



**THE HARRIS
CENTRE**
Memorial University

BUILDING AGRICULTURAL CAPACITY IN NEWFOUNDLAND AND LABRADOR

A. James Quinlan, Faculty of Medicine

May 2012



This research project was funded under the The Strategic Partnership – Harris Centre Student Research Fund. The intellectual property vests with the author(s). For more information about this Research Fund or to obtain hard copies of this report, please contact the Harris Centre.

Building Agricultural Capacity in
Newfoundland and Labrador

by

©A. James Quinlan

Faculty of Medicine

Memorial University of Newfoundland

1 May 2012

INTRD Strategic Partnership
Harris Centre

St. John's

Newfoundland

Contents

Executive Summary	2
Introduction.....	3
Barriers To Development.....	6
Potential Solutions	9
Case Study: How Government Stimulus Can Benefit Rural Agriculture.....	14
Conclusion	17
Recommendations.....	17
References.....	18

Executive Summary

Newfoundland and Labrador faces considerable challenges in maintaining a consistent and reliable food supply. The lack of locally produced food has resulted in the province's dependency on imported foods. Transporting this food to the province's communities relies on the ferry service, which is sensitive to disruption, and thereby contributes to the province's overall level of food insecurity. By increasing agricultural capacity, the province will be able to create employment, sustain rural economies, and increase local food production – all of which will help create a more food secure Newfoundland and Labrador.

There are many barriers preventing increased agricultural capacity in this province. First, there is a lack of infrastructure to promote and support labour and skill development. Second, current policies and programs favour large-scale agriculture, and fail to meet the needs of the developing smaller-scale industries that are commonly found in rural areas. Finally, current meat slaughtering regulations make it difficult for farmers to sell their products. Through government intervention, however, many of these barriers can be overcome.

In order to increase agricultural capacity in Newfoundland and Labrador, the government should invest in the creation of an Agricultural College on the Grenfell Campus of Memorial University. Such an institution could provide the necessary training to produce the farmers and entrepreneurs that are desperately needed in the province. There also needs to be a shift in policy directives to support and stimulate growth in the small-scale agricultural industries. The establishment of cooperatives that help small-scale producers share services, such as egg grading and meat inspection, are essential to the proliferation of competitive food production in the

province. Furthermore, it is important that government support the creation of a service that will help farmers and entrepreneurs with marketing and delivery of their product.

In the 2006 document “Eating Healthier in Newfoundland and Labrador” the provincial government acknowledged food security and food access as strategic priorities. Using these priorities as a starting point, this report aims to establish some of the barriers to developing agricultural capacity, as well as potential solutions for overcoming these barriers. Through dedicated action from both industry and government, Newfoundland and Labrador is capable of increasing its agricultural capacity to a point where it can be considered food secure.

Introduction

The health and wellbeing of a community is an intricate product of many factors, both physical and social. For people to identify as healthy, they need environments that support healthy choices, accessible options for physical activity, and a stable, safe, personally-acceptable source of food. This last component of well-being is more commonly referred to as community food security, which encompasses the production, availability, and consumption of healthy affordable foods. In the province of Newfoundland and Labrador, community food security is in serious jeopardy – the province currently imports 90% of its fresh fruits and vegetables (Harris Centre, 2010). With a modest supply of indigenous foods, people of the province often turn to other more readily available options. These food choices, guided by our environment, have helped Newfoundland and Labrador develop prevalence of diet-related chronic diseases, such as cancer, cardiovascular disease, and diabetes that are well above the national average (Public Health Agency of Canada [PHAC], 2008). In the 2006 document “Eating Healthier in Newfoundland and Labrador” the provincial government acknowledged food security and food

access as strategic priorities for enhancing provincial wellbeing (Government of Newfoundland and Labrador, 2006). Improving the province's agricultural capacity is a necessary step towards developing and maintaining community food security and food access. Currently, there are several barriers preventing the growth of small-scale agriculture including a lack of infrastructure, inadequate systems for labour and skill development, and narrow slaughter regulations that do not protect human health. To overcome these barriers, the Government of Newfoundland and Labrador must implement a series of policies that will stimulate growth in rural agricultural economies and provide safe, affordable, and healthy foods to the people of Newfoundland and Labrador.

