The availability of locally-grown food in Regina

Sheena Gordon and Joseph Piwowar, University of Regina
(joe.piwowar@uregina.ca)

Abstract: This study investigates the supply, distribution, and consumption of locally-grown food in Regina, Saskatchewan. Interviews were held with both producers and retailers of local food to examine the local food systems in Saskatchewan, and more specifically in Regina. In addition, the first author explored the question of local food accessibility to Regina consumers by attempting to eat locally for a month.

There are many barriers to sustaining the growth of a thriving local food market in southern Saskatchewan. Local producers are challenged by rising costs associated with producing locally, the inaccessibility of sizable food markets in which to sell their product, and a lack of consumer knowledge about the availability of local food products. As well, local retailers face the challenges of standardization in that they need local producers to standardize products in order to attract consumers. Finally, consumers are challenged by a lack of knowledge in local food as well as issues such as the seasonality and accessibility of local foods in the Regina area. All of these issues are underscored by a demanding regional climate and geography.

Introduction

As environmental concerns mount across the globe, Canadians are gradually becoming more aware of their impact on the world around them (Eberts 2004). Across Canada, households are increasingly implementing sustainability initiatives, such as recycling and composting, into their daily routines (Maclaren 2004). A relatively new sustainability initiative, popularized by books such as *The 100 Mile Diet* (Smith and MacKinnon 2007), is local food consumption: eating food grown and processed as close to home as possible.

Local food consumption is more of a *renewed* than a *new* concept. Throughout history, humans have consumed food primarily grown locally. People grew and ate whatever they could in the environment they inhabited, sometimes trading food, seeds and new agricultural methods with neighbouring social groups. However, as improved transport and communication networks facilitated a more connected world, a new food market emerged. Following the Second World War, a 'global food system' developed where food distribution was controlled by large corporations connecting producers to consumers (Maggos 1987). Through the process of vertical integration (where all aspects of the production system, from seed to field to factory to store to plate are controlled by a single group of business enterprises), these corporations continue to own or control the majority of means of production of food, determining the price producers receive and the price consumers pay (Lapping 2004).

The global food system has provided Saskatchewan residents with a plethora of fresh food choices at any time of the year for relatively low cost, regardless of seasonality or production distance. Because of this, most Saskatchewan residents can enjoy a wide variety of nutrient-rich food year-round. Consumers are also spending an even lower percentage of their income on food than they have in the past. For example, in the 1930s North American consumers spent approximately 25% of their disposable income on food while today they spend less than 10% (Statistics Canada 2008, USDA 2008). Furthermore, the global food system allows consumers to purchase all of their food items at one location—the supermarket— eliminating the commute time and cost between small market places to purchase groceries.

In spite of a number of positive attributes, mostly economic in nature, the global food system is riddled with problems. For example, food labels rarely list the place of origin for every ingredient in a product. Further, consumers are often unaware of the pesticides and hormones used on the food they purchase and the social costs of its production. Consumers are accustomed to purchasing fresh produce out of is local season that has been grown, processed and shipped from half way around the world.

Within the global food market the economy receives primary consideration, leaving environmental and social issues by the wayside. For example, the practice of 'redundant trade', where a food product is imported into a region where that same product is locally grown, puts pressure on the local economy (Smith and MacKinnon 2007). In Saskatchewan, locally grown garbanzo beans are exported while cheaper canned garbanzo beans from the Middle East are imported. Not only could this force Canadian producers to sell their beans at below the cost of production, it is an environmentally inefficient process that needlessly expends energy to ship produce around the world.

Many producers in third world countries stop growing local food subsistence crops and instead plant export cash crops to be sold on an unstable world market. These same third world countries then become dependent on imported food to feed their population, thus weakening their economic and food security. Further, farm workers in some third world countries are forced to work under lower labour, health and environmental standards than in Canada (Eberts 2004). However, these complex social and environmental problems are often deemed unimportant in the light of the economic viability of such an exchange.

Following the transition from local to global food systems, North American farmers markets—the once popular method for connecting producers with consumers—gradually lost their importance as grocery stores took over as the main source for food buying (Maggos 1987). Some producers and consumers felt isolated in a food market that no longer heard their concerns or addressed their needs. Local producers faced smaller returns caused by the absence of buyer competition paired with increased competition from foreign producers operating under lower overhead costs (Maggos 1987).

By the mid-1970s some concerned consumers wanted access to healthy and traceable food while supporting local producers and the local economy and farmers markets once again began to garner interest (Hinrichs 2000, Norberg-Hodge *et al.* 2002). These markets have now become a mainstay in most Canadian cities as a place to sell produce and specialty items made in the local area, if only on a small scale relative to more popular chain supermarkets.

