KPU | Institute for Sustainable Food Systems

The Township of Langley Food System Study

Institute for Sustainable Food Systems

Findings from the Township of Langley Post-production Study

Authors:

Payal Batra
Naomi Robert

Prepared for:

Township of Langley
September 2018

Abstract

The agri-food system is a complex network of activities, actors and supply chain steps necessary to prepare raw agricultural products for sale and human consumption. In BC, the agri-food system is a $22 billion economic sector creating employment opportunities for over 57,000 people (BC Ministry of Agriculture, 2016).

Examination of the post-production sector in the Township of Langley revealed a number of barriers for including local food in supply chains. The barriers identified related to regulation and policy, certification and licensing, access, availability and vertical integration of the food supply chain.

Institute for Sustainable Food Systems

The Institute for Sustainable Food Systems (ISFS) is an applied research and extension unit at Kwantlen Polytechinc University that investigates and supports regional food systems as key elements of sustainable communities. We focus predominantly on British Columbia, but also extend our programming to other regions.

Our applied research focuses on the potential of regional food systems in terms of agriculture and food, economics, community health, policy, and environmental stewardship. Our extension programming provides information and support for farmers, communities, businesses, policy makers and other. Community collaboration in central to our approach.

www.kpu.ca/isfs

This report has been prepared by the Institute for Sustainable Food Systems at Kwantlen Polytechnic University for the Township of Langley. Funding for the research described in this report was provided by the Township of Langley, and by the Creative Capital Grants, Kwantlen Polytechnic Univeristy.

Cover Photo: vladimir_n, Frozen raspberry processing business (ThinkStock)

Suggested Citation: Robert, N., and P. Batra. (2018) *Findings from the Township of Langley Post-production Study.* Richmond, British Columbia: Institute for Sustainable Food Systems, Kwantlen Polytechnic University.

For more information contact:
Naomi Robert
Research Associate, Institute for Sustainable Food Systems
naomi.robert@kpu.ca

Table of Contents

1. Introduction

In light of increasing consumer demand for local food, there is growing interest in the economic implications of localizing the food system. In British Columbia we spend an estimated $17 billion on food annually (Statistics Canada 2015; 2016). The majority of these expenditures are allocated to non-local food businesses, where the bulk of the dollars spent leave the community (Heffernan, 2006). A localized food system has the potential to capture a greater portion of food profits allowing capital to change hands multiple times before leaving the community, and multiplying the economic benefit for the region (Heffernan, 2006; Robert & Mullinix, 2018).

In local food systems research, there is a predisposition to emphasize the production phase of the food system. However, gross farm receipts (from the sale of raw, unprocessed agricultural products) reflect only one aspect of the economic impact of the food system. In BC, the agri-food system is a complex $22 billion economic sector creating employment opportunities for over 57,000 people (BC Ministry of Agriculture, 2016).

The post-production sector comprises the activities, actors and supply chain steps after primary production including cold and dry storage, value-added processing, distribution grading, slaughtering, butchering etc. These steps are often necessary to prepare raw agricultural products for sale and human consumption. However, they are equally important for extending the shelf-life of perishable agricultural products and for preventing waste of cosmetically inferior products. These functions in addition to value-added processing, can translate to higher economic returns for producers and food businesses. As such, developing local post-production capacity represents a crucial component to actualizing a local food system and realizing the associated potential conomic (and other) benefits.

Post-production capacity is often cited as the “missing middle” in localizing food systems (Hanthorn, 2015). Across North America, the majority of food still flows through conventional concentrated systems of nationally and globally organized wholesalers, processors, distributors, and retailers (Woods, 2013). In 2016, Agriculture and Agri-food Canada reported that infrastructure for activities such as aggregation storage, processing, distribution and marketing have become increasingly concentrated and integrated (Agriculture and Agri-food Canada, 2016). Although there is large economic potential in the post-production sector, the high cost and infrastructure requirements can make it difficult for small-scale processors to access these services and compete in the conventional food system (Hild, 2009). This is of particular interest in the Township of Langley (the Township), where small farms are prevalent.

In the Township, approximately 90% of cultivated field crops are grown on fields less than four hectares (10 acres). For many of these small farms, the lack of appropriately scaled post-production facilities creates a barrier for local food entering the supply chain. This bottleneck is widely recognized in the dialogue around re-localization of food systems (Hanthorn, 2015; Mullinix et al. 2016). From the Township of Langley Food Self-reliance Study report (ISFS, 2018), it is evident that post-production capacity can have a significant impact on the local food self-reliance, and overall economic returns from the agri-food sector. This study presents a brief summary of the current post-production activities in the Township, highlighting key challenges along with recommendations to strengthen the post-production sector’s support of local food systems.

2. Study Objectives

This study assesses the following dimensions of the post-production sector as a component of local food systems in the Township:

1. Types of post-production activities and food commodities present in the Township.
2. Flow of these commodities through the post-production network.
3. Challenges to inclusion of local food within the food system supply chain using the case study of produce (fruit and vegetable) and meat.