Of all the Canadian provinces, Newfoundland and Labrador has the fewest number of farms, declining from 643 in 2001 to 558 in 2006 (Statistics Canada, 2009a). As shown in Figure 1, the current number of farms in the province is down from its peak of 4226 farms in 1935 (Ramsey, 1998). This decline has been matched with a net flow of people out of rural communities into larger urban centres, often in other parts of Canada or the world. Over the last 150 years, the proportion of the Canadian population living in rural communities has gone from 87% to 20% (Statistics Canada, 2009b). These migration patterns have been compounding food production problems, as the majority of Canadian farms are in rural areas. According to a recent analysis by Statistics Canada, 71% of agricultural activity takes place in predominately rural regions (Chartrand, 2005). More important than the fact that Newfoundland and Labrador's rural communities are declining in population are the reasons behind the decline. Only by understanding the roots of the problem will communities and policy-makers be able to curtail it. One major reason for the net outflow is the lack of jobs available in the rural economy. Without a sustainable economy, many are forced into larger city centres to find work. The Burin

peninsula, for example, has a 35% employment rate (Eastern Health, 2006). Increasing agricultural capacity in Newfoundland and Labrador would not only help the province become more self-sufficient, but it would create jobs in the parts of the province most in need of economic stimulus. Currently, the lack of supportive agricultural policies in the province are hindering community health, dampening rural development, and imposing barriers to small-scale farmers.

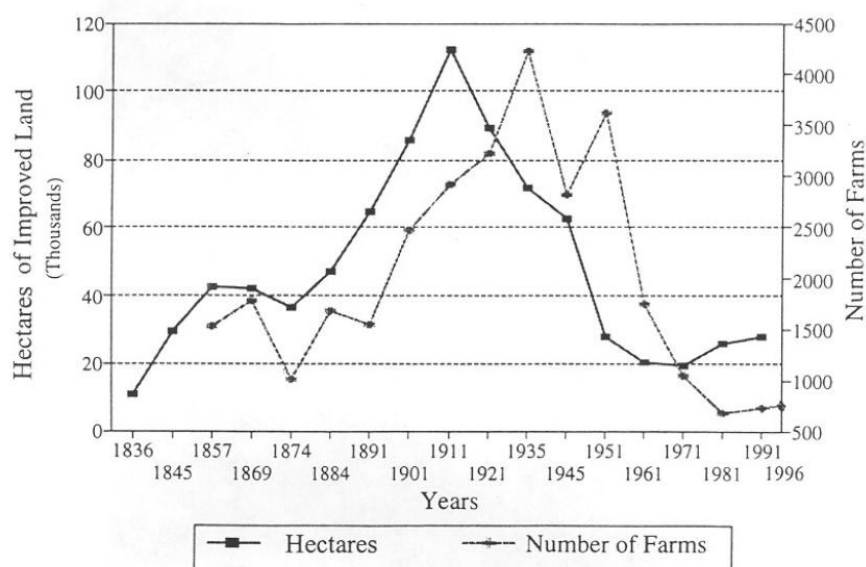


Figure 1. Number and area of farms in Newfoundland and Labrador, 1836-1996.

Although agriculture in Newfoundland and Labrador is currently under-supported, there is a history of government interest and investment in the industry. Throughout the 1980s, a number of government studies supported the further development of commercial agriculture (E.C.C., 1980; Government of Newfoundland and Labrador, 1980; Delaney, 1986). Following these reports, in 1986 the House approved the establishment of a task force to investigate the

development of agriculture within the province. This task force eventually produced *The Report of the Task Force on Agrifoods*, which put forth a number of recommendations designed to increase agricultural capacity (Hulan, 1991). In 1992, the Government released its economic recovery plan, *Change and Challenge: A Strategic Economic Plan*, which only endorsed a few of the recommendations made by the task force (Government of Newfoundland and Labrador, 1992). Furthermore, none of the recommendations were ever implemented and in 1993 government elected to abolish subsidies to the swine industry. This scenario highlights the importance of committing to agricultural development and financially supporting the recommendations on how to strengthen it. The production and distribution of agriculture in Newfoundland and Labrador faces a number of challenges, but without a commitment from government for stimulus to revitalize this essential industry, it will not be able to overcome the many obstacles along the way.

