

# **The Lower Mainland Food System: The Role of Fruit and Vegetable Processing**

**by  
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## **Abstract**

In this paper I explore the transformation of the fruit and vegetable processing industry in BC's Lower Mainland region from the late 1980s to 2011. I look at how the industry has adapted to the globalization of the fruit and vegetable processing sector and how it has evolved since the introduction of free trade agreements in 1989 and 1994. This research is based on the analysis of media reports, statistical data, survey results, and a series of interviews. The fruit and vegetable processing industry works within a globalized, competitive food system, while remaining an important component of the local food system. The paper contributes to the growing body of literature on Alternative Food Networks and Short Food Supply Chains in an often understudied link in that chain. This case study highlights the need for a strong and diversified local food economy in an era of climate change and uncertainty in the global food supply chain.

**Keywords:** food processing; local food system; globalization; embeddedness

## **Dedication**

This is dedicated to my wife Gail Barron, for her enduring support of my lifelong learning.

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I want to thank the people that participated in this research. I know how busy they all are and for them to take time away from running their business to fill in a survey or spend an hour or more of their time with me; I am truly grateful.

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## List of Acronyms

AAFC	Agriculture and Agri-Food Council
AEZ	Agricultural Enterprise Zone
AFN	Alternative Food Network
ALC	Agricultural Land Commission
ALR	Agricultural Land Reserve
ASM	Annual Survey of Manufacturers
BCAC	British Columbia Agriculture Commission
BCAFM	BC Association of Farmers Markets
BCFIRB	BC Farm Industry Review Board
BCFPA	BC Food Processors Association
BCVMC	BC Vegetable Marketing Commission
CANSIM	Canadian Socio-economic Information Management
CAPI	Canadian Agri-Food Policy Institute
CFIA	Canada Food Inspection Agency
CITT	Canadian International Trade Tribunal
CSA	Community Supported Agriculture
CUSTA	Canada-US Free Trade Agreement
FCC	Farm Credit Canada
FPCWG	Food Processing Competitiveness Working Group
IQF	Individually Quick Frozen
LFS	Local Food System
NAFTA	North American Free Trade Agreement
NAICS	North American Industry Classification System
NPMA	Natural Products Marketing Act
PHSA	Provincial Health Services Authority
RFSS	Regional Food System Strategy
SFSC	Short Food Supply Chains
SSFPA	Small Scale Food Processors Association

# 1. Introduction

A food system is defined by the full cycle of a food product from production, transport, storage, processing, distribution, consumption, and waste. This study analyzes the role of fruit and vegetable processing in the Lower Mainland food system and what changes have occurred in this sector over a two-decade period between the late 1980s and 2011. The research also analyzes how this industry has reacted to a contemporary shift in consumer focus towards local food. Concepts gathered from existing literature and the themes that emerged during the primary research are used to explore the following: What role does local fruit and vegetable processing play in the Lower Mainland food system? What are the opportunities and challenges in scaling up the sector to respond to the growing emphasis on local food?

While policy decisions can influence the level of sustainability of the local food system (LFS), it is important to understand the strengths and weaknesses of the current system and whether there are barriers within the processing sector that fail to promote local food. What constitutes a LFS? Researchers offer a variety of interpretations of what local means. Re-localization, re-regionalization, alternative food networks (AFN), and LFS research often focus on the relationships between the farmer and the consumer, with little attention given to the processing sector. While these concepts are explored in the next chapter, it is safe to say that a strictly geographic definition of local does not provide a sufficient basis for discussion. For the field research of this study, the survey respondents were provided with defined areas that offered local, regional, and other geographic options, but the interview participants offered their own ideas about what local means to them.

The literature review in Chapter 2 delves deeper into the many interpretations of “local” beyond a strictly geographic context. This study looks at the fruit and vegetable processing sector through the lens of the polarized positions that exist within our regional perspective on food. The globalization of the food system tends to favour

transnational food corporations as it allows them to organize the production, marketing, and consumption of food (Friedmann, 1994, p. 52). On the one hand, local food activists seek to challenge the dominance of the global food system by engaging in the alternative food network (AFN): by shopping at farmer's markets, by purchasing shares in Community Supported Agriculture (CSA), or by growing their own food. The term Alternative Food Network is often used to describe a movement based on efforts to counteract the conventional food supply chains and on re-localizing food systems (Marsden, Banks, & Bristow, 2000; Renting, Marsden, & Banks, 2003; Tregear, 2011).

While there is a strong policy bias at the federal level towards producing food for the export market, this focus on exports extends to provincial government policy as well. BC has about 100 trade officers around the world promoting our products and supporting our processors. Many of the farm-based businesses as well as other small-scale processors have looked beyond the domestic market for opportunities to grow their businesses. They are competing in a global marketplace against countries with cheaper labour, lower production costs, and in some cases, lax environmental regulations. The Lower Mainland food system currently reflects what Mount (2012) describes as a hybrid system where producers seek dual access for their products through the LFS and the conventional food system. The challenge that needs to be addressed is how the LFS can be scaled up without losing the identity and legitimacy of the producer-consumer connection (Mount, 2012).

Chapter 3 describes the methodology and data analysis used for this research. Industry Canada's definition for Fruit and Vegetable Preserving and Specialty Food Manufacturing under the North American Industry Classification System (NAICS 3114) is used to identify the businesses in this study. This classification includes manufacturing of frozen fruits and vegetables; frozen entrées excluding seafood; and the pickling, canning, and dehydrating of fruits and vegetables (Industry Canada, 2011). I was drawn to this particular sub-sector of the food manufacturing industry because of my own concerns about the safety of the food in the global supply chain and the fact that, with a few exceptions, I eat a predominantly plant-based diet. The frustration of not being able to find local, processed fruits and vegetables on retail shelves led me to find out more about food processing in our region. I can easily find fresh in-season produce at my local

farmer's market, and some retail grocery outlets, but what has happened to the canning and frozen food industry?

The area used to define the Lower Mainland in this study includes the 22 member municipalities, one electoral district and the treaty first nation that make up the Metro Vancouver Regional District, the neighbouring cities of Abbotsford, Chilliwack, and the District of Mission. Appendix A contains a provincial map depicting the Lower Mainland and a map of the Metro Vancouver Regional District that lists its members. As of the 2011 census, the combined population of this area was just over 2.5 million. The Lower Mainland contains some of the most fertile and productive land in British Columbia, providing the majority of the province's domestic production of vegetables and berries. The region's area in blueberries, cranberries, and raspberries accounts for 97%, 97%, and 92% of the provincial total area cultivated in these three berry crops respectively (BC Ministry of Agriculture, 2012a, p. 24). Between 2006 and 2011, the total area planted in berries increased 49% to 12,620 hectares (31,186 acres), while acreage in field vegetables declined 13% from 5,388 to 4,711 hectares (13,308 to 11,640 acres) (BC Ministry of Agriculture, 2012a, p. 24). Agricultural production and food manufacturing is a significant industry in the Lower Mainland's economy, with food manufacturing emerging as the number one industry by revenue in British Columbia since 2009 (Statistics Canada, 2012).

The changes in the fruit and vegetable processing sector are examined over the period from the late 1980s to 2011. These dates were chosen for two reasons. Firstly, the Canada - US Trade Agreement (CUSTA), implemented in 1989, and the subsequent inclusion of Mexico with the North American Free Trade Agreement (NAFTA) in 1994 coincided with some significant changes in the processing industry. Secondly, processing industry statistics were available from 1991 onwards which allowed for the comparison of employment data and facility closures and other industry events. Finally, the availability of crop data facilitated the examination of relationships between changes in the processing industry and variations in the acreage of crops planted in subsequent years. These trade agreements included a gradual removal of all tariffs on produce over a ten-year period to 1998. The analysis of 134 newspaper articles during that time frame predicted that facility closures would affect the acreage planted in specific crops in the years immediately following those plant closures. In some instances, Statistics Canada

data shows that the predicted consequences presented in media reports did correspond to declines in acreage planted for a few of those identified crops. Statistics Canada data also clearly shows a correlation between some of the plant closures and a decrease in the number of workers employed in the sector.

A survey was developed using the concepts from the literature and document analysis. Nine interviews were conducted with participants representing the fruit and vegetable processing sector and other important parts of the agrifood industry. This study benefits from the participation of key interview participants with many years of industry experience, who offer valuable insights into some of the challenges and opportunities facing the industry. Of particular interest is how the agri-food industry adapted to the loss of several large processors, how these losses affected local food production, and whether small and micro-sized processors have effectively filled any gaps in the LFS.

Chapter 4 describes the role of the fruit and vegetable processing sector in the Lower Mainland food system. This chapter tracks the changes that occurred in the fruit and vegetable processing sector over the two-decade period and shows the diminished role that the sector played during that period. An examination of the regulatory framework that the producers and processors operate within provides an explanation of the fruit and vegetable marketing commissions that follow later in the findings. A brief analysis of the pressures of urban growth in the Lower Mainland sets the context for some of the changes in fruit and vegetable production and processing that preceded the study period. This is followed by an examination of the plant closures and industry consolidation that occurred during the study period, and the effects they had on local agricultural production. This chapter then analyzes the current status of the fruit and vegetable processing sector. With the loss of several large processors over the last couple of decades, two trends have emerged. Small and micro-scale processors now make up the bulk of the industry, and farm-based processing has increased. Along with the changes in the processing sector, a significant shift has occurred in the Lower Mainland's crop production. There has been a substantial increase in blueberry production, and an increase in value-added processing by farmers on agricultural land.

The challenges and opportunities for scaling up the fruit and vegetable processing sector are examined in Chapter 5. A November 2012 examination by Douglas Hedley, for the Canadian Agrifood Policy Initiative (CAPI), posed a number of questions about why Canada's trade deficit in processed foods was increasing. He found a correlation between exchange-rate patterns and the processed food trade balance. He questioned whether the benefits of access to markets through the NAFTA were offset by other US trade agreements (Hedley, 2012, p. 8). Hedley (2012) queried whether the fact that much of "Canada's capacity is represented by branch plants of US and other foreign firms" was contributing to market erosion, whether it was the lack of investment in the food and beverage sector, or if "specific policy or regulatory changes" had affected the trade imbalance (p. 9). While the branch plant concern does not apply to this particular study, there are several issues identified in Hedley's national analysis that are relevant for this Lower Mainland food system study. These include: the impact of the currency exchange rate, a lack of innovation and plant modernization, higher wages, more expensive land, and higher taxes relative to their global competition.

The small-scale processors in this Lower Mainland study have a variety of specific challenges including high distribution costs, access to retail shelf space, and inconsistent regulations. While some processors view the many layers of regulation as obstacles to their success, others speak of the advantage that our food safety regime offers our processors in a global marketplace. However, competition in the global marketplace demands certification standards that require a certain scale of business in order to be economically feasible. This is particularly important for the farm-based blueberry processors that participate in a very competitive global market. The most effective processors succeed through providing either a value-added product or through technological innovation. Some farm-based processors include agro-tourism in their businesses or branch out into the production of fruit wines. The issue of branding and product marketing is similarly identified during the primary research phase of my study as both a challenge and an opportunity. For the Lower Mainland fruit and vegetable processors, the word "local" evokes a variety of responses that do not necessarily coincide with the emphasis in AFNs on direct exchange or local identity. While the region's largest volume processor sees the added expense of providing packaging specific to the local market as an unjustifiable expense, some small-scale processors

consider current labeling laws too restrictive. They believe that if their product is locally processed, using predominantly local ingredients, they should be allowed to label it as local food.

Other opportunities to scale up the local food system include the more efficient use of existing capacity and differentiation of local food as safe and trusted products. An examination of the Metro Vancouver Regional Food System Strategy (RFSS) looks at the concept of local food hubs and the role of processors within that model. With the need to improve the region's agricultural resilience in the face of present and future climate change, this research looks at what initiatives from that strategy have been implemented and in particular, where the processing sector fits within Metro Vancouver's RFSS. Local processing and storage facilities are identified as requirements in providing capacity to increase the availability of local food and assist in a transition from export oriented production to a more sustainable LFS (Connelly, Markey, & Roseland, 2011, p. 317; Lee, Barbolet, Adams & Thomson, 2010).

The final challenge is the issue of climate change and the vulnerability of the global food supply chain. The global food system faces a variety of threats including water shortages and extreme weather events like droughts and flooding that are often associated with climate change. The regional food supply is also at risk. In the Lower Mainland, spring flooding often delays planting, and in the fall of 2010 heavy rains wiped out much of the potato crop. Beyond the economic and social benefits of a more resilient LFS is the ecological importance of diversified agricultural production. Reduced use of pesticides, less fossil fuel consumption, resistance to disease, and more efficient use of water are some of the benefits of crop diversification. The loss of processing markets for crops that would normally be part of a regular crop rotation could adversely affect the health of the soil and the surrounding aquatic environment.

The concluding chapter briefly summarizes the key findings and outlines some of the limitations to scaling up the fruit and vegetable processing sector within the LFS. Suggestions are offered for future research in this field that would ideally involve academics, producers, processors, and local food activists. The findings and participant insights in this study will contribute to the literature on food supply chains and the food value chain. Beyond the contribution to academic literature, the conclusions and

recommendations can inform policy decisions within the study area and at the provincial or federal level. Through an examination of the food supply chain from the perspective of the people involved in the processing sector, barriers to increased use of local produce within the industry are explored. While the research participants support the concept of using local food and purchasing from local farmers, the degree to which they do this varies.

## **2. Literature Review**

I examine three key sets of literature to provide the context for the study of the fruit and vegetable processing industry. First, I look at literatures that examine the globalization of the food system and trade liberalization. Particular attention is paid to how the Canada US Trade Agreement (CUSTA) and North American Free Trade Agreements (NAFTA) affected the fruit and vegetable processing sector in Canada. I then examine literatures on Alternative Food Networks (AFN) and local food systems with an emphasis on Short Food Supply Chains (SFSC). A complementary set of literatures deals with the notion of hybrid food systems where both conventional and alternative distribution networks co-exist within the local food economy.

### **2.1. Globalization and the Conventional Food System**

Globalization is a term used to describe closer integration of national and international economic markets (West & Vaughan, 1995, Wolfe & Gertler, 2001). In the context of the global food system, a small number of multinational corporations wield a great deal of power (Hendrickson & Heffernan, 2002). Theories in rural sociology and rural development share the view that the global agrifood system tends to marginalise farmers and processors that lack economies of scale to compete in this market (Friedman & McNair 2008, p. 408; Tregear 2011, p. 420). Farms have become the suppliers of raw materials in a sector dominated by some of the largest corporations in the world and consumers in the developed world expect not only standard foods, but exotic foods from around the world (Friedmann, 1994). The dominance of large multinational corporations occurs in two ways. First, through horizontal integration, as companies expand through acquisition or strategic partnerships to dominate in one or two areas of the food chain such as seeds and fertilizers, and second, through vertical integration, whereby companies are involved in production, processing, distribution, and retail (Hendrickson & Heffernan, 2002). While these dominant multinational companies

are more prevalent in grains, meat, and poultry sectors, the fruit and vegetable processors are primarily challenged by the consolidation of the food retail area (Hendrickson & Heffernan, 2002).

The conventional food system that exists in this global environment is dependent on a supply chain management model dominated by multinational grocery store chains that determine the terms of purchase agreements and supplier contracts (Friedman & McNair, 2008; Hendrickson & Heffernan, 2002; Patel, 2007). While large processing companies and manufacturers continue to be significant players in the agri-food system, food retailers have taken an even more dominant role with the entry of Wal-Mart into food retailing (Konefal, Bain, Mascarenhas, & Bush, 2007). The implications of increased concentration among the retail giants are their ability to drive down the prices they pay to their suppliers. This depresses the margins of the processors and the producers. The other significant effect of this power shift is that retailers can increase the fees that they charge to processors to access retail shelf space. This makes it more difficult for new entrants and small-scale processors in particular, to gain access to this important distribution channel (Hendrickson & Heffernan, 2002). While Wal-Mart's presence in Canada is a more recent threat, retail concentration has been identified as problematic by the processing industry here as well. With four major grocery retailers in Canada accounting for about 65% of domestic retail food sales, processors experience increased costs, shrinking margins, tighter availability of shelf space, and additional service fees (Agriculture and Agri-Food Canada [AAFC], 2010a). Access to retail shelf space is a major impediment for the predominantly small-scale fruit and vegetable processors in the Lower Mainland.

Trade liberalization is often blamed for the loss of food processing facilities as food manufacturers seek cheaper labour while they attempt to consolidate their resources to increase profit. Long before the Canada US Trade Agreement (CUSTA) and the North American Free Trade Agreement (NAFTA), the industry was already undergoing consolidation. Large processing companies throughout North America were moving their operations to California to be close to large urban centres, a cheap supply of labour, and almost year-round production (Connor & Sheik, 1997). Connor and Sheik felt the fruit and vegetable processing industry was "footloose," able to establish their businesses wherever the costs were low and where they could form clusters with other

related industries (Connor & Sheik, 1997; Fraser, 2006). With the advent of the CUSTA came the reduction of protective tariffs. Tariffs ranged from 0% to 20% on most imported fruits and vegetables prior to 1989 and the CUSTA agreement called for their gradual removal over a ten year period (West, 1989, p. 1291). West's comparative study of US and Canadian fruit and vegetable processors at the cusp of the first free trade agreement found that Canadian firms had several disadvantages. These included more expensive produce, packaging, and transportation, and an unfavourable currency exchange rate. Despite perceptions that wage costs are higher in Canada, West's study found no such evidence (West, 1989).

A subsequent study of the food manufacturing industry in the United States and Canada between 1962 and 1993 compared investment in research and development, relative costs, and the rate of productivity growth (Chan-Kang, Buccola, & Kerkvliet, 1999). Following the recession of the 1970s, Canada failed to keep pace with the United States in the 1980s as the American companies embarked on deep cost cutting measures and industry consolidation (Chan-Kang et al., 1999, p. 116). The most likely explanations for the productivity gap between the US and Canada was the lack of research and development, technological innovation, higher product and packaging costs, and "excessive federal and provincial regulation" (Chan-Kang et al., 1999, p. 117). With increased industry consolidation in the US, and a widening productivity gap between Canada and its largest trading partner, the free trade agreements brought further changes to the Canadian processing sector. When the CUSTA launched in 1989, the stipulation was that all agricultural tariffs would be removed by 1998 (Fraser, 2006, p. 271). The North American Free Trade Agreement (NAFTA) added Mexico to the mix in 1994 with the same intended tariff removal deadline. Fraser (2006) examined the effects of trade liberalization on crop diversity and the processing sector in Southwestern British Columbia. Fraser (2006) used secondary data during the period from 1992 to 1997 from the BC Ministry of Agriculture and industry data from Statistics Canada from 1992 to 1998 to determine the percentage and overall acreage of crops grown for processing (p. 276). By analyzing the processing crop output along with the oral and written comments from The Select Standing Committee on Agriculture, Fraser found that a loss of processing facilities was a dominant theme among 51 of the presentations and submissions (Fraser, 2006, p. 274 & 275). Fraser also found that increased international

trade led to a loss in processing facilities, a loss of the traditional market for processed vegetables, and forced farmers to innovate with new markets including organic production (p. 278). It should be noted that only one of the 51 presentations and submissions analyzed, was from the perspective of the processing industry. Fraser (2006) posited that without the sufficient scale of processors in the Lower Mainland region, when the trade barriers were removed, the last remaining companies would leave (p. 278).

While Fraser found that the loss of processing facilities led to an increase in crop diversity as farmers changed to organic produce and grasslands, the trend in the past decade has seen blueberries become the dominant crop in the Lower Mainland. One of the strongest arguments against industrialized processes that encourage monoculture is that they require large amounts of fertilizers and pesticides to produce crops, stripping the nutrients from the soil (Francis, 2010). Environmental issues arising from the global agro-economic system require a more balanced approach to how and where our produce comes from. Quality standards that in the past have given consumers a level of trust in food safety have eroded to the point where the conventional food system is being challenged (Renting, Marsden, & Banks, 2003, p. 396). Hendrickson and Heffernan (2002) sum up the challenges facing the global food system including: the difficulty of large corporations being able to respond to consumer demand for more local food, the issue of reorienting their systems to serve niche markets, and the need to cultivate trust with their customers by addressing the social and environmental impacts of their practices (p. 360).

Another examination of the NAFTA reveals that it comprised three distinct bilateral agreements (Barichello, 2001, p.627). While the NAFTA's focus was on market access and tariff reductions, there were several commodities like dairy and sugar that the US considered sensitive in its earlier CUSTA with Canada (Barichello, 2001, p.627). Within the NAFTA, the US bilateral with Mexico allowed "market access to Mexico in virtually all areas" but at the same time allowed the US to maintain export subsidies so that both partners could "compete against similar subsidies from the European Union" (Barichello, 2001, p.627). There were no changes to Canada's non-tariff barriers in the supply-managed areas of poultry and dairy with the US and the same barriers were included in their bilateral with Mexico (Barichello, 2001, p.627). Because of these

differences in the bilateral agreements, the inclusion of Mexico into the NAFTA, created three distinct bilateral agreements. Barichello's (2001) review of the NAFTA was set in the context of a larger initiative to expand free trade to include all 34 countries in the Western Hemisphere in a Free Trade Area of the Americas (FTAA) agreement. He found that trade grew following the implementation of the CUSTA and the NAFTA and that the pace of growth in agricultural trade exceeded the pre-agreement trends. There were differences in how trade occurred between the three nations. Canada to U.S. trade increased from "an annual compound rate of 9% during 1984–91 to 13% from 1991–98" and included "a dramatic increase in high-value processed commodities" (Barichello, 2001, p. 624). While the trade data periods are slightly different, the US to Canada trade grew at an annual compound rate from 5% between 1980 to 1989, the years preceding the CUSTA, to 7% between 1989 to 1998, albeit from a much higher base volume (Barichello, 2001, p. 624). Trade volume in the seven years after the NAFTA indicated that Mexican exports to Canada increased 30% and Canada to Mexico exports increased 70% primarily in bulk commodities (Barichello, 2001, p. 624). The dramatic growth was in the doubling of agricultural trade between the US and Mexico during those seven years. Barichello (2001) acknowledges the criticisms of the NAFTA and other free trade agreements; job losses, lower wages, possible environmental damage and a loss of some Canadian sovereignty (p. 625). At the same time, Barichello (2001) characterizes the dispute resolution procedures within the NAFTA as well-developed and strong enough to handle any disagreements on agricultural support within the three partner countries (p. 627). The fact that successive Conservative and Liberal governments in Canada have pursued further free trade agreements indicates a level of acceptance that increased global trade is a net benefit for Canada.

## **2.2. Alternative Food Networks and Short Food Supply Chains**

Sonnino and Marsden (2006) view alternative food systems as a fundamental "short-circuiting of the conventional chain through the development of new relationships between producers and consumers" (p.183). In order for these alternative food systems to thrive beyond the short harvest season, when local produce is available, the processing sector must be part of the analysis of alternative food networks. While the

processing sector is often mentioned as an important stage in food systems analysis, there is a need to explore how this industry contributes to a healthy and viable LFS. Processed food is often associated with fast food diets that contain high fat, sugar, or salt content, or products that include ingredients that are unrecognizable to most consumers. Perhaps this perception contributes to the lack of literature on this aspect of the food chain. It could also be the perception that processors are one of the profit-taking intermediaries that come between the producer and consumer (Mount, 2012). The producer bias in one stream of AFN literature applies to the concept of rural economic development and how the direct producer/consumer relationship has helped the vertical integration of farm related businesses (Bloom & Hinrichs, 2010; Goodman, 2003; Marsden, Banks, & Bristow, 2000). From this perspective, the goal is to add value in the supply chain that directly benefits the primary producer (Renting, Marsden, & Banks, 2003). The challenge for many small-scale farmers is they lack the capacity to branch out into value-added processing (Jarosz, 2008, p. 241). Sonnino and Marsden (2006) identify a need for local and regional involvement in efforts towards re-localization, specifically in building networks and infrastructure for the food processing industry (p.190).

LFS and AFNs are often equated with a re-socialization of the food system with face-to-face interactions between consumers and producers (Jarosz, 2008; Mount 2012). The theory of social embeddedness of the local food movement is associated with that direct exchange between consumers and producers (Bloom & Hinrichs, 2011; Goodman 2003; Hinrichs, 2000; Winter, 2003). This form of embeddedness mitigates to some extent the exclusion of small-scale farmers and some processors in the mainstream or conventional food system. However, in the case of the fruit and vegetable processing sector, the most important concept is in how processors are able to differentiate their product through local or regional branding. The embeddedness of locality or “spatial embeddedness” is displayed through product differentiation based on place of origin (Bloom & Hinrichs, 2010; Feagan & Morris, 2009). Product labeling is an important element of including the fruit and vegetable processors in the AFN. One of the main challenges to increasing the participation in the LFS for processors is in how “local” is defined (see Wittman, Beckie & Hergesheimer, 2012). One of the generally accepted definitions is based on the 100-mile diet that is often referenced by what is known as the

“local food movement” (Connelly et al., 2011, p. 313). The concept of “spatial embeddedness,” where buying locally grown food is the primary motivation for consumers, is often explored in the context of farmer’s markets (Feagan & Morris, 2009; Smithers & Joseph, 2009). Smithers and Joseph (2009) found that, “important, and frequently contentious, issues in the operation of specific local food ventures is the delineation of local” (p. 246). How local is defined has been problematic for producers, processors, and consumers in the Lower Mainland study area. The Canada Food Inspection Agency (CFIA), in addition to several other laws under its jurisdiction, enforces the Consumer Packaging and Labelling Act (Canada Food Inspection Agency [CFIA], 2013b). Up until May 2013, the CFIA defined local food as originating from within 50 kilometres of where it was sold. Under that very restrictive definition, “corn from Chilliwack” or “raspberries from Abbotsford” could not be considered local in Vancouver (Shore, 2013). When this restrictive classification was replaced with an interim definition in May 2013, the concept of spatial embeddedness became problematic in how local food is defined. The new definition will now allow for any food produced in B.C. or within 50 kilometres of its borders, to be deemed local. According to Brent Mansfield, project coordinator for the University of B.C.’s Social, Ecological and Economic Development Studies program; “I think food needs to be labelled saying where it’s from, but I think it gets tricky when local food could come from 1,500 kilometres away” (Shore, 2013).