Today the local food movement has expanded beyond farmers markets. As concerns around food security and food traceability mount, there are a number of places consumers access local foods. In many urban centres specialty food shops carry local food. And, in response to mounting pressure from the public, some chain grocery stores have expanded to include locally grown and processed food.

Local food is lauded by many environmentally-conscious consumers as a positive and sustainable alternative to the global food system. Whereas producers are typically underpaid on the global food market, farmers often receive a higher return by selling locally to small-scale grocers or directly to the consumer. In local food systems, economic, social and environmental considerations are all taken into account and often producers focus on sustainability initiatives, such as incorporating organic production methods, to attract customers and market their goods.

The local food movement in Saskatchewan is in its infancy and there is not one umbrella organization that has assumed the role of sponsoring the production, marketing and consumption of locally grown produce. Some organizations that do promote local food are the various Saskatchewan farmers' markets that spring up in larger communities during the summer months, The Saskatchewan Regional Centre of Expertise on Education for Sustainable Development (an United Nations sponsored NGO that seeks to transform education for sustainability in our region), Saskatchewan Organic Directorate (a producer sponsored organization that is an information source for organic production practices), and Farmer Direct Regina (a co-operative of 70 organic family farms on the Canadian Prairies that grow cereals, pulses and oilseeds, and raise organic beef and bison).

Community supported agriculture schemes (CSAs) directly connect farmers to consumers. Based on an agreed contract, the farmer provides and delivers a set amount of vegetables, fruits, eggs, and meat products per month to the consumer. Consumers have the option of visiting and working on the farm whenever they desire. This system ensures fresh local produce for the consumer and a steady income for the farmer year round. Currently, there is one CSA in operation in the Regina area.

In the Saskatoon region, a diverse collective of groups and individuals that included producers, processors, community food action organizations, and local government have developed the Saskatoon Food Charter to ensure food security for all residents by researching and advocating for policy that will support access to an equitable, healthy and sustainable local food system. Since it was drafted in 2002, this Food Charter has played a central role in developing the local food market, not only in Saskatoon but in other prairie markets as well.

Though local food is increasing in popularity, it is by no means an effective alternative to the global food system. Instead, local food is a niche or speciality market that functions within the global food system. Local food systems are restricted by a number of factors, including high pricing and a lack of consumer education, that limit their growth.

This study investigates the supply, distribution, and consumption of locally-grown food in Regina, Saskatchewan. Information on food supply and distribution was obtained through interviews conducted with both local producers and retailers. The consumer perspective is represented by the description of a personal experiment to eat a local diet for one month (see below).

Objectives

The challenges of establishing a local food market in Regina are significant, in part because of the geography and climate of the region. Saskatchewan is located near the centre of the North American continent and experiences large temperature fluctuations from season to season because of its distance from the ocean. The province is located on a high plain in the rain shadow of the Rocky Mountains and is subject to variable but limited amounts of precipitation. In the southern parts of the province dry grasslands are dominant, although there are pockets of more moist land that can support shorter trees and bushes (Cote 2005). Both the climate and the soils of the southern regions favour the growth of wheat and oilseed crops such as flax and canola (Carlyle 2005). The climate and soils do not favour fruit and vegetable production, however, so market gardens and orchard farms are restricted to a select few moist green belts within valley areas, such as in the Qu'Appelle River valley near Lumsden.

In this article we move beyond the geographic and climatic restrictions to explore additional barriers limiting the accessibility of local food to the urban consumer in the city of Regina, Saskatchewan. These limitations are examined from three perspectives: the difficulties faced by the growers and producers of local foods; differences in the modes of retailing locally produced foods; and a first-hand account of attempting to eat a local diet. Thus, our objectives were to:

1. Gain an understanding of the challenges producers encounter in growing and marketing their produce at a local level;
2. Evaluate the importance that retailers place on making local food available to the consumer; and
3. Explore a consumer's perspective of the local food system.

Research Methods

'Local' has no clear or regulated definition: it is entirely determined within the context of its use. In Canada, local food is typically defined by one or more of the following geographical criteria (Chinnakonda and Telford 2007: 5): proximity (e.g., less than 100 km); travelling time (e.g., one hour); political jurisdiction (e.g., municipal or provincial boundaries); and bio-region (e.g., in the Lumsden Valley). However, the definition of local food often goes beyond geography. For many international non-governmental organizations (NGOs) local food also implicitly considers the social, economic and environmental attributes of the food (Chinnakonda and Telford 2007). For example, the UK-based NGO Friends of the Earth suggests that:

> [L]ocal food should be produced and processed as locally as possible using a diversity of sustainable agricultural practices and marketed through direct or short supply chains to local

> people, ensuring a fair price for producers at an affordable price (Chinnakonda and Telford, 2007 p5).