Barriers To Development

One of the biggest barriers to achieving community food security is the lack of labour and skill development opportunities in the province. Those interested in investing time and resources into agricultural production must first travel elsewhere, as neither Memorial University nor the College of the North Atlantic offer programs in primary agriculture. To acquire the necessary skills and formal training, one must relocate to the Nova Scotia Agricultural College in Truro, Nova Scotia or even farther to one of the other agricultural colleges across the country.

The education system in this province offers many viable career paths, however for something as essential to human life as food production, there is nothing. The provincial government is largely responsible for the publicly available programs offered in the education system, which places them in an ideal position to increase the number of opportunities. The expense associated with

leaving the province and the difficulties associated with relocating are two factors that prevent the province's youth from pursuing a career in agriculture.

For those who are able to train in primary agriculture, either formally or informally, there are additional barriers beyond initial education. Many groups have cited smaller-scale community agriculture, which brings the production and the market closer together, as a solution to community food security (Inter Pares, 2004). There are many benefits to smaller-scale food production including reduced transport to markets, a lower carbon footprint, increased transparency, and less reliance on conventional agrochemical farming methods. However, smaller-scale production cannot achieve an economy-of-scale, and therefore often lacks the ability to access important agricultural resources. For example, corporate suppliers of eggs in Newfoundland and Labrador have large facilities to automatically candle and grade the eggs that they produce. This advantage allows them to out-compete smaller producers by providing their product in the larger grocery stores. In order for local smaller-scale farms to compete in this neoliberalized world, the public sector needs to offer sufficient support to neutralize the advantage of multinational food corporations.

Candling and egg grading are not the only agricultural infrastructures that need improving. The province has tremendous potential to further develop livestock and poultry production. However, this production potential is being curbed by a severely limited access to the market. In order for meat products to be sold in large grocery store chains such as Sobeys or Dominion, the animal must be slaughtered in a federally-licensed facility. Newfoundland and Labrador has no such facility, and without such a facility local producers are unable to provide their products in the national chain stores.

Livestock that are raised and sold in this province must be slaughtered in one of the provincially-licensed facilities. The regulations that guide this process are less comprehensive than those governing the national facilities and may potentially threaten human health. There is no legislation in Newfoundland and Labrador requiring animals be inspected by a veterinarian prior to their slaughter. Although the *Meat Inspection Act* has put some safeguards in place, if locally-produced meat is to become a staple of the provincial diet, these regulations should be updated with a more substantial inspection process (Government of Newfoundland and Labrador, 2006). Recently, the provincial grocery store Colemans sought to offer local cuts of meat, while at the same time ensuring the health of their customers. Not satisfied with the provincial regulations, Colemans hired a veterinarian to visit the meat-producing farms to inspect the animals for quality and health. This, however, is a privilege of Colemans province-wide success – not all merchants can afford to have a veterinarian make farm visits. Furthermore, these inspections are not covered under provincial regulation. Without a more comprehensive regulatory process, it is difficult to ensure the safety of the meat products that are produced and sold in the province, which further hinders an increase in local food production.

Newfoundland and Labrador is vulnerable to food insecurity. The province's current food environment contributes to rates of chronic disease much higher than the national average. Furthermore, this food environment depends entirely on the ferry service to transport the food we consume to the island. The transport chain is bottlenecked by the marine ferry service, leaving the island portion of the province extremely sensitive to widespread food insecurity through a disruption in the service. Such disruptions have recently resulted in bare grocery store shelves after only a few days. In 2010, Hurricane Igor also exposed the many vulnerabilities of the province. With impassable roads, many rural communities had no source of food. It is time for

the government of Newfoundland and Labrador to take action and build agricultural capacity in this province that creates jobs, makes rural communities more self-reliant, and adds to the wellbeing of all citizens.