The processors that are not involved in direct exchange through farmer’s markets or in-store demos compel them to tell their story in some other fashion at the retail level. Sonnino and Marsden (2006) explored the conventions of regional identification of food in Southern European countries where they were populated predominantly by small-scale, family-owned farms and a fragmented processing sector (p. 186). The Lower Mainland food system is much closer to that of the Southern European countries “attuned to traditional and typical regional foods and, more generally, to the view that the terroir, or the context of production (culture, tradition, production process, terrain, climate, local knowledge system,” than the large-scale industrialized agrifood complex normally associated with North America (Sonnino & Marsden, 2006, p.186). Sonnino and Marsden (2006) suggest a deeper exploration of the interdependence between the AFN and the retail sector is required. Access to retail shelf space is a requirement for those processors wishing to scale up their businesses. An emerging theory in LFSs research is

that of “urban creative-food economy” (Donald & Blay-Palmer, 2006). In a study of Toronto’s food sector, the authors discovered that the fastest growing sector in processing was the small and medium enterprises (SME) that were focused on niche products, and, more specifically, on an array of products that appealed to the culturally diverse diets of a cosmopolitan city (Donald & Blay-Palmer, 2006). Donald and Blay-Palmer (2006) found that innovation in the processing sector was being driven by these smaller companies with a greater emphasis on human capital and job growth and employee retention (p. 1913). The motivations for the urban-creative food entrepreneurs were their emphasis on food safety as a form of resistance against the “domination of a global capitalist industrial-food system” (Donald & Blay-Palmer, 2006, p. 1917).

Expanding on the theme of food safety as motivation for consumers to reject industrialized agriculture, the authors conducted a subsequent study consisting of interviews with 25 participants, including five from retail and fourteen from the processing industry. The study offers insights into the descriptors used to elicit fear of conventional foods and the positive descriptors of attributes of AFN’s. They focus on the concept of embeddedness and how fear and mistrust of conventional foods is seen as a motivation for entrepreneurs in the processing sector. Many of the interview participants were involved in organic processing and/or retailing (Blay-Palmer & Donald, 2007, p. 280). This relationship between the processors and the retail sector is an important aspect of this research paper. Blay-Palmer and Donald (2007) caution that fear-based marketing could also be used by the conventional marketplace as well (p. 282).

The Short Food Supply Chain (SFSC) concept addresses the relationships between the actors within a local or regional food system (Renting et al., 2003, p. 394). SFSCs can feature products that relate to local, sustainable production, or integrated production methods (Renting et al., 2003, p. 401). SFSCs do not necessarily need to be local, but must be embedded with information that tells the story of that product, its origins, and who produced it (Marsden et al., 2000, p. 425; Renting et al., 2003, p. 405). This could include the face-to-face contact or packaging that conveys that same message of trust. Short supply chains acknowledge the importance of the social aspects of food and attach value the consumer’s right to choice based on their own perceptions, experience, and values (Marsden et al., 2000, p. 425). SFSC describes a food system with closer face-to-face connections between consumers and producers and their

relationships based on values and production methods (Marsden et al., 2000, p. 425). While spatial proximity is one SFSC measure, some of the specialized products have the potential to capture larger markets (Marsden et al., 2000, p. 430). In the case of research into SFSC case studies in Europe, the “spatially extended” products with regional identity are shipped globally through existing distribution channels (Marsden et al., 2000, p. 426). A more typical application of SFSC in the North American context is the value-added processing of jams or jellies that occur with farm-based business and retail through farmers’ markets or direct buying clubs (Jarosz, 2008, p. 233).

Despite the spatial and social embeddedness of AFN’s, there is little evidence to suggest that consumers are committed to only local food, and in fact, predominantly use the conventional food system (Winter, 2003, p. 31). Winter (2003) suggests that turning to local food as a panacea for the negative characteristics of globalization and the industrialized food system is a form of defensive localism as opposed to a “turn to quality” (p.23). In *Avoiding the Local Food Trap*, Born and Purcell (2006) challenge the idea that a LFS is more environmentally sustainable, more socially just, or better quality (p. 196). They argue that local food activists and academics fall into the trap of believing that there is something inherently better about local scale food systems. Dupuis and Goodman (2005) acknowledge the prevalence of the “alternative ethic” in academic literature and local food activism (p. 360). Many factors require consideration including whether there is sufficient scale to support a LFS, if local is necessarily more sustainable, better for the environment, or socially just (Born & Purcell, 2006, p.196). They argue that local is not inherently more sustainable; that just because the global food system is currently unsustainable doesn’t mean it will always be so (Born & Purcell, 2006, p. 197). Born and Purcell (2006) challenge planners and researchers to critically examine LFSs by questioning what the agenda of the benefiting parties is, and who benefits from localization (p. 205).

### **2.3. Hybrid Food Systems**

Maye, Holloway, and Kneafsey, (2007) suggest that categorizing economic activities in food systems as either “alternative” or “conventional” is seen as too simplistic and that these systems are based on “complex, changing and multiple sets of

relationships” (Maye, Holloway, & Kneafsey, 2007, p. 16). Bloom and Hinrichs (2011) introduce the concept of “hybridity” that recognizes that “alternative” and “conventional” food systems can coexist (p. 145). With increased urbanization and a well-educated and economically stable consumer, comes the increased demand for farmer’s markets and other local food initiatives (Jarosz, 2008). However, local and global food systems coexist through an imperfect political process (Dupuis & Goodman, 2005, p. 369). Dupuis and Goodman (2005) observe that most food policy councils “are named after the city that contains the consumers, not the region that contains the producers” (p. 365). They suggest that there is a lack of understanding of the diverse food politics amongst the urban elites and rural sociologists (Dupuis & Goodman, 2005, p. 365).

Local processing and storage facilities have been identified as requirements in providing capacity to increase the availability of local food and assist in a transition from export oriented production to a more sustainable local food system (Connelly et al., 2011, p. 317; Lee et al., 2010). The concept of local food hubs that include processing, distribution, and retail components has gained traction as a means of scaling up the LFS (Connelly et al., 2011; Mount, 2012; Wittman, Beckie & Hergesheimer, 2012). Questions remain as to whether the social economy ideals can survive the increased scale and compete and co-exist with the conventional food system (Connelly et al., 2011; Mount, 2012). Taylor and Miller’s (2010) study of a local produce cluster in Maine shows a complementary group of businesses along the food chain co-existing with the traditional export-oriented agrifood system. While the commodity based export-oriented crop yielded farm sales similar to the local produce, the multiplier effect created by the economic activity in processing, distribution, and retailing in the LFS was two and a half times greater (Taylor & Miller, 2010, p. 113). Despite the promising concept of establishing local food hubs, there is still a need for processors to access existing distribution and retail channels. This is of special importance to the producers and processors that rely on the export market. This examination of the Lower Mainland’s fruit and vegetable processing sector will build upon the AFN literature by addressing a gap in the research on this industry’s contribution to the local food system.

### **3. Methodology and Data Analysis**

This study was conducted over a period of two years that saw changes to the businesses I sought to survey. The study also covers a longer, two-decade period in which changes were made by Statistics Canada to include micro-businesses in their annual food manufacturing survey. I have used the more common term of food processor when referring to food manufacturers engaged in fruit and vegetable processing. The term processor is in common use in academic literature, policy documents, and by the individuals that I surveyed and interviewed. Using a mixed methods approach in my research, I gathered quantitative data from available statistics, publications from government and public policy organizations, and some of the survey questions. The qualitative data came from a media content analysis, several open-ended survey questions, and a series of nine interviews. I used a triangulation approach to test the findings of each method and used the qualitative data from the survey responses to help inform the interview sessions.

#### **3.1. Media Content Analysis**

For the media content analysis, I used key word searches: (food processing) or (food manufacturing) combined with (vegetable) or (fruit) in Canadian Newsstand through the ProQuest web interface and narrowed my subject search by time period and location. These keyword searches yielded limited results from three national papers; *The National Post*, the *Financial Post*, and the *Globe and Mail*, and two regional dailies, the *Vancouver Sun* and *The Province*. Results were also found in the *Abbotsford Times* and the *Surrey Now*, community newspapers within the region. *Country Life in BC*, a monthly agricultural newspaper published continuously since 1915, provided an additional source of information on the processing industry.

First, I identified the primary and secondary storylines from the articles. The more dominant themes were then incorporated into the analysis of the evolution of the fruit and vegetable industry in the Lower Mainland. I used quotes and excerpts from these articles to illustrate the media's perspective on events and focussed on the people that were directly involved in the processing industry, representatives of the various produce commissions and marketing boards, and government officials. An annotated list of articles is included in Appendix B. These themes helped inform some of the questions in the survey and the semi-structured interviews that followed. A review of *Country Life in BC* made it evident that to better understand the forces at play in the processing sector, additional categories would be required. This led to the addition of several inductive themes. The original themes were theory driven, from the literature review and data driven, from policy documents (Babbie & Benaquisto, 2010, p. 388). The inductive themes emerged through the early stages of the content analysis. I used manifest content to measure frequency of reports in some instances, and latent content to organize the articles by the complete set of themes as listed in Table 3-1 below. Manifest content is defined in terms of concrete examples or the surface content; for instance extracting key words such as the NAFTA and free trade and the frequency of their occurrence (Babbie & Benaquisto, 2010, p. 300). Latent content uncovers the underlying meaning of the article that may include some of those key words or phrases but often includes an emphasis on what the impacts of free trade or facility closures had on individuals or groups (Babbie & Benaquisto, 2010, p. 300).

**Table 3-1. Themes for Media Content Analysis**

Original Themes	Inductive Themes
Facility Closures, Mergers, Consolidations	Canadian Int'l Trade Tribunal (CITT)
Free Trade (CUSTA, NAFTA)	Tariffs and anti-dumping
Job losses	Supply issues
Crop Diversity	Impact on farmers
Local food	Policy initiatives
Food safety	Weather and climate change

## 3.2. Statistical Analysis

The period from the late 1980s to 2011 was chosen so I could examine the effects of policy changes on the agricultural sector using official statistics. The Canada United States Trade Agreement (CUSTA) had been implemented in 1989 and was followed in 1994 by the North American Free Trade Agreement (NAFTA). The availability of Statistics Canada data on the processing sector and data on crop production for the majority of the corresponding period allowed for comparison of the media reports and hard data. The CUSTA was implemented in January, 1989 and the processing sector and crop data was available from 1991 onward. The early investigation of media research and the subsequent interviews did not reveal any closures during the two-year period from January 1, 1989 and December 31, 1990. While I originally was looking only at sector facility closures, mergers and acquisitions, and new openings, I questioned whether there was a causal relationship between these events and the effect on crop production and diversity. Which came first, crop failures and a lack of supply, or the closure of the facility and a subsequent shift in crop production? Were there specific policies or initiatives that either supported or hindered the processors or producers? These new lines of inquiry provided a wider scope for the archival research.

For comparative purposes, when looking at the data during the period from 1991 to 2011, the methodology used by Statistics Canada underwent several changes in 2000. The changes to the Annual Survey of Manufacturers (ASM) included the addition of Statistics Canada's central listing of all manufacturers in the Business Register (BR). The BR identifies any incorporated business, with employees that manufacture \$30,000 or more in goods per year. Also in 2000, the ASM added all incorporated businesses with sales of less than \$30,000, and all unincorporated manufacturers. At the same time, administration employees at head offices were no longer included in the employment statistics (Statistics Canada, 2011). As a result of these changes, the number of fruit and vegetable processors included in the ASM in BC more than doubled from 27 to 56.

I also examined crop data for BC from 1991 to 2011. Availability of processors is only one factor that could affect the crop output for a given year, thus the number of acres planted was a more reliable indicator of any changes to the output of processing crops than revenue or tonnage derived from those crops. Despite the number of acres

planted being a better indicator of the effects of facility closures, crop planting could be affected by weather conditions such as a wet or cold spring planting season. Because of these variables, observations on processing crop acreage had some limitations in establishing any direct correlations between changes in the processing industry and the crops that were planted in the following year.<sup>1</sup> Statistics Canada crop data was helpful in enriching the interview process with participants that had been in the industry throughout the study period. Finally, I examined industry trade data in the processed fruit and vegetable sector to track the changes over the two-decade study period.

### 3.3. Document Analysis

The review of government publications, policy papers, and these media articles helped to inform some of the survey questions. Beyond the demographic information that I gathered on participating companies through this survey, I wanted to test the theories on scaling up LFSs and find out the degree to which area processors were already involved in the LFS. The Small Scale Food Processors Association (SSSPA) undertook a market scoping project in 2002 that gathered information on small-scale processors in BC (Moreland, Evans & Mark, 2002). Because of the time constraints on funding for their study, the research had to take place during the summer when most of the processors were putting in 70 hour work weeks. As a result their processor interview response rate was only 9%, and of those, only two participants were from the Lower Mainland (Moreland et al., 2002). I also examined statistical reports generated by the BC Ministry of Agriculture, BC Stats, Metro Vancouver, CAPI, and Agriculture and Agri-Food Council (AAFC) to help inform some of the survey questions. The AAFC's *Growing the Canadian Food Processing Sector, An Industry/Government Action Plan* (2010) provided some useful background for the Likert Scale questions in Q 18 in Appendix C.

<sup>1</sup> Throughout this study, tables and charts are used to illustrate changes in the number of acres planted in various crops. Canada's adoption of the metric system four decades ago has left a jumbled use of acres and hectares, pounds and kilograms, and miles and kilometres. Data from most of the regional and provincial reports use hectares while the Statistics Canada uses acres. During the interviews, acreage was used most often by the respondents and that is the same measurement system used by the United States, our primary trading partner. The approximate converted value is given in brackets whenever appropriate (1 acre = .404685 hectares, 1 ha = 2.471058 acres).

## 3.4. Surveys and Interviews

### 3.4.1. *Sample Population*

The 60 fruit and vegetable processors that comprise the Sample Population listed in Appendix D covers a range from the last large-scale fruit and vegetable processor in Western Canada to medium size businesses to small-scale processors. Their markets range from wholesale and retail distribution to direct-to-market sales and agro-tourism businesses. I compiled my list using the processor listings of the BC Food Processors Association (BCFPA), the Small Scale Food Processors Association (SSSPA), the BC Blueberry Council, the BC Cranberry Marketing Commission, the BC Vegetable Marketing Commission (BCVMC), *Edible Vancouver* magazine, Statistics Canada's Business Register (BR), and business licence listings from municipalities' web sites. I found several businesses that weren't listed in any of these public directories by looking for locally processed products on specialty grocery store shelves.

Statistics Canada's 2010 survey of food manufacturers indicated there were **69 businesses** in British Columbia that processed fruits and vegetables (Statistics Canada, 2011). Industry Canada defines the Fruit and Vegetable Preserving and Specialty Food Manufacturing (NAICS 3114) sector as frozen food manufacturing (31141), and fruits and vegetable canning, pickling, and drying (31142). Statistics Canada does not provide a listing of the companies that are surveyed in their ASM. Requests to Statistics Canada for a listing of businesses by region or Census Metropolitan Area (CMA) were denied for reasons of confidentiality. Finding the businesses that were engaged in fruit and vegetable processing proved to be a challenge. In the fall of 2011, I assembled an initial list of 132 businesses from the various sources listed in the preceding paragraph. I concluded that **72 businesses** could qualify under the Industry Canada definition for fruit and vegetable processing. Every effort was made to confirm these businesses where involved in the processing of fruits and/or vegetables by contacting the companies by phone or email, and failing that, by examining their product listings on their web sites. Of these 72 identified businesses, I excluded nine entities once I discovered they were involved in either fresh produce packaging or wholesale distribution. Two other businesses had ceased operations during that year, and another listed company had

never launched its processing business, resulting in a sample population of **60 businesses**.

### **3.4.2. Survey Instrument**

Of the 60 surveys distributed to the businesses listed in Appendix D, I received eight responses and filled out two more during the interview process for a total of ten. All survey participants were given the choice of email, Canada Post, telephone, or in-person questionnaire options, and were asked if they would accept follow-up questions or would like to participate in a follow up interview. Due to the low (17%) response rate of the survey questionnaire, I did not aggregate the demographic data to try and portray a general profile of the industry. Instead, I used the qualitative data from open-ended survey questions to explore any findings in greater detail in subsequent interviews. The responses I gathered had at least one respondent from each of the processor types that I identify later in Chapter 4.2. The survey questionnaire, attached as Appendix C, gathered information on the size of their company by revenue and number of employees, ownership structure, the form of processing, the type of location, and factors in site selection. The primary goal was to gauge their use of local produce, where their produce was grown, from which supply chains, and the primary destinations for their finished products. Some qualitative questions asked them to identify any factors that would encourage their use of local produce in their business. A final, open-ended, question asked them to provide any further comments that they felt would increase the public's understanding of the fruit & vegetable processing industry in the Lower Mainland.

### **3.4.3. Semi-structured Interviews**

Four interviews were conducted with current fruit and vegetable processors, including two processors that had taken part in the initial survey. I also interviewed two industry consultants, one provincial government employee, and one elected official. One representative from a non-government organization was also interviewed, but preferred anonymity. All but one of these semi-structured interviews were conducted in person and recorded on a digital audio recorder with the participants' permission. The remaining interview was done by phone. I used this additional qualitative data to help form an

understanding of how local produce fits into the overall food value chain. This information was then compared to the literature on LFS and SFSC. These interviews also served to fill in some gaps in the narrative where changes in the industry could not be explained by the analysis of secondary data. I use the first and last names of the interview participants throughout the paper except for Interview 5, who wished to remain anonymous. Table 3-2 below, provides the dates, names, category, and title of each participant. I followed my ORE-approved protocol with all participants and obtained their informed written consent to be identified in the thesis. An interview consent form is included in Appendix E and the semi-structured interview questions are in Appendix F.

**Table 3-2. List of interview participants**

<b>Date</b>	<b>Name</b>	<b>Category</b>	<b>Title</b>
9 May 2013	Travis Drew	Processor	Operations Manager Safeway's Abbotsford Processing Plant
14 May 2013	Andrea Gray-Grant	Consultant / Broker	Former Processor and Co- packer
15 May 2013	Tony Pellet	Provincial government	Regional Planner South Coast Agricultural Land Commission
16 May 2013	Ray Wagner	Consultant	Former FCC Manager Consultant to Berry and Wine Industry
23 May 2013	Interview 5	Non-profit Association	Anonymous Interviewee
27 May 2013	Mary Ellen Berg	Processor	Snowcrest Foods Ltd. Finance Manager
04 June 2013	Dyana Biagi	Processor	Owner Aji Gourmet Foods
07 June 2013	Catherine Anderson	Processor	Owner Trugs Gourmet Foods
23 June 2013	Harold Steves	Regional Government	Past Chair - Metro Vancouver Agriculture Committee / Richmond Councillor / Farmer

By looking at the combined data from all four sources, I was able to construct a narrative that combined the historical record with statistical data and the personal perspectives of several processors that were part of that history. It was important to allow the voices of the participants to be heard in the narrative and provide accompanying evidence to either support or refute the views they offered. By compiling the data and allowing additional themes to emerge from the conversations with the interview participants, I was able to provide an overview of the Lower Mainland fruit and vegetable processing industry from the perspective of those that understand it best.

## **4. Fruit and Vegetable Processing in the Lower Mainland**

This chapter provides a historical context for the fruit and vegetable processing sector by first examining the urban growth that led to a farmland protection act in BC, and then focusing on the changes that occurred over the period from the late 1980s to 2011, in the Lower Mainland. By examining the facility closures, industry consolidation, and trade wars throughout this two-decade period, the findings will show that the sector played a diminished role in the local food system. Particular attention is paid to how these changes affected employment levels within the sector, and the effects on agricultural production within the region. The second part of the chapter reviews current trends in the fruit and vegetable processing sector, and provides examples of a range of ways that processors access the consumer market. The interviews, supplemented by the surveys and secondary data, describe a landscape populated by a few remaining large processors. The chapter describes some of the new small-scale processors that are filling the void left by those closures. These new entrants include farm-based processors and entrepreneurs with different methods of scaling up their businesses. These examples demonstrate a few of the ways that small-scale businesses are utilizing both the AFN and conventional food networks.

### **4.1. History of the Lower Mainland Processing Sector**

#### **4.1.1. *Fruit and Vegetable Marketing Boards and Commissions***

There are several references in this chapter to various marketing boards, commissions, and judicial bodies that require explanation. In the early part of the 20<sup>th</sup> century dairy farmers from the Fraser Valley and orchardists from the Okanagan were seeking a way to stabilize prices they received for their product. These groups formed associations after the BC government introduced the *Cooperative Act* in 1910 (British

Columbia Farm Industry Review Board [BCFIRB], 2009, p.7). Subsequently, the BC government enacted the *Produce Marketing Act* in 1927 to try and stabilize prices for farmers. “The *Produce Marketing Act* gave control of grading, packing, shipping and marketing of designated agricultural commodities to producers of a given product, providing that 75% of them agreed to the regulation of that product under the Act” (BCFIRB, 2009, p.9). For a number of years following the legislation, there were conflicts as some farmers refused to participate and undercut the prices established by the cooperatives. Farmers that felt the marketing fees were a form of taxation launched a number of lawsuits. The British Columbia Marketing Board (BCMB) was created in 1934 with the majority of marketing schemes and supply management regulations established during throughout the 1960s, 1970s, and 1980s (BCFIRB, 2009). The BCMB amalgamated with the Farm Practices Board (FPB) in 2003 and became the British Columbia Farm Industry Review Board (BCFIRB) (BCFIRB, 2009, p.22). The BCFIRB currently supervises the general operations of five supply managed boards and three regulated industries and is the judicial body that has “responsibility for the *Natural Products Marketing Act (NPMA)*, the *Agricultural Products Grading Act (APGA)*, and the *Farm Practices Protection (Right to Farm) Act (FPPA)* (BCFIRB, 2009, p.22). The two regulated commissions that are relevant to this study are the British Columbia Cranberry Marketing Commission (BCCMC) and the British Columbia Vegetable Marketing Commission (BCVMC).

The BCVMC provides orderly marketing, administers quota, and represents BC vegetable growers in trade issues (BC Ministry of Agriculture Food and Fisheries [BC-MAFF], 2003). The provincial government appoints the chair of the BCVMC and the eight board members are elected from the 211 commercial producer/members in the Fraser Valley, Vancouver Island, and Interior regions (BCVMC, 2013b, p.2). The commission members are predominately large commercial growers in three categories; storage crops, processing crops, and greenhouse vegetables. **Storage crops** include: beets; green and red cabbage; carrots; parsnips; rutabagas; white turnips; yellow onions; and potatoes. **Greenhouse vegetables** include: cucumbers, tomatoes, peppers, and butter lettuce. **The processing crops**, that are most relevant to this study, include: peas, beans, corn, broccoli, Brussels sprouts, cauliflower, potatoes, and strawberries that are destined for processing (BCVMC, 2013a, p. 39). There are a number of un-

regulated vegetables that are exempt from quotas and fees. All direct to market sales like farm gate stalls, CSA boxes, and farmer's markets are also exempt. The majority of farms are not members of the BCVMC. Organic vegetable growers, products categorized as processing crops that are destined for the fresh produce market, and any unregulated crops do not require registration with the commission.

Overall, there are 19,759 farms captured in the 2011 BC Agricultural Census, of which 98% or 19,357 are family-controlled (BC Ministry of Agriculture, 2012a, p. 4). In 2011 of the 912 farms growing field vegetables in BC, 332 are in the Lower Mainland/South Coast region (BC Ministry of Agriculture, 2012a). While these farms make up 36% of the provincial total of all field vegetable farms, they account for 71% of the hectares in field vegetable production. The majority of BCVMC storage crop growers are not included in the Statistics Canada vegetable farm data as potatoes are classified as field crops. As Table 4.1 on the following page illustrates, all of the province's 55 BCVMC registered farmers that grow processing crops, reside in the Lower Mainland region. They produce 14 thousand tons of peas, beans, broccoli, Brussels sprouts, cauliflower, & strawberries (BCVMC, 2013b).

**Table 4-1. Adapted from BC Ministry of Agriculture 2011 Census and BCVMC Registered Growers. Number of farms and hectares of vegetables in production**

Region	Vegetables & melons		Green House	BCVMC Registered Farms		
	# of Farms	Hectares	# of Farms	Processing	Storage	GH
1 Vancouver Island	228	700	83		15	47
2 Lower Mainland S.Coast	332	4,711	75	55	64	11
3 Thompson Okanagan	240	886	24		8	11
4 Kootenay	65	157	8			
5 Cariboo	25	90	9			
6 North Coast	8	11	2			
7 Nechako	10	21	3			
8 Peace River	4	16	1			
BC Total	912	6,592	205	55	87	69

*Note:* The BCVMC is divided in three regions: Vancouver Island (1), Fraser Valley (2) and Interior (3). Potato growers that make up the majority of the BCVMC Storage crop farms are not included in the Vegetable and melons column as they are counted as field crops in Statistics Canada data.

Quota is required to grow regulated storage crops, predominantly potatoes, with allocation based on the farmer's 5-year average production (BC-MAFF, 2003, p. 4). Greenhouse vegetable production is allocated on the basis of each individual crop and applications must be made to the BCVMC for increased allocations or to switch to a different crop (BCVMC, 2013a, p. 33). An application fee is charged and the applicant must provide a business plan, and have the capital requirements and sufficient horticultural knowledge to be considered (BCVMC, 2013a, p. 32). There is no quota or production allocation for processing crops but there are fees and levies. Producers, agencies, and processors are all charged annual fees by the BCVMC and a levy is charged at: \$3.05/ton for broccoli, Brussel sprouts and cauliflower; \$3.30/ton for peas; \$2.68/ton for beans; and \$2.10/ton for strawberries (BCVMC, 2013a, p. 41). There are also annual fees of \$250 for producers and \$1,000 for processors (BCVMC, 2013a). While the \$1,000 cost may be prohibitive for small-scale processors, the BCVMC processor list is comprised mainly of medium size processors and fresh produce distributors.

