveled from production to the Kingston area an average of 4338 km.”⁶⁷ Another estimate puts the average Canadian meal at approximately 2000 km.⁶⁸

Around the world, international trade in food has tripled in the past 40 years, increasing to \$510 billion by 2002, with almost 900 million tonnes of food being shipped from one country to another each year.⁶⁹ Canada imported \$20.4 billion worth of food in 2004,⁷⁰ with much of it coming from the United States, the European Union, and Mexico.⁷¹ Seventy to eighty per cent of Canada's organic consumption is imported products.⁷²

Much of what we import is fruits and vegetables.⁷³ Indeed, with our cold climate, it is a challenge to produce some fruits here in Canada, often making importing necessary for such products. However, a study of the Waterloo region in Ontario, revealed a phenomenon called **redundant trade**. Redundant trade is “the simultaneous exporting and importing of the same product to the same region”⁷⁴ The study showed that even when, for example, locally grown tomatoes or apples were in-season and available to sell, imported

tomatoes and apples were on grocery store shelves. Furthermore, the price of the imported produce was often as low or lower than the local produce, despite the distance it has traveled.⁷⁵

One important externality or consequence of meals with more food miles is the increase in greenhouse gas (GHG) emissions caused by their transport. Whether food travels by ship, train, airplane or truck, fossil fuels are burnt in the process of transport, thereby releasing ‘greenhouse gases’ such as carbon dioxide and methane, which affect air quality and contribute to global climate change. Global climate change, as many of us are aware, will in turn have numerous foreseen and unforeseen consequences.⁷⁶ Lester Brown writes in his book *Plan B*: “Higher temperatures diminish crop yields, melt the snow/ice reservoirs in the mountains that feed the earth's rivers, cause more destructive storms, increase the area affected by drought, and cause more frequent and destructive wildfires.”⁷⁷

Several Canadian studies have attempted to calculate food miles. One study by FoodShare, a Toronto non-profit organization, compared the food miles of a typical dinner menu for which ingredients were either purchased from a farmers' market or a supermarket. Supermarket ingredients traveled 81 times further than those from the farmers' market, and by buying from the farmers' market, they estimated one could save a half tonne of GHG a year per household.⁷⁸ Another study by the Waterloo Region of Public Health, calculated the average distance and GHG emissions on dozens of imported foods, not just ingredients for one meal. They also calculated the total environmental cost of the region's consumption of imported foods. These foods account for 51,709 tonnes of GHG emissions annually in Waterloo Region, or the equivalent

of 16,000 cars on the road. Amazingly, 99 percent of these emissions could be eliminated if local foods, traveling only 30 Kilometres, were substituted for imports, and 96 percent of emissions could be eliminated if foods that had traveled only 250 km were substituted.⁷⁹ Furthermore, it should be noted that these studies examine imported goods from outside of Canada, but in a country as large as ours, even British Columbian fruit or Albertan beef will travel over two thousand kilometres.

Admittedly, there are other studies which argue that buying closer to home is not always better for reducing food miles and greenhouse gas emissions. A study by the Leopold Centre in Iowa found that, though consumers could save GHG emissions by buying food grown in their state, they could reduce emissions even more when large trucks delivered large quantities of food across the state, rather than having many local producers each transporting food in small trucks.⁸⁰ Overall, more research and discussion is needed to determine the optimal energy efficiency of a distribution system.

How safe and reliable is our food supply?

News stories in recent years have raised concerns about the safety of imported foods. This year, headlines have been made by E. coli-tainted spinach from the U.S., cantaloupes contaminated with salmonella from Costa Rica, and pet food containing a toxic chemical from China.⁸¹ Does a global industrial food system create cause for food safety concerns? Crowded populations of animals on large industrial farms can offer a comfortable environment for pathogens, of which avian flu is but one recent example. Researchers with the U.S.-based Worldwatch Institute have argued that “the globalized poultry trade and large-scale industrial farms located close to big cities in the developing world are chiefly responsible for the spread of the avian flu virus” and not the flocks that are raised in

backyards and on rooftops as previously suggested.⁸²

Furthermore, events such as 9-11 and the SARS outbreak in Toronto have prompted us to consider how we might cope if a disaster or emergency prevented us from importing food as usual. Would we have enough food to last until new alternative arrangements could be made? We are engaging in a global system of food swapping. Canada is, at the same time, the fifth largest importer and the fourth largest exporter of agriculture and agri-food products in the world.⁸³ In 1999 the agriculture and food sector exported 47 per cent of total primary production, either directly or indirectly in the form of processed goods.⁸⁴ We produce more than we need of some foods, but not enough of others. Furthermore, our food delivery system is a “just-in-time inventory system” which means we do not keep large stores of food, particularly in our urban areas. As a result, North American cities have only a three day supply of food – leaving our cities vulnerable to “food shocks” such as crop failures, severe weather or transport-related strikes.⁸⁵

When a country or community is able to feed itself through independent production without the aid of imports or food aid, this community is said to have **food sovereignty**. This term is said to have originated from Via Campesina, an international movement of peasants, small- and medium-sized producers, and indigenous people.⁸⁶

The idea of food sovereignty, as used here in the international context, is not against the trade of agricultural goods, but rather is against the priority that our current system gives to products for the purpose of exporting, and not feeding its own population. In countries in the global south, the diversion of land toward coffee and banana production, to feed us in the global north, takes a toll on production to feed the local population. And as discussed, there are many implications for those of us in the global north as well.

Distribution Research Gaps:

- How does the food distribution system in Kingston operate?
- How much redundant trade is occurring in our area? And what is the environmental impact of our reliance on imported foods?
- Are we prepared and capable of feeding ourselves in the event of a disaster that cuts off imports?
- What are the best factors and criteria for deciding how far “local” is?
- How economically feasible is it to re-create a more decentralized local food system in the Kingston area?

Food Access: Stores, Restaurants, Food Banks

Key Points

- Small independent grocers are in decline. The majority of food dollars (60%) are spent at chains owned by the five largest food retail corporations, up from 50% ten years ago.
- Food insecurity is a demonstrated problem in our area (affecting more than one out of ten people).
- Revenue for farms in the City of Kingston is equivalent to 7% of what residents spend on food each year.
- Though the popularity of organic food is growing (supermarket sales increased 31% between 2005 and 2006) only 15% of the organic food eaten in Ontario is grown here.
- About 30% of Canadian food dollars are spent eating out, and the most popular food choices are coffee and french fries.

At each stage in the food system, control is in fewer and fewer hands. Tens of thousands of farms send their produce through only one or two large corporations. These chains also tend to have larger and larger stores. The overall trend in Canada has been a decrease in the number of food stores and more sales at each store.⁸⁷ The number of chain stores, such as Loblaws, is increasing, but the number of independent stores is decreasing. In 2004, Loblaws had around 1,030 branch/franchise stores, and Sobeys around 1,310 stores.⁸⁸

Canadians spend the majority of their grocery store dollars at these large retailers. The five largest food retailers in Canada account for about 60% of national grocery sales; this is up from 50% only 10 years ago. On the other hand, the share of independent stores has gone down from 47% to 39% over the same period.⁸⁹ A movement in this direction is not surprising, given that large grocery stores are highly profitable, earning nearly triple the rates of return when compared to large retailers of non-food products. Medium and small-food retailers do not have anywhere near this rate of return.⁹⁰

This trend towards fewer and larger stores could be called **horizontal integration** (the control of many retailers by one company). This is happening along with **vertical integration**, where one company controls not only retailers, but the processors and distributors who supply and stock those retailers. Some large food retailers own wholesale operations and also manufacture their own private food labels to sell both in their stores and through smaller independent stores, such as the President's Choice label from Loblaws. This blurs the line between the different sectors of our food system.⁹¹

As we have seen earlier, this vertical integration throughout the food system shifts power away from the individual farm family and harms farm viability and prosperity. But how does the current system affect the consumer, the eater? Is food more accessible? Is it more affordable? What is it possible to buy at these stores?

What is food security?

In 1996 during the World Food Summit in Rome, the Government of Canada, together with 187 other countries, made a commitment to eliminate hunger and reduce the number of undernourished people in the world.⁹² They made a commitment to “food security.” **Food security** exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy lifestyle.⁹³

There are many ways to understand food security. Individuals or households can be food secure or insecure. **Community food security** is an approach to food security used by many dietitians and public health nutritionists in Canada.⁹⁴ Community food security is “a situation in which all community residents obtain a safe, culturally acceptable, nutritionally adequate diet through a sustainable food system that maximizes self-reliance and social justice.”⁹⁵ Community food security, as this definition shows, includes sustainable agriculture and community self-reliance as part of its definition, placing importance not only on food consumption but food production as well – something individual food security does not emphasize.

How accessible and available are healthy foods in the Kingston area?

Food insecurity is a recognized problem in Kingston, Frontenac and Lennox & Addington counties. As part of a survey, members of our community were read a statement describing the food situation in their household and were asked to say if the statement was often true, sometimes true or never true. 10.3% of respondents aged 12 and over in KFL&A answered 'often true' or 'sometimes true' to one or more of the following food insecurity statements:

- 1) You and others worried that food would run out before you got money to buy more.
- 2) The food that you and others bought just didn't last, and there wasn't any money to get more.
- 3) You and others couldn't afford to eat balanced meals.⁹⁶

A similar survey found that 11.5% of respondents in Kingston, Frontenac and Lennox & Addington were experiencing food insecurity.⁹⁷ A recent report by KFL&A Public Health demonstrates how families with a fixed- or low income are often unable to afford the essentials for living such as food and housing. Those on disability benefits, the unemployed, and single mothers, are particularly vulnerable to food insecurity, as are those with low levels of education, or low socioeconomic status.⁹⁸

Income is one of the most important determinants of food insecurity and hunger, but it is not the only one. Rent and utilities use a much larger percentage of income for low-income families. Access to food is also important, and another cause of community food insecurity is the **food desert**. A food desert is "a community or neighbourhood in which residents are unable to access affordable, quality food such as fresh meats, fruits and vegetables within a given walking distance of their home, for example, 500, 800 or 1000 metres"⁹⁹

The closure of the only full-service grocery store in the North Kingston neighbourhood of Rideau Heights raised concern about the area becoming a food desert.

How much of what we eat is local? Where can we purchase local food?

Even access to a grocery store or retailer does not guarantee us access to the specific foods we desire. In our global food system, emphasis is placed on ensuring

the pleasant appearance (e.g. uniformity in shape and colour) and easy transportation of food, rather than pleasant taste or high nutrient content.

We do not have exact figures on how much of what we do eat is local. However, a study in the Region of Waterloo examined local content for food commonly grown and eaten in the region. They found that of twenty common foods sold in stores most had little or no local content.¹⁰⁰

Revenue for farms in the City of Kingston totals only 7% of the total expenditure for food consumed in households in the area. The Kingston Agriculture Study estimates that "based on an average expenditure per household per week of \$86.97 for food purchased for consumption at home, the total annual expenditure for all 46,605 households within the City of Kingston would be \$210.8 million"¹⁰¹ - a lot of money, which, if a greater proportion of it were spent locally, would stay in the local economy as farmers buy other services and goods in and around Kingston. Another retail option for buying locally produced foods is to buy from farmers at farmers' markets such as the Kingston Public Market; Gananoque Farmers' Market; Perth Farmers' Market; Frontenac Farmers' Market (Verona); The Farmers' Market at Queen's University; and Quinte Market (Trenton). Little information is available regarding the total worth of sales at the market stalls.

How much local food is organic? What is the relationship between organic and local?

Many consumers concerned about food quality have started to purchase organically grown foods. According to the Nielsen Company, Canadian supermarkets sold \$412 million worth of certified organic food products in 2006. The growth in this area is amazing: between 2005 and 2006 sales of organic food grew by 28 percent, with 31 percent growth occurring in pre-packaged products and a 22 percent growth in fresh products.¹⁰²

Many consumers perceive organic food to be healthier, tastier, safer, or better for the environment. Our present supply of organic foods comes primarily from the United States, however, and is still shipped thousands of kilometers.¹⁰³ Only about 15 percent of the organic food consumed in Ontario is produced domestically.¹⁰⁴ Not only are our farmers and processors missing out on a good economic opportunity, all of the

problems associated with a global distribution of food – greenhouse gas emissions, concerns for food safety and food sovereignty, the rights and safety of migrant labourers – still exist with organic foods that are not grown and processed locally.

How much of our food is accessed from a restaurant or other food service?

One of the more dramatic changes to our food system is the increased popularity of eating out, and in particular the increase in “fast food.” Though fast food is nothing new anymore, it continues to increase. We are both eating out more often and spending more of our income on restaurant meals.¹⁰⁵ “In 2003, Canadian households spent an average of \$1,487 on food purchased from restaurants, a 27 percent increase from 1997.”¹⁰⁶ Furthermore, not only are we eating out more, drive-through, take-out and delivery services are on the rise too.¹⁰⁷ Canadian households spend an average of 30 percent of their food budget on food

services, and the most popular food and beverage to buy are french fries and coffee, respectively.¹⁰⁸

Kingston in particular is a city rich in restaurants, a number of which have recently shown interest in sourcing at least some food locally. However, there are obstacles. Sourcing food locally can also mean eating more seasonally, which can mean changing menus with the seasons. (Some restaurants avoid this by offering “seasonal specials”.) Furthermore, local food does not yet have the scale of distribution system that most restaurants desire.

