FOOD SECURE CANADA
SÉCURITÉ ALIMENTAIRE CANADA

Where agriculture, environment, health, food and justice intersect
Le pont entre l'agriculture, l'environnement, la santé, les aliments et la justice

DISCUSSION PAPER 9

Healthy and Safe Food for All

Food Secure Canada is a national membership-based organization committed to fighting against hunger and to building a healthy, fair, and ecological food system. Our vision is encapsulated in *Resetting the Table: A People's Food Policy for Canada*.

FOOD SECURE CANADA DISCUSSION PAPERS

The People's Food Policy is based on ten detailed discussion papers. These discussion papers were generated through 350 Kitchen Table Talks, hundreds of policy submissions, dozens of tele-conferences, online discussions, and three national conferences. Over 3500 people participated in their development. These papers cover a breadth of issues and include detailed policy recommendations for rebuilding Canada's broken food system. Unlike *Resetting the Table,* they are not consensus documents and not every member of Food Secure Canada has signed on to every recommendation in them. Rather, they are living documents, intended to inform debate, stimulate discussion and build greater understanding of our food system and how it should be—and must be—fixed.

1) Indigenous Food Sovereignty
2) Food Sovereignty in Rural and Remote Communities
3) Access to Food in Urban Communities
4) Agriculture, Infrastructure and Livelihoods
5) Sustainable Fisheries and Livelihoods for Fishers
6) Environment and Agriculture
7) Science and Technology for Food and Agriculture
8) International Food Policy
9) Healthy and Safe Food for All
10) Food Democracy and Governance

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Healthy and Safe Food for All

EXECUTIVE SUMMARY

This paper focuses on access to healthy and safe food for all and how current policies, research agendas, and strategies may be shaped to create supportive food environments and healthy public policy. Specifically, issues examined in this document include Canada's social safety net, relationships among physical and mental health outcomes with food insecurity, and safety issues in the Canadian food supply. General recommendations made include strategies aimed at reducing and monitoring poverty, more research examining the links between food insecurity and health, broadening the involvement of decision making related to our food supply to include health and consumer advocacy groups, creating supportive environments to make healthy food choices in public institutions and work environment as well as health and educational programs and strategies aimed at improving food literacy.

INTRODUCTION

This discussion paper unfolds a vision for healthy and safe food for all. There is growing and compelling evidence that Canadians of all incomes are experiencing chronic health problems and sometimes premature death due to poor quality diet, less than optimal nutrition and occasional exposure to unsafe food. In a country with a long-standing commitment to social justice the struggle of many to feed themselves and their families with dignity continues. Canadians who are poor risk particular harm to their health due to inadequate income to purchase high quality nutritious food. This represents an "unfair and avoidable" difference in health status among Canadians – otherwise known as health inequity.

Canadian society pays, through publicly-funded health insurance, for the costs of our collective food consumption patterns. The conventional food system, through which most people acquire food, carries no responsibility for the consequences of consumption of its products. While the evidence is overwhelming that a diet comprised of safe foods and rich in complex carbohydrates, fruits and vegetables and moderate in protein and fat is healthy for most, neither the conventional food nor the health, social and environmental systems are properly structured to reflect this reality.

This discussion paper adopts a health promotion lens. Health promotion is the "process of enabling people to increase control over and improve the determinants of health and thereby improve their health." Access to enough healthy and safe food for all is a key determinant of health. Many submissions to the Peoples Food Policy Project expressed concern that vital decisions relating to healthy and safe food for all have slipped away from Canadians. There was an urgent desire to bring these decisions into fuller public view and set a new course. This discussion paper makes policy recommendations to the federal government to set this new course. This course needs to be influenced and/or guided by various levels of government, communities, individuals, the private sector, non-profits, foundations, professional associations, and institutions. This discussion paper suggests ways for *ongoing, meaningful* citizen and civil society involvement in the policy making process.

These recommendations have been grouped according to three health promotion strategies: encouraging individual action (e.g. voting with our pocketbook and becoming informed consumers), creating supportive food environments, and healthy public policy.

Healthy public policy must aim at preventing ill health in the first place. Food environments determine the quality and quantity of food one can access. Food environments are dictated by factors such as food information rules, changing food supply, food product development, placement, marketing[1] community design (e.g., distances traveled to food retailers),[2] the strength of partnerships, and the sharing of resources at a community level.[3] Current food environments tend to contribute to consuming less healthy food. Policy recommendations related to supportive food environments and healthy public policy are the primary focus of this discussion paper.

This paper synthesizes the briefs submitted to the People's Food Policy Project (PFPP) with current research and best practices. In some instances, there are gaps in knowledge. So, further research and partnerships to either create needed research or articulate appropriate policy responses are recommended.[4] This paper outlines food policy initiatives to progressively integrate health concerns into the conventional food and health care system. This paper is intended as a catalyst for change by encouraging further dialogue among Canadians, helping them to advocate for healthy and safe food for all.

