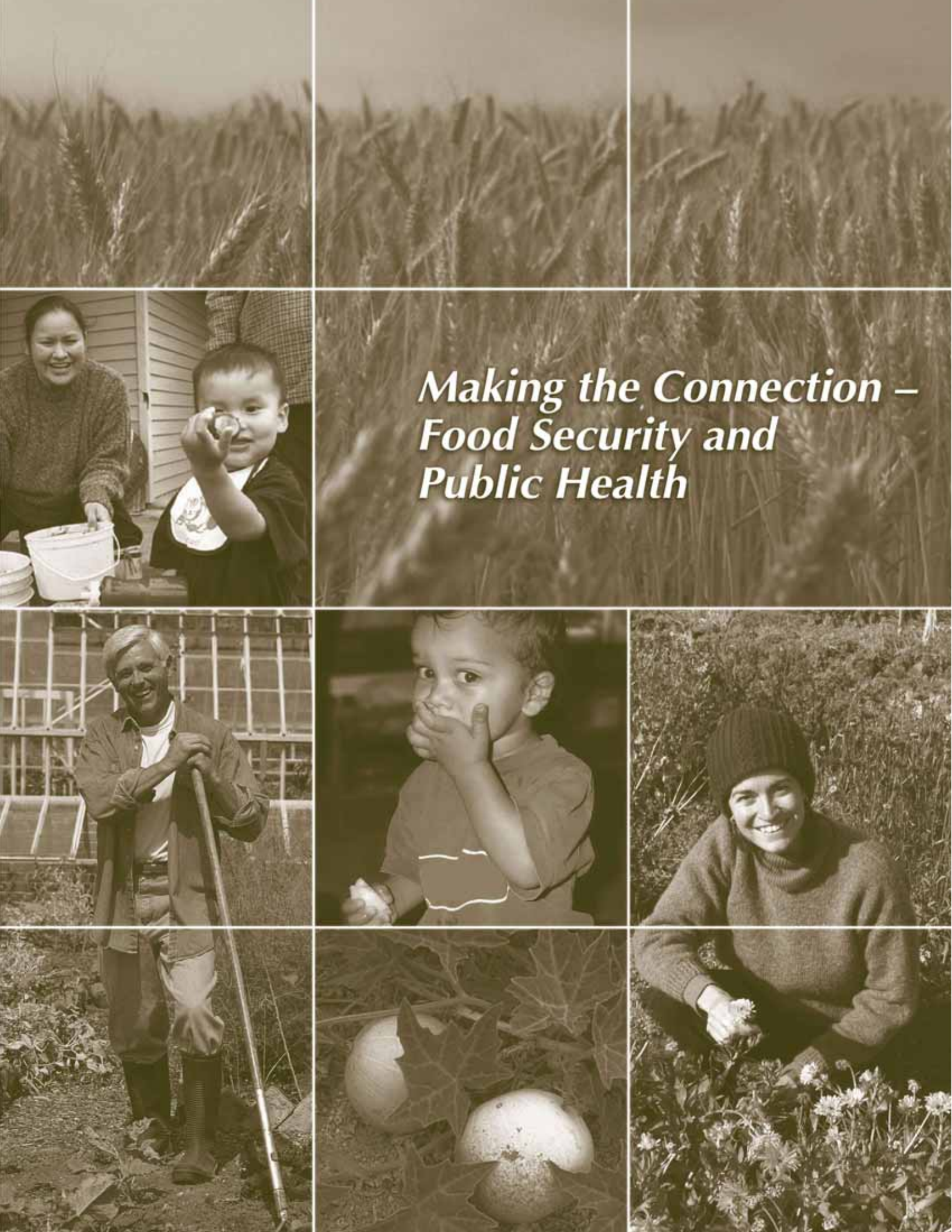

Making the Connection – Food Security and Public Health

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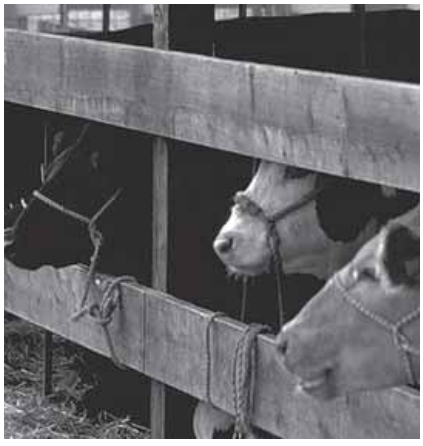
Submitted to
The Ministry of Health Services
and The Health Authorities
of British Columbia

by

The Community Nutritionists Council of BC

COMMUNITY NUTRITIONISTS COUNCIL of BC

June 2004



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Discussion Paper on Food Security and Public Health

This document was developed through discussions among community nutritionists in British Columbia and dialogue with those involved in food security and health care. The consultants/writers hired for this project assembled facts, ideas and concepts and gathered the references.

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Contents

FIGURES

TABLES

Executive Summary

"Community food security exists when all citizens obtain a safe, personally acceptable, nutritious diet through a sustainable food system that maximizes healthy choices, community self-reliance and equal access for everyone."
(Adapted from Bellows and Hamm 2003)

Food security is a prerequisite for healthy eating and foundational to human and environmental health. It is a basis for the prevention of chronic disease and the promotion of healthy growth and development. It is integral to healthy living and environmental health protection. If people do not have access to a sustainable supply of appropriate foods, their health will be compromised, regardless of available health care.

"People are fed by the food industry, which pays no attention to health, and healed by the health industry which pays no attention to food."
(Wendell Berry 1992)

On the surface, lack of food security presents itself as hunger, illness and disease. When we look deeper we find that food security expresses itself in many different forms, including diet-related medical conditions and even obesity. Across Canada escalating rates of hunger and obesity are observed. Cardiovascular disease remains the number one cause of death in BC. Type 2 diabetes, usually seen in older people, is now diagnosed in children and it is on the rise. Microbial food borne illness is a persistent and significant health concern.

Our food system has not been designed to ensure optimal nutrition and food security. The system is driven by a fragmented food policy designed and implemented by a variety of sectors. The health sector has been notably absent at many food policy-making tables.

Food related illness and disease are costly. Nutritional risk is the single best predictor of physician and emergency room visits, hospital readmission and increased length of stay (American Dietetic Association 1997, MacLellan and Van Til 1998). Obesity alone costs the BC economy an estimated $730–$830 million a year, about 0.8 percent of the province's Gross Domestic Product (Coleman *et al.* 2001).The total economic burden from all food-related illnesses and disease is staggering.

Food security concerns have elicited a variety of responses at many administrative levels in Canada. The federal government has signed a number of international covenants demonstrating their commitment to freedom from hunger, world nutrition, environmental sustainability and food security. A national action plan for food security exists, as does a food security bureau that monitors progress on that plan. Provincially, numerous groups are advocating coherent food policies as a means to realize food security. In communities across the country, there has been a ground-swell of food security activity. BC has one of the most widespread and well-organized networks of community food security activity in the country.

Community nutritionists have taken a lead role in supporting food security activities by using the existing strengths at the community level. A number of food security networks, coalitions and councils have been

formed. These groups are actively engaged in shaping their local food systems; community gardens and kitchens, markets, food co-operatives, food research and food policy initiatives have emerged.

Health outcomes realized by these endeavours include: local food self-sufficiency, improved local economies, improved performance of children in schools, increased social cohesion around food security, increased knowledge of healthy eating, increased consumption of healthy foods, decreased food bank use and much more.

Despite the remarkable success over the short term, food security is far from being realized. The health sector has yet to *officially* acknowledge food security as a core public health function. Food security programs and services remain fragmented and ad hoc, and lack the stability that core infrastructures could contribute. Coherent food policy at all levels is slow to emerge. A standardized set of food security indicators has not been developed. Baseline data about the state of the food system in BC has not been gathered.

"Eight of the top ten leading causes of death in Canada are diet related." (Statistics Canada 1997)

The Community Nutritionists Council of BC (CNC) asserts that it is time for the health sector to take a meaningful seat at food security tables. Specifically, CNC recommends that the:

- *BC Ministry of Health Services (BCMHS) designate food security as a core public health function in the final version of the core services document;*
- *BCMHS use and apply the findings of this document in their processes to revise the Public Health Act;*
- *BCMHS create a standardized set of food security indicators and develop a report on the state of food security in BC;*
- *BCMHS provide infrastructure to further the development of a provincial Food Security Council;*
- *BCMHS create cooperation in the private and public sector to reorient the food system to include a focus on health and nutrition;*
- *Health Authorities include community food security strategies in their health plans;*
- *Health Authorities provide the infrastructure to further food security developments in their health area; and*
- *Health Authorities participate in regional and provincial food security councils.*

1 Introduction

Canada is internationally renowned as a leader in health, social, and agricultural policy, programs, and services. Despite all of that, food security issues persist and are seemingly insoluble at home. There is no shortage of evidence demonstrating the food system is unable to ensure that all people at all times have *access* to the foods required for health. The average monthly attendance at food banks in 2002 was 750,000 (Canadian Association of Food Banks 2002). Concurrently Canadian children are consuming excessive amounts of packaged, processed, simple-carbohydrate and high fat foods (Starkey *et al.* 2001). The percentage of obese children has doubled in the last two decades, and the incidence and prevalence of childhood Type 2 diabetes is on the rise (Tremblay and Willms 2000). The ability of the food system to *supply* the foods required for health is also called into question with persistent reports of food-borne illness, the identification of mad cow disease (bovine spongiform encephalopathy or BSE) in North American cattle, and high levels of toxins in farmed Atlantic salmon (Stockstad 2004).

Governments officially pledge their commitment to world food security, world nutrition, the right to food, freedom from hunger and international environmental sustainability. But a coherent Canadian food policy that addresses these concerns has not been developed. Existing food related policies at all levels of jurisdiction in Canada are fragmented and fail to resolve food security problems (MacRae 1999). The health sector has been notably absent at many food policy-making tables. Food security programs and services remain fragmented and ad hoc, and lack the stability that core infrastructures could contribute (McIntyre 2003). As BC is currently defining core public health functions that will help form a new Public Health Act, now is the opportune time to step up to the table.

The development of *Making the Connection – Food Security and Public Health* was undertaken by the Food Security Standing Committee of the Community Nutritionists Council of BC (CNC) in the fall of 2002. The purpose of the document is to:

- Provide evidence that lack of community food security is a critical public health concern;
- Provide evidence that community food security interventions are effective in promoting health and preventing food related illness and disease; and
- Identify the role of the health sector in building community food security in BC.

While this paper has been developed to help support the BC Ministry of Health Services to define core public health functions, the concepts, evidence and recommendations will also be of interest to:

- Health Authorities;
- Community nutritionists;
- Related professional associations;
- Government ministries;
- Food security organizations; and
- Those interested in furthering food security.

This document reviews food system trends giving rise to food related illness and disease. It provides evidence of the huge financial burden to the health care system when food security is lacking. Approaches to food security are presented and examples of successful food security initiatives are described. Specific tools – indicators – to assist in determining the level of food security are offered, and in addition to those indicators, criteria for evidence that food security is taking place are also presented. To help put British Columbia on the road to food security, recommendations are made to the BC government and BC Health Authorities on how to integrate food security into government policies and activities, and the health care system.

2 Understanding Food Security

Food security is an evolving, multidimensional and multi-jurisdictional concept. Two definitions of food security form the basis for this document. The first is an international definition that emerged during the United Nation's Food and Agricultural Organisation World Food Summit. This definition was agreed upon by over six thousand delegates:

"All people at all times have physical and economic access to sufficient, safe and nutritious foods to meet their dietary needs and food preferences for an active healthy life." (Food and Agricultural Organization of the United Nations 1996)

The second definition for community food security was adapted by the Community Nutritionists Council of BC from Bellows and Hamm (2003):

"Community food security exists when all citizens obtain a safe, personally acceptable, nutritious diet through a sustainable food system that maximizes healthy choices, community self-reliance and equal access for everyone."

This definition implies:

- Ability to acquire food is assured;
- Food is obtained in a manner that upholds human dignity;
- Food is safe, nutritionally adequate, personally and culturally acceptable;
- Food is sufficient in quality and quantity to sustain healthy growth and development and to prevent illness and disease; and
- Food is produced, processed, and distributed in a manner that does not compromise the land, air or water for future generations.

Both definitions hold that food security is a universal concern rather than the concern of one sub-group or other. It is viewed as a basic human right – as a foundation to life and health. Both definitions also hold that solutions to food security must be realized now and over the long term.

If British Columbians are to be food secure, they must have control over food decisions. Strengthening community action – collectively engaging members of the community to be active participants in shaping their food system– is a critically important aspect of increasing control.

Food access is inextricably linked to food supply. Food security is understood to be dependent upon a *healthy, sustainable food system*. A *food system* includes linkages between different sectors and different aspects of life with respect to the production, processing, distribution, marketing, acquisition, and consumption of food. A *sustainable* food system occurs when these activities do not compromise the land, air or water now or for future generations. A *healthy* food system occurs when these activities are oriented towards the health of the population.

While building food security is a concern of multiple sectors, clearly the health sector has an important role. This role is understood as a core public health function.

It is important to recognize that policy decisions are inextricably linked to food security. Lang (1999) observed that malnutrition in the United Kingdom was virtually eliminated during the Second World War when revisions to food-related policies were made that supported community food self-sufficiency as well as equitable distribution of food.

Community nutritionists assert that if food security is to be achieved in BC, the food system must be shaped by a *coherent food policy* with optimal nutrition for all as its highest purpose. It must integrate health, agriculture, social, educational, trade, economic and communication policies and ensure that the food system is financially and environmentally sustainable (MacRae 1999). Such policy is part of an integrated public policy approach known as healthy public policy. It involves inter-sectoral partnerships and acknowledges that the responsibility for food security resides with individuals, communities and governments.