“The food that is available to people shapes their food choices.”¹⁰⁹ When we are able to access grocery stores with healthy and affordable foods, as opposed to convenience stores that offer mostly packaged, processed foods, we are more likely to meet our nutritional needs.¹¹⁰ For example, high numbers of fast-food restaurants in lower-income neighbourhoods have been shown to contribute to increased obesity rates in some American cities.¹¹¹

Research Gaps:

- How easy is it for our urban, suburban and rural populations to access healthy food?
- How easy is it for consumers to recognize locally-produced food?
- What are the barriers preventing the local sale of locally-produced food?
- How much money do the local farmers’ markets bring into in the local economy?
- How can we best measure a community’s food security status?

▼ **Below:** *Partners in Mission Foodbank in Kingston.*



▼ **Below:** *Food security is a serious concern in our area.*



Consumption: How We Eat

Key Points

- Some fruits and vegetables seem to be less nutritious than they were decades ago.
- Poor diet is linked to 80 percent of cardio-vascular disease, 90 percent of type II adult diabetes and 30 percent of cancer.
- Poor diet in Canada costs the health care system about \$4.3 billion per year.

How nutritious is the food we eat now?

It's now commonly recognized that part of healthier eating is including more fresh fruits and vegetables in our diets. Many people realize that the consumption of junk or convenience foods is linked to obesity, addictions and certain cancers.¹¹²

Unfortunately, even some of our 'healthy' foods appear to be less healthy than they were historically. A study in the United Kingdom linked modern industrial farming practices to a reduction in nutritional value of food. It examined 20 fruits and 20 vegetables and showed that these same products had more minerals in the 1920s compared to the 1980s [or] today.¹¹³ Another study has shown that the "depletion of soil minerals and early harvest are factors linked to a reduction in the nutritional value of foods."¹¹⁴

Concern for how our farming practices affect the quality of our food has led many to purchase organically-grown food. As noted earlier, the sale of organic foods is growing. But are these foods really healthier? Though more research needs to be done, recent studies are suggesting that some organic foods have more natural antioxidants and Vitamin C.¹¹⁵ Since research suggests that food eaten at the peak is more nutritious, fresh local food may also provide more nutrition.

What is changing in the way we eat?

We are dining out more often and spending more of our income on restaurant meals, often meals that we take away with us, possibly to eat 'on the run.'¹¹⁶ The rise in fast foods and take-out raises questions about how the experience of eating is changing. A recent Canadian study of work and family life found that the rise in eating alone, and not with family, is the third most important factor accounting for the decline in average time spent with family between 1986 and 2005.¹¹⁷ Not only does eating together provide the opportunity for family bonding, studies show that there is a lower risk of poor eating habits,

such as not eating enough fruits and vegetables, when parents accompany adolescents at the dinner table.¹¹⁸ Frequent family meals are even associated with lower rates of smoking, alcohol and drug abuse in pre-teens and teenagers.¹¹⁹ Meal and meal-preparation time are also important opportunities for adults to be positive role models, introducing children to new foods, demonstrating how to plan and prepare meals and generally interacting as a family.

What are the health effects of our consumption habits ?

Poor eating habits take a toll on our health and, consequently, on our health care system. It has been estimated that 80 percent of cardio-vascular disease, 90 percent of type II adult diabetes and 30 percent of cancers are linked to poor diet.¹²⁰

Food insecurity is also associated with health problems including heart disease, blood pressure problems, diabetes, malnutrition, obesity and other chronic disease.¹²¹ Furthermore, the effects of food insecurity are not only individual and physical. Food-insecure

▼ *Participants eat and discuss local food at a Food Down the Road Spring Series event.*



families experience feelings such as powerlessness, guilt, inequity, embarrassment, anxiety and frustration related to their food situation.¹²²

In financial terms, the cost of poor diet is tremendous. One study estimates that it adds \$4.3 billion to the cost of our health care system each year.¹²³

Research Gaps:

- What are our eating habits in the Kingston area? Do we eat enough healthy foods?
- Where and how is our community eating? Do people in the Kingston area feel they have the time to prepare and eat meals together with friends and family?



▲ *A table for tasting different heritage tomato varieties at NFU Feast of Fields 2006.*

Waste & Recycling

Key Points

- Canadians waste 14 million tonnes of food annually.
- In the City of Kingston, more than half of household waste is organic matter.

The food system does not end with consumption. Ideally, the food system should not end at all, with nutrients from the farm being returned to the soil to begin the cycle again. Too often nutrients are extracted from the soil but not returned, which is sometimes called “mining the soil”.

How much ‘waste’ does our food system produce at all stages of the system?

Waste is becoming a serious environmental problem for the majority of Canadian cities and towns. Canadian citizens waste an estimated 14 million tonnes of food annually. The demands put on waste disposal systems are also escalating.¹²⁴

According to the City of Kingston, about 56% of the garbage stream is organic by weight. Of that portion, 23.7% is vegetable and 14.8% is animal food waste. Recent Statistics Canada data show that farm costs for inputs like fertilizers have continued to rise in recent years. Simultaneously, food waste continues unabated; research indicates that 30% of North American waste is organic matter.¹²⁵ This provides a clear opportunity for returning food waste nutrients to

farms.

The City of Kingston performed a waste audit in 2002 and there are signs that it may be preparing to implement a new system to separate and collect organic and inorganic waste.¹²⁶

Of course, many of the nutrients in food are passed into human waste and into the sewage system. When processed at a treatment plant, biosolids are one result. In some areas, including Ontario, processed biosolids can be applied to fields for certain crops under certain conditions. Processing and waiting periods before harvest mean that biosolids applied according to regulations do not cause problems with pathogens. However, some concerns have been raised about other chemicals put into the sewer system, including heavy metals and pharmaceuticals.¹²⁷

The food system also produces a large amount of waste through the use of disposable packaging materials, especially with fast foods, although exactly how much is produced in Canada is a research gap. One estimate suggests that \$1 out of every \$11 spent at the grocery store pays for packaging.¹²⁸

Research Gaps:

- What would be the costs and logistics involved in separating the municipal garbage collection in Kingston?
- How much waste does the food system produce through the use of packaging and disposable items?
- How much compostable material is being diverted from the waste stream by Kingston area households already through home composting?
- What potential is there for the municipalities to support this by offering discounted composting materials or equipment?
- How much unsold produce is discarded by local supermarkets and where does it go?

Governments and Civil Society

Key Points

- There is no single coherent food system policy in Canada. Responsibility for food and agriculture is split between numerous ministries, departments, and agencies.
- There is growing interest in developing a more coherent and systematic approach to food security.

How do government programs and policy support the current system?

The food system is highly complex. It involves and impacts on many sectors of society. However, governments generally lack a coherent “food system policy” to help guide, manage and coordinate the system. Rather than departments or ministries of “food” we have ministries of agriculture, economic development, and health.¹²⁹ Responsibility for various aspects of food and agriculture are divided between different levels of government. Trade, including food importing and exporting, is controlled by the federal government, whereas healthcare is mostly provincial. Much of food policy, moreover, is heavily influenced by corporate lobbyists.

As a result of such fragmentation, no single body looks after our food system, and yet the actions of each sector have implications for the rest of the system. In the words of the agrarian writer and thinker Wendell Berry, “...people are fed by the food industry which pays no attention to health, and healed by the health industry which pays no attention to food.”¹³⁰ Eaters

and farmers themselves often do not have a strong role in decision-making about larger food policy. As a paper on Food Security and Public Health from the Community Nutritionists Council of British Columbia noted, “decisions about crop planting, food production and distribution are increasingly made at boardroom tables rather than kitchen tables.”¹³¹

However, there have been some changes. For example, in the 1990s, public health professionals began to recognize that “health issues must be tackled at the systemic level in order to make a difference.” The working concept of health broadened into “healthy communities” or “community food security”, which required the examination of the social, economic and environmental spheres.¹³²

Governments have also reacted to the notion of food security. The federal government, for example, has signed a number of international covenants showing their commitment to freedom from hunger, world nutrition, environmental sustainability and food security.¹³³

Research Gaps

- What commitments have our local, provincial and federal governments made to a healthy food system?

► *A few of the government and civil society organizations and initiatives in our food system.*



Conclusion

At the end of the introduction, we identified a number of social, economic, and ecological indicators that would help us measure a food system. Let's return to those indicators in light of the information in the sections above:

Social and Health Consequences

- Lack of **access** to healthy food is a serious problem even in Canada, and food insecurity is a concern in Kingston.
- There are numerous **health and nutrition** problems due to lack of access to healthy and fresh foods, and because of decreases in nutrient density of food items. Many of the additives and pesticides present in food are known or suspected carcinogens. Obesity and diabetes, already "epidemic", are still on the rise.
- The food system is not fostering **social equality**. Farmers themselves have negative realized net incomes and must often work off-farm to subsidize cheap food.
- There is also a lack of **inclusiveness and democracy**. The food system is primarily controlled by a small number of large companies.
- **Gastronomic** considerations have fallen by the wayside. Cooking skills are being lost, and a significant percentage of Canadian food dollars are spent on fast food. Eaters may recognize the brand of a food, but rarely know where it comes from.

Economic Consequences

- Global industrial agriculture has a high degree of **productivity**, at least in the short term.
- The **economic viability** of farmers and small processors is reduced.
- Around the world, and even in Canada, food distribution is not **fair and equitable** enough to eliminate food insecurity.
- Many farmers do not receive **fair compensation** for their labour, with large agricultural

and processing companies making record profits even as farmers post record losses.

- There are serious questions about whether the food system is **diverse and robust** enough to deal with emergencies or disruptions.
- The food system is not **socially or ecologically sustainable**. Industrial agriculture is resulting in significant soil erosion, the drawdown of water tables, and the consumption of non-renewable resources like fossil fuels.
- The system consumes significantly more **energy** than it yields in food calories. The system is largely depending on cheap supplies of fossil fuels.

Environmental Consequences

- The industrial food system is contributing to changes in **weather and climate**, with the consumption of fossil fuels for farm machinery and long-distance shipping producing **greenhouse gas emissions** and other forms of **air pollution**. Waste from food packaging is also a problem.
- The food system is adversely affecting supplies of **clean fresh water**, by drawing down available supplies of groundwater and through pollution of surface water with pesticide and fertilizer runoff.
- The use of fertilizers, biocides and deep plowing is not contributing to **healthy soil**.
- The spread of monoculture farming is negatively impacting **biodiversity**.

Clearly, there are major issues in the global food system. However, these problems also mean that there is much room for improvement, and many opportunities for creative ways of addressing these problems. The next section discusses some of the models which address these problems, and which can help to build a sustainable local food system.

Part II: Models for Change

Introduction

The farm income crisis, lack of access to healthy food, and ecological unsustainability are all problems inherent in our current food system. A shift to a local food system can help us solve all of these problems.

In the following section, we outline a number of potential models we can emulate in building a healthy local food system. We discuss everything from Community Supported Agriculture, to Good Food Boxes, to governance structures like Local Food Councils. Some of these models are entirely new approaches, and some of them date from long before the spread of globalized industrial agriculture.

Each model discussed below encompasses one or more of the food system sectors described above (production, processing, and so on). In the cases where a model overlaps more than one segment of the food system, we will discuss it under the heading of the first applicable sector. Though boundaries between sectors

are not always precise, we are breaking our list down by segments here for clarity and organization, and to help identify gaps.

Not all of the models identified below represent an ideal long-term approach. For example, although Food Banks are a vital and important service, we envision a food system that is accessible and equitable so that Food Banks would no longer be required. Hence, some of our models are long-term, and some are transitional.

The models identified here, though far from an exhaustive list, emerge from the creativity, initiative, and perseverance of a wide variety of people from farmers to community and anti-poverty activists to public health workers. None of these models alone creates a single vision for a local food system, but together they offer a promising path to a better food system and a better future. (For more information and analysis on this point, see Part III.)

Production: Farming and Gardening

New Farmers: Access to Land and Capital

New farmers have three main barriers to success: access to training, land, and capital, specifically start-up funds and equipment. There are a collection of related approaches and programs being used to aid farmers overcoming these barriers. Here we will discuss methods of ensuring that new farmers have access to land and start-up funding (for Farmer Training, see the following section).

In some cases, existing farmers or landowners will grant access to new farmers at a low- or no-cost basis. In more formal arrangements, land trusts may be created to ensure that certain lands remain accessible to farmers.

There is no specific date or place of origin for these approaches. Historically, most farms would have

passed to younger generations through family lines. However, recent social and economic disincentives and risks have discouraged young people from going into farming. With the average age of farmers at 52, and close to 80% of farmers approaching retirement in the next ten years, creative and multi-pronged approaches are needed to maintain a stable food supply into the future.