In this research we defined local food as food produced (grown, harvested, processed, or preserved) within the political boundaries of Saskatchewan. This definition permits access to food grown throughout the many bio-regions of Saskatchewan and provides a glimpse into producer experiences from across the province. However, because the study took place in Regina, the majority of the local food encountered came from the Lumsden Valley, the origin of most of the local produce marketed in Regina (see Figure 1).

Producer selection:

In order to gain an understanding of the challenges Saskatchewan producers encounter in growing and selling their produce close to home, a set of local food marketing questions was developed and delivered to food producers around the province. Since there is no single food producers' association in Saskatchewan, a list of producer participants was collated through web searches, magazines, food labels in stores, and links from local food web pages. This list was refined to include only Saskatchewan-based producers who grow for the local (Saskatchewan) market, provided that market can support their business. Participants were selected from around the province, with approximately half from the Regina

Table 1: *Producer interview questions?*

1. What percent of your product is Saskatchewan made?
2. Where in Saskatchewan is your product made?
3. How many full and part time jobs come out of your production system?
4. Where do you market your food to (i.e. Saskatchewan, Canada, the World)?
5. How do you sell your food locally (i.e. through farmers markets, private stores, from home)?
6. What percent of your product is sold in Saskatchewan?
7. Is it difficult to sell to the local (Saskatchewan) market? Why?
8. What are the barriers you face in increasing your production?

area in order to reflect the general makeup of local food availability in Regina (Table 1). Both a fruit producer and a livestock producer who market locally were also selected. In addition, three value-adding local producers—a hempseed oil company, a quinoa products company and a sprouting seed company—were selected to participate.

Retailer selection:

Regina, like any large urban centre, is home to a number of different food retailers. These retailers provide food to urban consumers—many of whom do not produce any foods for themselves. To evaluate the availability of local food being sold in Regina three food retailers representative of three distinct food markets in the city were visited: a supermarket; a local health food store that focuses on local, organic and fair trade food; and a farmers market. Although the supermarket belongs to a major grocery store chain, its size is small relative to the typical store size operated by this chain, giving it a more local consumer appeal. Nonetheless, it was the largest retailer studied. These three locations were chosen because they are all small-scale and represent three different kinds of food markets.

The retailer locations are within close proximity of each other and compete to cater to the same local population. They are all situated in Regina's Cathedral district, considered by many to be Regina's most bohemian neighbourhood. We acknowledge that our list of retailers is by no means comprehensive, but we sought to provide general insight into local food for sale in Regina in the neighbourhood where it is in highest demand.

In order to evaluate the availability of local food for the consumer, an inventory of local products was taken at each location. In cooperation with the producers at the farmers market, the following items were noted: the total number of (food) products for sale; the number of products produced or processed in Saskatchewan; the number of products made with all Saskatchewan ingredients; and the number of products with no ingredients from Saskatchewan or where the origin of the ingredients is unknown.

At the other two retailer locations, however, a comprehensive inventory of local products could not be carried out because the management of both stores could not give an accurate count. Consequently, the management of these stores was interviewed following a set of questions developed to better understand their role in local food markets.

Consumer perspective – a local diet experience:

It is one thing to research and discuss local food, but it is an entirely different experience to try to eat locally for any amount of time. Most consumers who are successful at eating a diet of locally grown and produced food are often well-prepared environmentalists who spend a considerable amount of time growing, purchasing, processing and storing produce or live in a locality where local food is freshly available year-round. However, these individuals are not typical of the more general population who are unable or unwilling to devote the same level of effort to eating locally, even though they may still wish to participate in the local food economy to some degree. In order to obtain a more realistic appreciation of the consumer's perspective, a local food diet was attempted by the primary author of this article. The goal of the diet was to eat as locally as possible with the limited food that was available while still following a healthy diet as defined by the Canada Food Guide (see Table 2).

Table 2: *Interviewed producer types and locations.*

Producer Type	Location
Market Garden	Lumsden
Market Garden	Craven
Market Garden	Lumsden
Fruit Orchard (focus on cherries)	Lumsden
Sprouting Seed Processing Plant	Shellbrook
Livestock farm and Butchering	Osler
Quinoa processor	Kamsack
Hemp Seed Oil Processor	Regina

The dieting experiments were conducted in the off-season months of November and December and no food was procured nor stored ahead of time. Daily notes were made on the food type, the food's classification in the Canada Food Guide, where the food was produced, where the food was purchased, the distance from farm to store, and the distance from the store to kitchen. The local diet lasted 28 days.

To provide a reference framework for the local diet, it was followed by another 28 days where a 'regular' diet was consumed. Again, a log was kept to describe the food's ingredients and their origins, as well as its classification in the Canada Food Guide.

Although this section of the study was a personal experience that cannot be repeated quantitatively it provides important context to understanding the local food economy in a prairie city.