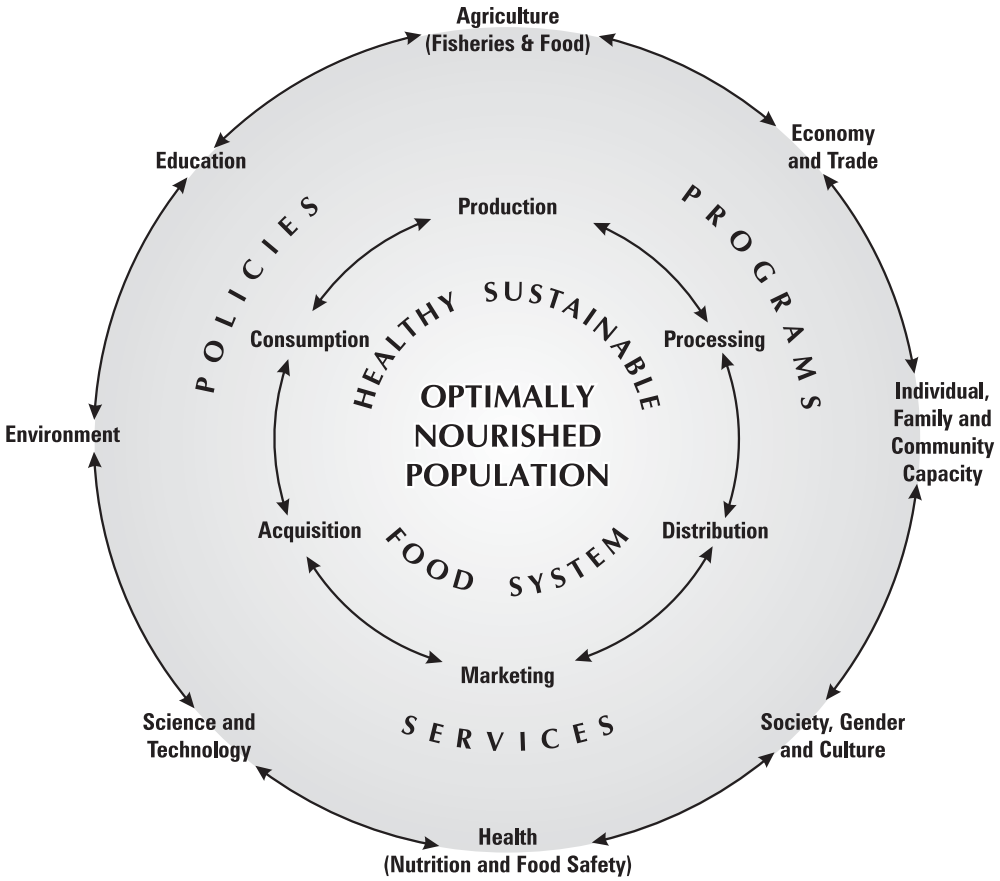


FIGURE 1 A healthy, sustainable food system framework.
(adapted from Dahlberg et al. 1997, Tansey and Worsley 1995).

Figure 1 defines a vision for community food security. Community food security exists when we have an optimally nourished population supported by a healthy, sustainable food system. Coherent food policy, programs and services provide the context for a healthy sustainable food system.

While the term food security may be relatively new, the pursuit of the foods required for health is not. The comprehensive approach outlined here – one that strengthens community action, supports the development of a coherent food policy and supports sustainability in the systems governing food security – is well supported in health literature (BC Ministry of Health and Ministry Responsible for Seniors 1997, World Health Organization 1986, 2003). Such an approach is the basis of the World Health Organization's 2001–2005 First Action Plan for Food Nutrition Policy in the WHO European Region (World Health Organization 2004).

3 Food-related Illness and Disease – Evidence that Food Security is Lacking

Lack of food security presents itself in many ways. On the surface we observe personal health impacts – food-related illness and disease. BC residents face a paradox of hunger and obesity and the nutritional health concerns associated with such conditions. They also face ill health due to contaminants in their food. Some links between these personal health issues are readily apparent, while others are less obvious. Linkages become more visible when one examines the systems giving rise to such issues – the substance of the next chapter.

Hunger

More than an uneasy or painful sensation caused by lack of food. Hunger bespeaks the existence of social, environmental and economic problems. Hunger is a situation in which someone cannot obtain adequate amounts of food, even if the shortage is not prolonged enough to cause physical health problems (President's Task Force on Food Assistance 1984)

Hunger and Food Insecurity

Evidence is mounting that many Canadians are not getting enough to eat. Among the most vulnerable are people living with poverty (see Section 4). The following statistics begin to paint a picture of hunger and food insecurity in Canada.

- In 1998–99, the Statistics Canada National Population Health Survey (NPHS) reported that 2.4 million Canadians were food insecure – or unable to get enough or the appropriate kinds of food (Rainville and Brink 2001).
- In the 2000–01 Canadian Community Health Survey (CCHS), 8.2 percent of BC residents reported "sometimes" or "often" not having enough to eat due to lack of money; 11.6 percent reported "sometimes" or "often" worrying that there wouldn't be enough to eat; and 14.8 percent reported "sometimes" or "often" not eating the quality of food they wanted (Statistics Canada, 2001–02).

As shall be revealed in the remainder of this section, chronic hunger and food insecurity are linked to a host of health concerns including malnutrition (inadequate intake of the nutrients and/or calories required for health), obesity and chronic disease.

Malnutrition

While it may be hard to fathom that malnutrition exists in a country that is a leader in food production, social and health programs, this is precisely the case. Unlike malnutrition in third world countries, malnutrition in Canada is evident in pockets of the population.

Malnutrition is a concern for high-risk pregnant women (those living in poverty, those living with substance abuse, and teens). Inadequate nutrition during pregnancy can cause low birth weight and infant morbidity and mortality. Low birth-weight babies have a higher rate of child-

hood health problems, including chronic illnesses and disabilities (BC Ministry of Health and Ministry Responsible for Seniors 1997, Health Canada 2000).

Malnutrition is a concern for high-risk seniors (those living alone and in poverty). According to a study by the South Fraser Health Authority, 2500 seniors (78 percent) of the elderly clients receiving continuing care services are at nutritional risk (McGuire 1999). These seniors have one or more conditions (such as weight loss and therapeutic diet needs) demonstrating their nutritional status is compromised. This study concluded that restricted food intake, low income and social isolation were contributing factors to their nutritional situation.

Inadequate nutrition during early childhood can lead to permanent cognitive damage, affecting the ability of children to learn and function. It may reduce resistance to infection (BC Heart Health Coalition 1997, Roberts *et al.* 1999, Alaimo *et al.* 2002). Inadequate nutrition has also been linked to child behavioural and emotional problems such as aggression, anxiety and irritability (Alaimo *et al.* 2001).

Malnutrition is an emerging concern among populations with mental health issues. According to one U.S. study, there is a strong association between food insufficiency and depressive disorder and suicidal symptoms in adolescents (Alaimo *et al.* 2002). Links have been made in Canadian studies as well. The National Population Health Survey (1998/99) revealed that a third of people in food insecure households reported emotional distress – three times the rate in food secure households (Rainville and Brink 2001). Further, a BC community hunger assessment survey noted that chronic malnutrition lowered personal dignity and self-esteem (Enns *et al.* 2001).

Malnutrition

A clinically measurable condition that results from an excess, imbalance or deficit of nutrient availability in relation to tissue needs. (Dietz and Towbridge 1990).

Obesity

Parallel to the persistent and growing hunger problem in Canada is the escalating crisis of obesity. For those who are food insecure, nutrient-poor, high calorie foods are a serious risk factor. Obesity is a problem impacting a large part of the population. The following statistics reveal the extent of obesity, the populations affected, as well as some important relationships between this condition and poverty, food insecurity and chronic disease.

- Obesity rates among Canadian children have doubled in the last 15 years. The number of overweight boys aged 7–13 years has increased from 15 percent in 1981 to 28.8 percent in 1996 and among girls this number grew from 15 percent to 23.6 percent (Tremblay and Willms 2000).
- Rates of overweight conferring a "probable health risk" (Body Mass Index of over 27) have more than doubled in BC, with 26.4 percent of the province's adults now overweight, up from 11 percent in 1985. While BC still has the lowest rates of overweight residents in the country, the increase has been sharper than the national average (Coleman *et al.* 2001).

Obesity

Obesity refers to excess amounts of body fat. Men with more than 25 percent body fat and women with more than 30 percent body fat are considered obese. Body mass index (BMI) has become the standard used to measure overweight and obesity. BMI uses a formula based on a person's height and weight. BMI equals weight in kilograms divided by height in meters squared (BMI = kg/m^2). A BMI of 25 to 29.9 indicates a person is overweight. A person with a BMI of 30 or higher is considered obese.

- In a study of Canadian children, 6.4 percent of children in the wealthiest quarter of the Canadian population were obese as compared with 12.8 percent of those in the poorest socioeconomic quarter (Tremblay and Willms 2003).
- Food insecurity is associated with obesity. In a recent study, more than 50 percent of low-income women who reported having difficulty putting nutritious food on the table were overweight. This compares to 34 percent of their food secure peers (Townsend *et al.* 2001).
- In a 2001 review of licensed mental health community care facilities in BC's Capital Health Region, seventy percent of the residents were found to be overweight or obese (Holland 2001).
- Obese Canadians are 4 times more likely to have diabetes, 3 times more likely to have high blood pressure, and 2 times more likely to have heart disease than those with healthy weights (Coleman *et al.* 2001).

Food insecurity

Food insecurity is a situation where individuals in a society lack either physical and/or economic access to the food they need (Food and Agricultural Organization, 1989).

Food insecurity and hunger are often used interchangeably – both are concerns about individual access to food.

Community food security differs from these terms in that it is a concern experienced by the community. It is a concern about the food system – food access and food supply.

Chronic Disease

There is a strong connection between nutrition and certain chronic diseases, in particular cardiovascular disease and diabetes. Overeating is contributing to epidemic rates of Type 2 diabetes.

The extent of chronic disease and the populations affected are revealed in the following data:

- In 2001 cardiovascular disease accounted for 18.5 percent of the deaths in BC, claiming 6,887 lives (BC Vital Statistics 2001).
- There are 1,063,689 Canadians aged 12 and over with diabetes – of these 133,329 reside in BC (Statistics Canada 2000–01).
- Among Aboriginal people, age-standardized diabetes rates are triple those found in the general population (Northern Health 2002).
- In a 2001 review of licensed mental health community care facilities in BC's Capital Health Region, twenty percent of the residents had diabetes compared to 5 percent for the general adult population in BC (Holland 2001)
- Mothers who stop breast feeding their babies too early increase the risk that their children will develop heart disease and diabetes later in life (Belch 2001).

Food-borne Illness

Food-borne illness is a significant food security concern. This does not involve too little or too much food – it is a concern about the food itself. Contaminants in food (bacteria, protozoa, viruses, prions, metals and chemicals) are contributing to illness (Centres for Diseases Control and Prevention Control 2002, Health Canada 1998, Kachatourians 1998). The discussion that follows focuses specifically on microbial food borne illness. Illness due to other food contaminants is explored in Section 4 – *Growing Food Concerns).*

Health Canada estimates that every year approximately two million Canadians suffer from illnesses caused by food-borne bacteria and about 30 of them die. Although most individuals recover, food-borne illnesses can result in chronic health problems in 2–3 percent of cases. Illnesses such as chronic arthritis and hemolytic uremic syndrome (HUS) leading to kidney failure, have long-term consequences for the individuals affected and for society and the economy as a whole. Health Canada also estimates that the costs related to these illnesses and deaths exceed $1 billion annually (Canadian Partnership for Consumer Food Safety *unpublished*, Health Canada 1998).

Table 1 lists the most frequent microbial causes of food-borne illness and disease in the U.S. It also provides *estimates* of the numbers of illnesses, hospitalizations and deaths resulting from microbes in the food in 1999. This table reveals that food-borne illness is a significant concern, claiming an estimated 1775 lives in the U.S. annually. This table also illustrates the *"health-effects pyramid"* – deaths are only the tip of the pyramid with episodes of illness far exceeding hospitalizations.

TABLE 1 The most frequent microbial causes of food-borne disease in the U.S. Estimated numbers of illnesses, hospitalizations, and deaths, 1999

Organism	Illness	Hospitalizations	Deaths
Bacteria			
Campylobacter	2,000,000	10,500	97
Clostridium perfringes	249,000	40	52
E. coli O157:H7	62,500	1,800	26
E. coli other	31,000	920	499
Listeria monocytogenes	2,500	2300	556
Salmonella	1,300,000	16,000	14
Shigella	90,000	1.250	2
Staphyloccous	236,000	2,100	31
Vibrio	5,200	125	2
Yersinia	86,700	1,100	
Protozoa			
Giardia lamblia	200,000	500	1
Toxoplasma gondii	112,500	2,500	375
Virus			
Norwalk-like - viruses	9,200,000	20,000	120

Source: Nestle 2003 *Safe Food: Bacteria, Biotechnology and Bioterrorism*

While similar estimates of illness, hospitalizations and deaths are unavailable in Canada, *reported* cases and outbreaks of water and food borne illness are available. Table 2 lists the *reported* cases and outbreaks in BC in 1993/1994.

TABLE 2 Microbial causes of food-borne illness in BC (1993/94).

Cause	Total reported cases	Number of cases hospitalized	Percent hospitalized hospital/case	Average days in	Hospital costs*
Salmonella incl. *S. typhi*	1046	126	12.1	6.0	510,300
Shigella	239	32	13.4	3.6	77,625
Other Food Poisoning	-	93	-	3.5	222,075
Listeria	7	6	85.7	23.8	96,5253
Toxins eaten with food	-	43	-	1.3	9,150
Campylobacter	2707	257	9.5	2.4	416,340

Source: Health Canada 1998 *Foodborne and Waterborne Disease in Canada*

The following synopsis of the extent of food-borne illness in BC is provided by the BC Centre For Disease Control:

"Reported cases of confirmed foodborne illness in BC are forwarded to Dr. Todd at the Bureau of Microbial Hazards, Ottawa. In his latest summary published in 1998, Todd reports that 1092 cases of confirmed foodborne illness occurred in BC in 1993. Todd estimates that 350 cases (literature range 25–1446.5) of foodborne illness occur in Canada for every confirmed case reported to him. As such, an estimated 382,200 cases occurred in BC in 1993. After adjusting for population growth, an estimated 438,752 individuals became ill in BC due to foodborne illness in 1996. Stated another way, an individual is anticipated to experience a foodborne illness, on average, once every 7.5 years. Further, by using Todds' average cost estimate of 620 (1985) dollars per case and adjusting for the BC consumer price index the estimated total cost of foodborne illness in BC is 374 million (1994) dollars. These costs would include emotion costs, cost of death, travel, hospitalization, lawsuits, product recalls, etc." (*BC Centre for Disease Control,* unpublished).

4 Food System Trends

Factors Giving Rise to Food Related Illness and Disease

What causes food related illness and disease? Certainly eating habits and food handling practices play a role, but why is it that we eat the way we do? If we look below the surface, we observe that food related illness and disease are symptoms of our current food system. This section reviews trends within the food system. It reviews policy and power within the system as well as trends within food system sectors. It explores the impact of the system on the health of the environment, the food and the people of BC. It concludes with the observation that the food system needs to be reoriented towards health.

Lack of Coherent Food Policy

In Canada, policies impacting food security are multi-jurisdictional, fragmented and for the most part uncoordinated. There is a role for nutrition policy as a basis for agricultural, education and social policy. The objectives of food-related policies rarely consider health. The agrifood policy is one major driver of the system. Its principal focus is food production and supply. Related health policy in Canada is limited to food labelling, dietary guidance, food fortification, food sanitation and food safety laws.

Lack of nutrition policy contributes, in part, to the development of systems that are not always conducive to health. For example, the lack of Canadian nutrition policy specifying what constitutes "adequate nutrition for health" contributes to a situation where social policy fails to ensure that recipients are able to purchase a nutritious basket of food (Riches 1997). Dietetic professionals across Canada use the nutritious food basket as an accepted standard for adequate nutrition for the general public (Dietitians of Canada 2003).

