

4. Food Security

The Food and Agriculture Organization of the United Nations defines food security as: “a condition in which all people, at all times, have physical and economic access to sufficient, safe, and nutritious food to meet their dietary needs and food preferences for an active and healthy lifestyle.” The food security perspective highlights a nutritious diet as an intrinsic human right essential for good health. At the household level, food insecurity occurs when access to either appropriate food quality or quantity are limited, often because of financial constraints. Roughly four million Canadians, and over 500,000 British Columbians, experienced some level of household food insecurity in 2012 (Tarasuk et. al., 2013).

“Food security exists when all people, at all times, have physical and economic access to sufficient, safe, and nutritious food.”

~Food & Agriculture Organization

Food security definitions have been further expanded to account for production systems. This requires food to be produced and obtained in ways that are environmentally sustainable and respect the dignity and human rights of both producers and consumers. Further, it means food sovereignty is crucial to food access, particularly in island and isolated communities. Most food is produced under corporate control and shipped to Vancouver Island from elsewhere in Canada or the world. This weakens local food production and produces dependence on trucked-in sources of food produced under dubious conditions. Food sovereignty asserts the right of people who produce, distribute, and consume food to control food systems at the local level for their own benefit. It further requires that policies and processes be put into place to achieve food security everywhere.

4.1 Local Food Production

The capacity to produce foods locally is central to a secure food system. Moreover, agriculture and food production are core sectors in many Canadian communities. Food production in the region has considerable economic impact. Agriculture is a key industry in the Comox Valley, which holds the greatest concentration of Agricultural Land Reserve (ALR) parcels on Vancouver Island. The Comox Valley is known to produce many delicacies, including seafood, dairy products, high quality meat, organic produce, and even wine, for both local and export consumption. At the same time, wild foods and other supportive subsistence activities, including foods that are hunted, fished, and gathered, contribute to local food production.

4.2 Availability of Agricultural Land (-)

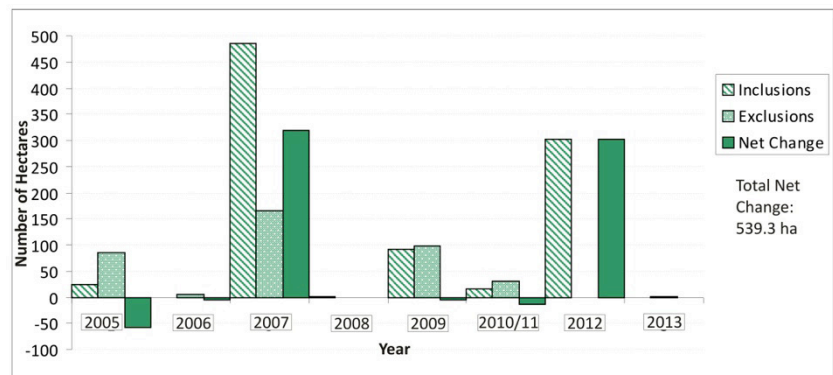
Much of the productive agricultural land on Vancouver Island is designated under the Agricultural Land Reserve. The ALR was established in 1974 by provincial and local governments in British Columbia to protect against further declines in agricultural land, largely caused by pressures to expand commercial and residential development. During this process, five percent of British Columbia land was designated as ALR. On these lands, farming is encouraged and non-agricultural uses are controlled in perpetuity.

On Vancouver Island, only two percent of the total land base was incorporated into the ALR. In the Comox Valley Regional District, this translated to 24,249 hectares designated for agriculture. Between 1974 and 2009, 4,778 hectares have been included and 5,613 hectares have been excluded from the ALR. The total net change has been an overall reduction of 835 hectares of agricultural land in the Comox Valley, resulting in 23,045 hectares in 2010. Figure 4.1 illustrates that the ALR actually experienced a net gain of 252.3 hectares in the Comox Valley between 2005 and 2009.¹⁶ While this implies a positive trend toward increasing ALR-designated lands, it does not reflect the potential quality of farm lands converted to other uses through exclusions. It also obscures long-term trends toward ALR reduction. Declines in agricultural land vary by region, but overall Vancouver Island lost 12,462 hectares from the ALR between 1973 and 2009 (Agricultural Land Commission, 2009).

¹⁶ Figures for net changes in ALR before 2009 include the Strathcona Region, adding approximately 19,000 hectares to the inclusion/exclusion statistics.

Currently, there is public concern that the Agricultural Land Commission may disintegrate under pressure to make more lands accessible to housing or various energy development projects. The ALR is crucial to supporting farm businesses by keeping the price of farmland more affordable. For instance, agricultural land in provinces without a land reserve in place has greatly increased in price compared to ALR land in British Columbia (Steves, 2014). Farmers of all scales place faith in the ALR to protect land for farm. They fear recent funding cuts or legislative initiatives to change the ALR weaken Commission's ability to inspect and enforce proper land use. Grassroots organizations such as the Farmland Protection Coalition are currently tracking changes to the ALR and advocating on behalf of the Commission.

Figure 4.1: ALR Areas Included and Excluded, Comox Valley, 2005-2009



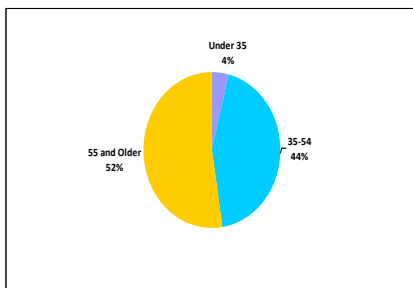
Source: BC Agricultural Land Commission, ALR Statistics by Year and Regional District

Coinciding with this commitment amongst farmers to preserve agricultural land is concern for the quality of land parcelled for agricultural use. Furthermore, farms on ALR land in the Comox Valley produce \$1,354 per hectare compared to \$2,714 in the Cowichan Valley or over \$15,000 per hectare in the Fraser Valley. Explanations for this lower level of productivity can be linked to uncleared land, lack of management capacity, and poor quality soils. Importantly, a lack of access to irrigation in the Comox Valley greatly inhibits the productivity of even prime ALR land.

Farm Operation Characteristics

The farm industry across Canada has changed considerably in the past several decades. Combined with increasing urbanization, farm operations have become fewer but also larger and more intensified. For instance, between 1991 and 2011, the number of farm operators nation-wide has dropped by 24.8% (Beaulieu, 2011). At the same time the average age of Canadian farmers has increased from 47.5 to

Figure 4.2: Average Age of Farm Operators, Comox Valley, 2011



Source: Statistics Canada, 2011 Census of Agriculture, Farm and Farm Operator Data

Table 4.1: Number of Registered Farms and Farm Operators, 2001-2011

	2001	2006	2011
Number of Registered Farms	445	497	432
Number of Farm Operators	670	760	670

Source: Statistics Canada, 2011 Census of Agriculture, Farm and Farm Operator Data