These kinds of initiatives are primarily directed at food producers, but often involve governments or NGOs. For example, the **Ontario Farmland Trust** is a non-governmental organization that works with farmers and rural communities to maintain and protect farmland. The Trust believes that “it is important to preserve the availability of farmland in Ontario for agriculture. We see farming as both an important business and part of our cultural heritage that is worth

preserving. Maintaining productive farmland for farmers benefits us all. Protecting farmland also helps to preserve the broader countryside and its associated values.”

Government programs also exist to offer incentives to protect lands, such as the Federal Land Tax Incentive Program, and the Provincial and Municipal Managed Forest Tax Incentive Program. Other agencies offer Land Protection Easements, agreements that would block certain kinds of activity on a given piece of farmland to ensure its conservation.

FarmStart is an example of a recent project aimed at addressing all three issues of access to land, funding, and training. FarmStart operates with government funding and is based out of Guelph, Ontario. The stated goal of the project is “to support and encourage a new generation of farmers to develop locally based, ecologically sound and economically viable agricultural enterprises.”¹ FarmStart offers several programs, including a “New Farm Incubator Program” in which new farmers “receive reduced rates on land, equipment, greenhouse space, irrigation and storage.”² During the start-up period, new farmers are also given special access to training and mentors.

Programs like these offer new farmers access to land, funding, training, and markets, while helping to meet the growing demand for locally grown, ecologically produced, culturally appropriate fresh produce. However, there are some challenges as well. Land prices near cities are often driven up by demand for suburban or industrial development, neither of which is very compatible with farming. This, in combination with the aging population of farmers, means that rapid action is required to ensure that farmland and other “undeveloped” land, especially land near cities, is maintained for future generations.

Many of these approaches seem well suited to Kingston and Countryside. This is especially true for small-scale growers like market gardeners and CSA farmers, who may require only a few acres of space to be prosperous.

New Farmer Training Programs

Because of the aging population of farmers, and the growing desire for more ecologically sustainable growing practices, there is a growing need for farmer training. There are a number of related practices and programs that offer training to new or potential farm-

ers.

Willing Workers On Organic Farms is a program that connects host farms with interested guests, who visit and work on the farm. Typically, these visiting workers (called WWOOFers, pronounced “woofers”) will work about 6 hours per day in exchange for room and board, and some farm training. These WWOOFers generally stay in an informal arrangement for short periods of time, and often travel from farm to farm for enjoyment and experience.

Apprentices or interns are workers who stay at a farm for a longer period of time, often in a more formal arrangement, and often for a full season. Compensation for apprentices varies widely from farm to farm, with some apprentices being paid a wage, some a regular stipend, and some apprentices paying the farmer for the privilege. Education and training arrangements also vary, with some training being integrated with work, and some farmers taking a more deliberate approach.

In some regions, host farmers have gotten together to create shared educational groups called **CRAFT Programs**. CRAFT is an acronym for Collaborative Regional Alliance for Farmer Training. There are a number of CRAFT programs in North America, including programs in New England, Kentucky, and Ontario, and related programs going under different names in other regions. CRAFT Ontario describes itself this way:

CRAFT Ontario is an informal, member-driven organization made up of more than a dozen southern Ontario organic farms. CRAFT Ontario farms are all distinct but they share several things in common. Each CRAFT farm:

- offers a full-season farming internship (details of these internships vary from farm to farm;
- practices organic agriculture;
- takes part in an annual joint-application process designed to provide increased selection/choice for applicants;
- is committed to bringing their interns to all six of the CRAFT field trips.

The goal of CRAFT Ontario is to enhance the internships offered by its member farms. The primary method of doing this is to offer monthly field trips which take place at selected CRAFT farms.³

Programs like these can help to ensure that there will be skilled and trained farmers in the Kingston

area in the future. Also, many participants (especially WWOOFers) take the training out of interest and do not become full-time farmers. This can be beneficial by spreading knowledge about farms, farm issues, and ecological farming into many different places and disciplines.

There are some challenges to be overcome with some of these programs. Demand for training often exceeds available space, indicating a need for more capacity. Secondly, some farms are dependent for labour on interns or apprentices who are unpaid or underpaid (not including WWOOFers who are paid in kind). Though farmers and apprentices are certainly able to come to mutually agreeable arrangements about compensation, dependence on additional unpaid labourers is another manifestation of the farm income crisis. A better and more sustainable system would allow workers and farmers to be paid a living wage.

Various farmer training programs take place in Kingston and Countryside. There are farms which accept both WWOOFers and apprentices. A number of farmers have also expressed interest in starting an Eastern Ontario CRAFT Program, and some have sought funding for this goal.

Community Shared/Supported Agriculture

CSA farms are usually small, mixed-crop farms which produce for a local market. In a CSA arrangement, eaters buy a “share” of the produce at the start of the season, and then are given the vegetables as the season progresses. (This means, for example, that if there are fifty families in a CSA, each family will receive one-fiftieth of the vegetables produced each week.) Both the eaters and farmers share in the risk, because if the season is poor the eaters will receive fewer vegetables, but if the season is excellent the eaters may receive more vegetables than they can eat. Because the people who would be interested in joining or running a CSA are also generally interested in other aspects of food health and sustainability, CSA farmers are usually based on ecological, organic, or biodynamic growing methods.

CSAs act as producers, processors (by washing, trimming, and packaging produce) and as distributors, often bringing food into cities for pickup or even home delivery.

CSAs originated in Japan in the mid-1960s under the name *teikei*. This translates to “face to face” or

sometimes “food with the farmer’s face on it”. Similar models arose in Germany and Switzerland around the same time. This makes the CSA model more than four decades old.

The first North American CSA was started in New England in 1985. Robyn Van En was one of the original farmers, and her writing and touring helped to popularize CSAs on this continent.

CSAs offer a number of benefits for farmers, eaters, and the community at large. Farmers get a guaranteed income, and receive it early enough in the season to pay for expenses. Eaters get access to healthy, local food, often for much less than the same vegetables would cost through other retail arrangements. The community at large benefits from maintaining a group of local food producers who often grow a diversity of foods including vegetables, meat and eggs, and in some cases fruits and berries.

There are challenges as well. Some eaters cannot afford to pay for many months of food in advance. Various CSAs have attempted to address this accessibility issue by offering staggered payment, the use of sliding-scale payment or subsidized shares, or “sweat equity” in which CSA members have the option to work in exchange for some or all of their share.

In order for the model to thrive, CSA farmers require access to land near to a group of eaters who are educated about the CSA model and interested in participating. Since CSA farms are often run by younger farmers, these farmers may benefit from training (see the CRAFT model) and help with start-up costs and access to land.

▼ *A work bee at Root Radical CSA on Howe Island.*



CSAs are a good fit for the Kingston area, as evidenced by their recent rapid growth. Kingston has a large amount of farmland near to the city, meaning that CSA farms have easy access to eaters. Kingston also has a growing population of people who are interested in supporting local food and who know about the CSA model, as evidenced by the fact that several of the CSAs in the Kingston area have significant waiting lists. Because minimal infrastructure is required to run CSAs, and the initial investment in tools and equipment is small compared to other kinds of farming, CSAs have the potential to proliferate rapidly. The main limitations on the growth of this model are interested and educated eaters, trained and committed farmers, access to land, and some initial funding.

The CSA distribution routes offer great potential for the future distribution of other local products. Currently some CSAs do distribute other products – one CSA in the Kingston area sells olive oil produced by localized farmers in Palestine, and excellent example of trade between localized food systems. As CSAs grow in number, it may become possible to “piggyback” the distribution of many other local products on their existing distribution routes.

Urban Agriculture

Urban agriculture encompasses a variety of urban and suburban food growing endeavours including community gardens, backyard gardens, roof-top gardens, and container gardening.

Although the amount of food grown in limited urban spaces cannot meet the full nutritional demands of a large population, surprisingly large amounts of food can be grown if lawns, parks, and other green space



▲ Kids' activities at the FRILL Community Garden.

are employed. According to some sources, Cuba uses urban gardening to produce about 60% of all vegetables consumed in that country. Beyond quantitative food production, though, some of the most important benefits of urban agriculture are social and psychological. Urban agriculture can be a powerful community-building force that spans classes, as well as promoting personal and neighbourhood well-being.⁴

There are a number of community gardens within Kingston. Some, such as the FRILL Community Garden on Charles Street, also hosts other community activities such as harvest festivals and skills workshops, and also serves as the pick-up location for a local CSA.

Some rooftop gardens and greenhouses are also built specifically to suit the building's owners. Rooftop gardens can cool buildings and reduce air conditioning costs. Some restaurants even have rooftop greenhouses dedicated to producing food for the kitchens below.

Growing food in an urban area can lead to a



Victory Gardens

During the Second World War, disruptions of labour and transportation causes fruit and vegetable shortages in many cities. This, and a desire to keep canned foods for overseas troops, caused the government to create a program of “Victory Gardens.” Everyday citizens were encouraged to plant Victory Gardens to supplement their own food rations and to help the war effort. Tens of millions of people in the Allied nations participated.

The photo at left is from a victory garden in Toronto in 1940. (Photo by John H. Boyd, from the City of Toronto Archives)

variety of challenges. Community gardens may have to buy expensive liability insurance. Land use in cities is very competitive and land that could be used for gardens may already be in use for parks or recreation, or it may be slated for construction. Also, some lands, especially areas near to industry, may be contaminated and unsafe for gardening. In lands that are safe to use, gaining a lease or permission to access is often the main hurdle. Generally, gardeners want to build the soil and sometimes small structures like raised beds, composters, or sheds. This means that, especially for community gardens, making an agreement for multi-

ple years of use is very beneficial. Municipal lands may be well suited to this, since the municipal government can make multi-year agreements and also offer other support to beginning gardeners.

Small scale intensive gardening requires only a small number of tools, many of which can be shared. Because the amounts of land are small and manageable, the scale of production can be ramped up rapidly, as demonstrated by the Victory Gardens during World War II (see sidebar).

Processing: Dairies, Abattoirs, Mills, Preservers

Local Processing Locations

Local processing locations include small abattoirs, canneries, washing and packaging facilities, cheese-making facilities, and even bakeries. Local processors do not reflect one single model, but a plethora of related models which flourished from the beginning of city life until quite recently. Local processors historically have been easily accessible and scaled to small local producers. However, the growth of large scale, corporate agriculture over the past fifty years has resulted in the closure of many small, local abattoirs, canneries, and other facilities. Local bakeries are still relatively common, but crucially, most of those bakeries do not source their ingredients locally.

Some producers, like market gardeners, can sell their produce with minimal processing. However, for meat and dairy producers offsite processing is very important or even required. The disappearance of small local processors, and the growth of centralized, industrial-scale processors means that producers must also grow and industrialize if they wish to stay in business. This process contributes to the delocalization and hyperspecialization of agriculture, as small mixed farms convert to large specialized producers. For example, virtually all tomatoes grown for processing in Canada are grown in southern Ontario, specifically in Kent and Essex counties. And 85% of tomatoes are processed by only three facilities located in that area.⁵

Local processors do still exist however, and the need for separate processing of some organic foods has encouraged the growth of some new processors. Pfennings Organics Vegetables near Waterloo began as one farm, but now has on-site facilities for the wash-

ing, processing and packaging of various vegetables produced by other farms in the area. Also, there are a number of local processors in Kingston and Countryside, including as Quinn Meats, Wallace Meats, Lynch's Slaughterhouse, Wilton Cheese, Garlic Fields, and Little Stream Bakery. A number of local producers are also involved in processing, including Henderson Farm and Old Farm. And Local Family Farms and Desert Lake Gardens make prepared meals from local and / or organic ingredients.

Organic food is one way for local processors to compete with the cheap prices that result from industrial economies of scale. Another is to focus on the quality of food, as artisanal cheesemakers have done. The Black River Cheese Company near Milford in Prince Edward County is a cooperative founded by farmers that is "dedicated to preserving tradition and making superior cheese."⁶

▼ *Making fresh noodles at Pasta Genoa .*



Kingston is an area that could benefit from more local processors. There is growing demand for local food year-round. Part of this can be met by small scale canning and preserving, but many eaters will want to buy preprocessed foods like they can already get at the grocery store.

Incubator kitchens, the following model, are another example of a way to encourage the growth of small local processors.

Incubator Kitchens

Incubator kitchens are public health certified kitchen facilities that are provided to small processors at reasonable rates. Although many people make prepared food or preserves in their own home kitchens, health regulations generally do not allow these products to be sold. Incubator kitchens can allow small businesses to “get off the ground” by providing them

with facilities and equipment they would not otherwise have access to. Typically, one kitchen would have a number of different users on different days and at different times, sometimes paid for by the hour. Incubator kitchens are well suited to encouraging small processors who would like to use local food.

FoodShare has operated an incubator kitchen in Toronto.⁷ A program in New York City called “Mi Kitchen es su Kitchen” offers a number of different incubator kitchens.⁸ And some US states have incubator kitchen programs funded by the Department of Agriculture.

