

Local Food Procurement Policies: A Literature Review

Prepared by Marla MacLeod and Jennifer Scott, Ecology Action Centre
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INTRODUCTION

Our food system has become increasingly globalized over the past few decades. Whereas a century ago most food was consumed in a relatively short distance from where it was produced, our diets today consist of foods from all corners of the globe. The trend toward increasing distances between producers and consumers has prompted many to question the environmental and social sustainability of our food choices.

Local farms are struggling to compete with larger, more industrialized farms in warmer climates. Products from California, for example, are dependent on publicly funded roads and transportation networks, and on vast subsidized irrigation networks that are not factored into the cost of food. This food is sent all over the continent, supplanting local production, because the price of the food is not reflecting the 'real costs' associated with its production. The real costs of food production include environmental costs, such as the effects of climate change due to increased CO₂ emissions from increased food transportation, as well as social degradation due to the loss of farms and rural communities, to name a few. When all this is considered, many are asking whether it might actually be more efficient to use a higher percentage of locally-produced food in Nova Scotia. This is the question we'd like to address in a more comprehensive study in 2007-08.

One way to begin to build sustainable local food systems is through governments adopting local food procurement policies. Given the size and stability of government operations, government procurement policies can help support local agriculture by providing a large, stable market for producers.

This report examines the environmental, economic and social benefits of local food, showcases existing procurement policies in Italy, Britain, the United States, and Canada, and examines lessons learned in other jurisdictions. It is a preliminary review of some literature on local food initiatives.

THE CASE FOR A LOCAL FOOD PROCUREMENT POLICY

There are environmental, economic and social benefits associated with the implementation of a local food procurement policy. The following sections will examine the benefits in detail.

ENVIRONMENTAL

Reduction of Food Miles and the Resulting CO₂ Emissions

The “food mile” is the distance a given food travels from farm to plate. The term “food miles” was coined by a British non-profit organization now known as Sustain UK in a 1994 report (DEFRA in Xuereb, 2005). Various food miles studies have been undertaken in recent years in an attempt to calculate the distances our food is traveling, and fuel usage and greenhouse gas emissions associated with this transport. The studies aim to show the potential energy savings of a more locally-based diet.

A commonly quoted statistic estimates that the ingredients in a typical North American meal travel an average of 1,500 miles or approximately 2,400 km. This statistic likely originated from Pirog et al. (2001), who found that produce arriving by truck into the Chicago Illinois terminal market traveled an average of 1,245 miles in 1981, 1,424 miles in 1989, and 1,518 miles in 1998.

Pirog et al. (2001) also compared three meals made with locally produced food with the same meals made with conventionally sourced foods. The local foods traveled an average of 44.6 miles, while the conventionally sourced foods traveled an average of 1,546 miles. The final component of the study examined 28 fresh produce items and considered the fuel savings and the CO₂ reductions if 10% of these 28 items were grown in Iowa and distributed through a local food system. They estimated that 280 to 346 gallons (1060 to 1310 litres) of fuel would be saved, resulting in a 6.7 to 7.9 million pound (3 to 3.6 million kilogram) reduction in CO₂ emissions annually.

The local foods traveled an average of 44.6 miles, while the conventionally sourced foods traveled an average of 1,546 miles.

Recently, a Canadian study was conducted in the Waterloo Region of Ontario. Xuereb (2005) found that the 58 food items studied traveled an average of 4,497 km and generated 51,709 tonnes of greenhouse gas emissions, representing 5.9% of total emissions generated by households in the Waterloo Region. All 58 food items could be produced in the region. If this were to happen, the associated annual greenhouse gas emissions would be reduced by somewhere between 49,485 and 51,442 tonnes.

When calculating food miles and their associated greenhouse gas emissions, it is important to know not only the distance the food item travels, but also the means of transportation. As shown in Table 1, transport by road emits approximately six times as much CO₂ as transport by ship and transport by a long-haul flight emits approximately 50 times as much as transport by ship.

Table 1: A comparison of CO₂ emissions resulting from different modes of food transport

Mode	Description	CO ₂ Emissions (Grams CO ₂ /tonne-kilometre ¹)	Energy Consumption (MJ/tonne-kilometre)
Air	Short-haul	1580	23.7
	Long-haul	570	8.5
Road	Transit Van	97	1.7
	Medium Truck	85	1.5
	Large Truck	63	1.1
Ship	Roll-on/roll-off	40	0.55
	Bulk Carrier	10	0.15

Source: Jones, 2001: 27

Transportation, however, is only one stage in the life-cycle of a particular food item. Garnett (2003) and Pirog (2001) both suggest that it is important to reduce CO₂ emissions in the food supply chain as a whole, and not to reduce emissions in one area at the expense of another, highlighting the need to take a Life Cycle Analysis approach to food system studies. Life Cycle Analysis (LCA) is a method of calculating the environmental impacts of a product at each stage of production. LCA does, however, require the researcher to make numerous assumptions and also requires a large amount of data collection. While conducting an LCA is beyond the scope of what we hope to accomplish in an upcoming study on the food system in Nova Scotia, we can draw on existing LCAs to address some of the questions pertaining to energy use in agricultural production and processing.

Carlsson-Kanyama (1997) conducted an LCA on carrots and tomatoes. Based on Swedish consumption patterns, carrots from six countries (including Sweden) and tomatoes from four countries (including Sweden) were analyzed. Her study examined the CO₂ emissions associated with farm production, fertilizer production, storage and transportation of these two foods. Results indicated that the emissions associated with tomatoes were ten times higher than those of carrots (on a per kg basis). In the case of carrots, the storage stage of the life-cycle is responsible for the largest percentage (37-

We have to decide whether foods that are produced using energy-intensive production methods should be sourced at all, as the least carbon-intensive choice would be to encourage consumers to eat a more seasonal diet.

53%) of CO₂ emissions, with transportation accounting for 21-43%. In the case of tomatoes, both highly energy-intensive greenhouse operations in northern climates and less energy-intensive systems in southern European climates were examined. Carlsson-Kanyama (1997) found that for Northern countries, it may be more energy efficient to import certain foods from warmer climates (particularly during the colder months) than to grow those same foods locally using energy-intensive production methods. Garnett (2003) suggests that we have to decide whether such foods should be sourced at

¹ A tonne-kilometre is “ a measure of freight, based on multiplying the weight of the load and the distance through which it is hauled. For instance a weight of 26 tonnes carried 100 kilometres represents 2600 tonne-kilometres”. (Garnett, 2003: 112)

all in such cases, as the least carbon-intensive choice would be to encourage consumers to eat a more seasonal diet.

If a full LCA cannot be conducted, there are ways of inferring areas of high energy use. Garnett (2003) argues that high food miles could be used as an indicator of high energy use elsewhere in the production of a particular product. “Processed food contains a very high embodied energy, not just because of the transport required in the assembly of the component ingredients but also because of packaging, heating and refrigeration. And there appears to be a correlation between growth in one area and growth in another” (Garnett, 2003:67).

ECONOMIC

Food dollars stay in local communities

In relation to economics, one of the more direct benefits of local food procurement is the increased financial resources that remain in the local economy. That is, the more money made by farmers, the more money they have to spend at local businesses and employ others in their communities.

The concept of a multiplier² is often used to capture the indirect economic benefits of a given activity. In the case of farming, a multiplier can be useful in determining how much of the money spent on local food stays within the local economy to generate further benefits, and how much leaves.

ATi Consulting (2002) found, based on Statistics Canada data from 2000, for every \$100 spent by a Nova Scotia farmer in their farming operation, \$112 is generated in the NS agriculture sector and \$135 is generated in the Canadian agriculture sector. The multipliers are calculated as 1.12 and 1.35 respectively. The same study, using 1999 data, found that the Nova Scotia agricultural sector contributed \$199 million to the Nova Scotia’s GDP; however when indirect and induced activity are factored in the total contribution to Nova Scotia’s GDP is \$389 million, a multiplier of 1.95, and the contribution to the national GDP is \$853 million, a multiplier of 4.29. Note

Note that the contribution to the national GDP is greater than that to the province’s GDP, which indicates that much of the money spent by farmers is leaving the province and thus not being reinvested in the local community.

² The New Economics Foundation has developed a simple definition of a multiplier (New Economics Foundation, no date)

An economic measurement tool called the ‘multiplier’ is a useful way to calculate the overall impact of spending money in the local economy. The starting point in each situation is that £100 enters the local economy. If 80% of each £1 spent stays in the local economy, the total amount of spending that that £100 will generate is about £500 – a multiplier of **5** (500 divided by 100). If only 20% of each £1 spent stays in the local economy, the total spending is only £125. This gives a multiplier of only **1.25** (125 divided by 100).

In a community in which 100% of all the money that enters the economy immediately leaves it again, the multiplier will be only 1. In a community that is entirely shut off from the world and all the money that comes in stays in the economy and is re-spent over and over again, the multiplier is infinite!

that the contribution to the national GDP is greater than that to the province's GDP, which indicates that much of the money spent by farmers is leaving the province and thus not being reinvested in the local community.

If local production can be supported through local procurement policies, more farm activity within the province might rekindle the businesses that service farms. As this business grows, it would be useful to track the multipliers to see if more agricultural dollars stay in the province. Agricultural supply businesses have to have a certain threshold of business in order to make it worthwhile to invest in locally-produced farm products and services (e.g. getting equipment re-built by a local person rather than buying new equipment made in another province).

Farmers have been shown to have spending habits that favour local businesses. ATi Consulting (2002) conducted a survey of 333 farmers, which showed that 92.5% of farm expenditures were made locally. However, many of the products sourced by local businesses came from outside of the province and thus a good percentage of the money leaves the province. Similar studies conducted in other regions also indicate the propensity of farmers to buy locally. Barrett (2003) surveyed 16 family farms in Maine, of whom more than half indicated that they were willing to pay more to support local businesses. The Iowa Farmers Union (2003) found that smaller farmers generally support local business while larger scale farmers are more likely to bypass local suppliers.

