



McGill

**World Platform
for Health and Economic Convergence**

2007 THINK TANK

Ways Forward Towards “Health Friendly” Local and Global Food Chains

**Changing what it takes for the Drivers of Supply and Demand to Stop the
Progression of the Obesity Pandemic**

Conference Report

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INTRODUCTION

The objective of the 2007 Health Challenge Think Tank was to identify lever points for change along local and global food chains to shift the drivers of supply and demand away from the current focus on quantity, high-yield/high-caloric content and low-cost/low-price products, to an emphasis on quality and diversity. It was based on the precept that nothing less will suffice to stop the progression of the obesity pandemic before our current generation of children become the first to have a shorter life expectancy than their parents.

The Health Challenge Think Tank 2007 demonstrated more compelling and urgently than ever that halting the childhood obesity epidemic worldwide requires revisiting some of society's basic parameters to ensure a better convergence between consumption, business, and economics on the one hand, and the social domains of environment, health, education, and culture on the other. This calls for "health-friendly" policy interventions that are logistically, economically and culturally sustainable for individuals, organizations and governments at a global level. Reaching the scale, scope and speed of changes needed to halt childhood obesity also calls for social, business and market innovation as much as for grassroots action and behaviour change from individuals.

This conference report highlights the levers for change identified during the Think Tank and sets out the rationale of why they were chosen. Specifically, it sets out:

- What are the lever points for change
- What is needed to lever the points for change

The lever points identified during the Think Tank are listed in the Box below. The first group of levers relate to the overarching policy approaches needed by governments and the global food industry. The second group pertains to specific policy actions. The third relates to broad economic and cultural factors. The fourth set identifies specific opportunities in leveraging food supply chains, and the fifth relates to actions needed in schools, children and families.

This report is drawn entirely from the presentations and discussions during the Think Tank. No extra material was used. Note that all the levers (and this report) focus on the "energy-in" side of the balance; the "energy-out" side will be the subject of the 2008 Think Tank.

Lever Points to Change the Drivers of Supply and Demand to Stop the Progression of the Obesity Pandemic, as identified by the 2007 McGill Health Challenge Think Tank

1. Overarching policy approaches

- Encouraging innovation in the global food industry
- Developing effective strategies to regulate the food industry
- Applying policy lessons learned from the environmental movement

2. Specific policy actions

- Creating a healthier food marketing environment
- Providing consumers with comprehensible nutrition information about food products
- Thinking carefully about pricing strategies

3. Broad economic and cultural factors

- Levering macroeconomic factors
- Levering food culture and cultural change

4. Innovation in food supply chains

- Empowering the fruit and vegetable supply chain
- Building shorter, local food chains

5. Levering schools, children and families

- Making schools catalysts for healthy eating
- Engaging children and families

SUMMARY OF RECOMMENDATIONS

1. Overarching Policy Approaches

1.1 Encouraging Innovation in the Global Food Industry

Why this is a lever for change

Encouraging innovation in the global food industry is a lever for change because global food companies, including food manufacturers, food retailers and food service providers, have the potential to make an important contribution to supplying and encouraging demand for healthier foods by:

- Reformulating products and menu items to reduce the amount of fats, sugars and salt
- Developing product portfolios with more “better-for-you” products
- Providing good quality, easily interpretable nutritional information to consumers
- Providing food in appropriate portion sizes
- Reducing marketing of energy-dense, nutrient-poor foods
- Using marketing creativity to promote healthier diets
- Educating consumers about healthy eating
- Encouraging healthy diets and wellness among their own employees

The companies are in a particularly good position to understand the nature of consumer demand because they are close to their consumers – they have the ability to obtain and act on consumer research. Such research stimulated PepsiCo, for example, to make significant investments in “healthier” oils. Global food companies are also in a good position to promote consumer demand through their marketing activities. The food service company, Sodhexo, for example, now promotes awareness of balanced eating in their restaurants and cafeterias. Moreover, global food companies increasingly accept the need to create a healthier food environment. Many already provide front-of-pack nutrition labels and logos, and only market food to children that adhere to defined nutrition profiles. The development of new “better-for-you” products and reformulation of existing products is one of the key drivers of industry growth. Unilever alone has reformulated 30000 stock keeping units (SKUs) across the range of their product portfolio. And these companies also have the financial incentives. “Better-for-you” products are a major source of revenue growth. In Canada, for example, PepsiCo’s *Smart Spot* products accounted for two thirds of the company’s revenue growth in 2006. In the UK, Unilever found that for every one Euro invested in wellness programs within their factories, there was a three Euro return from improved productivity and reduced loss of working time due to illness.