Incubator kitchens are good way to encourage the canning and preservation of local food. Any group with a health-certified kitchen that is used only part of the time, including churches or community centres, can implement an incubator kitchen program.

Distribution: Moving, Storing, Wholesaling Food

Institutional Buying & School Programs

Kingston is home to a number of large institutions, including schools and universities, hospitals, prisons, and other government entities including the Canadian Forces Base. Because of this and the city’s proximity to farmland, there is great potential for large-scale

institutional buying of local food in Kingston. The purchasing of local food would be determined by an institution’s food purchasing policies and contracts. Purchasing by public institutions and government is sometimes called “public procurement”, and local food has a number of public procurement success stories.⁹

Farm to School Projects

There are a number of Farm to School food projects throughout the United States.¹² Farm to School programs connect schools and school cafeterias with local farms to improve student nutrition, educate students about healthy eating, and support small local farmers. One ground-breaking example of such a program was in the Santa Monica-Malibu Unified School District in California. The program began in 1997, and by 2001 included all schools in the district. Part of the program there is the Farmers’ Market Salad Bar, which “offers high quality fruits and vegetables purchased directly from farmers at local farmers’ market[s].”¹³ About 800 to 1000 of the salads, which include only ingredients purchased from farmers’ markets, are sold each day in the district. The school district also conducts other “Edible Education” through tours of farmers’ mar-

kets, the use of school gardens, and through bringing chefs into the classroom.

Farm to School programs are taking place in at least 400 school districts in 22 states.¹⁴ A study by researchers at the University of California showed that children at participating school were more likely to choose fresh fruits and vegetables, if available, over other options.¹⁵

Kingston does not currently have a Farm to School program. The Limestone District School Board’s Food Sharing Project operates breakfast and snack programs to ensure that students are well nourished and ready to learn. This program began in 1982 with an emphasis on children in need, and now serves more than 1500 children each day. The Food Sharing Program has expressed interest in using more local food.

Farm to school programs are one example of this, discussed in the box opposite.

Institutional buying serves a distribution function in our conceptual framework, and institutions may also serve as processing, access & retail, and consumption sites, depending on how and where the food is prepared.

There are numerous precedents for institutional buying of local food around the world, and in Canada in particular. The University of Toronto, the largest university in North America, has agreed to source 10% of its food from local and sustainable sources, in partnership with the Local Food Plus program (see page 43). Since institutions prefer to purchase in bulk, some Mennonite farming communities like the one at the Elmira Produce Auction sell only in bulk themselves.¹⁰

Since the food currently purchased by institutions is often cheap, imported and heavily processed, there are many health benefits to be gained by switching to healthier local and organic foods where possible. This is especially the case in schools and hospitals, where the availability of nutritious foods can contribute directly to the fundamental goals of the institution. So it's not surprising that there are a number of promising examples in both cases. There is a market garden in downtown Toronto called the "Sunshine Garden" which is a partnership between FoodShare and the Centre for Addiction and Mental Health. And a number of hospitals in the US have signed the Healthy Food in Health Care Pledge, committing to serving local and sustainable food.

It is also possible for institutions to support local food without buying that food directly. For example, Queen's University has begun to host a regular indoor farmer's market on the Queen's Campus.

Local research indicates there is a great deal of interest on the part of Kingston institutions in buying local food.¹¹ However, institutional purchasing contracts often last for years – the Queen's food agreement lasts for ten years – meaning that change will have to wait until contracts expire. Bulk capacity is also an issue for some foods – since a local market and local producers must grow hand in hand – but there are already plentiful beef and dairy producers in the area who could partner with institutions. Some institutions have expressed hesitancy about changing their menus, since using a large portion of food would mean shifting to a more seasonal menu. However, the use of foods like

beef and dairy products are available year round and would not require any changes.

There is also some interest at Canadian Forces Base Kingston. Although, like many institutions, they would be willing to pay a higher percentage for fresh local food, they also want assurances of consistency of supply and quality.

Farmers' Markets

Farmers' markets are an example of direct-to-eater marketing that date back centuries or even millennia. The Kingston Farmers' Market is over two centuries old. This model is unique because of the direct relationship between farmers and eaters. This allows them to interact face-to-face, meaning that farmers and eaters can have an actual personal relationship, hold conversations, and learn more about the issues that are important to each other. This is an excellent opportunity for eaters to learn more about the food they want to buy, which helps them make decisions. Also, since money goes directly to the farmer without the high markup of "middlemen" like grocery stores or other distributors, both the farmer and the eater can benefit from better prices.

Farmers' markets can serve an important function as public spaces, and also allow for other non-food vendors (including craftspeople and musicians) to make an income. There are 130 farmer's markets in Ontario. The number of markets in Ontario had been growing until it dipped in the 1970s, before experiencing a resurgence in the 1980s. (In the US, the number

▼ *A sign points the way to the farmers' market at NFU Feast of Fields 2006.*



of markets increased by 800% between 1970 and 2003, to a total of 3155.) Farmers' Markets Ontario estimates that 27,000 people are involved in preparing and selling products at markets. Other business near to market locations may also benefit from increased traffic on market days, producing an overall economic benefit. It's estimated that farmers' markets produce an economic impact of \$1.8 billion dollars annually in Ontario.¹⁶ Farmers' markets tend to have locally and ecologically grown produce, as well as specific items like maple syrup products which are of special interest to tourists.

Because farmers markets are frequently in range of walking, bicycling, or mass transit, they can result in less fossil fuel use than some options. Many farmers' markets also offer indoor locations for part or all of the year. This extends the local food "retail season", and also offers extra benefits as a social gathering place in cooler months.

Farmers' markets do, of course, have some shortcomings. They do not occur every day, and do not occur all year round in some locales. Also, people may have to travel further to get to them than they might to reach the nearest grocery store. They thus lack some of the convenience of other options. Also, some shoppers may not be aware that certain retailers at some farmers' markets are not actually farmers, but resellers who purchase food through the Ontario Food Terminal, much like grocery stores. In cases like these, the money shoppers spend mainly goes back to large corporations instead of staying in the local economy. Local Food Logos (see page 43) can help to clarify the

difference.

A program in the United Kingdom offers a related solution. About 200 markets in the UK are certified by FARMA, the National Farmers' Retail and Markets Association. FARMA and its inspectors ensure that markets meet a number of criteria, including the following: food must be produced within a specified local area (usually a radius of 30 to 50 miles depending on the size of the town or city; food must be sold by a person involved in producing it; food must be "traceable" to producers and traders; and processed foods (such as bread) must include at least one quarter local ingredients.

Farm Direct Sales

Farm direct sales are sales that occur directly between the farmer and the buyer, often at the farm itself. This approach has many of the same benefits of farmers' markets, in that there is a direct relationship between the farmer and the eater, and no middleman takes a share of the income. The term "farm direct sales" may be used to include sales at farmers' markets, but here we will look at other examples.

Farm direct sales may include road-side vegetable stands, on-farm stores or pick-your-own operations. In these cases the eater will actually visit the farm and learn more about it, which is especially true in pick-your-own situations where the eaters actually go out into the field and do some labour.

Farm direct sales are open for more of the week than farmers market, which allows the eater more flexibility. These options do have a downside, however. Because the travel required to visit farms directly, this option may not be accessible to as many people, especially those without cars. It requires more fossil fuels for eaters to drive out from the city individually than it does for the farmer to bring food into the city in bulk. This effect is reduced somewhat in cases like farm stores, where food from a number of nearby farms may be stocked and sold at one location.

Farm direct sales are an important part of many local food development initiatives, such as the "Be A Local Hero: Buy Locally Grown" campaign in Western Massachusetts.

Producer Cooperatives

Producer Cooperatives are farmer-owned and operated organizations that distribute (and sometimes

▼ *A visitor reads about the Massachusetts-based "Local Hero Program" at a Food Down the Road spring series event.*



process) farm products. Because the cooperatives are owned by farmers, they are more responsive to farmer needs and decision-making, and profits are made by farmers rather than corporations. Cooperatives are distinct from collective farming (like the Kibbutzim in Israel) in that cooperative farmers pool their products and distribution routes, whereas collective farmers also pool their land, labour, and equipment.

Producer cooperatives have a long and successful history in Canada (and many other parts of the world), and formal cooperatives began emerging almost two centuries ago. Examples includes even “mainstream” food. Gay Lea Foods Cooperative Limited is an agricultural cooperative, based in Mississauga and founded in 1958, which markets processed dairy products in most grocery stores, such as Nordica brand cottage cheese. The Saskatchewan Wheat Pool, whose massive grain elevators are well-known prairie landmarks, is a farmers’ cooperative that emerged out of earlier cooperatives that began more than a century ago. Organic

“ *The pool is the world’s largest farm, the world’s largest shipper of wheat, the Biggest Business in Canada – and it was built by the Man Behind the Plow.*
– W.A. Irwin, 1929¹⁷ ”

Meadows is an organic grain and dairy cooperative, with producers in the Kingston area, which markets certified organic dairy products and frozen vegetables. A newer example, it was founded in 1989.

Farmers’ cooperatives emerged around the same time, and had close ties to, farmers’ credit unions and mutual farm insurance societies. These financial institutions offer loans and funding at reasonable rates, and helped farmers to deal with hard times.

Cooperatives offer the various economic benefits that come from sharing equipment and distribution chains. Crucially, they also allow large numbers of farmers to leverage their bargaining power for the benefit of agriculture, and to maintain the size of their own farm while benefitting from bulks sales and economies of scale.

For information about a specific nearby cooperative, please see the profile of the Quinte Organic Farmers Co-op, on the right.

PROFILE:

Quinte Organic Farmers Co-op



The Quinte Organic Farmers Co-operative was founded in 2005, and now includes thirteen family farms in Prince Edward, Hastings, and Northumberland counties. The Co-op believes in selling locally, and all members are certified organic.

Like other cooperatives, each farm can benefit from shared distribution and retail routes, while they focus on their livestock or vegetable specialties. According to the Co-op, “It makes sound sense for small organic farmers and growers to pool resources and achieve economies of scale. In doing so, farmers can expand the markets they reach, and consumers are offered local, organic produce which they could otherwise not access.”

They raise a number of different animals including cows, pigs, sheep, goats, chickens, ducks, geese, and sometimes rabbits. They also produce a variety of different vegetables, including some less common varieties, as well as culinary herbs and herbal teas.

The Co-op primarily sells at farmers markets in Toronto, Cobourg, and Belleville, but also sells to restaurants and inns.

Visit the Co-op’s website to hear “Listen to the Land”, an eight-part radio documentary about the cooperative. For more information, visit www.quinteorganic.ca.

Access: Stores, Restaurants, Food Banks

Good Food Boxes

Both food banks and Good Food Boxes are both programs that focus on access to food. Although we have placed food banks and Good Food Boxes under the “access” section, many also function as distributors, some (like the Daily Bread Food Bank in Toronto) also act as processors.

The **Good Food Box** is a non-profit, community-driven fresh fruit and vegetable distribution system operated by volunteers and a part-time staff, and led by a volunteer committee. The Good Food Box strives to provide monthly fresh fruits and vegetables to individuals and families. The first Good Food Box (GFB) program was started in the mid 1990s Toronto by FoodShare, borrowing from similar models in the US. GFB programs now exist in many different cities in Canada. Although available to anyone, the Good Food Box was designed to remove barriers to healthy eating and food access for individuals living on low incomes. Kingston’s Good Food Box program serves all in Greater Kingston and outlying areas.

The Good Food Box program in Kingston began in 1995, after research studies gave cause for concern about the nutritional levels of children living in north Kingston. It was formed by community members and staff from Better Beginnings for Kingston Children and the North Kingston Community Health Centre. GFB Kingston distributes food year-round on a monthly basis, collecting orders and money order early in the month, and then packing and distributing boxes near the end of each month. Boxes are packed by about 40 volunteers and then distributed to various pickup locations around the city. The program operates on a cost-recovery basis, with all revenue going back to pay expenses.

The GFB is a form of buying club, but one that focuses on access to healthy food for all members of the community. GFB Kingston has not increased the prices for its boxes since it began in 1995, but has seen continuous growth in the number of orders. GFB Kingston’s wholesaler is Tony Deodato and Sons, Ltd., but local produce is purchased whenever possible.

The Good Food Box program has a number of benefits for the community. It empowers participants and volunteers to enact change in their own environments, offers opportunities for individuals and families

to eat healthier, builds community, and encourages a healthy lifestyle.

The growth of GFB Kingston clearly indicates the need for its services. Starting from a 24 order trial run in 1995, the organization reached 800 orders per month and 41 host sites in 2004. They have also diversified from their original one size of box and now offer large or small boxes, and fruit or vegetable bags.