THE SCOPE AND EFFECT OF HOUSEHOLD FOOD INSECURITY AND HEALTH

Household food insecurity means "limited, inadequate, or insecure access to individuals and households to sufficient, safe, nutritious, personally acceptable food to meet their dietary requirements for a productive and healthy life."[5] In 2004, at least 9.2% of Canadians, over half of which were in households with children, experienced the health inequity of food insecurity. The risk and severity of food insecurity increases as income decreases[6] and as food security deepens the less healthy one's diet becomes.[7] Women who try to shield their children from the ill effects of food insecurity by sacrificing their nutritional intake are at particular risk of ill health.[8]

More than 790,000 Canadians sought assistance from food banks in March of 2009, 37% of whom were children; this increased by 18% from the previous year and is the largest annual increase since tracking began.[9] Food bank usage is a conservative estimate of household food insecurity as not all food insecure individuals use food banks.[10] More precise measures of food insecurity are needed that accurately reflect the scope of this public health issue.[11]

Recommendations

- Implement policies and interventions aimed at poverty reduction.
- Develop indicators that capture the overall size and scope of the food security issue in Canada.

HEALTH OUTCOMES AND FOOD INSECURITY

Food Insecurity and Mental Health

Research has demonstrated clear links between food insecurity and physical and mental health conditions. Food insecurity is more strongly associated with depression than measures of low income and education. Other resulting mental health conditions include higher levels of stress, anxiety, social isolation, eating disorders, and impaired cognitive abilities. The psychological consequences of food insecurity on children and families are significant and include links with lower levels of positive parent-child interactions, poorer infant feeding practices, poorer psychological health among children, and depression and suicidal tendencies in adolescents.[12] Studies have shown that food insecurity as a social inequality in health persists into adulthood, contributing to continued poor health status.[13]

Food Insecurity and Physical Health

Individuals from food insecure households are more likely to report poor/fair health and restricted activity by multiple chronic conditions. Evidence suggests that food insecurity is linked with several chronic diseases including type II diabetes and high blood pressure (perhaps mediated by stress, obesity, increased consumption of less nutritious foods, and food allergies).[14] Food insecurity is associated with increased use of clinical services[1]. Food insecurity is a marker of consumption of fewer fruits and vegetables and milk products, lower fibre intakes, higher energy density and inadequate intakes across a broad spectrum of nutrients (e.g., protein and several vitamins and minerals) among adults and adolescents.[6]

Studies have shown a higher incidence of obesity among food insecure populations (who live in low socioeconomic urban neighborhoods where healthy food may be less available and may cost more) compared to food secure populations.[6] Obesity appears to be more prevalent among women in food-insecure households[15]; however, there is not a clear relationship between income level and obesity as this association is not true of men.

Recommendations

- More research and monitoring to better understand links between physical and mental outcomes related to food insecurity, particularly obesity.[15]

POLICY RESPONSE TO FOOD INSECURITY AND HEALTH

Several PFPP briefs spoke to a federal government response to the "unfair and avoidable" difference in health status of Canadians attributed to insufficient money to buy food. Particular concern was expressed about the large number of Canadian children who are food insecure. The Canadian Government seeks to reduce food insecurity internationally as signatory to several international agreements that embrace a human rights framework; however, this commitment is not reflected in domestic policy.[16]

The right to food means a government should ensure its citizens "have the capacity to feed themselves in dignity."[17] In Canada, the right to food primarily means having enough money to buy food rather than depend on charity. For others, the right to food can have different significance. For example, First Nations Communities' capacities to feed themselves in dignity will come when land claims issues are resolved. In addition, a small minority of Canadians trap, gather, grow, and preserve all their food and so food is not secured through the exchange of money.

Monitoring Food Insecurity in Canada

The *Canadian Action Plan for Food Security (*1998) indicates that reducing poverty is a key strategy to reducing food insecurity. However, in 1998, the federal government dismantled the Canadian Assistance Plan (CAP) and in 1995, it significantly weakened the Employment Insurance (EI) system.[18] Both these policy changes may have increased poverty and food insecurity.

The federal government documents its progress on its commitments to *Canada's Action Plan for Food Security* through reports prepared by Agriculture and Agri-Food Canada. However, these reports contain no detailed assessment of federal government policy relating to income and other social welfare supports (i.e., EI, the Canadian Social Transfer, Canada Pension Plan, the Guaranteed Income Supplement, Canadian Child Tax Benefit, National Child Benefit, disability benefits, disability tax credits and other social welfare supports related to housing and childcare) and their effect on food security. Several provinces have recently implemented strategies to reduce and monitor poverty. For example, the recent increase in the child tax credit in Ontario to low-income families was designed to ensure these families have sufficient revenue to provide essentials (e.g., food).

The challenge for the federal and other levels of government is to track how policy initiatives affect levels of food insecurity for better or worse.