The Toronto Food Policy Council (1994) sums up the situation:

"The Canadian food and agriculture system [and social system] has never been designed to provide opportunities to promote optimal nourishment and health. This situation exists despite the opinions of some analysts that 60–70 percent of diseases have a diet-related dimension (U.S. Surgeon General 1988). The Canadian health care system, although committed to optimal nutrition in concept, has failed to invest adequately in the provision of a nourishing affordable diet as a health promotion measure. [Similarly, the Canadian social system has failed to invest adequately in the provision of benefits to ensure basic food needs are met]. As a nation, Canada is left with the paradoxical situation of a private-sector driven food production and consumption system and publicly funded health care [and social] systems. The consequence is that all Canadians end up paying for health care expenses associated with malnutrition, such as hunger, poor food choices, and poor food quality."

Consolidation, Control and Distancing

The supply sector of the food system is consolidating at many levels. Control over most aspects of the system rests in fewer and fewer hands. Decisions about crop planting, food production and distribution are increasingly made at board-room tables rather than kitchen tables.

The food system supply rests in the hands of a few trans-national corporations. These corporations are conglomerates of seed, pesticide, food processing, tobacco, and pharmaceutical corporations (Kneen 1993, 1999). Within these corporations, food is viewed as a commodity rather than as a social, cultural or health value. Table 3 provides a snapshot of consolidation within the food processing sector.

"Those who cannot feed their people, will be dominated by those who can"
Mohawk Proverb

The view of food as a commodity permeates North American culture. This, coupled with loss of knowledge, skills, and structures for local food self-sufficiency (which accompany consolidation and control of the food supply), means that for a majority of the population, food access is almost completely dependent on income. Income is largely dependent upon employment, and for those who are unable to be employed, income assistance.

TABLE 3 Top five worldwide food processing companies

1 Phillip Morris / Kraft Foods

Sales: $29,723 million
Subsidiaries, Divisions: Kraft Foods International Inc., Kraft Foods North America Inc.
Brands:

100% Bran, Aladdin, Alpha-Bits, Altoids, Athenos, Baker's, Balance Bar, Banana Nut Crunch, Blendy, Blueberry Morning, Boca Burger, Breakstone's, Breyers, Bull's-Eye, Callard & Bowser, California Pizza Kitchen, Calumet, Capri Sun, Carte Noire, Celis, Certo, Cheez Whiz, Churny, Claussen, Clight, Cool Whip, Cote d'Or, Country Time, Cracker Barrel, Cranberry Almond Crunch, Crystal Light, D-Zerta, Daim, Dairylea, DiGiorno, Dream Whip, Eden, El Caserio, Estrella, Ever Fresh, Figaro, Foster's, Freia, Frisco, Frosted Shredded Wheat, Fruit & Fibre, General Foods International Coffees, Gevalia, Golden Crisp, Good Seasons, Grand Mere, Grape-Nuts, Great Grains, Handi-Snacks, Harvest Moon, Hoffman's, Hollywood, Honey Bunches of Oats, Honey Nut Shredded Wheat, Honeycomb, Invernizzi, Jack's, Jacobs Kronung, Jacobs Monarch, Jacques Vabre, Jell-O, Kaffee HAG, Kenco, Knudsen, Kool-Aid, Korona, Kraft, Kraft Free, La Vosgienne, Lacta, Light n' Lively, Louis Rich, Magic Moment, Marabou, Maxim, Maxwell House, Meister Brau, Milka, Minute brand tapioca, Minute Rice, Miracle Whip, Miracoli, Molson, Nabob, Natural Bran Flakes, Old English, Oreo O's, Oscar Mayer, Oven Fry, Peanott, Pebbles, Philadelphia, Poiana, Polly-O, Post, Presidente, Prince Polo, P'tit Quebec, Q-Refresko, Raisin Bran, Red Dog, Saimaza, Sanka, Seven Seas, Shake 'N Bake, Shipyard, Shredded Wheat, Shredded Wheat 'n Bran, Simmenthal, Slim Set, Snack Abouts, Sottilette, Splendid, Spoon Size Shredded Wheat, Starbucks, Stove Top, Suchard, Sugus, Sure-Jell, Taco Bell, Tang, Temp-Tee, Terry's, Toasties, Tobler, Toblerone, Tombstone, Vegemite, Velveeta, Waffle Crisp, Yuban

Major Product Areas: Meat and poultry, dairy, grain mill products, sugar/confectionery, miscellaneous

2 Nestle USA Inc.

Sales: $28,000 million
Divisions: Beverage, Chocolate & Confection, Culinary, Frozen Food, Food Services , Foreign Trade, Ice Cream, Nutrition, PetCare, Sales.
Brands:

Baby Ruth, Butterfinger, Carnation, Carnation Instant Breakfast, Chase & Sanborn, Coffee Mate, Contadina, Friskies, Friskies ALPO, Friskies Mighty Dog, Goobers, Hills Bros. Coffee, Juicy Juice, Kerns, Libby's, MJB Coffee, Nescafe, Nestle, Nestle Carnation Follow-Up Baby Formula, Nestle Carnation Good Start Baby Formula, Nestle Crunch, Nestle Drumstick Ice Cream, Nestle Flipz, Nestle Quik, Nestle, O'Henry, Ortega, Raisinets, Stouffer's, Stouffer's Lean Cuisine, Sweet Success, SweeTarts, Taster's Choice, Toll House, Turtles, Willy Wonka

Major Product Areas: Canned, frozen and preserved foods, sugar/confectionery, beverages, miscellaneous

3 ConAgra Inc.

Sales: $27,629 million
Subsidiaries, Divisions: The Beatrice Group, ConAgra Agri-Products Cos., ConAgra Foodservice Sales Co., ConAgra Frozen Prepared Foods, ConAgra Grocery Products Cos., ConAgra Refrigerated Prepared Foods Cos., ConAgra Trading and Processing Cos., Lamb-Weston Inc.
Brands:

Act II, Andy Capp's, Armour, Banquet, Blue Bonnet, Butterball, Chef Boyardee, Chun King, Cook's, Country Pride, County Line, Crunch n Munch, Decker, Egg Beaters, Eckrich, Fleischmann's, Gilroy Brands, Gulden's, Healthy Choice, Hebrew National, Hunt's, Hunt's Snack Pack, La Choy, Lamb-Weston, Libby's, Marie Callender's, Orville Redenbacher's, Parkay, Peter Pan, Slim Jim, Swift Premium, Swiss Miss, Van Camp's, Wesson, Wolfgang Puck's

Major Product Areas Meat, poultry, dairy, canned, frozen, preserved foods, grain mill products, bakery, fats/oils, miscellaneous

4 Unilever

Sales: $25,700 million
Brands:

Ben & Jerry's, Bertolli, Birdseye, Breyers, Country Crock, Dove, Flora, Hellmann's, I Can't Believe It's Not Butter, Knorr, Magnum, Lipton, Omo, Slim-Fast

Major Product Areas: Ice cream, processed foods, fats & oils, sauces, tea

5 PepsiCo Inc.

Sales: $25,112 million
Subsidiaries, Divisions: Frito-Lay Co., Pepsi-Cola Co., Pepsi Bottling Group, Tropicana Products
Brands:

7Up, Alegro, All Sport, Aquafina, Burger Rings, Chee-tos, Diet Pepsi, Dole, Doritos, Frappuccino Coffee Drink, Fritos, Funyuns, Gamesa, Grandma's Cookies, Lay's, Lipton Brisk, Lipton Brew, Lites, Mirinda, Mountain Dew, Mug, Nobby Nuts, O'Grady's, Parkers, Pepsi, Pepsi Max, Pepsi One, Rold Gold, Ruffles, Slice, Smartfoods, Smith's, Smooth Moos, Storm, SunChips, Tostitos, Tropicana, Tropicana Pure Premium, Tropicana Season's Best, Walkers

Major Product Areas: Beverages, bakery, salty snacks, miscellaneous

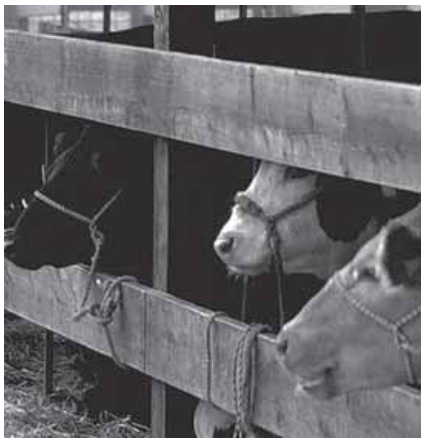
Source: *Food Processing Magazine,* Feb. 19, 2004, http://www.foodprocessing.com/fp/resources/top_100.html

Growing Food Safety Concerns

There are many issues related to large-scale farming. The following refers to some concerns of the public which need further scientific investigation and follow-up. Current food production practices increase environmental and human health risks. Feedlot practices and overuse of animal manures have increased the risk to human health. While contaminants in the food are on the rise, the nutritional value of the food is on the decline. Potential risks to health from the industrial food system include pathogens, prions, chemicals such as pesticides, antibiotics, and loss of nutrients.

Concerns are being raised in the public arena about the safety of farming practices. These are some examples:

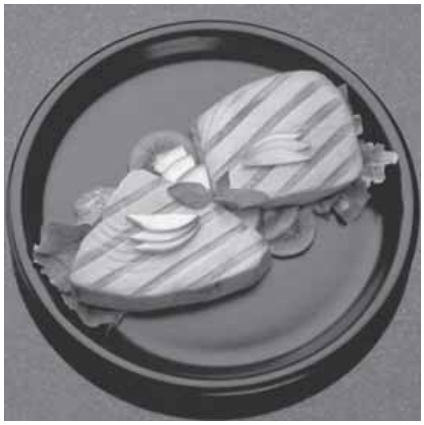
Industrial farming increases the potential for pathogen transmission. In feedlots and in commercial hog and chicken growing operations, animals are housed in close quarters. This increases the possibility of pathogen transmission. Large herds of cattle and flocks of poultry produce massive quantities of manure. Nitrates and pathogens from the manure can leach into water tables. Improperly composted manure can contaminate fruit and vegetables when it is spread on fields and crops. Raw manure containing pathogens has been found on crops that ordinarily do not come into contact with them (Nestle 2003). Ground water and surface water can contain nitrates and pathogens due to leachate from poor composting practices. The *E. coli* Walkerton water outbreak and numerous *E. coli, Salmonella* and *Camplyobacter* outbreaks from consumption of raw vegetables and fruits have been traced to poor management of animal manure (Ontario Ministry of the Attorney General 2000a and 2000b). Today food processing facilities are centralized and the meat products produced are transported across the continent. One diseased animal in the batch processing methods used at slaughterhouses has the potential to infect millions of people across the country.



Since the 1950s the use of chemicals and antibiotics in industrial farming has increased dramatically. The over-use of antibiotics has contributed to a rise in drug-resistant strains of bacteria which has lead to antibiotic resistance and compromised human treatment (Khachatourians 1998). World agriculture includes the use of many persistent organic pollutants like the organochloride pesticides heptachlor, mirex aldrin, dieldrin and chlordane. These pesticides are used to control agricultural pests. Most human exposures now occur through eating contaminated food, particularly fish, and other animals living near contaminated sites. According to the U.S. Environmental Protection Agency these pesticides are probable human carcinogens; they accumulate in the fatty tissues of mammals and bioaccumulate in the food chain (U.S. Environmental Protection Agency 2003). Pesticides such as Mirex are thought to be endocrine disruptors, chemicals that can interfere with the body's own hormones. Such hormone-disrupting, persistent contaminants can be hazardous at extremely low doses and pose a particular danger to those exposed in the womb. During prenatal life, endocrine disruptors can alter development and undermine the ability to learn, to fight off disease and to reproduce (World Wildlife Fund 2003).

Long revered for its positive health benefits, farmed salmon has recently received some bad press. A study published in January 2004 in the Journal of Science concluded that farm-raised Atlantic Salmon – especially those from Europe – had far higher levels of PCBs and dioxin than wild salmon (Stockstad 2004). Researchers recommended that consumers limit their intake of farmed salmon to minimize their cancer risks.

Another emerging food safety concern is the recent discovery of mad cow disease, Bovine Spongiform Encephalopathy (BSE), in North American cattle. Humans can become infected if they consume cattle with BSE (Centre for Disease Control and Prevention 2002a). The associated disease in humans is called Creutzfeldt – Jacob disease (CJD). CJD is a degenerative brain disease that causes neurological symptoms, progressive dementia, and death within three to twelve months after developing symptoms (Chin 2000). The infective agent for CJD is a unique protein called a prion. It is not destroyed during cooking. It takes 15 months to 30 years for symptoms of the disease to appear. Cattle contract BSE from consuming animal feed containing the brain, spinal cord, retina, dorsal root ganglia, distal ileum, and bone marrow from sheep, cattle and goats (Canadian Food Inspection Agency 2003). It has been common practice to make animal feed from leftover parts from the animal slaughterhouses. The animal feed industry is centralized similar to slaughterhouses. One sick animal in the slaughterhouse has the potential to infect thousands of cattle across the country. Humans can contract CJD from consuming cattle that are infected with BSE. In 1997 a feed ban came into effect prohibiting the inclusion of ruminant protein in feed intended for other ruminants; this has been identified as a primary means by which BSE spread. It is expected that eliminating this component from the feed will prevent the spread of CJD.



Finally, farming practices have been linked to a reduction in the nutritional value of the food. A United Kingdom study examining the mineral content of 20 fruits and 20 vegetables grown in the 1930s compared to mineral content of the same types of fruits and vegetables grown in the 1980s, revealed there has been a marked reduction in mineral content of produce over time. The authors concluded that there are statistically significant reductions in the levels of calcium, magnesium, copper and sodium in vegetables and magnesium, iron, copper and potassium in fruit (Mayer 1997). Depletion of soil minerals and early harvest are factors linked to a reduction in the nutritional value of foods (Linder 1985).

Proliferation of "Value-added" Foods

The focus of the food-processing sector is the production of *value-added* foods (Nestle 2002). Value added foods are often laden with cheap sources of fat and simple carbohydrates so that they are tasty and inexpensive. Cheaper fats and sugars (such as palm oil and high fructose corn syrup) are more stable during processing and can extend product shelf life. Consumption of value added foods, also dubbed *fast foods*, *convenience foods* and/or *junk foods* is linked to obesity, addictions and certain cancers (Nestle 2002, World Health Organization 2003).

"Super-sizing" value-added foods is a creative method employed by the food industry to garner a larger share of the food market and increase profits. In a recent study comparing portion sizes in similar eateries in Paris and Philadelphia (fast food outlets, pizzerias, ice cream parlours, and ethnic restaurants) researchers found the average portion size in Paris was 25 percent smaller than in Philadelphia. Chinese restaurants in Philadelphia served a meal that was 72 percent larger than Chinese restaurants in Paris. A candy bar in Philadelphia is 52 percent larger than the same candy bar in Paris; a soft drink is 41 percent larger and a hot dog is 63 percent larger. Researchers concluded that differences in portion size help explain the "French paradox". Despite France's rich cuisine, French citizens are decidedly slimmer than Americans. Only 7 percent of French are obese, compared with 30 percent of Americans (Rozin *et al.* 2003). Several new studies concur the strong association between increased portion size and obesity.