Findings in this report may help to craft locally suited strategies to strengthen support for the local-regional food system.

3. Methods

To fulfill our objectives, we conducted interviews with post-production businesses and producers (farmers) located in the Township. The interviews provided information on the types of post-production activities and commodities present in the Township as well as how these commodities move through the supply chain. To present the challenges and opportunities of how the Township can increase local food processing, we selected two food groups, produce and meat, as case studies. The business and producer interview processes are discussed in detail below.

3.1. Post-production Business Interviews

We compiled a list of post-production food businesses in the Township using the online business license (B/L) directory hosted on the Townships' website (Township of Langley, n.d.). The database search was exhaustive using multiple B/L primary category descriptions namely:

- broker
- farms/farm products
- food processing
- manufacturer
- slaughterhouse
- warehouse/storage
- wholesale merchant

In addition to the aforementioned B/L categories, food and beverage subcategories were applied under the primary category where available.

As of November 2017, there were 56 businesses listed under post-production food businesses. Retail businesses, businesses focused on alcohol, water bottling, animal feed and candy/confection were excluded from the interview process. As a result, there were 43 post-production businesses, focused on food for human consumption present in the Township. It is important to note that several commercial farms and greenhouses have on-site post-production infrastructure such as cleaning, individual quick freezing and packaging. These on-site processing establishments were excluded from our analysis as they are primarily production enterprises focused on processing their own products.

Informational interviews were conducted by phone and email with post-production (food production distribution and processing) businesses. The goal of these interviews was to understand the types and capacity of post-production activities and to assess the extent to which the businesses were engaged in the local food system. To verify that the business license directory was exhaustive, at the end of each interview, the interviewee was asked to list names of other post-production businesses they were aware of in the Township. If these names were not in the database compiled from the B/L directory, they were added to the pool after verifying their location as within the Township.

3.2. Primary Producer Interviews

In addition to post-production businesses, we interviewed select primary producers (farmers) in the Township to further inform our understanding of how food commodities flow through the supply chain to reach consumers. We compiled a list of 96 producers based on online sources such as BC Farm Fresh, BC Organic Farmers, Langley Farmers' Market, and individual farm websites [1]. The producer list is extensive, but not exhaustive, as there is no centralized source of producer information inclusive of all agricultural operations in the Township. Furthermore, many producer associations do not distribute the list of their members. For example, the BC Dairy Association informed us that there are 16 dairy producers in the Township, but were not able to share the names of these producers with the public. Hobby farmers, or those farming activites which do not aim to generate net farm income (Nibourg, 2016; Upland Consulting, 2015) were not targeted. A total number of 12 interviews were conducted with producers, nine with fruit and vegetable producers and three with livestock producers.

Table 1: Number of post-production businesses contacted and interviewed.

Interviews with Post-production Businesses	Number of Businesses
Businesses Contacted	43
Businesses Interviewed	18

Table 2: Number of producers contacted and interviewed.

Interviews with Primary Producers	Number of producers
Producers Compiled	114
Producers Contacted	31
Producers Interviewed	12

Table 3: Summary of producer interviews.

	Number of producers identified n=96	Number of producer interviews n=12
Produce		
Total number of producers*	**35**	**8**
Berries	18	3
Tree Fruits	2	1
Greenhouse	8	1
Field Produce	8	3
Livestock		
Total number of producers*	**29**	**3**
Poultry	6	2
Hogs	3	3
Beef	3	1
Other	1	0
Dairy	16	0
Mushrooms	8	0
Flowers/Trees	5	0
Propagatio	2	1

**More than one commodity can be producer by a single producer*

1 Producer list available upon request

4. Results

4.1. Existing Post-production Activities in the Township of Langley

A variety of post-production businesses exist in the Township. Interviews suggest that storage/wholesale activities were the most widely represented in the Township, with 10 of the 18 interviewed businesses participating in the storage/wholesale of food. The size of these storage/wholesale businesses varied from 1,000 sqft o 865,000 sqft. with a range of 6-650 full time equivalent employees.

Table 4: Summary of types of post-production activities present in the Township based on the interviews.

Post Production Activity	Primary Food Commodity and Type	Number of Businesses
Storage/Wholesale	Meat (Freezer, Refrigerator and Dry Storage)	2
	Meat Casing (Dry Storage)	2
	Produce (Temperature Controlled)	3
	Grain (Dry Storage)	2
	All Perishables	2
	Processed Perishables	1
Processing	Custom Butcher	1
	Cranberry	1
	Gluten Free Food Processing	1
	Freeze Drying	1
Brokerage	Connecting Supply Chain	2
Total		**18**

Table 4 illustrates the types of storage and processing capacity that were identified in the Township. The type of commodities accommodated by existing post-production facilities is shown in Table 5. Post-production businesses accommodated produce (fruit and vegetable), grain, and meat commodities, however capacity related information of these facilities is limited. The collection of qualitative information on post-production activities limited by the reluctance of businesses to share business details, due to business predilection or disinterest.

