

# *Community Food Security*

## Position of Dietitians of Canada

### *Abstract*

Dietitians of Canada takes the position that community food security (CFS) is both an important process and an outcome for achieving food security among Canadians. CFS exists when all community residents obtain a safe, personally acceptable, nutritious diet through a sustainable food system that maximizes healthy choices, community self-reliance, and equal access for everyone. Dietitians of Canada recognizes that CFS has a broad scope that emphasizes systematic and comprehensive approaches to promote food security for everyone, and implicitly recognizes the role of the larger food system in ensuring food security. CFS involves long-term planning with a wide range of stakeholders working toward a healthy, just, and sustainable food system. Dietitians of Canada strongly encourages dietitians to educate themselves about the issues and processes necessary to build CFS. The organization also urges dietitians to advocate individually and through participation in coalitions for the development and implementation of policies and programs that support CFS.

### *Résumé*

Les diététistes du Canada ont adopté la position selon laquelle la sécurité alimentaire de la communauté (SAC) est à la fois un processus important et un résultat pour atteindre la sécurité alimentaire chez les Canadiens. La sécurité alimentaire de la communauté est atteinte lorsque tous les résidents d'une collectivité ont une alimentation sécuritaire, nutritive et acceptable par chacun grâce à un système alimentaire durable qui maximise les choix santé, l'autonomie de la communauté et l'égalité d'accès pour tous. Les diététistes du Canada reconnaissent que la SAC a une grande portée qui met l'accent sur des approches systématiques et complètes afin de promouvoir la sécurité alimentaire pour tous, puis reconnaissent implicitement le rôle du système alimentaire plus large pour assurer la sécurité alimentaire. La SAC implique une planification à long terme avec une vaste gamme d'intervenants qui travaillent en vue d'établir un système alimentaire sain, équitable et durable. Les diététistes du Canada encouragent fortement les diététistes à se former sur les questions et processus nécessaires pour établir la SAC. L'organisation demande aussi avec insistance aux diététistes de plaider cette cause individuellement et par la participation à des coalitions à des fins d'élaboration et d'implantation de politiques et de programmes qui soutiennent la SAC.

## **INTRODUCTION**

In 2005, Dietitians of Canada (DC) published an official position paper entitled "Individual and Household Food Insecurity in Canada," which addressed food security as a social justice issue (1). This position paper coincided with the release of the 2000-01 Canadian Community Health Survey results, which showed that 15% of Canadians reported living in food-insecure households (2). Although the 2005 DC position paper focused on food security issues at the individual and household levels, it indicated that these issues were embedded within a larger context of the global food system and the broader ecology. This observation is consistent with community food movements, in which food issues (e.g., anti-hunger, ecological sustainability, health and safety) are being framed within a broader concept of CFS (3-5).

Dietitians are important stakeholders in addressing food insecurity and related health issues for Canadians. Consequently, this position paper will identify and explore key issues related to CFS in Canada and propose a role for dietitians

within a CFS model of food security. The paper will also serve as a key information source for policy- and decision-makers, including dietitians, in the area of food and nutrition program and policy development.

The focus of this paper is CFS within the Canadian context. While larger global issues are related to food security, as are other aspects of the Canadian food system that are part of the continuum of national food security, they are beyond the scope of this paper.

## **POSITION STATEMENT**

The position of Dietitians of Canada is that community food security is both an important process and an outcome for achieving food security among Canadians. DC recognizes that CFS has a broad scope that emphasizes systematic and comprehensive approaches to promote food security for everyone, and implicitly recognizes the role of the larger food system in ensuring food security. CFS involves long-term

planning with a wide range of stakeholders working toward a healthy, just, and sustainable food system.

Dietitians of Canada strongly encourages dietitians to educate themselves about the issues and processes necessary to build CFS. The organization also urges dietitians to advocate individually and through participation in coalitions for the development and implementation of policies and programs that support CFS.

### WHAT IS COMMUNITY FOOD SECURITY?

Community food security is a relatively new conceptual model of food security and as yet has no universally accepted definition (6-8). Nonetheless, emerging CFS movements and the related literature have revealed important common elements, which identify CFS as both a goal and a process. These elements are captured in the following definition, adapted from Hamm and

Bellows (9), which has been used as a foundation for this position paper:

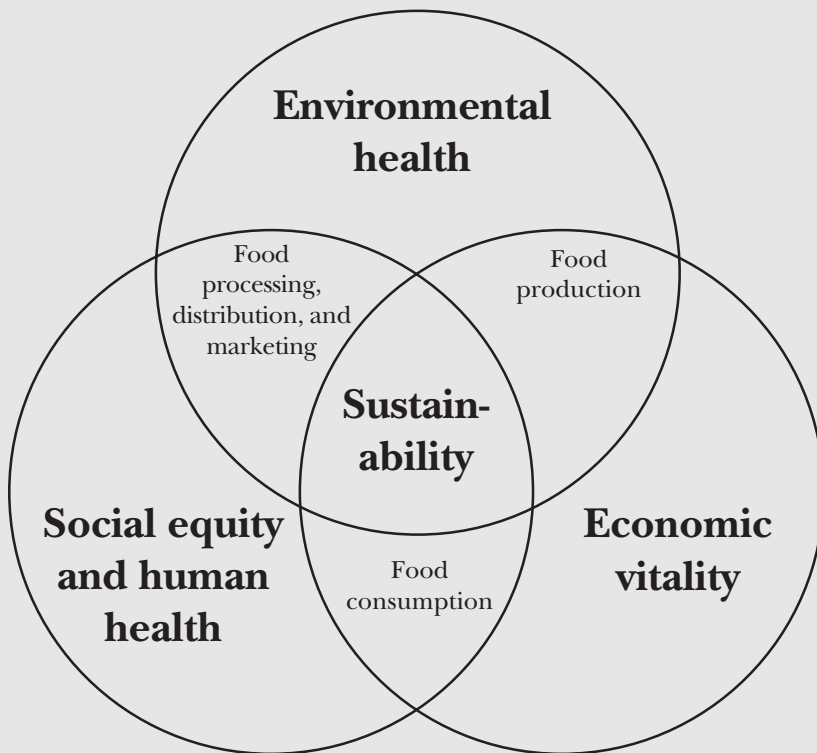
*Community food security exists when all community residents obtain a safe, personally acceptable, nutritious diet through a sustainable food system that maximizes healthy choices, community self-reliance and equal access for everyone (10).*

Traditionally, many food security initiatives have focused on alleviating hunger in low-income populations through short-term relief strategies (3,11-13). These efforts include food banks, soup kitchens, and other charitable or emergency food programs. Although CFS encompasses the basic principles of anti-hunger initiatives, it has a broader scope with distinct elements emphasizing long-term, systematic, and comprehensive approaches to address food insecurity for everyone in the community, not specifically low-income people (14,15). To this end, CFS strives to attain the following goals:

- Develop just, sustainable, and diverse food systems.
- Meet the food and nutrition needs of everyone, including people with low incomes.
- Promote safe food, good nutrition, and health.
- Promote, protect, and support breastfeeding across the continuum of health care.
- Revitalize local communities and build self-reliance and collaboration.
- Foster community economic development by strengthening local and regional food systems.
- Link farmers and consumers, and support sustainable and family farming.
- Promote good working conditions and sustainable livelihoods for farmers and food system workers.
- Advocate for increased social equity through increased minimum wage and social assistance payments, and work toward achieving a living wage to enable individuals and families to afford a nutritious diet.
- Change government and institutional policies to support CFS goals.
- Honour and celebrate diverse cultures and food-related traditions.
- Enhance the dignity and joy of growing, preparing, and eating food.
- Build the capacity for people to create change through education and empowerment (9,10,16,17).