Many of the nutritional problems of Americans, not the least of them obesity, can be traced to the food industry's imperative to encourage people to eat more in order to generate sales and increase income. **(Nestle 2002)**

Food Miles

Food is travelling longer distances from the field to the plate. Research conducted by the Leopold Centre for Sustainable Agriculture (2001) found produce arriving by truck travelled an average distance of 1,518 miles to reach Chicago in 1998, a 22 percent increase over the 1,245 miles travelled in 1981. The dependency on transport for food is contributing to rapid depletion of non-renewable energy resources, significant dioxide emissions and global warming. An important nutritional issue is the loss of nutrients in food because of early harvest and transport of food (Linder 1985).

Communities are dependent upon the import of food. In the event of an emergency or a natural disaster preventing this import, communities in BC would run out of food in an estimated 2 to 3 days (Farmfolk Cityfolk 1996, *Report on the Quality of Life in Prince George* 1999).

Food Poverty

One in six BC children live in poverty (First Call 2001). Three in five Aboriginal children under the age of six live in low-income families (Northern Health 2002).

Individuals on income assistance or on low incomes cannot afford to purchase a healthy diet. This has been the consistent conclusion of annual surveys conducted by community nutritionists in BC over the past three years (Dietitians of Canada 2003) Table 4 provides the findings from the most recent *Cost of Eating Report*.

Low-income families turn to food banks when they are unable to purchase their food. The number of food banks and the number of individuals dependent upon them is rapidly increasing. The first food bank opened in Edmonton, Alberta in 1981 (Riches 1997). During that decade food banks proliferated at twice the speed of McDonalds franchises. By 1991 there were 345 food banks across Canada (Schiller 1993). In 2002, 2.4 percent of Canadians received emergency assistance from

TABLE 4 The monthly cost of eating in BC

	Single pregnant female on income assistance	Lone parent with two children on income assistance	Family of four on income assistance	Family of four earning average household income
Income	$ 600	$1376	$1486	$3893(net)
Food	-201	-471	-648	-648
Sub Total	*399*	*905*	*788*	*3245*
Rent	-540	-855	-855	-1061
What's Left	**-141**	**50**	**-17**	**2184**

Source: Dietitians of Canada 2003 *The Cost of Eating Report*

Food Poverty

The inability to purchase basic foods required for maintaining one's health.

food banks. This represented a 98 percent increase since 1989 (Wilson and Tsoa 2002).

Food banks were originally set up as a temporary measure to alleviate the immediate hunger needs. They are unable to ensure a healthy diet – particularly over the long term. Food banks are dependent upon donations. Forty percent of food banks have difficulty keeping pantry shelves stocked. Although food bank fare varies, processed and packaged foods are most frequently donated. Fruits and vegetables are donated the least (Wilson and Tsoa 2002). Food banks may not have the capacity to store fresh produce, in particular if refrigeration is required. This limits the types of food they can offer. Food banks essentially privatize dietary support – a medically necessary service – for those in need.

According to a study by James *et al.* (1997):

"Thousands of people with low income living in downtown Vancouver have no or minimal cooking and storage facilities in their homes – can we leave their nutritional health up to charity alone?" **(Barbarah Tinskamper, Community Nutritionist, Vancouver 2004)**

"The diet of the lower socio-economic groups provides cheap energy from foods such as meat products, full cream milk, fats, sugars, preserves, potatoes and cereals, but has little intake of vegetables, fruit, and whole wheat bread. This type of diet is lower in essential nutrients such as calcium, iron, magnesium, folate and vitamin C than that of the higher socioeconomic groups. New nutritional knowledge on the protective role of antioxidants and other dietary factors suggests that there is scope for enormous health gain if a diet rich in vegetables, fruit, unrefined cereal, fish and small quantities of quality vegetable oils could be more accessible to poor people."

Food poverty is a critical food system issue at the root of hunger and food insecurity.

Pushing the Package: The Influence of Advertising

Fast food advertising expenditure in the United States is estimated to be approximately three billion dollars annually. Advertising expenditure promoting healthier food choices is considerably less. For example, in the year 2000, McDonalds spent one billion to promote fast food, while the American Cancer Society spent one million to promote fruits and vegetables (Tufts 2000).

The bulk of food advertising occurs during children's prime time television viewing hours. According to the Canadian Pediatric Society (2000) American children watch an average of 23 hours of television per week – equivalent to 9.5 years by the time they reach age 70. Canadian children watch an average of 15.5 hours of television per week. Television watching is strongly associated with increased risk of obesity because it involves both a decrease in energy expenditure and an increase in energy intake through excessive consumption of high-fat, high-energy snack foods (Canadian Pediatric Association 2000)

A purpose and effect of advertising is summed up in the following passage from a study by Jaffe and Gertler (2001):

"The prevalence of packaged, processed and industrially transformed foodstuffs is often explained in terms of consumer preference for convenience. A closer look at the social construction of "consumers" reveals that the agro-food industry has waged a double disinformation campaign to manipulate and to re-educate consumers while appearing to respond to consumer demand . . . under the cumulative impacts of massive marketing projects, consumers have gained a pseudo-sophistication about foods, but often lost the knowledge necessary to make discerning decisions about the multiple dimensions of quality. They have also lost the skills needed to make use of basic commodities in a manner that allows them to eat a high quality diet while also eating lower on the food chain, and on a lower budget".

Poor Eating Habits

Poor eating habits follow food production, processing, distribution and marketing trends. Canadians of all ages, are consuming less than adequate, or minimally adequate, intakes of most food groups .

Table 5 reveals that Canadian adolescents ingest 33 percent of their energy daily from "other" foods (pop, chips, candy and sweets). Similarly the 1988–1994 U.S. National Health and Nutrition Examination Survey showed that "energy-dense, nutrient-poor" foods now account for more than 30 percent of American children's daily energy intake, with sweeteners and desserts jointly accounting for nearly 25 percent. (Centres for Disease Control and Prevention 2002b)

TABLE 5 Percent of macro-nutrients by food group in the diet of a Canadian male adolescent (13–17)

	Grains	Fruits & Vegetables	Milk Products	Meats & Alternates	Mixed Foods	Other
Energy	20	11	14	15	7	33
Carbohydrate	28	16	9	2	6	39
Protein	15	5	23	38	9	10
Fat	8	5	19	26	8	34

Source: Starkey *et al.* 2001 *Canadian Journal of Dietetic Practice and Research*

The eating habits of BC residents also fare poorly. A recent report from the Provincial Health Officer revealed that 25 percent of adult residents are consuming more than 35 percent of their daily calories from fat (BC Ministry of Health Services 2002). Taking into account the contribution of both food and supplements, the report further revealed:

- The majority of BC residents eat less than the recommended amounts of fruits, vegetables and milk products;
- Many BC adults have inadequate intakes of folate, vitamins B6 and B12, vitamin C, magnesium and zinc;
- Calcium and fibre intake was below recommended levels for all adults;
- 10 to 14 percent of pre-menopausal women had inadequate iron intake;
- Supplement use is widespread among BC adults and increases with age;
- 80 percent of women 71 years and older reported taking nutritional supplements.

Reorienting the System Towards Health

Our current food system is driven by fragmented policy, developed by a variety of sectors. Health is rarely the goal. The system, particularly the supply component, is undergoing rapid consolidation and control. A handful of trans-national corporations own the lion's share of the industry. They view food as a commodity rather than a health or social good. BC residents are distanced from the decisions that impact their supply and access to food.

The distance between people and their food is increasing on many levels. With most of our food being grown, processed and delivered by huge trans-national or multi-national companies, communities and individuals have lost the capacity to provide for themselves. Many residents are unable to purchase appropriate foods. Rich or poor, our citizens are consuming excessive amounts of high fat, high carbohydrate, highly packaged and processed foods. Hunger, obesity, food-borne illness and environmental degradation are some of the negative impacts.

It is time we changed the way we conceptualize and address food concerns. It is time to consider an alternative approach – one that strengthens community action, supports coherent food policy and reorients the food system towards health.

TABLE 6 A new direction for the food system

The Industrialized System		A Healthy, Sustainable Food System
globalization	***vs***	localisation
urban/rural divisions	***vs***	urban-rural partnership
long trade routes (food miles)	***vs***	short trade routes
import/export model of food security	***vs***	food from own resources
intensification	***vs***	extensification
fast speed, pace and scale of change	***vs***	slow pace, speed, scale of change
non-renewable energy	***vs***	re-usable energy
few market players (concentration)	***vs***	multiple players per sector
costs externalised	***vs***	costs intemalized
rural depopulation	***vs***	vibrant rural population
monoculture	***vs***	biodiversity
science replacing labour	***vs***	science supporting nature
agrochemicals	***vs***	organic/sustainable farming
biotechnology	***vs***	indigenous knowledge
processed (stored) food	***vs***	fresh (perishable) food
food from factories	***vs***	food from the land
hypermarkets	***vs***	markets
de-skilling	***vs***	skilling
standardization	***vs***	diversity
niche markets on shelves	***vs***	real variety on field and plate
people to food	***vs***	food to people
fragmented (diverse) culture	***vs***	common food culture
created wants (advertising)	***vs***	real wants (learning through culture)
burgerization	***vs***	local food specialties
microwave reheated food	***vs***	cooked food
fast food	***vs***	nutritious, home-style food
global decisions	***vs***	local decisions
top-down controls	***vs***	bottom-up controls
dependency culture	***vs***	self-reliance
health inequalities widening	***vs***	health inequalities narrowing
social polarisation and exclusion	***vs***	social inclusion
consumers	***vs***	citizens
food control	***vs***	food democracy

Adapted from: Lang, Heasman and Pitt 1999 *Food Globalization and a New Public Health Agenda*

5 The Financial Burden of Disease

Food related illness and disease are a significant expense to the health care system. Nutritional risk is the single best predictor of physician and emergency room visits, hospital readmission and increased length of stay (American Dietetic Association 1997, Mclellan and Van Til 1998).

Extensive data exists regarding the incidence, prevalence and cost of obesity and related chronic disease. These concerns are readily detectable and monitored. They are clearly indicated in medical records. However, food insecurity, hunger, nutrition deficiencies, malnutrition and food borne illness are health concerns that are less detectable. Data collection with respect to food insecurity and hunger has only recently been undertaken by population health surveys in Canada (Rainville and Brink 2001, Statistics Canada 2000–01). Individuals living with these concerns may not seek medical attention. Hospitalization typically occurs when secondary complications arise – pneumonia arising from malnutrition as an example. Typically the secondary complication is recorded as the reason for the hospital visit.

A full cost analysis of the spectrum of the food-related health concerns raised in this document remains to be developed. The following data on specific food related concerns *underestimates* the cost. Yet, the data suggests that if a full cost analysis was available, it would be staggering.

- A preliminary analysis of European Union countries suggests that 4.5 percent of Disability Adjusted Life Years Loss (DALY) are due to poor nutrition, with an additional 3.7 percent and 1.4 percent due to obesity and physical inactivity. The total percentage of Disability Adjusted Life Years lost related to poor nutrition and physical inactivity is 9.6 percent. This compares with 9 percent loss due to smoking (WHO Regional Office for Europe, The First Action Plan for Food and Nutrition Policy 2001).
- Obesity-related illnesses cost the BC health care system an estimated $380 million dollars annually. When productivity losses due to obesity, including premature death, absenteeism and disability, are added together, the total cost of obesity to the BC economy is estimated at between $730–830 million a year (Coleman *et al.* 2001).
- The costs of diabetes in the U.S. (direct and indirect) is $98 billion annually. Direct medical costs are $44 billion (cost of medical care services), indirect costs are $54 billion (disability, work loss and premature mortality) (American Diabetes Association 1997).
- The overall cost of diabetes in Canada is estimated to be $ 9 billion dollars annually (Canadian Diabetes Association *unpublished*).
- A Nova Scotia case study found the medical costs for a high-risk pregnancy were $10,138 compared to $2,465 for a healthy mother. The low-birth-weight baby's medical costs were $13,870 compared to $674 for a healthy baby (Glynn and Clemens 1995).

- The cost of providing care to one person admitted to the Prince George Regional Hospital with an eating disorder is nearly $2,500 each day (Northern Health 1999).
- Agricultural economists estimate the costs of food borne illness in U.S. children alone came to $2.3 billion in 2000 (Nestle 2003).
- Health Canada estimates that the 2.2 million cases of food-borne illness result in approximately 30 deaths and costs more than $1.3 billion in direct medical costs and lost wages annually (Health Canada 1998).
- The BC Centre for Disease Control estimates that the cost of food-borne illness in BC, due to microbial contamination, is approximately 374 million in 1994 dollars (BC Centre for Disease Control *unpublished*).

6 Food Security Interventions

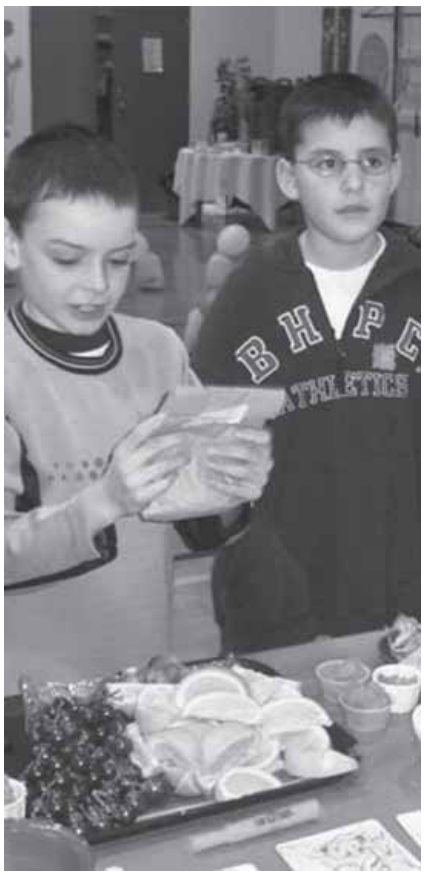
Escalating food security concerns have elicited a wide range of policy, program and service responses from global to local levels. This section reviews those responses.

Emergence of BC's Community Food Security Movement

Since 1920 it is estimated that 120 international declarations, conventions and resolutions have been formed with respect to the right to food. This right and the elimination of hunger were enshrined in the Universal Declaration of Human Rights (United Nations, New York 1948); in the Universal Declaration on the Eradication of Hunger and Malnutrition (World Food Conference, Italy, 1974); in the World Declaration of Nutrition (International Conference on Nutrition, Italy 1992); and in the Rome Declaration on World Food Security (World Food Summit, Italy 1996). Canada has been a signatory on each of these documents.

In 1998 as part of their commitment to international and domestic food security, the Canadian government developed an Action Plan on Food Security (Agriculture and Agrifood Canada, 1998). In 1999 a virtual Food Security Bureau was set up to monitor progress with the plan. Across the country from Newfoundland to BC various provincial, regional and local groups are organizing around food security.