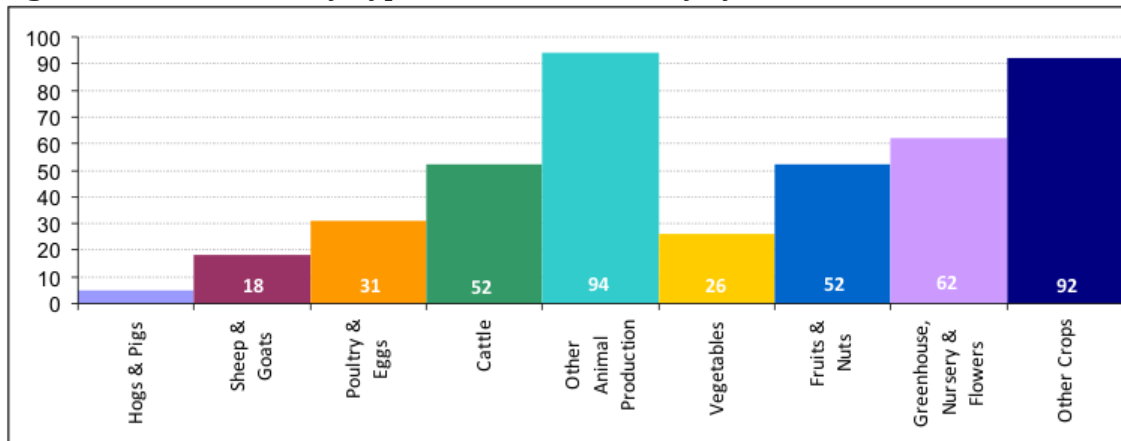
54 years of age since 1991 (Beaulieu, 2011). Analysts worry that decreasing numbers of young farmers could lead to continued declines in independent farm operators as aging farmers turn over their assets to existing companies.

The number of farms and farm operators in the Comox Valley has fluctuated since 2001, but has been in steady decline since as illustrated in Table 4.1. The age of farmers in the Comox Valley reflects the national trend as the vast majority of farmers in the region are 55 years of age or older (Statistics Canada, 2011a: see Figure 4.2). The dearth of young farmers threatens regional food security. As the majority of the current farmer population nears retirement, new farmers are required to sustain a growing farm industry. Trends in Production

Trends in Production

The Comox Valley has ideal climate conditions to produce a variety of crops, seafood and farm products. Yet there is significant potential to increase production in most agricultural industries. According to the Comox Valley Economic Development Society, only one third of productive land is currently in use. The total 'farm gate' value of local agri-food products (including seafood and food processing) is estimated at \$43.2 million per year (CVEDS, 2008). The primary farm types, by number of farms, are cattle (52 farms), fruit and nuts (52 farms), and greenhouse products (62 farms). Figure 4.3 illustrates the number of farms per industry group.

Figure 4.3: Farm Industry Types in the Comox Valley by Number of Farms



Source: Statistics Canada, 2011 Census of Agriculture, Farms Classified by Industry Group

Table 4.2: Livestock Type, Total Number of Animals and Number of Farms Raising Livestock

Livestock Type	Number of Animals	Number of Farms
Beef Cows	812	81
Dairy Cows	2,601	23
Sheep & Lambs	1,483	58
Pigs	774	31
Goats	206	27
Hens & Chickens	19,025	171
Other Poultry	2,585	43
Honey Bees & Pollinators	600 colonies	40

Livestock, Dairy and Forage

The cattle industry (including forage production and dairy) contributes the greatest amount of agricultural revenue to the local economy; \$20.3 million per year, or 47% of total farm gate receipts (CVEDS, 2008: 17). Although dairy production accounts for two thirds of this amount, there are also many smaller-scale and diversified farm operations raising a variety of livestock. Table 4.2 lists the number of animals and farms raising livestock, showing a divergence in farm scale. Dairy and hen farms tend to be concentrated, often with more than 100 animals per farm. Other varieties of livestock tend to be farmed on a smaller scale, with typically less than 25 animals of the same type per farm.

The livestock and forage industries are crucial to supporting food security and the local food economy as forage can be produced for grazing animals for nine months of the year. These animals can in turn provide a food resource throughout the year. The same cannot be

said of horticultural crops, which are generally more perishable and limited to a shorter seasonal growing period.

Farm Crops

Of the 432 farms registered in the 2011 census, there are 325 farms reported to be in crop, with a total of 4,279 hectares in production.¹⁷ Of this, only 343 hectares are producing edible crops such as fruit, nuts, and vegetables. The rest of the acreage is dedicated to hay, feed and silage corn for livestock consumption, Christmas tree farms, tree and flower nurseries, and sod production. Excluding animal feed, non-edible crops account for 10% of the total value of local agricultural production; about \$4.23 million per year.

Edible crops account for 23% of local agricultural 'farm gate' value, about \$10 million per year (CVEDS, 2008:16). The Comox Valley produces over 120 different edible crop products. Many of the crops, which account for the greatest amount of acreage, greatly exceed local consumption needs. These include cranberries, blueberries, potatoes, sweet corn, pumpkin and sprouts (CVEDS, 2008). Table 4.3 highlights edible crops grown in the region.

Fish and Shellfish

The seafood industry makes substantial economic contribution to the total farm gate value generated in the Comox Valley. This industry accounts for over 20% of the total primary agricultural production, earning \$8.8 million yearly. It has been speculated that less than 5% of the product harvested is sold to the local market as producers fetch higher prices outside this jurisdiction (CVEDS, 2008).

Producer Markets

In recent years, the Valley has experienced increasing investment in small scale processing and diversified farm operations, targeting 'niche' markets for specialty, health, or high quality foods. However it is difficult to determine the long-term impact of these types of farm ventures as statistics show that larger farms are increasing by number and volume of food produced, while the number of farmers producing less than \$10,000 per year in farm gate sales has remained stagnant (Statistics Canada, 2011a). The tendency toward export markets is common in the largest food commodities in the Comox Valley (including dairy, potatoes and cranberries). The Comox Valley Economic Development Society has estimated that the total value of local production aimed at markets outside the Valley is \$24.5 million yearly, or 57% of total local production (CVEDS, 2008:26). This creates a tension of scale between larger operations oriented to high volume export and smaller, diverse and more localized production. An important concern for the coming years will be to balance increasing self-sufficiency of local agriculture between different scales of food production with different priorities.

Organic Farming

British Columbia is a leader of organic growing in Canada; in 2006, 16.3 percent of all farms in BC were certified organic compared to an average of 6.8 percent nation-wide. In the Comox Valley only 12 farms were registered as certified organic in 2011 (Statistics Canada, 2011). The fact that only three percent of farms in the Comox Valley are organic likely reflects the fact that the majority of crop farm operations are producing non-edible products. Many farmers also utilize organic farming methods, but may not have the time or capital to acquire organic certification.

Table 4.3: Crops Grown in The Comox Valley by Area in Hectares

Crop Type	Hectares
Field Crops	
Potatoes	95
Fruits, Berries and Nuts	
Cranberries	32
Grapes	25
Apples	22
Blueberries	21
Raspberries	12
Other	73
Total	185
Vegetables	
Sweet Corn	19
Pumpkins and Squash	6
Lettuce	4
Califlower & Broccoli	4
Carrots	3
Onions & Shallot	3
Beets	2
Other	22
Total	63

¹⁷ This number accounts for the farms that are both accounted for by Statistics Canada and registered with the Agricultural Land Commission.