Potential Solutions

Fortunately, there are a number of steps the provincial government can take to increase agricultural output thereby making the province more food secure. For one, it could increase training capacity in the province. This initiative would best be completed in two phases: (1) a short term phase that increases training opportunities immediately and, (2) a long term phase that would provide the facilities necessary to continuously train the people of the province. The initial phase would involve making adequate funding available for individuals who wish to pursue agriculture as a career. Available funding would help offset the costs of both tuition and the expense of living in another province. It is important that money for a promotional campaign also be included in this budget. Targeted at high school-aged youth, a promotional campaign would raise interest in agricultural scholarships and help build interest in farming as a viable career option. This phase should be implemented quickly, and act as a temporary solution and bridge to the province's more sustainable and effective intervention: the creation of an Agricultural College in Newfoundland and Labrador.

Located in Corner Brook, the Grenfell Campus of Memorial University is steadily growing and has already established itself as a leader in environmental issues. Since the majority of the province's agricultural land is located on the west coast, the Grenfell Campus is the most logical place to create a School of Agriculture. Given our unique environment, this program

would focus on the potential strengths of the agricultural sector in the province and address the barriers faced by Newfoundland and Labrador farmers. The mere presence of an Agricultural College within the province will help citizens appreciate that agriculture is a viable, essential, and respectable career. Career opportunities like these will help rural youth realize their ability to remain in their communities while providing an essential and recently out-sourced service that contributes to the local economy and community wellbeing.

Investing in an agricultural college would be more than an investment in education. It would be more than an investment in jobs, or capacity, or infrastructure. It would also be investing in a cultural asset. Food is fundamental to life. It shapes our health, influences our actions, and helps us connect with one another. Memorial University currently has the capacity to train individuals in almost all of the important aspects of a society – medicine, business, humanities, basic sciences, and law enforcement, just to name a few. Yet with the elimination of the undergraduate program in dietetics, there is little focus on the food we consume, where it comes from, and how it is produced. Diet-related chronic diseases are now endemic in the province. These diseases – which are entirely preventable, wildly expensive, and largely defined by food consumption – represent a growing crisis in not only our health care system, but also our culture. In a culture where no emphasis is placed on the production of food, less importance is placed around the careful and appropriate consumption of food. Creating a centre for agricultural sciences will also generate attention and interest around food in general. It will give visibility to how food is produced, why it is important to produce locally, and how best to do so. Without government explicitly valuing food and its production through appropriate investments, the province of Newfoundland and Labrador will not be able to overcome its problems with food sourcing or food consumption.

Following an increase in available human resources for the agricultural industry, the development of a widespread and varied food production industry still faces several barriers. Once farmers have been trained, they are immediately confronted by competition from the larger corporate agricultural systems of the province. Already having recognized the need to increase agricultural capacity in the province, the government has established several programs to aid the further development of farmland. These programs, however, disproportionately favour already established farming operations and often have cut-offs that prevent new farmers from participating. One of the more prominent programs offered is the Agriculture and Agrifoods Development Fund, which was established to

“encourage the development, diversification and expansion of large scale agricultural projects in either the primary or secondary processing sectors within Newfoundland and Labrador, and is intended to stimulate and attract large scale investments in the industry (Government of Newfoundland and Labrador, 2011).”

Not only is the emphasis on large-scale producers in the mandate, but it is again reinforced in the eligibility criteria. In order to qualify for the funding one must prove a strong financial record and propose a project requiring a minimum investment of \$1,000,000. Other initiatives, such as the Provincial Agrifoods Assistance Program, which “provides financial assistance to eligible applicants involved in primary or secondary processing activities,” require that the farm have a minimum of \$15,000 in gross sales in order to qualify. These programs are all spearheaded by the provincial government.

Programs that are more accessible to new farmers have recently been developed by the federal government, with costs shared by the provinces on a 60:40 federal: provincial basis. These programs, which fall under the Growing Forward Agricultural Policy Framework, are far less exclusive and are available to both experienced and less experienced agricultural workers

and entrepreneurs (Agriculture and Agri-food Canada, 2011). One such program available in Newfoundland and Labrador is the New Farm Investment Program, which aims to “address the unique challenges faced by new entrants in the Newfoundland and Labrador agriculture industry, help ensure the development of underutilized agricultural resources, encourage the establishment of new farm businesses, and enhance the competitiveness of the sector” (Government of Newfoundland and Labrador, 2010).” Unfortunately, this five-year initiative will expire on March 31, 2013. In order to build on this momentum, it is imperative that the provincial government create similar programs and not only support new entry agricultural workers, but actively recruit them. An increase in funding that focuses on building smaller-scale agriculture and returns the power of food production to the people of Newfoundland and Labrador is essential to building community-wide food security, and will promote health not only through food availability, but also through community empowerment and increased employment.