The British Columbia Cranberry Marketing Commission (BCCMC) is the other regulated industry under the *Natural Products Marketing (BC) Act*. Any grower that owns leases, or operates a fully planted cranberry bog of 2 acres or more must be a member of the commission. The commission has a chair appointed by the Lieutenant Governor in Council and up to four members that are registered growers. The commission issues quotas to growers, issues licences, and collects fees. Over 90% percent of B.C. cranberry growers are members of the Ocean Spray cooperative which is the main marketing channel for cranberries in North America (BCCMC, 2011, p.14). The Commission is funded by licence fees from 85 growers, four agencies, and seven producer-vendors, and by levy revenues. The four agencies include Ocean Spray, Safeway, Pacific Canadian Fruit Packers Inc., and Pacific Coast Fruit Products Ltd. (BCCMC, 2011). The seven producer-vendors sell fresh, frozen, and other value-added products like fruit wines. The levy rate was increased from \$0.38 per hundred pound barrel to \$0.48 in August 2011 (BCCMC, 2011, p. 16). These levies of just under half a cent per pound do not appear to be a significant cost compared to the 60 cents a pound they receive from Ocean Spray (BCCMC, 2011, p. 20).

The British Columbia Agriculture Council (BCAC) is a non-profit organization that represents over 14,000 farmers and ranchers through 27 member associations (BCAC, n.d.). The BCAC advocates on behalf of its agricultural producers and delivers programs to its members (BCAC, n.d.). BCAC member groups that are involved in the fruit and vegetable sector include: the BC Blueberry Council, BC Cherry Growers Association, BC Cranberry Growers' Association, BC Fruit Growers' Association, BC Grapegrowers' Association, Raspberry Industry Development Council, BC Greenhouse Growers' Association, BC Potato & Vegetable Growers' Association, Certified Organic Associations of British Columbia, Fraser Valley Cole Crop Growers' Association, Fraser Valley Peas, Bush Beans and Corn Growers' Association, and Fraser Valley Strawberry Growers' Association. Unlike the BCVMC and the BCCMC, these groups do not have government appointees and do not set prices or provide production or acreage quotas but some of these organizations do collect fees from their members for marketing and advocacy purposes.

#### **4.1.2. Urban Growth**

The effects of globalization of the food system are often blamed for the contraction of the industry, but the urbanization of the Lower Mainland's agricultural lands were a strong determinant as well. Prior to the introduction of the Agricultural Land Commission Act in 1973, farmlands were being developed for residential purposes throughout the province. The pressure of urban development was most intense in the Lower Mainland. The loss of farmland led to several plant closures long before the advent of free trade. I spoke with Richmond farmer and City Councillor Harold Steves about the pressures of urban growth in the Lower Mainland. Harold Steves was one of the chief architects of the Provincial Agricultural Land Reserve (ALR) and the Chair of Metro Vancouver's Agriculture Committee during the RFSS planning process.

The rezoning of farmland to residential uses in Richmond in the 1950's and 60's resulted in a loss of small 5, 10, and 15 acre farms that grew strawberries for Empress Jams and pickling cucumbers for Nalley's (H. Steves, personal communication, June 23, 2013). Harold Steves cites "the disappearance of 12,000 acres" (4,856 hectares) of mostly small farms as the reason that these processors closed their doors (personal communication, June 23, 2013). Prior to the 1970's, nearly 6,000 hectares of prime agricultural land were lost each year in British Columbia to urban development and other non-farm uses (ALC, n.d.). This led to the Provincial government establishment of the Agricultural Land Reserve through BC's Land Commission Act on April 18, 1973. With local input and cooperation of the regional and municipal governments, a boundary was established between 1974 and 1976 (ALC, 2010a). Despite the protection of this legislation, there have been 6,572 hectares of land in Metro Vancouver and 5,420 in the Fraser Valley excluded from the ALR between 1974 and 2010 (ALC, 2010b). In his November 2010 review of the ALC, Commission Chair Richard Bullock commented on the effectiveness of the commission's role in protecting agricultural land: "The application process, whether it be for exclusion, subdivision or non-farm use, is a *"built-in"* mechanism in the Act that perpetuates speculation and fuels pressure for land use change. Since the inception of the Act the ALC has considered almost 40,000 applications" (Bullock, 2010, p. 45). The net effect of this speculation has been that farmland is less affordable, and margins for farmers and processors that use local produce have been squeezed. As Harold Steves suggests, the loss of prime agricultural

land led directly to the loss of specific crops that the processors depended upon, and the high price of land has made it difficult for new farmers to enter the industry.

The price of land in the region has not only affected the viability of farming and farm-based processors, but the availability and price of industrial land. As land was converted to residential zoning from industrial use in Vancouver, manufacturers from all industries were displaced. The price of the produce used by processors was driven up by the cost of the land. The growth of residential development has hurt the farmers; they are paying more for leasing land (T. Drew, personal communication, May 9, 2013). A lot of the growers are buying land in Washington State. Instead of paying \$80,000 to \$100,000 per acre in the Lower Mainland, they can buy land for \$15,000 to \$20,000 (T. Drew, personal communication, May 9, 2013). Ray Wagner, a former Farm Credit Canada (FCC) manager and current consultant to the berry and wine industry, sees the same cross border movement: “All of the costs are higher here than in the US; [there] you can get bare land for \$15,000 to \$25,000 per acre and grow the same plants, in the same climate, with the same soil, and compete in the same market” (Ray Wagner, personal communication, May 16, 2013).

#### **4.1.3. Consolidation of the North American Fruit and Vegetable Sector**

The interview with Mary Ellen Berg of Snowcrest Foods Limited<sup>2</sup> was instrumental in increasing my understanding of the BC fruit and vegetable processing history. With over 30 years of experience in the industry, Mary Ellen Berg was able to explain the tangled web of buy-outs, closures, and consolidations that have occurred in the sector during the past few decades. While the first few closures pre-date the study period, they provide a context for the rationale behind the consolidation of the processing industry. Mary Ellen Berg started in 1980 with York Farms, a Canada Packers company, which was sold and became the Berryland Canning Company in Maple Ridge. The company was subsequently sold to Jimmy Pattison, owner of the

<sup>2</sup> Snowcrest Foods Ltd. was established in 1959 by Jack Clappison. He entered the fruit and vegetable industry by storing 15,000 pounds of blueberries in his butcher shop freezer. He bagged and sold them at Woodward’s department and food store before acquiring a fruit co-operative at Snowcrest’s present site in Abbotsford.

largest privately held grocery retail operation in Western Canada.<sup>3</sup> He had previously purchased another canning company in Summerland, in BC's interior tree fruit growing region, which he closed and consolidated operations with the Berryland facility in Maple Ridge in 1986. Doug Souter, head of the Pattison Group's food processing division, cited foreign competition and "a consumer trend away from canned fruit" as reasons for the declining revenues and subsequent closure at the Summerland plant ("Can't compete with foreign..." 1986). Even with the Okanagan fruit canning operations moving to the Sardis and Maple Ridge plants, Souter expected those facilities' production levels to be reduced from the previous year ("Can't compete with foreign..." 1986). The Pattison Group then closed the Maple Ridge Berryland plant and consolidated all the operations into the Fraser Valley Foods facility in Sardis. The original purpose of these processing facility purchases was to ensure supply of Pattison's retail grocery operation with their private Western Family brand label (M.E. Berg, personal communication, May 27, 2013).

Following Pattison's purchase of Fraser Valley Foods, the processor experienced a loss of business with their previous retail partner, Loblaws. Loblaws, Canada's number one grocery retailer, refused to purchase from Fraser Valley Foods once they were acquired by Pattison, their number one BC competitor in the retail grocery space (M.E. Berg, personal communication, May 27, 2013).<sup>4</sup> Pattison subsequently sold the facility to Pillsbury Foods. Pillsbury was looking to create a more integrated north/south transborder trade with its other processing facilities on the west coast and reduce its transportation costs across Canada. They hoped to package their Green Giant label vegetables in BC but, "there were not enough heat units in BC to grow the Green Giant corn and they couldn't grow enough peas to fulfill the volumes that they needed" (M.E. Berg, personal communication, May 27, 2013). By the early 1990's, the effects of global and national consolidation in the industry and free trade started to further impact the fruit and vegetable processing sector.

<sup>3</sup> According to Forbes magazine, the Pattison Group is the third-largest private company in Canada, with sales of more than \$7.5 billion in 2012. The group has operations in the automotive, media, packaging, food, entertainment and financial industries. Jimmy Pattison is the third wealthiest person in Canada with a net worth of \$5.5 billion.

<sup>4</sup> Loblaw Companies Ltd. is Canada's largest food distributor with over 14 million customers per week, approximately 1,000 corporate and franchised stores, and 135,000 employees (including part-time). In 2011, Loblaw had sales of C\$31.25 billion and operating profit of C\$1.38 billion (Datamonitor, Marketline).

The first casualty, after the implementation of the CUSTA in January 1989, was Royal City Foods Ltd. of Burnaby. In October 1992, the President of the 63 year old company, Peter Beraldin, announced that they wouldn't be harvesting or processing crops any longer. Beraldin blamed high-priced marketing boards for making the business uncompetitive in a global market, while B.C. Vegetable Marketing Commission Manager Charles Amor blamed the Canada-U.S. free-trade deal ("Royal City pairing down," 1992). In *Country Life in BC's* November 1992 edition, Beraldin painted a grim picture of the processing industry in BC, agreeing that the federal government's free trade policy had driven them out of business (Schmidt, 1992). *The Vancouver Sun* reported a few months later that the farmers who supplied produce to Royal City were still awaiting payments totalling \$700,000 for their 1992 harvest of corn and beans ("Farmers in a fix," 1993). BC's Agriculture Minister Bill Barlee also placed the blame for the closure on the free trade agreement. The Royal City processing facility purchased 29% of the annual production of beans, corn, and peas in 1992. Table 4-2 on the following page illustrates the historical relationship between the loss of processor contracts and the changes in acreage planted.

The closure of Royal City Foods processing facility in 1992 corresponded with a modest decline of 11% in corn and 7% in peas between 1992 and 1993. There was a dramatic decline of 46% fewer acres planted in beans, one of the crops that the farmers were awaiting payment for. Although the data indicates an overall reduction of 15% for the three crops from 1992 and 1993, there was already evidence of declining acreage in the prior year. Although I could not find any weather related reasons for the previous decline, other macro-economic factors may have contributed to a drop in acreage planted. These factors included an appreciation of the Canadian dollar from .82 cents to .87 cents between 1989 and 1991 that may have affected exports of processing crops, and the fact that Canada was experiencing a recession in the early 1990's (Barichello, 1996, p.6). Surprisingly, other than the 200 lost jobs, there was no mention in any of the media reports of the impact on the affected employees.

**Table 4-2. Adapted from CANSIM Table 001-0013. Production of three primary vegetable processing crops by acres planted.**

Commodity	Closures	Year over Year Changes in Acres Planted					
		Beans	% + or -	Peas	% + or -	Corn	% + or -
1991		1,982		4,562		4,181	
1992	Royal City	1,600	-19%	3,780	-17%	3,700	-12%
1993	Fraser Vale	870	-46%	3,525	-7%	3,300	-11%
1994		990	14%	3,750	6%	3,845	17%
1995	Fraser Valley	1,115	13%	3,400	-9%	3,615	-6%
1996		1,353	21%	1,871	-45%	3,638	1%
1997		1,100	-19%	2,195	17%	2,375	-35%
1998		1,300	18%	2,155	-2%	2,760	16%
1999		1,540	18%	2,200	2%	2,740	-1%
2000		1,745	13%	2,230	1%	2,730	0%
2001		1,975	13%	2,111	-5%	3,100	14%
2002		2,000	1%	2,150	2%	2,750	-11%
2003		2,325	16%	1,800	-16%	2,800	2%
2004		2,395	3%	2,200	22%	2,700	-4%
2005		2,300	-4%	1,505	-32%	2,700	0%
2006		2,730	19%	1,800	20%	3,400	26%
2007		2,550	-7%	1,600	-11%	3,400	0%
2008		2,410	-5%	1,750	9%	3,030	-11%
2009	Snowcrest *	2,695	12%	1,255	-28%	2,120	-30%
2010		2,140	-21%	1,088	-13%	2,425	14%
2011		1,600	-25%	859	-21%	2,724	12%

*Note:* On Feb. 26, 2009 Omstead (Snowcrest) sold its vegetable processing business to Bonduelle North America. The Snowcrest label and plant was subsequently purchased by Silver Valley Farms in Maple Ridge, and continues to process frozen fruit.

The NAFTA trade pact that added Mexico in 1994 would put further pressure on the fruit and vegetable processing sector as their cost competitiveness in produce and labour were further eroded. By this time, Fraser Valley Foods was owned by Pillsbury and they had already expanded their West Coast network by opening a processing plant for broccoli and cauliflower production in Irapuato, Mexico. “They had their own growers

and their own plant and they could get a better quality of broccoli than we could grow up here” (M.E. Berg, personal communication, May 27, 2013). The Pillsbury restructuring impacted the Lower Mainland’s fruit and vegetable processors a few years later. On September 28<sup>th</sup>, 1993, British Grand Metropolitan PLC announced (from London) that it was closing its Pillsbury Fraser Vale Frozen Foods plant in Chilliwack (“360 jobs to go,” 1993). *The Financial Post* report of the story that same day neglected to include Pillsbury’s global ties to England and reported the restructuring as: “Food giant Pillsbury Co. of Minneapolis will close three Canadian processing plants as part of a US\$100-million restructuring of its Green Giant vegetable division” (Brent, 1993). The effects of globalization and industry consolidation were both evident in these articles. This closure affected 200 year round and 160 seasonal employees. The loss of the processor contracts was seen as problematic for Fraser Valley farmers. Fraser Vale Foods’ General Manager, Glenn Barrington, said the company was undergoing a strategic business review to examine whether peas, bean, corn and cole crops “fit in our business portfolio” (Brent, 1993).<sup>5</sup>

In 1995, just over two years after closing its Chilliwack plant, Pillsbury announced the closing of its Fraser Valley Foods Sardis facility, putting another 500 people out of work. Chilliwack Mayor John Les lamented the loss of one of the area’s biggest employers and the effect it would have on local growers. Tom Fawkes of local 1518 of the United Food and Commercial Workers Union believed that plant’s problems were due to the fact that the company had failed to invest in the 50 year-old plant during their eight years of ownership (Lee, 1995). In an extensive report, *Focus on the Future: Developing the Agri-food Industry in British Columbia*, a lack of technological advancements and antiquated equipment were identified as significant challenges facing BC’s processing industry (FERENCE, Weicker & Company, 2006, p. 73). These challenges still exist and are explored further in the following chapter.

Golden Valley Foods’ President Ken Funk and Abbotsford Mayor George Ferguson blamed the prices of produce set by the marketing boards (Turnbull, 1996, p. 4). Funk believed that the marketing boards had too much power. While insisting he was

<sup>5</sup> Cole crops are often called cruciferous vegetables and include broccoli, cauliflower, brussel sprouts, cabbage, and kohlrabi

not “anti-producer,” he stated that they should no longer expect the cost of production (COP) “based on narrow interpretation of what the COP should be” (Turnbull, 1996, p. 4). Mayor Ferguson predicted that there would be something else to replace marketing boards in “five to eight years” because of factors like free trade (Turnbull, 1996, p. 4). On the other hand, Mary Ellen Berg, who worked at Pillsbury at the time, cited the primary reason for the closure as Pillsbury’s desire to exit the canning business and consolidate the remaining frozen food operations elsewhere (personal communication, May 27, 2013). Wendy Holm, an agrologist and regular *Country Life in BC* contributor, offered this perspective on the Fraser Valley Foods closure: “In a Dickensian move unfortunately-reminiscent of parent-conglomerate Grand Met Foods’ British registry, Pillsbury advised its 500 or so employees of the impending plant closures a scant five days before Christmas” (Holm, 1996). Mary Ellen Berg disagreed with this dark portrayal, remembering, as part of their management team, how Pillsbury went out of their way to look after their employees. Most of the seasonal employees were already laid off and the rest of the employees were paid for the four months, until the closure on April 10<sup>th</sup>, and then paid out their severance. Transitional assistance was also offered through outplacement services, group employment sessions, and a storefront set up in Chilliwack (M.E. Berg, personal communication, May 27, 2013). The timing of the closure was unfortunate as the facility was the second largest employer in Chilliwack. Military base CFB Chilliwack, the number one employer, had earlier announced that it was closing.

The next significant closure with a serious impact on Lower Mainland farmers was in 1997, in the snack food category. While potato chip manufacturing falls under a separate food manufacturing category, NAICS 31191, the plant closure was viewed by the farming community as another victim of free trade policy. The November 1997 announcement cost 76 jobs and affected 30 to 40 growers’ contracts for their entire potato crops. Murray Driediger, General Manager of the B.C. Vegetable Marketing Commission (BCVMC), blamed the rash of processing facility closures on the US free trade agreement, with companies looking for lower labour costs, and lax environmental laws (“Nalley’s closing chip,” 1997). Blaming three straight years of local potato crop shortages, Nalley’s Canada Chair, Pat Lindenbach, announced the closure of their Delta chip-making factory (“Nalley’s closing chip,” 1997). According to CANSIM data for potato

crop production, 1997's yield of 1.575 million hundred weight was well below the ten year average of 2.152m while 1996 was close at 2.088m and the 1995 crop was well above the average at 2.684m. It appears the decision to close the facility was based on one bad harvest. Potato farmers were hopeful that Nalley's would continue to purchase their crop for their Oregon processing plant (Schmidt, 1998). The Nalley's closure underscored the importance of examining the implications of crop failures and weather related events as they impacted the processing industry. The local processing market for potatoes was dependent on a single snack manufacturer. However, french fries and other frozen potato products are the number one frozen food product in Canada (George Morris, 2012, p. 15). Despite the significant acreage of potatoes grown in the region, there hasn't been a french fry plant in BC since Spetifore Frozen Foods Ltd. in Delta closed in 1978.

For a period in the early part of the 2000's, there was some fruit and vegetable processing expansion. Fraser Valley Packers opened up a 15,000 sq. ft. processing plant in June 2000. Owned by four Abbotsford berry growers, the plant included a mechanical sorter and two thirds of the facility's capacity was dedicated for storage. The plant also had the capability for freezing and could be used for cranberries as well. Gord Cheema, Vice President and General Manager of Fraser Valley Packers, said the plant would employ approximately 25 people, but identified a lack of pickers as an ongoing challenge (Ullyot, 2000). In a rare instance of a BC company expanding its business, Snowcrest Foods of Abbotsford acquired Omstead Foods of Ontario from Heinz Canada in January, 2003. Snowcrest Foods Ltd. with 135 employees, owned by Calgary equity capital fund TriWest Capital Corporation, was much smaller than Omstead with 450 employees. The former General Manager of Snowcrest and incoming President of Omstead, Michael Walker stated; "[t]his gives us truly national coverage in the frozen fruit and vegetable business" (Constantineau, 2003). Snowcrest listed its regional assets as a processing plant in Abbotsford and a distribution centre in Burnaby, the former Royal City processing facility. Mary Ellen Berg recalls the Omstead era as a difficult time with the larger Ontario part of the company having a different way of doing business. While the profits were made in BC, the losses that were happening in Ontario were putting the company in a precarious financial position (M.E. Berg, personal communication, May 27, 2013).

Some good news for potato growers came from Naturally Homegrown Foods of Maple Ridge as they won a contract to process potatoes for Toronto based New York Fries. While it was not specifically mentioned as an expansion, the Maple Ridge company's potato processing tripled to 10,000 Kilos per week (Mitham, 2005). Sepp Amsler, company co-owner, played up the fact that the potatoes in his products were local. He and his partners acquired the company in 2002 and have their own brand of Hard Bite potato chips that are sold across Canada, Hong Kong, Japan, and Thailand. This was still a small portion of the 15,000 tons that Nalley's used to process and a tiny fraction of the 50,000 to 60,000 tons grown annually in the region. In July of 2007, less than a year after E.D. Smith & Sons purchased a jam and salad dressing plant from Golden Valley grocery foods division in Abbotsford, it closed the facility with a loss of 33 jobs and moved operations to its head office in Winona, Ontario (Toth, 2007). On February 26, 2009, Omstead sold its vegetable processing business to Bonduelle North America, a frozen and canning processor with seven facilities in Eastern Canada (Schmidt, 2009). As part of the agreement, Snowcrest would no longer process frozen vegetables, leaving Lower Mainland farmers in the lurch once again. Farmers predicted that the closure would affect the planting of 2,000 acres of corn, peas, and beans (Schmidt, 2009). They believed that BC Frozen Foods might be able to accommodate 200 acres but Lucerne (Safeway) was likely at capacity (Schmidt, 2009). Table 4-2 on page 35 shows the impact on crop acreage was much stronger for this plant closure as the 2009 planting of corn fell 30% or 910 acres, peas declined by 28% or 395 acres, and beans increased by 12% or 285 acres. The net loss of 1,010 acres was less than predicted but substantial none the less.

The changes in the number of fruit and vegetable processor facilities, employment levels, and revenues are calculated from the Statistics Canada data I compiled in Table 4-3 on the following page. While the data is based on statistics for the entire province, I offer them as a proxy for the Lower Mainland. The databases that I searched to identify fruit and vegetable processing businesses showed that over half of the BC fruit and vegetable processors reside within the Lower Mainland. Despite the limitations of not being able to access regional data, and the other changes in methodology discussed in Chapter 3, some conclusions can be offered. While the number of processors nearly doubled from 27 to 56 when Industry Canada's criterion for

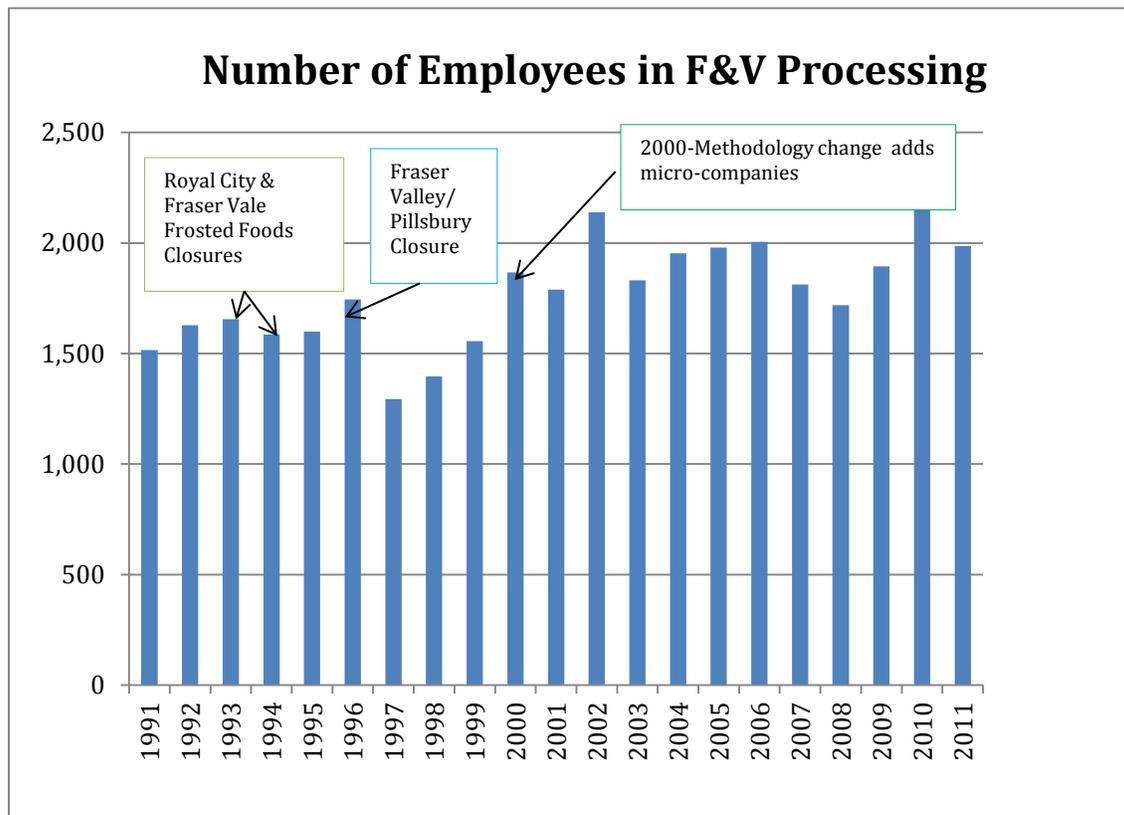
inclusion was changed in 2000, it only resulted in a 20 per cent increase in the number of employees. These appeared to be mostly small-scale processors, with few employees, as the overall revenue went up by 34.6%, while the number of employees increased by only 20%.

**Table 4-3. Adapted from Statistics Canada CANSIM Tables 301-0003, 301-0005, and 301-0006. BC Fruit & Vegetable Processing Industry NAICS 3114**

Year	Facilities			Employees			Revenue		
	Total Facilities	Freezing	Canning Pickling Drying	Total Employees	Freezing	Canning Pickling Drying	Total Rev x \$1,000	Freezing	Canning Pickling Drying
1991	x	x	x	1,516	366	1,150	259,167	66,876	192,291
1992	x	x	x	1,628	419	1,209	271,964	71,372	200,592
1993	x	x	x	1,656	298	1,358	280,988	73,187	207,801
1994	x	x	x	1,587	416	1,171	289,247	83,462	205,785
1995	x	x	x	1,600	383	1,217	332,913	88,006	244,907
1996	x	x	x	1,745	437	1,308	314,321	99,677	214,644
1997	x	x	x	1,294	381	913	307,462	90,965	216,497
1998	28	12	16	1,397	444	953	296,771	93,790	202,981
1999	27	11	16	1,557	515	1,042	305,329	92,887	212,442
2000	56	27	29	1,868	598	1,270	411,004	104,753	306,251
2001	51	25	26	1,789	692	1,097	409,662	124,541	285,121
2002	50	25	25	2,139	819	1,320	465,969	144,314	321,655
2003	54	26	28	1,831	636	1,195	392,261	132,140	260,121
2004	67	25	42	1,954	620	1,334	417,296	140,498	276,798
2005	78	29	49	x	x	1,565	x	x	333,184
2006	72	26	46	2,005	769	1,236	517,002	200,855	316,147
2007	68	25	43	1,812	681	1,131	479,643	186,974	292,669
2008	65	25	40	1,719	729	990	461,111	212,999	248,112
2009	63	25	38	1,895	907	988	491,273	240,706	250,567
2010	69	27	42	2155	1202	953	488,128	257,128	231,000
2011	x	x	x	1987	1185	802	432,242	224,393	207,849

While these methodological changes clearly affected the calculations of overall revenue and facility numbers, the data also captured the large plant closures that occurred during that time period. Figure 4-1 below, illustrates how the statistical data on employment in the sector correlated with some of the events described in the media analysis and interview sessions. The most significant closure was the Pillsbury plant in 1996. The data shows a loss of 395 employees in the canning and pickling category from 1996 to 1997. Mary Ellen Berg recalls that the Pillsbury closure meant the end of the local canning business (personal communication, May 27, 2013).