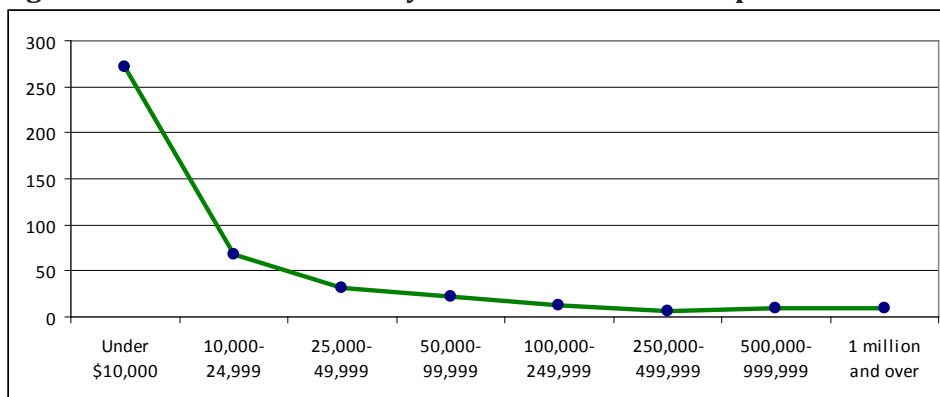
Food Processing

The main food items processed in the Comox Valley are dairy and cheese, shellfish and seafood, meat products, pet food, baked goods, wine and beverages. Local processing is crucial to food sovereignty in that it helps to sustain a connection between local food production and the local consumer base. Food processing earns approximately \$17.7 million, representing 29% of the total value of local agri-food sector (CVEDS, 2008:25). At the same time, food processing facilities represent another area of considerable agricultural growth.

Farm Employment

Farm employment in Canada has dropped 26% between 1998 and 2001 (Bowlby, 2002). This trend is likely due to the retirement of aging farm operators, and the orientation of the industry towards automation and larger farm conglomerations. Sagging farm incomes amidst increasing costs are making it more difficult for individuals to farm as a primary or sole occupation. Many farm families rely on off-farm income; in 2007, “seventy-one percent of BC farmers’ total income was from off-farm sources” (Miewald et al. 2007:23). In the Comox Valley, 70% of farm operators also work an off-farm job, the majority of these consuming 20-29 hours per week (Statistics Canada, 2011). While this number likely includes dual-income families and hobby farms, it likely has much to do with farm incomes. As Figure 4.4 indicates, the majority (272 farms, or 63%) of farmers in the Comox Valley earn less than \$10,000 per year on the farm alone.

Figure 4.4: Number of Farms by Total Gross Farm Receipts



Source: Statistics Canada, 2011 Census of Agriculture, Farm and Farm Operator Data, Farm Business Characteristics

The large-scale farms earning over \$100,000 per year account for less than 10% of the number of farms in the Valley, yet they generate over 85% of total agri-food revenue (CVEDS, 2008:25). These large-scale farms are generally specialized in a single commodity for export, while smaller farms are typically more diversified and likely to sell directly to the local market.

Operating costs vary by farm. Since 2005, they have increased for crop-specific production while livestock production has seen declines (Statistics Canada, 2011f). This is mainly due to the predominance of floriculture, and fruit and nut orchards, which require expensive inputs and labour to maintain. These changes become particularly significant in BC, which has the highest expense-to-receipts ratio in Canada. At the same time, the Farm Product Price Index reports that prices for crops have been on the rise since 2005, by 33.8%. Livestock prices have only increased by 5.7% (although dairy has risen by 12.6%) (Statistics Canada, 2011e). As food prices at the consumer level continually rise, it becomes greatly advantageous for local farmers to increase their production and for new farmers to join the industry to meet the increasing demand. It will be important in the next years to address some of the difficulties new farmers have in starting or increasing their business, such as connecting to markets, obtaining certification, and accessing affordable land.

Farms are an important source of local employment. Approximately 561 people are employed on 118 farms in the Comox Valley. Slightly less than half of this number includes permanent, year-round employment (Statistics Canada, 2011f). The Comox Valley has a greater proportion of year-round farm employment in comparison to the rest of BC (only 29% of farm jobs are year-round provincially) (Statistics Canada, 2011e).

Impact of the Farmers' Market (+)

The Comox Valley has hosted a farmers' market from May to October since 1992. The market season was later extended to include an indoor fall market in 2001 hosted at the Native Sons Hall; in 2008 that market was extended into the winter. In 2013, the farmers' market included eighty-two members including: 48 farmers, fishers and ranchers, 8 bakers, 16 food processors, 3 herbalists, and 7 concessions. Tables 4.4 and 4.5 display the average number of vendors, estimated visitors and estimated total sales of the two farmers' market sessions by season in 2013.

Tables 4.4 & 4.5: Comox Valley Farmers' Market Number of Vendors, Visitors and Sales, 2013

SATURDAY MARKET	Summer	Fall	Winter
Number of Sessions	28	9	13
Number of Vendors	55	40	35
Number of Visitors	1500-2000	800-900	500-700
Estimated Total Sales ³	\$826,991	\$193,232	\$214,215
WEDNESDAY MARKET			
Number of Sessions	9		
Number of Vendors	23		
Number of Visitors	300-600		
Estimated Total Sales	\$62,350		
Estimated Total Yearly Sales	\$1,296,788		

Source: Interview with Vickey Brown, General Manager at Comox Valley Farmers' Market, Feb. 6, 2013

The benefits of farmers' markets extend well beyond the participating vendors and attendees. Farmers Markets Canada (2009) has highlighted the significant social and economic impact of farmers' markets across the country. Their study shows that farmers' markets bring together community members, support nearby businesses and contribute to the local economy. Farmers' markets generate \$1.03 billion dollars in sales, and add \$3.09 billion to economies nationally. Their research indicated that farmers' markets are vital to vendors' livelihoods, but also to nearby retail businesses. While shoppers spent an average of \$32.04 per visit at farmers' markets, they reported spending an average of \$18.44 per visit at other retailers.

4.2 Food Distribution and Access (n)

A key indicator of food security is the extent to which healthy foods are accessible to the population. Most of the food consumed in the Comox Valley is produced within a global food system - grown and processed elsewhere in Canada or abroad by large food conglomerates and shipped into the region. This arrangement can be detrimental to some members of the community as food access is tied to the cost of foods found in commercial retailers. While an array of nutritious foods are imported throughout the year, many residents face barriers obtaining them.

The Cost of Nutritious Food

The Dietitians of Canada Association has been tracking the cost of healthy food for decades based on a 'nutritious food basket' indicator. The nutritious food basket represents an inventory of approximately 60 basic grocery items such as bread, eggs and apples, based on Health Canada dietary guidelines for a full and balanced diet. They found the average monthly cost of the nutritious food basket was \$868.43 in 2011 for a family comprised of two adults and two school-aged children (Dietitians of Canada, 2011). Moreover, a random sampling of grocery stores on Vancouver Island found that the cost of healthy food here was \$873.08, slightly above the provincial average.

While food costs vary depending on the age and number of people within a family, there has been a sharp increase in the cost of eating nutritiously over the past decade. In 2005, the same measure indicated that food costs for a family sat at \$654.46. Within six years, food costs have increased by \$213.97, or 32% (Dietitians of Canada, 2005). This indicates that it is becoming increasingly difficult for low-income individuals and families to access adequate amounts of healthy foods. Those earning minimum wage, receiving income assistance, or facing other challenges (such as high rents, lone parent child care, or disability) struggle to find ways to purchase food while also meeting their other basic needs.