Community food security has an impact on all community members through an implicit recognition of the role of the larger food system in ensuring food security (15). CFS promotes community-based food systems within the context of the food system continuum, from the local to the global level (18). The food system encompasses a broad range of food chain components, including agriculture, fishing, hunting, gathering, other food production, manufacturing, distribution, marketing, the availability of affordable outlets for quality food, the involvement of citizens, food producers, and various organizational and governmental food-related policies. CFS involves an acknowledgement that, despite many of the benefits of the dominant food production system, there are unintended negative

Figure 1  
Community food system



Garrett and Feenstra, 1999 (21)  
Reprinted with permission

consequences; these can be addressed by focusing on food system components in which ecological, health, and economic considerations share equal importance (10,19,20). CFS involves a consideration of the underlying community social, economic, and institutional factors that affect these components, and emphasizes sustainability in community food systems through a variety of elements (Figure 1) (7,21).

### Environmental health

Community food security is concerned with the viability of the natural resource base that provides our food, as well as with the food system's dependence on non-renewable energy resources. CFS promotes sustainable food production practices throughout the food chain (15).

Conventional intensive agriculture and food production require large amounts of fossil fuels for primary production, processing, and transportation of food across long distances to where consumers live and buy their groceries. The distance food travels from where it is grown to where it is ultimately purchased by the end user has been quantified through the concept of "food miles" (22). Produce in North America typically travels over 2,000 kilometres to the point of purchase, or 27 times the distance of local produce (23). Burning fossil fuels creates greenhouse gases, including carbon dioxide, that contribute to global climate change (24). A harmful cycle ensues, whereby agriculture both contributes to climate change and is subsequently affected by it. Climate change may precipitate rainfall redistribution and evaporation of fresh water resources, jeopardizing plant production and pushing cultivation toward the poles (24). Soils in some regions may become arid, resulting in increased salinity, erosion, desertification, and infestation by pests (25). Agriculture and all its components are estimated to contribute approximately 20% of global greenhouse gas emissions (25). This dependence on oil for food production has contributed significantly to the global increase in fossil fuel use over the past 30 years (26).

Other environmental concerns associated with intensive farming techniques include pollution from artificial nitrogen-based fertilizers, pesticides, and food packaging. Agriculture runoff containing excessive nitrogen, phosphorous, salt, and pesticides can pollute lakes, estuaries, and water reservoirs (27). Intensive livestock production also produces pollution through the concentration of animal waste. Ammonia from animal manure can be dissolved in runoff from pastures and feedlots, and is toxic to many aquatic organisms and in drinking water (28). Pollution is also generated from the production of excess food packaging, which ends up in landfills. Even the superior choice of recycled packaging requires fossil fuels.

Community food security promotes stewardship of land, air, and water through sustainable, community-based food systems and food production methods that reduce pollution and do not compromise the physical environment for future generations. CFS reduces dependence on fossil fuels and fosters closer connections between consumers and producers by encouraging the consumption of more locally produced foods when they are available.

### Social equity and human health

Community food security includes a recognition of the injustice of hunger and food insecurity in affluent countries such as Canada, as well as the link between food insecurity and poor health. Food security is a prerequisite for disease prevention and overall well-being, and has been identified as a social determinant of health (29,30). Food insecurity at the community level is also associated with several negative health outcomes.

**Obesity:** In Canada, obesity is an emerging public health problem (31). Obesity in individuals is linked with poor health outcomes such as type 2 diabetes, heart disease, and some cancers. The high prevalence among Canadians also makes obesity a population health issue and an indicator of community food insecurity (32). Approximately 23% of Canadian adults are obese, a rate that has almost doubled in 25 years (33). While the causes of obesity are multi-faceted, one proposed dimension is the proliferation of calorie-dense, low-nutrient, processed convenience foods available at a wide range of food service and retail outlets (34,35). Evidence suggests that many Canadians have increased their consumption of these foods over the past several decades (36,37). Lack of time and an increased demand for foods that require little preparation are cited as reasons for this trend (36,38). In addition, low-nutrient, highly processed foods can be less expensive than healthier options such as fresh fruits and vegetables. People with low incomes therefore choose them frequently, and this reinforces less healthy eating patterns (39). Obesity is also more prevalent in low-income women (33).

**Lack of access:** Food insecurity is linked with the consumption of nutritionally inadequate diets (40) and can be exacerbated by lack of physical access to affordable, nutritious foods. The recent proliferation of very large, centralized grocery stores (referred to as "big box" stores or "hypermarkets") in middle- and higher-income neighbourhoods has resulted in limited accessibility to food outlets in some lower-income geographic areas (41). This phenomenon perpetuates food insecurity for low-income residents who may not have adequate transportation to visit large grocery stores and must rely on insufficient, often more expensive food outlets such as convenience stores.

**Isolated communities and Aboriginal people:** Isolated communities are particularly vulnerable to food insecurity, primarily because of decreased availability of and accessibility to food. Of particular concern is the degree of food insecurity in isolated Aboriginal communities, which ranged from 40% to 83% in a recent baseline nutrition survey (42-44). Fifty-seven percent of First Nations people live in reserve communities and 12% of reserves are located in remote locations without year-round road access (45). Almost all Inuit communities are isolated. In these communities, market food is more expensive than in the South because of higher transportation, construction, and electricity costs. Despite Canada Post's Food Mail program (46), which coordinates and subsidizes shipments of food into remote northern communities, food costs in the North can be double those in the South (42-44). The loss of traditional land use (hunting, gathering, fishing) in many Aboriginal

communities has perpetuated further increased dependence on foods shipped from the South.

Unfortunately, some highly processed foods, such as fruit drink crystals, are lighter weight and less costly to ship and are therefore cheaper than more nutrient-dense, perishable foods, such as fresh milk, fruits, and vegetables. The high cost of market foods and poor food choices have contributed to the very high prevalence of obesity and type 2 diabetes in Aboriginal people (42-44,47).

A diet rich in traditional food has been demonstrated to be more nutritious than market foods available in the North. However, food security is further undermined by concerns about high concentrations of contaminants, such as trace metals (48,49) and organochlorines (chlordan, toxaphene, and polychlorinated biphenyls) in fish, marine mammals, and game (50,51).

Food insecurity is not only an important concern for those in isolated communities, but also for Aboriginal people residing in other communities. The 2000-01 Canadian Community Health Survey showed that 31% of Aboriginal people living off reserve experienced some form of food insecurity, compared with 15% of other Canadians (52). This finding was primarily because of high levels of poverty and unemployment. Urban Aboriginal people are more than twice as likely as non-Aboriginal people to live in poverty (56% compared with 24%) (53). Half of all Aboriginal children, whether on the reserve or not, live in poverty (54).

**Food safety:** A further concern with community food security is ensuring the safety of the food supply. Changes in food production methods over recent decades, including intensified livestock production, changes in animal feed, increased shelf life of foods, and transportation of foods across great distances, have resulted in the emergence of certain food-borne pathogens as significant hazards, such as *Campylobacter*, *Listeria*, and *Escherichia coli* 0157:H7 (55). The recent discovery of bovine spongiform encephalopathy in Canadian beef and avian flu in Canadian poultry has raised further concerns about the safety of the food supply, and has resulted in economic hardship for producers (56).