BC has one of the most widespread and well-organized community food security movements in the country (Houghton 2003). Working largely on a volunteer basis, with substantial leadership from the community nutritionists and medical health officers, the community food security movement is tackling the problems on a number of fronts from the provision of emergency food and diet counselling to the creation of municipal food policy. This movement is comprised of local food security groups (sometimes called food security coalitions, networks or food policy councils). Members of these groups include representatives from all parts of the food system – from food bank users and farmers to municipal councillors and hungry citizens. Increasingly these groups are organizing themselves into regional and provincial food security networks (see Appendix A for a list of food security groups and networks in BC).



The Community Food Security Continuum

The *Community Food Security Continuum* (Figure 2) is a framework that illustrates the road to food security - strategies employed over time at local levels to realize community food security.

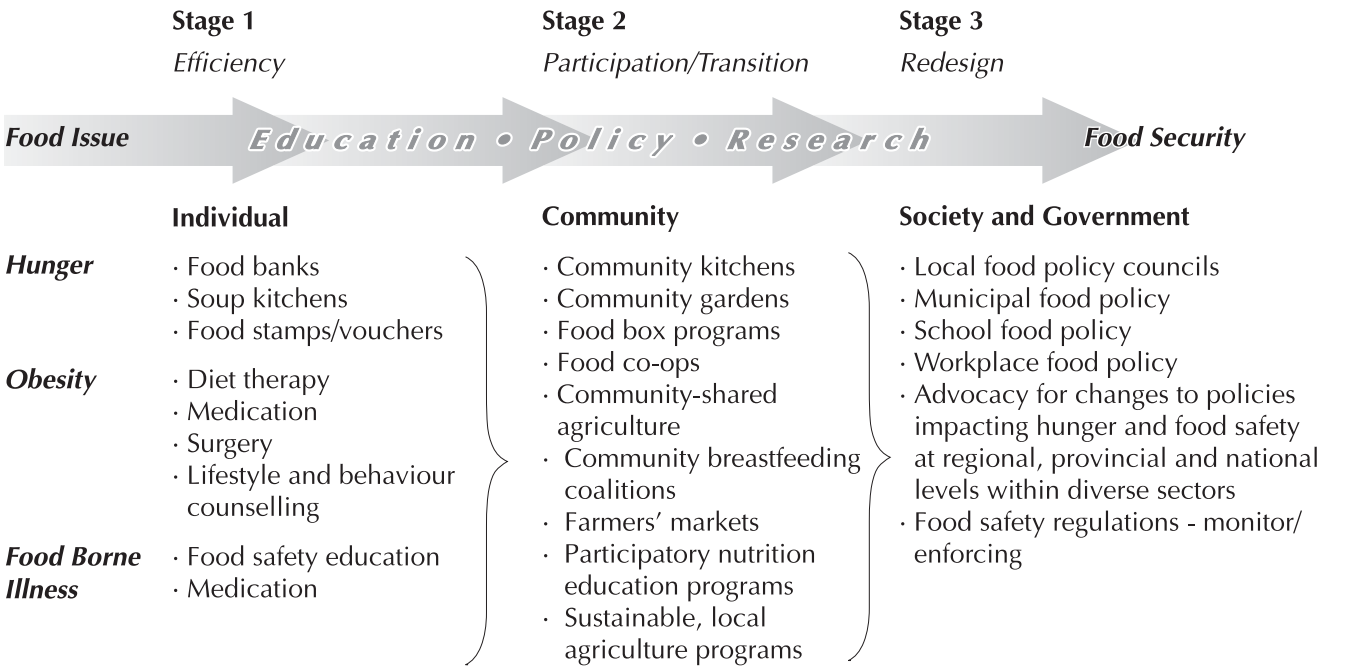


FIGURE 2 The community food security continuum depicting responses at local levels to the food security issues of hunger, obesity and food borne illness.
(Adapted from Houghton 1998 and 2003, Kalina 2000, and MacRae 1994)

Efficiency strategies

Efficiency strategies maximize existing resources to address food security concerns. They focus on treating the individual. As shown in Figure 2, sample efficiency responses to the problem of hunger include the provision of food through emergency feeding programs, food stamps or vouchers. Likewise, efficiency responses for the problem of obesity include diet therapy, medication, and surgery. Efficiency responses to food borne illness include education about food safety. Efficiency strategies tend to provide immediate, often temporary, relief of food security problems.

Participation/transition strategies

Participation/transition strategies can replace or run parallel with efficiency strategies. Described as building blocks to change, participation/transition strategies tend to be community driven, community based and small-scale initiatives. These strategies require participation and commitment from a diversity of community sectors concerned with food security issues. They are important considerations to those experiencing the day to day realities of such issues. Community breast feeding

coalitions, community kitchens, community gardens, food box programs, food co-operatives, community-shared agriculture and buy-local programs are sample participation/transition strategies. These strategies tend to address multiple food security issues. These strategies also take longer than efficiency strategies to evolve. However, meaningful engagement of the community yields solutions that are more sustainable over the long term.

Redesign strategies

Redesign strategies address structural issues giving rise to food security issues. Sample redesign strategies include the development of municipal policy supporting green space for urban gardening and local, nutritious foods in public institutions. Similarly, school food policies supporting adequate time to eat, promoting local foods in meal programs, and eliminating pop and other foods of limited nutritional value on site are sample redesign strategies. Food policy councils are vehicles that champion redesign strategies. These strategies require a long-term commitment from a diversity of sectors concerned with food security including policy makers. As such, redesign strategies are often the most difficult to mobilize. Redesign is unlikely to be achieved until efficiency and participation/ transition strategies have been attempted, because of the incremental nature of most policy and program development.

Food security framework

Those engaged in community food security understand that:

- *Achieving food security requires multiple strategies over time.* Food security is dependent on success with all three previously stated strategies[1]. It is important that there be positive movement over time towards systems redesign (Kalina 2000).
- *Food security is a community matter.* The extent to which a strategy is sustainable is proportional to the extent it meaningfully engages the broader community towards structural redesign. Achieving food security requires multiple partnerships. The participation of health, agricultural and social sectors, policy makers and concerned citizens is critical.
- *Food security is a systems matter*. It will ultimately be resolved when systems giving rise to food security issues are redesigned or reoriented towards health.
- *Food security is a policy matter*. It will only be resolved with the creation of coherent food policy.
- *Food security is a health matter*. Food security is the foundation for healthy people, healthy communities and healthy environments. Food security is a core public health function.
- The community food security continuum framework rests upon the same understandings that are fundamental to the food security defi-

[1] *Countries with the most comprehensive social policy and structure require emergency food programs. The critical issue in Canada is that current energy is heavily weighted in stage one on the continuum (McIntyre* et al. *1999, McIntyre 1999, Tarasuk 2001). According to Riches (1997) the institutionalization of food banks enables policy makers to claim the hungry are being fed.*

nitions and the sustainable food system concept outlined in Section 2. These understandings are congruent with the five domains of health promotion action outlined in Ottawa's Charter: strengthening community action, developing personal skills, creating supportive environments, building healthy public policy and re-orienting health services (Rutlen *et al.* 2000).

Current Contributions of the Health Sector

In BC, the public health sector is becoming increasingly involved in community food security work. The BC Ministry of Health Services has designated food security as a core public health function within their *draft* core services document (BC Ministry of Health Planning 2003). Recently, medical health officers worked with community nutritionists to create a provincial Food Security Public Health Alliance. The alliance intends to strengthen and support community food security endeavours in BC (Health Officers Council of BC 2003). All health authorities employ a variety of staff who perform food security work. Public health professionals engaged in food security work include, but are not limited to, medical health officers, public health inspectors, public health nurses and community nutritionists.

Community nutritionists are taking the lead role in community food security interventions. This is because food security has a natural fit with their role and mandate – which is to prevent food and nutrition related problems and promote overall health and well-being. Community nutritionists conduct their work in collaboration with other health professionals and community organizations and coalitions through organized community efforts.

Many nutritionists have either initiated or are actively involved in food security groups, coalitions and/or networks from local to provincial levels. Many actively support the strategies employed by such groups – from food box programs to urban greening policy. In addition to directly supporting community food security interventions, community nutritionists indirectly support these interventions by linking them to the spectrum of public health activities – from healthy child development and chronic disease prevention to environmental promotion and protection activities.

A variety of skills are used by community nutritionists in their food security activities including: community organizing, advocacy, policy development, public awareness, adult education, social marketing, fundraising, research, media, technical writing, and program planning, implementation, management and evaluation. The spectrum of programs and services provided by community nutritionists may include supporting public health professionals who provide services in home care and assisted living, as well as monitoring and enforcement of licensing legislation.

Appendix B lists key food security functions employed by community nutritionists in BC. For comparison, food security activities carried out by public health nutritionists in Ontario is provided in Appendix C. Food security is a mandated activity of public health nutritionists in Ontario (Ontario Public Health Association 2003).

7 Potential for Community Food Security

This section presents a summary of the evidence found in the literature regarding the effectiveness of community food security work in BC, across Canada and internationally. While food security initiatives are growing in response to the anticipated food security crisis, a standardised set of food security indicators is yet to emerge. Nonetheless, a recommended set of indicators based on what is currently available in the literature is proposed. This set of indicators offers the basis from which a comprehensive set of indicators can be built. It provides a starting point to measure the success of community food security endeavours.

Health Outcomes of Food Security Interventions

The literature reveals that food security interventions – policies, programs and services – have realized a host of positive health outcomes. Table 7 provides a synopsis of health outcomes linked to food security interventions.

Table 7 illustrates food security strategies that lead to health improvement, disease and injury prevention, and environmental health. Outcomes correspond to core service areas defined by the BC Ministry of Health Services in their draft core services document (BC Ministry of Health Planning 2003). Those service areas include:

- *health improvement* – services or activities that improve overall health and well-being and/or have a broad preventive impact on a wide variety of physical and mental health problems;
- *prevention of disease, disability and injury* – services or activities that have a specific preventive effect on a specific disease or condition;
- *environmental health* – services or activities that protect people from hazards in the physical environment.

A fourth service area has recently been added to the core services document – emergency health management. Community food security interventions apply to this service area as well. Local food security reduces vulnerability to interruptions of supply.

TABLE 7 Achieving health along the food security continuum

This table lists examples of the outcomes that can be achieved by implementing food security strategies, which usually occur concurrently.

Food Security Continuum and Programs			
	Efficiency Strategies	***Participation/Transition Strategies***	***System Redesign Strategies***
	• charitable food programs[80] • foodbanks [8,126] • school feeding programs • pregnancy outreach programs • screening and monitoring nutritional risk among vulnerable populations • "Food Safe" education	• nutrition education (e.g., workshops, supermarket tours, food festivals and teaching other professionals) [20, 32, 51, 59, 78, 90, 131] • community kitchens[57] • community bulk buying clubs (e.g., Good Food Box) • community gardens • community supported agriculture [66] • coordination of local/regional food activities • food festivals/fairs	• develop policies and directives for institutions to use government funded systems to buy local foods [54,64] • restructure social assistance rates to ensure welfare recipients can purchase the foods required for health[1,2,61,103] • ensure health care planning has sufficient resources to promote health and the prevention of disease [59,103] • develop policies to limit fast food/"junk food" for children[42,114] • develop education policies that allow for nutrition education and skill building around healthy eating [7,53,57,58,78,124] • develop agricultural systems that support local, sustainable food production, processing and marketing [47,63,97,123] • develop standards for the agriculture industry to become environmentally friendly • develop multi-jurisdictional, inter-ministerial community partnerships [12,55,67,77,92]
Public Health Outcomes for Food Security Strategies			
	Efficiency Strategies	***Participation/Transition Strategies***	***System Redesign Strategies***
Health Improvement Outcomes	**Improved learning and education outcomes** *Indicators:* • better performance in school • fewer missed school days *Evidence:* • improved nutrition and increased learning at school through school meal programs[10,30,48,77,84] **Healthy pregnancy outcomes** • Pregnancy Outreach Programs – healthy moms/ healthy infants [28,31,96] **Increased health and productivity** • improved health and economic productivity due to better access to food [1]	**Increased knowledge on how to support health** *Indicators:* • capacity to choose good food [56,82,98] • knowledge of food preparation, storage and preservation [57,58,70] • rejection of "junk food"[37,41,50,105,114] • improvement of body image [26,29] • breast feeding rates [52] **Decreased incidence of childhood ailments** • healthy development [2,22,29,41,100] • healthy brain development [50,100,115] **Increased ability for self-care** • increased community participation [7,66] • increased dignity and self-esteem [7,57,58,86] **Reduced illness and acute care costs** • reduced acute care costs [3,72,101] • reduced hospitalization [3,4,21,68,79]	**Increased health of food supply** *Indicators and Evidence:* • more healthy food choices available [132] • increased food micro-nutrients [25,76,123,132] • increased level of antioxidants in organic foods [5,76,129] **Increased ability of individuals to access healthy foods** • increased community capacity [12,55,60,65,74,90,106] • improved social determinants of health [34,40,56,80,89] • good range of food choices assured [49,66]

TABLE 7 Continued

Public Health Outcomes for Food Security Strategies			
	Efficiency Strategies	***Participation/Transition Strategies***	***System Redesign Strategies***
Prevention of Disease, Injury and Disability Outcomes	**Prevention of low birth weight babies** *Indicator:* • incidence of low birth weight and associated health risk factors *Evidence:* • POP outcomes and decreased low birth weight [9,13,33,106,130] **Early assessment of health risks leading to decreased utilization of health care** *Indicator:* • number of seniors screened • number of health risks identified by early screening *Evidence:* • monitoring for health conditions [116] • monitoring nutritional risk in seniors [22,68,71,72,79,101,113]	**Decreased dependency and use of food banks** *Indicator:* • change in use of food banks *Evidence:* • food banks possibly contributing to obesity [14] • food banks possibly contributing to food insecurity **Reduced incidence of chronic disease, injury and disability** • decreased incidence in all chronic disease [11, 21,38,39,45,46,67,75,95, 119,127,128] • reduced obesity rates [14,15,19,29,35,37, 85,99,118,121,122] • reduced incidence of eating disorders • less Type 2 diabetes [44,83,89,107,109] • reduced cancer rates [23,39] • reduced rates of arthritis [95] • reduced iatrogenic effects in hospitals [87,113] **Reduced incidence of behavioural issues contributing to poor health** • reduced crime/reduced violence [27] • reduced addictive behaviour [44] • reduced behaviour problems in children • decreased bullying and violence on the playground [30,42,84,110]	**Decreased incidence of non-food borne illness** • reduced pesticide and toxic residues [6,16,18,104,108] • reduced use of antibiotics [62] **Improved nutrition status of residents in care facilities** *Indicators:* • nutrient content of daily food intake • appropriateness of diet *Evidence:* • fewer residents at nutritional risk • fewer residents with nutrition-related health problems [35, 112,125]
Environmental Outcomes	**Decreased incidence of food borne illness** *Indicators and Evidence:* • decrease in food-borne illness [74,108] • increased food safety [57]	**Increased access to health promoting foods** *Indicators and Evidence:* • healthier food in the workplace [93] • healthier foods in schools/ meal programs **Effectiveness of school meal programs** • dependent on capacity building integral to program [81]	**Increased health of community** *Indicators:* • interventions addressing environmental barriers to optimal health [12,34,60,64,74,120] • participation in developing food policies [65,73,102] *Evidence:* • public input into social planning and food policy [12,34,60,64,74,120] • reduced environmental pollutants, reduced pesticide and toxic residues in food [6,16,17,18,104] • reduced transportation distance for foods [69,70] • reduced use of antibiotics due to local enhanced food supply [62] • improved nutrient intake due to increased use of local food [62] • increased local economic activity [49,63,64] **Increased control over food supply** • reduced dependence on sources of food over which the region has no control (e.g., fast foods) [14,55,111] • preference for seasonal foods [25] • increased use of local, non-imported foods

Refer to Appendix E for references.