It should not be forgotten, however, that much of the world’s food is processed and sold by national and local food companies, and not global multinationals. So while large global food companies can be catalysts for change and drive best practice through the

system, they will only ever represent a certain proportion of the food market. There is also the inherent tension that although global food companies can improve quality, they will still have the drive to sell more quantity, which is counter to the message of many healthy eating and obesity prevention initiatives.

What is needed to lever this point for change

Four key actions were identified as needed to lever innovation for change in the global food industry:

Create effective and successful public private partnerships. Partnerships are needed between global food companies and public entities that are going to have a real impact on obesity levels. To have the required impact, these public-private partnerships need to: (i) be multi-sectoral and multi-agency, i.e. involving many companies, NGOs and government agencies, but with not so many partners that it becomes difficult to control; (ii) be well-coordinated; (iii) have, from the outset, very strong commitment from all stakeholders over a long time frame; (iv) have realistic targets; (v) have clear roles and responsibilities for all the stakeholders; everyone should know what their role is, and what they will and will not do; (vi) at the outset, have agreement about what will be monitored and reported on, and this should be sustained throughout the partnership; (vii) have trust and confidence between the stakeholders.

Encourage cross-disciplinary research for product development. Cross-disciplinary collaboration between researchers in private and public entities enables breakthroughs in food and nutrition research, e.g. physiologists, biologists, food science technologists. To encourage innovation, good regulation of intellectual property is needed and should be settled from the outset of the research process. A long-term research strategy from all partners is a requirement for success. And a substantial contribution from government is needed to increase the leverage of all the partners.

Integrate health and nutrition into entire business models. Rather than just treating health and nutrition as an “add-on”, global food companies need to integrate the goal of supplying and creating demand for healthy products into their entire business model. This needs to be part of “corporate responsibility”, which extends beyond the original practice of “corporate social responsibility” by incorporating economic and environmental issues as well as social. To integrate health and nutrition fully into business models, better understanding is needed of the way that current business models and value chains work. And to really achieve broader change, there needs to be an action that allows change in one company to roll out to the rest of the industry. Often, this involves companies working together to achieve the same goal.

Create the right incentives, mechanisms to stimulate companies to be more innovative in their efforts to encourage healthier diets. This is needed to create a system that rewards positive changes by global food companies, but penalizes industry laggards. There is a role here for government to create these incentives and penalties.

1.2 Developing effective strategies to regulate the food industry

Why is this lever for change

While voluntary industry actions and market mechanisms can be powerful levers for change, hard government-led regulation of the food industry has the advantage of being a public good: it applies to all actors in a sector, not just single companies, so that it has the potential to move change across the board. It can be used to affect both supply and demand. Government regulation also backs up changes made by voluntary initiatives to ensure they stay in place. In so doing, it is a means of promoting stable, system- and sector-wide change. History also suggests that market mechanisms are not very effective in turning the wheels of capitalism in a healthier direction, and that food companies have a tendency to distort messages and actions in their own interests. That is why government regulation is so often suggested as a lever for change in addressing the obesity epidemic.

What is needed to lever this point for change

A mix of traditional and more innovative regulatory strategies is needed to lever change.

Command and control regulation of the food industry. This is the most commonly suggested approach (i.e. the food industry should do as the governments tell them). Calls for government regulation of food marketing to children (the next lever discussed in this report) are the classic example. Food taxes, also discussed below, are another example. Others include government regulation of nutrition labelling and requirements to reformulate products. The problem here is that while these approaches are frequently suggested, they have not been tried and tested, so it is not clear if they will work, and in the meantime, they alienate and reduce the potential for innovation in the food industry.

Performance-based regulation of the food industry. A more innovative (yet also untested) approach is to adopt performance-based regulation of the food industry. This strategy involves assigning responsibility to different food companies to reduce obesity in selected populations e.g. in schools, but leaving them to decide how to achieve the target i.e. not requiring them to do it in any particular way. Thus, a food company would be assigned X number of schools and told they must reduce the prevalence of obesity in the school by X amount over X number of years. They must then decide how to achieve this goal.

Litigation against the food industry. Another “regulatory” approach is to sue the food industry to place pressure on them to change. Several class action lawsuits have been attempted and/or are still pending in the United States.

Removing regulations that reduce the production and access of fruits and vegetables and other healthy foods. A much more positive approach is to *reduce* regulation to increase supply and demand in a *positive* way. For example, regulations in Canada ban butter blends, impose tariffs in imported fruits and vegetables, make it less expensive to grow fruits and vegetables locally, and reduce the ability of food companies to advertise

their foods with health claims. These regulations could be removed to stimulate the market for healthier foods.

1.3 Applying policy lessons learned from the environmental movement

Why this is a lever for change

Environmental problems have important similarities with obesity in that they have complex causes, lag times between cause and effect, and long-term impacts that are difficult to reverse. There have been many successes in the environmental movement. The lessons emerging from these successes, particularly as they relate to the policy approaches needed, could be successfully applied to addressing obesity. Thus applying lessons learned from the environmental movement is a lever for change.