Employment

Farmers generate on-farm employment in three ways: self-employment, employment of others to work on the farm, and hiring of contract services (e.g. veterinary services, custom combining etc.). These three types of on-farm paid employment are included in Statistics Canada's Labour Force Survey estimates under the heading "Agriculture and Related Services". In 2002, over \$83 million dollars were spent on farm wages in Nova Scotia; however, it is important to note that this may or may not include monetary compensation for family members who work on the farm (Statistics Canada, 2003). In 2001, 7,300 people were employed in the agriculture sector in Nova Scotia (Statistics Canada, 2002).

The agricultural processing sector is also a valuable source of employment in rural communities. For example, in Berwick, NS the Larsen pork plant employs 400 people. If this plant were to close, it would be a great loss to the economy and tax base of the community, which has already lost a number of other processing facilities in recent years, including Avon Foods, the Berwick Fruit Company and Berwick Bakery (Farm Focus (2004); DeLong, 2004). The Avon Foods plant in Berwick used to employ 80 full time and 55 seasonal workers (DeLong, 2004). On April 28, 2007 the Maple Leaf chicken processing plant in Canard, King's County closed (Delaney, 2007). The Maple Leaf plant employed 380 people.

Farm Income

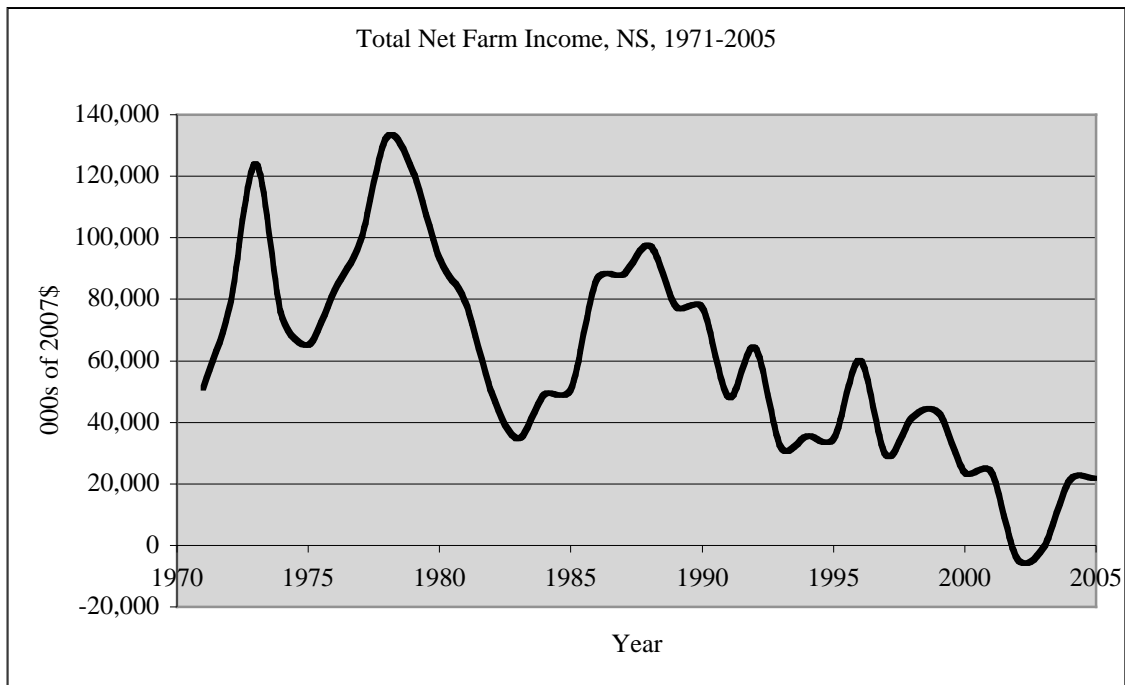
Total net farm income has been low in recent years. In 2002 and 2003, the total net farm income in Nova Scotia was below zero (Figure 1).

Despite the importance of farming, farmers are struggling to make a living, and in 2002 and 2003, as a group, paid out of pocket to produce food. This is a symptom of a food system in which the buyers have control over prices, and farmers must comply or be shut out of that market. A local food procurement policy must ensure that farmers are being paid a fair price for the food they produce, or Nova Scotia will eventually lose all of its food producers due to lack of economic viability. In a future update of this report, the ways farms can achieve better economic returns will be explored in detail.

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A local food procurement policy must ensure that farmers are being paid a fair price for the food they produce, or Nova Scotia will eventually lose all of its food producers due to lack of economic viability.

Figure 1: Total Net Farm Income in Nova Scotia from 1971 to 2005 (\$2007)



Source: Compiled from Statistics Canada 2007 Agriculture Economic Statistics Tables.

Rural Revitalization

Given the potential for revenue and employment generated by the agricultural sector and the amount of money spent on public sector catering, there is huge potential to invest in rural communities. A British study (Peckham & Petts, 2003), found the following:

One study in Cornwall showed that for every £10 spent on an organic box scheme, £25 was generated in the local economy through the multiplier effect. Another example is the local food sector in Devon, Somerset, and Dorset which includes 900 businesses involved in food production, processing, wholesaling, retailing, and catering. The farms employ an average of 3.4 full time staff compared with an average of 2.34 full time staff for the South West as a whole. Given that about £2 billion is spent on food and catering a year in the public sector, if this was spent on local supplies of food it would potentially boost local economies by £5 billion and create local employment (12).

While Nova Scotia is considerably smaller than Britain, the potential boost to local economies is nonetheless significant. Investment in local agriculture can help revitalize rural areas. Potential benefits of a more localized food system include:

- Regeneration of market towns and deprived areas.
- Improved incomes for local producers. Greater trust and understanding between stakeholders.
- Encouraging entrepreneurship.
- Raising profiles of local businesses.
- Greater access to healthy, safe food.
- Supporting small business and enterprise and job creation.
- Reducing external costs to both the purchasing authority and its constituents.
- Halting the decline in rural services and food and farming infrastructure (Peckham & Petts, 2003:12).

SOCIAL

Nutritive value

There is continuing debate as to whether or not locally produced foods have greater nutritional value than imported foods; however, there is some evidence to suggest that this is the case for certain fruits and vegetables.

According to Jones (2001), the nutritional value of certain fruits and vegetables may decrease as the length of time between its harvest and consumption increases. Vitamins A and C appear to be the most likely to decline. A decrease in vitamin C begins

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immediately following harvest, though the decline can be slowed by limiting exposure to heat, air and light. Riboflavin and vitamin E are also somewhat susceptible to nutrient loss. Fruits and vegetables such as apples, carrots, grapefruit and oranges are more likely to preserve their nutritive value over long periods of storage, while such products as kale, broccoli, and green beans are more

susceptible to nutrient loss. For instance, a study of green beans showed that when stored at 10°C for 24 hours, the green beans lost 10% of their vitamin C and when stored at room temperature for 24 hours they lost 24% (Zeplin & Elvehjem in Jones, 2001). Jones (2001) notes that the evidence is not complete, but findings do suggest that the lengthening of the food chain can lead to a decrease in nutritional value.

Every three to four years, Agriculture and Agri-Food Canada publishes tables showing the current nutritional content of various foods in grocery stores. When analyzing the data, Thomas Pawlick found that a fresh tomato has 61% less calcium than it did in the 1950s (Pawlick, 2006). Across the board, some nutrient losses have been as steep as 70% over a 50-year period. One reason for this decline in nutrient content is crops are selected for transport or shelf-life rather than taste and nutrition. Another reason is that imported produce is harvested prematurely so that it can be shipped long distances without rotting. This decreases the nutritional content as well as flavour of the food. His solution to this problem is to consume locally produced food from family farms. According to Pawlick, “the less time there is between picking and eating, the more nutrients will still be in the product” (Chreighton 2006).

Food Security

Food security exists when all people at all times have access to nutritious, safe, personally acceptable and culturally appropriate foods that are produced, procured and distributed in ways that are environmentally sound and socially just (adapted from Fairholm, 1998).

Food security is one of the four priority areas outlined by *Healthy Eating Nova Scotia* (Healthy Eating Action Group, 2005), which is a strategic plan to address nutrition-related health issues. *Healthy Eating Nova Scotia* is the first provincial food and nutrition strategy developed by an active partnership of government and non-government organizations, private corporations and professional associations, in consultation with the broader community. The food security component recognizes that healthy eating is not simply a matter of personal choice. It is largely dependent on access and availability. *Healthy Eating Nova Scotia* identifies two objectives relating to food security:

Food security exists when all people at all times have access to nutritious, safe, personally acceptable and culturally appropriate foods that are produced, procured and distributed in ways that are environmentally sound and socially just.

- To increase the proportion of Nova Scotians who have access to nutritious foods.
- To increase the availability of nutritious, locally produced foods throughout the province.

To be a more food secure society, we must decrease our reliance on imported foods and develop policies that support local food production. Thus a local food procurement policy would be a key step in supporting this movement towards a local sustainable food supply.

Healthy Eating Nova Scotia outlines the following next steps to address the issue of food security:

- Establish a provincial system to monitor food insecurity.
- Promote the use of the food security policy lens for assessing the impact of policy and budgetary decisions on food security.
- Increase public awareness of the extent and reality of food insecurity.
- Include food security in the curricula of health and education professionals.
- Advocate for public policies that increase the affordability of locally produced food.
- *Advocate for public policies that support local food production and distribution systems.* [emphasis added]
- Advocate for municipal and provincial policies that permit the use of land for community gardens.
- *Advocate for public policies that increase the use of locally produced foods in publicly funded institutions* [emphasis added] (Healthy Eating Action Group, 2005: 27).

Since the publication of *Healthy Eating Nova Scotia*, a background paper and policy lens entitled *Thought About Food? Understanding the Relationship Between Public Policy and Food Security in Nova Scotia* (Policy Working Group of the Nova Scotia Participatory Food Security Projects, 2006) has also been published. This background paper explains food security, how it affects our lives, and how it intersects with other sectors such as agriculture, fisheries, community services, economic development, education, environment and labour, health, housing and justice. The lens provides a series of analytical questions with which one can critically examine program and policy decisions to determine possible effects on food security. This document should be used by decision makers when developing local food procurement policies.

OTHER COMMON COMPONENTS OF SUSTAINABLE FOOD POLICIES

Many local food procurement policies have taken into account other environmental and social sustainability criteria. For example, it is not uncommon to see criteria relating to reduced packaging, organic and fair trade foods, animal welfare and healthy eating in local food policies. Conversely, in recent years some healthy eating policies have begun to include guidelines relating to local food. The healthy eating component features prominently in the school and hospital-based programs. Schools and hospitals are seen as ideal environments to educate vulnerable populations – children and those with serious health issues – about the importance of a healthy diet, high in fresh fruits and vegetables.