**Summary:** Community food security promotes social equity as a basis for full participation in the food system. In addition, CFS involves food production and distribution methods that promote health and the safety of the food supply.

### **Economic vitality**

Community food security involves a recognition that within the dominant food production system, many communities depend on foods produced at a distance, while paradoxically producing foods that may be shipped far away because of the increasing global and corporate nature of the food economy (21). This reduces producer control over production, marketing, and labour decisions, and can reduce community economic self-reliance.

Canadians have one of the least expensive food supplies in the world, the result of a unique combination of competition, globalization, and domestic efficiencies. In 2003, Canadians spent 10.6% of their disposable income on food (57). This was down from 12.5% in 1997, and this trend of

spending less on food is projected to continue (36). At first glance, the answer to food security may seem to be making cheaper food more accessible, especially to low-income Canadians. Unfortunately, this benefit to consumers can mask the impact on other players in the food chain.

Canadian farmers are primary producers of many Canadian foods, and yet they have seen their incomes decline steadily over the past several decades. When adjusted for inflation, net farm income fell by 24% between 1988 and 2002 (58). Decreased returns have led many farmers to adopt more practices of efficiency, increasing both farm size and the amount of inputs (fertilizers, pesticides, machinery) required to increase yields; however, commodity prices have remained relatively flat (59). The result has been an erosion of rural livelihoods and loss of agricultural independence. Between 1996 and 2001, the number of family farms in Canada decreased by 11%, primarily because of the challenges of making a living from farming (60).

Canadian fishers have also been affected negatively in recent years. In 1993, six Canadian populations of Atlantic cod had collapsed to the point of commercial extinction (61). The result was a moratorium on cod fishing, which put fishers and processors out of business, increased unemployment and poverty, and ended fishing traditions that reached back centuries. Improper management of fish stocks, leading to overfishing, has been implicated in this and other fish stock collapses. Serial depletions of fish have been accelerating around the globe and are primarily the result of industrial-scale fishing using deep-sea trawlers, intensive fishing technologies, and exploitation of previously spurned species (62).

Community food security encourages community self-reliance and supports community economic development through innovative direct marketing, local processing, and other value-added activities that allow communities to strengthen their economic health by creating meaningful jobs and reinvesting financial capital locally (21). CFS also involves adequate wages and working conditions for those who earn their livelihoods from the food system (15).

### **FOOD SECURITY IN CANADA**

The federal government has acknowledged food insecurity as both a domestic and a global issue, and has participated in all major international food security summits. Agriculture and Agri-Food Canada developed Canada's Action Plan for Food Security in response to the World Food Summit held in 1996, during which 187 countries, including Canada, pledged to reduce by 50% the number of undernourished people by 2015 (17). The plan outlines actions for both domestic and international environments. The Food Security Bureau was established in 1999 as a team of officers working in food security-related areas within Agriculture and Agri-Food Canada. Beginning in 2003, the personnel, activities, roles and responsibilities of this team were incorporated into the Programs and Multilateral Affairs Division of Agriculture and Agri-Food Canada and continue to function there. The Bureau website was closed in 2006 (P. Murphy, personal communication, 27 Feb. 2007).

Currently, no coherent Canadian food policy seems to exist to integrate sustainability, public health, and economic

goals. In addition, current policies for addressing food security are fragmented at all levels of jurisdiction (63). Policies exist for agriculture, fishing, and food safety, as well as for nutrition. However, these are not connected through a set of common goals or a comprehensive policy framework.

Canada's agriculture policies, established by Agriculture and Agri-Food Canada, are primarily intended to develop and expand Canada's production and export of agricultural products and position Canada as the world leader in food safety, innovation, and environmentally responsible production. Five elements have been proposed to accomplish these objectives: business risk management, environment, food safety and food quality, science and innovation, and renewal (64). Fisheries and Oceans Canada is responsible for policies and programs that support Canada's scientific, ecological, social, and economic interests in oceans and fresh waters (65). The Canadian Food Inspection Agency establishes policies and standards for plant and animal health, and oversees the safety of agriculture and aquatic commodities produced domestically and imported. Health Canada sets policies and standards for the safety and nutritional quality of food sold in Canada. Nutrition labelling legislation and *Eating Well with Canada's Food Guide* are two policy instruments that Health Canada has developed. Charitable food banks are not part of any official government response to food insecurity, but serve as a *de facto* policy instrument whereby government workers, such as public health employees, work closely with food banks as a source of emergency food in the absence of other formal policies.

It is becoming clear that harmonizing agriculture, food safety, and nutrition policies, as well as policies aimed at reducing poverty, is a prerequisite for ensuring national food security. A recent national conference on Canadian food policy revealed increasing consensus among a broad spectrum of stakeholders for including public health on the food policy agenda (66).

## BUILDING COMMUNITY FOOD SECURITY

### Role of policy

Community food security cannot be realized outside a policy context. Policies are the articulation of goals to address issues identified by governments, businesses, social groups, and individuals (67). They provide a framework within which decisions are made and actions are taken (3). A food policy is any decision, program, or project endorsed by a government, business, or organization that affects how food is produced, processed, distributed, purchased, protected, and/or disposed of (13,68). Food policy can operate at institutional, local, regional, provincial, national, and global levels (13). For CFS, food policies are the mechanisms by which food security action projects can be transformed into a framework to meet the goal of a food system that is economically and environmentally sustainable, promotes health, and supports food security for all (3).

### Strategies

Community food security employs long-term planning and encourages change through community-based processes, including coordination of resources, partnerships, training

and economic development, and advocacy (3,69). Essential to this process are surveillance and monitoring of CFS indicators. Improving CFS requires the involvement of many stakeholders from a variety of sectors, including agriculture, health, business, community economic development, and civil society. CFS processes also include working with food environments such as health care institutions, schools, commercial food operators, nutrition service providers, and food processors, distributors, and marketers to encourage healthy, environmentally sound food choices.

Community food security initiatives can act at all levels of the food system to effect positive change in the short, medium, and long terms. Some of these initiatives may seem at odds with anti-hunger actions. For instance, local foods produced by smaller-scale operations may be more expensive than imported foods, and sources of local foods, such as farmers' markets, may not be readily accessible to low-income residents who lack affordable transportation. Promoting local food production and consumption is one strategy to move toward a more sustainable food system. At the same time, reducing economic disparities that contribute to food insecurity is also essential in building long-term food security. Shifting to a CFS model of food security, however, is the only way to improve access to safe, nutritious, affordable foods for all people, including those most at risk (70). No one strategy will bring about the changes required to improve CFS. Only by working across a continuum of food security, through multiple approaches and with diverse stakeholders, can we hope to improve food security for all.

Different communities will have different community food security issues and needs, and will therefore employ different strategies (9). Strategies to build food security, including individual, household, and community food security, are not discrete processes and outcomes, but are located within a continuum of food security (3,12,71,72). The stages in the continuum have been conceptualized into three categories:

**Stage 1 – Initial food systems change:** Strategies create small but significant changes to existing food systems and provide immediate and temporary relief to hunger and food issues (e.g., food banks, soup kitchens).

**Stage 2 – Food systems in transition:** Strategies build capacity through greater involvement from those experiencing food insecurity and by strengthening current food systems through partnerships and networks (e.g., community kitchens, community gardens, food-buying clubs).