What is needed to lever this point for change

The lessons learned from the environmental movement relate particularly to the balance of voluntary and regulatory strategies needed to address long-term, chronic problems like obesity. Specifically:

Solving the problem requires a mix of different strategies at multiple spatial and temporal scales. An array of strategies and actions are needed at both the global and local level. These include state-led policies, market-oriented strategies, engaging industry, public advocacy, education and awareness-raising.

Industry needs to be engaged to solve the problem. Engaging industry is important because progressive companies are always ahead of government regulations (usually by 5-10 years). Best practices that are adopted today by progressive companies tend to be tomorrow's status quo or business-as-usual. The first step in engaging industry is to find out what drives industry actions, what opportunities they have, and what challenges they face. Industry-led voluntary initiatives can be either bilateral (e.g. involving a company responding to an initiative set up by the state) or unilateral (e.g. a company independently setting up an initiative).

Industry-led voluntary initiatives are most successful when the right incentives are in place. To stimulate the development and effective implementation of industry-led voluntary initiatives, the right incentives have to be in place. The two most important incentives are a credible threat of external regulation, and financial incentives e.g. decreasing input costs, increasing market share, acquiring market access. These financial incentives increase if the market value of the product increases.

To encourage real change, carrots are needed to encourage industry leaders and sticks for industry laggards. To really move the marketplace, there need to be carrots for the leaders and stick for the laggards. Leaders need to have a perceived benefit for making changes and the laggards need to face a perceived threat. The challenge is to speed up the adoption of best practices by the laggards and by the middle mass of companies that fall

between the leaders and the laggards. The best approach is to focus on the leaders and the laggards, and then the middle mass will follow behind. One problem is that the laggards complain to governments that making changes costs too much, etc. The best way to counter this is to: 1) create a safe place for companies to publicly speak out (rather than through industry association, which is not a very comfortable place for most companies to speak out); 2) work with companies down the value chain to demonstrate that they can be profitable and progressive at the same time; 3) work with companies to educate the public and raise awareness, and 4) offer public support by government when the industry does the right thing.

Both regulatory and voluntary approaches are needed to change the incentives of the producers of the problem. Voluntary approaches have the advantage of providing firms with the flexibility to adjust to financial incentives or market demands. But these approaches need to be shored up by government regulation and standards (mandatory policies) in order to secure and stabilise advances made by industry and keep things from rolling backwards. They need to be both qualitative and quantitative in nature, and, to be successful, have clear objectives, targets, and enforcement mechanisms and penalties. Another type of approach that can complement voluntary initiatives are taxes and subsidies to address market failures, which are imposed by governments but (in environmental-policy speak) “non-mandatory” in nature.

2. Specific Policy Actions

2.1 Creating a healthier food marketing and media environment

Why this is a lever for change

Creating a healthier food marketing and media environment is a lever for change because the media has a pervasive impact on us all, with both negative and positive implications. Specifically, it affects food demand. Children are now surrounded by advertising and other promotional activities. In the United States, by the time children are in the first grade they have spent the equivalent of three school years in front of the television set; the average child views 40000 advertisements per year, many for food and snacks. There has been much discussion and debate around this issue, and governments and industry are now recognizing action is needed. There is also a considerable opportunity to leverage the positive power of marketing.

What is needed to lever this point for change

Four key changes are needed to use and lever the marketing and media environment to help address the obesity epidemic:

Reduce marketing of high-calorie, nutrient-poor foods, especially to children. This can be done through government regulation, self-regulation and/or voluntary initiatives. In

the United Kingdom, for example, government regulation has been used to ban advertising of energy-dense, nutrient-poor foods to children under the age of 16. At the same time, many food companies and media channels are developing and implementing voluntary initiatives to reduce the amount of advertising of these foods to children. The US government has suggested that food companies should not allow their licensed characters to advertise these foods. Given the global nature of food marketing, the World Health Organization (WHO) is also developing a set of recommendations on marketing food to children. Some stakeholders believe that a more formal code on marketing food to children is needed at an international level.

Use marketing to spread positive messages. Unique and innovative kid-targeted promotions and packaging, including the use of licensed characters, could be used more proactively to promote fruits and vegetables. Marketing is also needed to promote the healthier products now being sold by the food industry. This marketing should convey positive and simple messages that are readily understood by the targeted market.

Encourage television programs to depict healthy lifestyles. Television programs popular with children are a way of motivating children to eat healthy diets and instil healthy habits for life. They can be used to increase knowledge, modify attitudes and, ultimately, affect behaviours. One such example is the *Sesame Workshop*, which works in conjunction with the health sector to promote healthy diets around the world in their children's television show.