Table 5: Summary of types of food commodity businesses present in the Township based on the interviews.

Food Commodity Type	No. of Businesses
Vegetable	7
Fruit	7
Grain	7
Meat	6
Dairy	4
Egg	2
Ingredients	2
Total	**36**

4.2. Flow of Commodities th ough the Post-production Sector

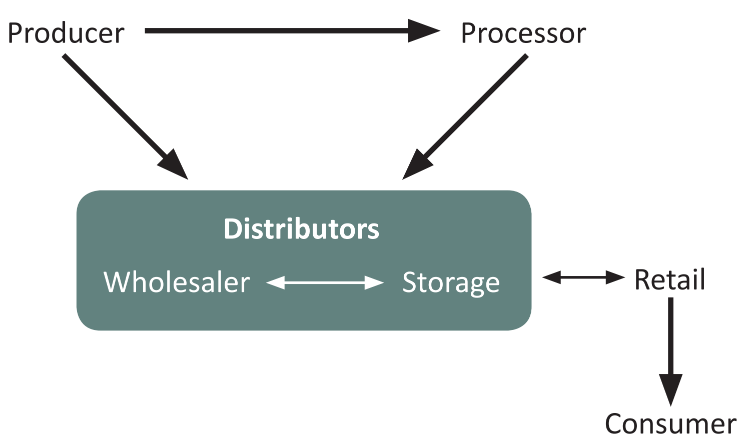
In this study we define four types of actors in the food supply chain:

Producers:	Agricultural operations established for the purpose of producing food.
Processors:	Transformers of agricultural products for human consumption, to extend shelf life and/or to add value through activities such as cleaning, preserving, slaughtering, butchering, pasteurizing, etc.
Distributors:	Intermediaries that connect food grown by producers and/or transformed by processors to retailers. Distributors include wholesalers, storage, brokers, etc.
Retailers:	Outlets for public consumers to purchase/procure food, including grocery stores, institutional buyers, restaurants, etc.

Figure 1 illustrates the movement of commodities through the supply chain in the Township. Most distributors have storage capacity and act as wholesalers, with the exception of one business that rents storage space to other actors supply chain actors, but does not buy/sell commodities. Wholesale distribution centers can either be owned by large retail chains (eg. Overwaitea Food Group) or by other private companies that do not have direct retail presence (e.g. EV Logistics).

Wholesalers play a significant role in the food supply chain of the Lower Mainland; 69% of produce flows through wholesale channels to reach consumers (Hild, 2009). Wholesalers can serve as a convenient single purchaser for producers, accepting a diversity of products, and often in varying quantities. As such, wholesalers can reduce transportation and logistic costs for producers while consolidating products into appropriate quantities for sale to retailers. Despite these advantages, the relatively low profit margins associated with entering the supply chain through wholesalers can be economically prohibitive for many small-scale producers.

Figure 1: Conceptual diagram of the flow of commodities between principle food supply chain actors.



4.3. Product Certifiation and Licensing

CanadaGAP certification is required for producers to sell fruits and vegetables outside of direct-to-consumer channels. Without CanadaGAP certification the only option or producers is direct to consumer marketing. According to a report by CanadaGAP as of March 1st, 2018 there are 27 CanadaGAP certified producers in the Township [2]. Organic certification is another opportunity or producers to access additional mar ets and potentially higher alue sales channels. See page 13 for an overview of select certification and licensing requirements.

Federal and provincial inspections of meat processing facilities regulate the sales of products within and between provincial and national borders. Meat processing represents the largest component of Canada's food processing industry (Agriculture and Agri-food Canada, 2016). Nine federally registered establishments that handle meat commodities are located in the Township, engaging in different post-production activities such as slaughter (1 facility), boning and cutting (3) casing (1), and storage (4). There are no provincially regulated meat post-production facilities in the Township.

4.4. Distribution Networks

Post-production businesses in the Township buy from, and sell to, a mix of British Columbian, Canadian and international producers, distributors and retailers. Some businesses reported trying to source from Canada and British Columbia when possible. Respondents reported several barriers to including more local food in their supply chain. These are discussed later in this report. Table 6 shows geographic sourcing and selling of products for the post-production businesses in the Township where data is available. The table also indicates geographic origin (Primary Sourcing) and destination (Primary Selling) of primary products as within British Columbia (BC) Canada (CA), international (ITN) or a combination (mix).