Food Banks

Food banks also address hunger and sometimes nutrition issues, although their clients often do not have the financial resources to pay for a Good Food Box. The **Daily Bread Food Bank** is the largest food relief organization in the Greater Toronto Area (GTA). It offers food relief to more than 83,000 people, and distributes more than a million pounds of food, each month. This food is distributed through 160 member agencies across the GTA. Most food banks focus on non-perishables, but the Daily Bread Food Bank also operates a large institutional kitchen where it processes foods close to expiry so that they can be frozen and delivered to meal or school nutrition programs, which reduces food wastage. The kitchen operates as a training facility, where people can learn skills that will help them find employment in the food industry. Daily Bread also reduces nutrient wastage by composting the organic matter in damaged or potentially unsafe food.

In addition to direct work with food, Daily Bread also offers advocacy services to food bank clients, and performs research and public education work.¹⁸

Although food banks offer vital support through their hunger reliefs programs, their very existence indicates serious shortcomings in the current food system. Addressing those shortcomings will require major changes in the food system, and in larger society, that address the root causes of poverty and hunger. This fact is well recognized by those who provide food relief services; the Daily Bread brochure states: “Our immediate goal is to feed hungry people,” but “our ultimate goal is to eliminate the need for food banks.”¹⁹

There are also organizations which focus on re-distributing fresh food which would otherwise go to waste. Second Harvest is an organization in Toronto which picks up fresh surplus food and delivers it to

social service agencies like drop-in centres, shelters, and community centres.

Third Party Certifiers & Local Food Logos

Third party certifiers are independent organizations that ensure that producers or retailers meet a given set of guidelines or standards. These certifiers are distinct from government organizations that ensure legislated standards. Third party certifiers have a voluntary relationship with the participating producers. They often employ logos to ensure recognition by the public, though it is local food logos that are of special interest to us here.

Third part certification can provide a framework for eaters to grade and compare different options, help them to make informed choices, and give them confidence that claims made by producers or retailers are correct. They also provide a standard for producers, processors and distributors to determine what qualifies as “organic” or “local” that help them to develop business plans or marketing strategies.

Third party certification organizations may certify producers and retailers based on whether they are organic or local, or whether they meet various other guidelines, as in the case of biodynamics or animal welfare certification. A number of local food certifiers exist, and appropriately, they are often based around a certain region themselves.

Local Food Plus (LFP) is a Toronto-based non-profit organization that certifies food producers and processors, and links them with local purchasers. Local Food Plus has an emphasis on sustainable local food, which is not necessarily certified organic, meaning that other ecological producers or those who are in transition to certified organics can still benefit from selling to local purchasers. Local Food Plus has seen success recently in a partnership with the University of Toronto (see Institutional Buying, page 38) Local Food Plus offers a logo that can be used by participating producers and retailers to attest to their certification.

The “**Be a Local Hero**” campaign in Massachusetts offers a logo to be displayed with local food for sale. The Vermont Fresh Network (on page 44) offers a local food logo as well. FARMA in the UK offers a logo for certifying entire farmers’ markets.

Local food logos allow shoppers to easily identify local food so that they can select it. This also allows farmers to collectively establish a “brand identity” for

local farmers that can aid in marketing campaigns. In order to be effective, a local food logo needs to be publicized at the same time as a local food awareness and education campaign, so that eaters understand the meaning of the logo. In order to assure that a local food logo is used appropriately by retailers, people who use the logo are generally required to sign a licensing agreement and may work with a third part certifier.

A local food logo has been developed for use in Kingston (pictured below) and standards are being established for its appropriate use.

Third party certifiers in general do have some potential shortcomings. The initial expense of getting certified may act as a barrier to some small producers. In addition, since the third party certifiers themselves are usually not certified or regulated, consumers must be able to trust their honesty and integrity. There are also some concerns that a growing number of logo and “point of purchase” nutrition programs are causing confusion among eaters.²⁰ Ultimately they are not a substitute for direct contact between farmers and eaters.

Local Food Directories

Local food directories are maps or indexes of where local food can be obtained in a given area. Typically they would contain a list of farmers, how to contact them, a list of their products, and information about where those products can be purchased. These directories increase the visibility of small-scale farmers, and clarify who grows what and where that food can be obtained. These directories act as an important reference for everyone involved in the system, from

▼ *Kingston's Local Food Logo.*



Nourish Yourself, Nourish Our Community

There is a food directory for the Kingston area created by National Farmers Union Local 316 called “Eating Close to Home” which is updated regularly and is available in *The Local Harvest* newspaper and online. There are also other innovative food directory projects in North America. The website www.localharvest.com offers US-wide interactive local food map. The Vermont Fresh Network is a partnership between farmers and chefs which also offers farm-to-table cooking classes, and publishes a directory called the

Buying clubs may also serve an important social role, as community-building tools and as ways to share

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information about food.

Buying clubs first became popular in the 1970s. The Ontario Natural Food Co-op (ONFC), a large cooperative based in Toronto, was formed in 1976. The ONFC operates a 31,000 square foot warehouse and

a number of trucks for delivery, and stocks food from nearly 200 different suppliers. The products distributed by the ONFC include frozen and refrigerated products, beans, nuts, pasta, prepared foods, and household and personal items.

Consumption: How We Eat

Community Kitchens and Skills Classes

Community kitchens are made up of groups of people who meet regularly to cook together. The basic idea is simple, and also highly flexible. Some community kitchens are formally organized and funded with a professional kitchen site, others are more informal. Some community kitchens offer a specific focus or theme (such as vegetarian food) and others are more generalized. At some community kitchens participants will cook and eat one meal together, while at others the participants will cook and freeze a number of meals to bring home.

Community kitchens are excellent ways to bring people together and build community. They also help people to share information and techniques about food and cooking. Through bulk food buying and preparation, community kitchens can make good, nutritious food more accessible, less expensive, and less labour-intensive. For these reasons, community kitchens can offer a valuable contribution to community food security. Cooks may also have access to equipment and food processing tools that they would not have at home. Since community kitchens do not sell the food they make, they do not need to operate out of a health-certified professional kitchen, but can operate out of whatever facilities they have available to them.

Some community kitchens form around specific dietary or social needs. Community kitchens may form to make food that is diabetic-friendly or gluten-free, or to provide a social setting for new mothers or recent immigrants. A number of cities in Canada host organ-

ized community kitchen programs, including Calgary, Vancouver, and Toronto (through FoodShare).

Community kitchens are easy to start and require few initial resources. There is a community kitchen in Kingston at North Kingston Community Health Centre.

Community kitchens sometimes go hand in hand with cooking skills classes. Many community kitchens will also host workshops for canning or other kinds of food preservation. Valuable cooking classes do not have to be provided by community kitchens, of course. The North Kingston Community Health Centre offers cooking classes to residents as well, to give one example.

Cooking skills in general have been lost in recent decades. So cooking skills classes offer a number of social and nutritional benefits, especially for local food. Crops that grow well locally are sometimes unfamiliar, like kohlrabi or patty-pan, and not necessarily the same as common grocery store vegetables. However, these crops are nutritious and locally available. Cooking classes that include information on how to use these less common vegetables, along with information about preserving, can go hand in hand with the development of a thriving local food system.

There are a number of online resources about starting your own community kitchen:
<http://www.foodshare.net/kitchen07.htm>
<http://web.uvic.ca/bcics/research/commKitchens/index.htm>
<http://www.nanaimocommunitykitchens.org/diy.htm>

Waste & Recycling

Municipal Curbside Composting

Although household composting is an excellent option for those with the space and skill to compost their own organic waste, a growing number of cities have been offering municipal organic waste compost-

ing programs. Although many municipal collectors separately collected organic waste until the early twentieth century, organic waste has commonly been mixed in with non-biodegradable waste since then. When organic materials are mixed in with other wastes and

buried in a landfill, they increase the volume of garbage, degrade to produce potent greenhouse gases like methane, and fail to return nutrients to the soils they came from. Since between 30% and 50% of household waste is organic material, diverting this waste from landfill can yield significant social and ecological benefits.

Toronto has been collecting organic waste from single-family dwellings since 2002 as part of its Green Bin program. In Toronto, approximately 30% of residential waste is made up of organic materials. Studies in Etobicoke and Scarborough suggest that each resident diverts about 200 kilograms of waste per year. The waste is composted and sold to residents and landscapers. Currently, Toronto collects organic waste from more than half a million households and is expanding its processing facilities to increase capacity. The city would like to include apartments in its collection, and achieve 100% diversion of organic waste by 2010.

Municipal composting does have some challenges

as well. Some residents have concerns about the health and odour implications and about the traffic increase and property values near processing facilities. Also, large scale composting programs are more likely to have problems with contamination – people are unlikely to put plastic or other garbage in their household composter, but may not have the same restraint with a curbside composting bin.

A curbside composting program has potential for Kingston. With blue and grey boxes already in place, some see curbside composting as the next logical step. Kingston would first have to build or retrofit a facility to deal with the organic matter, but there are a number of potential sites in and near the city.

Meanwhile, household composting is still a very viable option. For residents without access to yards, such as apartment-dwellers, options like vermicomposting (composting in a bin of soil and earthworms) offer proven alternatives to the backyard composter.²¹

Governments and Civil Society

Food Policy Councils

Food policy councils are groups of representatives allied with a municipal government that serve to study and discuss local food systems, and offer ideas and policy recommendations on how to improve them. Generally, they are made up of representatives of all parts of a local food system. Although they work well and are often funded by municipal governments, they do not usually have the capacity to create laws, and instead act in an advisory and educational capacity.

Food policy councils may emerge out of municipal bodies like Public Health or the Social Planning Department, or they may be formed because of grassroots initiatives. The first food policy council in Canada formed as part of the Toronto Board of Health in 1991, and was also one of the first such councils in the world. The council was created partly in response to a lack of provincial and federal leadership on food security. (See sidebar on opposite page.) A number of interesting and helpful projects have been initiated through food councils.

Food policy councils serve as a forum for discussing and integrating different policy issues relating to food. For a food policy council to form in Kingston, a

sponsoring agency or agencies, funding, and a broad base of interest from various groups and individuals would be needed.

Local Food Charters

A Local Food Charter is a statement of principles and goals related to the food system of a municipality or province, typically with a focus on food security for the people of a given area. Once a food charter is approved by the local government and other agencies (like public health) the charter will guide the actions and decisions of those bodies.

Food charters may have one origin in the United Nations Covenant on Social, Economic and Cultural Rights, signed by Canada in 1976, which includes “the fundamental right of everyone to be free from hunger.”²² More recently, UN declaration stated; “Governments have a legal obligation to respect, protect, and fulfill the right to food.”²³

Food charters express a common vision and commitments to a just and sustainable food system. The Manitoba Food Charter notes that they can be used as a basic tool for decision-making and action by “government, business, non-profit organizations, com-

munities, families, and individuals.”²⁴ That charter also notes that this “should lead to improved social, economic, environmental, and nutritional conditions in a community.”²⁵ There are a number of food charters already in effect in Canada, including those in Toronto, Vancouver, and Prince Albert. Food charters can give historical context and information about the present food situation, as well as identifying specific actions and projects to be undertaken.

In order to be effective, a food charter must meet several challenges. Firstly, the charter statement must receive widespread and multi-sectoral endorsement

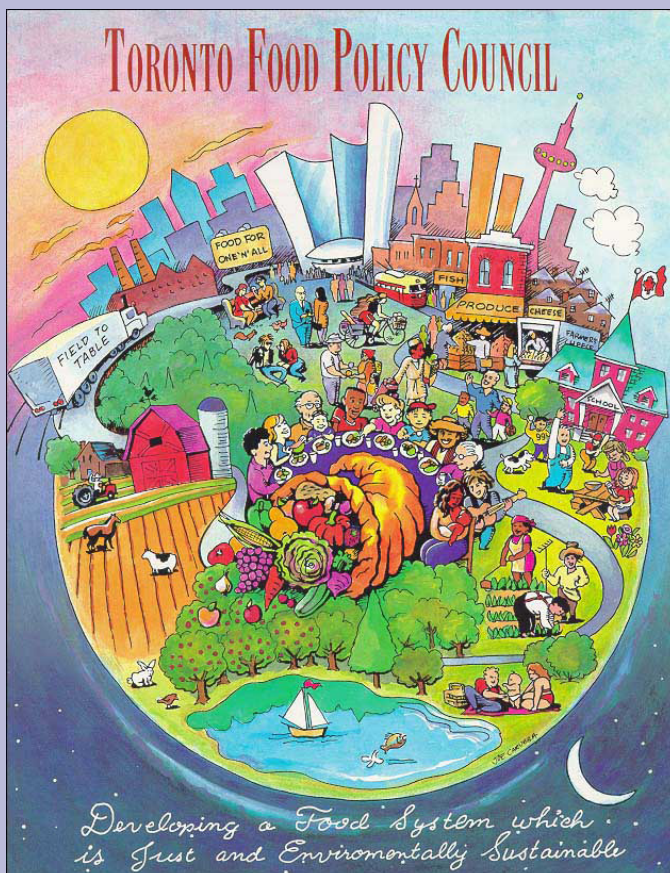
and political agreement within a community or region. It also requires financial support for research, pilot projects and other actions. Councils and relevant bodies must support the charter of the long term.