Social Assistance and Welfare Programs

Policy responses to food insecurity include Canadian social assistance and welfare programs. The federal government provides block funding to provincial and territorial governments through the Canadian Social Transfer that replaced the CAP for social and educational spending including social assistance (welfare). Provincial governments now choose how to allocate the block funding received.[19] Block funding has resulted in reductions in benefit levels and greater restrictions on who can receive welfare. Although data suggested decrease welfare caseloads prior to the current recession, this was not necessarily linked to people finding employment but rather to tighter eligibility requirements particularly for "employable singles." One author writes, "Cuts to welfare systems in the mid to late 1990s resulted in substantial increases in food bank use."[20]
Although social assistance levels are higher for families and single parents with children, they are inadequate – leaving recipients with the dilemma of "Feed the Kids or Pay the Rent."

EI is supposed to provide income support to the unemployed during job transitions. Due to the changes in eligibility requirements, only 40% of employed Canadians qualify for EI.[21] Almost six months of full-time work is required to qualify which can disqualify younger

workers, parents (particularly women) returning to work after a leave, and recent immigrants.[22] Bill C-50, introduced in October 2009, extended EI benefits by five to twenty weeks for "long tenure" workers until the fall of 2011. This was a helpful policy improvement for those who qualify, however, for the estimated 500,000 unemployed that would have exhausted their benefits by the spring of 2010,[23] it is not helpful. EI does not provide the necessary transitional support to a significant number of Canadian workers and likely impedes their ability to secure healthy food.

One policy brief argued that improved income supports would not enhance the nutritional status of low income Canadians, as they will gain entry *as consumers* into "a food system that produces and sells food without concern for nutritional quality." The creation of a public food system was suggested, based on the concept of food as a human right. As an example, fruits and vegetables could be made available at a subsidized cost. Farmers would be paid a fair market price for this produce and in this instance, provincial governments, would subsidize the difference. Alternatively, provincial governments could distribute "public food vouchers" each month to be redeemed at grocery stores or farmers' markets. This benefit would be taxed back from those with a higher income and avoid any stigmatization of lower income earners.

Recommendations

To eliminate food insecurity, comprehensive and multi-pronged approaches are needed that include:

- Enshrining the rights to food and water in the *Canadian Charter of Rights and Freedoms*.
- Implementing population health approaches to address health inequity, such as a public food system that ensures the provision of high quality food for all Canadians.
- Setting national minimum standards for social assistance in Canada.
- Revamping food security reporting processes to include federal departments charged with responsibility for income and other social welfare supports in collaboration with members of civil society including low-income Canadians, anti-poverty organizations, public health professionals, and other levels of government.
- Revamping reporting on the obligations to secure the right to food for all Canadians by assessing on an annual basis the degree to which federal policies address food insecurity. This reporting must be public and be subject to independent oversight (Auditor General).

- Renewing the social policy agenda with improved income support mechanisms complemented by other social welfare supports[24] as follows:
  - Revamp the EI program to provide transitional support to *most* Canadian workers from one job to the next with monies sufficient to access healthy food.
  - Reinstitute a CAP-like program, which shares the cost of social assistance with the provinces and territories and ensures universal eligibility with minimum income assistance thresholds, an immediate increase in income assistance rates, and an indexing mechanism.[25]
  - Increase the Canada Child Tax Benefit to at least $5,000 per child per year from the current level of $3,300.[26]
  - Discontinue claw backs to the National Child Tax Credit.
  - Complement improved income support mechanisms with other supports, including greater resources geared to income housing and affordable, high quality childcare.
  - Ensure economic development and labour market integration strategies particularly target low income Canadians and newcomers.[27]

CANADIAN FOOD CONSUMPTION PATTERNS AND CHRONIC DISEASES

Good nutrition promotes health. Canada's Food Guide (2007) was developed to help Canadians meet their nutrient needs and reduce their risk of obesity and chronic diseases such as type 2 diabetes, heart disease, certain types of cancer and osteoporosis.[28] The majority of Canadians (i.e., about 70% of children and adults) do not eat the recommended amount of vegetables and fruit, milk and milk alternatives or whole grain products[2]. Over a quarter of Canadians between the ages of 31 and 50 consume amounts of fat that are beyond the threshold of significant health risks.

The discussion of food consumption and chronic disease needs to also consider the importance of breastfeeding. Breastfeeding, where feasible, is the preferred infant feeding practice because it promotes optimal development of the child,[29] and reduces the risk of obesity,[30] type 1 and type 2 diabetes,[31] asthma, and types of childhood leukemia.[32] Benefits of breastfeeding for the mother include a reduction in the risk of breast and ovarian cancers,[33] type 2 diabetes, and osteoporosis. Breastfeeding rates are lower in the Aboriginal population at 54% compared to 75% for the Canadian population.[34] National statistics suggest that the rate of breastfeeding initiation is 87%; however, the duration rates fall quickly with many mothers not meeting their breastfeeding goals.

Over the past 25 years, there have been disturbing trends in the prevalence of overweight (BMI over 25 kg/m^2) and obesity (BMI over 30 kg/m^2) among adults, adolescents and

children. In 2004, nearly one quarter (23.1%) of adults were obese and additional 36.1% were overweight; a 13.8% increase since 1978/79.[35] Being overweight or obese is a risk factor for cardiovascular disease, type II diabetes, some cancers (e.g., colon, breast and endometrial) osteoarthritis, depression, gynecological problems, non-alcoholic fatty liver disease, asthma and reproductive problems.[36] The total cost of obesity has been estimated to be $4.3 billion (2005 dollars); $1.8 billion in direct healthcare costs and $2.5 billion in indirect costs.[37] Chronic disease has significant social and economic costs, including reduced quality of life, lost productivity, and escalating health care costs. Although today's public health challenges and health care costs are related to chronic diseases, nutrition interventions are significantly underfunded.