Results

Producer practices:

The selected producers were asked a series of questions to identify the challenges they face when producing for a local food market in Saskatchewan. The questions were based on other studies from different locations in Canada and around the world, such as local food in the Niagara region (Feagan et al. 2004) or local food in Northern Ireland (Chinnakonda and Telford 2007). Their responses to the interview questions are summarized below.

1. What percent of your product is Saskatchewan made?

The majority of the producers interviewed sell products exclusively grown or made in Saskatchewan. The market gardeners and cherry producer grow most of the produce they sell (some market gardens also sell fruit from British Columbia). Some producers make value added products, such as jams, that contain non-local ingredients, but are processed within the province. For example, the sprouting seed company uses only 50% Saskatchewan grown crops and the rest of the seeds comes from out of province. The hemp seed oil company exclusively uses Saskatchewan grown crops.

2. Where in Saskatchewan is your product made?

The market garden and orchard producers all grow their own crops within the Lumsden Valley green belt. Other producers and processors (those that value add, such as meat processing and sprouting seed packaging) use product from a number of different producers around the province. For example, the meat producer butchers meat from farms within a 20 km radius of his farm in the Osler area. The sprouting seed company uses seeds from all over Saskatchewan but especially in the south and south east of the province. The quinoa processing facility buys quinoa within the Kamsack area from approximately ten farmers a year.

3. How many full and part time jobs come out of your production system?

For the most part, producers earn enough money to employ themselves full time and depend on seasonal and part-time labour during peak times, such as seeding and harvest. The market gardens operate in this way—during the winter months, they have no employees, but from spring to harvest (about May 1st to November 1st) they employ a fluctuating number of seasonal workers, the numbers ranging from one to thirty extra employees. This number is dependent on the time of year as well as on the weather and the size of the crops they are seeding or harvesting that day. The work and hours are very informal and are generally determined by the specific job that needs to be done that day such as weeding a pumpkin patch or harvesting cucumbers.

The same situation applies to livestock harvesting—up to thirty seasonal staff will be employed at butchering time, and even then the larger animal butchering will be deferred to another better-equipped plant. This work is not steady but it does contribute to the informal sector of the rural economy.

Other producers, notably those that value-add, keep a small full time permanent staff because the work flow remains steady throughout the year. Furthermore, because many producers link together, either to provide each other with services such as butchering livestock or milling grain or providing each other with products such as meat, seeds or fruits, they form horizontal linkages that strengthen the stability of the local economy and increase the prosperity not only of the producers but also the entire region.

4. Where do you market your food to (i.e. Saskatchewan, Canada, the World)?

Once again the response to this question varies by the type of producer. For some, notably the value added 'health food' producers (e.g., hemp seed oil and sprouting seeds) it is difficult to market locally because they do not have a large enough 'health conscious' consumer base in the province. Instead these producers market to larger Canadian centres such as Vancouver and Toronto as well as internationally to the United States and Europe.

The livestock producer, on the other hand, is required by law to sell his products within Saskatchewan because slaughter plants are provincially inspected. The market gardeners sell their product locally (both to Lumsden and Regina area consumers) because they have a good sized local market.

5. How do you sell your food locally (i.e. through farmers markets, private stores, from home)?

Producers that sell locally use a number of venues to market and sell their product. Primarily, they use the direct marketing technique of selling at farmers markets and in their own on-farm stores. Some producers manage to sell wholesale to local grocery stores, and increasingly producers use Internet websites to advertise and sell their products within and beyond Saskatchewan borders. This is especially true of those producers whose markets lie outside of Saskatchewan. Both the hemp seed oil company and the sprouting seeds company use the Internet to advertise and sell their products to clients and retailers around the world.

6. What percent of your product is sold in Saskatchewan?

The market garden producers and livestock producer sell all of their products locally because staple products such as vegetables and meat are in high local demand. The cherry producer sells the majority of his products within Saskatchewan, although he has started marketing out of province, particularly to Alberta. The value added processors— hemp seed oil, sprouting seeds, and quinoa products—sell the majority of their products within Canada (although mostly outside of Saskatchewan), with some exporting to the United States and overseas. Approximately 1-5% of their product sales are within Saskatchewan.

7. Is it difficult to sell to the local market? And if so, why?

Market garden crops and many meat and organic crops are primarily sold on a local market. For some producers, the market and consumer base in Saskatchewan is far too small to sell locally. The population is too small to support a niche market.

Another challenge is marketing. It is not logical for those who produce for the national or international market to spend a lot of money on advertising in Saskatchewan when they could spend the same amount of money advertising to a much larger audience in Ontario. Marketing and advertising are also challenging for producers with a local consumer base. One local producer has to rely on a number of venues to get his message out: word of mouth, websites, radio advertising, newsletters, and even press releases.