Table 6: The geographic sourcing and selling of products for Township of Langley post-production businesses

Post-production Business Type	**Primary Commodity**	**Primary Sourcing**				**Primary Selling**			
		BC	CA	ITN	mix	BC	CA	ITN	mix
Storage	Meat				x	x			
Storage	Ingredients			x				x	
Wholesale/storage	Processed Grocery			x			x		
Wholesale/storage	Ingredients		x			x (*AB)			
Processor	Cranberry	x						x	
Processor	Gluten free				x				x
Processor	Produce				x				x

***Alberta**

2 Full list of certified producers available upon request

4.5. Case Studies of the Post-production Sec or in the Township of Langley

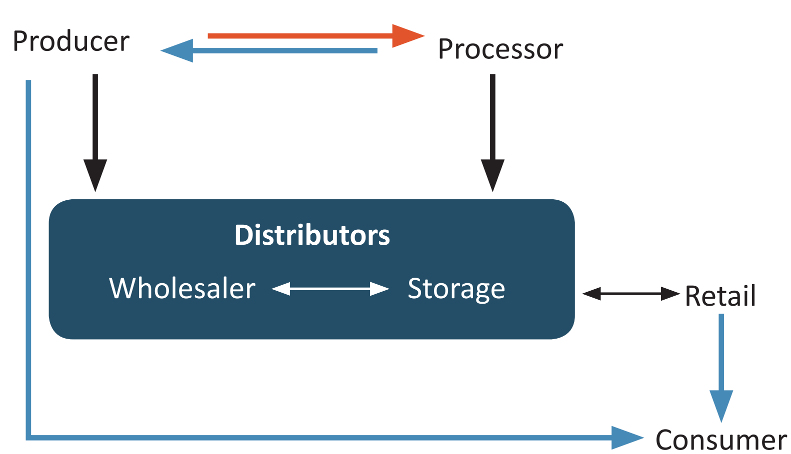
In British Columbia the post-production and processing sectors for food and beverages represents the second largest generator of economic activity within the manu acturing sector, after the wood manufacturing industry (BC Ministry of Agriculture, 2015). As the sector continues to show steady growth in the province, it is important to note that the growth of the post-production sector has been driven primarily by export markets, creating a highly integrated sector that does not prioritize localization of the food supply. This is reflecfled in the following case study discussions of two of the most predominant food groups in the Township's supply chain; produce (fruit and vegetables) and meat.

4.5.1. Case Study: Meat Production in the Township of Langley

Small-scale producers represent the majority of livestock operations in the Township of Langley (BC Ministry of Agriculture, 2013). Equine activities, are the most common livestock activety type, representing 60% of livestock operations in the area. With respect to food commodities beef and poultry are the most common in the Township, each representing 13% of livestock operations. Small-scale producers (< 25 cows) compose over 90% of beef producers, and median farm size is four hectares (10 acres). For poultry, 60% of operations are small-scale (< 2,500 birds), with a median size of two hectares (5 acres) (BC Ministry of Agriculture, 2013). Meat producers wishing to sell their products must have their livestock slaughtered and processed at a licensed facility. In Canada, both federal and provincial governments regulate slaughter and processing facilities, with the goal of enforcing high standards of food safety and traceability. Federally licensed facilities (registered with the Canadian Food Inspection Agency) can export meat products outside of BC, while the products from provincially licensed facilities must be sold within the province. Some provincial meat processing licenses limit sales to the regional district where processing occurred (Class D & E) (BC Ministry of Agriculture, n.d.). A four-tiered licensing system dictates the permitted activities, type of sales and the quantity of animals processed annually for each facility. See page 11 for an overview of licensing requirements in the current supply chain.

Figure 2 shows the flow of products in the livestock supply chain. The red arrow indicates reported bottlenecks that challenge viability of small-scale producers. Small-scale producers in the Township rely on "custom kill" services from slaughter facilities to process livestock before producers can market products. Access to appropriate slaughter facilities has been reported as a significant challenge for small-scale meat producers.

Figure 2: Conceptual diagram for the flow of commodities through the meat supply chain



Overview of Certification (for produce) and Licensing (for meat) Requirements in the Current Supply Chain

Produce[3]

CanadaGAP is a food safety program for companies that produce, handle and broker fruits and vegetables. The program has received full Canadian Government Food Safety Program Recognition and meets international requirements under Global Food Safety Initiative (GFSI) benchmarking. Certification indicates that the operation has a system of procedures to minimize the risk of contamination to products. The cost of certication, which varies depending on the certication option, the scope of operation and the facility location, changes from approximately $1,000 to $2,000 annually.

Organic certification varies based on where products are marketed. For products traded exclusively within BC, a Certified Organic Association of British Columbia (COABC) regionally accredited certification body (CB) is selected. To access markets outside of BC, a CB accredited by the Canadian Food Inspection Agency (CFIA) in accordance with the requirements of the Canada Organic Regime (COR) is selected. The cost for organic certification is highly variable depending on the selected certification body, number of enterprises and business entities to the farm.

Meat [4,5]

Meat inspection is regulated at the federal or provincial level. In order to sell animal products, animals must be slaughtered or processed at either a provincially or federally registered establishment.

Federally registered establishments: Meat that is transported between provinces or exported out of the country must be inspected in a federally registered establishment. The Canadian Food Inspection Agency (CFIA) performs inspection activities in all federally registered meat establishments in accordance with the Meat Inspection Act and the Meat Inspection Regulations. Approximately 95% of animals slaughtered in Canada are slaughtered in federally registered establishments, and the majority of the meat processed in Canada is processed in federal establishments.