The key findings of the literature review can be summarized as follows:

- Community food security interventions have positive outcomes across all traditional public health service areas;
- The effectiveness of interventions in sustaining positive health outcomes appears to improve as interventions strengthen community action towards system redesign (Beihler *et al.* 1999, Dahlberg *et al.* 1997, Welsh and MacRae 1998, Yeatman 1996);
- While systems redesign strategies take longer to evolve, they address multiple concerns in an integrated fashion; and
- The connection between community food security strategies and health-related outcomes (particularly concerning the system redesign strategies) has not been addressed in peer reviewed health journals. The current evidence available refers mostly to efficiency and participation/ transition strategies. This may reflect the fact that there are few redesign strategies that are being applied at present, that they take longer to evolve, and health sectors have not taken their place at the redesign table.

Emerging Community Food Security Indicators

While a number of community food security indicators exist, a standardized set, particularly relevant to the public health sector, has yet to emerge. In the literature, indicators are labelled as direct and indirect. From a clinical nutrition perspective, direct indicators are measures that reflect the physical nutritional health status of residents of BC. For example, body mass index (BMI) is a direct measure of obesity. Direct measures exist for a number of food security issues, but not all.

In the case of food insecurity and hunger, direct indicators do not exist. This is because individuals can experience food insecurity and hunger without having a measurable change to physical health status. Direct indicators do exist for the long-term consequences of food insecurity and hunger - nutrition deficiencies, low birth weights, malnutrition and so on. This is not to suggest food insecurity and hunger cannot or should not be measured. According to Tarasuk (2004) *"The profound deprivation that underlies experiences of food insecurity suggests that this condition is a matter of public health concern and a social problem worthy of monitoring in its own right. Food insecurity is also important to monitor as a risk condition for other health concerns."*

Direct indicators only illuminate a small fraction of the food security issue. They tend to measure longer-term physical health outcomes. Other personal health indicators – measures of psychological, emotional and spiritual well-being – are not typically cited. Nor are community and environmental health indicators commonly included on the direct indicator lists. Yet the breadth of the food security concept and approach demand additional indicators.

Indirect indicators (also called "predictor" indicators) assist in providing a fuller picture of the state of food security in BC (Riches 1997, Sarlio-Lahteenkorva and Lahelma 2001). In the case of hunger, food bank proliferation and usage rates are commonly cited as indirect indicators. The inability of residents to purchase appropriate food is another widely accepted indicator of hunger. Indirect indicators are diverse, ranging from the ratio of farms to population base, the distance food travels to local markets, household incomes, social assistance rates, eating habits, and the existence of coherent food policies.

Tables 8 and 9 define some of the emerging indicators that will help to identify standardized measuring tools.

TABLE 8 Key direct food security indicators

Personal food security issue	Indicator of successful management
Hunger	Incidence and prevalence of food insecurity and hunger as reported in population health surveys
Malnutrition	Rate of low birth weights Number of infants born with neural tube defects Hospital admissions due to malnutrition
Obesity	Percentage of population with Body Mass Index (BMI) >27
Chronic Disease	Incidence and prevalence of Type 2 diabetes, cardiovascular disease and cancer
Food-borne Illness	Reports of food-borne illness Food-borne illness outbreaks Rate of food-related cancers Occurrence of food allergies or sensitivities

TABLE 9 Key indirect food security indicators

Precipitating Food System Issues	Indicator of Successful Management
Local food production capacity	Amount and types of foods locally produced Degree of self-reliance regarding provision of food to meet nutritional needs of population Number of local farms/farmers Number of community gardens/rooftop gardens Number of community shared agriculture initiatives
Level of contaminants in food	Amount of organic food produced Amount of pesticides, chemicals and hormones used in food production Levels of pesticides, chemicals and hormones found in food Number of farms using genetically modified seeds
Local food processing capacity	Amount and types of foods processed locally Number of community kitchens/community cooking clubs, incubator kitchens Number of participants in community kitchen programs Number of food processing facilities
Food transportation	Number of food miles from farms to retail stores Amount of fossil fuel consumed and carbon dioxide emitted by vehicles transporting food Numbers and frequency of food borne illnesses due to food processing and storage methods
Marketing of local foods	Number of farmer's markets and their usage Quantity and type of food in local food stores Quantity and type of food in local institutions Number of food outlets, grocery stores in low income neighbourhoods
Food advertising	Advertising of fast foods and foods from other food groups (e.g., number of television ads in prime time) Advertising of fresh fruits and vegetables (e.g., number of television ads in prime time)
Food poverty	Level of household incomes Level of social assistance rates Monthly funds available to citizens to purchase a nutritious food basket Number of food banks Rate of food bank usage Number of school meal programs
Healthy eating	Breast feeding rates Level of consumption of fruits and vegetables Level of consumption of low fat dairy products Level of consumption of lean meats Level of consumption of high fibre foods Level of consumption high fat, high sugar foods – other foods Level of consumption of fresh foods Level of consumption of local foods Level of consumption of organic foods
Evidence of food citizenship/ community around food	Degree of social cohesion around food as measured by social research Number of food box programs Ratio of families eating at the table in a Health Authority area Number of community kitchens/gardens
Evidence of existing food policies	Number of inter-sectoral partnerships in a Health Authority around food security and related policies Number of coherent food policies for health care facilities, schools, prisons and other public venues in a Health Authority area Number of municipalities with a municipal food policy in a Health Authority area Degree of advocacy in a Health Authority for social, agricultural and health policies

8 Successful Food Security Initiatives

While a comprehensive list of successful food security initiatives is beyond the scope of this document, following are examples of initiatives towards community food security internationally, nationally and in communities across BC. These are initiatives that:

- Promote optimal nourishment of the population and prevent a range of food security concerns; and
- Employ one or more food security strategies that realize positive outcomes.

At the International and National Level

Norway's Food Policy

Extensive unemployment and poverty in Norway in the 1930s resulted in a diet lacking variety, with a substantial portion of the population suffering from malnutrition. Health problems included rickets, vitamin deficiencies, anaemia and decreased resistance to infectious diseases. By 1937 these food related issues were of such a concern that the government decided to take responsibility for a national nutrition policy. This policy had the dual aim of promoting public health and benefiting agriculture. In 1937 a National Nutrition Council (NNC) was established that included representatives from the Ministries of Health, Agriculture, Fisheries and Trade. The NNC set out to conduct a major nutrition education campaign.

By the l950s Norway was enjoying economic prosperity – Norwegian dietary habits changed radically. Overall fat intake increased and fibre intake decreased which resulted in obesity. By the mid seventies cardiovascular disease accounted for half the deaths in the country.

There was a second call for an integrated nutrition policy at the *World Food Conference* of 1974, and the Norwegian Minister of Agriculture made a commitment to formulate the policy. Within a year a white paper was submitted to parliament and a National Nutrition and Food Policy adopted. The general policy goals were to follow the recommendations of the World Food Conference – to encourage healthy eating habits, increase the consumption of Norwegian food products, improve the degree of self-sufficiency in food products, and to capitalize on food resources in areas with a weak economy.

By 1975, two agencies had been set up to co-ordinate and implement the nutrition and food policy: the Interministerial Co-ordinating Committee on Nutrition (ICCN) and the National Nutrition Council (NNC). The NNC included 17 scientists and experts from nutrition, health, dietetics and food production. Their role was to provide advice, conduct research,

make recommendations on policy and monitor the progress of policy.

A full decade after the adoption of a national food and nutrition policy, several positive gains were evident: increased consumption of cereals, vegetables, fruit, fish and low fat milks; decreased fat intake (from 41 percent to 38 percent) and a reduction in deaths from coronary heart disease and related disorders (Norwegian Royal Ministry of Health and Social Affairs 1981–82).

The effort to integrate public health goals with agricultural policies required considerable time, energy and debate. Progress was slow, in part due to the meat and dairy industry's concerns around promoting the intake of fruit, vegetables, fish and other low-fat foods over dairy and meat products. Research and financial support brought these groups on board.

The most recent challenge to the Norwegian food and nutrition policy was the global trade arrangement of the 1990s. Norway's policy to permit no TV food advertisements for children under 12 is now under attack (by the British advertising industry). As well, the Global Agreement on Tariffs and Trade has meant that Norway had to give up its ban on food dyes. Norway is not backing down, however. In current trade negotiations Norway is arguing its case for national agriculture policy in the name of food security (Lang, Heasman and Pitt 1999).

Toronto Food Policy Council: A Systems Approach to Community Food Security

Established in 1990, the Toronto Food Policy Council (TFPC) was Canada's first official Food Policy Organization (FPO). The TFPC partners with business and community groups to develop policies and programs that promote food security. The aim of the TFPC is *"a food system that fosters equitable food access, nutrition, community development and environmental health"*. The council has three primary goals:

- to reduce hunger and the need for a charitable food distribution system;
- to increase access to sufficient, nutritious, affordable, safe and personally acceptable foods; and
- to promote equitable food production and distribution systems which are nutritionally and environmentally sound (Schiller 1996).

The TFPC is a subcommittee of the Toronto Board of Health, having a yearly budget of $200,000. It consists of 21 volunteer members appointed by city council. Members come from a diverse range of food-related backgrounds. The TFPC is co-chaired by a city counsellor and a community member. The organization has three full time staff. Community action, advocacy, education, research, networking, communication and policy development are the principle activities of the council.

Since its inception the TFPC has acted as a catalyst spurring on an explosion of community food security programs. Community shared agriculture, breast feeding programs, farmers markets, good food box programs, incubator kitchens, community restaurants, community gar-

dens, rooftop gardens, and school food programs proliferate. These programs are designed to provide Toronto residents access to an affordable nourishing diet, to rebuild food skills, and to foster community around food. Decreased social isolation, increased consumption of fruits and vegetables, increased community food self-sufficiency and increased sustainable food production are but a sample of the health outcomes reported in the literature (Biehler *et al.* 1999, Toronto Food Policy Council 2001, Welsh and MacRae 1998). On the policy front, the organization has developed a number of discussion papers, and in 2001, the City of Toronto adopted a Food Policy Charter (TFPC 2001a).

The TFPC was not a novel concept. It was inspired by the Knoxville Food Policy Council and the United Kingdoms London Food Commission (Lang 1999, Yeatman 1994). The TFPC differs from most other FPOs in the Canada in that it is based in government institutions.

Toronto Food Policy Council's successes, like those of FPOs across North America, have hinged on their capacity to:

- Access leadership – particularly within the health, municipal and agricultural sectors;
- Access core funding to support the activities of the organization;
- Conduct research and share information;
- Organize diverse partnerships;
- Access decision-makers;
- Develop food policy;
- Highlight and take positions on food issues; and
- Act as a catalyst for projects (Biehler *et al.* 1999).

The TFPC model to build community food security has inspired the development of FPOs across Canada, from St. Johns, Newfoundland, to Prince George, BC. Local groups are linking through a variety of mediums, creating regional, provincial and national networks. Their aim is the development of healthy, integrated food policy supporting a re-orientation of the food system towards health.

For further information visit www.city.toronto.on.ca/health/tfpc_index.htm or contact Wayne Roberts, Coordinator tfpc@toronto.ca

The Best of BC

Cooking Fun for Families Program

Cooking Fun for Families is a food skill-building program that helps families with challenges including food security, life skills, social skills and community integration. The program provides education on nutrition, food preparation and budgeting in a safe and comfortable environment. The program is community based and community-driven, involving partners from the schools, community centres, neighbourhood houses, Boys and Girls Clubs, the Vancouver Food Bank and the University of BC. The program is supported by a community nutritionist employed by the Vancouver Coastal Health Authority who helps with a variety of activities from fund-raising to program development.

This project demonstrated the need for a five-year community development plan. There is also a need to collaborate with partners to find available capacity to support the programs. One of the major challenges in implementing new programs is funding. Grant writing is an ongoing need.

While a formal evaluation of the program is due in 2004, preliminary successes include:

- skill development in budgeting, meal planning and preparation;
- increased awareness of healthy foods among parents and children;
- introduction of new skills to new immigrants;
- pre-employment skill development for parents and children;
- the creation of safe community learning environments;
- increased social cohesion, socialization, cultural exposure; and
- increased parent involvement with their schools and community centres.

For further information contact Barbara Crocker or Melanie Kurrein, Vancouver Coastal Health Authority, Vancouver, BC
barbara_crocker@vrhb.bc.ca *or* melanie_kurrein@vrhb.bc.ca

Build It and They will Come! Nanaimo Foodshare

Since 1997 Nanaimo residents concerned with food security have been working collaboratively to establish and develop the Nanaimo Foodshare Society. The mission of the Society is to increase individual and community food security by providing programs and services that facilitate equitable access to food in empowering ways. Their mandate is to:

- Operate a food resource and referral centre;
- Facilitate gleaning and distribution of surplus foods in the community;
- Operate a summer lunch program for low-income, school age children;

- Operate a food box program to provide access to affordable, nutritious food; and
- Develop and operate new programs that meet food needs through skill-building and self-reliance.

The Foodshare Centre is a hub of activity in Nanaimo's downtown. As well as Foodshare, the centre houses the Nanaimo Community Kitchens and Community Garden Programs. The gardens are located on the adjoining city property. Community groups use the centre for meetings and events. There are many workshops in food preparation and preservation offered that make use of the Health Authority's "Approved Kitchen."

Highlights from Foodshare's 2003 activities include:

- The Summer Lunch Munch Program served 6000 lunches prepared at the Foodshare Centre;
- The Living Well Program for diabetes prevention offered monthly workshops on "cooking out of the box" (the Good Food Box) and canning, as well as a community walking program;
- Reorganized the Good Food Box Program;
- Implemented a community food growers gleaning program;
- Developed funding proposals for a youth scratch cooking program and for a women's entrepreneurial training program; and
- Worked with the city's Social Planning Committee to create a food security umbrella organization, Nanaimo Food Link, to accommodate the continuum from food banks to policy creation.

For further information contact: Nanaimo Food Share Society – foodshare@shaw.ca *or*

Making the Links: BC's Food System Network

The British Columbia Food Systems Network is a provincial food policy organization which links people all over the province involved in community action related to food. Established in 1999, its first project was to create a framework for presentations to the Provincial Government's Agri-Food Policy public consultation process; the result was a consistent and powerful message about the importance of food security in agri-food policy at every hearing of the Government committee.

Members of the Network include farmers, community outreach workers, community nutritionists, food processors, food system analysts, educators, policy-makers, First Nations people, leaders and participants in the BC Pregnancy Outreach Programs, and people living with poverty. Many of the local initiatives linked by the Network are rooted in the work of Community Nutritionists.