It is also very difficult for market gardeners to sell their produce wholesale. One interviewee claimed it was “near impossible”, while another stated that he could only sell his pumpkins (a specialty crop) to a wholesaler, and that the wholesaler would only sell these within the province. The majority of the food produced in the Lumsden Valley costs more than what wholesalers are willing to pay for it, especially when wholesalers can access the same product for less on the global food market.

8. What are the barriers you face in increasing your production?

Cost is one of the main barriers most of the producers interviewed face. Processors face large upfront costs such as buying, processing and marketing a raw product. Two producers explained that they often do not see returns for their investment for over half a year, which forces them to manage their finances very carefully in order to make ends meet during that time period.

Hitting a critical mass is another huge challenge and barrier. A producer needs to sell enough products to cover all the start up and maintenance costs of an operation and then sell even more on top of this to make a decent and desirable profit. Achieving a sustainable critical mass of sales is challenging for a number of the producers interviewed.

Although the cherry producer makes a high number of sales and is very successful, the overhead costs of purchasing extra supplies in order to make more specialty products prevents them from reaching a desirable profit. Furthermore, the overhead of installing infrastructure, such as mechanizing a production line, can be crippling, even though the upgrades are necessary to increase production efficiency and enable the producer to compete within the market.

Escalating production and labour costs also limit expansion. Most of the Lumsden Valley Market gardeners face labour shortages and rising fuel, water, and seed prices. They cannot compete with grocery store production costs and are unable to cater to those consumers who seek the lowest cost product.

Because some processors and producers rely on other producers for their product (such as quinoa), they are limited by the quality of product they are supplied, as well as product availability. Therefore, if it is a bad year for crops the processor may not have access to the volume of product they need to run a successful business.

Retailer Experiences:

Although three retailer types were studied, only two of these fit into normal retailer format. Both the health food store and the chain supermarket are shopping centres that purchase food from wholesalers and producers and sell these food items to the consumer. Interviews took place at both of these retail centres to learn more about local food retailing in the city.

1. What local products do you sell?

The health food store begins to receive fresh produce in mid- to late June and supplies last into late harvest. The store also stocks a comprehensive list of local food items year round, including eggs, wild rice, flour, beans, lentils, oats, goat's milk, meat, fish, frozen berries, garlic, and pasta. They also have root vegetables, provided these are not sold out.

The chain grocery store sells locally produced dairy products, although it is not labeled as such because all Dairyland milk is processed in Saskatoon (Ehman 2007). A number of other staple items, such as eggs, are from the other Prairie Provinces. The supermarket sells only limited quantities of local fresh produce in the summertime.

2. What percent of the products you sell is Saskatchewan made?

The health food store focuses primarily on organic foods but also sells local foods. As a result, they provide quite a few local food products such as Saskatchewan eggs. Approximately one third of their frozen meats are local and about two thirds of their bulk grains, pulses and legumes are of local origin. They also sell about 2% local fruit and 20% local vegetables when they are in season.

The chain grocery store, on the other hand, does not have a clear inventory of their Saskatchewan products, but they estimate approximately 2% of all products are locally made.

3. Do you consciously attempt to provide Saskatchewan products?

This is the health food store's second priority (after organic food). However, the proprietor of this store has been on the forefront of the local food movement in the Regina area for the past ten years. He also runs a farm that grows organic market produce.

The chain grocery store sees lowest price quality produce as its first priority. Location does not factor into purchasing considerations, although if food, especially produce, is locally grown then it will be advertised as such in store.

4. What percent of in-store sales do Saskatchewan products represent?

Saskatchewan products represent approximately 28% of total sales at the health food store. Interestingly, the total percent of inventory from Saskatchewan is considerably less. The reason the sales volume is so large is because many of the Saskatchewan products they sell are staple products. Items such as meat, eggs, flour, and beans move very quickly because they are items that most people buy regularly.

The staff at the chain grocery store did not know what percentage of in-store sales Saskatchewan products represent. They had no way of determining this.

5. What are the difficulties in acquiring Saskatchewan-made products?

The health food store acquires all its Saskatchewan made products directly from local producers and processors. This means the store does direct transactions with Saskatchewan producers. As a result, the local producer receives a higher percentage of the consumer's food dollar (for example 69 cents versus 10 cents from chain grocery stores). Also, being part of a short food supply chain ensures that both the retailer and the consumer have easier access to the producer to ask questions about production methods and comment on the quality of the produce.

Working directly with producers also means dealing with issues such as consistent product availability and quality. Quality levels vary between crop years, or between producers. The Canadian Organic Livestock Association (COLA) provides the health food store with its meat products. COLA has approximately 42 livestock suppliers all operating in different ways, with some producers provide high quality tender meat while others providing tough meat. The store does not have a choice between these producers and has to accept whatever COLA sends it.