Michaels (2006), in studying best practices in sustainable food procurement in the UK, outlines the five broad aims of the Public Sector Food Procurement Initiative (PSFPI). They are:

- Raise production and process standards
- Increase tenders from small and local producers
- Increase consumption of healthy and nutritious food
- Reduce adverse environmental impacts of production and supply
- Increase capacity of small and local suppliers to meet demand (2).

PSFPI also contains additional objectives relating to increasing demand for organic food, improving choice for ethnic minorities, reducing waste, providing better conditions for catering staff, and improving data collection (Michaels, 2006). Additional criteria outlined by Michaels (2006) include the suggestions to review menus to reflect seasonal and local availability and to include educational and awareness raising initiatives in the policy.

In the following sections, examples of local food procurement policies in Italy, Britain, the USA, and Canada are given. Many of the examples featured below incorporate some of these additional components.

PROCUREMENT POLICIES IN OTHER JURISDICTIONS

ITALY

Public procurement in the European Union is governed by regulations that, amongst other directives, include a principle of non-discrimination. In other words, contracts cannot be awarded based on the geography of the bidder, and thus food miles cannot be taken into consideration (Morgan & Sonnino, 2006). In 1999, the EU Council of Ministers did agree that contracting authorities may take production methods into consideration. This is particularly relevant in terms of green procurement, as it allows environmental criteria to be considered, as opposed to a decision based primarily on cost. (For more details on creative public procurement, see Morgan & Morley, 2002).

Food education plays a large role in supporting public procurement. With respect to school meals, parents are actively involved in monitoring and evaluating the quality of the food.

Italy has a history of sustainable food procurement that goes back to the mid-1980s. Examples include organic meals in schools, hospitals, and university canteens in various Italian cities, as well as emphasis in some locations on traditional Mediterranean foods. In addition, food education plays a large role in supporting public procurement. With respect to

school meals, parents are actively involved in monitoring and evaluating the quality of the food.

In 1999, the Italian government passed the following law:

To guarantee the promotion of organic agricultural production of “quality” food products, public institutions that operate school and hospital canteens will provide in the daily diet the use of organic, typical and traditional products as well as those from denominated areas, taking into account the guidelines and other recommendations of the National Institute of Nutrition (Finance Law, December 1999, Chapter 1, Measures to Facilitate the development of employment and the economy, Section 4 cited in Soil Association, 2003: 65)

This law helped to facilitate public procurement of local, organic food in Italy.

According to Morgan & Sonnino (2006) the Italian “multifunctional view of school meals supports creative forms of procurement” (22) in three ways:

- 1) Contractors retain control of the service and can introduce changes to the food service in order to preserve its link to food education within the school;
- 2) It allows for discrimination. Because of “its emphasis on the linkages between food and culture and traditions, the Italian system opens up a legal way to interpret creatively the EU directives ... to emphasize the territorial ‘rootedness’ of the school meal service over and above the European principle of ‘non discrimination’” (22);
- 3) “It presupposes a *holistic* interpretation of the notion of *best value*” extending the definition to include such things as hygiene, nutrition, and education” (22).

In conclusion, Morgan & Sonnino (2006) found that “the development of sustainable forms of food consumption is linked to both policy and culture; in other words, it depends on the implementation of creative forms of public procurement that successfully mobilize and integrate political action and cultural change” (24).

ROME SCHOOL MEAL PROGRAM

Dr. Silvana Sari introduced her *All For Quality* food procurement principles into Roman schools in 2001 (Liquori, 2006). The principles support a broad definition of health, which includes the social and nutritional health of the child, as well as the environment. In Rome, approximately 140,000 school lunches are served everyday, plus a mid-morning snack. Currently six different companies hold three year contracts to supply the meals. The awarding of contracts is based on a 100-point system, of which 51 points are based on the purchase price of the food. The remaining 49 points include support for infrastructure (improving canteens, kitchens, and furniture; training courses and informational campaigns; and organizational features), and changes in the type or quality of food (place of origin, organic, fair trade etc.).

Numerous individuals and groups are responsible for the planning and preparation of school meals (Liquori, 2006). A staff of 70 nutritionists assures that school meals meet national nutritional guidelines. Local Health Authorities monitor health and hygiene. An elected parent Canteen Commission monitors food quality and taste. The City of Rome monitors the financial aspects, and a specialized company contracted by the city conducts inspections that include verifying the designations and certifications, assuring that hygiene standards are met and making sure that food service providers meet the terms of their contracts. Approximately 1,100 inspections are carried out each year.

In the first contract period, 2002-2004, organic ingredients increased from 10% to 70%, while the cost increased from \$4.31 (USD) in the 2002/03 school year to \$4.68 in the 2003/04 school year (Liquori, 2006). Additionally, this tender specified nutritional and environmental criteria such as increasing the servings of fruit, prohibiting GMOs, and including PDO and PGI products. In the second contract period, 2004-2007, the tender called for seasonal menus, more organic foods, replacing processed fish with frozen fish, and including fair trade items such as bananas and chocolate. The meal cost has increased to \$5.09 (USD). Changes to the dining area have also taken place, with metal cutlery replacing plastic cutlery and square tables replacing rectangular tables, which helps facilitate better interaction between the children during meals (Morgan & Sonnino, 2005).

In the second contract period, 2004-2007, the tender called for seasonal menus, more organic foods, replacing processed fish with frozen fish, and including fair trade items such as bananas and chocolate. The meal cost has increased [from \$4.68] to \$5.09 (USD).

The principles that have guided the change in the Rome school meals are as follows:

- Study the market capacity to accurately gauge the rate, type and extent of change possible.
- Strive for a gradual change that incorporates new elements and assesses the impact of these elements in order to make the appropriate corrections.
- Assume that making corrections is an inevitable part of the change process.
- Establish an ongoing contract monitoring process.
- Use the monitoring process to impose real sanctions for all violations – large and small.
- Be transparent and consistent in approach.
- Be creative (Liquori, 2006: 3).

While Rome is one of the larger scale examples of a local food procurement policy, there are over 300 examples of local, organic school meal services in Italy (Sustain, 2002). For example, the town of Ferrara (pop. 133,000) commissioned a feasibility study and then created a list of foods that could be used without significantly increasing costs. As result of this study, the use of organic foods in public procurement has increased to 50% and up to 80% for nurseries, while the average cost of a meal has only increased by 13.4% (Sustain, 2002).

The town of Ferrara (pop. 133,000) commissioned a feasibility study and then created a list of foods that could be used without significantly increasing costs. As result of this study, the use of organic foods in public procurement has increased to 50% and up to 80% for nurseries, while the average cost of a meal has only increased by 13.4%.

PROTECTED FOOD NAMES: PDO, PGI & TSG

In 1993, the European Union passed a regulation that allowed for the protection and designation of specialty foods linked to a particular geographical region. There are three categories of designation: Protected Designation of Origin (PDO), Protected Geographical Indication (PGI), and Traditional Speciality Guarantee (TSG).

PDO designates that production, processing, and preparation have all taken place within the geographical area whose name the product bears and that “the quality or characteristics of which are essentially or exclusively due to a particular geographic environment (with its inherent natural and human factors)” (Vroom-Cramer, 1997: 2). While PGI designates that the product originates from the named geographical region and that “a specific quality, reputation or other characteristic attributable to that geographic origin, the production and/or processing and/or preparation [...] takes place in the geographic area defined” (Vroom-Cramer, 1997: 2). TSG designates traditional products that have a minimum historical record of 25 years.

To register a product, an application must first be submitted at the national level. If deemed appropriate at that level, the application is then taken to the EU Commission and published in the Official Journal of the European Communities. If no objections are raised within six months of publication, the product is added to the register of Protected Designations of Origin and Protected Geographical Indications.

According to Peckham & Petts (2003), there are two ideas implicit in the designation of specialty foods: “first, that some foods are so special they can only be produced in certain places and should be protected from becoming open to the abuse of mass production; and second, that products are in some way the cultural property of people or communities in those areas” (25).

In Ferrera, Italy, public procurement contracts are written so as to encourage the supply of traditional foods.

While any European nation has the option of protecting its food names, it has generated more interest in some European countries, namely Italy, France, Spain and Germany, than others (Vroom-Cramer, 1997).

In Italy, PDO and PGI food products have been used to favour local and traditional products in public procurement contracts. For example, in San Marcello in Tuscany, a tender to supply school meals specified eight types of cheeses, four of which were regional cheeses with either PDO or PGI certification (Morgan & Morley, 2002). However, even traditional foods that have not been PDO or PGI certified, have been used to encourage local food purchasing. For example, in Ferrera, Italy, public procurement contracts are written so as to encourage the supply of traditional foods (Peckham & Petts, 2003).

BRITAIN

In recent years the British government has begun to put in place measures to promote local food. In January 2002, the report from the Policy Commission on the Future of Farming and Food, commonly known as the Curry report, after the chair Donald Curry, was released. Among its approximately 100 recommendations, are the recommendations “to reconnect farming with its market and the rest of the food chain; to reconnect the food chain and the countryside; and to reconnect consumers with what they eat and how it is produced” (Peckham & Petts, 2003).

The Curry report was endorsed by government, who then published their *Sustainable Farming and Food Strategy* in December 2002. The government then established an implementation group, chaired by Donald Curry. A number of workstreams were formed, the largest of which was the Food Chain workstream. Its aim is “to achieve a more efficient and competitive supply chain within a sustainable food and farming sector” (Curry, 2003: 2).

Five priority objectives of PSFPI are:

- *Raise production and process standards;*
- *Increase tenders from small and local producers;*
- *Increase consumption of healthy and nutritious food;*
- *Reduce adverse environmental impacts of production and supply;*
and
- *Increase capacity of small and local suppliers to meet demand*

The Public Sector Food Procurement Initiative (PSFPI), part of the Food Chain workstream, was launched in 2003. Each year approximately £1.8 billion is spent on

public sector food and catering services in England (Defra, no date). The aim of PSFPI is “to encourage public sector buyers to work with farmers, growers and suppliers to ensure more sustainable food is consumed in hospitals, schools, prisons and canteens”(DEFRA, no date:3). Its five priority objectives are:

- Raise production and process standards;
- Increase tenders from small and local producers;
- Increase consumption of healthy and nutritious food;
- Reduce adverse environmental impacts of production and supply; and
- Increase capacity of small and local suppliers to meet demand (Defra, no date: 3).