**Stage 3 – Food systems redesign for sustainability:** Strategies are broader in scope, requiring long-term commitment from representatives of the entire food system (e.g., reducing socio-economic disparities, developing a national/provincial food policy that harmonizes agriculture and public health goals).

The continuum of food security provides a useful framework to explain the various stages that planners and policy-makers, including dietitians, can follow to create a more secure, sustainable food system. One of the challenges in building CFS is determining what evidence-based strategies can be implemented to ensure maximum success. As with other community-based initiatives, the outcomes of CFS

processes are often medium- and long-term, and can be difficult to associate with particular strategies. Consequently, it is important to identify objective, measurable indicators as part of the planning process. Table 1 provides a framework of evidence-based strategies and indicators arranged on the continuum of food security (8,10,15,71). This is not intended to be a comprehensive list of strategies and activities, as communities may undertake other initiatives.

**Dietitians and community food security**

As a process and an outcome, community food security is an umbrella under which diverse sectors and traditions

operate. People working in anti-hunger and sustainable agriculture movements, public health, community economic development, and social justice advocacy can identify CFS as a key common issue. Dietitians have traditionally worked in the health sector, but CFS projects offer an opportunity to work with and across other sectors. As leaders in food and nutrition in Canada, dietitians are poised to apply their unique skills to building CFS.

Klitzke states that, as food and nutrition experts, dietetics professionals should consider the food system in its entirety (73). Dietitians should be integral to advocacy for community food security because optimal health, well-being,

**Table 1**  
Food security continuum  
McCullum et al, 2005 (71) Adapted with permission

Stage of continuum	Strategies and activities	Indicators
<b>Stage 1: Initial food systems change</b>	a. Counsel clients to maximize access to programs providing food and nutrition assistance, social services, and job training.	a. Number of clients accessing services
	b. Educate clients on healthy food and lifestyle options.	b. Number of clients making positive lifestyle changes
	c. Support existing charitable/emergency food outlets to provide timely service in a dignified manner.	c. Satisfaction of recipients
	d. Map the location of charitable/emergency food outlets.	d. Number, location, and accessibility of outlets
	e. Document the nutritional value of charitable/emergency foods as a baseline for improvement.	e. Nutritional value of foods
	f. Identify price inequities in low-income neighbourhoods, using a nutritious food basket protocol.	f. Cost of nutritious food basket
	g. Map the number and location of high-quality, affordable food outlets.	g. Number, location, and accessibility of grocery stores and farmers' markets
<b>Stage 2: Food systems in transition</b>	a. Connect charitable/emergency food programs with local urban agriculture, community shared agriculture projects, and other local food producers.	a. Number of programs using locally produced foods
	b. Create multi-sector partnerships and networks that work toward community food security.	b. Number of partnerships and networks
	c. Facilitate low-income consumers' access to farmers' markets, community shared agriculture projects, and community gardens.	c. Number of opportunities to access farmers' markets (e.g., buses/ other transport, number of residents accessing transportation)
	d. Facilitate the development of i. community kitchens. ii. community gardens. iii. school garden and hydroponics projects.	d. Other i. Number of kitchens/participants ii. Number of gardens/gardeners iii. Number of projects/students involved
	iv. good food box programs/food-buying clubs. v. buy-local campaigns.	iv. Number of programs/participants v. Number of people who know of the campaign, amount of local food sold

*...continued on next page*

Table 1 *continued*  
Food security continuum

<b>Stage 3: Food systems redesign for sustainability</b>	a. Advocate for minimum wage increases, adequate social assistance, a living wage, and more affordable housing.	a. Level of minimum wage, assistance rates, living wage, and rent
	b. Advocate for environments and policies that encourage breastfeeding.	b. Breastfeeding initiation and maintenance rates
	c. Work with governments, organizations, and communities to develop policies for	c. Other
	i. land use that facilitates urban agriculture.	i. Number of urban agriculture projects
	ii. increasing a community's food self-reliance.	ii. Number of local farms/farmers
	iii. tax incentives and financing mechanisms to attract local food businesses to low-income neighbourhoods.	iii. Number of food businesses in low-income neighbourhoods
	d. Adopt healthy food and nutrition policies within health regions to model healthy environments for the rest of the community.	d. Number of facilities adopting policies
e. Advocate for adequate food budgets for institutions (e.g., long-term care facilities).	e. Number of facilities having adequate budgets	
f. Promote the development of and participate in regional/provincial/national food policy councils.	f. Number of food policy councils, number of policies developed	
g. Promote the development of community food charters.	g. Number of food charters	

and sustainability are at the core of promoting healthy eating and CFS (9). Dietitians have expert knowledge and skills that allow them to work across the food security continuum.

Kalina asserts that movement along the continuum measures success, not being at a particular stage (74). Consequently, dietitians can begin community food security work at any point on the continuum, recognizing that everyone has valuable contributions to bring to the process. Historically, however, most have focused on entry points at the first two stages. While this work is important and should continue, Kalina further suggests that dietitians must become leaders in Stage 3, redesigning food systems for sustainability (74). Dietitians are critical partners in food policy processes, which are necessary for food system reform. It is at this stage that actions can address the underlying causes of food insecurity; however, this stage can also be the most difficult to implement. Stage 3 strategies tend to require time and long-term commitment, but can have significant impact and lasting benefits. Dietitians must see themselves as partners in CFS, working across disciplines and with community-based organizations. Specifically, Dietitians of Canada members can take the following actions to build CFS:

1. Acquire knowledge and understanding of the links between CFS and health. This requires an expanded definition of nutritional well-being that includes food system sustainability principles. Knowledge and understanding of these areas are a prerequisite for participation in building CFS at the local, regional, national, and international levels.

2. Build skills in facilitation, coalition-building, advocacy, assessment, planning, and evaluation. Work in coalitions with others, including food policy councils and civil society organizations, to advocate for policies that build CFS. These policies should strengthen the Canadian food system for future generations.
3. Participate in the establishment of and surveillance and monitoring of CFS indicators.
4. Educate senior administrators in the workplace, whether a hospital, long-term care facility, public health unit, or other institution, about CFS and how the workplace can become involved. This can be through providing funding to local CFS initiatives, instituting workplace food policies that support local growers, or supporting dietitians' participation in local food policy organizations.
5. Conduct and publicize research that supports policies to build CFS. This approach includes community-based and participatory processes that involve citizens in the research. Examples include community food assessments, nutritious food basket pricing, and food policy development and impact analyses. This research can be used to advocate for food policy, and to educate the public and decision-makers.
6. Work with institutions, such as hospitals, long-term care facilities, government offices, and schools, to implement food service policies that support CFS. This includes sourcing locally produced food products where possible and promoting the use of these products to patients, residents, and staff.
7. Incorporate CFS principles into client education sessions, both individual and group. Document barriers to food