Recommendations

- Continue to examine and implement educational strategies that will facilitate food consumption patterns based on Canada's Food Guide. Establish appropriate budget commitments that increase funding for nutrition programs at the population-based level.[38]

- The federal government take a more interventionist role in the Canadian food supply. This includes calls for cuts in salt, saturated fat and the banning of trans-fats.

- Implement initiatives that will increase the initiation and duration rates of breastfeeding, particularly among First Nations communities.

- Support The International Code of Marketing of Breastmilk Substitutes, which bans all promotion of bottle-feeding and sets out requirements for labeling and information on infant feeding. Any activity which undermines breastfeeding (e.g., handing out free samples of formula) also violates the aim and spirit of the Code.

- Focus on health promotion initiatives to reduce rates of food insecurity, obesity, and diet-related chronic diseases. This includes campaigns to raise awareness of the importance of high quality and sustainable food, strategies to celebrate and promote Canadian culinary tradition and innovation especially targeting children and youth.

- Provide technical expertise to and fund more detailed community level assessments of food skills across Canada.

- Increase educational opportunities both in community-based and school based settings to learn food skills and culinary skills.

Creating Supportive Food Environments

The quality of food environments can depend greatly on the neighbourhood and/or the community in which one lives. For example, residents of certain low-income urban neighbourhoods have limited access (e.g., no vehicle, limited public transit) to healthy food (e.g., supermarkets, farmers markets). In addition, northern and remote communities face barriers to accessing healthy food.

Changes in the food supply over the last number of decades and the development, placement, sale and marketing of food products call for changes in food environments. There are now more calories available to consume. From 1976 to 2003 most food commodities available for consumption remained relatively constant; however, "just seven food commodities (i.e., salad oils, wheat flour, soft drinks, shortening, rice, chicken, and cheese) accounted for more than 80% of the total increase in per capital estimated energy availability (EEA). The conversion of these commodities into food products leads to foods that are high in fat, sodium and/or sugar, and calories.

The most commonly consumed food commodities are for the most part highly processed and profitable for food processors and retailers.[39] Therefore, they are prominently featured in supermarkets and many "non-traditional" locations, such as public facilities, gas stations along or near major highways,[40] and in urban fast food restaurants. Some studies have demonstrated a link between obesity for those who live close to areas "dense with fast food retailers."[41] While consumers want healthier food,[42] time constraints have driven demand for foods that are convenient, pre-prepared, and easy to prepare.

The decisions of corporations, food producers, governments, and retailers have a great influence on the foods made available to Canadians.[43] Food and beverage marketing takes various forms such as print media, educational materials, sponsorships of events and sports teams, television, internet, social networking sites, advergaming, podcasts, and mobile phones.[44] There is particular concern about food advertising of nutrient poor options to children, as they may not have the critical thinking to properly evaluate food and beverage advertisements.[45]

Students with decreased overall diet quality are more likely to perform poorly in school, have more behavioural and emotional problems[46], and be obese.[47] Canada's schools have faced budget constraints due to funding cuts and have become more reliant on the private sector, parent-sponsored fundraising (e.g., sale of chocolate bars),[48] as well as vending machine contracts with food and beverage companies to increase revenue streams. The revision of school curriculum has generally seen the end of basic food preparation skills learning.

Because most adults spend at least 25% of their lives at work, it is in the economic interest of employees to promote health among employees.[49] Overweight and obese employees have "lower productivity, higher rates of injury, disability and absenteeism, increased insurance premiums, worker's compensation, medical costs, and early retirement.[50] There are at least 380,000 federal government employees and because of its size and purchasing power, the implementation of healthy food-related initiatives would display significant leadership. Its commitment to purchase local food would help develop local food infrastructure and demonstrate how procurement policies can favour sustainable food.[51]

There are many examples of federal programs that assist those who are food insecure. The Canadian Prenatal Nutrition Program (CPNP) reaches at-risk pregnant women, new mothers, and their infants in urban, isolated, rural, and northern areas, and reaches out to newcomers and First Nations communities. CPNP and like programs such as the Canadian Action Program for Children (CAPC) and Aboriginal Head Start offer welcoming and respectful environments and targeted outreach strategies to attract participants who are typically at risk for food insecurity and may not attend "mainstream" programming.

Canadian agriculture and the agri-food industry need to be reinvented to promote healthy eating, optimal nutrition and ensure food safety for all Canadians; economic development and trade liberalization goals cannot take precedence over concern for public health. With the exception of the supply management system, Canadian agricultural policy is increasingly disconnected from domestic policy considerations and is now firmly part of a global system that promotes agricultural production for export. This system, in turn, favours the production of a few dominant crops such as corn, soy and wheat, which provide a plentiful supply of some of the food commodities previously discussed that are transformed into processed foods.