Provincially registered establishment: Products from provincially licensed facilities must be sold within the province. In BC, provincial slaughter licenses are available under a graduated licensing system (Class A through E).

Class A: Permits slaughter/cut/wrap of unlimited animals for sale through retail for direct consumer channels throughout BC.

Class B: Permits slaughter of unlimited animals for sale through retail or direct consumer channels throughout BC.

Class D: Permits slaughter of 1-25 animal units annually for sale through retail or direct consumer channels within the regional district where meat is produced.

Class E: Permits slaughter of 1-10 animal units annually for sale through direct consumer channels only within the regional district where meat is produced.

3 https://www.canadagap.ca/program/

4 http://www.inspection gc.ca/food/information for-consumers/fact-sheets-and-infographics/products-and-risks/meat-and-poultry-products/meat-inspection-system/eng/1374559586662/1374559587537

5 https://www2.gov.bc.ca/gov/content/industry/agriculture-seafood/food-safety/meat-inspection-licensing

There are few government-inspected slaughter facilities in the Fraser Valley, and even fewer that are able to accommodate small-scale meat producers who require more customized services. For example, while a federally inspected pork slaughter facility operates in the Township, its vertically integrated structure does not accommodate small-scale producers who require custom kill services. Other slaughter facilities remain inaccessible to small-scale producers due to prohibitive minimum slaughter quantities. It as noted that small-scale producers wanting to raise their animals outdoors may not have the land or infrastructure to transport sufficiant animals to meet minimum slaughter quanties. (C. Singfield, personal communication June 28th, 2018). For small-scale producers, one facility in Fraser Valley provides custom kill services for poultry, and one for hogs and cattle; Fraser Valley Specialty Poultry and Johnston's Packers LTD respectively. Both facilities are located in Chilliwack.

The small-scale meat producers interviewed in the Township focus on adhering to high land stewardship and animal welfare standards, resulting in a higher cost of production. This presents challenges for establishing profitable sale margins within the wholesaler business model, which is accustomed to producers with lower production costs. All participating small-scale producers in this study noted that demand for their product exceeded the quantity that they are able to supply at present. They also cited access to suitable slaughter facilities as the biggest barrier to expanding production. Attempts to scale up to meet increasing demand for high quality and ethical meat products is challenging, and at times cited as 'impossible', with current limited access to slaughter facilities.

> "Our region is on the brink of losing what little community focused meat production it has left due to roadblocks and bottlenecks created by regulations and policies that do not facilitate regional scale production models."
>
> -Julia Smith, President, Small-Scale Meat Producer's Association

Challenges for Meat Production in the Township of Langley

1. **Long travel distances to slaughter:** Given the limited number of licensed animal slaughter facilities that provide custom kill services, producers face long travel times to bring animals to slaughter, which comes with notable financial and animal welfare costs.

2. **Limited suitability of current facilities for small-scale producers:** Current facilities are designed to serve primarily large-scale producers, whose livestock are slaughtered, processed and sold into the supply chain as the facilities own product. Custom kill services slaughter and return livestock to small-scale producers for their own marketing. However, there are challenges in adapting the large-scale model of these facilities to the quality, traceability and animal welfare standards required by small-scale producers.

3. **Financially prohibitive minimum quantities:** Chicken production by small-scale producers was cited as "nearly impossible" due to economically prohibitive minimum slaughter fees/quantities and a lack of processing capacity as facilities move away from custom kill services.

4. **Regulatory barriers to alternative slaughter facilities:** Class D & E licenses permit on-farm slaughter of a limited number of animals annually to be sold in the same regional district where the meat was produced. These are rarely accessible to small-scale producers in the Lower Mainland, or other areas not considered to be remote. Class D licenses are only available to producers in designated remote areas, from which the Township is excluded. Class E licenses are rarely available to producers who are within 2 hours driving time from a Class A or B facility (BC Ministry of Agriculture, n.d.). Concerns have been raised by small-scale producers that the physical proximity to a slaughter facility does not guarantee sufficiant and/or suitable access to slaughter services.

4.5.2. Case Study: Challenges for Produce Production in Township of Langley

In line with other reports, most small-scale producers confirmed that they often participate in the local food economy via direct channels such as community supported agriculture (CSA) or farmer's markets. CanadaGAP certification has been cited as a barrier for local produce to enter the retail commodity market, and was echoed in our interviews with both producers and post-production businesses. CanadaGAP certification, although not government mandated, has come to provide a business-to-business assurance that product is being grown and handled in a way that manages the risks inherent with handling fresh produce, and that minimizes potential contamination throughout the supply chain. Introduced in 2008, its uptake has increased dramatically and it is accepted domestically and internationally. Two manuals, one specific to greenhouse operations, the second for other fruit and vegetable operations, have been developed. The manuals are designed to help companies implement Good Agricultural Practices (GAPs) in their production, packing and storage operations, and for re-packers and wholesalers implementing Good Manufacturing Practices (GMPs) and Hazard Analysis and Critical Control Points (HACCP) programs. Certifiation is renewed annually and may cost up to $2000.00, per year.