Under the PSFPI, there has been research into best practices and barriers to public sector procurement, pilot projects to test best practices and case studies of successful initiatives around the country. The PSFPI has also published guides and toolkits aimed at both producers and caterers (Defra, no date).

One large barrier in the public procurement of locally-produced foods are the European Union (EU) regulations, which under the Treaty of Rome, include a principle of non-discrimination on the grounds of nationality in the awarding of public contracts. Other European countries have been creative in their use of sustainable procurement policies to increase the amount of local food procured by public institutions, without specifying “local”. Morgan & Morley (2002) describe several of the methods used by other countries. They are as follows:

- Organic procurement policies. By specifying organic in countries with a large number of organic producers, one can increase the amount of local food.
- Purchasing regional specific products, such as the European certified PDO or PGI.
- Incorporating seasonality into public food demand.
- Service specification, such as levels of freshness, quick delivery response times and minimal packaging may favour local businesses.
- Operating below EU procurement thresholds. This is prohibited, but still practiced in some areas.
- Allowing for the use of “lots” during tendering. This allows companies to bid for all or part of the contract, which is beneficial for smaller suppliers who may otherwise be excluded.
- The use of variants, which is “a contractual method that prescribes two or more variations of the product(s) that can be supplied” (37). This method is commonly used by those wishing to purchase environmentally-friendly products, since in this situation, “green” suppliers can bid on “conventional” contracts and have their environmental qualities be considered favourably.
- Third party organizations manage meal provision, e.g. non-profit organization or parent organizations in schools.
- Occasional sourcing, e.g. a regular local, organic meal served every two weeks.

Morgan & Morley (2002) suggest that Britain could work more creatively within EU regulations to increase the amount of local food procured by the public sector.

SOUTH GLOUCESTERSHIRE COUNTY COUNCIL CATERING AND CONTRACT SERVICES

South Gloucestershire County Council Catering and Contract Services, managed by Kay Knight, supplies the 120 schools in the county. They have been working to increase the use of locally produced food in the schools they supply.

Since the inception of the local food initiative, the number of school lunches sold has doubled due to the increased quality and variety of meals supplied. Because the school meal program had only been breaking even, the increase in school meal sales has generated profits that have then been reinvested in the schools.

Kay Knight put a lot of energy into developing relationships with local producers and suppliers and continues to find more sources of local food. Currently, they are able to source local pork, lamb, burgers, sausages, eggs, ice cream, potatoes and some vegetables and fruit, including local, organic apples (Curry, 2003; Friends of the Earth, 2003). The local sourcing has been achieved without an increase in the budget (Friends of the Earth, 2003).

Since the inception of the local food initiative, the number of school lunches sold has doubled due to the increased quality and variety of meals supplied (Curry, 2003). Because the school meal program had only been breaking even, the increase in school meal sales has generated profits that have then been reinvested in the schools. The reinvestment has allowed for further improvements in food quality, higher wages for the kitchen staff, and the purchase of new kitchen equipment (Friends of the Earth, 2003).

In addition to the lunch program, local foods are also being used in the tuck shop. For 10p (approximately 25 cents), students can purchase paper cup filled with fruit. The tuck shop uses out-grade produce – fruit that is either too large or too small for the supermarket. Kay Knight knew that “small children find it difficult to eat whole pieces of fruit, but when presented with a variety of fruits cut into bite-sized pieces, they will accept it” (Friends of the Earth, 2003: 2). Further initiatives include a breakfast program, introduced in 20 primary schools, and a food basket service that allows staff to purchase local food for home use (Curry, 2003). There is an educational component to the local food initiative which includes sending menus and newsletters home and inviting parents to special “taster” days (Friends of the Earth, 2003).

Challenges faced in the implementation of this local food initiative include obtaining a sufficient quantity of local supply from smaller producers, overcoming both bureaucratic and distribution issues, and the 40-week demand for food (as opposed to 52 weeks).

Some of the challenges faced in the implementation of this local food initiative include obtaining a sufficient quantity of local supply from smaller producers, overcoming both bureaucratic and distribution issues, and the 40-week demand for food (as opposed to 52 weeks) (Wye Valley AONB & Sustain, 2003). The initiative, however, has had numerous benefits including increased consumption of fresh foods by students and

marketing opportunities for local producers, as well as skill building, greater job satisfaction and reduced turnover amongst kitchen staff (Curry, 2003).

HOSPITAL FOOD PROJECT

The British National Health Service (NHS) serves 300 million meals in 1200 hospitals every year, totaling £500 million spent on food annually (Hockridge & Longfield, 2005). If this money was used to purchase locally produced foods, it would provide a boost to local economies of rural communities. In a study by the Royal College of Physicians, it was found that 40% of patients admitted to hospitals in the UK are either malnourished or become malnourished during the course of their stay (Morgan and Morley, 2002). It was in this context that the Hospital Food Project was piloted. From January 2004 until December 2005, the Hospital Food Project was initiated in four London hospitals. The project was coordinated by Sustain, under its London Food Link Program and in partnership with the Soil Association. The aim of the project was to increase the percentage of local, seasonal and organic food used in the participating hospitals to 10%. The objectives of the project were to:

- Provide new markets for organic and/or local food;
- Provide more secure markets by encouraging medium-term supply contracts;
- Develop markets for products rejected by supermarkets (for cosmetic reasons, for example);
- Increase returns for producers where possible, while maintaining a good price to public sector buyers by shortening supply chains;
- Identify and help create viable distribution mechanisms;
- Secure high level support in NHS catering as a step towards integrating local and/or organic products into standard procedures;
- Promote the practical lessons learnt as widely as possible to the health, food and business sectors (Hockridge & Longfield, 2005:7).

Certain conditions were agreed to before beginning the project (Hockridge & Longfield, 2005). For example, it was agreed that local food would be given priority over organic food. Additionally, it was important that the project focus on procurement of local foods that were currently being sourced from other countries and not simply displace a product produced in one region of Britain with one from a somewhat closer region. It was also agreed for both health and environmental reasons that increasing the number of deliveries to the hospitals would be avoided. Hospitals did not want to see increased deliveries due to issues of infection control, increased invoicing, and vehicle congestion in the loading bays. For environmental reasons, it was important not to increase vehicle traffic, particularly of small, inefficient vehicles.

The majority of the work of Sustain and the Soil Association centered on working as a “dating agency” to match potential food suppliers with a particular hospital’s requirements.

The majority of the work of Sustain and the Soil Association centered on working as a “dating agency” to match potential food suppliers with a particular hospital’s

requirements (Hockridge & Longfield, 2005). Through existing contacts, internet searches, trade shows, and the Soil Association's existing network of producers, the project officers located suppliers and created a database that has been made available to other public institutions. Other project activities included:

- adapting menus to include more local foods and developing promotional materials to advertise the change;
- organizing visits to suppliers so that the London-based caterers could make a personal connection with the farms;
- holding informational events with both dieticians and potential suppliers;
- organizing a photography exhibit "to illustrate and celebrate the project from 'farm to plate'" which was displayed first at City Hall and then at the participating hospitals; and
- organizing numerous promotional events such as showcasing a local, organic breakfast; setting up an organic fruit and vegetable box scheme for patients, staff and visitors; and holding an *Apple Day* celebration to highlight varieties of English apples.

Royal Brompton incorporated the local food initiative into all parts of their operations; much of their success was due to an enthusiastic catering manager.

At the end of the pilot project, certain hospitals had been more successful than others in establishing local and/or organic food procurement (Hockridge & Longfield, 2005).

Ealing General – This hospital's food service was supplied by a large national company that was not willing to commit to sustainable purchasing at that time. Penalty costs were incurred by individual hospitals should they wish to change an aspect of the catering.

Royal Bethlem – This hospital successfully started a fruit and vegetable box scheme for staff, visitors, and patients. They are currently working with their fruit and vegetable supplier to procure more local, seasonal produce.

Royal Brompton – This hospital incorporated the local food initiative into all parts of their operations; much of their success was due to an enthusiastic catering manager. In their "whole hospital" approach, healthy eating is seen as an integral part of patient care. They reached their goal of 10% of their food budget spent on local and/or organic food in 6 months, and as of late 2005, were at 13%. They have successfully sourced local potatoes and some fruit and vegetables, organic oats, and local organic milk, beef, apple juice and pear juice.

St. George's – This hospital had recently suffered budgetary cuts to the hospital catering department due to financial difficulties at the hospital. However, the hospital restaurant has managed to source some local products, including ice cream and dried fruit.

EAT THE VIEW

Eat the View was an initiative of the Countryside Agency which aimed to reconnect the consumer with the region in which their food is produced. It ran from 2000 to 2006.

While not specifically a procurement initiative, this program has provided support for producers. By working in partnership with other organizations, Eat the View focused on:

- raising consumer awareness of the links between the products they buy and the countryside they value;
- helping increase demand for locally and regionally distinctive products that help reinforce the character of the countryside;
- working to enhance market opportunities for producers and growers as a result of product identity with land management systems that promote the character, diversity and environmental value of the landscape (Countryside Agency, 2002: 10).

To achieve their objectives, Eat the View formed partnerships with numerous organizations to support demonstration and pilot projects (Countryside Agency, 2002). Examples of organizations with which the Countryside Agency, through the Eat the View initiative, had partnerships include: the Farm Retail Association, the National Association of Farmers' Markets (which it helped establish), the Soil Association, the Forestry Commission, Cotswolds Area of Outstanding Beauty, the Peak District National Park, Food from Britain and regional food organizations.

A diversity of projects were undertaken. Examples include helping the Farm Retail Association to increase their membership and develop a farm shop accreditation scheme; working with Food from Britain to expand the role and capacity of regional food groups to market locally and regionally distinctive projects; working with the Cotswolds Area of Outstanding Beauty and the Peak District National Park to pilot the use of an environmental quality mark, to distinguish products that come from sustainably-run operations that help to protect the British landscape; and funding a study to examine the feasibility of composting bracken (Countryside Agency, 2002). Some non-food projects have also been initiated under the Eat the View initiative, such as a project with the Forestry Commission to increase the market for English wood products and support for local craftspeople (Countryside Agency, 2002).