Presentation can also be an issue. Because producers are accustomed to harvesting and selling their product at a farmers market on the same day they do not feel the need to provide a product that appears fresh for much more than a day. For example, when harvesting chard, most farmers cut the chard off and leave it on the ground while they finish the row, then pile it up at the end of the row to be collected later on in the day. The resulting chard is limp and unattractive to the consumer. However, retail-marketed food needs to look fresh for about a week, so producers must change the way they harvest their product in order to better satisfy retail consumers. Getting producers to change entrenched harvesting practices can take a long time.

Because the grocery store is a chain retail operation all of the food purchased and sold in-store is provided to the store by a warehouse located in Calgary. This warehouse does all of the food ordering, working with a wholesaler so local store management cannot decide whether or not to buy and sell local food products. The distance between producer and consumer is much further, increasing the difficulty of any type of interaction between the two groups.

6. Do you receive consumer requests for local food?

The health food store has noted an increase in local food requests over the past year, although the owner has been pushing local food for the past ten years. The only requests for local food the chain grocery store receives is specifically for locally produced organic food.

Farmers market:

The third retailer type, the farmers market, is a different retail situation because it is a venue for producers to come and sell their products directly to the consumer. Every week the combination of producers is different and there are usually different products available. An inventory was made to identify how many Saskatchewan grown and produced items, Saskatchewan produced (but not grown) items, and non-local items were for sale. The inventory is representative of one market day in November.

There were approximately 180 food products for sale at the farmers market that day. Although all of the 180 products were produced (processed) in Saskatchewan, only 30 products contained some ingredients made in Saskatchewan, and only 13 items (all produce) were grown in the province. Approximately 137 of the 180 products at the farmers market were made with ingredients that originated from out of province or out of country, or whose origins were unknown.

Local diet experience:

When the local diet started in early November, the only fresh local produce available were root vegetables, such as squashes and cabbages, and eggs. The selection of dried local produce was limited to a few varieties of legumes and beans as well as flour. It was a constant challenge to find dairy products. Occasionally, the health food store would carry some local goat's milk, but often the supply was unreliable. Locally made cheese, butter, milk or yogourt could not be found.

An analysis of the origins of the foods consumed during the local diet showed that most came from within 50 km of Regina (see Figure 1). The fresh vegetables were from Lumsden and the pulse and grain crops were from the Qu'Appelle area (see Table 3).

After completing the first month on a local diet, the eating during second month consisted of a non-local, regular healthy diet (see Table 4). Although it was difficult to determine the exact origin of many of the foods consumed, we estimate that most products must have travelled over 2,000 km to reach the consumer.

Discussion

In this study, the local food economy in Saskatchewan is examined from three perspectives: the producers', the retailers', and the consumers'.

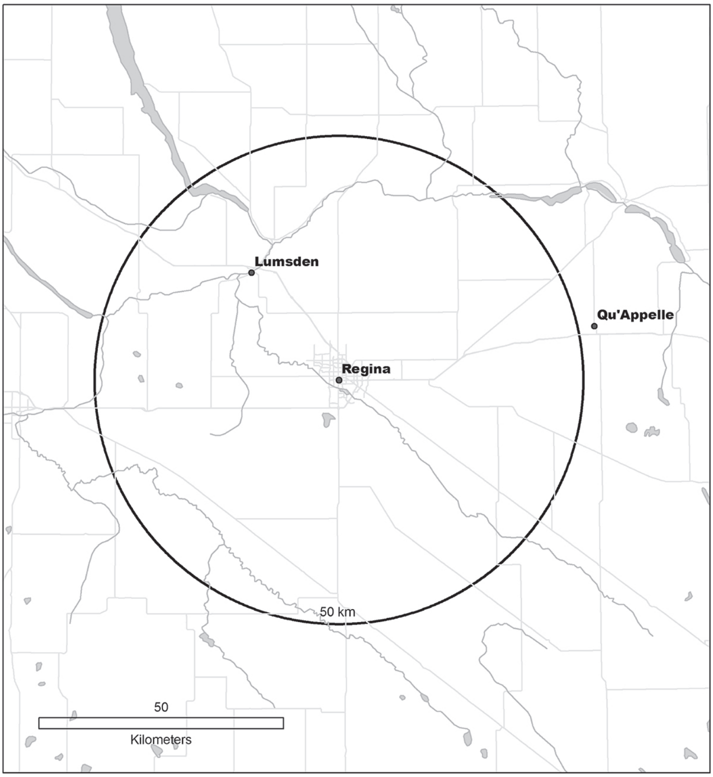

Figure 1: *Map of Regina, Saskatchewan area.*

Table 3: *Retailer interview questions.*

1. What local products do you stock?
2. What percent of the products you sell is Saskatchewan made?
3. Do you consciously attempt to provide Saskatchewan products?
4. What percent of in-store sales do Saskatchewan products represent?
5. What are the difficulties in acquiring Saskatchewan-made products?
6. Do you receive consumer requests for local food?