With the end of the Growing Forward Agricultural Policy Framework comes a new opportunity for development. Recognizing the importance and the success of this framework, Agriculture and Agri-Food Canada are currently preparing to launch Growing Forward 2: 2013-2018. Still in the consultation and planning process, Growing Forward 2 can provide the province of Newfoundland and Labrador with a unique opportunity to modernize and rejuvenate its agricultural industry. The development of the policy is currently in the second of three phases and has already identified “institutional, physical, and human resource infrastructure” as one of the two key policy drivers. In other words, one of the two central drivers for the Canada-wide agricultural policy aligns perfectly with the goals of Newfoundland and Labrador’s own agricultural industry. This creates an opportunity for the provincial government to invest federal funding into the creation of an academic unit that will strengthen our current institutional and

human resources. As Growing Forward 2 remains in the planning phase, it is imperative that provincial-federal communications identify an academic unit designed to increase agricultural capacity as a priority for the province. That way, money can be invested to create systemic change within the province, thereby reshaping the food production system.

Another potential service the government could facilitate is the establishment of a co-operative that provides the necessary resources to candle and grade hen eggs. Due to the small number of eggs produced and the required resources to candle and grade them, it is not feasible for each small-scale producer to operate their own processing facility. However, there exists the potential to create shared regional facilities that all egg producers can utilize. These larger co-operatives would also be able to provide a larger, more stable egg supply enabling the producers to forge agreements with the larger grocery store chains. With a larger and more stable supply, local merchants will have more confidence and ability to sell Newfoundland and Labrador products in their stores. An arrangement like this would benefit both producers and retailers and would successfully connect the people of the province with the foods of the province.

Another problem that exists in local agricultural production is the lack of widespread availability of certified-safe poultry and livestock products. The insufficient regulations regarding the health and slaughter of animals renders the supply of local meats vulnerable. A two-fold government response to this problem would help close the gaps in the supply chain and make local meat more accessible to local consumers. The first priority is recognizing the growing importance and demand for locally-produced meat and updating the *Meat Inspection Act* to better reflect federal standards. This would alleviate consumer worries over the safety and origin of local meat products, thereby helping to further increase demand. With more intensive inspection procedures, smaller-scale producers would need assistance in meeting these

requirements. Similar to the issues with egg candling and grading, farm operators may not have the necessary resources to ensure proper inspection while still maintaining competitive prices. A potential solution to this problem could be the establishment of regional inspection authorities that could be shared by the various smaller-scale producers. This initiative could be operated in conjunction with the egg candling and grading co-operative to further reduce costs and promote participation.

Case Study: How Government Stimulus Can Benefit Rural Agriculture

There is incredible potential to develop the meat industry in Newfoundland and Labrador. The production of livestock such as cows, lambs, and chickens is possible on appreciable scales that can provide a significant portion of the meat consumed in the province. Not only would sourcing the meat within the province leave us less vulnerable to interruptions in ferry services and other transportation difficulties, but the economics of locally-produced meat can be very profitable. Over the past few years, the desire to purchase and consume locally-produced goods has been increasing dramatically. Popular media has been saturated with consumers and experts alike criticizing the centralized industrial food complexes that currently supply our plates, and advocating for foods grown and produced closer to home. These foods require less transportation, will produce less carbon dioxide, and are easily traced back to their source. Currently, Newfoundland and Labrador has a severely underdeveloped agricultural industry. This lack of supply has bottlenecked the demand for locally produced goods. To capitalize on this potential market, it is crucial that the product is available and can be appropriately advertised and delivered to the consumer. Through government assistance, a UK award-winning brand of beef from Northern Ireland has been able to do just that.