**Figure 4-1. Number of BC Employees in Fruit & Vegetable Processing, Produced from Statistics Canada Tables 301-0003, 301-0005, and 301-0006**

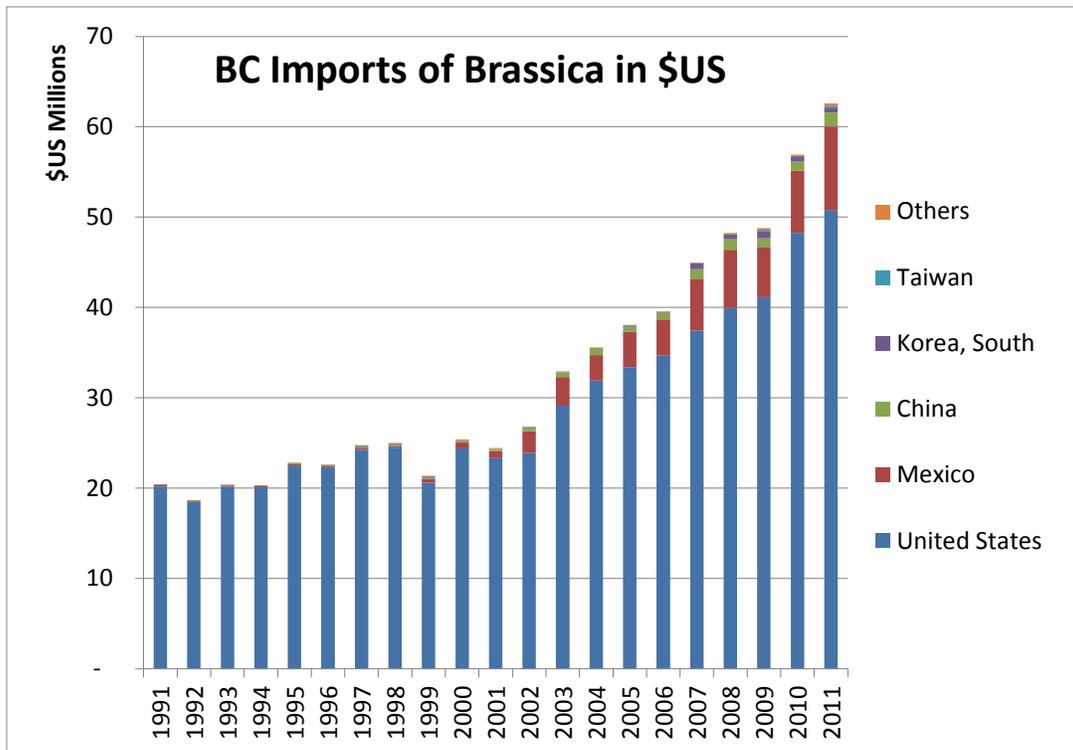


#### **4.1.4. Trade Wars and Tariffs**

An underlying theme in the conversations and media analysis on the fruit and vegetable processing industry was the impact that trade agreements' stipulation for the gradual removal of tariffs had on the agrifood sector. While the articles on processing facility closures and acquisitions mentioned free trade and global economic forces that factored into the stories, the bulk of the media coverage concerned the overall impacts on the producers. A total of 33 stories, from those selected, focused on the Canada United States Trade Agreement (CUSTA), the North American Free Trade Agreement (NAFTA), or with anti-dumping duties and the Canadian International Trade Tribunal (CITT). The trade wars that occurred because of dumping allegations happened at the same time that protective tariffs were being phased out over a ten year period on certain imported fruits and vegetables. These issues had an effect on the cost structure of processing crops for the Lower Mainland's processing industry.

In May 1991 Chuck Amor, General Manager of the BC Vegetable Marketing Commission (BCVMC), warned about the effect of the existing free trade pact with the US and how much worse it could get with the inclusion of Mexico in a North American trade agreement. Amor, concerned about the drop in tariffs, suggested that local farmers would no longer grow broccoli and cauliflower as they try to compete with Mexico (Schmidt, 1991). The editorial in the same issue complained about the free trade agreement in relation to US countervailing duties placed on Canadian pork products even though a bi-national dispute panel had ruled those duties were illegal ("Free trade far from free," 1991). From the producers' point of view, there were no positives in expansion of the free trade agreement. Amor's fears about increased imports from Mexico were realized to a limited degree after the NAFTA agreement. The imports of cole crops that include broccoli and cauliflower from Mexico went from \$173,893 in 1994, to \$393,426 in 1999 after the final tariffs were removed, and steadily increased over the following decade to over \$9.2 million by 2011. Figure 4-2 on the following page illustrates that the greater threat to BC producers was still the US. The significance of the increase in cole crop imports to the processing sector proved to be less significant than these figures suggested as there are only two companies left in the frozen vegetable processing market.

**Figure 4-2. Adapted from Statistics Canada trade data- HS 0704. BC Imports of Brassica or Cole Crops Fresh or Chilled (Cauliflowers, Broccoli, Brussels sprouts and Edible Brassicas) in \$US**



While farmers from the Lower Mainland and Vancouver Island protested a lack of government support as the trade tariffs were being phased out, Doug Kitson, Vice President of production for Royal City Foods, noted that the BC vegetable market had developed behind trade barriers and that it was now having trouble competing. Kitson noted that with BC's interest rates, input costs, minimum wages, and taxes all higher than the US, "farmers cannot be expected to preserve farmland for the future without being compensated" ("Free trade far from free," 1991). Articles on free trade and disputes over dumping peaked just prior to Mexico joining the agreement under the NAFTA and again from 1999 until 2002. The CITT hearings were costly and time consuming for the participants. In July of 2000, during CITT hearings regarding the accusation that Washington potatoes were being dumped into the BC market, BCVMC General Manager Murray Driediger testified for eight hours and was grilled by lawyer Daryl Pearson, an international trade specialist who represented Washington State

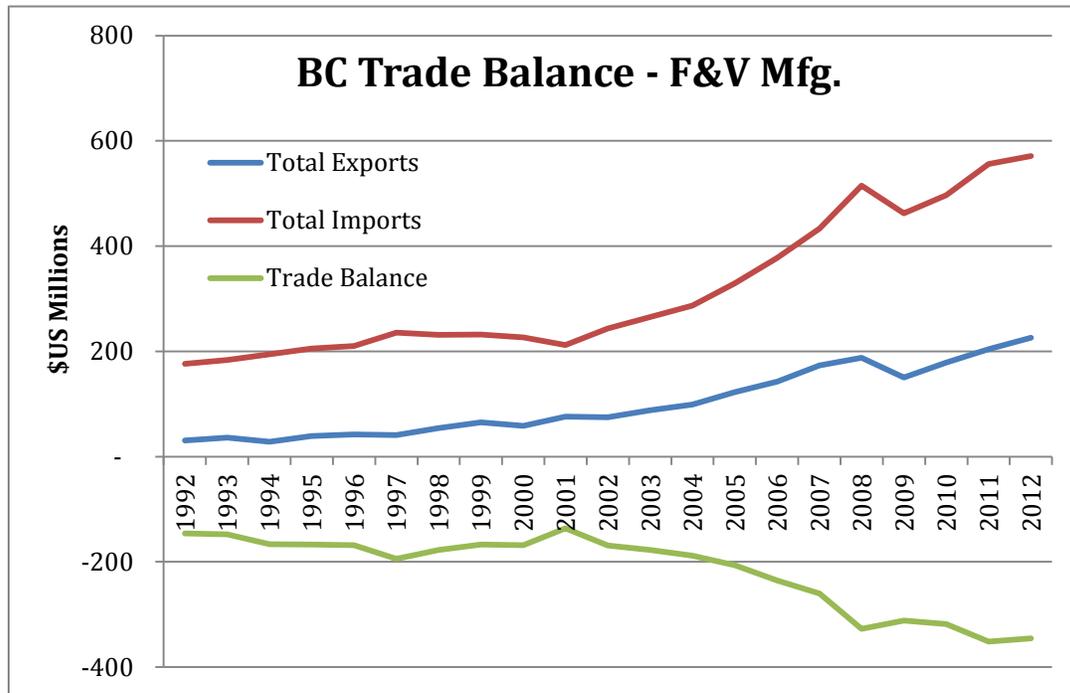
potato growers (Schmidt, 2000a). The costs of these hearings were borne by the farmers through their marketing agency dues. A couple of months later, farmers celebrated a favourable anti-dumping ruling on potatoes, taking some of the sting out of earlier losses on onions and apples (Schmidt, 2000b).

The escalation of trade wars over agriculture peaked in late 2001. Provincial Minister of Agriculture, Food and Fisheries John van Dongen called Canada and US trade actions "*non-productive exercises and hurtful on industry,*" as he hoped to build bridges at the agriculture ministers meeting in Mexico (Schmidt, 2001b). Meanwhile the US Department of Commerce (USDC) imposed provisional duties of 50-75% on BC tomatoes, 4.5 times higher than expected. With 80% of BC greenhouse tomatoes exported to the US, Canada then retaliated by imposing duties on US field tomatoes (Schmidt, 2001c). While it is difficult to assess how these duties affected the processing industry, the time, effort, and money spent on the tribunals was a drain on BC's marketing commissions and the farmers. The crop at the centre of the Lower Mainland's attention was potatoes and the BCVMC successfully had the duties renewed every five years, most recently in 2010. The dumping of crops is still an issue in the industry with Brussel sprouts dumped on the market from Europe as a recent example (T. Drew, personal communication, May 9, 2013). It is incredibly expensive for the various commissions to take their case to court when faced with a country dumping product onto the market.

The free trade agreements and the globalization of the processing industry were cited as significant factors throughout the media coverage of the events during the late 1980s to 2011 study period. In a preliminary assessment of the effects of the CUSTA over its first seven years, Dr. Richard Barichello offered other reasons for the changes in cross-border trade between Canada and the US. He found that the Canadian dollar appreciating from .82 to .87 between 1989 and 1991 hurt Canadian exports, followed by depreciation to .73 between 1991 to 1995 which aided exports (Barichello, 1996). Other macro-economic factors included a recession in the early 1990's, declining inflation, and lower interest rates. Barichello (1996) did not view the trade tariffs that were gradually removed as a condition of free trade as a significant factor in trade as they were quite small (10% – 15%) for "soft fruit and vegetables"(p. 6). Despite the increase in Canadian exports in all agricultural commodity sectors since the free trade agreement,

there is a significant trade deficit in processed fruits and vegetables. Figure 4-3 below shows BC's exports and imports in processed fruit and vegetables between 1992 and 2012. While the exports have been increased every year except during the global recession in 2009, the negative trade balance continues to grow.

**Figure 4-3. Adapted from - BC Trade Balances in \$US million, NAICS 3114 - Fruit and Vegetable Preserving and Specialty Food Manufacturing**



## 4.2. The Current Landscape

The fruit and vegetable processing industry appears to have survived globalization, free trade agreements, and several other challenges that are outlined in the next chapter. The sector looks quite different now than in the past when there were several large facilities that would ramp up production during the local harvest season. Despite the loss of most of these facilities and a reduction in labour with increased automation at the Safeway plant, employment data for the sector suggests that smaller processing businesses have created additional employment. In British Columbia, in 2012, there were 26,000 people employed in the primary agriculture and aquaculture sector and 31,800 in food and beverage processing. The primary sector had farm cash

receipts of \$2.8 billion and the food and beverage processing sector had \$8.2 billion in sales (BC Ministry of Agriculture, 2012, p. 5). Despite the size of the industry, there is little research on the tracking of inputs for the processing industry. The federal government believes that the sector relies primarily on imports for our food, and recognizes a vulnerability to outside manipulation and emergencies (AAFC, 2007, p. 13).

#### **4.2.1. *The Last of the Early Processors***

Where there had once been a thriving vegetable processing sector, only two businesses are still processing frozen vegetables as well as frozen berries. While they did not all participate in this study, there are approximately five other frozen berry processors located in the industrial area of Abbotsford. The vegetable canning industry had already vanished with the closing of Fraser Valley Foods in 1996. Fraser Valley Foods, at the time it closed in April 1996, was the second largest employer in Chilliwack. During its peak, they employed 600 people in a manual canning line doing mostly asparagus, imported from the US (M.E. Berg, personal communication, May 27, 2013). While there are several facilities processing frozen fruit, there are only two frozen vegetable processors left; Safeway and BC Frozen Foods. I was able to interview Travis Drew, the Operations Manager at Safeway. BC Frozen Foods Ltd. declined my survey request citing customer confidentiality issues. However, information was available on their web site and in the *Journal of the International Academy for Case Studies* (Shah and Ghazzawi, 2012). According to BC Frozen Foods web site they are still processing vegetables (BC Frozen Foods, n.d.).

Safeway's fruit and vegetable processing plant in Abbotsford was established in 1958. They have the advantage of vertical integration as they are part of a multinational corporation with a large retail presence in the US and Western Canada.<sup>6</sup> Safeway is in a unique situation in that they have control over all aspects of the value chain from sourcing, processing, packaging, distribution, and retail sales. With approximately 50% of their produce grown locally in Abbotsford and another 20% within the region, they have a close relationship with their growers (T. Drew, personal communication, May 9,

<sup>6</sup> Empire Ltd., the second largest Canadian grocery retailer and owner of Sobeys' grocery chain purchased Safeway's Canadian assets in June 2013.

2013). They contract directly with their growers, offer support through their own Field Managers, own a couple of pea harvesters, and supply crews for harvesting. Their Field Managers have 35 and 40 years of experience, respectively. Safeway is involved in the operation right from the field to the plate. They choose growers that work well with their facility and pay their farmers right away. Travis Drew feels that being part of a large vertically integrated corporation like Safeway is a definite advantage (personal communication, May 9, 2013).

While blueberries are the Abbotsford Safeway plant's number one crop, the next four items are beans, Brussel sprouts, peas, and broccoli. Most of the imported produce is for their line of frozen mixed fruit products that contain tropical fruits like pineapple and mango. Travis Drew is very empathetic towards the local farmers and believes that if there were more processing capacity available, farmers would grow more vegetables for the frozen market (personal communication, May 9, 2013). Safeway exports a majority of its finished product with 45% to the US, 30% to the Prairie Provinces, 5% to Ontario, with the remaining 20% sold through its stores in BC (T. Drew, personal communication, May 9, 2013). Safeway's Abbotsford plant has been going strong since 1958, and has kept pace with global competition through plant modernization and innovative technologies. However, Travis Drew identified several challenges facing the fruit and vegetable processing sector and their growers. These are explored in detail in the Chapter 5.

BC Frozen Foods originally specialized in fresh berries, Individually Quick Frozen (IQF), and berry puree. In an effort to diversify, they invested in a green bean processing area and a custom vacuum pack processing area (Shah and Ghazzawi, 2012, p. 3). Based in Mission, across the Fraser River from Abbotsford, the company started in 1987 as S&S Corporation before changing its name to BC Frozen Foods in 1989. The primary fruits and vegetables processed at BC Frozen Foods in the early days included raspberry, strawberry, blueberry, cauliflower, broccoli, rhubarb, and Brussels sprouts (Shah and Ghazzawi, 2012, p. 3). Like Safeway, their proximity to the growers meant they could process the produce within hours of harvesting. Unlike Safeway, they found access to labour challenging, and utilize the temporary foreign workers (TFW) program to bring in labourers from Mexico.

Before moving on to the growth in farm-based processors it is interesting to note an exception to this trend. As discussed in the changing landscape of fruit and vegetable processing, the Biln Family of Silver Valley Farms achieved their vertical integration by acquiring the Snowcrest facility and label from Bonduelle in 2010. Prior to the Biln Family acquisition, the plant ceased processing frozen vegetables and Snowcrest now processes fruit with blueberries as their dominant product. Silver Valley sells fresh blueberries from their farm, mostly to the US market and now offers an extensive line of Snowcrest frozen fruit products through their processing facility in Abbotsford. They are in the original Snowcrest facility that was built at that location in 1957 because it had an artesian well located on site. Blueberries are their number one product followed by strawberries, rhubarb, and cranberries with approximately 90% of it originating within 150 kilometres (M.E. Berg, personal communication, May 27, 2013). They distribute most of the product across Canada and export to the US, Japan, and Vietnam. The scale of the operation includes 30 year-round employees. Because they are able to freeze and store the product, they can distribute the packaging process throughout the year. Both Snowcrest and Safeway hire students from the University of the Fraser Valley for the busy summer season.

#### **4.2.2. *Farm-based Processing***

One of the significant trends in fruit and vegetable processing in the Lower Mainland is the number of farm-based operations that have entered the field. There are several reasons for an increase in farm-based processing. Some farmers are struggling financially and are attempting to increase profits by selling value-added products directly to their customers. Other farmers, particularly in the blueberry industry, are having difficulty finding buyers for their product, and by freezing a portion of their harvest, can access more markets for their berries. Twenty of the 60 processors that I identified had farm-based operations and of those twenty, seventeen processed berries as their main produce item. There are several advantages in processing on the farm. Perishable product can be sorted, washed, and frozen immediately. Machine harvested berries can be pureed and packaged for further processing. The labour force can be deployed for both harvesting and processing. Several farms have also integrated agri-tourism into their operations. Economic advantages in co-locating processing on agricultural land

include: lower tax rates, reduced transportation costs, and reduced loss of perishable product.

One survey participant complained that the rules in the ALC Act are too restrictive. The ALC Act requires that a minimum 50% of the product has to be grown on site for an on-farm processing facilities on ALR land. The participant felt that the ALC should be encouraging on-farm processing rather than restricting it, and that most of the existing processors located on the ALR are out of compliance with the current rules. Tony Pellet, the ALC Regional Planner for the Southcoast Mainland area, explained how the rules apply. The farmer needs to apply to the commission for a non-farm use permit if they wish to exceed the 50% limit (T. Pellet, personal communication, May 15, 2013). Depending on the circumstances, the commission may allow exceptions and they would lay out the parameters of the non-farm use permit. These applications are vetted and are given a high priority by the land use planners (T. Pellet, personal communication, May 15, 2013). For instance, Ocean Spray applied for and received permission to build a facility to wash and grade cranberries in Richmond on what was formerly a golf course within the ALR.<sup>7</sup> They needed ALC approval for non-farm use to exceed the 50% rule (T. Pellet, personal communication, May 15, 2013). Under Section 46 of the ALC Act, municipalities can place more restrictions on on-farm processing facilities, but they cannot be less stringent. Building permits that regulate the size of facilities built on ALR properties are established by the individual municipalities.

Richard Bullock, the Chair of the ALC, wrote a report in November 2011 in response to the provincial Auditor General's findings of September 2010.

The ALC must look at ways to encourage farming in an era of climate change, significant urban expansion, concerns about local food supply, food safety and sustainability. It must shift from a mandate of preserving the land for agricultural production to also supporting other aspects of the food system beyond production (i.e. processing, retail, distribution, waste management). This should include a balanced approach to support a wide spectrum of diverse agricultural uses and infrastructure needs. (ALC, 2011, p. 63)

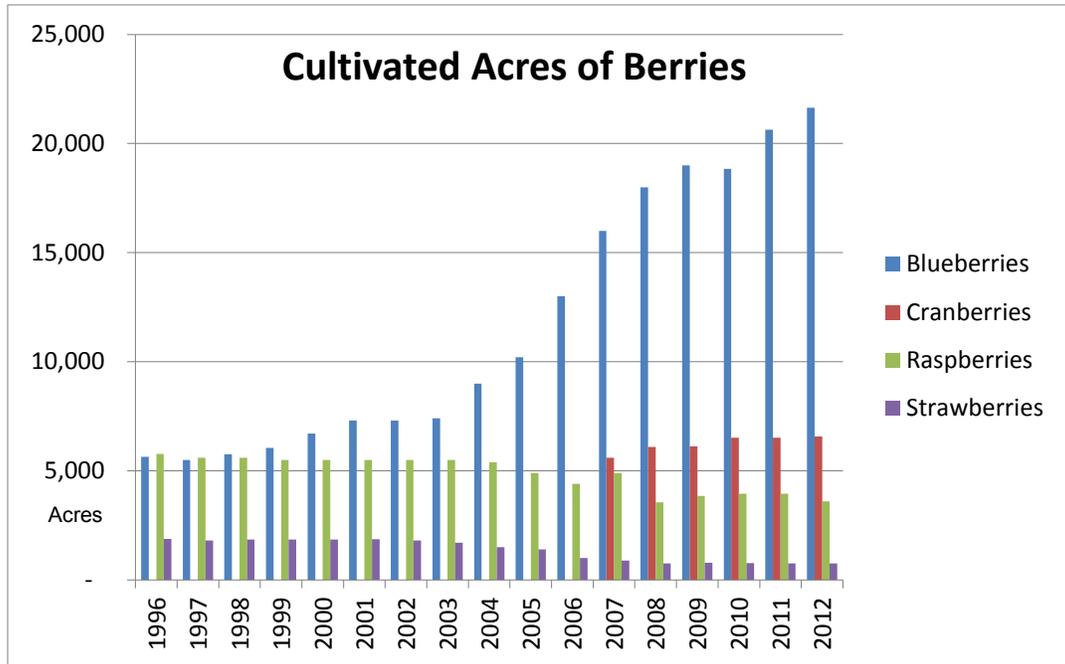
<sup>7</sup> According to the BC Cranberry Marketing Commission (BCCMC), approximately 95% of BC's 85 cranberry growers are members of the Ocean Spray co-operative.

Without specific reference to how support for other aspects of the food system would manifest itself, the farm-based processors must remain in compliance with the 50% rule. For that one participant at least, they would like to see a relaxation of that rule or the development of a special Agri-Commercial zone with protection under the Right to Farm legislation with a taxation system that would satisfy the municipalities.<sup>8</sup>

With the growth of farm-based processing in the Lower Mainland, I wondered how the established processors that reside on industrial or commercial zoned land viewed this competition. I posed this question to Travis Drew and Mary Ellen Berg; some common issues they identified included the imbalance in taxation levels between agricultural land and industrial, water and waste water charges levied by the municipalities, and the cost of the land itself (personal communications, T. Drew, May 9, 2013; M. E. Berg, May 27, 2013). Some of the farm-based processors have discharged wastewater back onto the land while others discharged into the sewage system without being metered. Some cities have recognized these inequities and have moved to address the wastewater issue (T. Drew, personal communication, May 9, 2013). While the competitive landscape has changed in the blueberry processing industry, Safeway and Snowcrest have secure supply sources and the number of farms switching to blueberries continues to grow. Figure 4-4 on the following page illustrates that the number of acres planted in blueberries nearly tripled, from 6,700 acres in 2000 to 19,000 in 2009. Highbush blueberries take three years before they start to bear fruit and then reach maturity around seven years so there is a lag between acres planted and a corresponding spike in production.

<sup>8</sup> Established in 1996, the Farm Practices Protection (Right to Farm) Act (the FPPA) was introduced to “strengthen the agriculture and aquaculture industries in BC,” “to increase certainty for BC food producers and raise public understanding of the needs of farmers and the valuable role of farming in society” (BCFIRB, 2009, p. 23). This act is administered by the BC Farm Industry Review Board (BCFIRB).