UNITED STATES OF AMERICA

Unlike Italy and Britain, the United States does not have an overarching culture or strategy of public procurement of local foods. There are, however, policies and programs that support local food initiatives.

The Department of Defense (DoD) began a pilot project in 1994 in eight states, in which they offered their food buying services to local institutions, such as schools, hospitals and prisons (Joshi, et. al, 2006). In 1996, the program, now called the Fresh Program, took on a more local focus. In partnership with the Department of Agriculture (USDA), the

program sought to procure produce for institutions that was grown within their state, and increasingly gave preference to small and medium sized farms.

Ironically, local procurement efforts have been hampered in recent years by the USDA, who has begun enforcing regulations to prohibit geographical preferences when purchasing products with federal money, despite more recent legislation which overrides those regulations.

Currently the program is active in procuring local food for schools in 12 states and one territory. While programs vary from state-to-state, DoD involvement typically entails setting up a meeting with food service and state agriculture employees, helping to negotiate a fair price for farmers, and working with growers and grower organizations to ensure they have the necessary certification and are meeting standards and requirements. Ironically, local procurement efforts have been hampered in recent years by the USDA, who has begun enforcing regulations to prohibit geographical preferences when purchasing products with federal money, despite more recent legislation which overrides those regulations (Joshi, et. al, 2006). The Community Food Security Coalition has been working with the USDA and examining the 2007 Farm Bill to develop practices that foster local procurement policies (Joshi, et. al, 2006).

Over the past decade numerous local food procurement policies have been developed and implemented in a variety of venues from the Farm to School programs active in at least 19 states to university-based local food policies to local food as part of health care initiatives. Below are some examples.

FARM TO SCHOOL PROGRAMS: GET FRESH, GET LOCAL

A recent report by Joshi, et al (2006), features case studies of farm to school programs in eight different states and showcases the diversity of programs. One example detailed in Joshi et. al (2006), is that of the “Get Fresh, Get Local” program in Massachusetts. This

From the schools’ perspective, they required a wide variety of products but they preferred to deal with only one vendor. For the program to be profitable for the farmer, minimum orders were necessary to make deliveries practical and cost-effective.

program started as a one-year farm to school pilot in five school districts of Massachusetts. Funds of \$40,000 granted to the Massachusetts School Nutrition Association from a class action suit were used to start the pilot program.

Program coordinator, Kelly Erwin, found that the biggest challenge was to find farmers to supply the school market. She began by contacting farmers using directories of commodity associations, old lists of wholesaling farms, and referrals from other farmers. She succeeded in finding farmers to supply four of the five schools in the first year and then found a farm for the fifth school the following year.

After the pilot ended, Erwin began working with the Czajkowski farm to “define what a ‘good’ school customer would look like relative to existing delivery routes, school

locations, product mix and purchasing volume” (12). She continued to work to match farms and schools and to do the necessary preliminary research to locate mid-sized farmers.

In order to grow the program, Erwin found that several conditions were necessary. From the schools’ perspective, they required a wide variety of products but they preferred to deal with only one vendor. For the program to be profitable for the farmer, minimum orders were necessary to make deliveries practical and cost-effective. By offering a wide variety of products, either by diversifying their farm or by purchasing products from other farms, it was easier for the school to make the minimum order and for the farmer to meet schools’ need for variety. Erwin also found that cold storage facilities were needed to extend the period of time in which the farmer could supply the school and that being able to supply tree fruit and/or berries in addition to vegetables, made the operation more profitable.

Erwin was also involved in assisting the University of Massachusetts with their local food purchasing. The university required large quantities of a wide variety of products. This in turn was beneficial for the schools near the university. Because the university required such large quantities, it became efficient for suppliers to deliver regularly to the area, and thus the schools in the area could have a wider variety of products delivered to them.

A “translator” or matchmaker was needed, particularly in the beginning, to help farmers and food service providers understand one another’s challenges, limitations, and priorities. In time, a relationship formed between the two parties and even some of the more reluctant food service providers become enthusiastic about buying locally.

Some of the challenges faced by the Massachusetts farm to school program include inadequate kitchen staff and facilities at the school, as well as the emergence of food service management companies who have “preferred” vendor contracts with large food manufacturers and who would prefer not to deal with smaller local suppliers. She did find that price was generally not an issue. Even when more expensive food items (e.g. strawberries) were brought in, the increase in school meals purchased offset the increased costs.

The reasons cited for the success of the program are related to both logistics and education. Erwin was able to find mid-sized farmers whose existing delivery routes passed near the participating schools, and who thus could easily accommodate the programs into their existing operations. She found that a “translator” or matchmaker was needed, particularly in the beginning, to help farmers and food service providers understand one another’s challenges, limitations, and priorities. In time, a relationship formed between the two parties and even some of the more reluctant food service providers become enthusiastic about buying locally.

Education programs are key to the success of a farm to school program. There were chef-led “Cooking with Local Foods” workshops held around the region and a local chef

developed and tested a food service cookbook. The Seeds of Solidarity Education Center developed school gardens and classroom curricula for the students, as they have found that interest in purchasing locally tends to last when the school also has a garden onsite. Finally, the Massachusetts Department of Agricultural Resources developed display materials for school food service trade shows and a farm to school page on their website with resources for both farmers and food service providers.

Future plans for this program include the training and mentoring of other agriculture support professionals to increase the number of “matchmakers” throughout Massachusetts, as well as a telephone survey on local food purchasing practices currently employed by food services directors in Massachusetts.

KAISER PERMANENTE

Established in 1945, Kaiser Permanente is the oldest and largest private non-profit health care system in the United States. It has 8.6 million members, 37 medical centers, and 431 clinics.

Recognizing its responsibilities as a health promotion organization, Kaiser Permanente has, in recent years, begun to develop a food policy. The vision is as follows:

Kaiser Permanente aspires to improve the health of our members, employees, our communities and the environment by increasing access to fresh, healthy food in and around KP facilities. We will promote agricultural practices that are ecologically sound, economically viable and socially responsible by the way we purchase food (Kaiser Permanente, 2006: 1).

Policy objectives include:

- education – signage, table tent cards, menu notes, newsletters and e-mail are tools for educating members on what Kaiser Permanente is doing and why;
- locally sourced foods – local foods can be cheaper and fresher than conventional foods and while delivery can be difficult, food service firms should be open and flexible;
- hormone- or antibiotic-free poultry, livestock and dairy;
- reduced or zero-waste practices – potential actions include reducing or eliminating disposable cutlery, recycling, donating and/or composting unused or waste food, and donating unneeded kitchen equipment to local shelters or soup kitchens;
- seasonal and sustainably harvested foods;
- pesticide-free and other certifications (e.g. fair trade);
- energy- and water-efficiency practices; and
- nutrition (Kaiser Permanente 2005b).

The food policy extends to in-patient food, cafeterias and coffee carts, vending machines, catering and farmers' markets (Solomon, 2006). Kaiser Permanente has a Food Policy Steering Committee that developed the vision and guiding principles, ensures coordination, and supports implementation. There is a Community Food Workgroup, responsible for the farmers' markets and community gardens. And there is the Kaiser Permanente Food Workgroup, responsible for in-patient food, cafeterias, vending, and catering. A Vending subgroup also exists.

To date, 32 farmers' markets have been set up in 5 states, increasing fruit and vegetable consumption of employees, patients, and the local community. Between August and October, 2005, 1,238 surveys were collected at 17 of the 22 Kaiser Permanente-sponsored farmers' markets in existence at the time (Kaiser Permanente, 2005a). Of the participants surveyed, 71% indicated that they eat at least "a little more" fruit and vegetable as a result of shopping at the market and 63% reported eating at least "a few more kinds" of fruits and vegetables. Kaiser Permanente also wanted to determine who was shopping at the farmers' market and found that 53% were staff or physicians of Kaiser Permanente and 29% were members. Participants were also asked about types of services they would like to receive, with 61% indicating interest in recipes that use the produce available at the market, 35% indicating interest in general health and wellness information, and 32% wanting on-site consultations about food and diet.

To date, 32 farmers' markets have been set up in 5 states, increasing fruit and vegetable consumption of employees, patients, and the local community.

This survey suggests that Kaiser Permanente can contribute to the health and well-being of their staff and members by making access to fresh fruit and vegetables more convenient. Feedback on potential services will also help Kaiser Permanente create more opportunities. Currently they already offer an "Ask a Registered Dietitian" booth at two locations, several locations have on-site cooking demonstrations, and three have hands-on cooking classes.

If modest measures to procure more local fruits and vegetables (whole and processed) were undertaken, Kaiser Permanente's carbon footprint for the northern California hospitals could be reduced by approximately 20%.

Progress has been made in other areas including: a Healthy Picks vending program; sustainable and healthy cafeteria food; rBGH-free dairy; seasonal menu planning, and a northern California local sourcing pilot (Solomon, 2006).

Talberth and Sweitzer (2006) published a paper examining the decrease in Kaiser Permanente's carbon footprint if they were to switch from their current food procurement system to an alternative system with a greater focus on local food procurement. If modest measures to procure more local fruits and vegetables (whole and processed) were undertaken, Kaiser Permanente's carbon footprint for the northern California hospitals could be reduced by approximately 20%. While this figure is still relatively rough and based on a number of

assumptions, future studies could endeavor to refine the calculations. With better data on the exact types of truck, ship or airplane used, or by incorporating information about different types of farming practices, the study could be more comprehensive.

YALE SUSTAINABLE FOOD PROJECT

Yale University, in New Haven, Connecticut, founded the Yale Sustainable Food Project in 2001. Many students, faculty, and staff played a role in the creation of this project, along with Yale president, Richard Levin, and chef and sustainable agriculture advocate, Alice Waters. The two main project components include the establishment of an urban farm on an overgrown plot of land at the university and a sustainable food initiative in the university dining halls. The Yale Sustainable Food Project is staffed by two project directors: one focuses on the farm and the other on the dining services. Initial funding to cover the costs of hiring the directors and some of the project expenses came from an anonymous donor (Kummer, 2004).