Based on the nutritious food basket measurement, "families on income assistance spend 34-49% of their disposable income on food," compared to median income families who spend about 15% of their income on food (Dietitians of Canada, 2011:6). Table 4.6 below indicates several common family income scenarios and the relative cost of food. As noted in the Comox Valley Planning for Plenty Report, "the young, aged, mothers and teens that are most at risk from (in)adequate nutrition are the same segments of the population most often in need of health, educational or employment assistance" (LUSH Valley, 2006:24).

*"Families on income assistance spend 34-49% of their disposable income on food, compared to median income families who spend about 15% of their income on food."
~Dietitians of Canada*

Table 4.6: Cost of food as a proportion of monthly disposable income

Monthly Income and Costs	Single Parent, 2 children, income assistance	Young, pregnant woman, income assistance	Single man, disability assistance	Family of 4, low-earned income	Family of 4, median income
Income	\$1,786	\$663	\$959	\$2,530	\$5,621
Cost of Housing	\$1,107	\$732	\$732	\$732	\$1,491
Percentage of income required for housing	62%	110%	76%	31%	27%
Cost of Food	\$689	\$273	\$322	\$868	\$868
Percentage of income required for food	39%	39%	34%	34%	15%
What's left after housing and food	-\$10	-\$297	-\$95	\$867	\$3,262

Source: Dietitians of Canada, *Cost of Eating in BC 2011*

The nutritional food basket provides only a partial picture of the challenges associated with increasing food costs. It does not include the travel costs involved in trips to supermarkets or the cost of cooking utensils and food storage. The majority of the food items listed in the nutritious basket (such as ground beef, pasta

and frozen fish, for example) require cooking skills and equipment to be edible. Unfortunately, the skills, space, and resources needed to prepare meals from scratch are not available to everyone. In the case of the homeless or those experiencing poverty, access to refrigeration and ovens can be difficult. Many individuals are inexperienced cooks. These individuals will opt for fast or ready-made dinner options instead. However, the nutritional food basket does not include frozen dinners, take-out, or trips to restaurants in its cost overview. According to the Restaurant and Foodservices Association, “the average Canadian family visits a restaurant for a meal or snacks approximately 500 times per year” (Miewald et. al., 2007:27). While this fact indicates that the amount of income spent on food is higher than suggested by the Dietitians of Canada, it also means that those without access to kitchen appliances must pay considerably more for cooked meals.

Based on these additions, it is clear that the average monthly food bill could be significantly higher than suggested by the Dietitians’ calculation. Finally, the Dietitians’ measure assumes that all families have the same dietary requirements and needs. Many individuals have special dietary needs inadequately accounted by this measure.

Comox Valley Food Cost Survey

To better understand the uneven nature of food access and affordability in the Comox Valley, two researchers with the Comox Valley Food Round Table investigated the prices of select food items in various retail outlets. In the winter of 2014, they visited ten businesses representing three types of retailers to study the cost of common food items. They investigated four national supermarkets, two local grocers, and four local convenience stores. The survey included items that could be found at each type of retail outlet, would fit a variety of dietary preferences, occupy all food groups, and are relatively low-cost foods. They recorded the cheapest price for (fifteen) food items at specified small weights or sizes.

The cheapest prices for organic food items were also recorded at comparable weights or sizes as well as dietary substitutes for items on the list to which some individuals might have restrictions (i.e. soy instead of dairy milk).

To complete the comparison, the price of each food item was recorded and the average calculated for each type of retailer (supermarket, local grocer, and corner store). This method was also used to compare the costs for conventional, organic, local, and gluten/lactose free dietary options. Table 4.7 below indicates the list of items surveyed and the average cost for the entire shopping list for each type of retailer or dietary pattern.

Table 4.7: Price survey shopping list and average total costs type of retail and type of product

Chain Supermarket	\$36.04	Price Increase
Independent Grocer	\$49.02	36%
Corner Store ⁴	\$56.41	57%
Lactose and/or Gluten Free	\$43.56	21%
Locally Sourced	\$41.71	16%
Organic	\$72.13	100%

Shopping List

1 lb apples
1 lb potatoes
1 lb tomatoes
1 lb carrots
1 lb bananas
2L milk
200g cheese
Whole wheat bread loaf
900g white rice
100g mixed nuts
500ml olive oil
340ml chickpeas
680ml canned tomato sauce
500g dried spaghetti noodles
500g fresh ground beef

The total average cost for the shopping list, when purchasing the lowest-priced items at national supermarket chains was \$36.04.¹⁸ The same list, when purchased exclusively at local independent grocers was \$49.02. The increased cost at local grocers can be attributed to their smaller volume and margins, likely absence of discount brands, and a focus on local, regional, organic, and specialty products, which are generally higher in price.

The total average cost when shopping at neighbourhood convenience stores cost \$56.41 on average, although the comparison was difficult because fresh tomatoes were excluded and fresh ground beef was replaced with frozen. Despite the overall increase in cost, the price for pantry foods like canned goods, pasta and bread was not substantially different. What was significantly more expensive in corner stores, and rarely available, was fresh produce. For example, apples typically cost a dollar each, more than twice the average price in a supermarket. Convenience stores may provide residents with pantry foods in neighbourhoods lacking a supermarket. They are distributed throughout the region. Unfortunately, they do not provide sufficient affordable fresh foods to make them a good support of healthful diets.

Substituting products for gluten- and lactose-free versions (while still including the lowest possible priced foods where applicable), resulted in overall spending of \$43.56, a 31% increase. However, the cost difference between regular items and their specialized gluten/lactose free equivalents was \$7.62, which represents a 60% increase for just a few items. This means that families with dietary limitations regularly spend more to purchase these items. This is particularly so since gluten- and lactose-free products were much less likely to be offered at discounted prices than their conventional counterparts, and when placed on sale, the reductions were typically modest.

Finding local products can be difficult in supermarket chains, especially during the winter months. For this reason, a broader definition of 'local' was used to include any products originating from British Columbia.¹⁹ The cost of buying local for our grocery list (when possible) was on average \$41.71. Local products were available in about 35% of the stores at the time of the survey. Currently, the best way to access a wide variety of local products is to shop at independent grocers, the farmers' markets, or directly at the farms. Some chain supermarkets offered BC and Island products, while corner stores very rarely offered any local products. It is important to note that the price and availability of local products has much to do with seasonal availability. At the time of the survey, apples and milk from BC as well as potatoes, bread and beef from the Island were all found to be about equal in price to imported discount brands. However, local tomatoes and cheese were significantly more expensive.

When priced for the lowest cost organic foods, the average total cost for the shopping list was \$72.13. Every item on the list was available as organic, and these were available at 40-60% of the stores visited, depending on the item. Almost all chain supermarkets carried a range of organic foods, as do many independent grocers in the Valley. However, the considerable increase in price for organic indicates that the choice to consume such foods is available only for more affluent segments of the population.