A food charter for Kingston would be a valuable addition to local agriculture in this region. A food charter could be developed and ratified in conjunction with a local food council. The charter could be written by a food council, or the charter could mandate the existence of the council, or both could occur in tandem.

Please see our excerpt from the Manitoba Food Charter in the box on the following page.

PROFILE:

Toronto Food Policy Council



The Toronto Food Policy Council was created in 1991 out of the Board of Health. Its members include “City Councillors, and volunteer representatives from consumer, business, farm, labour, multi-cultural, anti-hunger advocacy, faith, and community development groups.”

Council has spearheaded and partnered in many important projects and initiatives. It has helped to fundraise and administer millions of dollars in grants for community organizations. The Council has promoted urban agriculture and has helped to significantly expand the number of community gardens in Toronto. The Food Policy Council has also served a vital role in education, giving hundreds of presentations on slideshows to a variety of groups, including workshops at schools for parents and teachers.

The Council has written or collaborated on a number of landmark documents in food policy and health, including the Toronto Food Charter. The Council has also authored a series of 15 discussion papers on food, health, and sustainability, all of which can be viewed on the Council’s website.

For more information, see http://www.toronto.ca/health/tfpc_index.htm.

Conclusion

This section identifies some of the most interesting, inspiring, influential, and feasible models for helping to build a local food system. It does not provide an exhaustive or comprehensive list. The Further Reading page offers some more additional on different models.

Independent local food models, positive as they are,

do not make a local food system. Growing a sustainable and just food system for Kingston and countryside requires integrating these many different paths into a vision of a diverse local food system. We begin down this path in the next section, Part III: Bringing it all together.

EXCERPT FROM THE Manitoba Food Charter

Manitoba's food system has both strengths and weaknesses. We have a significant and diverse agricultural sector and many Manitobans can access the food that they want. However, agricultural communities are challenged by an increasingly urban and globalized economy. Many northern, inner-city, and low income citizens have difficulty accessing quality food and realizing their fundamental human right to adequate food. ... There is tremendous interest and widespread concern about Manitoba's food system and a desire for increased coordination and leadership on the issues facing it. The Manitoba Food Charter is testimony to Manitobans' willingness to collectively and constructively engage in meeting these challenges. ... A just and sustainable food system in Manitoba is rooted in healthy communities, ensures no one is hungry and that everyone has access to quality food. It ensures an economically viable, diverse and ecologically sustainable system to grow, harvest, process, transport and recycle food.

A just and sustainable food system in Manitoba will:

- Ensure that our farmers, fishers, harvesters, processors and distributors can generate adequate incomes and use ecologically sustainable practices.
- Respect the traditional hunting, fishing, trapping and gathering practices of First Nations, Inuit and Metis peoples
- Ensure a sustainable balance between fair inter-

national agricultural trade and diverse vibrant production for the local market

- Build healthy relationships between producers and consumers in urban, rural and northern Manitoba communities
- Ensure availability of a variety of affordable, nutritious food for all Manitobans through:
 - accessible retail outlets and food service operations, and
 - adequate household incomes to buy sufficient food for each household member each day for their health and basic dignity
- Provide well grounded confidence in the quality and safety of food available
- Create easy access to understandable accurate information about nutrition, food composition and the ways food is grown, preserved/processed, purchased, cooked, and recycled.

WE, THEREFORE, DECLARE our commitment and intent to work in partnership toward a just and sustainable food system in the province of Manitoba. We recognize that this commitment has real implications for policy, program and practice for all levels of government, businesses, non-profit organizations, and families/individuals. Our willingness to make this commitment indicates our sense of collective and personal responsibility for the present and future ecological, economic and social well-being of Manitoba.

Part III: Bringing It Together

The development of a local and sustainable food system for Kingston and countryside will take time. A local food system takes knowledge, skills, relationships and infrastructure which cannot be gained and developed quickly. At the same time, the need for change is urgent and so we must prioritize as well as seek out “low hanging fruit” or opportunities that we can harvest now.

Part I described our current food system and provided some evidence for the need for change. Part II examined possible alternatives to parts of our current system – models tried and tested by real people and communities who want to improve their food system. In Part III, we consider where Kingston and countryside might go from here given the problems that exist and the options that are available. We will specifically outline some recommendations for short-term actions (to get that “low hanging fruit”), and long-term investments (to plant seeds for the future). These short-term actions can happen quickly and offer benefits right away. The long-term investments deal with opportunities that require more time to mature or change, but which are no less important.

At recent Food Down the Road events, people in our community have been discussing their needs, priorities and visions for the future and we summarize some of this feedback below. Also, a number of studies have been done in our region which examined the food system, based on Kingston-specific data, and have made some useful recommendations for what could work well in our area. These recommendations are shared here as well.

These studies, and the visioning of the participants in Food Down the Road events, help provide a beginning for a dialogue about our collective vision for a local food system and how we want to build it. To further spur that dialogue, we’ll also highlight a number of questions that may need addressing in the future. Understanding what it is we do not know and need to know is one first step towards a sustainable food system for Kingston and countryside.

Finally, this section offers a few possibilities for “next steps” that individuals and groups can take to help improve the food system. Whether you work in public health, own a food-related business or are farming, there are a number of things you can do right now.

Food Down the Road so far

Food Down the Road: Toward a Sustainable Local Food System for Kingston and Countryside (FDTR) is an initiative that emerged from years of work by the National Farmers Union (NFU) and others on sustainable farm and food issues, including the very popular National Farmers Union Feast of Fields. FDTR came into being at the end of the 2006. Since that time, FDTR has been networking, consulting and building partnerships with different sectors of the food system, giving numerous presentations and holding promotional events. A Spring Speakers Series that took place in 2007 brought eight local food experts from other regions here to the Kingston area to educate, inspire and challenge the over 700 people who participated

in the events. A number of key issues including local food marketing, sustainable agriculture, community food security and food charters and policy councils were discussed. Public participation was a key part of each event, and among other activities, participants were asked to consider their vision for a sustainable local food system by 2012. Many of the respondents said they want more local food that is easily accessible and available to all, and some mentioned that they want to see more or larger farmers’ markets. Others said they want more organic, native and heritage varieties of food. Urban-rural partnership, municipal involvement and general support for our farmers were also part of the visions expressed.

A Food Down the Road Community Council has also been created. The members of this council come from all sectors of the food system. They provided leadership for the November 2007 Local Food Summit and act as champions for sustainable local food system development in the community. The Community Council has also been identifying future directions, such as policy, finance, economic development and infrastructure that support sustainable local food systems.

The Summit in November 2007 will bring together as many local food system participants as possible, plus members of municipal governments and the general public to explore and discuss the many facets of local markets and food system development.

It is also expected that a minimum of one to two economic development projects will begin within a year after the Summit. Funding is already being sought to develop a food policy council, programs to support new farmers, and a farmer cooperative which will include storage and distribution capacity development. However, so much of what happens depends on the community interest, skills and abilities, and



▲ *A packed house at a Food Down the Road Spring Series event.*

funding that is available. It also depends on our collective vision and priorities. This next section examines our food system, sector by sector, and considers the range of opportunities available to us, as well as some challenge(s) we might face and questions that we will need to address.

The Food Down the Road Local Food Summit (November 2-4, 2007)

The Food Down the Road Local Food Summit is meant as a gathering place for all people interested in a healthy, just, and sustainable future for farming and food, for all citizens in Kingston and countryside.

The Friday evening keynote address by Thomas Homer-Dixon, chair of Peace and Conflict Studies at the University of Toronto and author of *The Ingenuity Gap* and *The Upside of Down*, at Sydenham Street United Church, starts the Summit with the big picture. Homer-Dixon is one of the few thinkers able to synthesize the many challenges facing our society and our planet and offer a hopeful and practical vision for a sustainable future. Local farms and food are key to the renewed civilization he calls for.

Saturday's 18 informative and participatory workshops and two plenary sessions at St. Lawrence College cover a range of topics: cooking and

tasting for the whole family; the future of farming; hunger and food justice in Kingston and area; seeds and biotechnology; food and energy security; the role of policy and government; and how we can all take food action at home.

These sessions move us towards Sunday's drafting of the Local Food Declaration. This document is the beginning of a Food Charter for Kingston and countryside which will be a statement of principles and practical directions for the future of food in our region. We will seek endorsement of the Food Charter by local municipal governments institutions, organizations and individuals, so that shared principles and practices can be integrated into public policy.

For more information on the summit, please visit www.fooddowntheroad.ca.

Production: Farming and Gardening

The strong showing of support for local food at Food Down the Road events, and at related events like the National Farmers Union Feast of Fields, are evidence that there is a local desire for local food. Given the trend in agriculture of declining incomes, fewer farms and fewer new farmers, one the major problems on the horizon is a lack of supply of locally produced food relative to demand. One of the central challenges of developing a local food system is to produce enough food to meet local demand. We also want to know what limits to production we might face. Is it possible to feed the population of Kingston entirely from local food? Would we have to increase the amount of land under cultivation or could we simply repurpose it? What would be the ecological implications of doing this? How could we ensure that this food will be affordable for all of Kingston's diverse communities?

We can be optimistic that we can produce much of the food we need with the land we already cultivate. Our history tells us that at one time, we grew many more beans, carrots, onions, lettuces, potatoes, tomatoes, sweet corn, apples, and raspberries that we do now.¹ Another study has examined our potential in producing beef:

...we estimate that [Frontenac and Lennox & Addington Counties] consumes approximately 11.6 million lbs of beef. Assuming we can raise on the order of 15,000 head of cows annually...and that these animals would pro-

duce an estimated 9 million pounds of beef, if the beef supply chain were reorganized and the number of animals in the two counties stayed constant, in theory, we should be able to consume all the beef produced locally.²

Furthermore, one local study has argued that we can take advantage of urban spaces for food production. According to this study we could meet the fresh fruit and vegetable needs of 10 to 76 percent or more of the greater Kingston area. The study estimates that there are 5600 hectares of area in the inner-city that could be used for food production. Though there are challenges – perceptions of limited space, limited resources and lack of education – the list of recommendations that accompany the study indicates that expanding urban agriculture can happen just as it has in other countries. The benefits – social, economic and environmental – would be significant. For example, by growing 39 commonly eaten fruits and vegetables in this way (within 30 km of Kingston) we would generate approximately 81 times less greenhouse gas emissions than if we imported these foods.³

In the introduction, we addressed the question of what to do about tropical foods which cannot be grown in this area (page 11); supporting local food does not mean eliminating all non-local food. However, there are many things we can do to extend the seasonal supply of foods already produced right here. This does not have to involve the construction of large,

▼ *There are many season extension techniques available in our area, include greenhouses (lower left), as well as the storage of crops that do well in this area, such as garlic (lower right). (Photos from Root Radical CSA)*



high-tech greenhouse complexes. There are many easily available ‘low-technology’ solutions such as double-digging, covered beds, passive heating methods (such as barrels of water to capture heat on sunny winter days) that can be used, particularly by small market gardeners, to extend the growing season so that produce such as spinach, leeks, cabbage, kale, parsley, arugula, and herbs can grow all winter. These options should be explored as a way to increase our local consumption during the winter months as well as bring additional income to farmers.

If we’re going to increase production locally we will also need skilled people. Encouraging young people to take up farming will need to be a top priority as our current farmers will reach retirement in the next ten years or so. In Part II, we saw a number of start-up and training models we can adapt to our area as well as organizations in Ontario with which we could partner (e.g. CRAFT). There has been significant growth in Community Shared/Supported Agriculture operations in the last few years in our area, which are often run by new or young farmers. In 2005 there were no CSA shares available in Kingston. In 2006 there were 47. In 2007 there were 141. This is evidence that particular aspects of the CSA model are new-farmer friendly, such as funding up front to help pay for expenses and the ability of the CSA to grow with the gardeners’ needs and interest. Food Down the Road is currently

working on a “New Culture of Agriculture Initiative” which would include a CSA Incubator Farm program and an Eastern Ontario CRAFT project.

We also want to ensure that farming is done in a healthy and sustainable way. Farmers in particular want agriculture to be sustainable. In a recent survey in Frontenac county, fully 91 percent of responding farms said that “environmental responsibility” was “very important” or “somewhat important” to their operation.⁴ Together we need to address how we can add incentives and supports to encourage farmers to transition to organic or other more sustainable farming practices. This could include initiatives aimed directly at farmers, as well as at consumers who can affect supply through their demand. By reviving our local economy, farmers selling to local markets can move towards smaller and more diverse farms, which are more conducive to sustainable farming practices. More organic and local growing practices may also help us to cope with Peak Oil (see sidebar on page 14).

Food production, however, is contingent upon what is happening up the supply chain – such as the availability of processing facilities and consumer demand. Changes to local production therefore cannot be left to farmers alone. Close partnerships with governments, businesses, and consumers are necessary, and require appropriate timing and coordination.