**Table 2**  
**Examples of community food security initiatives involving dietitians**

<b>Community Food Security Initiative</b>	<b>Information Link</b>
<p><b><i>Thought About Food? A Workbook on Food Security and Influencing Policy</i></b></p> <p>This was developed by Food Security Projects of the Nova Scotia Nutrition Council, Atlantic Health Promotion Research Centre, and Community Action Program for Children (CAPC)/Canada Prenatal Nutrition Program (CPNP)-funded Family Resource Centres. The workbook was developed in participation with multiple community stakeholders and is a tool for enhancing the capacity of community groups to build food security through healthy public policy.</p>	<p><a href="http://www.foodthoughtful.ca">http://www.foodthoughtful.ca</a></p>
<p><b>The Victorian Order of Nurses (VON) Healthy Baby &amp; Me Program</b></p> <p>This VON program offers education and support to pregnant and parenting youth under age 24 across New Brunswick. Dietitians provide education on the benefits of breastfeeding and the program provides eggs and orange juice to those attending the program each week.</p>	<p><a href="http://www.von.ca/branch/nb_healthybaby/index.html">http://www.von.ca/branch/nb_healthybaby/index.html</a></p>
<p><b>Food Security Network of Newfoundland &amp; Labrador</b></p> <p>This is a non-profit organization that brings together individuals and organizations involved in health care, education, farming, community development, family services, anti-poverty work, emergency food aid, school nutrition programs, and environmental protection to work on solving the problem of increasing hunger in the province.</p>	<p><a href="http://www.foodsecuritynews.com">http://www.foodsecuritynews.com</a></p>
<p><b>Regroupement des cuisines collectives du Québec</b></p> <p>This non-profit organization aims to promote and consolidate emerging collective kitchens in Quebec. The values promoted by the collective kitchens include self-sufficiency, empowerment, dignity, democracy, and social justice. The organization offers workshops on starting up and leading collective kitchens, plus training sessions on economics, politics, social relationships, and other topics.</p>	<p><a href="http://www.rccq.org/">http://www.rccq.org/</a></p>
<p><b>Foodlink – Waterloo Region</b></p> <p>Foodlink seeks to create partnerships with food producers, processors, retailers, and consumers to promote the sale and consumption of locally grown and produced food. In building a “food localism” movement, Foodlink intends to identify, expand, and create new markets for local farms and farm-based businesses while also building a demand for local food products.</p>	<p><a href="http://www.foodlink-waterlooregion.ca/">http://www.foodlink-waterlooregion.ca/</a></p>
<p><b>Manitoba Food Charter</b></p> <p>The result of a province-wide consultation, the Manitoba Food Charter is a publicly owned, one-page vision statement of what Manitobans believe their food system should look like. The charter brings together a diversity of voices and identifies priorities and guidelines for action around local food security.</p>	<p><a href="http://food.cimnet.ca/cim/43C1_4T97T3T7.dhtm">http://food.cimnet.ca/cim/43C1_4T97T3T7.dhtm</a></p>
<p><b>Food Secure Saskatchewan</b></p> <p>The goal is to improve food security through coordinated, community-led action. Food Secure Saskatchewan encourages broad participation and works to stimulate policy change and the development of a comprehensive, integrated food security strategy.</p>	<p><a href="http://www.foodsecuresaskatchewan.ca/">http://www.foodsecuresaskatchewan.ca/</a></p>
<p><b>Growing Food Security in Alberta</b></p> <p>This is a network of intersectoral partnerships, including Dietitians of Canada, and public participation that promotes and supports policies and initiatives to reduce food insecurity in children and their families. The network seeks to address disparities that are the root cause of food insecurity through supporting community level actions across the province. The project has produced a DVD to educate community groups and policy-makers about food security.</p>	<p><a href="http://www.foodsecurityalberta.ca/">http://www.foodsecurityalberta.ca/</a></p>
<p><b>Kamloops Food Policy Council</b></p> <p>Through partnering with the regional health authority and community organizations, the council has developed a local and regional nutrition policy framework that has resulted in a steady decline in food bank usage in Kamloops. Kamloops is the only jurisdiction in Canada to report a decline in a recent survey (10). This policy is integrated into the municipal plan and has buy-in and sign-off from key organizations, such as the school district, that can have a positive impact on the population’s health.</p>	<p><a href="http://www.kamloopsfoodbank.org/Food%20Bank.asp?Page=Food%20Policy%20Council">http://www.kamloopsfoodbank.org/Food%20Bank.asp?Page=Food%20Policy%20Council</a></p>
<p><b>Kugluktuk Prenatal Nutrition Program</b></p> <p>This is a Canada Prenatal Nutrition Program, in the Kitikmeot region of Nunavut, that aims to engage families in healthy lifestyles and to address ongoing food security issues in the community. The program has a strong partnership with the Kugluktuk Brighter Futures Program and the community wellness centre. Activities include cooking classes and skill-building education sessions.</p>	
<p><b>Food First Foundation</b></p> <p>The foundation is dedicated to promoting, supporting, educating, and advocating for the nutritional health of school-aged children in the Northwest Territories and Nunavut. Supported by Breakfast for Learning and Canada North Airlines, Food First provides funds for school meal programs and is overseen by a volunteer council that includes professionals in nutrition, health, and education, as well as representatives from First Nations communities, students, teachers, and members of parent advisory committees.</p>	<p><a href="http://www.foodfirst.ca/mainpage.html">http://www.foodfirst.ca/mainpage.html</a></p>



Table 3  
Further information about community food security issues

**Community Food Security**

- Community Food Security Coalition: <http://www.foodsecurity.org/>
- Fairholm J. *Urban Agriculture and Food Security Initiatives in Canada: A Survey of Canadian Non-governmental Organizations*. IDRC Cities Feeding People Series #25. Ottawa; International Development Research Council; 1998: [http://www.idrc.ca/en/ev-6545-201-1-DO\\_TOPIC.html](http://www.idrc.ca/en/ev-6545-201-1-DO_TOPIC.html)
- Food Secure Canada: <http://www.foodsecurecanada.org/>

**Global Food Security and Systems**

- Canadian Food Security Policy Group. *A Food Security Perspective on Canada's International Trade and Development Assistance Policies: A Discussion Paper for the Government of Canada's International Policy Review*. Ottawa: Canadian Council for International Cooperation; 2004: <http://www.ccic.ca/e/003/food.shtml>
- International Food Policy Research Institute: <http://www.ifpri.org/>
- Lang T, Heasman M. *Food Wars: The Global Battle for Mouths, Minds and Markets*. London, UK: Earthscan; 2004.
- Oxfam: <http://www.oxfam.ca/what-we-do/campaigns/world-food-day>

**Consumer Information**

- Canada's Seafood Guide*: <http://www.seachoice.org>
- Canadian Organic Growers: <http://www.cog.ca/>
- Dietitians of Canada: <http://www.dietitians.ca/resources/resourcesearch.asp?fn=view&contentid=3419>

**Fair Trade**

- Transfair Canada: <http://www.transfair.ca/en/>
- Oxfam: <http://www.oxfam.ca/what-we-do/campaigns/world-food-day>

**Food Safety**

- Canadian Food Inspection Agency: <http://www.inspection.gc.ca/english/toce.shtml>
- Canadian Partnership for Food Safety Information. *Fight BAC!*: <http://www.canfightbac.org/en/>
- University of Guelph Food Safety Network: <http://www.foodsafetynetwork.ca/en/>

- security in nutritional assessments. Emphasize the health benefits of supporting CFS through purchasing local foods and supporting local producers. If working with community-based programs that provide services to low-income clients, incorporate CFS into programming: link clients with community-supported agriculture initiatives, local good food boxes, and farmers' markets.
8. Develop a personal food policy that reflects CFS principles, as a tool to educate friends, family, and others about the benefits of local food and sustainable eating.
  9. Incorporate food security into undergraduate dietetics curricula to provide graduates with a sound foundation in the issues of food security.
  10. Become involved with civil society organizations, such as local social planning councils, food policy councils, Food Secure Canada (75), and the Canadian Council on Social Development (76).
  11. Provide leadership for and participate in DC initiatives that build food security for all Canadians.
- Canadian dietitians have a long history of working for food security, and many dietitians today are taking the lead in CFS initiatives across the country. Several projects

involving dietitians are listed in Table 2. Note that food security initiatives involving dietitians span the food security continuum, including elements of short-term relief and capacity building, and food system redesign through food policy development and implementation.