Table 4.8: A closer look at pricing for eight grocery items

Grocery Item	Lowest Average Cost at Chain Supermarkets	Average Low-cost Local Grocers	Average Lowest Cost Corner Stores	Average Cost Locally Sourced	Average Cost Organic
Apples	\$1.29	\$1.94	\$3.44	\$1.32	\$2.24
Tomatoes	\$1.91	\$2.94		\$4.99	\$4.11
Carrots	\$1.11	\$2.89	\$1.99	\$1.49	\$3.11
Dried Spaghetti Noodles	\$1.75	\$2.34	\$2.94		\$3.19
Ground Beef	\$3.79	\$4.22	\$5.39	\$3.99	\$7.78
Canned Tomato Sauce	\$1.99	\$2.64	\$3.37		\$4.43
Cheese	\$4.51	\$4.42	\$6.32	\$6.03	\$6.56
Milk	\$3.30	\$3.64	\$5.52	\$3.84	\$5.60

¹⁹ Food security organizations define local as those foods grown, raised, and/or processed within a small geographic scope (typically up to about 150km, but ideally as close to one's home as possible).

While the average cost to purchase all the items on our list totalled \$36.04, the lowest possible price to do so was \$26.05 when bargain shopping at multiple supermarkets. This implies that nutritionally dense foods can be found at competitive prices in the Comox Valley, even in modest quantities or sizes. However, this does not necessarily translate into improved household food security. Poverty remains a significant barrier to consuming a wholesome diet, and even competitively priced foods may not be affordable to families for several reasons.

The findings demonstrate that access to a variety of retail options is vital to obtaining healthy food. This is not available evenly across the Comox Valley. The smaller outlying communities are likelier to have higher priced groceries as retailers in these areas have lower sales volumes. Moreover, variation in cost is an obstacle for individuals with limited economic means. Although such price reductions seemingly make food more affordable, they do not decrease long term base pricing. Food affordability becomes tied to the varying discounting practices of grocery stores. Unfortunately, this means individuals must have both sufficient time and transportation to access the cheapest foods.

The elevated prices of specialized products further diminish both family and societal food security. The higher costs of organic or local foods ties food access to the conventional, intensive agricultural production system that requires cheap farm labour and significant use of insecticides, herbicides, fungicides, and other chemical inputs derived from fossil fuels. At the same time, food environmental pressures combined with food commodification can make it difficult for members of some communities to obtain their own local foods. For example, declining fish stocks has resulted in limited numbers of food fish for First Nations communities, while shrinking forested lands has resulted in decreased access and availability of wild plant foods. Food security and sovereignty suggest that accessible food is not just about low costs at grocery stores. It is equally about food systems that provide enough good food for all people in socially just ways. It is clear that individuals and families with limited economic resources or special dietary needs are less likely to meet their nutritional needs.

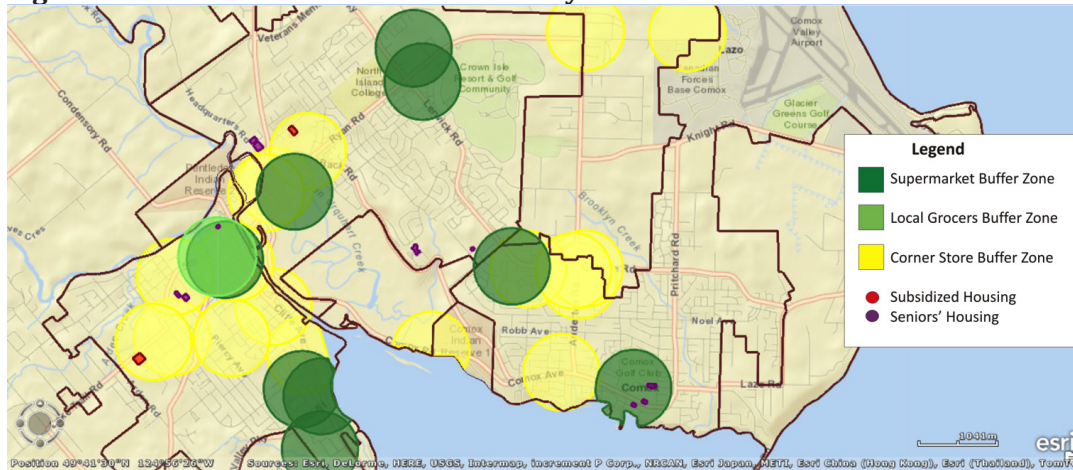
Related indicators: health, income security,

Food Deserts (n)

Public health researchers often use the concept ‘food deserts’ as a way of measuring geographic access to food retail. Food deserts are “areas of relative exclusion where people experience physical and economic barriers to accessing healthy food” (Sparks et. al. 2009:7). Most often, food deserts are designated to neighbourhoods with a combination of high rates of poverty and few or no nearby food retail options. The types of retail available are crucial indicators of the level of access. For instance, food secure neighbourhoods feature retailers with competitively priced foods from all food groups, especially fresh produce. Understanding that not all residents have access to vehicles, food deserts are measured based on a ‘reasonable walking distance’. A recent study conducted by Comox Valley Food Round Table researchers examined food deserts in the region using a 500 metre walking distance measure.²⁰ This was used to accommodate families with young children, the elderly and individuals with mobility difficulties.

To complete this study, a list was compiled of food retailers in the region using the Reference Canada database. The locations of supermarkets, independently owner grocery stores and corner stores were geo-coded into ArcGIS Explorer and analysed using a buffer-zone method. Based on the findings from the Comox Valley Food Cost Survey, corner stores were excluded from food access measurements because of the higher costs and lesser variety found at these retailers. While the ‘buffer zone’ method does not closely reflect how pedestrians travel through the city, it is sufficient in displaying which areas of the Comox Valley are within service reach of grocers. Measurements of population within walking distance and variety were applied as the most applicable indicators due the small population and number of retailers. Figure 4.5 is provided as an example of the desert maps, displaying food retail access in Courtenay and Comox.

²⁰ Researchers varyingly use benchmarks of ½ mile, 1 km, or 1 mile and/or access to direct, public transportation.

Figure 4.5: Food Retail Access in Courtenay and Comox

Based on the area of the buffer zones (0.78km) compared with population data (adjusted for overlap), the approximate percentage of the population within walking distance to supermarkets and grocers was determined. Figure 4.5 outlines these results.

Table 4.9: Percent of the Population within Walking Distance to Grocers in the Comox Valley

Community	Population	Population Density (per km ²)	Approx. # of Residents within Walking Distance	Percent of Population within Walking Distance
City of Courtenay	24,099	820.2	3,840	16%
Town of Comox	13,267	814.3	1,270	9%
Village of Cumberland	3,398	117.2	91	3%
Other Areas	22,163	48	150	0.6%
Totals	63,287	-	5,351	8%

Source for Population Statistics: Statistics Canada, 2011, Focus on Geography Series

There is a significantly low percentage of the population within walking distance to supermarkets. While these numbers in some cases reflect the rural character of the Comox Valley, we can also note that few of the residents within areas with high population live within walking distance.

In the Comox Valley, variety is limited in comparison to larger metropolitan areas. Many of the townships do not have a supermarket. Courtenay is the only community with more than two. On average, the shortest distance between two supermarkets in Courtenay and Comox is 1.6 kilometres (ranging from 0.5 to 2.7 kilometres). Aside from downtown Courtenay, there are no areas in the Valley where shoppers can access more than one large grocer within a reasonable walking distance. This creates challenges for individuals with limited mobility, looking to shop bargains or for anyone with dietary restrictions.