Short-Term Opportunities:

- Encourage the development and growth of CSAs and market gardens locally. Examine the challenges for CSAs in our area and evaluate their potential for meaningful employment.
- Encourage community gardens and other forms of urban food production.
- Share information about season extension techniques and encourage local growers to extend the season.
- Encourage interested people, especially young people, to take training in food production through apprenticeships. Support the creation of a CRAFT program for this area. Allow new farmers access to land and training through programs like FarmStart.
- Offer an online farm “land link” service to help small growers find access to land.

Long-Term Opportunities:

- Assess the gardening skills of the broader (and aging) population, and determine how to best share those skills to increase food growing capacity of small gardeners.
- Use land trusts and other approaches to ensure that existing farmland is retained.
- Invest in the long term by encouraging orchards and building a regionally appropriate bank of saved seeds, as well as through infrastructure like greenhouses.

Processing: Dairies, Abattoirs, Mills, Preservers

When our farmers sell and ship ‘raw materials’ such as tomatoes or corn to be processed elsewhere, we are missing opportunities to create jobs and wealth for our community, as well as to enjoy our local bounty in another form. Furthermore, as noted in Part I, the processing capacity we do have in Eastern Ontario is mostly operated by multi-national corporations that do not source their raw materials from our region. It is however a vicious cycle, as production may be stifled because of a lack of interest in their produce from processors. Since production and processing go hand in hand, we will benefit by developing both concurrently.

In a study conducted among producers in Frontenac County, processing or **value-added** processing was very important to them. Thirty-six percent of respondents said that the market potential of their agricultural products could be enhanced with additional local processing or value-added opportunities.⁵ One third of respondents in this survey said they were interested in “expanding and diversifying [their] business to include value-added processing.” Access to a local abattoir was the top priority with 84 percent of respondents replying it was very important or somewhat important. Processing and marketing facilities was the next top priority for respondents (tied with drainage).⁶ The need for a local abattoir has been identified in a number of other studies as well. One local study has this to say about the potential for processing capacity enough to provide the entire beef supply:

The primary processors in the region are [Wallace Beef Inc. and Quinn’s Meats Ltd.] At the moment, Quinn’s estimates they could ramp up their capacity using their existing infrastructure to process on the order of 3600 animals per year. This would require them to run two shifts a day, but could be managed within their operation as it is now... we know that in 2001 there were approximately 15,000

beef cows. If we were to operate at full capacity for local production, then three times more processing capacity would be needed... The processing capacity could be increased as local markets present themselves. In the short-term, as local abattoirs are currently operating at 20% capacity there is substantial room for growth.⁷

There have also been some movements toward the construction of an abattoir that would have the capacity to track individual animals and their meat.⁸ This could be of benefit for niche and specialized producers, including some organic producers. Also, there is no poultry abattoir close to Kingston. A new abattoir for poultry could expand opportunities for farmers.

Some other areas where we may want to begin developing processing capacity are processing apples (into apple cider, syrup and butter) and organic and natural products such as soft white winter wheat, pumpkin seeds, and sunflower seeds.

There are a number of challenges to setting up local processing facilities including large start-up costs, difficulties in fighting for a share of the market against large corporations with huge buying power and large advertising budgets, as well as a general market pressure to source the cheapest rather than the highest quality ingredients. On the other hand, if we can market ‘local’ as a value that can be added to a product, local processors (and producers) will have a leg up on what today seems like formidable competition such as multi-national corporations or organic growers in California.

Not more than a few decades ago, much processing of food occurred in the home. Is this a tradition we want to revive? There is currently a resurgent interest in home preserving and do-it-yourself culture in general. Would this be an appropriate scale to ensure the efficient use of energy? What challenges are there to increasing home canning and preserving? How can we educate others about canning and preserving?

Short-Term Opportunities:

- Encourage small scale processing to reduce waste and make maximum use of local produce at the home level, as a value-added component of existing farms, and by encouraging small processing businesses through incubator kitchens.
- Help to link local growers with local processors and restaurants. Programs like Local Food Plus offer examples.

Long-Term Opportunities:

- Encourage the development of medium-scale processors, and especially abattoirs, in the area.
- Increase community knowledge and skill in the safe preservation of food for home use.
- Explore capacity for packing pre-cut vegetables, as sales in this area have already increased. Examine potential for maple syrup, specialty oils and vinegars, and jams and jellies made with local ingredients that could be sold to tourists as well as to local residents.⁹

Distribution: Moving, Storing, Wholesaling Food

A local food distribution system has the potential to reduce greenhouse gas emission as food miles are reduced. A decentralized local distribution network, with fewer bottlenecks, has the potential to be more robust and democratic. However, decentralization beyond a certain point may also result in a decrease in efficiency, as economies of scale are lost and unnecessary energy is spent moving a larger number of small vehicles (a concern addressed in “Responding to the Critics” on page 11). Together, through dialogue and research, we need to discover the optimal scale, and this may differ depending on the food product. Furthermore, we need to consider our needs for storage facilities. To what extent do adequate storage and warehousing facilities currently exist in our area? If they do not exist, how can we address this?

There are a number of models introduced in Part II that offer unique ways to distribute local food. Farmer cooperatives, which are worthwhile for many reasons, also have advantages related to distribution. As the profile on the Quinte Organic Farmers Co-op demonstrated, members can pool their products and distribution routes to minimize their distribution costs. This allows them each to retail through many more markets than they could alone. Co-ops are also able to offer the kind of bulk sales and leverage the economies of scale they need to sell to larger stores or food service providers. Co-ops are a model worth examining closely, particularly for market gardeners, beef and maple syrup producers.¹⁰

Another potential form of distribution (and also retail) is farm-direct sales. A survey of producers in Frontenac County reported that 58 percent of respondents already sell their products at the farmgate. Furthermore, when asked “how could the market potential of your agricultural products be enhanced,” 47 percent responded that it could be enhanced by direct marketing to consumers.¹¹ As mentioned earlier, some challenges to this approach are government regulation that might prohibit farm direct sales, and competition from cheaper imports. On the other hand, farmers should explore marketing angles that speak to preferences which market research tell us consumers have, such as preferences for fresh, quality products and purchases that contribute to the local economy.¹²

Finally, creating links with institutions such as schools, prisons and hospitals has excellent potential in our community. Farmers, the public, the staff and users of these institutions need to find out how food is currently supplied at the institution, when the contract with the supplier, if there is one, comes up for renewal, and make an effort to understand the needs of the institution. One possible option is to encourage local institutions to make a public pledge to providing healthy foods. It is also important that institutional decision makers recognize that local food are healthy because they are fresher and can be sustainably produced.

The creation of an indoor farmers market at Queen’s in 2006 was a good first step towards introducing local food on campus. Also, in April of 2007,

the Kingston City Council passed a resolution expressing support for local farmers and producers and resolving that bids to supply food concession services at the Multiplex will be required to identify, and will be awarded points for, providing healthy food options

as well as locally-produced food. This resolution, as well as the interest at Queen's, are important first steps that may help lead to more change.

Short-Term Opportunities:

- Encourage farmers markets in the area and identify local produce available there.
- Maximize partnerships between local growers, businesses and institutions.

Long-Term Opportunities:

- Consider the development of cooperatives which would own storage and distribution infrastructure.
- Adjust the food procurement contracts of public institutions toward local food.

Access: Stores, Restaurants, Food Banks

Eaters are interested in local food. According to a survey conducted with local eaters, their third highest priority is whether or not food is local, after food quality and price.¹³ The report concludes that “when combined with the interest in education and labeling [that the survey also detected] and the desire for quality...there is an important opportunity to link ‘local’ with ‘quality’ through marketing and education.”¹⁴ If consumers identify local with quality, it may be possible to attract an additional two thirds of eaters, according to the study.¹⁵

Some of the suggestions local shoppers made when asked about access to local food were the need for:

- Improved availability (32%);
- Competitive pricing (13%);
- Improved farmers markets (12%);
- Better labeling (13%); and
- Better education about the importance of local food (9%).

Over 81% of people in the survey were interested in knowing more about local food.¹⁶

Local retailers and food buyers who have been surveyed have also displayed a great interest in buying local foods. However, a number of challenges have been identified: lack of consistency in supply and quality; pricing competitiveness; and the need for better communication. With this in mind, we need to think of creative ways to link farmers with retailers such as the creation of a directory of suppliers or a farmers' cooperative and/or a centralized but local distribution system that could facilitate a supply network. The greatest opportunity for local farmers, according to this local

study is to sell to “small and medium sized enterprises who are not locked into buying contracts” the way the large retail stores are.¹⁷

Two important short-term opportunities (attainable is less than a year) are local branding and a local food directory that meets suppliers and retailers needs, as well as those of eaters.

Food needs to be accessible, but it is too simple just to say that food needs to be “cheap”. Food in Canada is currently the second least expensive of any country in the world. Monetary barriers to accessing food have more to do with low incomes and high rent and utility costs, as discussed on page 26. Furthermore, making food cheap by using poor quality ingredients, or by denying farmers and food services workers a living wage, only undercuts the very goals of social justice that we are trying to achieve. The goals of food security and re-localizing our food system have a great deal of overlap.

Nevertheless, much discussion is needed to address the extent to which a local food system is *sufficient* for protecting against food insecurity. In what ways does a local food system contribute to a more just food system? If there are other activities that need to happen at the non-local level to ensure food security, how can we leverage the local partnerships we have created to make those efforts more effective, such as creating a broad coalition of food system participants to lobby provincial or federal governments for policy changes? Charity efforts to feed those in need were meant to be short-term solutions, but they have be-

come an old institutions in our community. We need to consider how to work together so that all people have a sustainable way to access good, healthy food.

Short Term Opportunities:

- **Logo:** Make use of the existing local food logo (see page 43) to help shoppers to recognize local food where it is available.
- **Branding:** Branding of local food provides not only a logo and slogan associated with a product but an opportunity to build a marketing campaign that can educate consumers about local food. Armed with more knowledge, consumers may seek out local food and request it at local retailers and restaurants.
- **Local Food Directory:** Use local food directories (page 43) like the NFU's *'Eating Close to Home'* to ensure that eaters and retailers know where local food can be found.

Long Term Opportunities:

- Address the roots of food insecurity so that charity models are not required.
- Evaluate the potential for the broader use of sliding scale pricing or subsidized shares (as used by some CSAs).

Consumption: How We Eat

Eaters today do respond to new information about eating habits and health – as evident from the sudden drop in breads and pasta sales because of the low-carbohydrate 'Atkins' diet. Local food is not a fad like the Atkins, but with information about the benefits of local food we believe that those in the Kingston area will change their shopping and eating habits. What public campaign and strategies can we use educate people about the benefits of local food? At the same time, we may want to take note that other 'buy local' campaigns such as one in Massachusetts have been more successful with messages about how local food contributes to the local economy (and specifically to one's neighbours), and less successful with messages related to health and ecology.

Another consideration is that local food is largely unprocessed food that requires cooking. With so many

pre-cooked foods available, a lack of knowledge or cooking skills may also prohibit people from consuming local foods such as unusual vegetables, less popular cuts of meat, or flour. How can we improve such skills? Might community kitchens and cooking classes be beneficial? What opportunities exist in our local classrooms and cafeteria for learning about food and farming issues, and gaining for cooking skills? Might we be able to coordinate marketing and education activities for added impact such as community cookbooks that feature local farms?

Furthermore, cooking and meal preparation take time. As we know, family meals are on the decline and people are working longer hours. How do we, as a community, help change such a trend? How can we help families prioritize healthy meals and family time together?

Short-Term Opportunities:

- Organize "local food challenges" or local food lunches.
- Offer more education about the nutritional and gastronomic benefits of eating local.
- Advocate for a living wage and affordable housing.

Long-Term Opportunities:

- Encourage the spread of cooking and meal preparation skills, especially with a seasonal focus.

Waste & Recycling

Other cities offer viable models for organic waste collection that we could emulate. Though these programs offer some challenges, the benefits for the environment are tremendous. What barriers exist to implementing a curbside pickup in our municipalities and how can we overcome them? What methods

can we develop and implement to return nutrients to the soil, avoiding “nutrient mining” and soil depletion? What other ways can we reduce the waste that is made over the course of the food system? How can we reduce throw-away packaging or food waste from restaurants or retailers?

Short-Term Opportunities:

- Encourage household composting to reduce the amount of organic waste that is mixed with other garbage.

Long-Term Opportunities:

- The City of Kingston should consider separating organic waste for composting from other garbage.

Governments and Civil Society

The development of a local food system requires leadership, coordination, partnerships, research, education and the active participation of key players in the food system. Food Down the Road, as mentioned above, has been actively working to build partnerships with other local organizations such as: Kingston, Frontenac and Lennox & Addington Public Health; the Sisters of Providence; Kingston Community Health Centres; the Kingston Economic Development Corporation (KEDCO); St. Lawrence College; and the Frontenac Federation of Agriculture. While Food Down the Road has helped to create momentum for changing our local food system, there is much work to be done requiring the expertise and resources of a wide variety of groups in all sectors.