Further information about community food security issues is provided in Table 3. The glossary in Appendix I defines key terms.

**CONCLUSION**

Food security is an important health, social, and economic goal in Canada. Community food security is part of the continuum that builds on the strengths of the current food system and addresses gaps and weaknesses. Dietitians can play a strong and important role in building CFS with stakeholders from a variety of sectors to achieve a sustainable, equitable food system that improves human and environmental health and well-being, increases choice within the food marketplace, and builds vibrant rural and urban economies. A food-secure Canada will benefit all Canadians and leave a strong legacy for future generations.

## Appendix I

### Glossary of terms related to community food security

**Community economic development:** local action to create sustainable, inclusive economic opportunities and enhance social conditions in communities. It is a community-based and community-directed process that explicitly combines social and economic development and fosters the economic, social, ecological, and cultural well-being of communities (77).

**Community food assessment:** a participatory and collaborative process that examines a broad range of food-related issues and resources in order to inform actions and improve community food security (78).

**Community garden:** a plot of land where community residents gather to grow food together, typically in an urban setting. It provides fresh produce, urban greening, and opportunities to socialize and improve the community.

**Community kitchen (also called collective kitchen):** a cooking group that prepares meals together, and typically takes them home. Participants develop cooking skills, learn about healthy eating, and have opportunities to socialize.

**Community supported agriculture (also called community shared agriculture):** consists of a community of people who support a farm operation. Growers and consumers provide mutual support and share the risks and benefits of food production. Typically, members or “shareholders” of the farm pledge in advance to cover the anticipated costs of the farm operation and the farmer’s salary. In return, they receive shares in the farm’s bounty throughout the growing season, as well as satisfaction gained from reconnecting to the land and participating directly in food production (79).

**Fair trade:** a trading partnership that seeks greater equity in international trade. It contributes to sustainable development by linking low-income producers with consumer markets and educates consumers about the importance of purchasing fairly traded products that support living wages and safe and healthy conditions for workers in the developing world (81,82).

**Farm-to-cafeteria program:** creates direct links between growers and institutions to increase the amount of fresh locally or regionally produced foods used by schools, colleges, universities, government offices, and other institutions.

**Food charter:** a publicly owned statement on what the citizens of a community or region believe their food system should look like. It brings together a diversity of stakeholders, including citizens and decision-makers, to identify priorities and build community food security (83).

**Food policy organization:** a forum in which stakeholders from every part of the food system participate to share perspectives and experiences, develop initiatives, and advocate for policies that support community food security (3).

**Food system:** all processes involved in growing, harvesting, processing (or transforming or changing), packaging, transporting, marketing, consuming, and disposing of food and food packaging; operates within and is influenced by social, political, economic, and natural environments (84).

**Good food box program:** supplies members with fresh produce bought directly from local farmers, whenever possible, for a reasonable cost; may be delivered or picked up at a central location.

**Integrated pest management:** an effective and environmentally sensitive approach to pest management that uses current, comprehensive information on the life cycles of pests and their interaction with the environment, in combination with available pest control methods, to manage pest damage by the most economical means and with the least possible hazard to people, property, and the environment. It can be applied to both agricultural and non-agricultural settings, such as the home, garden, and workplace (80).

**Living wage:** a minimum wage that could allow someone working full-time to escape poverty (85).

**Organic agriculture:** a holistic, sustainable production system designed to optimize productivity and fitness of diverse communities within the agro-ecosystem, including soil organisms, plants, livestock, and people. Organic foods are produced without synthetic pesticides or fertilizers, materials and products resulting from genetic engineering, sewage sludge, synthetic hormones, synthetic veterinary drugs, irradiation, or other synthetic processing substances (86).

**Personal food policy:** a set of standards used to guide personal decisions about and actions around food choices (87).

**Reduced-input agriculture (also called low-input agriculture):** employs methods that reduce, but do not necessarily eliminate, application of chemical fertilizers, insecticides, and herbicides. Yields are maintained through greater emphasis on cultural practices and utilization of on-farm resources and management (88).

**Social equity:** a principle of sustainable and humane development that strives to satisfy essential needs and improve quality of life for all social groups and communities, particularly the most vulnerable, through access to employment, education, medical care, social services, and quality housing (89).

**Sustainable agriculture:** seeks to optimize skills and technology to achieve long-term stability of the agricultural enterprise, environmental protection, and consumer safety. Agricultural and food system practices do not compromise the ability of future generations to meet their food needs. Included in this approach are environmental protection, profitability, ethical treatment of food system workers, and community development. The goal of sustainable agriculture is to minimize adverse impacts to the immediate and off-farm environments while providing a sustained level of production and profit (90).

## Acknowledgements

Dietitians of Canada gratefully acknowledges the following for their participation in the development of this position paper:

### Author:

**Joyce Slater**, MSc, RD  
Department of Human Nutritional Sciences  
University of Manitoba and  
International Centre for Infectious Diseases/  
Canadian Institutes for Health Research  
Strategic Training Program in Microbiology  
and Infectious Diseases  
Winnipeg, MB

### Reviewers:

**Rebecca Green**, BAsC, MSc(c)  
Master's Candidate  
Mount Saint Vincent University  
Halifax, NS

**Bridget King**, MHS, RD  
Public Health Nutritionist  
Sudbury and District Health Unit  
Sudbury, ON

**Deborah Lay**, MSc, RD  
Public Health Nutritionist  
Regional Municipality of Durham  
Whitby, ON

**Judith Lawn**, MSc  
Consultant  
Dialogos Educational Consultants Inc.  
Pembroke, ON

**Eunice Misskey**, MCEd, RD  
Public Health Nutritionist  
Population & Public Health Services  
Regina Qu'Appelle Health Region  
Regina, SK