Besides certification, small-scale producers also face distribution related challenges. Lack of access to robust storage infrastructure that extends the shelf life of produce can discourage producers from expanding operations and limit their ability to enter local and export markets. A handful of producers have managed to enter the supply chain via wholesalers in Vancouver and specialty local retail stores that prioritize local products. Smaller profit margins were also a cited as a disincentive for small-scale producers to enter the supply chain through wholesalers (that is to say, wholesalers will not pay producers enough to make it sufficiantly profitable).

Challenges for Produce Production in the Township of Langley

1. **Economic profitability of wholesaler marketing channel:** Profit margins through wholesale channels may not be financially viable for small-scale producers who are growing a variety of crops on smaller acreages. Price competition from non-local products, and the justification of higher costs associated with many of the specialty products that small-scale growers produce, can further discourage the use of wholesale marketing channels

2. **Certification and its costs:** CanadaGAP certification is increasingly necessary for small-scale producers to enter the commodity market, however, annual costs of this certification can be a barrier for producers.

3. **Produce seasonality:** The seasonal availability of produce for local growers can be less compatible for wholesalers at the distribution level, who tend to favor year-round and longer contracts with suppliers.

5. Barriers and Opportunities

5.1. Barriers

Table 7 summarizes the barriers identified by meat and produce producers through interviews conducted for this study. Table 8 identifies additional barriers that were identified by post-production businesses. Regulation and policy and the economic viability of farming were most widely cited by producers as barriers, but also identified as the most significant opportunities for increasing local food system capacity. These are further outlined later in this section along with other opportunities

It should be noted that while some barriers are specific to the commodities chosen for case-studies (e.g. access to suitable animal processing facilities) other cited barriers (e.g. protection and promotio of agricultural use of farmland) are applicable to all type of farming.

Table 7: Barriers to strengthening local food systems in the Township of Langley, as reported by produce and meat producers.

Barriers for local food in supply chain	Description
Regulation and Policy (identified by 4 producers)	Small-scale farm context is not adequately considered in bylaws and procedures. e.g. Secondary dwellings on small farms are prohibited but can be necessary to farming operations, especially on leased land
	Conflicting guidance between the ALC and local municipalities on land use, zoning, and definitions of a 'bona fide' farm can present conflicting policy environment for producers.
	Increasing non-agricultural use of ALR land threatens farmland viability and imposes limits on farmland viability through increased land prices and neighbour conflict.
	There is a need to consider the time-sensitive, seasonal nature of farming in permitting process so that it is not overly onerous or time consuming.
Production and Operational Challenges (identified by 3 producers)	Agricultural practices that result in environmental degradation an impact farming operations in the region as a whole. e.g. Spraying inputs via helicopter can impact producers in the area through degradation of pollinator populations, water quality etc.
	Shortage of local farm labour; required to hire migrant farm workers.
	Prohibitive regulations regarding dwellings on small farms makes finding acceptable labour challenging.

Barriers for local food in supply chain	Description
Economic viability of farming (identified by 4 producers)	Profit margins available through wholesaler channels may not be financially viable at the quantities available to some (particularly small-scale) producers. Viable options can be limited to direct consumer channels.
	Justifying the fair price and true cost of ethically raised meat is significant challenge in working with wholesalers. Higher production costs associated with high ethical and environmental standards are reflected in product prices. These are difficult for wholesalers to manage within their own sale margins, and price can be too high for their consumers.
	Generally, property is inaccessible for many new farmers.
	Competition with imported products.
Access to suitable livestock processing (identified by 4 producers)	Small-scale chicken processing nearly impossible; other livestock increasingly challenging.
	Access to suitable slaughter/processing is significant restriction in viability of small-scale meat production; Demand exceeds supply but slaughter/processing limit production capacity for many small-scale growers.
Traceability (identified by 1 producer)	Traceability is difficult and costly to execute as a producer; there is no support or funding from government, which is limiting or some producers.
Certification (identified by 1 producer)	Complying with different food safety standards for local vs global buyers is costly.

Table 8: Most significant barriers to strengthening local food systems in the Township of Langley, as reported by post-production businesses.

Barrierds for local food in supply chain	Description
Commodity availability	Certain commodities not available in Canada either definitively or seasonally.
Vertical integration	Multiple steps of the supply chain are controlled by the same business who may mandate the connections between supply chain intermediaries.
Required certification	Some post-production business require suppliers to have certification (e.g. CanadaGAP).

5.2. Opportunities

This study revealed a number of opportunities to strengthen the post-production sector in the Township, all of which can directly contribute to food self-reliance and farm viability. Opportunities are based on interviews conducted with post-production businesses and producers in the Township and are applicable to the meat and produce case studies, as well as the agricultural industry as a whole.