Andy Bryan, a small scale cattle farmer from Ireland, partnered with two part-time farmers with the goal of establishing a brand of beef that would be in local demand. Beyond the challenge of producing a high grade product, these three lacked the necessary skills to deliver their product to market in a desirable fashion. Without the support of the various departments that would typically come with a large agricultural corporation, they turned to government support programs. Ireland's Department of Agriculture and Rural Development, in conjunction with the European Union, operates the Rural Development Programme (RDP), which aims to develop competitive and sustainable rural business and thriving rural communities (Department of Rural Agriculture and Development, 2012). Specifically, "farming and food" is the first of three priorities for the RDP. One of the programs operated under this umbrella is "Supply Chain Development," where farmers and agricultural producers can receive facilitations, mentoring, training, advice, and support to help successfully and competitively delivery their product to market. Having few business skills, the three entrepreneurs were able to learn how to best butcher their meat, and were given the opportunity to participate in a 50-day consultation with a marketing expert to help them establish and market their brand. Without the help of this government program, these farmers would have continued to struggle creating a niche and selling their product. However, through public assistance, they were able to create and launch a successful brand that provides citizens with local, traceable food and has gone on to win the 2008 UK Great Taste Award.

Scenarios like these are not unique to Ireland. In our own province, there remains an insatiable demand for local meat. Dave and Del Oliver, two small-scale farmers based out of Placentia Junction, regularly provide beef and chicken, along with other goods, to the weekly Farmer's Market in St. John's. Their product, however, is in such demand that they cannot keep

it in stock. Even if a consumer is savvy enough to know that on Saturday mornings one can go to the Farmer's Market to find local meat, or even savvy enough to call ahead and reserve their order, it is not guaranteed that their order can be filled. This level of unmet demand speaks to not only the potential market for locally-produced meat in this province, but the thriving and growing market that already exists. This demand is further justification for increasing government support to increase agricultural capacity in Newfoundland and Labrador.

Although Dave and Del Oliver are able to sell their product with little trouble, there are several barriers that prevent them from reaching a larger scale market. For one, the packaging of the products is rudimentary and offers very little in terms of establishing a brand. Although this packaging is acceptable to those who travel to the Farmer's Market to buy their product, it can be regarded as unprofessional or unappealing to the average consumer, who is accustomed to buying their professionally labelled and packaged meat in a grocery store. Another barrier is the lack of marketing, or access to marketing skills and expertise. Although there is both a supply and demand for locally produced goods, this supply and demand must be brought together through commercial marketing. Such marketing skills are often beyond the average small-scale farmer, who is therefore unable to reach those who wish to purchase their product. If the government of Newfoundland and Labrador were to institute a program similar to the "Supply Chain Development" program found in Ireland, they could assist farmers and other agricultural entrepreneurs in developing, packaging, and marketing a successful and competitive brand that could become a sustainable enterprise. These sustainable industries would not only create jobs in rural communities where they are needed most, but would make the entire province less vulnerable to food insecurity and transportation difficulties.

Conclusion

Increasing agricultural capacity in this province is essential to enabling the people of Newfoundland and Labrador to be self-reliant and food secure. Food security has been shown to be an important part of community health and integral to the prevention and control of many diet-related chronic diseases. Before rural populations further decline due to lack of economic opportunity, it is important that the provincial government seize the growing interest in and demand for locally produced foods and invest in smaller-scale local agriculture. Through comprehensive policy shifts, common infrastructure for smaller producers, and tighter meat regulations, the province of Newfoundland and Labrador can build the necessary capacity to provide for ourselves.

Recommendations

- Create funding and support for the Grenfell Campus of Memorial University of Newfoundland to establish an Agricultural College
- Change existing agricultural subsidies to offer more support to small-scale agricultural producers
- Facilitate livestock inspection and slaughtering for small-scale meat producers, in order to make their meat widely available in grocery stores across the province
- Create a program that will offer business and marketing guidance to small-scale agricultural producers in order to make their products more competitive