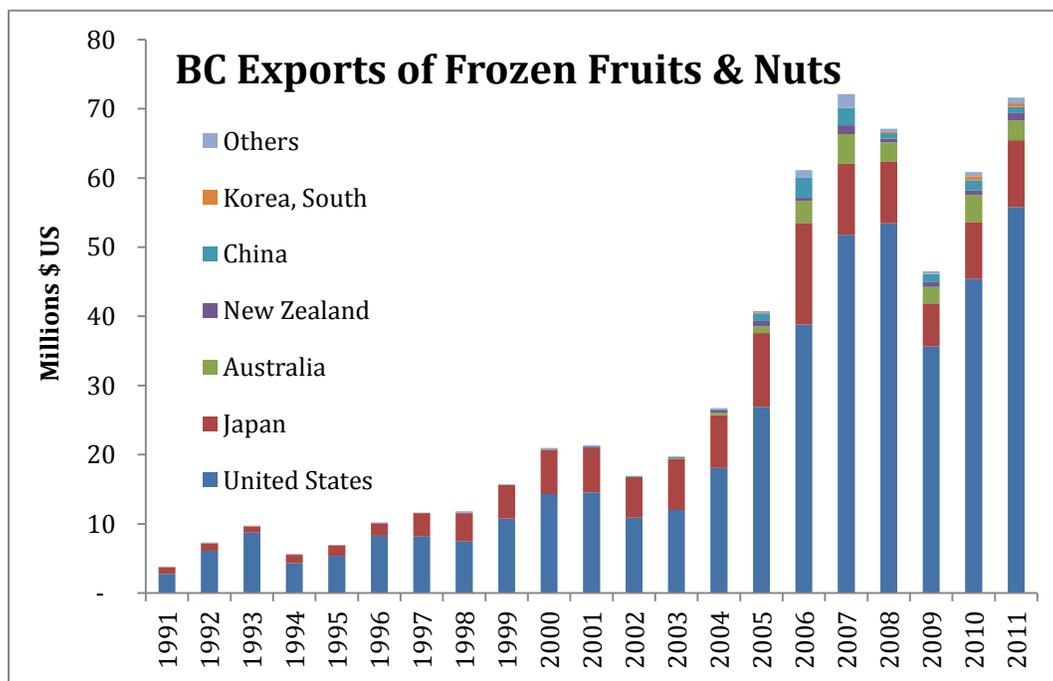
**Figure 4-4. Adapted from Statistics Canada CANSIM Table 001-0009 - Area, production, and farm gate value of fresh and processed fruits, by province, annual. Number of Cultivated Acres Berries.**



One of the major challenges for new blueberry processors is finding a market for their product. When consultant Ray Wagner is approached to create a business plan for a client wanting to invest in blueberry production, he asks them to find three buyers for their product (personal communication, May 16, 2013). The major retailers and processors have their supply chains set and there are barriers to entry for new farmers and processors. It takes a large investment in real estate, building, and equipment and in the end the margins are usually in the range of 10 to 15 cents a pound (R. Wagner, personal communication, May 16, 2013). While the market for frozen berries has expanded into Asia, they lack freezer and refrigeration capacity, and other infrastructure for sustained growth. Japan has a highly developed system for food transportation and storage whereas China’s lack of “hinterland cold chain infrastructure” is an important consideration in the growth of export markets (Gill, 2013, p. 15). This holds true in other targeted export destinations like India where their logistics chains and infrastructure are less developed still (Gill, 2013, p. 30). The US is still the primary destination for 75% of the fresh blueberries and the majority of frozen berries. Separate data for frozen

blueberry exports are unavailable but Figure 4-5 below offers an example of the primary destinations for BC frozen fruit and nuts with the US and Japan as historical leaders. Processors view other Asian markets as areas of growth despite the logistical issues of storage and distribution. I have included South Korea, where the exports between 2008 and 2010 fluctuated from \$181,642 to \$21,838 to \$626,647, as one of those potentially lucrative markets. Trade with South Korea is being held up by duties that are imposed on Canada but not competitor countries like Chile and the US (M.E. Berg, personal communication, May 27, 2013). Bi-lateral trade talks between the two countries have been hampered primarily by two major issues. South Korea imposes tariffs between 22.5% and 25% on Canadian pork while Canada applies 6.1% duties to South Korean vehicles (McKenna & Keenan, 2013).

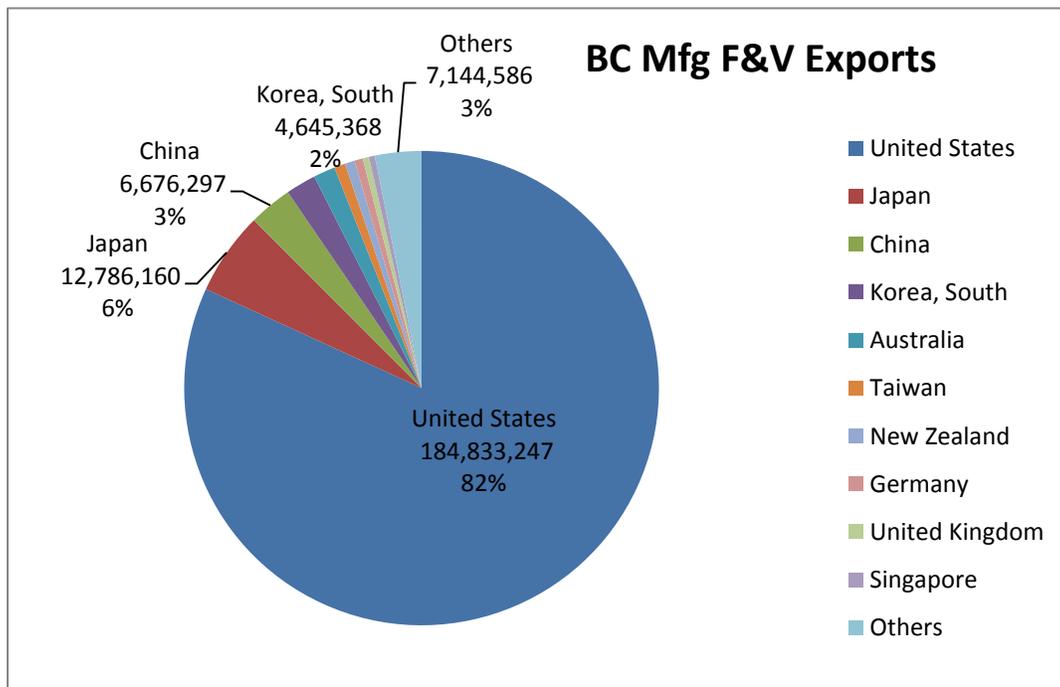
**Figure 4-5. Adapted from Statistics Canada, BC Frozen Fruit and Nut Exports by Top Destination - HS 081190 – Fruits and Edible Nuts NES - Frozen**



Some of the farm-based blueberry processors have diversified into a range of value-added products including juice, fruit wines, and innovative dried and powdered formulations that don't require refrigeration. Bremner Foods produces high quality fruit juice on its farm in Delta using blueberries grown on site as well as other local juices

from raspberries and cranberries. They also offer a pomegranate juice made from imported ingredients. Because of the appeal of the anti-oxidant properties of their juices, they have made in-roads into the Asian market in addition to their presence on local retail shelves. They recently expanded into fruit wines and have a retail outlet in a heritage barn on their farm. Cal-San Farms in Richmond is another example of a farm diversifying into frozen berries, fruit wine, and an innovative technology that is discussed in Chapter 5. While there is focus on the Asian export market, Figure 4-6 below, demonstrates that the US is still the major market for the fruit and vegetable processing industry in BC. Other berry farms throughout the Lower Mainland produce jams, jellies, and pies with several incorporating agro-tourism into their operations. There are several fruit wineries that have opened including Cal-San’s Sandhuz Winery, and Bremner’s Wellbrook Winery. There are several other farm-based processors like Glenn Valley Artichokes in Langley that specialize in niche products like preserves and condiments. Farm-based processing has filled some of the void left by the contraction in the fruit and vegetable processing sector in the Lower Mainland.

**Figure 4-6. Adapted from NAICS 3114 Trade Data – BC Top Ten Exports for 2012**



### **4.2.3. *Scaling up – From Farmers Markets to the Retail Shelf***

Whereas several of the farm-based processors have an on-site retail component to their business, other small and micro-scale processors launch their first sales at farmers' markets. In the summer of 2002, the Small Scale Food Processors Association (SSFPA) undertook a market scoping project to identify ways in which small-scale producers and processors could prepare themselves to take advantage of increasing market demand for specialty and organic food (Moreland et al., 2002, p. 7). Moreland et al. (2002) found that of the 47 processor interviews they conducted; 14% used farm-gate sales; 34% sold at farmer's markets; 34% used distributors; 38% attended trade shows; 52% used supplier driven marketing; and 70% had some presence in retail stores (p. 26). Supplier driven marketing is defined as personal presentations of the product at tasting tables at trade shows, craft fairs, and in-store demos (Moreland et al., 2002, p. 27). The results of my study also indicate that the small-scale processors often use more than one method for selling their products. Two of the entrepreneurs interviewed started their businesses at the urging of friends who liked a particular food item that they shared at a pot luck dinner or after receiving their product as a gift. The paths these entrepreneurs travelled to operating their own business ranged from home-based kitchens, to rented or borrowed space, to shared-use with other businesses, and eventually to contracting the work out to co-packers.<sup>9</sup> The outlets that these small-scale processors use for selling their products include: farmers' markets, gourmet food stores, and larger grocery retailers. While some small-scale processors are content to process in a home kitchen exclusively for farmers' markets, the participants I spoke with had moved on to commercially approved kitchen facilities that allow them to sell through retail establishments.

Aji Gourmet Foods took an unorthodox path by first gaining placement on retail shelves, and then expanding into farmers' markets. Dyana Biagi's traditional Columbian recipe for aji (pronounced ah-hee) was first shared at a potluck gathering of parents who convinced her to sell her product (D. Biagi, personal communication, June 4, 2013). One

<sup>9</sup> Co-packers are food companies that operate commercially approved facilities where the client can have their product processed, and packaged to their specifications. Co-packers speed up processing, reduce capital costs, and allow the client time to promote and distribute their products (Clark, 2012).

of the potluck attendees had a store, and Dyana Biagi's first sale was a case of her product sold at that store (personal communication, June 4, 2013). She was later discovered at the Vancouver Wellness Show by Choice's, a small independent grocery store. She had a lineup of customers buying the product at her booth. One of their representatives contacted Dyana Biagi and helped facilitate the placement of her product into one of their stores (personal communication, June 4, 2013). By the time she had established a presence in Choice's, she had already gained entry into the Whole Foods store in West Vancouver after offering a product demo. Whole Foods is a large US based alternative grocery retailer that focusses on local and organic foods. As her business grew, she moved from her home kitchen to a local community centre and then into a local church kitchen. The business has grown to the point where Dyana Biagi now uses a co-packer to create her product (personal communication, June 4, 2013).

The case of Aji Gourmet Foods contrasts with the normal pattern in a couple of ways. In a crowded retail environment, it is often difficult to access retail shelf space, and there are often costs associated with that access. Dyana Biagi was able to market directly to small retail grocers on an individual store-by-store basis by establishing relationships with the store managers and has done so without having to pay for shelf space (personal communication, June 4, 2013). Last year, she hosted approximately 70 in-store product demos. In order to expand her business further, she started selling directly to the consumer at farmers' markets. The more traditional path for most processors is to graduate from farmers' markets to retail space. Farmers' markets certified by the BC Association of Farmers Markets require the vendors "to make it, bake it, or grow it," so Dyana Biagi must be personally involved in the processing of her product in order to sell at these markets. In 2012, approximately 70% of her sales were in farmer's markets while 30% were in retail grocery stores. Dyana Biagi is happy with the co-packer arrangement she has with Premier Pacific where she is able to participate in bottling the product that is destined for farmer's market venues. They have been able to accommodate the growth of her business and attempt to source local ingredients on request (D. Biagi, personal communication, June 4, 2013). Dyana Biagi has since placed her product on the shelves of several Urban Fare stores and one Save-on Foods location in South Surrey (personal communication, June 4, 2013). Urban Fare and Save-on Foods are part of the Pattison Group of grocery stores. While Dyana Biagi has not

been charged for shelf space, each of the grocers requires a sample case of each product called “free-fill” (personal communication, June 4, 2013). The challenges of accessing retail shelf space and the issue of listing or slotting fees are explored in more detail in the following chapter.

Catherine Anderson of Trugs Gourmet Foods processes her products in a shared use commercial kitchen, where she is a sub-tenant. Trugs Gourmet Foods produces fruit jams, pepper jellies, cranberry chutney, plum sauce, and other assorted products. Catherine Anderson is happy using someone else’s excess capacity rather than building her own (personal communication, June 7, 2013). The scale of business required to operate a stand-alone facility is beyond her requirements. The main tenant is a catering company and the owner of the catering company does the processing for her as an independent contractor. Catherine Anderson also contracts a food scientist for product development and recently added a line of vegetable-based cookies that are co-packed by a bakery (personal communication, June 7, 2013). Snowcap is the wholesaler where she sources most of her produce and they get it from all over the world. Sourcing the product from a wholesaler reduces time and labour costs because some of the prep work is done in advance. For instance, onions are chopped and frozen which cuts down on preparation time and labour. She would like to source more local ingredients directly, but cost is a big consideration. The margins for processors are already very thin and the added prep work would require the hiring of an employee. Catherine Anderson also sources some specialty ingredients that are not locally available. Trugs Gourmet Foods sells through retail outlets of the Overwaita Food Group through a special local supplier program where “you get the kid gloves treatment” (Catherine Anderson, personal communication, June 7, 2013). Once approved, the processor isn’t charged listing fees and they can approach individual stores to access shelf space. Catherine Anderson prefers the requirement for a free-fill rather “than pay a \$5,000 listing fee” (personal communication, June 7, 2013). Catherine Anderson promotes her product with in-store demos two to three days a month and believes the growth opportunity for - scaling up of her business is through the small gourmet food store segment (personal communication, June 7, 2013). While she currently derives about 60% of her revenue from the large retail stores, she sells in only 10 gourmet stores “out of thousands” (C. Anderson, personal communication, June 7, 2013). Catherine Anderson’s story is not typical in that

she was a practicing lawyer who changed careers and recently bought the business from a retired couple from the Sunshine Coast (personal communication, June 7, 2013). These examples demonstrate the way that small-scale processors utilize the conventional channels to market their product and the direct relationship qualities of AFN.

#### **4.2.4. *The Role of Co-packers in the Fruit and Vegetable Sector***

One avenue of scaling up includes the use of co-packers. Co-packers are defined as food companies that operate commercially approved facilities where the client can have their product processed, and packaged to their specifications (Clark, 2012). There are three co-packers listed in the data bases I found and two others were mentioned during the interviews. Like other segments of the processing sector, there were a lot of co-packers in the 80's and 90's but many of them were bought up and closed and the processing industry was moved off-shore. "It was the Pattison Group essentially that did that" (Interview 5, personal communication, May 23, 2013). The world of co-packing in the fruit and vegetable processing industry is a difficult one to penetrate. Many co-packers don't want to be found or sought out by just anyone that has a product they wish to process. The more established co-packers prefer to deal with brokers or consultants that know when a client is ready for their services. The co-packers don't have time to deal with people that lack the business or organizational skills. By working with intermediaries, the co-packer can be sure that the client has been educated and vetted by the consultant and understands their expectations. Some co-packers have been stuck with unclaimed product and in some cases the co-packer will insist on sourcing the raw product from their own supply chain to ensure the quality meets their standards and produces a consistent finished product for their client.

Andrea Gray-Grant has twenty years of industry experience including work with Yves Veggie, Nature's Path, Imagine Foods and Happy Planet and operated her own processing business from 2006 to 2011 (personal communication, May 14, 2013). She started her own business by making pickles, relish, and preserves from family recipes passed along from her grandmother and mother. In 2007, after a year of borrowing someone else's facility, Andrea Gray-Grant set up a 2,400 sq. ft. plant in leased space in Burnaby (personal communication, May 14, 2013). The idea was to create a commercial

plant where she could process her own product and offer a new business concept of assisted co-packing. In 2008, the economy crashed, so Andrea Gray-Grant ran the plant for just her own product while working as a broker for other processors (personal communication, May 14, 2013). The problem with the brokerage business was that once the clients had their product into the retail space, they no longer needed her. Once the economy started to improve, Andrea Gray-Grant restarted the co-packing and assisted co-packing in 2009 (personal communication, May 14, 2013). In order to make the business viable, she had to co-pack other people's products as well process her own line of product. Her clients were responsible for sourcing their own ingredients and as the co-packer; Andrea Gray-Grant would handle the processing and assist in providing retail contacts (personal communication, May 14, 2013). Despite her business experience and passion for making good, local food, Andrea Gray-Grant wound up the business after an expensive product recall (personal communication, May 14, 2013). She continues to work as an industry consultant helping small-scale processors. Andrea Gray-Grant offers marketing assistance, helps processors scale up production, and introduces them to co-packers when they are ready to take that step (personal communication, May 14, 2013). Andrea Gray-Grant provided examples of co-packers in the region that welcome small businesses and facilitates these introductions depending on the needs of the client (personal communication, May 14, 2013). For example, "Apex can make weekly batches of 1,500 litres" of product or "Premier Pacific can do a 1,200 litre batch once every three months, if you want" (personal communication, May 14, 2013). Taste Culinary Solutions is a new co-packer, opening last year in Vancouver that is currently seeking clients through its affiliation with the Small Scale Food Processors Association (SSFPA). The SSFPA, among its other services, provides a conduit for processors, suppliers, and producers to connect and share information.

## **5. Challenges and Opportunities to Scaling up the Fruit and Vegetable Processing Sector**

In this chapter, I outline the challenges and opportunities facing the fruit and vegetable processing industry in the Lower Mainland. The challenges encountered by survey and interview participants vary to some degree depending on whether they are focussed on consumers within the local market or are oriented to selling their products in the export market.

Through the survey instrument and subsequent interviews, the following challenges emerge: Access to capital is an issue for the facilities that wish to modernize existing equipment, and for the small-scale processors that have outgrown their existing facilities. The high cost of distribution is a difficult challenge for the small processors that have made it onto store shelves but cannot afford to wholesale their product to existing distributors. Distributors require the processors to deliver enough product to meet demand, carry only a limited number of products, and demand wholesale discounts of up to 40%. Product distribution challenges have led to increased transportation costs for those small businesses that were unable to afford broker's fees. Several of the small-scale businesses had unpleasant experiences with regulatory agencies. While labour was not a significant problem, there were a few specialized trades and management fields that were sometimes hard to fill. Currency exchange, the strength of the Canadian dollar vs. the US dollar, was mentioned as a major concern for those processors that rely on the export market. Most of these challenges are paired with opportunities for the fruit and vegetable processors to scale up their businesses in both the global food system and the LFS. I conclude the chapter by looking at the issue of climate change and the areas of local and regional food policy.

I designed a survey question regarding the challenges to the local fruit and vegetable processing based on my analysis of an initial set of issues that were identified through the AAFC Food Processing Competitiveness Working Group's (FPCWG)

December 2010 Action Plan (AAFC, 2010a). Table 5-1 below represents a series of statements that were contained in question 18 of the survey that was filled in by 10 local processors. Of the ten surveys that were returned, eight respondents answered this question. They provided a basis for several questions in the in-depth interviews. Participants were asked to indicate the degree to which they agreed or disagreed with the following statements as they pertain to their company.

**Table 5-1 Survey results from Q.18, Fruit and Vegetable Processor Survey.**

	Average Response	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Ranking (SA=2; A=1;N=0;D=(-1); SD=(-2))		2	1	0	-1	-2
High input costs such as energy and packaging have a negative effect on my business.	1.125	3	3	2		
The lack of alignment between domestic and international regulations for food safety and labeling puts BC processors at a competitive disadvantage.	.625	1	5		2	
Deregulation of packaging standards will have a negative impact on my business.	.625	1	3	4		
Product of Canada labeling criteria is too restrictive.	.375	2		5	1	
Access to capital is an obstacle to competitiveness & ability to grow my business.	.25		3	4	1	
Development of the Canada Brand strategy will improve my businesses profitability.	0		2	5		1
A lack of access to skilled labour affects my business.	-.375		2	1	5	
I have difficulty accessing retail space or placement for my products.	-.5	1		3	3	1

*Note:* Responses above: averages above 0, indicate a higher average level of agreement with statement, less than 0 indicate an average level of disagreement (2 or -2, is the maximum number possible).

## 5.1. Input Costs

Six of the eight survey respondents agreed or strongly agreed that high input costs such as energy and packaging have a negative effect on their business. Despite the strong agreement with that statement, the open-ended questions at the end of the survey elicited few elaborations on these responses. Some of the high costs identified included water and waste fee charges, restrictions on some imported produce, land lease costs for growers, high tax rates, and the increase to the minimum wage. Higher land costs, fuel, and fertilizer costs for growers was cited as a factor in increased produce prices being passed along to the processors. Another issue identified by one processor is the cost of off-site storage. These costs are incurred when processors store frozen product off-site at companies like Versacold, until they have the capacity to package them (M.E. Berg, personal communication, May 27, 2013). With very tight margins in the industry, several interview participants felt their ability to pass along any increased costs to retailers and consumers was difficult. Safeway's Travis Drew perceives BC's recently increased minimum wage as a major challenge to area farmers. When the hourly wage went up from \$8 to \$10.25, "those costs had to be absorbed by the growers" (T. Drew, personal communication, May 9, 2013). The increased minimum wage in BC had a more serious effect on the growers than on the processors. Snowcrest has high labour costs with many long-term employees with expensive benefit costs and the plant's operations are not automated, so it is difficult to increase productivity (M. E. Berg, personal communication, May 27, 2013).

Access to clean water is critical to the processing industry and according to one survey response; those costs have "risen dramatically" in the Lower Mainland. Some of the scarcer crops like rhubarb are harder to source and drive up costs. Mary Ellen Berg has only three local rhubarb growers and they have the ability to sell to a higher bidder (personal communication, May 27, 2013). Andrea Gray-Grant cited pickling cukes as an example whereby processors could purchase from the US for 30% to 40% less than local product (personal communication, May 14, 2013). Andrea Gray-Grant believes that there needs to be an education piece around the cost of local food (personal communication, May 14, 2013). She would like to see labels on processed foods that show where the costs of the product are and who is getting each portion of the

consumer dollar. She believes there is a latent demand for good, locally processed food as “consumers are demanding to know where their food is coming from” (A. Gray-Grant, personal communication, May 14, 2013). Consumer awareness of the true cost of food, and who benefits from the price customers pay, and resulting increased willingness to pay, will surely lead to more opportunities for local processors.

## **5.2. Regulations, Food Safety and Quality Control**

The Lower Mainland food system functions within a variety of regulatory bodies that can affect the cost of production for small-scale processors. The interview participants have a variety of experiences that offer an insight into some of the challenges facing new these entrepreneurs. For the businesses that are not exporting beyond the province of BC, their contact for food safety requirements in the Lower Mainland is either Vancouver Coastal Health Authority or the Fraser Health Authority depending on the location of their facility. Environmental Health Officers (EHO) inspect and licence the processor’s premises. One of the issues identified by small-scale processors is the uneven application of rules between individual officers and between the two health authorities. Andrea Gray-Grant noted that one EHO demanded she install a lower ceiling structure in her facility, a move that would have cost her \$40,000 (personal communication, May 14, 2013). There is a requirement for a Vancouver Coastal Health (VCH) permit for trade show sampling at Vancouver events, even though all the approvals are in place through the neighbouring Fraser Health Authority (C. Anderson, personal communication, June 7, 2013). Catherine Anderson says that her EHO told her that the facility that she uses is not allowed to have more than two sub-tenants, thus leaving it underutilized for half of the time (personal communication, June 7, 2013). Dyana Biagi mentioned one EHO in the Fraser Valley whose reputation for causing processors grief is legendary; but she has high praise for the head of the VCH (personal communication, June 4, 2013). These may be isolated occurrences but this is just one level of the regulatory process.

In order to export, processors need to be certified by the Canada Food Inspection Agency (CFIA). Once they are certified, they no longer have to deal with the EHOs (A. Gray-Grant, personal communication, May 14, 2013). The CFIA is tasked with

enforcing a vast array of regulatory responsibilities. These include: Canada Agricultural Products Act, Health Canada's Food and Drugs Act, Consumer Packaging and Labelling Act, Pest Control Products Act, three acts dealing with environmental protection, Organic Products Regulations, and the Safe Food for Canadians Act that was enacted in November 2012. "The new Safe Food for Canadians Act consolidates the authorities of the Fish Inspection Act, the Canada Agricultural Products Act, the Meat Inspection Act, and the food provisions of the Consumer Packaging and Labelling Act" (CFIA, n.d.). Labelling regulations that are the CFIA's responsibility include: "list of ingredients, placement of information, ingredient class names, grade marks, best before date, common name, type size, dealer name and address, standards of identity, and net quantity. The CFIA is embarking on a "Food Labelling Modernization" initiative that involves consultation with consumers, consumer groups, industry and industry associations, the provinces, academics, CFIA employees, other government departments, and international partners (CFIA, 2013a, p.7). The focus of these consultations is to develop guidelines that address consumer demands for product labeling that improves transparency, accountability, and better product awareness (CFIA, 2013a, p.2). They are going to focus on the outcome; "as long as you can prove that the food is safe, how you prove it is in the process of change" (Interview 5, personal communication, May 23, 2013). Andrea Gray-Grant states there is little synergy between the Provincial Health authorities and the federal CFIA. There is some confusion as to the rules for shared use facilities (personal communication, May 14, 2013). The CFIA says there are no rules against co-use facilities while the message from provincial health authorities sometimes conflicts with that message (C. Anderson, personal communication, June 7, 2013).

Municipal regulations are another layer of compliance that processors must negotiate. Andrea Gray-Grant mentioned a processor that closed up after being told that the building code required her to install a fire door at a cost of \$12,000 at her facility in Delta (personal communication, May 14, 2013). While her dealings with Burnaby inspectors were pleasant, it took Catherine Anderson four and a half months and multiple inspections to get a business licence (personal communication, June 7, 2013). A pilot project for the Metro West Multi-City Business Licensing (MCBL) program is set to launch in October and last until the end of 2015. It would include the cities of

Vancouver, Burnaby, New Westminster, Surrey, Delta and Richmond and deal with projects involving skilled trades in multiple jurisdictions (Vancouver Economic Commission, 2013). This type of model could be used for other industries and serve as an example for other regulatory bodies that cross multiple jurisdictions. Small-scale processors are often caught in a regulatory limbo between various levels of government.

The challenges that are present in a strict regulatory environment also present opportunities for fruit and vegetable processors. Safeway and Snowcrest Foods have achieved internationally recognized standards of food safety. Third party audits are required for these quality assurance designations from organizations like the Guelph Food Technology Centre (GFTC) and Safe Quality Food (SQF) standard (M.E. Berg, personal communication, May 27, 2013). Mary Ellen Berg questions whether the farm-based processors can meet these high international standards, particularly in the area of the quality of water used in the processing and where the waste water is discharged. Although in theory, the quality assurance certificates are voluntary in nature, “critics argue that their development process is neither participatory nor transparent, they tend to be costly and exclusionary, and that their requirements are not always based on sound science” (Byers, A., Giovannucci, D., and Liu, P. 2008, p.2). Another criticism of the certification programs is that they are forced on suppliers by corporate buyers as a requirement of participating in their supply chain (Byers, A., Giovannucci, D., and Liu, P. 2008, p.3). Despite the added costs of achieving higher food safety guidelines and good agricultural practice (GAP) standards, farmers and processors see them as increasingly important as a marketing tool (Byers, A., Giovannucci, D., and Liu, P. 2008, p.3). Most of the farm-based processors in the Lower Mainland don’t have the global safety standards (R. Wagner, personal communication, May 16, 2013). Ray Wagner states; “there are a lot of hoops to jump through in order to receive accreditation,” but he believes this is an area where Lower Mainland processors can have an advantage (personal communication, May 16, 2013). With global food fears, people will pay a premium for a quality, safe product (R. Wagner, personal communication, May 16, 2013). Another opportunity lies in the way consumers perceive the quality of fresh versus frozen food. People have a perception that fresh is better than frozen. Travis Drew compares the journey of fresh produce spending a week in a truck, a week on the warehouse shelf, and a week on the grocery shelf to the nutrient value of frozen local produce. “We’re

freezing the stuff within hours, sometimes within an hour of picking. It's a perception; if it's fresh it has to be better than something in a bag" (T. Drew, personal communication, May 9, 2013). Again the issue comes back to consumer education and the value, quality, and safety of our locally processed fruits and vegetables.