Support improved access to suitable processing facilities for small-scale meat producers.

Access to suitable slaughter facilities for small-scale producers has been widely cited as the primary barrier for growth in this sector. Supporting access to alternative slaughter and processing facilities, including on-farm slaughter (e.g. Class E licenses) as well as advocating for provincial policy change to improve access to suitable slaughter for small-scale producers are important components to strengthening the local-regional meat production sector.

Promote flexible regulatory and policy environments that support producers, particularly small-scale producers, and promote farm viability.

Small-scale producers face unique challenges in establishing viable farming operation, particularly in Metro Vancouver, where the price of land is among the most expensive in the province (Tatebe et al., 2018). Within the Township, 49% of farms report as less than four hectares (10 acres). These small farms face a variety of unique challenges that may not be properly addressed through policies designed to support larger export-oriented operations. Ensuring that regulatory environments recognize the unique needs and challenges of small-scale producers has been widely cited as an important aspect for strengthening local-regional food systems.

One opportunity cited by small-scale producers in the Township includes expanding the definition bona-fide farms, which is currently limited to large scale producers (e.g. 16-20 hectares of vegetables; 56,000 broiler chickens/cycle, etc.) (Township of Langley n.d). Since only bona-fide farms are eligible for accessory residential use of agricultural land, this can limit the viable options for small-scale operation that require farmworker accommodations for cultivate leased land where the property owners maintain a dwelling. While it is important to ensure that those who seek certain uses of agricultural land, such as accessory residential use are doing so in support of legitimate farming operations there is an opportunity to balance this with the representation of the interests of small-scale producers who are meaningfully advancing local-regional food systems.

Promote inclusion of local agricultural products within the existing post-production sector.

This may be achieved through support for appropriate intermediary actors/infrastructure to aggregate and deliver a higher volumes of local food to wholesalers. Retail and distribution co-ops can also support an increased supply of local food by purchasing direct from producers, and providing local retail opportunities. Producer co-ops can allow producers to share various post-production costs, including packaging and transportation.

Promote consumer education and awareness to eat seasonally.

Consumer demand has the power to drive food system elements to be more representative of local foods. Thus, it is important that consumers not only understand why local products are only available seasonally, but gain knowledge and awareness about seasonal eating.

6. References

Agriculture and Agri-food Canada (2016). Overview of the Canadian Agriculture and Agri-Food System (Report). Retrieved April 2018 from https://caes.usask.ca/members/_pdf/Overview%202016-Final_eng.pdf

BC Ministry of Agriculture (2013). Land use Inventory Report Township of Langley Summary 2010. Retrieved from https://www2.gov.bc.ca/gov/content/industry/agriculture-seafood/agricultural-land-and-environment/strengthening-farming/planning-for-agriculture/agricultural-land-use-inventories/south-coast

BC Ministry of Agriculture (2016). *Fast Facts 2015: British Columbia's Agri-food and Seafood Sector.* (Report). Retrieved March 2018 from https://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/agriculture-and-seafood/statistics/industry-and-sector-profiles/faststats/faststatsbc-2015.pdf

BC Ministry of Agriculture. (n.d.) *Meat Inspection & Licensing.* Retrieved April 2018 from https://www2.gov.bc.ca/gov/content/industry/agriculture-seafood/food-safety/meat-inspection-licensing

Hild, C. (2009). *The economy of local food in Vancouver (Report).* Vancouver Economic Development Commission. Retrieved March 2018 from http://www.vancouvereconomic.com/wp-content/uploads/2016/07/the-economy-of-local-food-in-vancouver.pdf.

Hanthorn, M. and Brownlee, M. (2015). *Ingredients for Food Localization.* Retrieved March 2018 from http://www.localfoodshift.pub/ingredients-for-food-localization

Hassebrook, C. (2006). *What the family farm crisis looks like: Factors contributing to the current situation and building a national agenda for change.* In K. Mullinix (Ed.), The Next Agricultural Revolution: Revitalizing family-based agriculture and rural communities (pp. 23–31). Yakima, Washington: Good Fruit Grower.

Nibourg, T. (2016). *How Do I Obtain "Farm" Status in Alberta - Frequently Asked Questions.* Retrieved January 10, 2018, from http://www1. agric.gov.ab.ca/$department/deptdocs.nsf/all/ faq7142?opendocument

Robert, N and K. Mullinix. (2018). Municipal policy enabling regional food systems in British Columbia, Canada: Assessing focal areas and gaps. *Journal of Agriuclture, Food Systems and Community Development*. 8 (2).