... students who volunteer on the farm once a month or more “report better adjustment to college, higher participation in class, fewer tardy assignments, more frequent social interactions, and fewer symptoms of depression than students who do not volunteer on the farm”.

The Yale Farm, established in 2003, is an educational resource and a model of small-scale, sustainable agriculture. Over 200 varieties of fruits, vegetables, herbs and flowers are produced on the site and are sold at the New Haven Farmers’ Market and to New Haven restaurants. The produce is also given to volunteers and shared in Yale dining halls on special occasions (Yale, 2007). Proceeds from the farm help defray its

operating costs. The farm has 30 student volunteers in a typical week. In an ongoing study, preliminary results indicate that students who volunteer on the farm once a month or more “report better adjustment to college, higher participation in class, fewer tardy assignments, more frequent social interactions, and fewer symptoms of depression than students who do not volunteer on the farm” (Viertel & Shannon-DiPietro, 2005: 5-6).

The sustainable food initiative began with a pilot project in the dining hall of Berkeley College, one of twelve dining locations on the Yale University campus. In the fall of 2003, the test kitchen at Berkeley College opened. The test kitchen prepares meals based on a seasonal meal using as many local, sustainable or fairly traded ingredients as possible. Berkeley College was chosen as the pilot location because it had a newly renovated kitchen, a master and associate master who were enthusiastic about the project and talented staff (Yale University, 2007). Buy-in from those who do the cooking is very important, as the shift to local food requires more preparation time than conventional food, which has often been pre-peeled and chopped and arrives in Cryovac bags (Kummer, 2004). The pilot, however, was a large success. There were reports of long lines at the dining hall and of students from other colleges creating fake Berkeley IDs in order to access the better food (Kummer, 2004).

Since 1998, Yale University has contracted Aramark for its food service management. Yale University, however, sources and purchases the ingredients used in the dining halls. (Yale University, 2007).

The cost of preparing local, sustainable meals at the Berkeley dining hall is higher than in the other dining halls with conventional menus. In 2003, its first year of operation, the food cost was 75% higher than in other college dining halls; however, by 2005, the food cost per meal was approximately 35% higher than the other colleges. This suggests that a full expansion can be fiscally responsible as the system becomes more efficient (Yale, 2007; Viertel & Shannon-DiPietro, 2005). Not all foods have been more expensive. For example, the granola recipe made from local and organic ingredients was actually cheaper than the pre-made granola bought in bulk that the other colleges were purchasing (Kummer, 2005).

Buy-in from those who do the cooking is very important, as the shift to local food requires more preparation time than conventional food, which has often been pre-peeled and chopped and arrives in Cryovac bags.

After the success of the Berkeley test kitchen, the sustainable food initiative was expanded to other dining halls (Viertel & Shannon-DiPietro, 2005). In 2005, the plan was to increase the amount of sustainable food to 22% of the menu. A survey of Yale students conducted in 2005 showed very strong support for further expansion of the Yale Sustainable Food Project, with 90% of students stating that an expansion was “important” to them. Additionally, the survey found that the students in Berkeley College ranked the food quality 30% above the Yale College average (Viertel & Shannon-DiPietro, 2005).

Educational initiatives surrounding food include a very popular lecture course entitled “The Psychology, Biology and Politics of Food”, informal weekly workshops at the farm, a fall Harvest Festival, and print materials in the dining halls (Viertel & Shannon-DiPietro, 2005).

Yale is becoming a national model for sustainable food in universities, with representatives from twelve universities visiting in 2005 to learn more about the Yale Sustainable Food Project (Viertel & Shannon-DiPietro, 2005).

CANADA

Several Canadian local food procurement policies and initiatives have begun in recent years. As most are still in the early stages, it is difficult to find reports and evaluations of the programs; however, it will be interesting to watch them develop in the coming years.

THE UNIVERSITY OF TORONTO AND LOCAL FLAVOUR PLUS

On September 19, 2006, the University of Toronto launched their local, sustainable food procurement initiative. The University of Toronto is using an incremental approach to ease the transition to more local, sustainable food at the university (Bowman, 2006).

Anne MacDonald, the university's director of ancillary services, has characterized the 2006-07 school year as "experimental" (Bowman, 2006). The first local, sustainable foods to be introduced to the menu are dairy products, salad ingredients, processed tomatoes and other seasonal ingredients. Eggs are the next item to be studied.

Local Flavour Plus, an Ontario-based non-profit organization that certifies local, sustainable farms, helped to broker the arrangement between the University of Toronto and their food service providers. The 10 guiding principles of Local Flavour Plus are as follows:

- 1) Link local food producers and eaters to boost community, health, and environmental benefits.
- 2) Reduce the distance between farmers and eaters to promote vibrant regional economies.
- 3) Reduce or eliminate the use of synthetic pesticides and fertilizers.
- 4) Reduce agriculture pollution by protecting and conserving soil and water resources.
- 5) Promote safe and fair working conditions for farm workers and viable incomes for farmers.
- 6) Raise animals in humane conditions without the use of growth stimulating hormones, sub-therapeutic antibiotics, or animal by-products.
- 7) Conserve and enhance wildlife habitat and ecological diversity.
- 8) Reduce the use of fossil fuels throughout the entire food chain.
- 9) Produce crops and raise animals without the use of genetic engineering.
- 10) Encourage closed-looped systems that conserve and recycle nutrients (Local Flavour Plus, 2007)

Local Flavour Plus, an Ontario-based non-profit organization that certifies local, sustainable farms, helped to broker the arrangement between the University of Toronto and their food service providers.

As of September 2006, 30 farms were LFP certified and demand for their products was exceeding the supply (Powell, 2006).

MOUNT ALLISON UNIVERSITY

On May 1, 2006 a sustainable procurement policy for the campus dining services at Mount Allison University came into effect.

Prior to May 1, 2006, the university's dining services were contracted to Sodexo. In the two years prior to the end of the contract, the university researched best practices in sustainable food procurement. Michelle Strain, director of administrative services, traveled to and talked to other universities in North America, including Yale, Cornell, Bowdoin, and Colby (M. Strain, *pers. comm.*).

The committee, made up of staff and students, included a local, organic, and environmental clause in the Request For Proposals. Aramark responded and was awarded the contract.

The current requirements include a minimum of 33% locally sourced foods, which will increase to 40% and then 50% throughout the life of the contract (M. Strain, *pers. comm.*). Dairy, eggs, potatoes, and in-season fruits and vegetables have been the easiest to source locally. For example, Scotsburn Dairy, located within 60 km of Mount Allison, currently supplies the dairy products to campus. Suppliers have to be licensed and federally inspected, as per Aramark's food safety requirements.

Fish, poultry, and meat have been more difficult, due to a lack of licensed suppliers and storage facilities.

The current requirements include a minimum of 33% locally sourced foods, which will increase to 40% and then 50% throughout the life of the contract.

Other environmental and social justice initiatives include biodegradable packaging, fair trade products, and a focus on eating lower on the food chain (M. Strain, *pers. comm.*). The "plastic" wrap used in the two retail outlets on campus is made from a corn-based product that biodegrades within 10 days and the packaging biodegrades within 45 days. Fair trade coffee and tea are sold in the retail outlets and dining hall, and are accompanied by educational displays. Vegan and vegetarian options are available at all of the food stations in the dining hall and one food station is devoted entirely to vegan and vegetarian foods. This station is regularly used to introduce international foods to the menu. Mount Allison University was recently recognized by PETA as one of the most vegetarian-friendly universities in Canada.

Food service providers have been educating themselves on local, organic and sustainable food issues in recent years and are much more open than in the past. An institution can ask for certain requirements, especially when shopping for a new contract.

Future plans include creating a scraping station and a campus composting project (M. Strain, *pers. comm.*). The scraping station would require students to scrape their own plates at the dining hall in an effort to make them more aware of food waste on campus and encourage them to reduce their own food waste. Also in progress is a composting project, whereby all food and garden waste would be composted on campus, reducing the university's need to send its waste off-site. Both are expected to be in place by the fall of 2007.

Current challenges include moving the percentage of local food from 33% to 50% (M. Strain, *pers. comm.*). Because of Aramark's food storage and processing requirements, they only use federally-inspected meat, and require farm food safety certification (Hazardous Analysis of Critical Control Points) and \$5 million liability insurance (A. Grant, *pers. comm.*). The majority of the food used by Aramark is supplied by Sysco. Ideally, Mount Allison would like to see Aramark buy from more small, local farmers and also work with the local community garden that could be supplying the university with fresh herbs.

Michelle Strain, director of administrative services at Mount Allison, noted that food service providers have been educating themselves on local, organic and sustainable food issues in recent years and are much more open than in the past. An institution can ask for certain requirements, especially when shopping for a new contract. She also noted that Environment Canada has been very helpful with the composting project, helping Mount Allison navigate the requirements.

WORKPLACE FOOD POLICIES

The above section examined larger scale institutional food procurement policies; however, there are also workplaces implementing sustainable food procurement policies on a smaller scale. It has been more difficult to find examples of these policies, likely because few internal workplace policies are being made publicly available.

The workplace is an ideal environment for promoting healthy local food, as many adults spend a third of their day at work. According to Cowan (in Wanjek, 2005) “In Canada, the cost-effectiveness of workplace health promotion programmes is estimated to be \$1.75–6.85 for every corporate dollar invested, based on reduced employee turnover, greater productivity and decreased medical claims by participating employees” (19-20). Below are three examples of healthy, sustainable food initiatives.

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ActNow, BC

The province of British Columbia has begun ActNow BC, “a cross government, cross-sectoral and integrated initiative with the over arching goal to make British Columbia the healthiest jurisdiction ever to host the Olympic and Paralympic Games by targeting common risk factors for chronic diseases” (ActNow BC, no date a).

Among the healthy workplaces initiatives, the healthy eating section gives guidelines as to which foods should be chosen for meetings and events, and which to avoid. Checklists, workbooks, toolkits, brochures, and activity posters can all be found on the website. There is a short reference to the importance of buying locally produced food in their *Meet Well* brochure: “Locally grown and produced foods are fresher and less expensive when they are in season. Choosing locally supports local farmers and producers and reduces shipping costs and environmental impact” (ActNow BC, no date b). There is also a section on local, in-season fruits and vegetables on the website, which includes suggestions on where to buy fresh local produce and a seasonal fruit and vegetable guide (ActNow BC, 2006).