Recommendations

Federal initiatives

1. Refer to policy recommendations regarding improving food environments in low income, urban and rural and remote communities in discussion papers three and four respectively for recommendations.
2. Research and implement tax disincentives to discourage the consumption of foods that are high in fat, sodium, sugar, and calories. Implement a mandatory phase out of food products containing trans-fats.
3. Ensure independent evaluation of the voluntary industry measures to reduce sodium in the Canadian diet as recommended by the Health Canada Sodium Working Group.[52]
4. Develop internal systems to promote a health for all federal employees and dovetail these efforts with the purchase of local and sustainable foods.

5. Senior levels of government convene meetings with government and nongovernmental monitoring and research agencies, working in the food-health field, to discuss new structures and processes for early detection of emerging problems, and appropriate research directions in the fields of food production and distribution and nutrition intervention to further our understanding of the public health implications[53].
6. Research agricultural production needed to provide for a healthy diet to reduce chronic disease and obesity and ensure agricultural support programs and financial incentives to growers to produce this food.
7. Develop a National Agriculture and Healthy Eating Plan that features clear benchmarks for shifting agriculture to meet public health goals, annual reporting on how benchmarks are being met, and the creation of a National Food Policy Council to oversee the Plan.
8. Redirect funds for agricultural and agri-food research and development to facilitate the shift of agricultural policy to meet public health goals resulting in a shift from industry led "product development."
9. Create forums for dialogue among farmers, citizens, and public health professionals to map out a detailed research agenda and further develop policy recommendations related to agriculture and public health.
10. Support the development of Regional Food Systems comprised of small and medium size farms that grow a range of crops in support of healthy eating and optimal nutrition.

To help municipal governments, the federal government should:

11. Create an electronic food environment atlas that provides a spatial overview of a community's ability to access healthy food to aid municipal food planning efforts.[54]
12. Fund the Federation of Municipalities or a similar body to offer clearinghouse and consulting support to municipalities so they can actively engage in local food planning and governance to create supportive food environments
13. Directly support the cost of developing comprehensive municipal or regional healthy and necessary infrastructure to bring them to life.
14. Examine the success of current Healthy Eating Guideline promotion strategies for foods and beverages in municipal contexts.

For schools and children

15. Implement policy interventions to encourage healthy eating in schools including the development of a Pan-Canadian School Nutrition Program and comprehensive policies that prohibit marketing to children in schools, contain nutritional standards for foods offered in schools (e.g., vending, cafeterias), and reflect Canada's Food

Guide. Conduct regular surveillance of school food policies and guidelines, food offerings and student consumption measured against benchmarks.

16. Integrate cooking and food growing education from preschool to the end of secondary school that includes a focus on rural and urban agriculture, developing school gardens, organic food production, composting, vermicomposting, recycling and encourages food sovereignty.
17. Implement more research to better understand how food and beverage marketing influence children eating habits and take regulatory action in terms of unhealthy food and beverages to children.[55]
18. Support community-based creative partnerships that bring healthy food based policies and practices into schools,[56] and provide funding for promising practices.

To create other supportive environments

19. Mandate that away-from-home food establishments provide consumers with nutrition information in a standard easy to understand format and that independent research be commissioned to monitor the effect of consumers' choices when presented with this information.
20. Implement policies and strategies to create workplace healthy eating environments such as providing nutrition information and offering healthy options[57] (e.g., serving healthy and safe food in meetings, celebrations, training sessions, cafeterias and vending machines).
21. Implement comprehensive urban agriculture policies and ensure these policies consider who face mobility challenges or who use wheelchairs.
22. Expand funding to community-based programs that serve populations at risk for food insecurity to ensure these programs serve all the communities in which they are needed, have no wait list and are sustainable.

Municipal government

23. Ensure transit planning and development ensures ease of access to healthy food. For example, create "healthy food destinations" such as neighbourhood markets, proximity of food retail to neighbourhoods, and community gardens.
24. Establish food procurement policies for local and sustainable foods that include discouraging the establishment of fast food chains and corner stores within a certain radius of schools.
25. Provide staff support and resources to food policy councils or similar bodies to encourage civil society action to strengthen the local food system.

SAFETY IN THE FOOD SUPPLY

Safety in the food supply concerns include food borne illness, exposure to environmental contaminants, genetically modified organisms via food, and the addition of substances to food (e.g., natural health products in food format).

Food Borne Illness

Food borne illness affects at least 11 million Canadians annually and costs an estimated $12 billion a year. With the move to larger farms, centralized processing, and globalized agri-food trade, food borne illness can spread from one source to large numbers of people across vast areas (e.g., in 2006 spinach from California contaminated with E coli caused illness in over 26 states and one province). The distances food travels complicates the task of tracing the source of food borne contamination.[58]

In a formal review of the outbreak of food borne listeriosis in 2008, several weaknesses in the Canadian food safety system were identified: industry error, deficiencies in regulations, lack of preparedness among various governments, and failures in communications to the public. Other concerns related to food borne illness include that new food-borne pathogen strains, resulting from a complex interaction of biological and sociological forces, pose health risk, especially for immuno-compromised individuals[59]. The Canadian food safety system is complex as several federal government departments (i.e., the Canadian Food Inspection Agency, the Public Health Agency of Canada, and Health Canada) are responsible for food safety and this responsibility is in turn shared at provincial and local levels.