Mapping the location of BC Housing subsidized and seniors' accommodations gives a clear indication of gaps in retail access for members of our community with limited mobility and income. The food desert maps indicated that subsidized and seniors' apartments located in Comox and Cumberland have adequate access, while none in Courtenay are within walking distance. Returning to Figure 4.5, all of the subsidized housing in Courtenay (indicated with a red box) is outside of food access buffer zones; in most cases well over a kilometre away. Six of the thirteen seniors' apartments across the Comox Valley (indicated with purple squares) are located outside of food access zones. This means there is great socio-geographic disparity in access to healthy and affordable food retail for some elderly and low-income people in the City of Courtenay. These, as well as some areas in the Comox Valley with particularly limited access to affordable and health food could be considered food deserts.

Unlike other communities in Canada, the food sector in the Comox Valley is dominated by large supermarkets. While supermarkets are an important component of most food systems, they are not the only solution to increasing food access. Smaller and independent grocers play a crucial role in minimizing food deserts and supporting balanced food systems. It is also important to acknowledge the other ways in which people can access fresh and affordable foods. These include the Comox Valley Farmer's Market, specialty stores, CSA boxes and farm gate sales, gleaning and gardening projects, and even emergency food providers. Shortcomings in the food systems force individuals and families, especially those who are struggling economically, into assistance programs. Some are designed to provide short-term emergency relief while others are intended to develop skills and food independence through educational and capacity building programs.

4.3 Short Term Food Relief

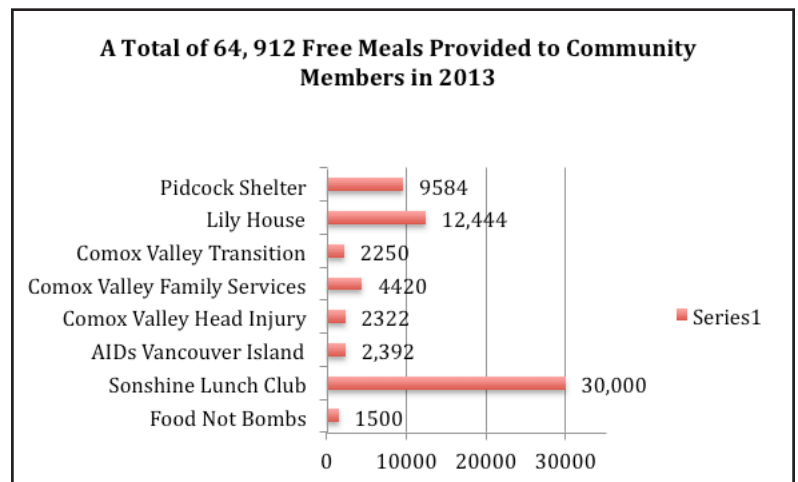
In food security, short-term relief solves only immediate hunger issues while ignoring the systemic nature of hunger. Short-term relief includes soup kitchens, food banks and emergency food hampers. These services provide support for people experiencing crises that are typically rooted in unemployment, poverty, mental health, or family problems. The Comox Valley fosters a climate of service. This can be observed in the high number of free foods and meals provided at multiple sites each day throughout the region. At the same time, several emergency hampers, some with eligibility requirements, are also available to the community.

Unfortunately, food programs are not simply a reflection of altruism. They also show increasing hunger in the area. Typically people who are accessing short-term relief are those most in need; they report their income as Disability Assistance, Social Assistance or part-time and/or minimum wage income. The long time users of short-term relief food services are mostly people with mental or physical disabilities who have an income too low to subsist and require extra support to have enough calories in their diet. Some have been accessing these services for decades. Use of these programs fluctuates with the seasons, and depending on the program, has incrementally increased or remained stable over the years.

Soup Kitchens

'Soup kitchens' provide free prepared meals that are available to everyone and can be accessed daily in the Comox Valley. Almost completely volunteer run, each of these programs can be found through the Ad Hoc Emergency Resource Organization network. This group distributes a monthly updated pocket Resource Guide that lists the organizations providing meals for anyone who shows up to 'eat' each day. Meals typically consist of sandwiches and/or soup, desserts, coffee and juice, with an emphasis on higher calorie provision. The food for these programs comes from a variety of donated sources; large grocery store and restaurant chains, local farms and restaurants, food non-profit organizations and individual community members. Local churches have pooled their resources to host most soup kitchens, but one group, Food Not Bombs, is a completely volunteer-based group that receives its funding from community members and non-profits.

Figure 4.6: Number of meals provided by soup kitchens and community meals in 2013



Sunday

There are two groups that provide free meals on Sundays. The Sunday Pancake Breakfast Club, a program of the Seventh Day Adventist Church, serves a free pancake breakfast. Food Not Bombs serves a late afternoon meal. For the last year, the number of people served through FNB has remained stable at 20-30.

Monday – Friday

The Sonshine Lunch Club provides a lunch-time meal Monday to Friday in downtown Courtenay at St. Georges Church. Its mandate is to provide free lunches for the needy. Different church groups prepare the food on different days, so the meals vary. Approximately 100 people attend per day, typically single men and single mothers with young children. HOPE Kitchen on Hornby Island provides meals on a weekly basis and an opportunity to build connections between all ages and socioeconomic groups.

Saturday

The Good Samaritan Kitchen offers a soup and sandwich lunch on Saturdays; they have about one hundred people attend.

Meals for Specific Populations

Many organizations that provide social and health assistance understand that access to good food is integral to mental and physical wellbeing. Therefore, food is integrated into many counseling, emergency, or health services in the Comox Valley. These meals consist of a variety of dishes and are typically more balanced and nutrient dense to meet the nutritional health needs of the organization's clients. Similar to Soup Kitchens, the food comes from a variety of sources; large grocery store and restaurant chains, local farms and restaurants, food non-profits (community gardens and harvest redistribution programs) and individual community members. These meal programs may also be funded by private foundations or the provincial government as they are attached to service program.

Health

AIDs Vancouver Island is a non-profit that provides health, counseling and education services to people living with HIV and/or Hepatitis C. They provide meals to forty-six people through the Outreach Program and during a health focused workshop.

Comox Valley Head Injury Society provides programs and services to brain injury survivors. Their weekly luncheon provides a nutritional meal at low cost to 35-45 survivors of head injury, their families and or caregivers. The luncheon also provides a social outlet for clients, and a way to meet others in similar circumstances. On average the majority of clients are survivors. CVHIS also offers a Christmas Dinner to 150 clients every year.

Comox Valley Nursing Center is an Island Health initiative that amongst many health services also offers a once a month 'one stop drop-in' connecting 20-30 people in need with food, shelter, advocacy and health care.

Comox Valley Family Services promotes the health and wellbeing of families. This organization offers several programs and initiatives that teach nutrition and healthy lifestyle choices for people of various ages. Healthy meals are served to forty-five adults and forty children per week. They also provide healthy snacks to a Moms and Tots group in Fanny Bay forty weeks a year. In addition to these meals, CVFS also provides meal bags eight times a year (240 bags per year) and distributes commercial food coupons worth up to \$6000 a year to participants. Finally, CVFSA also operates the Farmers Market Nutrition Coupon Program in which \$1650 worth of coupons are distributed to families and seniors.