The Network provides opportunities for exploring and connecting initiatives related to food security, food policy and public health, and the development of best practices in these areas. It also distributes information and resources through a web site and a list serv, and hosts an annual conference for education, networking and planning.

The Network's activities are based in an understanding of the social determinants of health, and it places local initiatives such as Good Food Box projects or its conference on "Greenhouse Growing North of the 54th Parallel" in this holistic context. Its annual Sorrento Gatherings have emphasized the complex links between land, food, medicine and health, with substantial leadership from First Nations elders. In addition to modelling an inclusive and respectful process, the Gathering also models the celebration of local foods produced in a sustainable manner.

For further information visit the website at www.fooddemocracy.org, or contact: Cathleen Kneen, Coordinator, BC Food Systems Network, S-6, C-27, RR #1 Sorrento, V0E 2W0, BC – cathleen@ramshorn.bc.ca

Healthy Eating Active Living in Northern BC

In communities across northern BC, food security is understood to be the root of healthy living. Achieving community food security is integral to the vision of one of the regions most visible, and widely known, health promotion and community development endeavours – the Healthy Eating Active Living (HEAL) program. This program is funded by Health Canada and managed by the Northern Health Authority. It is guided by a committee of diverse stakeholders and is engaging people to become active participants in their health.

In HEAL's first year an advisory committee was established, a vision was created, and a communication strategy was developed and implemented. This strategy included the development of a website, a list serve, newsletters and e-briefs. The result is a growing and thriving HEAL network (the website alone www.healbc.ca attracts over a thousand visitors per month).

HEAL provided seed funding for 15 participation/transition projects in its first year. Eleven of these projects were directed at improving food security: a green house and garden at Acwsalcta School in Bella Coola; community gardens in Canim Lake, Dawson Creek, Fort Nelson, Smithers, Terrace and Prince George; community kitchens in Fort St. John, a cooperative food buying program in Horsefly and a nutrition education program in Masset grocery stores.

These HEAL projects have resulted in a number of positive personal, community and environmental health outcomes such as awareness of healthy food, increased food production, and preparation skills.

HEAL Network participants work extensively on education and skill building. They come together annually to share expertise and identify relevant activities for their communities. Skill building sessions ranged from conducting participatory research and supporting youth leadership to personalizing food policy.

HEAL took on redesign strategies in its second year, taking aim at the lack of food policies within schools and workplaces. The result was the development and adoption of food, nutrition and wellness policies in four elementary schools and in one community organization in the Cariboo. The vision *Every School a HEAL School* is becoming a reality in the neighbouring Interior Health Authority, as they have recently earmarked funds for this purpose.

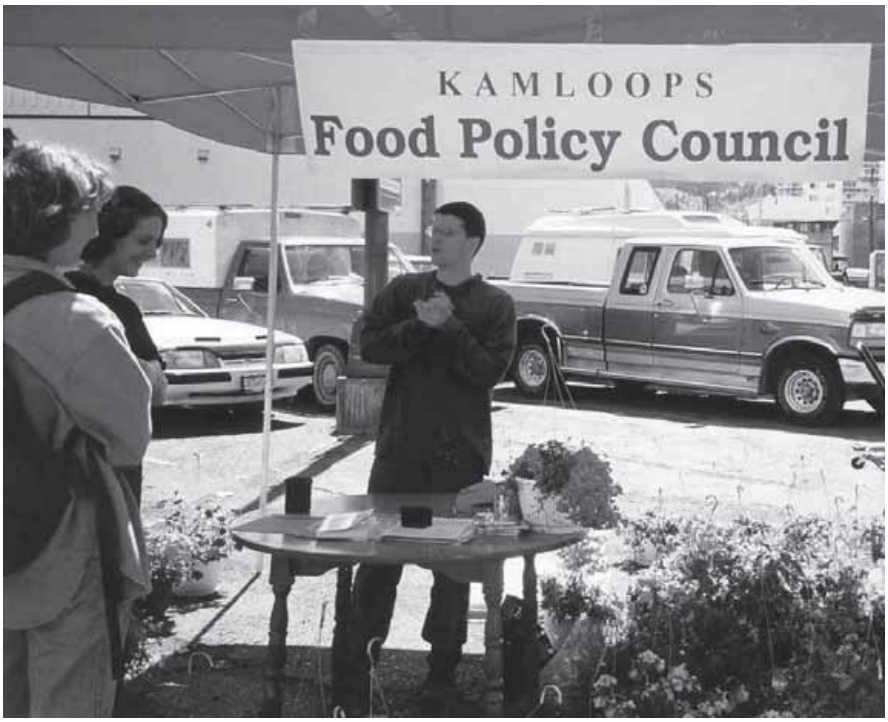
In its third year HEAL continues to broaden and strengthen its network and to support communities in their policy and system redesign strategies. Major initiatives underway include: the mapping of HEAL activities, the creation of a documentary film to share HEAL's successes, and the completion of a first participatory evaluation report.

Four outcomes specific to food security are emerging from HEAL's major activities: s*kill building, strengthened community action, structural redesign and healthy food policy.*

For further information visit www.healbc.ca or contact Joanne Houghton, Community Nutritionist, Northern Health Authority Joanne.Houghton@northernhealth.ca

Kamloops Food Policy Council

While officially established in 1997, the Kamloops Food Policy Council has been working for more than a decade on food security activities. Laura Kalina, Community Nutritionist with the Interior Health Authority, has been collaborating with the diverse partners of the Kamloops Food Policy Council to develop programs and services that make nutritious food more available. Partnerships with the Salvation Army, church groups and community agencies have created participatory transitional programs such as community kitchens and gardens, the Good Food Box and the Gardengate Training Centre.



Gardengate is a horticultural training centre for marginalized groups. According to Kalina, the Gardengate Training Centre produced 20,000 pounds of food on one acre of land in 2003.

"This is land owned by the health region and now it is not only producing fresh organic produce but people are being trained in horticulture," commented Kalina.

The Kamloops Food Policy Council was the first organization in BC and Canada to have the successful adoption of a Food and Nutrition Policy Framework at both the municipal and regional levels. This framework was adopted by the former Thompson Health Region and Social Planning Council, and City of Kamloops. It facilitates the enhancement of food security programs in the region and includes:

- Safe and nutritious food is available within the region for all residents;
- Access to the safe and nutritious food is not limited by economic status, location, or other factors beyond a resident's control;
- There is a local and regional agriculture and food production system which supplies wholesome food to the region's residents on a sustainable basis; and
- All residents have the information and skills to achieve nutritional well-being.

Positive outcomes include a steady decline in food bank usage from 1999 through to 2002. CBC News (2002) reported that the Kamloops Food Bank was the only food bank in Canada where numbers have decreased by 32 percent. The decline is attributed to grassroots initiatives to make food security a priority. Sharon Hartline, Executive Director, of the Kamloops Food Bank states, "The goal of food security in our

region is to provide 'good food for all people, not poor food for poor people'. Food Security is a population health issue and our community nutritionist has played a major role in not only establishing our local food policy council but also striving for food security across the region".

For further information contact Laura Kalina, Community Nutritionist, Interior Health, Kamloops, BC Laura.Kalina@interiorhealth.ca

Food for Kidz

Food For Kidz (FFK) is a regional coalition which addresses food security in the South Fraser Area. Food for Kidz works to: increase community awareness and responsibility to eliminate child hunger; advocate for hungry children; encourage programs to feed children and to promote healthy local food systems.

Food for Kidz first brought together community partners in the South Fraser regarding the issue of food security at a community forum in 1999. Community Nutritionists with the Fraser Health Authority have taken a lead role in FFK. As the issue of child hunger was of paramount concern to this group, FFK embarked on a community hunger assessment in Surrey and Langley, utilizing participatory action research. This report is available at: www.firstcallbc.org/publications/publication_home.htm

Food for Kidz partnered with community agencies in 2003 to develop an electronic database of low and no cost food sources and food action projects in Surrey and White Rock. FFK is currently working with community partners toward the formation of a food policy council in the South Fraser.

For further information, contact: Community Nutrition Program at Fraser Health Authority – phnutrition@fraserhealth.ca

Vancouver Food Policy Task Force

Discussions about a coordinated food policy for the City of Vancouver have been taking place for more than a decade. In 1990 the Vancouver Health Department nutritionists initiated internal discussions about local food security, the production and supply of adequate quality of foods and the ability to acquire them. In 1993, the Vancouver Food Policy Coalition was created and included members from the Vancouver Health Department, Vancouver Social Planning, BC Ministry of Agriculture, Reach Community Health Centre as well as the Food Bank and a few other organizations. After many years of discussion about a food policy for Vancouver, in 2003 the City Council created a Food Policy Task Force. This Task Force was spearheaded by several of the Vancouver City Councillors, Vancouver School Board, Vancouver

Coastal Health representatives, Vancouver Parks Board and representatives from approximately 70 community groups.

On July 8, 2003 the Vancouver City Council approved a motion supporting the development of a just and sustainable food system for their city. In March 2004, Vancouver City Council approved the positions for two full-time staff to work in connection with a Food Policy Council.

Capital Region Food And Agriculture Initiatives Roundtable (CR FAIR)

CR FAIR has brought together a wide range of agencies and groups interested in food and agriculture in the Capital Region of BC. For the past ten years they have focused on their vision to create a sustainable and secure local agriculture and food system that provides safe, nutritious food accessible to everyone in the Capital Region. Some of the activities have included "buy local" campaigns, public forums related to food security, advising the provincial government on agri-food policy, and the first ever Baseline Assessment of Food Security in the Capital Region.

The membership includes The Land Conservancy, Life Cycles Project Society, Small Scale Producers Association, Growing Green, Island Farmers Alliance, Groundworks Learning Centre, BCGEU, Vancouver Island Health Authority, the Ministry of Agriculture, Fisheries and Food, and the Community Social Planning Council.

For further information contact: Community Social Planning Council of Greater Victoria – info@communitycouncil.ca

9 Furthering Community Food Security in BC – A Role for Public Health

Despite remarkable success over the short term, community food security is far from being realized in BC. The health sector has yet to officially acknowledge food security as a core public health function. The extent to which health authorities embrace and support food security work varies considerably from region to region.[2] Food security programs and services remain fragmented and ad hoc and lack stability. Coherent food policy at all levels is slow to emerge. A standardized set of food security indicators has not been developed. Baseline data about the state of food security in BC has not been gathered. This section outlines concrete steps the health sector can take to build upon best practices and existing capacity in order to realize food security over the long term.

The Role of the Provincial Government

How can the health sector further food security in BC? First and foremost, the health sector must confirm their legitimate role in building community food security. The move by the BC Ministry of Health Services (BCMHS) to designate food security as a core public health function within its draft core services document is an important first step in this regard (BC Ministry of Health Planning 2003). The designation of food security as a core function in the *final* core services document is the critically important second step. Embedding food security functions in the new Public Health Act is critical.

The health sector must take a leadership role in conducting a comprehensive assessment of the food security situation across the province. A standardized set of food security indicators is required. This set of indicators must be broad enough to measure individual health impacts when food security is lacking, as well as food systems trends giving rise to food related illness and disease. It must capture the differing food security issues in communities across BC. This coordinated approach, engaging the key stakeholders from public health and various sectors of the food system, is necessary in the development of such indicators.

The health sector must use these indicators to gather baseline data about food security and generate a report outlining the state of food

[2] *There are a number of factors that influence the extent to which food security is supported by regional health authorities. Factors include: current economic constraints, increasing health needs and demand for intervention; knowledge about the food security concept and its correlation with health; and perceptions about the legitimacy, feasibility, cost effectiveness, and support for community food security work.*

security in BC. Further periodic reporting is required to monitor the situation and evaluate the success of food security interventions.

The BC Ministry of Health Services must support the development of a comprehensive, provincial food security strategy that is community-based. The mission of this strategy would be *to improve the health of all British Columbians through a coordinated approach to establish community food security.* The goal of the strategy would be *an optimally nourished population, supported by a healthy, sustainable food system*. The development of an advisory group or a BC Food Security Council is a logical step toward the development of such a strategy (See Appendix D). This Council would be accountable to the Ministry and be comprised of diverse members: government, non-government organizations, farmers and citizens. They would play an important role in:

- coordinating policy, research and evaluation of food security initiatives across the province;
- enhancing communication and collaboration amongst community food security groups, farmers and the public sector; and
- working towards resolution of food security issues at provincial, regional and local arenas.

The Role of the Health Authorities

All Health Authorities must develop regional strategies for food security. These strategies must be incorporated into regional health plans.

For a Health Authority to integrate food security into their health services, the following approach is recommended:

- establish a food security team that works closely with decision-makers;
- assess food security needs in the Health Authority area;
- liaise with community groups interested in food security;
- develop a food security action plan with deliverables;
- allocate staff time and resources to food security projects;
- implement and evaluate food security projects and initiatives;
- develop a food security policy for the Health Authority; and
- support local food security groups.

In conjunction with regional strategy development, Health Authorities must continue to commit staff and material resources to work with communities to assist them with their food security endeavours. This approach has been instrumental to the development of a growing network of food security programs, policies and services across this province.

10 Recommendations

Following are some of the important recommendations that have been formulated through research, consultation and discussions for the preparation of this document.

The Community Nutritionists Council of BC recommends:

- **That the BC Ministry of Health Services designate food security as a core public health function in the final version of the core services document.**

Rationale: This document demonstrates that food security is a critical public health concern and that lack of food security is a costly burden to health care. It shows that the realization of food security requires a distinct approach – one that examines and addresses food issues in a participatory, integrated, policy and *systems* manner. It shows that there are considerable commitment and resources invested in food security activities from a diversity of sectors. It demonstrates that this investment is yielding positive intermediate health outcomes. Further it demonstrates that with continued activity there is great potential to re-orient the food system towards health. Such re-orientation can realize reductions in illness and disease over the long-term.

Health authorities have a legitimate role in continued promotion and support of food security. Core food security programs and services in public health provide a logical platform for articulating that role.

- **That the BC Ministry of Health Services use and apply the findings of this document in their processes to revise the Public Health Act.**

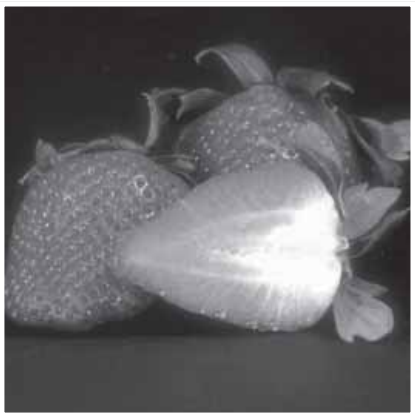
Rationale: This document demonstrates that legislation exists in other provinces to further the realization of food security. In Ontario legislation exists mandating food security as a function of public health nutritionists. In Quebec legislation exists to reduce food insecurity, poverty and social exclusion. Such legislation could help formulate food security issues in the Public Health Act in BC.

- **That the BC Ministry of Health Services create a standardized set of food security indicators and develop a report on the state of food security in BC.**

Rationale: While this document offers a solid beginning, a standardized set of indicators has yet to be developed. Provincial baseline data, using a standardized set of indicators, has not been gathered. Such data is necessary to provide the basis from which government agencies, non-government organizations and civil society can measure progress in realizing healthy food systems, food security, and optimal nutrition for the population.