Farm Fresh Project, Maine

The Farm Fresh Project ran an intervention in workplaces in rural Maine for six weeks in the summer of 1997, with the aim of changing produce-purchasing behavior (Ross et al., 1999). In reviewing the literature, they found that positive attitudes toward locally produced food do not necessarily translate into increased purchases of locally produced foods. Past research suggested that inconvenience is a major barrier for consumers. The researchers set out to develop a project to overcome the inconvenience of buying locally.

Positive attitudes toward locally produced food do not necessarily translate into increased purchases of locally produced foods.

In three workplaces, on a weekly basis, employees were offered tastings of local food, information about the produce, and the opportunity to order produce, which would then be delivered to their workplace. On average, 25% of employees ordered produce. Significant numbers of employees also increased their purchases of local foods at local farmers' markets, roadside stands, pick-your-own operations, and other outlets. Results were compared with those of a control group, who had not received the intervention. In the control group, only purchases at roadside stands increased.

The authors concluded that selling to consumers at their workplace may be an option to increase the markets for local food. However, they also note that advance orders may be too time-consuming and transportation-intensive for farmers, but that temporary farm stands at workplaces may be a promising venue.

Defra, Britain

In 2003 the British Department of Environment, Food and Rural Affairs (Defra) adopted an internal sustainable food procurement policy (Defra, 2006). The internal policy extends to the thirteen catering facilities that provide dining services to Defra staff, as well as refreshments for meetings and conferences. Six different catering companies provide these services and have been proactive in implementing the PSFPI (see the Britain section above for more details).

Objectives of the action plan include: organic food, local food, fairly traded food, fair treatment of suppliers, healthy eating, food hygiene, religious, cultural and ethnic diets, avoidance of waste, reducing vehicle emissions for food delivery, and other environmental objectives. Specific action items to address these objectives include working to increase the amount of sustainable food procured by the department, by working with their contractors and ensuring that purchasing processes do not discriminate against local suppliers. Additionally, they are undertaking educational initiatives to raise awareness about organic produce and fair trade products. Finally, they are conducting regular audits and surveys to assess progress and are updating the action plan as needed.

RESULTS OF INTERVIEWS WITH LOCAL FOOD BUSINESSES

In an effort to begin exploring the possibilities and challenges faced by local food businesses, interviews with five local food businesses were undertaken.

The five local food businesses were as follows:

- Unnamed Caterer (for reasons of privacy) – a soup and sandwich-style catering company in downtown Halifax that has been in business for ten years.
- Terroir Catering (Sean Gallagher) – a Halifax-based catering company specializing in local, sustainable food. Most of its business comes from catering lunchtime meetings, conferences and receptions. It also operates a sandwich bar in the Grad House on the Dalhousie Campus and has been in business for two years. It is opening a local food grocery store in the North End of Halifax.
- White Point Beach Resort (Alan Crosby)– A full service dining room operates at the resort located on the South Shore of Nova Scotia. It caters banquets, weddings, and events, and has a la carte dining. It has been in business since 1928.
- Masstown Market (Laurie Jennings) – an independent farm market located in Truro. It has been in business since 1969 and employ 65-70 people. It does a limited amount of catering, mainly trays of sandwiches, vegetables and sweets. The catering is not a large part of the business.
- SeaSpray Atlantic (Allison Grant) – a local, organic farmer co-operative, carrying a wide range of products. Thirteen farmers are members of this co-op, which started in PEI in the early 1990s and expanded to include Nova Scotia and New Brunswick in 2002. The co-op supplies restaurants, chain stores, independent retailers, some food service companies, and does some exporting along the eastern seaboard.

Customers

When asked if their customers are asking for local food, the unnamed caterer said no, Crosby of White Point said only the environmentally-minded organizations who hold events at White Point have been asking, and Gallagher of Terroir said that most of his business is coming from environmentally conscious organizations. Gallagher has not had to advertise; all of his business has been via word of mouth. Jennings of the Masstown Market said that his customers are not very aware of the benefits of buying locally. A few years ago he was getting a lot of questions about whether or not a product was organic or had been sprayed; however, in recent years those questions have stopped and he is unsure why. Grant of SeaSpray Atlantic said that her customers and potential customers are receptive to the idea of buying locally. She has found that the restaurant industry has been strongly promoting local food and that the grocery stores are starting to see local as a trend. She has found that Co-op Atlantic wants to promote local and that Sobeys is proud of the fact that they buy more local products than the other chains.

The restaurant industry has been strongly promoting local food and that the grocery stores are starting to see local as a trend.

Sourcing Local Products

The unnamed caterer, Terroir, White Point and Masstown market were all asked which products they found easier to source locally, and which were more difficult. Gallagher of Terroir Catering, who estimated that 90% of his ingredients were locally sourced, finds that there is always something available. All of the main ingredients are local and, when

All of the main ingredients are local and, when possible, organic and approximately half of the meat is free-range. He has to be creative, work with what is available, and plan ahead.

possible, organic and approximately half of the meat is free-range. He has to be creative, work with what is available, and plan ahead. The unnamed caterer uses local eggs, flour, apples, and produce when in season. White Point sources local beef, haddock, mussels, fresh herbs, and produce when in season. Crosby said that he occasionally receives calls from farmers in the area and rarely turns down anyone offering to sell him a local product. He has bought

rhubarb and mushrooms from growers in his area. The Masstown Market tries to buy as much local as they can get. He said that there are always local products in the store, though the amounts and products change seasonally. Jennings said that the primary products, such as fresh fruit and vegetables, were easy to source, as well as local flour.

Certain products are more difficult to source locally. White Point, given the large volume of food they require, had had trouble sourcing such products as free-range eggs and lamb, as the farmers could not supply him with all that he needed. Currently White Point orders approximately 75% of their food from M&S, a subsidiary of Gordon's Food Service and Crosby noted that it is hard to push the large food service companies to buy local. The unnamed caterer does 75% of their business

in the winter months when local produce is out of season, limiting the amount of local the caterer has been able to use. The Masstown Market would like to carry more processed goods, such as juice and canned vegetables, but cannot due to the closure of local processing facilities. Masstown would also like to carry more local meat products and is concerned about the decreasing numbers of meat processing facilities in the province. Gallagher of Terroir tries to plan ahead, as it's easy to run out of things like garlic. He noted that due to crop failures last summer, there are certain products, like organic carrots, that are in short supply.

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He also mentioned his plans to start a small retail store and noted a lack of certain products. For example, there are few artisan cheese-makers in Nova Scotia, which will make it necessary for him to source cheeses from New Brunswick and PEI, or perhaps Ontario and Quebec that have a larger selection of artisan cheese.

Challenges

A variety of challenges associated with local food were mentioned. For Terroir, which uses predominately local ingredients, the two related issues were planning and the learning curve. In terms of planning Gallagher found that he has to have open lines of

communication with local suppliers and know who was supplying what and when it will be available. Additionally, one has to plan for the winter months when local products are less readily available. Gallagher has wanted to do some preserving, but found that there is a steep learning curve associated with preserving. We are losing a lot of knowledge of previous generations.

Price and cost-related issues were discussed by four of the interviewees. Gallagher of Terroir noted that the fluctuating prices of his ingredients did make pricing menu items challenging. For example, a particular menu item could have a 60% mark-up at a certain time of the year, but may only be breaking even a few months later. The unnamed caterer noted that price, along with availability and reliability were what she looked for when ordering from a given supplier. Crosby at White Point noted that cost, particularly

The price of organic reflects the true cost of production; however, many of the larger buyers are used to setting the price they wish to pay, regardless of the true cost of production. It can be challenging to convince them to buy a more fairly-priced product.

of organic products, was an issue for him. For example, he has found that organic pork is five times more expensive than his regular pork supply. Grant also discussed pricing. The price of organic reflects the true cost of production; however, many of the larger buyers are used to setting the price they wish to pay, regardless of the true cost of production. It can be challenging to convince them to buy a more fairly-priced product.

Convenience poses another challenge. Crosby of White Point said that if the process of sourcing local food becomes onerous, he cannot do it. In October 2006, the Canadian Network for Environmental Communication and Education (EECOM) held a conference at White Point and they sourced as much local, organic as possible for the meals. Crosby said that he found it to be a great exercise and he had a lot of fun planning the menu; however, it raised a lot of issues in terms of convenience and ease of sourcing local. He found that local farmers, particularly local organic farmers, tend to be very loosely organized. He found the Atlantic Canadian Organic Regional Network's (ACORN) website a very useful resource.

The costs associated with delivery are also a large barrier for White Point because White Point is not near a major centre and there are few other businesses nearby to make deliveries more cost-effective. Grant of SeaSpray Atlantic also discussed the cost-effectiveness of deliveries. As many of the markets are small, it is not cost-effective if one has to make a lot of small deliveries. This year they are starting a pilot project with a delivery vehicle of their own.

Both SeaSpray and Masstown Market raised infrastructure issues. As mentioned above, Masstown Market would like to supply more locally processed goods and meat products, but processing facilities have been closing. Grant of SeaSpray noted that the market for convenience foods is growing, but there is little infrastructure to

As many of the markets are small, it is not cost-effective if one has to make a lot of small deliveries.

process and package products such as pre-washed salad mixes or ready-to-eat baby carrots. Grant also discussed issues related to meat. There are two types of inspections for meat processing: federal and provincial. While both are equally safe, federal inspection is needed if meat is to cross provincial or national borders. All meat in the large chain grocery stores has to be federally inspected, as it must cross borders to go through the distribution centres. In the Maritimes, we only have one federally-inspected plant that processes beef, and a couple more for pork and poultry. Organic meat is especially difficult, as it requires a custom kill at an abattoir. Jennings of Masstown Market expressed concern at the shrinking market for provincially-inspected meat, as there are few independent Nova Scotia retailers.

Opportunities and benefits

When asked what it would take for other caterers to increase their use of local products, Gallagher said that customers would have to ask for it. He suggested that conventional caterers could make use of the two local organic co-ops, SeaSpray Atlantic and Fresh Air Foods. Conventional caterers would also have to throw away everything they know about the conventional food buying system and trust the local food system. They would have to be convinced that being seen as a more community-minded organization would make it worth the extra cost.