### **5.3. Branding & Marketing**

Because of the widely divergent views on what constitutes local food, I attempted to find out what local meant to processors and whether processing locally grown food was an issue of importance to them. In my survey, I offered the following choices in question 15 when I asked the processors where they sourced their product from in relation to their processing facility. Local was offered as 50 kilometres or less as it coincided with the CFIA definition of local at the time of the survey. I called 50 -150 kilometres regional as it coincided closely with the 100 mile diet. Okanagan or Vancouver Island represented the other primary fruit and vegetable growing regions of the province. Provincial (other areas of BC), National (outside of BC), United States (California), United States (except California), México, South & Central América, China, and Other were the remaining choices. I based the latter geographic areas on the primary locations that BC has imported its produce from over the past couple of decades. The surveys and subsequent interviews helped me understand where the main sources of the processor's inputs were from. In retrospect, Washington State could have been given its own category. At the time I developed the survey, I was unaware of the quantity of cross-border movement of produce between BC and Washington, and the increasing ownership of Washington farms by BC producers.

With a few exceptions, the overwhelming response from the surveys and interviews was that they sourced most of the produce they used in 2012 either locally or regionally. The results of question 15, with eight of ten responses, indicate the geographic source of product by percentage of produce input costs for 2012 in Table 5-2 on the following page. The total average survey response was that 69% of their produce was sourced from within 150 kilometres. Due to the low response rate, I cannot conclude that these results are indicative of the overall Lower Mainland fruit and vegetable processing industry. The in-depth interviews yielded a few interesting exceptions to

these overall findings. Processors who scale up from home-based kitchens and can't afford their own facilities sometimes use co-packers to process their product, thus losing some control over the where they source their produce. Co-packers such as Apex and Premier Pacific often prefer to source the ingredients for their clients to ensure the quality, traceability, and cost competitiveness. Unless the client requests locally sourced produce, and are willing to pay any additional costs, the co-packer will purchase products from the cheapest source in order to maximize their profit margin. While most small-scale processors prefer to use local produce, tight margins mean that the prices have to be competitive (C. Anderson, personal communication, June 7, 2013). This view was also shared by Dyana Biagi, who lets her co-packer look after the product sourcing with price being the primary determinant (personal communication, June 4, 2013).

**Table 5-2 Produced from Q 15 of the Fruit and Vegetable Processor Survey - Geographic areas where processors' produce was sourced in 2012. Based on percentage of total purchases by cost of goods.**

Processor	Local	Regional	OK, VI	BC	Canada	US	Mexico	Other
1	100							
2	70	30						
3		90					10	
4	15		50			35		
5	50	20		10		10	2	8
6	100							
7	70					30		
8	Produce Source Unknown							
9	Produce Source Unknown							
10						40	10	50
	51%	18%	6%	1%	0%	14%	3%	7%

*Note:* Local is 50 kilometres or less, regional 50- 150k, the third category combines the Okanagan and Vancouver Island.

Safeway's Travis Drew found it difficult for Safeway to get on board with local branding. They ship most of their products to the US and the three Prairie Provinces and "the BC brand doesn't necessarily resonate with a buyer in Manitoba" (T. Drew, personal communication, May 9, 2013). Travis Drew questions what it means to buy local.

Someone in Prince George is happy to buy anything from BC and someone from Calgary may look at fruit from the Okanagan as local produce (personal communication, May 9, 2013). He finds it difficult to justify the expense of adding an extra stock-keeping unit (SKU) or distinctive local packaging for each product.

Navigating through the various definitions of local food is a difficult task for consumers but even more so for those that are processing the food. The federal government, through the Canadian Food Inspection Agency, had previously offered a definition of 50 kilometres as local, and since May, 2013 has an interim definition that includes the entire province plus 50 kilometers beyond their borders. Neither of these definitions fit within the perceptions of what consumers or people involved in the agrifood chain consider to be local food. To further complicate the issue, it is difficult for processors to even meet the standards to call their product Canadian. Up until mid-2008, if 51% of the production costs were incurred in Canada and the “last substantial transformation of the product occurred in Canada,” it was legal to use the “Product of Canada” or “Made in Canada” labels. On May 21, 2008 the federal government announced that the new Product of Canada labeling rules would require at least 98% of the ingredients to be domestically sourced. Announcing the new rules, Prime Minister Stephen Harper declared; “Under our new rules, if something in the grocery store is marked product of Canada, it must mean all or virtually all the contents are Canadian” (CBC, 2008). These labeling regulations are covered by the *Food and Drugs Act* and the *Consumer Packaging and Labelling Act*, which prohibit false and misleading claims (CFIA, 2013b). Processors that fail to meet the 98% criteria, can use the Made in Canada label but must add one of the following phrases; “Made in Canada from imported ingredients” or “Made in Canada from domestic and imported ingredients” (CFIA, 2013b). These changes were widely heralded by farmers as the National Farmers Union and the Canadian Federation of Agriculture (CFA) endorsed the changes. CFA president Bob Friesen stated that “clearly the Canadian government has listened to farmers and consumers” (Schmidt, 2008, p.21). Blake Johnston, vice-president of Food and Consumer Products of Canada (FCP), noted that because of Canada's short growing season, manufacturers often source fruits and vegetables from different countries. Johnston didn't believe that the new rules would pose a problem for processors because, of the “35,000 products in an average grocery store, only a few

dozen are using 'Product of Canada' "(Scott, 2008). In a report the following year, it was revealed that the Minister of Agriculture, Gerry Ritz, ignored the advice of senior staff in the ministry's food value chain bureau and the agriculture committee of the House of Commons that the threshold for Product of Canada labeling should be 85% (Schmidt, S., 2009). The notion of spatial embeddedness depends greatly upon the perspective of who stands to gain from the new rules. The FCP has a large contingent of multinational companies among its members, and as their spokesperson suggested, few of their products carried the Product of Canada label even with the previous lax labeling standards.

This has created difficulties for some processors in marketing their products. At roundtable meetings of the Food Processing Competitiveness Working Group (FPCWG), processors and government representatives identified the new product labeling standards as a significant issue. Industry participants supported the 85% product content level previously proposed the government's House of Commons Standing Committee on Agriculture (AAFC, 2010a, p. 19). The new rules are very restrictive for fruit and vegetable processors. Adding sugar to frozen strawberries to create a light syrup means that it can be labelled "packed in BC" but not "BC Grown" (M.E. Berg, personal communication, May 27, 2013). The addition of imported sugar also precludes the use of the product of Canada label. "The new rules have effectively removed the right of any processors in Canada to call their product Canadian" (Interview 5, personal communication, May 23, 2013). The 98% rule means that any processed goods that require spices or other ingredients for flavouring, can exclude something that contains virtually all local grown produce from being labelled as local food. To address the concerns of the industry, a new Canada Brand strategy is being developed by the federal government in order to "mitigate the damage done by the new labeling laws" (Interview 5, personal communication, May 23, 2013). Only two of the survey respondents or interview participants were aware of the Canada Brand strategy. The FPCWG is hopeful that as this new branding platform is developed, there will be some assistance for the small-scale processors that make up the majority of Canada's food processing sector. They cite the current support of the industry as "fragmented at the provincial and territorial levels at best and non-existent on a national basis" (AAFC, 2010a, p.10).

### **5.3.1. Buy BC and Buy Local**

The provincial Buy BC program that existed in the 1990's and the latest Buy Local program consider anything grown within the province as local food. Both of these programs were designed to be producer and retailer focussed, with the goal of raising awareness of BC grown products. When the program was first announced on July 12, 1992, Tim Singh, President of the Surrey Farmers Institute, argued that it was underfunded with \$1.9 million earmarked instead of the original \$2.8 million that was promised (Schmidt, 1992). The BC government was to set up a Food Advisory Council of producers, processors, labour, consumers, wholesalers, retailers, and members of the food service sector within a month of the announcement. Buy BC was finally launched a year later on June 29, 1993 by Minister of Agriculture, Food & Fisheries Bill Barlee. Barlee called it a consumer driven initiative saying; "The average individual has a social conscience and will buy BC if he or she knows it is produced in this province" (Schmidt, 1993). The five-year commitment was for \$9.5 million, with \$1.5 million allocated for the first year. In a review of the Buy BC program at the three-year mark, *Country Life in BC* columnist Herb Barbolet (1996) commented on the absence of a public education component to the program, asked questions regarding which actors ultimately benefitted from the initiative, and whether it was the best use of meager public funds (p. 5).

Although 1240 business associations, including 450 retail outlets, were licenced to use the logo on 4,500 listed products, there appears to be little research to determine the level of participation from the processing sector (Ilbery, Morris, Buller, Maye, & Kneafsey, 2005, p. 126). Ilbery et al. (2005) found that the program raised consumer awareness, increased sales of BC agricultural products, and fostered industry collaboration (p. 126). The impact on the industry was tempered by research results that indicated that price, quality, and freshness drove consumer preference with 'impact on the local economy, placing fourth (Ilbery et al., 2005, p. 126). Ilbery et al. (2005) found that while Buy BC did not deliberately exclude farmers, it focused on the processors and retailers (p. 126). The program continued during the late 1990s at varying levels of funding beyond the initial five-year funding period. On September 11, 2000 there was one final infusion of funding as the government increased funds by \$750,000 to \$2.4 million with the government providing 35% of the cost of approved programs (Schmidt, 2000c). As Ilbery et al, (2005) suggest, publicly funded projects are vulnerable to shifting

priorities and in particular changes in government (p. 126). In July, 2001 shortly after a change in provincial government, Minister of Agriculture, Food and Fisheries, John van Dongen, discontinued the program, blaming a large deficit as the reason (Schmidt, 2001a). The BC Agriculture Commission (BCAC) took over the Buy BC program in 2002, after the province withdrew funding. A year later BCAC Executive Director, Steve Thompson, admitted it was tough sustaining the Buy BC program without government funding (Schmidt, 2003). When I asked processors if they had participated in the Buy BC program, they answered no. According to Travis Drew, the marketing of locally processed foods has not captured the attention of government funding sources (personal communication, May 9, 2013). Fruit and vegetable processors need a well-defined branding strategy that can give them the opportunity to participate in the local food movement.

The provincial government launched a new Buy Local program with a \$2 million investment on August 30, 2012. The grants require matching funds from the applicants to aid in the promotion of local food through marketing campaigns including “in-store promotions, social media or web campaigns, traditional advertising and on-product labelling” (British Columbia – Government press release, 2013b). Eligible organizations include: associations, cooperatives, marketing boards, Aboriginal groups, businesses, and non-profit organizations. The Investment Agriculture Foundation (IAF) administers \$1.5 million, and the BC Agriculture Commission (BCAC) the remaining \$500,000. The organizations representing the province’s food processors welcomed the news. BC Food Processors Association (BCFPA) President, Dave Eto stated it would help “stimulate market growth,” assist small-scale processors, and help “educate consumers on the origins of their food” (British Columbia – Government press release, 2013b). Candice Appleby, Executive Director of the Small Scale Food Processors Association (SSFPA) echoed those sentiments on behalf of her members, saying: “this program offers small-scale processors the opportunity to personally connect with them (customers) to promote their products” (British Columbia – Government press release, 2013b). Of the \$1.5 million allocated through the IAF, just over \$1.2 million was committed since its inception in August, 2012 until November, 2013. Table 6-1 in Appendix H on page 118, created from the BC government press releases, indicates that only two of the 31 grants distributed could be considered as allocated to processors. One grant to Naturally

Homegrown Foods Ltd. for \$100,000 was for marketing the Hardbite Potato Chip brand and the other one to the BCFPA for \$65,000, was to assist its members in raising brand awareness. The majority of funds, \$475,000, went towards a variety of marketing commissions and boards for promotion of their products. Another \$139,800 was allocated to the BC Association of Farmer's Markets and individual farmer's markets. To date, there have been no fruit and vegetable processors receiving funds as part of this initiative.

## **5.4. Capital Funding**

An examination by the Canadian Agri-Food Policy Institute last year shows that after a steady increase in capital investment in the food processing sector in the 1990's, those investments declined from 2003 to 2011 (Hedley, 2012, p. 9). The FPCWG also identified access to capital as a more pressing need among small and medium scale processors as opposed to the large companies. They asked the question; "is a particular form of capital not being made available to the sector or are companies not meeting lenders' criteria?" (AAFC 2010a, p. 5) They proposed a set of actions to discover what levels of capital were needed to modernize and automate processing facilities, and looked at funding sources such as Farm Credit Canada (FCC) or the Business Development Bank of Canada (AAFC 2010a, p. 5).

In question 18 of my survey, only three of ten respondents identify access to capital as a challenge but several interview participants reveal that access to financing is indeed difficult. The small-scale processors that wish to scale up their operations have difficulty raising needed capital while one of the larger businesses needs to invest in mechanization of their existing facility. It is also very difficult for new processors to establish their own facilities. If you need to make an investment of \$150,000 to ramp up your production, the more practical choice is to use a co-packer who has already invested \$1.5 million in their facility (Interview 5, personal communication, May 23, 2013). There is a need for venture capital to support the processing sector; "the key is patient capital" (Interview 5, personal communication, May 23, 2013). This type of venture capital would lock in an investment for a minimum of five years and allow a business to establish itself. The use of provincial tax incentives or making these

investments RRSP eligible would provide a benefit to investors and entrepreneurs alike (Interview 5, personal communication, May 23, 2013). Andrea Gray-Grant agreed that there needs to be some start-up funding available for new processors at least for the first couple of years (personal communication, May 14, 2013).

Question 19 of my survey asked processors: Have you ever received government funding for marketing, research and development, capital improvements, or other purposes? Two of the ten survey respondents had accessed capital from government funding to install computerized traceability programs. Most government funding programs to date has been targeted toward the farming sector through their various marketing commissions. These funds are used primarily for broad advertising campaigns or for the development new plant varieties.

In response to the concerns of the food processing industry, the federal government set up the AgriProcessing Initiative. This is a five-year initiative providing up to \$50 million that ends on March 31, 2014. It is a discretionary program delivered nationally by Agriculture and Agri-Food Canada (AAFC, 2010b). The AgriProcessing Initiative (API) is part of the Agricultural Flexibility Fund announced in the 2009 federal budget. API may provide repayable contributions of up to \$2 million per project, or up to 50% of eligible costs, whichever is less, towards the cost of purchasing and installing new-to-company machinery and equipment in Canadian facilities in order to enable the adoption of innovative and new-to-company manufacturing technologies and processes, and/or the introduction of new products. The API program is delivered by the BC Ministry of Agriculture through four regional offices throughout the province. The program may also contribute towards costs related to the contracting of external expertise for services related to equipment installation, and consultation, design, and advice regarding new-to-company manufacturing technologies, processes and products. None of the companies I surveyed or interviewed have received funding from this initiative nor could I find any record of direct investment by the Growing Forward investment program to individual processors. While Winfield is in the Okanagan, and outside the study area, on April 28, 2013 the B.C. Tree Fruits Cooperative received \$735,150 of joint federal/provincial funding to assist with the purchase and installation of a “next-generation” apple packing line (British Columbia – Government press release, 2013a). The new packing line does

not meet the definition of a fruit and vegetable processing facility but exhibits some level of government interest in capital funding for new technologies.

## **5.5. Innovation**

There are opportunities for expansion of the processing industry in the Lower Mainland to meet increased domestic demand and expansion of the export market. While the local market has well developed infrastructure, a significant challenge in some destination markets is the lack of refrigeration and freezer capacity in the distribution, storage, and retail sectors (R. Wagner, personal communication, May 16, 2013). There was near unanimity among the interview participants that the Asian market had great potential for increased sales for innovations in processed foods that don't require refrigeration and freezer capacity. For example, Bremner Foods in Delta produces pure fruit juices from local blueberries, cranberries, raspberries, and Okanagan cherries as well as an assortment of imported fruits. Bremner's has tapped into the Asian market where the health benefits of blueberries are in demand (Bremner's, 2013). Bremner's is also available through specialty retail grocers and in the food section of London Drugs stores in BC. The BC Food and Beverage Processors Steering Committee also identified a high growth potential in niche market such as functional foods, organics, and Asian and other ethnic foods (BCFPA, 2004, p.14). Funding for technological innovation has been largely focussed on the biotechnology sector. More than 99% of the \$292.5 million federal research budget supports agrifood biotechnology-related innovation and export opportunities for 1999 (Donald & Blay-Palmer 2006, p. 1914). Most of those funds have gone to large scale farm producers, multinational food manufacturers, universities, and senior government agriculture departments (Donald & Blay-Palmer 2006, p. 1914). The rate of innovation in the fruit and vegetable processing industry has been hampered by large capital requirements. CAPI's Leadership Panel on Food and Wellness Connection recognizes the challenges that food processors face as they respond to a demand for healthier products while coping with a lack of support for research and development in the food manufacturing sector (CAPI, 2010, p. 20). Snowcrest Foods for example, is not automated and at least one of the freezers dates back to 1957 with the original

company. They hope to access new federal funding for plant automation that would allow them to become more competitive (M.E. Berg, personal communication, May 27, 2013).

Safeway, on the other hand, has been able to continually modernize their operations. As part of a vertically integrated operation, the Abbotsford plant still needs to compete for capital among the other business units. Safeway has 31 other processing facilities that the Abbotsford plant competes against for capital funds, yet they have been successful at adopting the latest freezing technologies. As long as they can make a business case that demonstrates a pay-back period of ten years or less, they are successful in attracting investments. Over the years, they have added case packers, baggers, colour sorters, cameras, and lasers to detect produce defects. The automated equipment is run by computers that inspect down to micro pixels. When improved technologies emerge, they can trade out whole pieces of equipment (T. Drew, personal communication, May 9, 2013). This demonstrates the advantages of being a branch plant of a large vertically integrated operation.

CAL-SAN Enterprises Ltd. is a blueberry and cranberry farm and processing operation, privately owned by the Sandhu family, and headquartered in Richmond, B.C. The 15 year old company has over 200 acres in production, along with a new 30,000 square foot facility capable of processing up to 7 million pounds of fruit annually. CAL-SAN will now continue the process of building a global wholesale and retail distribution network for the sale of their high-value, dried blueberry products which can be used as snack foods and as ingredients for cereals, energy bars, and baked goods. The company plans to expand into other dried fruit product areas and will consider increasing their plant operations in the future to support market growth. Dave Sandhu, President of CAL-SAN Enterprises, stated that; "*nutraREV*<sup>™</sup> gives the market a major advancement in food dehydration technology, and I truly believe that it will revolutionize the value-added food processing sector" (EnWave, 2009). EnWave Corporation has developed proprietary technology, under the guidance of Chairman and CEO, Dr. Tim Durance of the University of British Columbia. According to Dr. Durance; "I strongly believe that we have developed a competitive new method for food dehydration which offers consumers rich textures, concentrated flavours and excellent nutritional and environmental benefits"

(EnWave, 2009). These dried products are ideally suited for distant export markets and domestic applications in baked goods and mixed cereals.

Growing Forward was a five-year investment program, co-ordinated between federal and provincial governments, “to help farmers and other participants in the agricultural and agri-food industry increase their competitiveness and profitability” (AAFC). These cost-shared funds were part of the \$78 million invested under Growing Forward in a number of non-Business Risk Management programs designed. The cost-shared investments that could be considered as directed towards the processing sector include the \$1,340,427 to the SSFPA to administer the Food Safety Systems Implementation (Processor) Program (FSSIP) (British Columbia – Government press release, 2013b). Program funding included basic food safety courses for processors, courses on Good Manufacturing Practices (GMPs) and Hazard Analysis and Critical Control Point (HACCP) plans, consultant assessments of on-site processing operations, financial assistance for eligible processors for a “GMP and/or HACCP food safety plan” (SSFPA, 2013). The Growing Forward program also invested \$481,650 in the Food Innovation Centre of BC for provision of services to the food processing sector. The Food Innovation Centre of BC (FICBC) was launched in 2011 with funding from Growing Forward, a federal-provincial-territorial initiative. While still in its formative stages, it found out that its government funding was being cut by 40%. FICBC had been seeking a commitment of \$645,000 for 2012/2013 but instead a \$262,500 grant was announced (Freeman, 2012). FICBC CEO Mike Leslie complained that it was old money, “[t]here must be an election coming, [t]hey’re reporting things that are a year old” (Freeman, 2012). As of March 31, 2013 the centre is closed. There appears to be some duplication of efforts between the processing industry associations in food safety and educational seminars. With the BCFPA, the SSFPA, and the now defunct FICBC, all competing for limited government resources, increased collaboration may result in a net benefit to the processors these groups represent.

## 5.6. Labour

Access to labour did not appear to be a significant issue for the small-scale fruit and vegetable processors. They tend to be smaller operations; by definition 25 employees or less. Although access to labour was not an overarching theme among the survey respondents and interview participants, there were some specific areas of concern. The larger processors like Safeway and Snowcrest Foods, both located in Abbotsford, access their seasonal labour supply by hiring students from the University of the Fraser Valley (UFV). Safeway, with a modernized processing plant, offers specialized training on “very specific equipment” (T. Drew, personal communication, May 9, 2013). They identify quality employees, offer mentorship to those people, and give them on the job training on specialized equipment. Snowcrest Foods’s Mary Ellen Berg finds that the energy of their seasonal workers “boosts production for the whole group” (personal communication, May 27, 2013). Survey responses from farm-based processors indicate a substantial boost to employment numbers during the harvest and processing season. Some of these operations access labour through the federal government’s Temporary Foreign Worker (TFW) program and utilize them in the fields as well as the processing plants. BC Frozen Foods also takes advantage of the TFW program to staff their processing plant in Mission by employing seasonal agricultural workers from Mexico (Shah and Ghazzawi, 2012, p. 8). These seasonal labour requirements are limited to the three remaining medium size processors and some of the bigger farm-based operations.

Snowcrest’s Mary Ellen Berg finds that their biggest concern is sometimes finding qualified engineers for the refrigeration power plant (personal communication, May 27, 2013). Large-scale refrigeration plants used by food processors contain ammonia and require qualified operators on premises whenever the site is occupied. With more blueberry farmers adding freezing facilities to their production and ice rinks competing for those qualified individuals, skilled labour shortages sometimes occur. These skilled trade shortages are cyclical, as five years earlier it was millwrights that were in short supply (M.E. Berg, personal communication, May 27, 2013). Safeway’s Travis Drew, observes their management positions are harder to fill locally, and typically hires individuals from big agricultural colleges in Saskatoon, Edmonton, and Winnipeg to

fill those needs (personal communication, May 9, 2013). Safeway hires extension managers, people who have the combined experience of farming and advanced education, to work directly with their contract farmers in the area.

## **5.7. Retail Access & Distribution**

Only one survey respondent identified gaining access to retail shelf space as a significant challenge. However, four of the interview participants, including the two small-scale processors, described some significant challenges and costs associated with gaining that access. Many of the large retailers demand that processors use a broker to access their retail space. That way they deal with one individual or company instead of individual business owners. The retailers make a lot of their profit through having their suppliers purchase shelf space and participate in their marketing initiatives (Interview 5, personal communication, May 23, 2013). Referring to it as “the dirty little secret,” *The Globe and Mail’s* John Lorinc, sheds some light on the practice of major grocery retailers charging listing, or slotting fees. With grocery retailers working on after tax profit margins between 1% and 2%, slotting fees can make up as much as half of those profits. They charge these fees to suppliers to offset the costs of warehousing, stocking shelves, adding new SKUs to the inventory system, and in-store marketing and promotion (Lorinc, 2007). Large companies like Loblaws and Wal-Mart have the ability to drive down the wholesale prices they pay for products (A. Gray-Grant, personal communication, May 14, 2013). The FPCWG identified “processor concerns with growing slotting allowances, reduced shelf space access, narrowed margins, additional service fees and the rising market share for private label products” that resulted from the increased concentration of the grocery retail market and the loss of independent grocers (AAFC, 2010a, p. 8). Hendrickson and Heffernan (2002) observed that while these slotting fees have been around since the 1970’s, the use of these fees has increased as retail concentration intensified (p. 358).

Whole Foods or Choices are friendly towards supporting domestic product, but are “saturated with these specialty products” (Interview 5, personal communication, May 23, 2013). Overwaitea Foods, a member of the Pattison Group of grocery retailers, has a special local supplier program, but once approved, you still need to approach the

individual stores to gain access to shelf space (C. Anderson, personal communication, June 7, 2013). Catherine Anderson believes the key to her expansion plans lie in getting into more gourmet food stores and expanding beyond the provincial borders (personal communication, June 7, 2013). The Saskatchewan Food Processors Association provides a successful example of export market penetration with processors combining their various products on pallets for shipment to Asian markets (Interview 5, personal communication, May 23, 2013). Another group set up a retail presence in Germany that offers high end specialty products to select consumers (Interview 5, personal communication, May 23, 2013).