References

- Agriculture and Agrifoods Canada. **2011**. Growing Forward Agricultural Policy Framework. <http://www4.agr.gc.ca/AAFC-AAC/display-afficher.do?id=1200339470715> (last accessed 14 April 2011).
- Chartrand, D. **2005**. The Agriculture and Agro-Food System in Canada, working paper No 16, Joint UNECE/EUROSTAT/FAO/OECD Meeting on Food and Agricultural Statistics in Europe (Rome, 29 June-1 July 2005). <http://www.unece.org/stats/documents/ces/ac.61/2005/wp.16.e.pdf> (last accessed 10 April 2011).
- Delaney, S. **1986**. An Overview of Selected Resource Industries. A Background Report Prepared for the Royal Commission on Employment and Unemployment, Newfoundland and Labrador.
- Department of Rural Agriculture and Development. **2012**. <http://www.dardni.gov.uk/index/rural-development/rdp-campaign.htm> (last accessed 28 April 2012).
- Eastern Health. **2006**. Navigating the way together: Burin Peninsula community health needs assessment. <http://www.easternhealth.ca/OurCommunity.aspx?d=1&id=400&p=379> (last accessed 14 April 2011).
- Economic Council of Canada (E.C.C). **1980**. Newfoundland: From Dependency to Self-Reliance. Hull: Minister of Supply and Services Canada.
- Government of Newfoundland and Labrador. **1980**. Managing All Our Resources: A Development Plan for Newfoundland and Labrador, 1980-1985.
- Government of Newfoundland and Labrador. **1992**. Change and Challenge: A Strategic Economic Plan for Newfoundland and Labrador.
- Government of Newfoundland and Labrador. **2006**. Meat Inspection Act. <http://www.assembly.nl.ca/legislation/sr/regulations/rc960801.htm#59> (last accessed 14 April 2011).
- Government of Newfoundland and Labrador. **2006**. Eating Healthier in Newfoundland and Labrador: Provincial Food and Nutrition Framework and Action Plan. <http://www.health.gov.nl.ca/health/publications/provincialnutritionplan.pdf> (last accessed 30 April 2012).

- Government of Newfoundland and Labrador. **2010**. Growing Forward Program. <http://www.nr.gov.nl.ca/nr/funding/growingforward/index.html> (last accessed 14 April 2011).
- Government of Newfoundland and Labrador. **2011**. Agriculture and Agrifoods Development Fund. http://www.nr.gov.nl.ca/nr/funding/agrifoods_development_fund_guidelines.pdf (last accessed 14 April 2011).
- Harris Centre. **2010**. What's for Dinner? Building a healthy, reliable food supply for Newfoundland and Labrador. <http://www.mun.ca/harriscentre/policy/memorialpresents/2010c/> (last accessed 7 April 2011).
- Hulan, H.W. **1991**. The Report of the Task Force on Agrifoods. Prepared for the Department of Forestry and Agriculture, Government of Newfoundland and Labrador.
- Inter Pares. **2004**. Community-based food security systems: local solutions for ending chronic hunger and promoting rural development. Inter Pares Occasional Paper, No.4, November, 2004. http://www.interpares.ca/en/publications/pdf/food_security_brief.pdf (last accessed 14 April 2011).
- Public Health Agency of Canada. **2008**. Chronic Disease Facts and Figures. http://www.phac-aspc.gc.ca/cd-mc/facts_figures-faits_chiffres-eng.php (last accessed 7 April 2011).
- Ramsey, R.D. **1998**. Issues Affecting the Development of Agriculture in Newfoundland: A Case Study of the Lethbridge-Musgravetown Agricultural Development Area. *Rural Research Centre*, Nova Scotia Agricultural College, Research Paper No. 30.
- Statistics Canada. **2009a**. 2006 Census of Agriculture. <http://www.statcan.gc.ca/ca-ra2006/index-eng.htm> (last accessed 30 January 2011).
- Statistics Canada. **2009b**. Population, urban and rural, by province and territory. <http://www40.statcan.ca/101/cst01/demo62a-eng.htm> (last accessed 10 April 2011).



THE LESLIE HARRIS CENTRE OF REGIONAL POLICY AND DEVELOPMENT

1st Floor Spencer Hall, St. John's, NL Canada A1C 5S7

Tel: 709 864 6170 Fax: 709 864 3734 www.mun.ca/harriscentre

THE HARRIS CENTRE Memorial University