- **That the BC Ministry of Health Services provide the infrastructure to further the development of a provincial food security council.**

Rationale: A provincial food security council is required to develop a comprehensive strategy to coordinate the building of food security in BC. This document has shown that food security councils provide the structure for food security activities and are effective vehicles for food security. Food security councils have contributed to a reduction in nutrition related disease, a reduction in hunger and food insecurity, the promotion of local food self-sufficiency, the promotion of a sustainable, safe supply of food and an increase in "food citizenship" - the participation of citizens in the shaping of the food system.



- **That the Health Authorities include the development of a community food security strategy in their plans for health care services.**

Rationale: A community food security strategy will allow for effective planning, development, implementation, coordination and evaluation of community food security work at local levels. A first step in the development of such a strategy could be an action plan with specific goals and deliverables tailored to the needs and priorities of the Health Authority.

- **That the Health Authorities continue to provide the infrastructure to further food security developments in their health area.**

Rationale: Continued designated public health staff and resources towards the development and implementation of a food security strategy is essential, if community food security is to be realized in BC.

- **That the Health Authorities participate in the development of regional and provincial food security councils**

Rationale: Health care representation on a multi-sectoral team will bring the health issues related to food security to the discussion table.

11 Conclusion

Food security is the foundation of a healthy environment, healthy communities and healthy individuals. If people do not have access to a sustainable supply of appropriate, healthy food they will become ill, regardless of health care intervention. Lack of food security is evidenced in food-related illness and disease. We must do more.

It is clear that the current fragmented approach to food issues fails to ensure the nutritional health and well-being of our citizens. A comprehensive approach – one that enhances knowledge and skills, strengthens community action, addresses underlying food system issues and supports coherent food policy – has the greatest potential to realize food security.

There are gaps in our data with respect to the impacts of food security on health. This is due in part to the lack of research, and in part to the lack of funding for prevention research. It also has to do with the fact that the food security movement is relatively new across Canada, and evaluating food security activities is under-developed. Nonetheless we can say with certainty that a comprehensive approach to food security in BC:

- increases access to healthy foods;
- increases knowledge about healthy food choices;
- increases consumption of healthy foods;
- increases community food self-sufficiency;
- supports the sustainability of the food system;
- supports the development of healthy public policy; and
- strengthens "food citizenship"– the participation of citizens in the shaping of the food system.

Examining the health outcomes where there is a longer track record in the food security arena, we can also say with certainty that there is much potential to:

- reduce hunger and dependency on emergency food outlets;
- reduce chronic disease;
- reduce food borne illness;
- reduce environmental degradation; and
- reduce costs to the health care system.

Much progress has been made toward food security in BC, but there is much more to be done. If we are to ensure that all people have access to a sustainable supply of the foods required for health – today, tomorrow and in the future- the health sector must be a principal partner at food security tables.

12 References

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The above references were gathered by the main consultants and writers of this discussion paper. It has been beyond the abilities of the Community Nutritionists Council of BC and the Food Security Standing Committee to screen the references or verify them.

Appendix A
A Snapshot of Food Security Organizations in BC[3]

Boundary Farm to Table Society
Regional, non-profit society
Christina Lake/Grand Forks, BC
iam@sunshinecable.com

British Columbia Food System Network
Provincial non-profit network
Sorrento, BC
www.bcfooddemocracy.org
Cathleen@ramshorn.bc.ca

Burnaby's Food First Committee
Local non-profit coalition
Susan.legresley@fraserhealth.ca

Capital Region Food and Agriculture Roundtable
Local non-profit coalition
Victoria, BC
info@communitycouncil.ca

Community Nutritionists Council of BC
see Food Security Standing Committee

Emergency Food Provider Coalition
Local non-profit network
Vancouver, BC
Barbarah.Tinskamper@vch.ca

Farmfolk Cityfolk Society
Non-profit society
Vancouver, BC
www.ffcfc.bc.ca
info@ffcfc.bc.ca

Food Action (Salmon Arm)
Local non-profit group
cathleen@ramshorn.ca

Food First of Northern BC
Local, non-profit organization
Prince George, BC
kathy.hill@northernhealth.ca

Food For Kidz
Food for Kidz, non-profit coalition
Delta, the Langleys, Surrey, White Rock
phnutrition@fraserhealth.ca

Food Security Public Health Alliance
Provincial, non-profit alliance
Nanaimo, BC
Fred.rockwell@cvihr.bc.ca

Food Security Standing Committee
Community Nutritionists Council of British Columbia
Provincial, non-profit committee
Vancouver, BC
Barbarah.Tinskamper@vch.ca
Barbara.Seed@fraserhealth.ca

Healthy Eating Active Living (HEAL)
Regional non-profit network
Prince George, BC
www.healbc.ca
cwellner@healbc.ca

Kamloops Food Policy Council
Local non-profit society
Kamloops, BC
Laura.Kalina@interiorhealth.ca

Lush Valley Food Action Society
Regional, non-profit society
lushval@yahoo.com

Mission Community Food Coalition
Local non-profit coalition
Mission, BC
Catherine.Atchison@fraserhealth.ca

Nanaimo Foodshare Society
Local non-profit society
Nanaimo, BC
foodshare@shaw.ca

Nelson Food Coalition
Local non-profit coalition
Nelson, BC
brynne@uniserve.com

North Okanagan Food Coalition
Regional, non profit coalition
Vernon, BC
dantonishiak@interiorhealth.ca

Vancouver Food Policy Task Force
Municipal, non-profit group
Vancouver, BC
Corinne.Eisler@vch.ca

[3] *Food Security Organizations are neighbourhood, municipal, regional or provincial groups with the goal to improve community food security through actions that are contributing to system redesign and policy development. Most Food Security Organizations in BC are non-profit and reliant upon volunteers. A comprehensive list was unavailable. This list was generated from two sources: 1) the BC Food System Network website www.bcfooddemocracy.org, and 2) the Healthy Eating Active Living website www.heal.bc.*

Appendix B

Key Food Security Functions for BC Community Nutritionists

This section is based on a master list of key functions endorsed by the Community Nutritionists Council of BC (CNC) in February 2003. The list of key functions was compiled by the CNC Executive and the Food Security Standing Committee. This list illuminates the range of expertise and skills that community nutritionists draw upon in their community food security building endeavours.

Community nutritionists are registered dietitians and members of the College of Dietitians of BC. These recognized health care professionals work in public health and community nutrition.

From discussions within the Food Security Standing Committee, some additions have been made to the list of key functions of BC community nutritionists for the purpose of this report. Depending on the individual health authority, community nutritionists may focus on some key functions more than others. Not all of these key functions take place in all communities.

Program[4] development, implementation and evaluation

This refers to developing programs in the community. Programs are designed to increase individual skills and knowledge of participants, to build community capacity, and to work towards systems redesign in order to achieve community food security. The objectives of the programs are to:

- promote and support healthy growth and development of children and youth. Sample programs include: school meals, promotion of breast feeding, and prevention of eating disorders;
- promote and support access to safe, nutritious, culturally and personally acceptable food. Examples are food offered in schools, care facilities and mental health care homes;
- promote and support sustainable food production. Sample programs include: seniors' meals, community kitchens, community gardens, cooking clubs, good food box programs, community shared agriculture, gleaning programs, food co-ops, farmer's markets, community food stores, community restaurants, local food processing, local foods in health care facilities;
- promote and support healthy eating and chronic disease prevention. Sample programs include: healthy eating in restaurants and

[4] *Programs* are defined as initiatives with indefinite time frames.
Projects are defined as initiatives with specific time frames, budgets and deliverables.

work sites, increasing access to produce markets (sample programs listed previously also fit here); and

- promote and support primary care and nutritional therapy in the community. Sample programs include: outreach to "at risk" pregnant women and nutrition screening for seniors.

Project development and management

Community nutritionists employ the entire range of project management and entrepreneurial skills, both in relation to projects in the community and to projects in their own workplaces. These skills include: needs assessment, fundraising (source identification, proposal writing); building business cases; building project teams (identifying and assigning roles to project team members and identifying project sponsors and supporters); contract management; project planning, implementation, management, evaluation and reporting.

Food and nutrition policy development and implementation

Community nutritionists work in partnership with planners and decision makers to promote, develop and lead the implementation of food and nutrition policies. "Policy" in this context can include legislation and/or regulations. Nutritionists work to ensure the messages and services they provide are consistent with these policies. Policies may be developed in partnership with:

- local institutions (hospitals, daycares, preschools, schools, facilities, workplaces), e.g., school food policy, Baby-Friendly Initiative;
- municipal governments, health authorities and provincial government (i.e., the Kamloops Food Policy and Food Charter, Nutrition Regulations within the Public Health Act and Community Care and Assisted Living Act); and
- federal government and international bodies (i.e., nutrition labelling legislation, Dietary Reference Intakes, and Canada's Action Plan for Food Security).

Advocacy

Community nutritionists are advocates for the population to have safe, nutritious and adequate food. They also advocate for certain population groups who are at nutritional risk. They represent the interests of specific populations, especially vulnerable groups, to decision makers or others in authority. Nutritionists advocate for:

- services and policies to support at-risk seniors and home care clients;
- services and policies to support families and individuals with low income; and
- services and policies to support sustainable food systems.

Nutrition consultation and education for health and other professionals

As health professionals with special expertise in human nutrition, community nutritionists are called upon to provide expert advice to colleagues and also to educate a wide range of professionals in nutrition and health promotion. This includes: review, development and distribution of resources; in-service sessions with Public Health staff, health care workers and school staff, college and university classes in nutrition and related programs; and consultation regarding clients.

Public education

Community nutritionists educate the public through a variety of methods. They may take a proactive approach (initiating material or stories) or a reactive approach (responding when nutrition issues come up in the news). Methods include:

- brochures, newsletters, fact sheets, and web sites;
- forums, workshops, and presentations;
- promotional campaigns, e.g., breast feeding, World Food Day and Nutrition Month;
- programs for general public audiences, e.g., grocery store tours, health fairs, displays and community kitchens;
- media (radio, television, newspapers, journals); and
- consultation.

Population health surveillance and evaluation

Community nutritionists monitor existing trends and identify emerging issues related to nutritional health through monitoring existing surveillance data, supporting the collection of data, and working with community groups. They also identify "best-practice" approaches through evaluation of programs and review of literature[5], and engage in primary research, particularly in collaboration with community groups. Surveillance and evaluation examples include:

- BC Nutrition Survey;
- The Cost of Eating in BC Report;
- Community Food Security Report Cards, (e.g., in Prince George, Dawson Creek, Terrace and Quesnel);
- Regional Health Profiles (child health profile in Prince George); and
- Child Hunger Assessment in Fraser South.

[5] Such research provides evidence for the efficacy of food security strategies in achieving public health goals (see Section 6).

Clinical work and primary care

Community Nutritionists create linkages amongst health professionals, referral agencies and acute care in order to provide continuity of care. Nutrition education and consultation occur in a variety of clinical and community settings. It includes group nutrition education and community work to prevent chronic disease or reduce the burden of disease through chronic disease management, and also individual nutrition intervention. Program examples include:

- kindergarten nutrition screening;
- allergy prevention and treatment;
- nutrition support for mental health clients and other at-risk clients in the community;
- community programs for groups of overweight and obese children;
- eating disorder intervention and prevention; and
- education and support to community groups and agencies assisting individuals with chronic disease.

Monitoring and enforcement of nutrition regulations

In the licensing area, community nutritionists monitor compliance with regulations in licensed residential child and adult care facilities. They work to develop appropriate and effective regulatory frameworks to support nutritional health and population health. They are engaged in the full continuum of monitoring facilities from planning stages to continuous surveillance and have a range of functions that include:

- providing information, guidance, consultation and nutrition expertise with respect to compliance;
- applying legislation – through a program of education and progressive enforcement, and investigation of food and nutrition complaints;
- providing input to the formation of legislation such as the Adult Care Regulations, Child Care Regulations and the Community Care and Assisted Living Act;
- conducting needs assessments, developing, implementing and evaluating licensing-related nutrition education opportunities and resources; and
- gathering statistics regarding compliance.

Appendix C

Community Food Security Programs/ Activities in 32 (out of 37) Ontario Public Health Units

	number of health units
Community Food Security Coalition, organization or network	21
Community forum or panel discussion on food security or food system issues	13
Food Policy Council	2
Food Policy or charter – *internal* to the health unit	6
External food policy work (e.g., school food policy)	19
Advocacy on food security or food system issues (e.g., income, land use, pesticide use)	11
Nutrition Food basket data collection	31
Other community food needs assessment, survey or research	17
Urban Agriculture (e.g., Community or roof top gardens, grow a row, composting)	13
Locally grown or "buy local" campaign	8
Good Food Box or other Food Box Program (e.g., community shared agriculture)	18
Child student nourishment programs	29
Peer-led community programs (e.g., community kitchens, cooking groups, multicultural)	21
Professional-led community programs: food/nutrition/cooking/ multicultural including CPNP	23
Consultation to, or involvement with, food banks/soup kitchens/emergency food	26
Provision of food supplements or food coupons (e.g., HBHC, CPNP)	24
Handouts or counselling re household food security issues	23
Other: directory, e-mails via TFPC, Transportation	3

Source: Ontario Public Health Association 2002 *A Systemic Approach to Community Food Security: A Role For Public Health*

Appendix D

A Food Security Strategy and Council

A Provincial Food Security Strategy

The mission of a Provincial Food Security Strategy (PFSS) would be to improve the health of all BC residents through a coordinated approach to establish community food security.

The goal of a PFSS would be a well-nourished population supported by a sustainable food system.

A British Columbia Food Security Council

The establishment of an advisory body would be the first logical step. Such an advisory body could be called "BC Food Security Council". This Council, accountable to the BC Ministry of Health Services, would work with health authorities and key stakeholders throughout the province to create the provincial food security strategy. Over the long term the Council would advise the Ministry of Health Services, the Office of the Provincial Health Officer and Health Authorities on policies and actions to implement, monitor and evaluate the strategy. Important roles would include:

- coordinate policy, research and evaluation of food security initiatives across the province;
- enhance communication and collaboration amongst community food security groups, farmers and the public sector;
- work towards the resolution of community food security issues at provincial, regional and local arenas; and
- provide seed funding for food security initiatives.

Members of a BC Food Security Council may include representatives from:

- BC Ministry of Health Services
- BC Ministry of Agriculture Food and Fisheries and other Ministries (Human Resources; Children and Family Development; Community, Aboriginal and Women's Services; Water, Land and Air Protection)
- All Health Authorities
- Community Nutritionists Council of BC
- Health Officer's Council of BC
- BC Centre for Disease Control
- Provincial food security/policy groups (BC Food System Network, Farmfolk/Cityfolk, Food Security Public Health Alliance)
- Community coalitions/councils focusing on food security
- Community leaders (farmers, First Nations, poverty groups and community coalitions and action groups focusing on food security).
- Representatives from small and large farm production, processing and distribution

Appendix E

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