Singfield, C. (June 28th, 2018). *Personal Communication.* Member of the Small-Scale Meat Producers Association

Stott, D., Lee, E., and Nichols, E. (2014). *Small/Medium Farm Product Distribution In the Lower Mainland: Requirements for a Local Food Distribution System. (Report).* Retrieved March 2018 from https://www.farmfolkcityfolk.ca/PDFs_&_Docs/Distribution/report%201_%20Requirements%20for%20food%20distribution.pdf

Tatebe, K., N. Robert, R. Liu, A. dela Rosa, E. Wirsching, and K. Mullinix (2018). *Protection is Not Enough: Policy Precedents to Increase the Agricultural Use of BC's Farmland (White Paper)*. Institute for Sustainable Food Systems, Kwantlen Polytechnic University. Retrieved April 2018 from http://www.kpu.ca/sites/default/files/P_otection%20is%20not%20enough full %20white%20paper_ISFS_March%206%202018.pdf

Township of Langley. (2017). *Business Licence Directory.* Retrieved December 2017, from https://www.tol.ca/business/business-licence-information

Township of Langley (n.d.). *Determinging Eligibility for a Second Swelling for Farm Help.* Township of Langley.

Upland Consulting. (2015). *Farm Tax Class: Income Threshold Investigation.* Submitted to Metro Vancouver Regional Planning (Report). Retrieved July 9th from http:/ www.metrovancouver.org/services/regional-planning/PlanningPublications FarmTaxClassIncomeThresholdInvestigation.pdf

7. Appendicies

Appendix A: List of CanadaGap Certified Producers

	Operating Name	Location	Scope of Certification
1	BKS Blueberry Farms Ltd.	Langley	Production of Blueberries
2	Charn Randhawa	Langley	Production of Blueberries
3	Coast Cranberries Ltd.	Langley	Production of Wet Harvested Blueberries
4	D&T Blueberry Farms Ltd.	Langley	Production of Blueberries
5	Driediger Farms Inc.	Langley	Production of Blueberries
6	Five River Farms Inc.	Langley	Production of Blueberries
7	Fort Langley Farms Inc.	Langley	Production of Blueberries
8	G&M Gill Farm	Langley	Production of Blueberries
9	Gehlan Agri Farm	Langley	Production of Blueberries
10	Golenwood Valley Farms Ltd./ Katathelon Farms Inc.	Langley	Production & Packing of Peppers, Eggplants and Cucumbers
11	H. Dhaliwal	Langley	Production of Blueberries
12	Jagraj Buttar	Langley	Production of Blueberries
13	KH Gill Blueberry Farm	Langley	Production of Blueberries
14	L&S Farm	Langley	Production of Blueberries
15	Langley Growers/Guran Enterprises Inc.	Langley	Production of Blueberries
16	Mander Brother Farm	Langley	Production of Blueberries
17	Pannu Blueberry Estate	Langley	Production of Blueberries
18	PL Brar Farm	Langley	Production of Blueberries
19	Rajibinder S. Atwal	Langley	Production of Blueberries
20	Sandher farms	Langley	Production of Blueberries
21	Saran Farms	Langley	Production of Blueberries
22	SBS Berry Farm	Langley	Production of Blueberries
23	YG Blueberry Farm	Langley	Production of Blueberries
24	Myers Organic Farms Inc.	Aldergrove	Production of Blueberries
25	Nirmal Singh Toor	Aldergrove	Production of Blueberries
26	RJT Blueberry Park Inc.	Aldergrove	Production of Blueberries
27	South Alder Holdings Ltd. South Alder Farms Ltd.	Aldergrove	Production & Packing of Blackberries, Blueberries, Raspberries, Strawberries - Packing Currants & Gooseberries

Appendix B: List of Federally Certified (CFIA) Meat Processing Businesses

Registration Number	Name of Operator	Address	Function Codes	Telephone Number(s)
361	FG Deli Group Ltd.	27101-56th Ave. Langley, BC V4W 3Y4	3fx 6fx 11AD	(604) 607-7426
402	Oversea Casing Co. Ltd.	22958 Fraser Hwy. Langley, BC V2Z 2T9	5 11D	(604) 534-7374
430	JD Sweid Foods (2013) Ltd. Also doing busienss as: JD Sweid Foods	9696 -199A St. Langley, BC V1M2X7	6fx 11D	(604) 888-8662 (604) 882-2672
513	Donald's Fine Foods Also doing business as: Britco Pork Inc.: Donald's Meat Distributio	22940 Fraser Hwy. Langley ,BC V2Z 2T9	1d, 3x 6x, 11ADGKQSVIF	(604) 533-5515 (604) 533-3911
673	Made-Rite MEat Products LP	26656 - 56th Ave. Langley, BC V4W 3X5	3fx 6fx 11DC	(604) 607-8844
S103	EV Logistic	5016 - 272nd St. Langley, BC V4W 1S3	10A	(604) 857-6750 (604) 857-6809
S108	Klondike Cold Storage Ltd.	5775-272nd St. Langley, BC V4W 0B1	9B/US, 10A, 11S	(604) 626-4019
S115	Coastal Cold Storage Inc.	27417 Glouster Way, Langley , BC V4W 3Z8	9BC/US, 10AB	(604) 856-0090
S145	Bradner Cold Storage Ltd.	9087D-198 St. Units 700 & 800 Langley, BC V1M3B1	10AB	(604) 856-3221