The creation of a Food Charter for Kingston and Countryside would be an excellent step forward for local food. A public commitment to these goals by key actors in the food system might spur further action and help hold leaders accountable. As well, a food policy council for our region is an important way to coordinate ongoing activities and to act as a focal point or hub for what may be a number of food system activities and initiatives in a number of sectors. If we believe that such a council is necessary, how can we ensure that it will have the legitimacy and resources to function well? What powers will the council have and what organization or level of government will support it? How will the council handle the challenge of sev-

eral municipalities co-existing in our 100 km region?

Some government policies may need changing to help encourage the sale of locally produced food, and these barriers need to be explored. The sale of chicken is one good example. There may be significant demand for free-range and/or organic chicken raised on family farms, yet the quota system has discouraged production for local markets. In 2007, for the first time, in response to a campaign by the NFU and other farm organisations, the CFO (Chicken Farmers of Ontario) allowed, on trial basis, for the sale of up to 300 birds direct from the farm to the customer. If this policy is improved and entrenched, it may create opportunity for eaters and farmers. There will still remain the lack of a poultry abattoir close to Kingston.

Apart from the traditional *places* of power such as government, there are many organizations that can make a difference to food system development. It is important at this early stage that we seek them out and ask them to participate. Some of these organizations may include farming organizations, social and health organizations, environmental groups, religious and community groups, local residents, business and labour organizations, researchers, poverty-activists and educators. As an example, Mike Payne and Joanne Whitfield are Kingston high school geography teachers working on curriculum about sustainable local food.

Short-Term Opportunities:

- Create a Food Policy Council to study the food situation in the Kingston area and suggest visions for the future, and coordinate policies and projects.
- Draft a Local Food Charter that would express commitment to local food and act as a decision-making aid.
- Adopt more institutional buying of local food.

Long-Term Opportunities:

- Implement policies recommended by the Food Policy Council.
- Address social justice issues that cause low incomes and hamper access to healthy food.
- Reinstate home economics as an important part of the school curriculum.

Select Recommendations from “Urban Agriculture in Kingston”

The following is a selection of recommendations for local food from Sun On Lam’s study “Urban Agriculture in Kingston: Present and Future Potential for Re-Localization and Sustainability”.

- Promote horticultural therapy and the mentally rejuvenating aspects of urban agriculture.
- Urban, peri-urban and rural agriculture should be taught in elementary, secondary and postsecondary teaching institutions in Kingston.
- Increase institutional purchasing for local and sustainable foods.
- Recreate the local capability for food processing and storage.
- Facilitate the creation of urban CSAs.
- Provide more “seed” grants to start up grass-roots urban agriculture.
- Use urban or peri-urban food production as a means of generating a sustainable revenue stream.
- Make organic waste collection and re-use a priority.
- Assess inner city and peri-urban land available for cultivation and create an inventory.
 - a. Promote intensive container gardening.
 - b. Use parks for urban agriculture especially for food security reasons.
 - c. Use brownfields and vacant lots for urban agriculture.
 - d. Assess the possible use of rooftops for urban agriculture.
 - e. Assess the possible use of vertical surfaces or structures for urban agriculture.
 - f. Assess the possible use of basements for mushroom urban agriculture.
- Promote the creation of “farmer-citizen co-operatives”.
- Create workshops or public education series that train people about urban agriculture, food politics, and job and life skills.
- Create a framework or process to guide the establishment of urban agriculture.
- Create community gardens, demonstration gardens or another form of urban agriculture on teaching institution grounds.
- Marketing and public outreach on issues of local food, urban and peri-urban agriculture must occur on a regular basis through media outlets.
- Establish an agriculture extension and research service that also covers urban agriculture in its mandate.

What can I do next?

We polled people from a number of different backgrounds, asking them “what actions would you suggest to your colleagues to promote local food and healthy eating?” Here are some of our collected suggestions:

Eaters:

- Consider including at least some local foods in your weekly diet. There are a number of excellent seasonal recipe books that make this easier. (See Further Reading) *The Local Harvest* newspaper has information about where local food can be found and when different foods are seasonally available.
- If eating or shopping at a place where the food is not labeled, ask if there is local food available.
- Consider joining a CSA or shopping at the farmers’ market.
- Lobby governments, schools, hospitals and other institutions to make more use of local food.
- Write letters to the editor.
- Grow some of your own food, and save your own seeds.
- Read our list of 10 ways to take action (see the Local Harvest).

Students:

- See if your school has an institutional buying program or policy to include local food in meals. Try to encourage them to adopt policies that will bring in more local food.

Teachers:

- Try to incorporate information about the food system and the benefits of local sustainable food in your classes. Teachers in the Kingston area are already working on curricula for this (see page 57).
- Encourage your school to bring in more healthy local food.
- Bring your students on field trips to visit places where food is grown, such as farms and com-

munity gardens, and consider growing some food at the school.

Institutional Purchasers and Administrators:

- Consider adopting policies that would include more local food in your next food buying contract.
- Consider building relationships with local growers who can produce the kind of food you are looking for.

Health Care Workers including Doctors:

- “Prescribe” healthy eating of fresh fruits and vegetables, especially local foods. Distribute literature about benefits of eating local, supporting local sustainable food system.
- Encourage your health care facilities to look at options like signing the Healthy Food in Health Care Pledge (see page 39), signed by a number of hospitals in the US who have agreed to prioritize fresh and local food.
- Advocate for a living wage and affordable housing for your clients and patients so that those in your care can afford to eat fresh, healthy local foods.
- Encourage patients (and self) to ask grocers for local food.
- Encourage plans for emergency provisions in case of an interruption to imported food supplies.
- Remember that we can have a healthy food system but still not everyone will have access to healthy food because of cost and transportation issues. Ensuring food security also means ensuring social justice in wider society.

Elected Officials and Civil Servants:

- Support community gardens and urban agriculture.
- Encourage the use of local food in government cafeterias and food contracts.
- Consider supporting the creation of a Local Food Charter and a Local Food Council which would study local food issues and offer recommendations.

Primer Glossary

Community Food Security is “a situation in which all community residents obtain a safe, culturally acceptable, nutritionally adequate diet through a sustainable food system that maximizes self-reliance and social justice.” (Community Food Security - Hamm, MW and Bellows AC. 2003. Community Food Security: Background and Future Directions. Journal of Nutrition, Education and Behaviour. Jan-Feb; 35(1): 37-43.)

Economies of Scale are production situations in which a large scale of production yields a decrease in cost per unit produced.

Externality. A cost or benefit resulting from an economic transaction that is borne or received by parties not directly involved in the transaction. For example, manufacturing that causes air pollution imposes costs on others not borne by those who pollute.

Food Desert. A community or neighbourhood in which residents are unable to access affordable, quality food such as fresh meats, fruits and vegetables within a given walking distance of their home, for example, 500, 800 or 1000 metres.

Food Miles are the distance that food travels from its source of production to its retail destination. It facilitates the measure of greenhouse gas emissions. It does not account for emissions during production or of people who drive to retailers to get food. It is however a good starting point for factoring in social and ecological impacts of food production into decision-making.

Food Security exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy lifestyle. (See also Community Food Security)

Food Sovereignty is the right of peoples to healthy and culturally appropriate food produced through ecologically sound and sustainable methods, and their right to define their own food and agriculture systems. It puts those who produce, distribute and consume food at

the heart of food systems and policies rather than the demands of markets and corporations. It defends the interests and inclusion of the next generation. It offers a strategy to resist and dismantle the current corporate trade and food regime, and directions for food, farming, pastoral and fisheries systems determined by local producers. Food sovereignty prioritises local and national economies and markets and empowers peasant and family farmer-driven agriculture, artisanal fishing, pastoralist-led grazing, and food production, distribution and consumption based on environmental, social and economic sustainability. Food sovereignty promotes transparent trade that guarantees just income to all peoples and the rights of consumers to control their food and nutrition. It ensures that the rights to use and manage our lands, territories, waters, seeds, livestock and biodiversity are in the hands of those of us who produce food. Food sovereignty implies new social relations free of oppression and inequality between men and women, peoples, racial groups, social classes and generations. (Declaration of the Forum for Food Sovereignty, Declaration of NYÉLÉNI, Sélingué, Mali, Feb.27, 2007)

Food System. The food system includes all processes involved in keeping us fed: growing, harvesting, processing (or transforming or changing), packaging, transporting, marketing, consuming and disposing of food and food packages. It also includes the inputs needed and outputs generated at each step. The food system operates within and is influenced by social, political, economic and natural environments. Each step is also dependent on human resources that provide labour, research and education.

Industrialized Food System. A wide range of activities and disciplines in modern food production. From a consumer perspective, the industrialized food system might be equated with corporate farming. As such, it represents large-scale, vertically integrated food production businesses, seen as the source of a range of effects (some undesirable) on the environment, on food

quality, and on society in general.

Inputs refer to products or materials that are brought to a farm or added to soil to increase production. This may include seeds, fertilizers, weed herbicides, and a host of other chemicals, including hormones and antibiotics for livestock.

Globalization. A set of processes leading to the integration of economic, cultural, political, and social systems across geographical boundaries. It includes increased international trade, growth of international investment (foreign investment) and integration of markets for goods, services, labour and capital, as well as international migration.

Horizontal Integration. The growth of a firm or corporation within a sector of the supply chain achieved by internal expansion or by external expansion through mergers and acquisitions of firms offering similar products and services. A firm may diversify by growing horizontally into unrelated businesses. An example of horizontal integration might be a large company that processes corn buying a number of other companies which also process corn, producing a single large corporation.

Local Food System. A food system in which food production, processing, distribution and consumption are locally occurring to enhance the environmental, economic, social and nutritional health of a particular place.

Monoculture is the practice of producing or growing one single crop over a wide area.

Nanotechnology refers to the manipulation of matter on the scale of the nanometer (one billionth of a meter). Nanoscale science operates in the realm of single atoms and molecules. At present, commercial nanotechnology involves materials science (i.e. researchers have been able to make materials that are stronger and more durable by taking advantage of property changes that occur when substances are reduced to nanoscale dimensions). In the future, as nanoscale molecular self-assembly becomes a commercial reality, nanotech will move into conventional manufacturing. While nanotechnology offers opportunities for society, it also involves profound social and environmental risks, not only because it is an enabling technology to the biotech industry, but also because it involves atomic manipulation and will make

possible the fusing of the biological world and the mechanical. (From ETC Group at <http://www.etcgroup.org/en/issues/nanotechnology.html>)

Organic Farming “is a holistic production system designed to optimize productivity and fitness of diverse communities within the agroecosystem, including soil organisms, plants, livestock and people.” Organic agriculture does not use synthetic pesticides or fertilizers, hormones or antibiotics, irradiation, or genetically modified organisms. Instead, it focuses on the long term health of animals, plants, and the land, especially through building the soil and adopting preventative health measures.

For information about organic labeling, please visit <http://www.inspection.gc.ca/english/fssa/orgbio/otfgt-spbe.shtml>

Realized Net Farm Income is a farm’s net income (revenue minus expenses) minus “depreciation” costs like replacing aging equipment.

Redundant Trade is the simultaneous exporting and importing of the same product to the same region.

Terminator Technology is used to genetically modify plants to produce sterile seeds at harvest – it is also called Genetic Use Restriction Technology. Terminator technology was developed by the multinational seed/agrochemical industry and the United States government to prevent farmers from saving and re-planting harvested seed. Terminator has not yet been commercialized or field-tested but tests are currently being conducted in greenhouses in the United States. (From Ban Terminator at http://www.banterminator.org/the_issues/introduction)

Vertical Integration is the degree to which a firm owns its upstream suppliers and its downstream buyers. An example of vertical integration would be a company that manufactures automobile tires purchasing an oil company (which provides the raw materials) and an automobile parts retailer.

Value-added processing increases the value of a product. Value-added processing could mean turning wheat into flour, milk into yogurt, or berries into jam. Local value-added processing can keep more money in the local community by making a retail product out of what otherwise might be a tradeable commodity.

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Photo Credits

Thank you to Wendy Luella Perkins for the photos on pages i, 4, 5, 8, 9 (right), 10, 22, 27 (left), 28, 29, 36, 37, 39, 40, and 50.

Thank you to Kim Perry for the photo on page 6.

Aric McBay took the photos on the cover, 7, 9 (left), 18, 27 (right), 35, and 51.

Graph on page 20 redrawn from the National Farmer's Union's *The Farm Crisis & Corporate Profits*.

Graph on page 19 based on information from the Food and Agriculture Organization.

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The development of a local and sustainable food system for Kingston and countryside will take time. A local food system takes knowledge, skills, relationships and infrastructure which cannot be gained and developed quickly. At the same time, the need for change is urgent and so we must prioritize as well as seek out “low hanging fruit” or opportunities that we can harvest now.

From page 49 of the primer.

**October 1st, 2007
Kingston, Canada**

Copies of *From the Ground Up: A Primer for Community Action on Kingston and Countryside's Food System* may be downloaded or ordered from the Food Down the Road website (www.fooddowntheroad.ca). Availability is limited.