Table 4: *The Canada Food Guide daily recommendations (Health Canada 2007)*

1. Seven to eight vegetables and fruits
2. Six to seven grain products
3. Two dairy and alternative products
4. Two meat and alternatives products a day for a female aged nineteen to fifty.

Producer issues:

The biggest and most important challenge to producers is finding a sufficient and sustained consumer base to which to market their product. Without this consumer base there is no reason to produce anything at all. In Saskatchewan, conventionally grown grain crops and value added products are sold directly onto a wholesaler market where they are distributed for retail sale on an inter-provincial or international scale.

Although most producers market outside of the province, some have experienced growth within Saskatchewan. According to the sprouting seed company, direct sales in both Saskatchewan and Alberta have grown over 300% since 2005. However, this may have less to do with increased interest in local food and more to do with increased interest in health foods.

Because market gardeners are dependent on local customers they have observed consumer food eating trends over the past number of years. Many producers believe there is a natural fluctuation in sales—some years many people will buy local produce but other years they will not. One producer noted that business has slowed as family sizes decrease and as people become busier and less willing to spend time cooking food from fresh ingredients. She believes more families are eating value added convenience meals and going out for supper while fewer people, especially young people, are cooking from scratch.

Most local producers rely on direct marketing to sell their products and depend on consumers to come to them. If consumers do not make that effort the producers make no money. One producer said sales are hugely affected by the weather—if a weekend is rainy and cold no one will come out to the farm to purchase food, but if it is a sunny and warm weekend they will be very busy. This is an aspect of range where weather can actually decrease the minimum distance consumers will travel to purchase goods.

Local growers who provide foods grown in Saskatchewan are the cornerstones of the Farmers Market. These producers primarily sell vegetables, honey, eggs, meat and other staple products directly to the consumer. Often the Saskatchewan grown produce is sold along side of local value-added products such as pickles, breads and cookies that contain additional non-local ingredients. For example, although all of the baked goods at the farmers market were cooked in the Regina area the ingredients came from around the world, as many of the producers got their ingredients from large chain supermarkets. This balance between locally grown and locally produced varies dramatically by season. When the farmers market was surveyed in late fall for this study there were many more value added products that were produced locally but not grown locally compared to locally grown goods. This proportion would have been dramatically reversed if the inventory had been taken in the middle of July when a number of local vegetables are in season.

Retailer issues:

The issue between retailers and local food can be summed up as a problem of standardization. On the one hand, local producers cannot convince retailers and wholesalers to carry their product because chain grocery stores are vertically linked and all decisions are made at higher levels in different provinces or even countries. As a result, produce is often bought from around the world based on the lowest possible buying price (and thus the largest possible profit margins) and shipped out from one central distribution centre to all chain locations in a region.

On the other hand, retailers are hesitant to purchase local food because of a lack of standardization. Local producers need to standardize their business practices—deliver crops on time, ensure the produce is harvested correctly and uniformly, and try to create a local brand—in order to perform and excel within the retail environment. Retailers need producers they can depend on, and the best way to achieve this is through producer coalitions and cooperatives that ensure retailers a steady supply of the goods they need when they need them.

Consumer issues:

Eating locally incurs an increased cost to the consumer. During the local diet experience it was very difficult to find local foods that were non-organic. This type of “co-marketing” forces the consumer to assume the combined costs of both local food and organic food. For example, one dozen local organic eggs cost approximately $4.00 while the same number of non-organic eggs of unknown origin at a supermarket cost around $2.00. In addition, although locally produced frozen berries were available in November they were prohibitively expensive. Price differences on a per-item basis may not seem great but they continually add up when multiple items are purchased for longer periods of time (see Tables 5 and 6).

Eating locally also requires a more substantial time commitment. Shopping for local food is not as simple as stopping at a single grocery store. Because locally food is not universally available in all grocery stores, consumers have to diversify their shopping—perhaps buying flour from a farmer, eggs from the corner store, meat from a health food store and vegetables from the farmers market. Because all of these items cannot necessarily be found in one place consumers must make numerous trips in order to complete their food shopping. Some consumers are reliant on public transit or cannot/will not afford the extra time and costs of driving to the farmland surrounding the city for food.