**Susan Roberts**, MEd, BSc, PDt  
Project Coordinator, Growing Food Security in Alberta  
Spruce Grove, AB

**Dean Simmons**, RD  
Nutritionist, First Nations and Inuit Health Branch  
Health Canada  
Vancouver, BC

**Marie Weingartshofer**, MSc, RD  
Calgary, AB

**Lynda Corby**, MSc, MEd, RD, FDC  
Director, Public Affairs, Dietitians of Canada  
Victoria, BC

## References

1. Dietitians of Canada. Individual and household food insecurity in Canada: Position of Dietitians of Canada. *Can J Diet Prac Res* 2005;66:43-6.
2. Ledrou I, Gervais J. Food insecurity. *Health Rep* 2005;16:47-51.
3. Kalina L. Building food security in Canada: A community guide for action on hunger. Kamloops, BC: Kamloops FoodShare; 2001.
4. OPHA Food Security Work Group. A systemic approach to community food security: A role for public health. Toronto: Ontario Public Health Association; 2002.
5. Community Food Security Coalition [cited 2006 15 June]. Available from: <http://www.foodsecurity.org/>
6. Anderson MD, Cook JT. Community food security: Practice in need of theory? *Agric Hum Values* 1999;16:141-50.
7. Cohen B. Community food security assessment toolkit. E-FAN-02-013. Washington, DC: Food Assistance & Nutrition Research Program, United States Department of Agriculture; 2002.
8. Campbell MC. Building a common table: The role for planning in community food systems. *J Plan Educ Res* 2004;23:341-55.
9. Hamm MW, Bellows AC. Community food security and nutrition educators. *J Nutr Educ Behav* 2003;35:37-43.
10. The Community Nutritionists Council of BC. Making the connection – food security and public health. Victoria, BC: Ministry of Health Services and the Health Authorities of British Columbia; 2004.
11. Toronto Food Policy Council. Reducing urban hunger in Ontario: Policy responses to support the transition from food security to local food security. Discussion paper #1. Toronto: Toronto Food Policy Council; 1994.
12. Houghton J. The dietitian's role in British Columbia's food security movement. *Dietitians of Canada Members Action Newslett* Nov. 1998.
13. Atlantic Health Promotion Research Centre, Family Resource Centres and Projects. Thought about food? A workbook on food security and influencing policy. Halifax, NS: Nova Scotia Nutrition Council; 2005.
14. Fairholm J. Urban agriculture and food security initiatives in Canada: A survey of Canadian non-governmental organizations. IDRC Cities Feeding People series #25. Ottawa: International Development Research Council; 1998.
15. Winne M. Community food security: Promoting food security and building healthy food systems. Venice, CA: Community Food Security Coalition; 2005.
16. Community Food Security Coalition. Community food security programs: What do they look like? 2005 [cited 2006 24 Mar]. Available from: <http://www.foodsecurity.org/pubs.html>
17. Agriculture and Agri-Food Canada. Canada's action plan for food security. Ottawa: Agriculture and Agri-Food Canada; 2003.
18. Hohenschau D. Community food security and the landscape of cities. Vancouver, BC: University of British Columbia; 2005.
19. Coveney J. Why food policy is critical to public health. *Crit Public Health* 2003;13:99-105.
20. Caraher M, Coveney J. Public health nutrition and food policy. *Public Health Nutr* 2004;7:591-8.
21. Garrett S, Feenstra G. Growing a community food system. Puyallup, WA: Western State University Cooperative Extension; 1999.
22. Sustain UK. Food miles – Still on the road to ruin? London, UK: Sustain: The Alliance for Better Food and Farming; 1999.
23. Pirog R, Van Pelt T, Enshayer K, Cook E. Food, fuel and freeways: An Iowa perspective on how far food travels, fuel usage, and greenhouse gas emissions. Ames, IA: Leopold Center for Sustainable Agriculture; 2001.

24. Flannery TF. *The weather makers: How man is changing the climate and what it means for life on Earth*. New York: Atlantic Monthly Press; 2005.
25. El-Hage Scialabba N, Hattam C. *Organic agriculture, environment and food security*. Rome: Food and Agriculture Organization; 2002.
26. Kjell A. *Oil: A bumpy road ahead*. World Watch Washington 2006;19:10-15.
27. Vellidis G, Smith M, Lowrance R. Impact and control of agricultural runoff. *Stormwater* 2003;4:42-5.
28. Clark N, Cole A. An environmental look at American feedlots. *Agric Res* 2003;9:11.
29. McIntyre L. Food insecurity. In: Raphael D, editor. *Social determinants of health*. Toronto: Canadian Scholars' Press; 2004:173-86.
30. Tarasuk V. Health implications of food insecurity. In: Raphael D, editor. *Social determinants of health*. Toronto: Canadian Scholars' Press; 2004:187-200.
31. Belanger-Ducharme F, Tremblay A. Prevalence of obesity in Canada. *Obes Rev* 2005;6:183-6.
32. Townsend MS, Peerson J, Love B, Achterberg C, Murphy SP. Food insecurity is positively related to overweight in women. *J Nutr* 2001;131:1738-45.
33. Tjepkema M, Shields M. Nutrition: Findings from the Canadian Community Health Survey – Measured obesity: Adult obesity in Canada. Ottawa: Statistics Canada; 2005.
34. Nestle M. *Food politics*. Berkeley, CA: University of California Press; 2002.
35. Nestle M, Jacobson MF. Halting the obesity epidemic: A public health policy approach. *Public Health Rep* 2000;115:12-24.
36. Agriculture and Agri-Food Canada. *Canadian food trends to 2020: A long range consumer outlook*. Prepared by Serecon Management Consulting Inc. Ottawa: Agriculture and Agri-Food Canada; 2005.
37. NPD Group. Snacks knock lunch out of the top three meals of the day: Canadian eating patterns take a major shift. *CCN Matthews*; 2006 [cited 2006 15 Dec]. Available from: <http://www.ccnmattthews.com/news/releases/show.jsp?action=showRelease&searchText=false&showText=all&actionFor=625214>
38. Agriculture and Agri-Food Canada. *Food retailing in Canada: Trends, dynamics and consequences*. Prepared by Zafiriou M. Ottawa: Agriculture and Agri-Food Canada; 2005.
39. Hendrickson D, Smith C, Eikensberry N. Fruit and vegetable access in four low-income food deserts communities in Minnesota. *Agric Hum Values* 2006;23:371-83.
40. Glanville NT, McIntyre L. Diet quality of Atlantic families headed by single mothers. *Can J Diet Prac Res* 2006;67:28-35.
41. Smoyer-Tomic K, Spence J, Amrhein C. Food deserts in the prairies? Supermarket accessibility and neighbourhood need in Edmonton, Canada. *Prof Geographer* 2006;58:307.
42. Indian Affairs and Northern Development. *Nutrition and food security in Kugaaruk, Nunavut: Baseline survey for the food mail pilot project*. Prepared by Lawn J, Harvey D. Ottawa: Indian Affairs and Northern Development; 2003.
43. Indian Affairs and Northern Development. *Nutrition and food security in Fort Severn, Ontario: Baseline survey for the food mail pilot project*. Prepared by Lawn J, Harvey D. Ottawa: Indian Affairs and Northern Development; 2004.
44. Indian Affairs and Northern Development. *Nutrition and food security in Kangiqsujuaq, Nunavik: Baseline survey for the food mail pilot project*. Prepared by Lawn J, Harvey D. Ottawa: Indian Affairs and Northern Development; 2004.
45. First Nations and Northern Statistics Section, Corporate Information Management Directorate, Information Management Branch. *Basic departmental data 2004*. Ottawa: Department of Indian Affairs and Northern Development; 2005.
46. Canada Post. *Food mail program*. Ottawa: Canada Post Corporation; 2007 [cited 2007 20 Jan]. Available from [http://www.canadapost.ca/corporate/about/food\\_mail\\_program/default-e.asp](http://www.canadapost.ca/corporate/about/food_mail_program/default-e.asp)
47. Health Canada. *Diabetes among Aboriginal (First Nations, Inuit and Metis) people in Canada: The evidence*. Ottawa: First Nations and Inuit Health Branch, Health Canada; 2005.
48. Chan HM, Kim C, Khoday K, Receveur O, Kuhnlein HV. Assessment of dietary exposure to trace metals in Baffin Inuit food. *Environ Health Perspect* 1995;103:740-6.
49. Kim C, Receveur O, Boulay M, Chan HM. Risk assessment of cadmium exposure in Fort Resolution, Northwest Territories, Canada. *Food Addit Contam* 1998;15:307-17.
50. Kuhnlein HV, Receveur O, Muir DC, Chan HM, Soueida R. Arctic indigenous women consume greater than acceptable levels of organochlorines. *J Nutr* 1995;125:2501-10.
51. Dewailly E, Ayotte P, Bruneau S, Laliberte C, Muir DC, Norstrom RJ. Inuit exposure to organochlorines through the aquatic food chain in arctic Quebec. *Environ Health Perspect* 1993;101:618-20.
52. Statistics Canada. *Study: Food insecurity in Canadian households*. Ottawa: The Daily, Statistics Canada; 2005 3 May [cited 2006 9 Nov]. Available from: <http://www.statcan.ca/Daily/English/050503/d050503b.htm>
53. Lee K. *Urban poverty in Canada: A statistical profile*. Ottawa: Canadian Council on Social Development; 2000.
54. Oh Canada! Too many children living in poverty for too long... 2006 report card on child and family poverty in Canada. Toronto: Campaign 2000; 2006 [cited 2007 11 Jan]. Available from: <http://www.campaign2000.ca/rc/rcpdf.html>
55. Nestle M. *Safe food: Bacteria, biotechnology, and bioterrorism*. Berkeley, CA: University of California Press; 2003.
56. Standing Committee on Agriculture and Agri-Food. *Canadian livestock and beef pricing in the aftermath of the BSE crisis*. Ottawa: House of Commons Canada; 2004.
57. Statistics Canada. *Food expenditure survey*. Ottawa: Statistics Canada; 2003.
58. Statistics Canada. *Net farm income: Agriculture economic statistics*. Ottawa: Statistics Canada; 2006.
59. National Farmers Union (Canada). *The farm crisis, bigger farms, and the myths of "competition" and "efficiency."* Saskatoon: National Farmers Union; 2003.
60. Statistics Canada. *Canadian farm operations in the 21st century*. Ottawa: Statistics Canada; 2001.
61. Myers R, Hutchings J, Barrowman N. Why do fish stocks collapse? The example of cod in Atlantic Canada. *Ecological Applic* 1997;7:91-106.
62. Pauly D, Christensen V, Guenette S, et al. Towards sustainability in world fisheries. *Nature* 2002;418:689-95.
63. MacRae R. Policy failure in the Canadian food system. In: Koc M, MacRae R, Mougeot L, Welsh J, editors. *For hunger-proof cities*. Ottawa: International Development Research Centre; 1999. p. 182-93.
64. Agriculture and Agri-Food Canada. *Agricultural policy framework: Federal-provincial-territorial programs*. Ottawa: Agriculture and Agri-Food Canada; 2005.
65. Fisheries and Oceans Canada. *Our mandate* [cited 2006 8 Dec]. Available from: [http://www.dfo-mpo.gc.ca/dfo-mpo/vision\\_e.htm](http://www.dfo-mpo.gc.ca/dfo-mpo/vision_e.htm)