One of the keys to increased domestic business is gaining greater access to the existing large retail chains and reducing the fees that accompany that access. In 2004, the BC Food and Beverage Processors Steering Committee called for “increased access to markets and major distribution channels” in order to enhance the competitiveness of the local processing sector (BC Food and Beverage Processors Steering Committee, 2004, p. 19). Distribution charges can cost a processor as much as 28% to 30% to get their product from their facility to the store or even higher if it’s frozen or refrigerated. “There needs be a supported distribution system” (A. Gray-Grant, personal communication, May 14, 2013). Andrea Gray-Grant describes the process; the distributors purchase the product from the processor at wholesale discounted prices and handle the distribution to the retailers that they supply. “I have spoken to so many processors in the last few months that are ready to give up; their distribution costs and their production costs are so high” (personal communication, May 14, 2013). Catherine Anderson encountered the same problem with distributors charging 40% margins on the products (personal communication, June 7, 2013). Many small-scale processors look after the distribution to their retailers themselves because of the prohibitive cost or because they lack the scale of production that distributors require to carry their product. Catherine Anderson uses a small courier company to deliver most of her product and delivers small orders whenever it’s convenient (personal communication, June 7, 2013). Dyana Biagi does her own deliveries, sometimes combining trips with her in-store demos (personal communication, June 4, 2013). Another problem that comes with this delivery system and using a co-packer is that storage can be problematic. Catherine Anderson and Andrea Gray-Grant thought a co-op distribution company would be beneficial to

small-scale processors as it doesn't make sense to deliver one case of product to a store (personal communications, June 7, 2013 and May 14, 2013). The opportunity to amalgamate and store products from a variety of processors for combined deliveries would give these processors an opportunity to scale up and allow new entrants an economical method of product distribution.

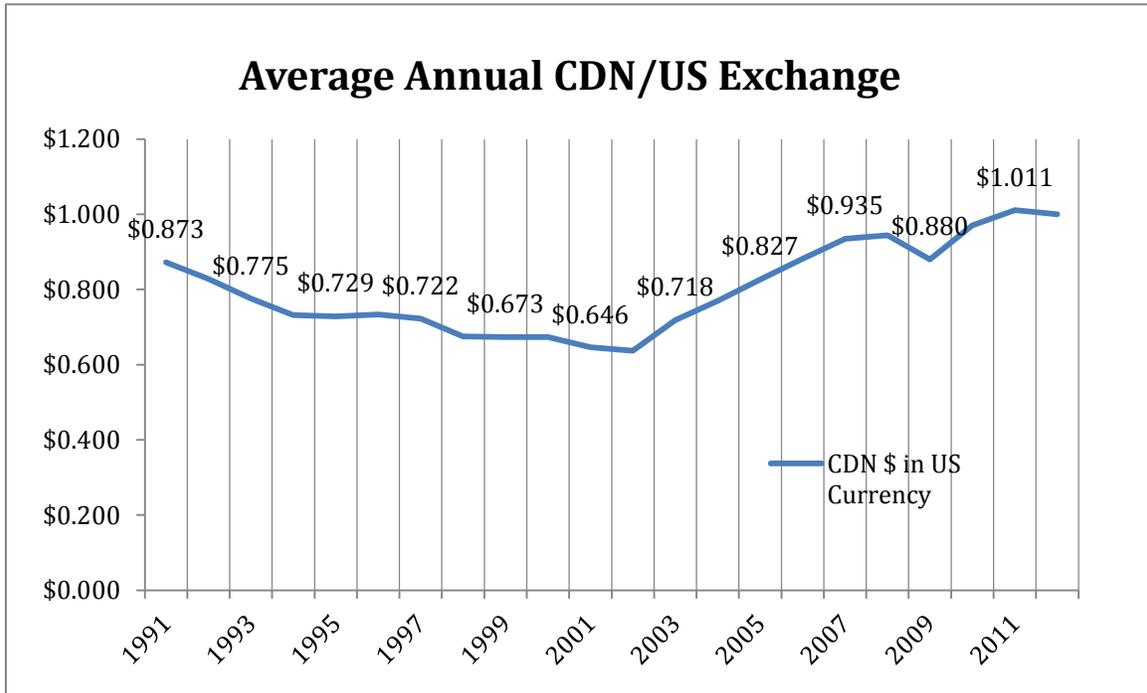
## **5.8. Capacity Utilization**

One of the areas of need identified in the Metro Vancouver's Regional Food System Strategy (RFSS) is the lack of processing capacity. I asked the question: Do you have available capacity (room to increase production without incurring expansion costs) to process more BC produce in your facility? All of the survey and interview responses indicated that they have capacity to process more produce. However, the larger processors run at maximum capacity during the harvest season. Travis Drew says, "there is only a certain window when a crop will come to harvest" (personal communication, May 9, 2013). The producers that supply Safeway have planted some trial varieties of crops that can stagger the harvest times but the determining factor is the number of heat units available in the soil. It takes years to develop new varieties that can be adapted to the local climate. Research is ongoing but "it can take 50 years to develop a new variety" and it is very expensive (T. Drew, personal communication, May 9, 2013). One way that Safeway and Snowcrest Foods deal with the processing peak is by storing the less perishable berries and packaging them throughout the year. For the small-scale processors that process local produce, their available capacity is in spring and pre-harvest summer period. Many of these processors are busy marketing their product at trade shows throughout the fall. The main challenge of capacity utilization is that locally produced food is harvested within a very short period. Freezing and storing product for later processing is one way of using excess capacity. Another opportunity exists in taking advantage of underutilized processing capacity in shared use arrangements with caterers, restaurants, and other commercial kitchens. Shared use regulations regarding commercial kitchens, as mentioned in the previous section, need to be addressed.

## 5.9. Currency

The exchange rate between Canadian and US currency is a strong determinant of profitability. The trade deficit in processed foods was between \$1.4 to \$1.7 billion in the early 1990's and reached \$6.3 billion in 2011 (Hedley, 2012, p. 6). Some of this trade imbalance could be blamed on free trade, a lack of large processing facilities, or lack of capital investment. Certainly a major factor is the currency exchange rate. When the Canadian dollar dipped to historical lows in 2002, the net trade surplus rose sharply and was positive for the years 2003 to 2005 (Hedley, 2012, p. 6). Figure 5-1 on the following page shows the dramatic rise in the Canadian dollar between its low annual average of 63.7 cents in 2003, to 88.2 in 2006, a 38% increase against the US dollar. Several of the processors I spoke with rely on exports for a large percentage of their revenue. Whether the exports are going to the US or the Asian market, all transactions occur in US currency. The number one crop in the Lower Mainland in acreage, tonnage, and revenue is blueberries. One of the worst things that can happen for an exporting country is to have a strong dollar (T. Drew, personal communication, May 9, 2013). "When we were back at 70, 80, or even 90 cents on the dollar, we could compete" (T. Drew, personal communication, May 9, 2013). When the Canadian dollar is at par, it has a devastating effect on exports. The margins in the food business are minimal and when the exchange rate moved from 68 or 70 cents on a dollar in 2003, to 88 cents in 2006 those margins disappeared (M.E. Berg, personal communication, May 27, 2013).

**Figure 5-1 Canada US Exchange Rate – values displayed for odd years beginning in 1991.**



## 5.10. Regional Food Systems and Food Hubs

The local food movement has instigated a number of local and regional planning initiatives. Metro Vancouver's board adopted the Regional Food System Strategy (RFSS) on February 25th 2011. Metro Vancouver's RFSS calls for an increase in capacity for processing, storage, and distribution of food and investment in training in safety skills development (Metro Vancouver, 2011a, p. 28). In the Lower Mainland, there are several food policy councils and other not for profit organizations that are focused on urban sustainability as it relates to our regional food supply. With concerns about the sustainability of our food system and the regions' resilience in the face of a sometimes unstable global food supply, cities across the region are reviewing food policy and governance. Many of the concerns about the sustainability of the region's food system focus on the vulnerability of the area being cut off from the global supply of food. As the chair of Metro Vancouver's Agriculture Committee, Harold Steves attended most of the meetings in the planning of the RFSS. As a farmer, he understands the dilemma faced

by the producers and the processors. In the formative stage of developing the RFSS, Metro Vancouver set up a separate meeting exclusively for processors but they represented a very narrow range of product (H. Steves, personal communication, June 23, 2013). Harold Steves sees a disconnect between the needs of farmers and processors, “what the existing processors said is that they can’t get enough products, because there aren’t enough farmers producing whatever the commodity it was that they wanted.” When the planning committee met with the farmers in Delta; “they couldn’t find anyone to process their product” (personal communication, June 23, 2013). The farmers indicated a willingness to switch crops with some assistance, but worried that there wouldn’t be enough processors to handle their product.

During the public consultation process leading up to the adoption of the RFSS, Metro Vancouver held a luncheon meeting with the private sector to gather feedback on their draft plan. The summary of participant feedback on the local value chain included recommendations for the creation of Agricultural Enterprise Zones (AEZ) within the ALR, tax incentives for co-packing facilities, and the establishment of a freeze-drying facility to process tree fruits and berries (Metro Vancouver, 2010). Metro Vancouver staff also collected feedback at several public consultation forums throughout the regional district. The concept of AEZ was mentioned in the dialogues on the RFSS and in several interviews. Harold Steves perceives this concept as an appropriate use of current industrial zoned land that could be used for processing agricultural products (personal communication, June 23, 2013). While municipalities don’t have the capacity to help finance the processing sector, they have several ways of helping them bridge the gap from start-up to profitability. Cities could subsidize the rent for five years, offer reduced Development Cost Charges, and draft bylaws to create agri-industrial zones. Harold Steves believes that the individual municipalities would have to apply to the province to alter the assessments for this new zoning (personal communication, June 23, 2013). Not all Metro Vancouver member municipalities agree that the concept would work. In a response letter to the draft strategy, Pitt Meadows staff stated; “While the concept for an Agricultural Enterprise Zone is good, Staff wishes to point out that past attempts to create Agricultural Industrial Parks, which are similar in concept, have not been successful due to land pricing constraints and need to stay competitive” (Metro Vancouver, 2011b, p. 52).

One of the goals of the RFSS is to “improve the financial viability of the food sector” where the first strategy is to, “increase the capacity to process, warehouse and distribute local foods” (Metro Vancouver, 2011a, p. 48). Building on the theme of on increased capacity is Local Food First’s initiative to create a food hub in Vancouver. Some of the founding participants are also members of the Vancouver Food Policy Council. Bringing together growers, processors, distributors, restaurants, and grocers, they identified an integrated local food hub as a community need. The vision for the New City Market is to have a central place that integrates local food production and consumption by providing a link between rural supply and urban demand (Local Food First, 2010, p. 1). Assisting small producers through investments in food precincts like the New City Market will allow for the integration of processing, storage, and transportation infrastructure (Lee et al., 2010, p. 9). When I asked several of the other interview participants about the concept of including a processing centre as part of a food hub, I received mixed responses. A couple were supportive of the idea of a commercial kitchen to incubate new businesses, test new products, or as a means of raising consumer awareness. However, they questioned the efficacy of full-fledged processing facility. A number of food processors were engaged in the initial dialogue on the New City Market and the consensus was that the proponents were trying to put too much into the facility; that food manufacturing should not be a component of the New City Market (Interview 5, personal communication, May 23, 2013). However a quote from the visioning process offered this perspective; “[Processing] is the largest single most important link missing in the effort to eat locally 365 days per year” (Local Food First, 2010, p. 7).

Vancouver’s Greenest City Action Team report, *Vancouver 2020: A Bright Green Future, An Action Plan for Becoming the World’s Greenest City*, sets a long-term goal of becoming a global leader in urban food systems and includes a 2020 target to reduce the carbon footprint of their food by 33% (City of Vancouver, 2009, p. 9). A number of recommendations that support a local food hub concept include: identifying a location for a food hub, developing policies to promote food processing and storage, and seek senior government funding to support grants for “land and facilities for local infrastructure such as food processing, storage, distribution, and purchasing hubs” (City of Vancouver, 2009, pp. 61-2). Harold Steves envisions a smaller scale version of a food hub in his

neighbourhood of Steveston, in the City of Richmond. By using city owned or harbour authority land, Harold Steves would like to create a food hub on the Steveston waterfront with a permanent farmers' market and a distribution centre with all the marketing functions (personal communication, June 23, 2013). The idea is to get the product into the city where the customers are and local processors would be able to access their inputs in one location. Harold Steves has seen this model in action in Japan where they've repurposed existing buildings to create these food hubs. Steveston, where a vibrant fishing port still exists, used to have around 20 fish processors. While Harold Steves applauds the work of the Vancouver Food Policy Council, he would like to see Richmond set an example by implementing the food hub concept at a smaller scale in Steveston (personal communication, June 23, 2013). The opportunities for the fruit and vegetable processing sector presented by these regional and local food initiatives are particularly important given the importance of food security as society confronts the effects of climate change.

## **5.11. Climate Change**

Whether processors source their product from the surrounding region or import the produce from farther afield, climate change is a constant threat. A March 2012 report from the *Climate Action Initiative on BC Agriculture and Food*<sup>10</sup> identified the problem of processing schedules at harvest time. While farmers are able to adapt to poor planting conditions in the spring by adjusting planting times, the few remaining processors that remain in the region run at full capacity during the harvest season (Crawford & McNair, 2012, p. 18). Competition for water resources between an ever expanding metropolis and the agricultural sector will test the resilience of the Lower Mainland. Case studies of Phoenix and Cape Town found that urban expansion had exceeded those cities' capacity to supply water to its residents and irrigated farmland (Ernstson et al., 2010). While the Lower Mainland's climate has high annual precipitation, there are threats to its

<sup>10</sup> The project involved contributions from: University of Northern BC, BC Ministry of Environment, BC Agriculture Council, BC Ministry of Agriculture, BC Ministry of Environment, Agriculture and Agri-Food Canada, Environment Canada, and the Pacific Institute for Climate Solutions.

resilience as water supply diminishes. There are no water licences available for additional irrigation on many of the rivers and streams and underground aquifers are not covered by licensing permits (Brandes & Curran, 2008, p. 25). Competition for scarce water resources will increase as residential and industrial development continues its rapid growth in the Lower Mainland.

In the period 1999 to 2002, climate-related natural disasters cost BC an average of 10 million dollars per year. Between 2003 and 2005, weather related events cost an average \$86 million annually. Risks to the Lower Mainland's local food inputs include rising sea levels, floods, summer droughts, forest fires and increased disease and pest infestations (BC PHSA, 2010, p.14). BC imports approximately 45% of its food and relies on the United States for 60% of its imported fruit and 70% of its vegetables (BC PHSA, 2010, p.19). The manner in which climate change occurs in the US and in particular California may have a profound impact on BC's ability to import fresh fruit and vegetables (p. 24). The impact of extreme weather events on local producers can have negative impacts on the processing sector. According to Travis Drew, crop insurance is so poorly run in BC that only 20% to 30% of farmers participate (personal communication, May 9, 2013). They make it difficult to collect; if you have a 100 acre field and 50 acres is damaged and you harvest the good half, you can't collect. The farmer then must decide whether to plow under the entire crop or collect on the damaged acreage. There is no advantage to the grower to take out the insurance. Once they make a claim, they then have to battle to determine what their yield would have been. They use a ten year average or an industry average where the yields can be a lot worse than the best producers. "Quebec and Ontario, it's the exact opposite, they are bending over backwards to help their growers" (T. Drew, personal communication, May 9, 2013).

## 6. Conclusions

This research found that the Lower Mainland food system is a good example of a hybrid food system that combines the attributes of a vibrant local food system, with a strong focus on trade within the global food system. The larger legacy processors like Safeway and Snowcrest Foods have strong social relationships with their suppliers while participating in a highly competitive global environment. While the survey results indicate that among the respondents, processors source 69% of the fruit and vegetables they process from within 150 kilometres, the small-scale processors that use co-packers have lost some control over their choice of produce inputs. Further study, ideally in collaboration with the SSFPA and BCFPA, to canvas more processors on where they source their produce, would benefit local food system research. The largest growth area among the fruit and vegetable processing sector is in on-farm processing. This mostly involves individually quick frozen (IQF) for storage and bulk shipments but also includes some value-added processing like juicing, drying, and production of berry wines. The on-farm processing extends to pickling and preserves of both fruits and vegetables. The fact that many industry participants have survived a recent recession in a competitive global environment suggests these processors are a resilient group that can thrive under the right circumstances. Given the increased interest in healthy eating, food safety, and an emphasis on local food, the Lower Mainland fruit and vegetable processing sector has an opportunity for continued growth.

There are some challenges that stand in the way of this growth. Factors beyond the control of the industry like currency exchange rates have a large impact on the viability of the sector. The strength of the Canadian dollar relative to the US currency hurts the export oriented processors. This is particularly true for the processors that focus on a single commodity like blueberries and rely heavily on the export market. Climate change will become increasingly more significant as late spring rainfall and prolonged summer droughts affect the crop yields and the vulnerability of both domestic and imported produce. As more land converts to blueberry production from forage and

vegetable crops, the threat of pests to a monoculture crop system increases. Branding and the marketing of local products continue to be a problem. There is a distinct difference between the wants and needs of the fruit and vegetable processors and the policy platforms of the federal government in regards to labeling and definition of locality. Throughout this research, many of the processors I surveyed and spoke with felt that there was little consumer awareness of their place in the food system and that as an industry they had little impact on policy decisions.

Further research on the relationships between the wholesalers and the processing industry should be pursued. If the local food system hopes to scale up and provide locally sourced produce in a processed form, then the wholesale link in that chain needs to be part of that relationship. This could take the form of a new type of wholesale establishment as envisioned in food hubs or in encouraging the existing wholesalers to include more local food. These shifts must be driven by consumer demand. While they are part of the value-added proposition, this research did not touch on those businesses that wash, grade, sort and sometimes cut and package fresh fruit and vegetables. There are some large companies such as Windset Farms that gather and package greenhouse vegetables from farms around the Lower Mainland. This is another part of the food value chain that requires further study. There are opportunities for further processing for many of the commodities that are shipped to the US and reappear as finished products on our local retail shelves. Ocean Spray, a US cooperative headquartered in Massachusetts, built a \$26 million receiving station in Richmond to sort, grade, and wash cranberries. Despite having 85 Ocean Spray co-op members in the Lower Mainland, the added value processing occurs entirely in US plants where there are 750 co-op members (BCCMC, 2011). Craisins (dried cranberries) are processed in Nevada while the juices are processed in other US locations. BC, with 48% of the Canadian cranberry production, has all but 60 acres of its 6508 acre total, marketed through Ocean Spray. Quebec, with 44% of the Canadian production distributes only 5% through Ocean Spray with the remainder through independent markets (BCCMC, 2011).

Several of the interview participants mentioned the concept of co-ops as means of moving the fruit and vegetable industry forward. These cooperative structures, with local ownership and shared governance, can be implemented on various levels in the

food chain. Suggestions included cooperative distribution, a cooperative processing plant, or a food hub concept for sourcing the local inputs needed for their processing facilities.

In conclusion, everyone I interviewed believes in the value of our local produce and the prospects for further growth. They agree that consumers need to understand the costs associated with our local food supply and need to be willing to pay a premium for the pleasure of enjoying safe, nutritious, quality food.

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## **Appendices**

# Appendix A.

## Lower Mainland & Metro Vancouver Regional District maps

Map of the Lower Mainland from BC Provincial web site



Map of Metro Vancouver Regional District



## Appendix B.

### Media Content Analysis Bibliography

Author	Date	Title of Article	Publication	Page
	Feb-91	Soft Fruits on Brink	Country Life in BC	16
Paul Luke	25-Mar-91	Serving up hi-tech cereal: Delta company's \$6-million plant	The Province	
Tony Kennedy	14-May-91	Off to Mexico, Green Giant the new king of the frozen food	Globe and Mail	
David Schmidt	May-91	Fewer vegetable growers chase smaller \$	Country Life in BC	1,2
Editorial	May-91	Free trade far from free	Country Life in BC	4
Daphne Bramham	15-Nov-91	Fruit, vegetable growers fearful	The Vancouver Sun	D3
David Schmidt	Mar-92	Survival Tops Agenda CL Mar 1992	Country Life in BC	3
David Schmidt	May-92	Grim future faces Lower Mainland vegetable growers	Country Life in BC	11
	Jul-92	Vegetable Growers plow down crops to protest imports	Country Life in BC	17,18
Barbara Brenman	Aug-92	Vegetable farmers ask govt aid to survive	Country Life in BC	1,19
David Schmidt	Aug-92	Buy BC promotion greatly watered down	Country Life in BC	1,2
	15-Oct-92	Royal City paring down: Harvest, process operation knifed	The Province	
	Nov-92	Royal City closes, defers growers' pay	Country Life in BC	1,2
	08-Jan-93	Farmers in a fix: Royal decree means hill of beans to vegetable growers	The Vancouver Sun	
Murray, M.	28-May-93	Innovation seen as key to food war with U.S.	The Toronto Star	2
David Schmidt	Aug-93	Buy BC promotion launched	Country Life in BC	1,2
	Oct-93	BC apples protected at border	Country Life in BC	16
	28-Sep-93	360 jobs to go at Chilliwack Pillsbury plant	The Vancouver Sun	D1
Brent, P.	28-Sep-93	Pillsbury restructuring to hit Canadian plants	Financial Post	3
David Schmidt	Nov-93	Fraser Valley processing plant to close	Country Life in BC	18
Toth, C.	16-Dec-93	Diversity builds strong economic base	Abbotsford Times	16
David Schmidt	Jul-94	Buy BC proving a great success with sales up 19 to 102 percent	Country Life in BC	28
Barbara Schmidt	Apr-95	Organic processing crops FV possibility	Country Life in BC	12
	Aug-95	Raspberries tops in Abbotsford	Country Life in BC	15

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David Schmidt	Dec-95	FCC/CIBC/Western Diversification	Country Life in BC	17
Jenny Lee	20-Dec-95	500 to lose jobs as Pillsbury closes Valley plant	The Vancouver Sun	
Malcolm Turnbull	Feb-96	Who will buy?	Country Life in BC	4,5
Wendy Holm	Feb-96	It's the Valley of the Jolly (ho, ho, ho) Green Giant. Not.	Country Life in BC	5
Barbara Schmidt	Mar-96	No surprises forecast for berry returns	Country Life in BC	25
	May-96	Wet spring could be it for some	Country Life in BC	3,6
Daphne Bramham	07-Sep-96	Imposition of import-food standards chided:	The Vancouver Sun	E1
Herb Barbolet	Oct-96	Time to change "Buy BC" program?	Country Life in BC	5
Dr. Richard Barichello	Nov-96	How Cdn agriculture has fared since '89	Country Life in BC	6,28
Rodger Hughes	Jan-97	Anti-dumping laws a must	Country Life in BC	1,2
David Schmidt	Feb-97	Blueberry co-op in bankruptcy	Country Life in BC	1,2
David Schmidt	Mar-97	Organic vegetables can net higher \$\$	Country Life in BC	17
David Schmidt	Apr-97	Apply now for strawberry ITF payment	Country Life in BC	27
David Schmidt	Jul-97	BC onion growers fear US dumping	Country Life in BC	1,2
Wendy Holm	Aug-97	Dear Catherine An open letter to B.C. agriculture's brand new Deputy Minister	Country Life in BC	5
David Schmidt	Nov-97	Many vegetable growers face utter disaster	Country Life in BC	1,3
David Schmidt	Nov-97	Anti-dumping duty removal could spell grower ruin	Country Life in BC	3
	22-Nov-97	Nalley's closing chip operation in Delta	The Vancouver Sun	
Barbara Schmidt	Jan-98	East Chilliwack no longer co-op	Country Life in BC	1,2
David Schmidt	Jan-98	One up two down-along with a new coach	Country Life in BC	1,2
David Schmidt	Feb-98	Delta processing farmers at risk	Country Life in BC	16
Wendy Holm	Jan-99	Fridge list for the coming year and beyond	Country Life in BC	5
Wendy Holm	Dec-99	The erosion of public policy support for agriculture	Country Life in BC	5
David Schmidt	Dec-99	Overproduction bogs down cranberry crops	Country Life in BC	11
Grant Ulyot	Jul-00	New berry processor for Abbotsford	Country Life in BC	7
David Schmidt	Aug-00	Potato industry fights for its life	Country Life in BC	1,2
David Schmidt	Oct-00	While BC potato growers celebrate tribunal win...	Country Life in BC	3
David Schmidt	Oct-00	Will 'Buy BC' campaign bear any fruit?	Country Life in BC	17
Wendy Holm	Jan-01	Reflections at the millennium	Country Life in BC	5
Wendy Holm	Mar-01	Where is the leadership when the future of farming is on the line?	Country Life in BC	5,6

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David Schmidt	May-01	First salvo fired in tomato wars	Country Life in BC	3
David Schmidt	May-01	Costly hearings grow deficit for BCVMC	Country Life in BC	11
David Schmidt	Aug-01	"Deficit position" axes Buy BC program	Country Life in BC	1,11
David Schmidt	Sep-01	Greenhouse tomato growers join forces for anti-dumping, trade action defence fund	Country Life in BC	3,6
Peter Mitham	Sep-01	Weather, Asian economic difficulties could spell reduced farm exports	Country Life in BC	27
David Schmidt	Oct-01	Damaging U.S. trade actions "outrageous misuse of rules"	Country Life in BC	3
David Schmidt	Nov-01	Tomato duties go from bad to worse	Country Life in BC	1,2
Peter Mitham	Nov-01	Cranberry growers hope to break even	Country Life in BC	1,2
David Schmidt	Dec-01	Canada plays tit for tat in anti-dumping actions	Country Life in BC	2
David Schmidt	Mar-02	Canada's WTO ag negotiators seek to level the playing field with the U.S.	Country Life in BC	18
David Schmidt	Apr-02	Food fight escalates with tomato duties up to 71%	Country Life in BC	1
David Schmidt	May-02	US drops ant-dumping duty	Country Life in BC	1,2
David Schmidt	Oct-02	Ag council to take over the reins of Buy BC program	Country Life in BC	7
John Wilcox	Nov-02	A thought for food	Country Life in BC	4,31
Wendy Holm	Dec-02	Mind candy for empowerment	Country Life in BC	5
Constantineau, Bruce	10-Jan-03	Snowcrest to triple revenue after buying Ontario firm	The Vancouver Sun	3
Toth, C.	20-May-03	No one to pick berries: Growers try to lure students to fields.	Abbotsford Times	1
David Schmidt	Nov-03	Challenges for Buy BC program despite strong consumer support	Country Life in BC	3
Peter Mitham	Jan-04	Scorch burning BC berry growers	Country Life in BC	20
Wendy Holm	Mar-04	Water and NAFTA: A sweetheart message from Canada's farmers	Country Life in BC	5
David Schmidt	Apr-04	Food processing incubator hopes to take FV by storm	Country Life in BC	29
David Schmidt	Jul-04	Blueberry supply could soon exceed demand	Country Life in BC	14
David Schmidt	Sep-04	Anti-dumping review takes aim at Yankee spuds COP	Country Life in BC	12
Toth, C.	30-Nov-04	Speakers try to sway commission: Abbotsford may no longer be berry capital	Abbotsford Times	4
Peter Mitham	Dec-04	Innovation, expansion in the works for the Cranberry Lady	Country Life in BC	18