The unnamed caterer noted that dealing with local producers is more interesting than “those 1-800 numbers you call”. Crosby said that sometimes he will source a product because it makes him feel good and hopes the customer will enjoy it, though it may not always be a good business decision. Jennings of Masstown finds that local food is fresher and competitive in terms of quality and price. He also likes dealing with the person who grew or made the product. They tend to be the best salespeople because they truly care about the product. Finally, Grant noted the need for better awareness of the benefits of buying local. She has found that as long as the consumer feels that they are getting a quality product, they are willing to pay the price.

LESSONS LEARNED

Building on the above case studies and using several articles on best practices as guides, there are several lessons we can learn about local food procurement policies. Some of these lessons include: roles of the key partners, steps involved in developing and implementing a policy, and common challenges and potential solutions. (For detailed articles on best practices in developing and/or implementing a local food procurement policy, see Curry, 2003; Food Alliance, 2007; Hockridge & Longfield, 2005; Michaels, 2006; Oxfam America, 2002; Peckham & Petts, 2003.)

KEY PARTNERS AND THEIR ROLES

The three key partners in any institutional food procurement policy are the institutional buyers, the producers/suppliers, and the matchmakers.

Institutional buyers are responsible for involving the appropriate individuals within their institutions, identifying champions, and developing and implementing the policy. The producers/suppliers are responsible for determining which products they can supply and in what quantities. They may also need to collaborate with other producers/suppliers in order to build capacity and infrastructure within the sector.

The three key partners in any institutional food procurement policy are the institutional buyers, the producers/suppliers, and the matchmakers.

Matchmakers link buyers with suppliers. They may help negotiate contracts, clarify regulations, undertake educational initiatives to support the local procurement policy, and help the buyers and suppliers navigate challenges as they arise. The matchmakers could come from within the institution, from within the supply sector, or from an outside organization. It is not uncommon for the matchmaking role to be filled by a non-governmental

organization, such as the case of Sustain in the London Hospital Food Project. If the role is filled by such a non-governmental organization, it is necessary that they have adequate funding and dedicated coordinators.

THE STEPS

The following steps have been compiled from a number of sources (Curry, 2003; Food Alliance, 2007; Hockridge & Longfield, 2005; Michaels, 2006; Oxfam America, 2002; Peckham & Petts, 2003). Not all steps are necessarily relevant to every situation; rather they reflect the range of issues that should be considered. The steps are organized into phases: initial planning, policy development and policy implementation.

Lay the Groundwork

- Identify management, staff, constituent and stakeholder needs and interests.
- Engage institutional leaders at all levels.
- Identify sustainability champions.
- Involve key stakeholders.

- Audit how supply chains work at present.
 - Map and prepare a database of known producers, marketing groups, processing facilities, local wholesalers, retailers, and distributors.
 - Seek out processors and small wholesale companies who can operate at a local scale.
 - Develop an understanding of what local producers could potentially offer beyond their current ranges.

Develop the Policy

- Identify the parties and the nature of the policy
- Establish a vision
- Assess limits and opportunities
- Investigate local food sources
 - Additional time will likely be needed to work with and develop relationships with local suppliers.
- Establish strategies, standards and compliance mechanisms
- Establish benchmarks
- Create a statement of goals and objectives
- Develop an action plan
- Develop a statement of how the process will be managed, progress evaluated, and the policy adapted and improved over time

Implement the Policy

- Involve stakeholders across the sectors
 - This could potentially involve producers, suppliers, procurement officers, students and parents (in the school setting), dieticians (especially in the hospital setting), and kitchen staff. Consult with those involved to ensure that they are active participants in the implementation of the new policy.
- Provide education and demonstration
 - Provide buyers and suppliers with access to information and examples of good practice
 - Provide training opportunities e.g. for kitchen staff
- Implement the policy in a gradual manner
 - Staff has time to get used to the new policy
 - Producers have time to increase production and get delivery channels organized
- Provide practical help
 - Matchmakers will be necessary to connect and build relationships between buyers and suppliers
 - Provide support for smaller scale suppliers to collaborate and build capacity. Lack of delivery and storage infrastructure is often a large obstacle.
- Encourage flexibility
 - Retain existing kitchen infrastructure and invest in kitchens for hospitals, schools, or other institutions that have had their kitchens removed or that were built without kitchens.

- Encourage diversity from growers, manufacturers and distributors in order to increase regional self-reliance.
- Examine the contract process and specifications to ensure that they do not discriminate against local suppliers
- Review menus
 - Menus should reflect seasonal fresh produce available locally, and be geared to nutritional objectives
- Raise awareness and engage in educational initiatives
 - Communicate the message of sustainable food and healthy eating to buyers, consumers and throughout the supply chain.
- Evaluate and publicize your success!

COMMON CHALLENGES AND POTENTIAL SOLUTIONS

There are a number of common challenges faced in the procurement of locally produced food. Below are examples of some of the challenges and how they have been overcome.

Trade regulations

As noted in the European examples above, EU regulations include a principle of non-discrimination. Government procurers in the EU have had to be creative when developing policies. Some solutions have included incorporating seasonality, specifying levels of freshness and specifying fast delivery response times in the policy.

The issue of non-discrimination is not exclusive to the EU. Canada, in its Agreement on Internal Trade, also has non-discrimination regulations. Research should be conducted on the implications of this policy on the procurement of local food to ensure that this policy will not prevent the implementation of a local food procurement policy.

Canada, in its Agreement on Internal Trade, also has non-discrimination regulations

Contract Issues

Food service contracts can inadvertently discriminate against smaller scale suppliers by operating at a scale that excludes them. Additionally, smaller scale suppliers may not be familiar with the process of bidding for government contracts or may find the process cumbersome, and thus do not bid.

Peckham & Petts (2003) suggest the following methods for making government contracts more accessible to smaller scale local suppliers:

- Subdividing contracts into “lots”, which allows suppliers to bid on a percentage of a contract.
- Having occasional contracts, whereby a certain supplier (e.g. a local, organic producer) supplies meals on an occasional but regular basis, such as once every two weeks.
- Using variants. This method allows both

Longer term contracts allow producers to plan their plantings and invest in infrastructure.

sustainable local suppliers and conventional suppliers to bid for a contract, but the sustainable suppliers will have their environmental qualities considered favourably.

- Having longer term contracts that allow producers to plan their plantings and invest in infrastructure.

Delivery

There is a need for alternative distribution networks and for smaller suppliers to work together to make distribution more efficient and cost-effective. There are concerns that without a distribution network, there would be an increase in small vehicle traffic. It does not make economic or environmental sense to have a numerous small vans following each other around the province. Additionally, better coordination, should lead to improved access in more remote areas. One solution to this delivery issue is to encourage and support farmer co-operatives.

Quantity of supply

Achieving a sufficient quantity of supply is challenging on two scales. The first is at the smaller organizational scale and speaks to the need for matchmaking; it is challenging to find farms to match the scale of institutional needs. As mentioned by White Point Beach Resort, it is often difficult to find one supplier who can supply all of a given food item. As with the issue of delivery, encouraging and supporting farmer co-operatives may help to solve this problem.

If government institutions were to implement local procurement policies, would the province have sufficient supply?

The second challenge is on a larger scale. If government institutions were to implement local procurement policies, would the province have sufficient supply? While this question requires further research, quantity of supply is definitely a concern, particularly given the decreasing numbers of farms in Nova Scotia.

Cost of local, sustainable food

The cost of local sustainable food is both a real and perceived barrier. Sometimes local food can cost more to procure, as in the case of Yale University. The cost of meals at the Berkeley College, the pilot dining hall, was 75% higher than in the other dining halls in the first year. However, as the system became more efficient, the costs did decrease. By the third year, the costs were only 35% higher. It is not always the case that local, sustainable food is more expensive. The South Gloucestershire County Council Catering and Contract Services were successful in increasing the quantity of locally produced foods, without increasing the cost to the students. Additionally they found that the meals were fresher and better tasting, and as a result the sales increased, making the school meal program more profitable. The profits were then reinvested in further improving the food and kitchen infrastructure, creating a virtuous cycle.

Lack of kitchen facilities

Due to the increasing prevalence of pre-prepared or heat-and-serve meals, many institutions no longer have kitchen facilities on site.

Without kitchen facilities, institutions do not have the flexibility to implement local food procurement policies.

Without kitchen facilities, institutions do not have the flexibility to implement local food procurement policies, as they are dependent on the pre-prepared meals. For this reason, it is important to invest in kitchen facilities. The “Get Fresh, Get Local” farm to school program in Massachusetts experienced the problem of lack of

kitchen facilities. According to Joshi et al. (2006), over half of the students in the Boston public school system are served pre-prepared meals manufactured in another state due to lack of kitchen facilities in the schools.

Staff training

Connected to the issue of kitchen facilities is staff training. In many cases, the kitchen staff employed by an institution is not trained to cook. Their jobs consist of opening bags or cans and heating what has already been prepared. The staff is often paid low wages and turnover rates are high. As with kitchen facilities, investment is necessary. For example, when the South Gloucestershire County Council Catering and Contract Services reinvested profits into their kitchen facilities and staff, they found that staff job satisfaction increased and turnover rates decreased. At Yale University, they also found that the kitchen staff gained increased job satisfaction, despite the increased work load associated with cooking food from scratch.

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Developing menus

Menus often do not reflect seasonality or locally available foods. It is important to work with dietitians in hospitals and schools to create menus that are healthy, tasty and seasonally-appropriate. This also connects to the issues of staff training and kitchen facilities. Kitchen staff must have culinary training and the ability to cook with a wide variety of foods. They also need to have proper facilities in which to do this.

CONCLUSION

There are numerous environmental, economic and social reasons for developing and implementing a local food procurement policy. From reducing our food miles to supporting local farmers to promoting food security, a local food procurement policy has the potential to help create a more stable and sustainable food system for Nova Scotia. A food procurement policy could also move beyond just local food, to include other sustainability criteria such as those relating to reduced packaging, organic, seasonal and fair trade foods, culture appropriateness, animal welfare, healthy eating, and education. Local food procurement is an important step along the road toward sustainable prosperity in Nova Scotia.

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