The K'òmoks Health Centre of Kwakiutl District Council (KDC) Health, provides weekly elders' lunches to members of the K'òmoks First Nation, as well as healthy foods and grocery store gift cards at their regular Precious Beginnings program. The K'òmoks Health Centre has a community garden and their programs are regularly supported by the KDC Health Community Nutritionist. In addition to their standard programs, the K'òmoks Health Centre offers seasonal community kitchens, food preserving workshops and programs which encourage sharing and celebration of traditional foods knowledge and practices.

Women

Comox Valley Transition Society hosts a weekly two-hour drop-in for women who are homeless, at risk of homelessness, and/or living in deep poverty. They provide lunch and a number of services including free income tax returns, legal information, free toiletries, and vouchers for a thrift shop. The population attending drop-in includes young single mothers, women in various stages of addiction or recovery or older women with mental health issues. Some of the women don't access other soup kitchens or the Food Bank because of fear they will encounter abusive ex-partners, drug dealers or people to whom they may owe money. The goal of the program is to build respectful and helpful relationships with women who experience multiple barriers to services.

Shelters

Comox Valley Transition Society operates a fourteen-bed transition house for women and their children who are fleeing from abusive relationships or situations, as well as women who are in our Detoxification and Supportive Recovery programs. CVTS provides all food for residents. Residents prepare their own breakfast and lunch and take turns cooking dinner, on their own or in pairs, depending on preference. In addition to providing food from typical donors, Conservation Officers donate confiscate fish and venison to support this program.

The Salvation Army operates a shelter on Pidcock Ave. In 2007 they provided 5,000 breakfasts and dinners to 200 individuals.

Food Banks, Emergency Hampers, Food Pantries

Food banks provide free food to individuals and families to take home and prepare. In BC during March 2013, 94,002 people accessed a food bank. In Canada, over the past 30 years there has been a steady decline in blue collar jobs or wages, increasing the necessity of such emergency food services (Food Banks Canada, 2013). In March 2013, 833,098 people were helped by food banks in Canada; over a third were children.

While food banks provide an essential service in helping to curb hunger, their scope doesn't address the systemic causes of food shortage. Years after the recession's end, food bank use remains at near record levels, and is 23% higher than in 2008, before the recession began. Like soup kitchens and community meal programs, the food for these programs is donated and provided from a variety of sources. The food ranges from calorie dense processed foods to nutrient dense fresh produce.

Comox Valley Food Bank, Salvation Army and St. George's Pantry each offer monthly food hampers that cumulatively provide enough basic food for an individual for five days of the month. All offer monthly food hampers that consist of enough basic food for an individual for five days. The Comox Valley Food Bank also has fresh produce that people can access weekly while bread can be accessed daily. In 2012 the Salvation Army distributed 544 Christmas Hampers and Coast Realty helped top that up with 600 more Christmas Hampers.

LUSH Valley Food Action Society distributes food to those in need through its Fruit Tree Program and accepts donated food from farmers, restaurants, and gardeners. People living in poverty with chronic health problems or specific diet requirements come to LUSH Valley seeking nutrient dense foods. LUSH Valley often has available frozen meals prepared during their cooking programs, fresh fruit and produce or canned preserves. On average LUSH shares food with approximately 500 people per year in addition to allocating over 10,000 lbs of produce yearly to other organizations, such as Food Not Bombs, to use in their programs.



The Wachiay Friendship Center is an indigenous community organization. Its "Our Helping Hands" program is an emergency assistance program that dispenses food and health items to people and families in need.

They do not advertise, but this program operates at capacity. Their program is unique in that the amount and type of food provided depends upon personal needs, allergies, storage capacity, fridge, stove, or freezer access, and ability to transport bags (weight).

Emergency Hampers for Specific Populations

The Comox Valley Family Services, Comox Valley Transition Society and Comox Valley Head Injury Society provide emergency food hampers to their clients. Minimal food is distributed; usually enough for one or two days and this service is not widely advertised as it is only for those most in need. The Comox Valley Transition Society works with a lot of hungry women and children and often their food pantry is empty as it is supplied solely by donations. Each of these organizations makes access flexible based on the needs of the individual who asks for assistance.

4.4 Capacity Building Food Programs

Capacity building initiatives offer education and resources that empower community members to have more control over their health and diet.

These kinds of food initiatives include programs like community kitchens and community gardens. There are several capacity-building food programs available in the Comox Valley through non-profit organizations and at community schools. Many of these resources aim to address the various issues identified earlier on in the food section in a constructive, education-based manner. These programs are usually funded through private and public grants.

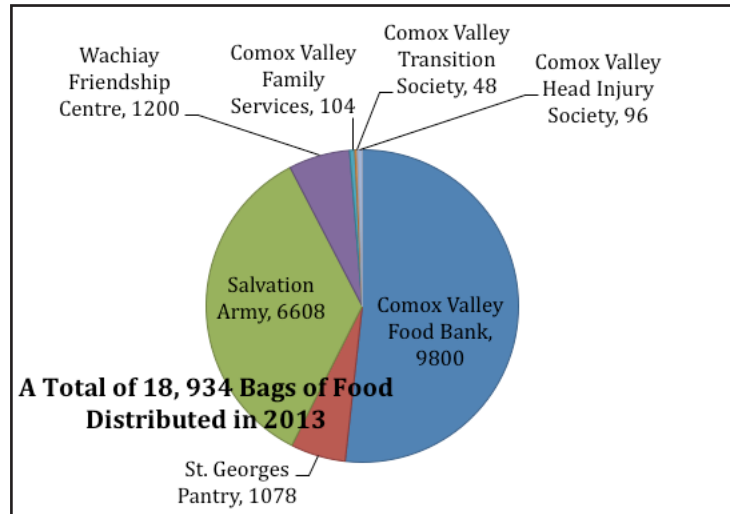
Gardening Programs

Community gardens provide fresh produce, physical activity, and promote a sense of community and connection to the environment. Dawn to Dawn Community Garden began in 2012 and is located on Harmston Ave in downtown Courtenay. This garden was initially created to provide food for the most vulnerable community members experiencing housing issues, but is open to the whole community. The garden operates on a minimal budget plus donations of plants, soil, equipment, and other supplies from multiple sources. They share their donations with other organizations and community members who will use them in their gardens. On a regular basis they have ten or more volunteers who maintain the gardens, plus one honorarium-based coordinator. Several educational groups from non-profit organizations and schools come to learn and tend the garden.

As the garden is open to the community and people harvest food as desired or needed, the amount of food and food value produced is difficult to measure. The first harvest in 2013 generated about \$2000 worth of produce while other harvests have yield considerable amounts including 25lbs of peas, 12lbs of radishes, and 35lbs of garlic. Salad and basil were constantly available and there is a bed of well over 100 strawberry plants.

LUSH Valley Food Action Society offers a garden matching service and grows produce for their cooking programs through the Garden Share program. People list a garden that they have available and others looking for gardens contact them directly. There is a plot of land in Comox that LUSH Valley uses to produce food for their cooking programs and the land is also available for people to have their own plots. In 2013 LUSH Valley harvested 100lbs of garlic from this garden. LUSH Valley also maintains its own raised bed gardens.