Recommendations

- That enforcement functions through self-regulation by food companies discontinue as it places all food inspection under corporate control.
- Food safety activities must include government inspection and enforcement measures.[60]

Agricultural Practices and Genetically Modified Foods

Genetically modified foods (GM foods) are foods that have been changed by altering the genes of the food item (e.g., inserting genes from one species into another), or biotechnologically-derived foods. The responsibility of assessment and control including labeling requirements of GM foods lies with Health Canada and the Canadian Food

Inspection Agency and since 1994, over 81 GM foods have been approved.[61] Special labeling of foods is required if the GM food contains health risks (e.g., allergens) or if the nutritional composition of the food item has been altered. The Standing Committee on Health began to re-examine consumer-labeling needs in 2002. However, this committee agreed to not pursue labeling after a voluntary standard or labeling of GM foods was instituted (Canadian General Standards Board. 2004). Concerns about voluntary standards are that these policies need to be understood in a context where testing and "proof" of safety is dominated by industry. Long-term effects of GM foods on human and environmental health are unknown.

A basic concern is that genes can replicate, recombine, and spread infinitely, and we cannot know the ramifications of this.[62] GM food developments need to be fully evaluated and introduced through broad democratic goal-setting and public participation. GM foods are discussed further in Section 7.03.1 - Regulation of Genetic Engineering and other emerging technologies.

In addition to GM foods, other problems related to the structure of the food and agriculture system are occurring. For example, antibiotic-resistant bacteria, associated with agricultural production practices, are difficult to treat with standard medical therapies. Mad cow disease, also a product of agricultural production practices, may be transmissible to human populations.

Recommendations

- Mandate that genetically engineered foods, and/or foods that contain engineered ingredients, regardless of country of origin be labeled.

- Refer to Discussion Paper #7: Science and Technology for Food and Agriculture - Section 7.03.1. - Regulation of Genetic Engineering and other emerging technologies for a complete set of recommendations about GM foods.

Exposure to Food Contaminants

Potentially toxic chemicals are found in foods in low concentrations (e.g., pesticides, plastics, metals); however, when combined with other sources they contribute to overall exposure. Exposures that occur during pregnancy and early in life have the most potential for harm. Diet surveys seem to indicate that exposures to food contaminants are generally below guidelines and may have decreased for some chemicals. [63] However, recent studies have shown that chemicals that were not previously tested may be present in foods.

Contaminants can be present in food due to the use of pesticides (for crops) and antibiotics (in meat) during food production, the environment (e.g., mercury in fish), or intentional or unintentional additives during packaging or preparation (such as leaching of BPA in the lining of cans into food, PFCs transferred from non-stick cookware to food during cooking). Therefore, reducing food-related exposures to contaminants is a challenge. The level of evidence varies depending on the chemical (i.e., some are based on human studies; many are based on animal studies).

There is evidence to suggest that chemical contaminants in food, caused by industrial pollution and agricultural practices, may be contributing to immune system suppression and hormone disruption.[64] Policy actions required to address these contaminants depend on the source of the contaminants and require multiple approaches.

Recommendations

- The Canadian Food Inspection Agency tests foods for a range of contaminants regularly and make these results readily available. If some chemicals are shown to be increasing, the sources need to be investigated and strategies to lower the levels implemented.
- Ban Bisphenol A (BPA) from food packaging and containers.
- Ban all Polybrominted Dihenyl Ethers (PBDEs) from products to stop the contamination of the environment and the food supply.
- Eliminate sources of lead in the food supply (e.g., ban the import of lead-soldered and availability of lead crystal glassware). Alternatively provide intensive education about the health risks of lead.
- Place severe limits on emissions of coal-power plants and incinerators, as they are major sources of mercury that contaminates the fish supply. Support sustainable power sources.
- Revoke the exemption granted by Health Canada for total mercury content for large predatory fish species, such as swordfish, shark, and tuna (fresh and frozen, not canned). The commercial fish species guideline of 0.5 part per million (ppm) should apply.
- Provide education to support food practices that reduce fat intake (increase fresh fruits and vegetables, select low fat dairy products, lean cut of meats, trim visible fats, remove skin from meat or fish) to reduce exposures to chemicals stored in fat (e.g., dioxin, PCBs, PBDEs)
- Support exclusive breastfeeding up to age six months, followed by the introduction of foods while continuing to breastfeed for up to two years and beyond to reduce exposure to chemicals and contaminants.
- Provide clear labeling of cookware indicating potential health impacts of components and precautions to take to reduce risk. For example, PFC-containing

non-stick cookware should have a warning not to use it on high heat (greater than 350˚c).