Adding to the time commitment is the necessity to cook the food from scratch. People following a local diet must often bake their own bread and cook their own vegetables, meats, desserts and snack foods. Although a multitude of ingredients are available to make endlessly varying meals the significant time obligation is not necessarily realistic for someone who

Table 5: *Sample daily local diet consumption.*

Meal	Food Item	Origin	Distance from field to plate (km)	Cost ($, approximate)
Breakfast	-Brown bun (local flour and eggs)	Qu'Appelle	55	0.50
	-Honey	Silton	53	0.10
	-Egg	Abernethy	104	0.33
Lunch	-Brown bun	Qu'Appelle	55	0.50
	-Egg	Abernethy	104	0.33
	-Cabbage	Craven	39	0.60
Supper	-Egg	Abernethy	104	0.33
	-Cabbage	Craven	39	0.60
	-Onion	Craven	39	0.90
	-Potato	Craven	39	0.50
	-Oil (Hempseed)	Regina	0	0.50
Snacks	-Pumpkin seeds	Lumsden	34	1.00

Table 6: *Sample daily non-local diet consumption.*

Meal	Food Item	Origin	Distance from field to plate (km)	Cost ($, Approximate)
Breakfast	-Cereal	Unknown	Unknown	0.30
	-Soy milk	British Columbia	1,800	0.50
	-Banana	Guatamala	4,181	0.24
Lunch	-Bread	Canada	Unknown	0.20
	-Cheese	Canada	Unknown	0.75
	-Avocado	California	2,800	1.60
	-Tomato	Canada	Unknown	0.50
	-Mayonnaise	Canada	Unknown	0.10
Supper	-Broccoli	USA	Unknown	0.30
	-Onion	USA	Unknown	0.30
	-Can of tomatoes	Canada	Unknown	1.10
	-Spices	Unknown	Unknown	various
	-Spaghetti	Canada	Unknown	0.50
Snacks	-Apple	British Columbia	1,800	0.25.
	-Orange	USA	Unknown	0.25

is working, going to school, raising a family or doing a combination of all three.

In Regina some food is available year round. Dried goods such as legumes and grains can always be bought. So too can frozen meats and fresh eggs. However, items such as fresh fruits and vegetables are difficult to find year round. For those who wish to consume local foods out-of-season it is important to pre-purchase all the food necessary and to store it appropriately by canning, freezing, pickling or using cold storage.

In addition, some staple foods are difficult, if not impossible, to find locally. Most food items on grocery market shelves do not provide precise information on the origin of a food product. The country of origin is almost always given but more specific details are not available. For example, most dairy products on grocery store shelves do not provide the province of origin or processing but only the wholesaler's head office.

Many consumers are simply unaware of where they can purchase local food, so they do not know they have a local option. Saskatchewan is home to many producers who are actively trying to create a viable and attractive local food system and retailers who are willing to participate in this alternative food system. Right now Regina's local food system is small, supported mostly by one or two health food shops, the farmers market and a handful of market gardens in the Regina area. However, if more consumers realize the benefits of local food this market can expand, allowing for new sectors of the local food economy such as restaurants and specialty local food stores.

Consumer access to local food today is really limited by one factor—consumer education. If more people know about local food, more producers and retailers will offer local food in response. As the demand for local food grows it will become increasingly lucrative for more businesses to be involved.

Conclusion

The global food system we live in has removed our knowledge of where food comes from and how it is grown. We do not know what pesticides were used to grow it and the labour conditions under which it was harvested. Local food movements seek to reverse that trend by providing a forum where producers and consumers can meet and consumers can begin to understand the life cycle of the local eco-system and the foods they eat. Local food production is more than just a resistance to global forces but also "the beginning of a process of rebuilding more agro-ecological systems which begin to integrate space and nature into production processes" (Marsden and Smith 2005: 299). Local food, then, attempts to reconcile human eating patterns with the natural world by acknowledging the processes and importance of nature and using that wisdom to create a place-specific food system.

The challenges of eating a local food diet in Saskatchewan arise from a combination of geographic, economic and social factors: the climate and soils of this region are not conducive to growing fruits and vegetables; the consumer market is too small to sustain a large-scale local food industry; and consumers may be unwilling to assume the added costs and time needed to eat a local diet. It is clear that Saskatchewan, and more specifically the Regina area, has enough consumer interest to support some local producers, but the market may not be large enough to support many more producers than are already established in the Lumsden Valley area.

Eating locally in the Regina area is difficult but not impossible. Saskatchewan is blessed with an abundance of food types and producers who know the importance of adopting environmentally sustainable practices. Saskatchewan also has a few retailers that value selling local food, and the population of the province can demand more local food from the chain supermarkets if they so choose. Saskatchewan local food has a long way to go—eating locally is a young concept, and producers are only starting to see the benefit of marketing right here at home. There are still many distribution, production and processing issues that need to be addressed, but the future looks bright for local food provided more people learn about it and the benefits it can offer.

Local food is not a trend that will fade away to make room for the next eco-style. The local food market is an important approach to food, one that the mainstream population in industrialized societies abandoned years ago when we decided convenience and price were priorities over the environmental, social and economic effects of creating a huge and anonymous food system. As we learn more about how our decisions affect the planet we live on, we must decide if we want a food system of cheap convenience or a food system that acknowledges our inextricable link to the earth and to one another; where food is a blessing for everyone whose hands it passes through.

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