Figure 4.7: Bags of food distributed in the Comox Valley in 2013



Early in 2013, the Comox Valley Growers and Seed Savers purchased a hand-powered seed winnower to make seed cleaning easier for its members and for local farmers. CVGSS puts on seed saving workshops and hosts Seedy Saturday every year. The Seed Bank is a project of CVGSS, its purpose is to preserve and maintain a collection of viable, open-pollinated, non-GMO, organically grown food seeds that are well-adapted to the growing conditions of the Comox Valley.

School Gardens & School Food Security

There are eleven school gardens in the Comox Valley's school district. Most of these gardens are fenced with raised beds, have a composter and a shed for holding supplies. Each of these schools has a garden coordinator who promotes garden care to students. Families volunteer through the summer to care for the gardens and harvest what they need. In the fall students get to do the final harvest and cook various dishes to celebrate. The Green Sprout School Garden Program is also available in six of these schools, which accounts for 1800 students. This program provides lessons on composting, crop rotation, soil pH, weather, bug identification and others. There are over 1800 students enrolled in these schools who participate in the garden activities at various times throughout the year.

Some issues experienced in establishing and maintaining the school gardens include installing the gardens in a timely manner, water infrastructure, and garden work scheduling around classes, holidays, and extended breaks during planting times.

In addition to growing food, schools also provide cooking skills education and connections programs that transform neighbourhood schools into community centres. Cumberland Community School Society at Cumberland Elementary School has a 'Garden Club' that offers cooking classes in and after school. In partnership with the North Vancouver Island Chefs Association, and with a policy to source food locally when possible, the "Growing Chef" program introduces children to growing and cooking food. CCSS also provides a healthy food program which includes daily low cost or free lunches and snacks.

Lake Trail Neighborhood Connections offers a variety of programming related to food including gardening and cooking workshops. They have a community garden and fruit trees on the Lake Trail Middle School property. In addition to the 250 students with access, including a 10-15 student Garden Club, the garden is also open to the public. Elective classes integrate cooking into the curriculum, while Lake Trail offers community cooking classes and meals that take place throughout the year. Many of these teach basic culinary preparation skills for cuisines throughout the world.

Cooking Programs & Community Kitchens

Cooking programs and community kitchens are designed to help individuals access healthful food at affordable prices by teaching individuals to cook basic healthy meals from scratch. As such, programs integrate culinary skills with lessons about nutrition, grocery shopping and budgeting. Beyond the health benefits, these programs provide social integration and connection. Moreover, participants report experiencing a sense of empowerment by building their abilities. Food for the cooking programs comes from a variety of sources, primarily local farmers and grocery stores.

LUSH Valley hosts a number of cooking programs and community kitchens in which its commercial kitchen is made available for community groups to work on culinary skills with clients. AIDS Vancouver Island offers a community kitchen monthly to their clients living with Hepatitis C. Their goal is to help clients and their families to cook healthy meals on a low budget. They typically have 6-10 participants.

Many of the other community kitchen groups hosted at LUSH Valley come and go as interests change. "Because We Can" is an open weekly canning group operating in early 2014. It has had up to six participants each session. Participants take home some canned goods while the remainder is donated to LUSH Valley to raise funds for programming. A "Raw Lunch" group focuses on the benefits of eating raw and shows how fun and delicious raw meals can be made. Another example is the "LUSH'Us" Lunch, a community kitchen

project by North Island College Nursing Students who worked to build community through food. Their Friday lunches have been very successful with 10-12 attendees. The flexibility of the community kitchen design allows for a dynamic environment to bring together different interests in the community through food and sharing.

Food Skills for Families is a six week cooking program developed by the Canadian Diabetes Association. Their curriculum focuses on promoting healthy lifestyles through food to prevent chronic disease. Two organizations offer this cooking program up to three times a year each; Comox Valley Family Services and LUSH Valley Food Action Society. Each session has up to twelve participants who learn how to cook low cost nutritious meals.

Comox Valley Life Long Learning Association offers the “Family Literacy Outreach Program” weekly. This program addresses three literacy areas, including food and health literacy in which families are introduced to healthy food through a shared lunch. Ten parents and up to fifteen children attend this program per week and the program runs for eight weeks up to three times a year.

Young Cooks is a food skills program for at-risk youth (10-14 years old). This group meets weekly at LUSH Valley to learn cooking, gardening, and basic budgeting skills while developing peer and community relationships. Five month long sessions run twice a year with five to eight participants. This program connects youth to the community through field trips to farms, bakeries, and markets.

The *Peppermill Program* is a vocational program for people with mental health or substance use issues supported by the Canadian Mental Health Association in partnership with Island Health. Its mandate is to help students learn safe food and cooking skills to increase their employability while also providing low cost frozen meals to clients with mental health issues and extreme difficulties with their ailments. *Peppermill* is composed of 11 participants and serves 40 clients under the care of the Ministry for Mental Health and Substance Use, who may purchase up to 15 meals per month.

LUSH Valley provides access to its ‘incubator’ kitchen for small-scale food entrepreneurs to develop food products. This shared cooking space reduces their costs of operating and provides an avenue for them to advertise their products. As of April 2014 five food businesses were operating out of LUSH Valley’s incubator kitchen. There are several other commercial kitchens in Comox Valley that are available to rent.

Comox Valley Food Round Table

The Comox Valley Food Round Table (CVFRT), an initiative of LUSH Valley Food Action Society, was formed in 2013. The CVFRT is a coalition of over twenty non-profit sector, private business and local government representatives who work to improve food security in the Comox Valley. This group is concerned with all areas of the food system and works to build, celebrate, improve, and expand community-related food work already under way in the Valley. These efforts typically involve research projects, community events, and advocacy work.

Vancouver Island and Coastal Communities Indigenous Foods Network

The VICCIFN is a grassroots network of community members from across Vancouver Island and surrounding communities with a shared vision of to create a healthy future based on reconnecting with First Nations cultural teachings and practices. The VICCIFN has approximately 200 members, hosts yearly Traditional Foods Conferences at rotating locations on Vancouver Island, and also supports regional food-related activities. It is the vision of the VICCIFN that Indigenous food systems on Vancouver Island are recognized, protected, maintained, enhanced and celebrated in a holistic way.

Comox Valley Economic Development Society (CVEDS)

CVEDS was formed in 1988 as a non-profit organization and is funded by the regional district and municipal governments within the Comox Valley. Their mission is to “encourage responsible expansion of the economic base of the Comox Valley with the intent of enhancing wealth and employment opportunities” (CVEDS, 2010). An important component of their work includes supporting the growth of the local agri-food sector, such as through improving management ability in food production. CVEDS also support the local agri-food industry through research and supporting projects such as the annual Comox Valley Grower’s Guide (an extensive directory of local producers and agri-food tourism).

Conclusion

The Comox Valley is an agriculturally rich area with abundant food production opportunities. Despite this base many residents experience difficulty obtaining nutritious food on a regular basis. A variety of organizations offering numerous programs are working to tackle the underlying causes of hunger and food insecurity: poverty and economic limitations, food costs, food deserts, food literacy and skills shortages, and gaps in local food production and processing, to name a few. Creating an equitable, secure, and socially just food system can be reached but only through continued efforts within the community, as well as sound government and economic policies. Until that time, there will be work toward increasing food security and food sovereignty in the Comox Valley.

Related indicators: all other indicators in one way or another, but especially health and income security.