Labeling of Foods

Both health and sustainability are stated public policy objectives, but our food information rules and practices stand in the way of achieving them. Consumers often get information that is incomplete and contradictory. They also do not have the resources to determine with any ease the accuracy or completeness of food industry messages, particularly when faced with the size of food industry advertising budgets.

Nutrition labelling became mandatory for all prepackaged foods in December 2007 (Health Canada www.hc-sc.gc.ca/fn-an/label-etiquet/nutrition/index-eng.php). The Nutrition Facts table that appears on foods is intended to make the information consumer-friendly. Despite these efforts, many issues still exist regarding nutrition labels, consumer awareness, and education. Many people do not check food labels and a high proportion do not understand labeling information.[65] More than 40% of the Canadian adult population does not have strong literacy skills and 50% have low numeracy skills.[66] Of similar concern is the "dose limits" education provided by Health Canada for certain items in our food supply (e.g., general recommendation that caffeine consumption not exceed 300 mg per day). However, there is an apparent inability for most consumers to understand the idea of "dose limits."

The issue of food labeling also extends to dietary supplements (or natural health products). Natural Health Products (NHPs) may be sold in food format; and in this form, they are not subject to the same safety provisions of the Food and Drug Act and Regulations pertaining to foods. For example, the following do not apply to NHPs in food format: limits on contaminants, residues of agricultural chemicals or food additives; regulations governing the safety of bottled water; and nutrition labelling. There is also strong potential for consumers to exceed the maximum levels of vitamins and minerals recommended for health when they are included in foods marketed as NHPs. In the US, the Dietary Supplement Health and Education Act prevents the marketing of dietary supplements as a conventional food. Even in the more regulated environment for dietary supplements, the National Institutes of Health (Science Statement on Multi Vitamin/mineral Supplements) have raised concern about the cumulative effects of supplementation and food fortification and the potential for segments of the population to exceed healthy levels.

In March 20, 2010, Health Canada circulated a notification outlining its intention to amend the Food and Drug Regulations to permit the use of caffeine and caffeine citrate as food additives in non-alcoholic, carbonated, water-based, flavoured, and sweetened beverages

other than cola type beverages at specific maximum levels. There are numerous concerns about this and similar authorizations to allow industry to add substances to our food supply that include:

- Monitoring of risk due to a lack of surveillance data. Industry is often not required to track its use of added substances in their food products. Thus there is no knowledge about the impact of intake of substances (e.g., caffeine), particularly for children.
- Evidence suggesting certain segments of the population have genetic polymorphisms that are associated with altered rates of metabolism of certain substances (e.g., caffeine) and thus consumption of these substances within current acceptable levels can present health risk in these individuals.

Consumers rely on Health Canada to act in their best interests when it comes to the Canadian food supply. However, the messages being sent to the consumer are contradictory. For example, Health Canada recommends to Canadians to limit their daily intake of caffeine; the same government body authorizes the addition of caffeine to non-cola soft drinks, which may increase the risks of over-consumption of caffeine.

Recommendations:

- Health Canada establish a proactive consultation process that seeks input from the health and nutrition community and consumer-based health advocacy groups in addition to the input received by industry when reviewing food regulations that pertain to nutrition policy, health products and food.

- Examine the feasibility of developing a positive attributable message on food labels that relates consumption of foods to Canada's Healthy Eating Guidelines.[67]

- Identify clearly all products of controversial technologies including GM Foods.

CITIZEN INVOLVEMENT IN DECISION MAKING

Due to space constraints, this discussion paper has given a brief overview of some of the many issues related to healthy and safe food for all Canadians. These issues are complex and inter-connected and often draw on specialized research and/or practice. Despite the challenge it presents, strategies are needed for *ongoing, meaningful* citizen and civil society involvement in the policy making process. Serious consideration needs to be given to how these strategies can be developed and implemented. These strategies need to be guided by a philosophy that "non-expert" or "lay" perspectives bring great value and insight to and are ultimately essential allowing citizens to influence a new policy direction for healthy and safe

food. The Canadian Institute for Health Research (CIHR) has developed a framework to guide citizen involvement into its research and policy development role and can serve as a useful guide.

Recommendation

- Map out strategies to ensure citizen involvement in "governance, research priority-setting, developing strategic plans and strategic directions" relating to a new federal policy directions related to healthy and safe food for all.

CONCLUSION

There are established, well-documented, and complex relationships that exist between food and human health. This discussion paper has detailed important issues related to the provision of healthy and safe food and has focused on health promotion strategies (e.g., creating supportive food environments) and policies that would work towards reducing food insecurity and optimizing the nutritional health of Canadians.

General recommendations include strategies aimed at reducing and monitoring poverty, more research to examine the links between food insecurity and health, broader involvement of decision making related to our food supply to include health and consumer advocacy groups, supportive environments to make healthy food choices in public institutions and work environment, as well as health and educational programs and strategies to improve food literacy.