66. Lussier G. What are we eating? Proceedings of Towards a Canadian Food Policy Conference; 2006 2 Feb; Montreal: McGill University; 2006.
67. Howlett M, Ramesh M. Policy instruments. Studying public policy: Policy cycles and policy subsystems. Toronto: Oxford University Press; 1995. p. 80-101.
68. Vancouver Food Policy Council. Food policy [cited 2006 12 June]. Available from: <http://www.city.vancouver.bc.ca/commsvcs/socialplanning/initiatives/foodpolicy/>
69. Winne M, Joseph H, Fisher A. Community food security: A guide to concept, design and implementation. Venice, CA: Community Food Security Coalition; 1997.
70. Pedersen S. A population health promotion framework for community food security. Victoria, BC: British Columbia Ministry of Health; 2006.
71. McCullum C, Desjardins E, Kraak VI, Ladipo P, Costello H. Evidence-based strategies to build community food security. *J Am Diet Assoc* 2005;105:278-83.
72. MacRae R, Hill S, Henning J, Bentley A. Policies, programs, and regulations to support the transition to sustainable agriculture in Canada. *Am J Altern Agric* 1990;5:76-92.
73. Klitzke C. Dietitians: Experts about food systems? *J Am Diet Assoc* 1997;97:S195-6.
74. Kalina L. Building food security: Dietitians as leaders in food policy development. *Can J Diet Prac Res* 2001;62:6.
75. Food Secure Canada. Initial action agenda. Toronto: Food Secure Canada; 2006 [cited 2006 17 Aug]. Available from: <http://www.foodsecurecanada.org/>
76. Canadian Council on Social Development [cited 2006 13 Dec]. Available from: <http://www.ccsd.ca/home.htm>
77. The Canadian Community Economic Development Network. What is CED? [cited 2006 13 Dec]. Available from: <http://www.ccednet-rcdec.ca/en/pages/home.asp>
78. Pothukuchi K, Joseph H, Burton H, Fisher A. A guide to community food assessment. Venice, CA: Community Food Security Coalition; 2002.
79. United States Department of Agriculture. Community supported agriculture [cited 2006 13 Dec]. Available from: <http://www.nal.usda.gov/afsic/pubs/csa/csa.shtml>
80. United States Environmental Protection Agency. Integrated pest management and food production [cited 2006 13 Dec]. Available from: <http://www.epa.gov/pesticides/factsheets/ipm.htm>
81. Fair Trade Federation [cited 2006 13 Dec]. Available from: <http://www.fairtradefederation.org/index.html>
82. Transfair Canada. About fair trade [cited 2006 13 Dec]. Available from: <http://www.transfair.ca/en/fairtrade/>
83. Manitoba Food Charter. About us [cited 2006 13 Dec]. Available from: [http://food.cimnet.ca/cim/43C1\\_4T97T3T7.dhtm](http://food.cimnet.ca/cim/43C1_4T97T3T7.dhtm)
84. Department of Nutritional Sciences, Cornell University. A primer on community food systems: Linking food, nutrition and agriculture [cited 2006 13 Dec]. <http://foodsys.cce.cornell.edu/primer.html>
85. National Anti-Poverty Organization. Make the minimum wage a living wage [cited 2006 15 Dec]. Available from: <http://www.napo-onap.ca/en/livingwage.php>
86. Canadian Organic Growers. Quick facts about Canada's organic sector [cited 2006 13 Dec]. Available from: <http://www.cog.ca/orgquickfacts.htm>
87. The food security projects of the Nova Scotia Nutrition Council and Atlantic Health Promotion Research Centre. Thought about food? A workbook on food security and influencing policy. Halifax, NS: The Nova Scotia Nutrition Council and Atlantic Health Promotion Research Centre; 2005.
88. Pimentell D, Culliney T, Buttler I, Reinemann D, Beckman K. Low-input sustainable agriculture using ecological management practices. *Agric Ecosyst Environ* 1989;27:3-24.
89. Gagnon C. A social impact follow-up model for environmental impact assessment and regional sustainable development: Glossary. Université du Québec à Chicoutimi [cited 2006 13 Dec]. Available from: <http://www.uqac.ca/msiaa/Rapport%20Final/anglais/index.html>
90. United States Department of Agriculture. Sustainable agriculture: Definitions and terms [cited 2006 13 Dec]. Available from: [http://www.nal.usda.gov/afsic/AFSIC\\_pubs/srb9902.htm](http://www.nal.usda.gov/afsic/AFSIC_pubs/srb9902.htm)