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Toth, C.	25-Jun-05	Network offers reliable outsourcing professionals	Abbotsford Times	15
Henry F. Heald	Jul-05	The farm crisis- whose problem is it anyway?	Country Life in BC	4
David Schmidt	Jul-05	Record year for blueberries tempered by global expansion	Country Life in BC	11
Toth, C.	05-Jul-05	Berry growers in a jam: Port strike stalls flow of fruit overseas	Abbotsford Times	1
	Aug-05	Photo of Pea Harvest	Country Life in BC	19
David Schmidt	Sep-05	Serious declines in local strawberry yields gives rise to cheaper imports	Country Life in BC	12
Peter Mitham	Oct-05	Duties decision will prevent US potato dumping	Country Life in BC	3
Paul Luke	30-Oct-05	B.C. firms grow Bellingham branches:	The Province	
Peter Mitham	Dec-05	The chips are up for spud producers	Country Life in BC	23
David Schmidt	Mar-06	Berry prices at mercy of foreign competition, buoyant loonie	Country Life in BC	10
David Schmidt	May-06	Poor prognosis for cole crops' future	Country Life in BC	13,14
David Schmidt	May-06	Berry exports to Asia need cultivating	Country Life in BC	27
Peter Mitham	Aug-06	Tomato takeover promises stability	Country Life in BC	35
Peter van Dongen	Sep-06	Photo of Lally Farms processing centre	Country Life in BC	19
David Schmidt	Sep-06	Tri-National ag group agrees to remedy anti-dumping rules	Country Life in BC	21
Peter van Dongen	Oct-06	BC Food Processors appoint first CEO	Country Life in BC	12
Peter van Dongen	Nov-06	Richmond farm tour touts Building Viability	Country Life in BC	21,22
Peter van Dongen	Nov-06	B.C. cranberry crop bound for new U.S. Craisin processor	Country Life in BC	20
Toth, C.	20-Mar-07	Jam plant will close this summer: Move 'just a good business decision': CEO	Abbotsford Times	12
David Schmidt	May-07	Cole crop growers call for improved crop insurance	Country Life in BC	11
Toth, C.	15-Jun-07	Luncheon aims to turn guests green; ideas for sustainability abound at Abbotsford chamber event	Abbotsford Times	10
Peter Mitham	Jan-08	B.C. Hot House preps for relocation	Country Life in BC	32
David Schmidt	Mar-08	Oversupply prodding blueberry growers to invest in marketing	Country Life in BC	10
David Schmidt	Apr-08	Burgeoning blueberry industry host N.American tour	Country Life in BC	22
Schmidt, S.	30-Apr-08	Canada wants to delay plan for ingredients labels on processed food	The Vancouver Sun	

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Downham, M.	30-May-08	Strawberry demise; industry is shrinking, but fresh fruit is still on menu	Abbotsford Times	1
David Schmidt	Jun-08	Product of Canada labeling approved	Country Life in BC	3
David Schmidt	Jun-08	Colder than normal FV weather afflicts berries	Country Life in BC	12
David Schmidt	Jul-08	Council seeking data on blueberry plantings	Country Life in BC	19
Schmidt, S.	23-Jul-08	Safety checks inadequate for imported food, study says	The Vancouver Sun	
Schmidt, S.	23-Jul-08	Large gaps in safety of imported food: Report; health Canada	National Post	
Linda Wegner	Aug-08	Dedicated volunteers propel Fraser Valley Gleaners to succeed	Country Life in BC	9,10
Jim Rohman	Oct-08	Rosy future for food manufacturing sector	Country Life in BC	6
David Schmidt	Oct-08	Get ready to "Pick BC"	Country Life in BC	21
	Nov-08	Ocean Spray credited with price recovery	Country Life in BC	11
David Schmidt	Dec-08	Foreign workers bring stability to the processing industry	Country Life in BC	8
Dave Hall	28-Feb-09	Food firm to cut jobs	The Windsor Star	3
David Schmidt	Mar-09	Processor leaves farmers in lurch	Country Life in BC	1,2
Dave Willis	17-Mar-09	'Devastating' change for farmers	The Surrey Now	
David Schmidt	Jul-09	Marketplace awash with blueberries	Country Life in BC	9
Jim Rohman	Jul-09	Free trade and food safety are intertwined	Country Life in BC	28
David Schmidt	Aug-09	Food processors featured in annual Abbotsford ag tour	Country Life in BC	13,14
Bob Collins	Nov-09	Will "transition towns" lead the way to sustainable future?	Country Life in BC	4
Peter Mitham	Nov-09	Vancouver summit discusses farmland preservation	Country Life in BC	19,20
David Schmidt	Dec-09	Multinationals will squeeze farmers out of existence: Estell	Country Life in BC	26
David Schmidt	Feb-10	Anti-dumping duties under review	Country Life in BC	1,2
David Schmidt	Mar-10	Processors, manufacturers pool resources for virtual clearing house	Country Life in BC	15
Cheryl Davie	May-10	"Martini Farmers" threaten Fraser Valley agriculture	Country Life in BC	11
Brian Morton	22-May-10	Cloudy skies for B.C. farming; Rising costs for loans, higher dollar	The Vancouver Sun	
	28-May-10	Good news for berry biz; thousands set aside for abby growers co-op	Abbotsford Times	12
David Schmidt	Jun-10	Berry good news! Feds deliver on sorely-	Country Life in BC	3

<b>Author</b>	<b>Date</b>	<b>Title of Article</b>	<b>Publication</b>	<b>Page</b>
		needed funds for BC berry industry		
David Schmidt	Jun-10	Farmers want potato anti-dumping orders renewed	Country Life in BC	6
David Schmidt	Jul-10	Major retailers lack buy local as marketing strategy	Country Life in BC	11
Toth, C.	27-Jul-10	Berry growers: Nothing sweet about falling prices	Abbotsford Times	5
Arnott, R.	27-Jul-10	Agriculture: Our 'economic engine'; one in four jobs has ties to abby's agri sector	Abbotsford Times	3
David Schmidt	Sep-10	BC spud producers await outcome on anti-dumping case	Country Life in BC	3
Ronda Payne	01-Sep	Small scale producer processing faces funding challenges	Country Life in BC	17
David Schmidt	Oct-10	Potato anti-dumping order renewed	Country Life in BC	1,2
Ronda Payne	Nov-10	Soaked Fraser Valley farmers devastated by crop loss in rain-stricken harvest	Country Life in BC	1,11
Kathy Michaels	Nov-10	Growers watch juicer branch out	Country Life in BC	29



7. Please indicate which type of business structure applies to your company:
- Local (single location)
  - Regional (multiple facilities in Lower Mainland)
  - Provincial (multiple processing facilities within BC)
  - National (multiple processing facilities in Canada)
  - Multi-national (processing facilities outside Canada)
  - other (please specify) \_\_\_\_\_
8. Please indicate the type of location where you process your product.
- farm-based business
  - home-based business
  - co-packing facility
  - shared use commercial kitchen
  - commercial/industrial processing facility
  - Other (please specify) \_\_\_\_\_
9. Please check any of the following options you feel are important factors for choosing facility location.
- cost of land or lease
  - close to large population centre
  - proximity to highway
  - proximity to rail
  - proximity to port
  - close proximity to local farmers
  - availability of labour
  - close to produce distribution centre
  - proximity to other suppliers (excluding produce)
  - Other (please specify) \_\_\_\_\_
10. Please indicate the size of your company by the following annual revenue categories.
- |  |   |
|--|---|
| <input type="checkbox"/> up to \$30,000              | <input type="checkbox"/> \$30,000 to \$100,000        |
| <input type="checkbox"/> \$100,000 to \$250,000      | <input type="checkbox"/> \$250,000 to \$1 million     |
| <input type="checkbox"/> \$1 million to \$2 million  | <input type="checkbox"/> \$2 million to \$5 million   |
| <input type="checkbox"/> \$5 million to \$10 million | <input type="checkbox"/> \$10 million to \$99 million |
| <input type="checkbox"/> over \$100 million          |   |
11. How many employees do you have?
- Full time year round \_\_\_\_\_
- Part time year round \_\_\_\_\_
- Full time seasonal \_\_\_\_\_
- Part time seasonal \_\_\_\_\_

12. Do you belong to any of the following industry organizations? Please check all applicable boxes.

- BC Food Processors Association (BCFPA)
- Small Scale Food Processors Association (SSFPA)
- Food Processors of Canada
- Food Processing HR Council
- BC Vegetable Marketing Commission
- BC Cranberry Marketing Commission
- BC Blueberry Council
- BC Fruit Growers Association
- Certified Organic Associations of BC
- BC Produce Marketing Association
- Canadian Produce Marketing Association
- Other (please specify) \_\_\_\_\_

13. Approximately what percentage of your processed product in 2012 contained fruits and/or vegetables? \_\_\_\_\_%

14. Please list the top produce items that you processed in 2012 by gross sales.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

15. From which geographic areas did you source your produce in 2012? Please indicate the percentage of total purchases by cost of goods.

- a. Local (0 - 50 kilometres) \_\_\_\_\_%
- b. Regional (50 - 150 kilometres) \_\_\_\_\_%
- c. Okanagan or Vancouver Island \_\_\_\_\_%
- d. Provincial (other area of BC) \_\_\_\_\_%
- e. National (outside of BC) \_\_\_\_\_%
- f. United States (California) \_\_\_\_\_%
- g. United States (except California) \_\_\_\_\_%
- h. México \_\_\_\_\_%
- i. South & Central América \_\_\_\_\_%
- j. China \_\_\_\_\_%
- k. Other \_\_\_\_\_%

16. Which supply chain sources does your company use for produce inputs? Check all that apply.

- direct from farmer
- grow my own produce
- wholesale distributor
- marketing commission
- Other (please specify) \_\_\_\_\_

17. If your company exports, please list the top five destination provinces or countries and the approximate % of total gross revenue in 2012.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Agriculture and AgriFood Canada (AAFC) held discussions with senior industry and departmental officials in the form of a Food Processing Competitiveness Working Group (FPCWG) that culminated in an Action Plan in December 2010. The following issues were defined by the Working Group as important for the continued viability of the Canadian food processing industry.

18. Please indicate if you agree or disagree with the following statements as they pertain to your company.

Check one box for each statement

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Access to capital is an obstacle to competitiveness & ability to grow my business.	<input type="radio"/>				
High input costs such as energy and packaging have a negative effect on my business.	<input type="radio"/>				
A lack of access to skilled labour affects my business.	<input type="radio"/>				
I have difficulty accessing retail space or placement for my products	<input type="radio"/>				
Deregulation of packaging standards will have a negative impact on my business.	<input type="radio"/>				
The lack of alignment between domestic and international regulations for food safety and labeling puts BC processors at a competitive disadvantage.	<input type="radio"/>				
Development of the Canada Brand strategy will improve my businesses profitability.	<input type="radio"/>				
Product of Canada labeling criteria is too restrictive.	<input type="radio"/>				

19. Have you ever received government funding for marketing, research and development, capital improvements, or other purposes?

- No (if No, skip to Question 24)
- Yes (if Yes, please answer next question)

20. Please provide details of the source, the year, and use of the funding.

Year \_\_\_\_\_  
Source (i.e. level of government, IAF, BDC) \_\_\_\_\_  
Use of Funding (i.e. marketing, research and development, capital improvements) \_\_\_\_\_

A 2008 Ipsos Reid public survey regarding the agriculture sector indicated that 85% of respondents were confident that food products processed in BC are safe and nearly 2/3 found it easy to locate foods that are processed in BC.

21. Given the increased interest in local food, please indicate if there are any factors that would encourage you to increase the processing of BC fruit and vegetables in your facility.

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Metro Vancouver's 2011 Regional Food System Strategy states that "to sell more locally produced food, there needs to be more facilities for processing farm and fish products as well as more capacity for warehousing and distribution."

22. Do you have available capacity (room to increase production without incurring expansion costs) to process more BC produce in your facility?

- No
- Yes (Please indicate specific times or seasons when you could accommodate more product)

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23. Please provide any further comments that you feel will increase the understanding of the fruit & vegetable processing industry in the Lower Mainland.

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## Appendix D.

### Sample Population

	Company	City	Processing
1	49 degree Organics	Vancouver	Gourmet sauces
2	A & P Fruit	Abbotsford	Fresh frozen puree & juice blueberries and raspberries
3	Abbotsford Growers Co-op	Abbotsford	Straight pack, puree, puree sieved & juice
4	Misty Mountain Specialties	Richmond	Mushrooms, fresh and dried
5	Aji Gourmet Foods	Surrey	Condiments and sauces
6	Apex Foods	Abbotsford	Dips & sauces, Co-packer
7	Asian Family	Vancouver	Vegetables, beverages & sauces
8	Basco	Maple Ridge	Natural & Vegetarian Soups
9	BC Frozen Foods Ltd.	Mission	Fresh and frozen fruits and vegetables
10	Berryhill Foods Inc.	Abbotsford	Straight pack and puree raspberry
11	Blackberry Hill Farm	Vancouver	jellies, jams, syrups and fruit pies
12	Bremner Foods	Delta	Pure Fruit Juices
13	Cal-San	Richmond	Blueberries
14	Canada Youth Orange Network	Vancouver	Juice
15	CanWest Farms	Richmond	Blueberries
16	Coast Cranberries	Langley	Cranberries, frozen, concentrate and juice
17	Cranberries Naturally	Ft. Langley	Sauces, dips, jams, dried & candied cranberries
18	Dreidiger Farms	Langley	Fresh berries, jams, jellies, and pies
19	Everland Natural Foods	Burnaby	Salsas, cooking dipping & pasta sauces
20	Fraser Valley Packers	Abbotsford	
21	Gladwin Farms (Lally Group)	Abbotsford	Fresh and frozen berries
22	Glen Valley Artichokes	Langley	Preserves - artichokes, squash, beans & peppers
23	Glenwood Farms	Langley	Jams, jellies, salsas & preserves

	<b>Company</b>	<b>City</b>	<b>Processing</b>
24	Global Gourmet	Richmond	Sauces, soups, fresh and frozen entrees
25	Golden Eagle Group	Pitt Meadows	IQF and bulk frozen blueberries
26	Goodies by Thelma	Abbotsford	Jam, Jelly, & Pickled Vegetables
27	Gourmet Savouries	Surrey	Pesto, vegetable antipasto & artichokes
28	Happy Planet	Vancouver	Fruit & Vegetable Juice, soups
29	It's All Good Foods	Richmond	Veggie Based Foods, Entrees fresh and frozen
30	Kahlon Farms Ltd	Abbotsford	IQF, straight pack, puree seedless, puree, juice & concentrate
31	Krause Berry Farms	Langley	Jams
32	Left Coast Naturals	Burnaby	Organic & Natural Foods (Skeet & Ike's, Hippie chips)
33	Lone Willow Enterprises Ltd	Ladner	Raspberry, Strawberry and Mead Wine syrups
34	Meadow Berry Farms	Pitt Meadows	Frozen Blueberries
35	Momma Nellie's Goodies	Burnaby	Salsa
36	Naturally Homegrown Foods Ltd	Maple Ridge	Hardbite Potato Chips
37	North American Tea & Coffee Inc.	Delta	Fresh cut and canned fruits and vegetables
38	Pacific Canadian Fruit Packers Inc.	Abbotsford	
39	Pacific Coast Fruit Products Ltd.	Abbotsford	IQF Fruit, Puree, Concentrates and juices
40	Premier Pacific	Vancouver	Co-packer
41	Preserved BC Sunshine	Vancouver	Preserves, Jams, Condiments
42	Safeway	Abbotsford	Green Beans, Wax Blueberries, Frozen fruits and vegetables
43	Saint's Preserves	Delta	Preserves, jams, and jellies
44	Salad Sisters	Richmond	Fruit based salad dressings
45	Sandel Foods	Chilliwack	Fruit fillings and sauces
46	Savoury Processed Foods	Delta	
47	Shady Glen Enterprises Ltd.	West Vancouver	Raspberry, blackberry, cherry vinegar
48	Silverhill Orchard	Mission	Jams, preserves, and spreads

	<b>Company</b>	<b>City</b>	<b>Processing</b>
49	Snowcrest Packers Ltd.	Abbotsford	Fresh & Frozen Fruits & Vegetables
50	South Alder Farms Ltd.	Aldergrove	IQF and bulk freezing, pureed blueberry and raspberry, currents
51	Sun Plus Products	Surrey	Fruit & Vegetable Juice
52	Taste Culinary Solutions	Vancouver	Condiments, Indian sauces pickles sold through retail outlets, co-packer
53	Taves Family Farm Applebarn	Abbotsford	Jams, jellies & ciders
54	The Berry Boys/Meadowland Farms	Pitt Meadows	Frozen, dried chocolate and yogurt covered
55	Triple Crown Packers Ltd.	Abbotsford	IQF, puree, juice
56	TRU Buy-O-Logical Foods Ltd.	Abbotsford	Beans, berries
57	Trugs Gourmet Foods	Burnaby	Jams, condiments, sauces and pickles
58	Valley Berries	Abbotsford	Blueberries, Frozen Juice, Frozen Berries, & Frozen Fruit
59	Westberry Farms	Abbotsford	Confectionery, Fruit, & Berries further processed
60	Willow View Farms	Abbotsford	Apple juice and cider

## Appendix E.

### Interview Consent Form

Date: \_\_\_\_\_

Dear \_\_\_\_\_,

Thank you for participating in my research project titled: *The Lower Mainland Food System: The Role of Fruit and Vegetable Processing*. I am a graduate student at SFU undertaking this study for a Masters degree in Urban Studies under the supervision of Professor Hannah Wittman. This letter clarifies the conditions of the interview.

The purpose of this research is to understand which current fruit and vegetable processing facilities exist in the Lower Mainland, how this compares to the historical processing capacity, and what factors have influenced any changes in the number of facilities. The specific focus will be on which facilities process local produce and how much volume, value and percentage of their overall product is locally sourced.

Great care will be taken in data collection so that individual firms cannot be identified. Individual revenue data and other information that could identify your company will be strictly confidential and information will be consolidated to avoid individual firm identification. If the municipality location can identify a particular company it will be omitted from the data.

This study will take an in depth look at the produce processing industry in the region and identify the size of the industry, number of employees, and how this has changed over the period from 1991 to 2012. This information will be charted and compared to trade and agricultural policy decisions during that period. Crop failures and other extreme weather events will also be considered as external variables that may have affected these food processing statistics.

I hope the findings of this study will contribute to the literature on food supply chains and the food value chain. Conclusions and recommendation may be used to inform policy decisions within the regional study area and at the provincial or federal level.

This research is independent and has not been commissioned or funded by any organization. The decision to participate is voluntary, and entirely yours. I will make every effort to protect your privacy in the study process. You may choose whether the information you provide during the interview may be attributed directly to you, or whether you wish to remain anonymous. You are free to refuse to take part, or not to answer any questions, or to withdraw at any time without penalty.

I will store the interview notes for three years in a locked cabinet to which only I will have access. There are no foreseeable risks to you from participating in this study. There is also no cost to you, other than your time involved. You and your company may benefit from the findings if they provide useful information on your industry sector.

Once complete, my thesis paper will be published in SFU's Institutional Repository called Summit (<http://summit.sfu.ca/>). I may also seek to publish versions of the study in academic publications. All interview participants will be invited to my thesis defense, which will be open to the public.

This study has been reviewed and received ethics clearance through the SFU Office of Research Ethics. If you have any questions regarding this study, please contact me via email [REDACTED]. I look forward to meeting you and thank you in advance for your assistance.

Yours Sincerely,

Grant Rice, Masters in Urban Studies Candidate, SFU



## Appendix F.

### Qualitative Interview

1. *Please provide a brief history of your company; what year it was started and under what circumstances.*
2. *How has your company evolved since it started?*
3. *What are the greatest challenges in growing your company?*
4. *You have identified the following factors as limitations to increasing local produce processing (this will depend on the initial survey) Can you elaborate on these limitations?*
5. *Can you identify any policies, past or present, that encourage or discourage the increased use of local produce? (prompt, is there an emphasis on export markets vs. domestic? Have trade agreements had any effect on supply or demand?)*
6. *Please provide examples of any increases in demand from customers seeking local produce? How has this manifested itself?*
7. *Please identify available distribution channels that can deliver more local food to the retail sector? (prompt, is it difficult getting new local product onto retail shelves?)*
8. *What are the greatest opportunities for your company relating to increased demand for local food?*
9. *Is there anything else you would like to add to the conversation on local produce and the role of processing facilities in the regional food system?*

## Appendix G.

### Codebook

Code	Description
CAP	Access to Capital. Investment capital for start-up companies or for modernization of existing processing facilities.
CO-PK	Co-packing. The practice of using a third party to process your product either entirely or with your assistance.
CURR	Currency Exchange Rate. The exchange rate of Canadian currency primarily against the U.S. dollar.
DIST	Distribution. The costs associated with distributing the finished product either through a Distributor, delivery service or by the processor.
DUMP	Dumping of product. Refers to the dumping or selling of foreign product into the local market below the cost of production.
FD:SAF	Food Safety. Any reference that described food safety issues as either a differentiating factor or an opportunity or barrier to increased trade.
FM	Farmer's Markets. Processors that use farmer's markets as a way of selling their product or any reference to that distribution channel.
FT: B	Free Trade Agreements - Barrier. Free trade agreements (CUSTA and NAFTA) perceived as barriers to their business.
FT: O	Free Trade Agreements – Opportunity. Free trade agreements (CUSTA and NAFTA) perceived as an opportunity to their business.
INNOV	Innovation. Facility upgrades including investments in new technologies or equipment.
RET:FF	Retail Access - Free Fill. Avenues for distribution of product. Free Fill pertains to the practice of processors giving free product to access shelf space.
RET:SS	Retail Access – Shelf Space. The practice of large grocery retailers charging fees for retail shelf access.
SH-PKG	Shared use Processing. Any processor that uses a shared commercial kitchen to process their product.
WHSL	Wholesale. The use of wholesalers to acquire produce for processing.

## Appendix H.

### Buy Local Campaign

**Table 6-1 Produced from BC Buy Local media releases- Funds committed from inception to Nov. 15, 2013**

<b>Date</b>	<b>Organization</b>	<b>Objective</b>	<b>Amount</b>
Dec 11, 2012	BC Cranberry	Promote cranberries for Christmas	\$15,700
Jan 26, 2013	B.C. Certified Seed Potato Growers Association	Promotion at trade shows, web & social media	\$5,000
Feb 13, 2013	BC Chicken Growers' Assoc.	Educational video	\$15,500
Feb 16, 2013	Port Alberni Farmers' Market Association	Local food cook book	\$5,000
Feb 23, 2013	BC Shellfish Grower's Assoc.	Promotion at trade shows, web & social media	\$35,125
Mar 11, 2013	Ecotrust Canada	BC seafood traceability program	\$69,794
Mar 16, 2013	The Okanagan Plant Improvement Corporation	Promote "Born in BC. Raised in the Okanagan" two new apple varieties	\$25,000
Mar 18, 2013	Tourism Kelowna	Promote "Farm to Table," farmers and restaurants	\$100,000
Mar 20, 2013	Sunshine Organics	Create a coastal "buy local" logo in the Comox and Powell River region	\$100,000
Apr 3, 2013	BC Wine Institute	BC VQA wine and local food campaign	\$100,000
Apr 5, 2013	Vancouver Islands' Coastal Black Estate Winery	Web site, radio ads, newsletter	\$16,300
Apr 15, 2013	Vernon Farmers' Market	Marketing strategy, new signage	\$10,000
April 13, 2013	Hopcott Farms	Agritourism activities and local beef promotion	\$16,883
Apr 15, 2013	Naturally Homegrown Foods	Brand development, social media & promotions	\$100,000
Jul 4, 2013	White Rock Farmers' Market	Mail outs, advertising health promotion	\$20,000
Jul 8, 2013	BC Tree Fruits	Cherry promotion	\$20,000
Jul 12, 2013	New Tree Fruit Varieties	Web site updates & social media	\$50,000

<b>Date</b>	<b>Organization</b>	<b>Objective</b>	<b>Amount</b>
	Development Council	promote ambrosia apples	
Jul 20, 2013	Cayoose Creek Indian Band	Promote agritourism and ethno botanical products	\$39,612
Jul 24, 2013	The BC Association of Cattle Feeders	Promotion of BC Certified Beef	\$10,250
Aug 2, 2013	BCfresh	Promote Warba potato variety	\$16,000
Aug 5, 2013	B.C. Food Processors Assoc.	Develop in-store & web material to help consumers identify their member's products	\$65,000
Aug 13, 2013	Little Valley Farms	Promote locally raised and processed meats	\$36,000
	Kawano Farms		\$7,625
Aug 13, 2013	Quesnel Community and Economic Development Corporation & the North Cariboo Agricultural Marketing Assoc.	Promote 50 products grown and raised in the North Cariboo	\$22,000
Aug 28, 2013	The BC Association of Farmers' Markets	Social media campaign and video production to promote farmer's markets	\$85,000
Sep 3, 2013	BC Salmon Marketing Council	Multi-media campaign	\$60,700
Sep 3, 2013	Nuu-chah-nulth Tribal Council	Seafood product education	\$25,000
Sep 3, 2013	Victoria Downtown Public Market Society	Marketing	\$19,800
Sep 3, 2013	BC Salmon Farmers Association	Develop a pamphlet on salmon farming	\$7,500
Sep 3, 2013	Sooke Region Food Community Health Initiative (CHI) Society	Marketing workshop for farmers	\$5,600
Oct 24, 2013	BC Greenhouse Growers' Association	Spring 2014 consumer awareness campaign	\$100,000
<b>Total</b>			<b>\$1,204,389</b>