ENDNOTES

[1] Morgan or Winson or both.
[2] Morgan
[3] Centre for Disease Control Atlanta
[4] See Airlie Conference/pg 477
[5] Tarasuk – CSO Regional Conference
[6] (Bierman & colleagues) (Bermingham)
[7] Tarasuk – Page 21 CSO Regional Conference
[8] page 26 – the Canadian Facts
[9] Page 2/Hunger Count 2009
[10] Tarasuk
[11] Kirkpatrick/Tarasuk Canadian Public Health Review page 324
[12] American Journal of Nutrition 2002/Vozoris
[13] Alaimo, AJPH
[14] [ref Seligman 2008])
[15] www.phac-aspc.gc.ca/publicat/2009/oc/index-eng.php/retrieved June 17, 2010
[16] Rideout 566/also page with chart)
[17] www.righttofood.org
[18] Dietitians of Canada page 43
[19] page 8 – the 1995 Budget and block funding.
[20] A 10 per cent cut in the welfare caseload is associated with a 4.2% increase in food bank use" and "a ten per cent cut of benefits would result in a 14 per cent increase in food bank use"/Page 6/Goldberg and Green
[21] page 35, Canadian Facts
[22] page 2, Jackson/Schetagne
[23] (Jackson/Schetagne)
[24] Goldberg and Green
[25] Goldberg and Green.
[26] page 3, Hunger Counts)
[27] Hunger Counts and Green
[28] (www.hc-sc.gc.ca/fn-an/food-guide-aliment/index-eng.php)
[29] {{348 Palda, V. A. October 2003}}, 349 Vennemann,M.M. 2009
[30] {{343 Butte,Nancy F. 2001}} {{342 Armstrong,Julie 2002}}
[31] {{345 Sadauskaite-Kuehne, V. 2004 }},
[32] {{341 Shu,Xiao Ou 1999}}.
[33] {{348 Palda, V. A. October 2003}},
[34] NAHO 2004
[35] (Shields
[36] Robker et al; Luo 2007. www.statcan.gc.ca/pub/82-620-m/2005001/article/adults-adultes/8060-eng.htm#8
[37] {{358 Public Health Agency of Canada 2009}}.
[38] McRae, R. Is Food the Next Public Health Challenge? City of Toronto Public Health. August, 1997 . Link: http://www.toronto.ca/health/tfpc_challenge.pdf
[39] Winson page 302
[40] Winson (302/305),
[41] http://www.emaxhealth.com/1020/109/31801/obesity-influenced-fast-food-retailers.html
[42] Abridged Building Convergence – page 6),
[43] (Lang page 329)

[44] (Lang ecological public health/City of Toronto Staff Report)
[45] (page 5 City of Toronto)
[46] (Florence, M. D., & Asbridge, M. (2008), Pollitt, E., & Jacoby, ER. (1998)
[47] [CCHS 2004].
[48] Tony Winston page 301
[49] (curitti 5).
[50] (Curitti 9
[51] (Menu 2020 page 30)
[52] (www.cmaj.ca/earlyreleases/06nov09-sodium-working-group.dtl)
[53] Ibid, McRae, R.
[54] (Example at: http://ers.usda.gov/FoodAtlas/)
[55] (page 1 CDPAC press release)
[56] Metcalf – Implement a Food School Program page 29),
[57] curitti page 16)
[58] (page 2 Listeriosis investigative review; page 400 – Agriculture Policy is Healthy Policy and the following web link)
[59] Ibid., McRae, R.
[60] (Independent Research and Tracking www.listeriosis-listeriose.investigation-enquete.gc.ca/index_e.php?s1=rpt&page=summ)
[61] (Health Canada. 2009. http://www.hc-sc.gc.ca/fn-an/gmf-agm/appro/index-eng.php)
[62] (Ho, 1997).
[63] Health Canada. 1998. The Health and Environment Handbook for Health Professionals. Food Quality. Ministry of Supply & Services, Canada. Cat. No. H49=96/2=1995E.
[64] Ibid., McRae, R.
[65] Cowburn G, Stockley L. Consumer understanding and use of nutrition labelling: a systematic review. Public Health Nutrition 2005;8:21-8.
[66] (Statistics Canada, 2005).
[67] Ibid., McRae, R.

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Food Secure Canada is based on three interlocking commitments:

Zero Hunger: All people at all times must be able to acquire, in a dignified manner, adequate quantity, and quality of culturally and personally acceptable food. This is essential to the health of our population, and requires cooperation among many different sectors, including housing, social policy, transportation, agriculture, education, and community, cultural, voluntary and charitable groups, and businesses.

A Sustainable Food System: Food in Canada must be produced, harvested (including fishing and other wild food harvest), processed, distributed and consumed in a manner which maintains and enhances the quality of land, air and water for future generations, and in which people are able to earn a living wage in a safe and healthy working environment by harvesting, growing, producing, processing, handling, retailing and serving food.

Healthy and Safe Food: Safe and nourishing foods must be readily at hand (and less nourishing ones restricted); food (including wild foods) must not be contaminated with pathogens or industrial chemicals; and no novel food can be allowed to enter the environment or food chain without rigorous independent testing and the existence of an on-going tracking and surveillance system, to ensure its safety for human consumption.