Use the mass media to generate massive awareness on the magnitude and impact of childhood obesity. This is needed worldwide to prompt political and public action.

2.2 Providing consumers with comprehensible nutritional information about food products

Why this is a lever for change

Providing consumers with comprehensible nutritional information about food products is a lever for change because it empowers consumers to make healthy food choices.

What is needed to lever this point for change

There is a widespread view that the nutrient facts panel is an inadequate means of promoting healthy food choices – but that categorising different foods inherent in more innovative approaches is a challenge. There is likewise a recognition that international approaches could help strengthen the provision of consumer information at a global level. These, then, were identified as the three main steps needed to lever change:

Innovating new forms of nutrition labels. New ways of labelling, notably the use of front-of-pack labels, are needed to help consumers understand nutritional information. Voluntary industry-led, non-governmental and mandatory approaches can be used. Food manufacturers and retailers are now launching front-of-pack logos schemes for their own

products on a voluntary basis, and some limited data suggests they are having a positive influence. The challenge of single company approaches is that they are used to create competitive advantage, and are thus unlikely to be standardised across the entire sector. An alternative approach is for non-governmental organizations to partner with industries. For example, the Heart and Stroke Foundation of Canada licenses the use of its *Health Check* logo to over 120 food companies. These new labels have a second major advantage in that companies are reformulating their foods in order to be able to display the labels. However, more research is needed in order to provide evidence to test the hypothesis that the front-of-pack approaches are more effective in encouraging healthier diets relative to nutrient facts panels.

Develop methods of classifying the nutrient status of foods. One of the major challenges of providing more graphic nutritional information is how to classify the nutritional status of the food. Should it or should it not have a “better-for-you” label? Is the product high in fat or not? One means of doing this is nutrient profiling, the science of ranking individual foods based on their nutrient composition. There are different models currently in use to profile foods. These models should be simple, useful and the algorithms used transparent.

Consider how the Codex Alimentarius or other international approaches could be used to spread best practices globally. The *Codex Alimentarius* has been very successful in setting nutrition labelling standards, but there is debate about if and how it could be utilised to improve the quality of nutritional information to consumers worldwide. More engagement is needed with this process, or an alternative process to enable countries to learn lessons from each other about the best ways to provide consumers with nutritional information.

2.3 Thinking carefully about pricing strategies

Why is this lever for change

Pricing is a lever for change because prices affect international, national and local food markets and consumer food choices as well as the ability to access food. But because price policies would affect wealthier and poor people differently, they need to be thought through very carefully.

What is needed to lever this point for change

Pricing mechanisms are one of the most commonly suggested levers for change to address the obesity epidemic. But reflecting broader debates, no particular consensus emerged during the Think Tank about if and how pricing should be used. Three suggestions were debated, with the majority of the discussion focusing on food taxes and prices.

Food taxes. There are many different types of taxes that could be imposed on foods with the aim of discouraging consumption. For example, it was suggested during the Think Tank that taxes could be imposed according to the energy-density of the food, or there

could be a tax on marketing of energy-dense foods. However, an economic analysis presented challenges these suggestions, since in developed countries (not developing countries), consumers tend to be price insensitive (i.e. foods have low price elasticities), and so taxes would have to be extremely high to make any difference. This in turn would be very regressive on poorer consumers and those with higher calorie needs. Such taxes would also be unfair since all consumers would bear the cost of higher food prices, rather than those who are obese.

Taxes would also be highly problematic in developing countries since poor consumers are highly price sensitive. This is currently in evidence in developing countries, where food prices are rising. It was argued that these rising food prices will have very little positive difference in developed countries (because they would have to be far higher to make any significant difference to reduce excessive food consumption) but will have a large negative difference among the poor in developing countries. It was also pointed out that the rise of food prices currently being experienced – including of vegetable oils and sugar – may also encourage obesity because it is likely the price of fruits and vegetables will rise faster than of fats and sugars, so it will continue to be relatively cheaper to consume energy-dense foods, which will in turn continue to promote obesity. Epidemiological studies show that wealthier consumers behave differently to poorer consumers when faced with higher food prices. In Brazil, for example, when the income of poorer people rises, they spend the extra money on meat and processed foods, not fruits and vegetables, which could be related to prices. Thus, if prices of meat and processed foods were made more expensive and of fruits and vegetables cheaper, this could encourage greater fruits and vegetables consumption among the poor. But in talking about prices and taxes, it should not be forgotten that the poor people are usually making their choices about food in the context of other non-food essentials. Choice is not just among foods, but between foods and something else, and that applies to the poor segments of population worldwide.

The issue is clearly very complex. But there was some agreement concerning the potential advantages of food taxes in developed nations. Low elasticity means that tax revenues would be high, which could be earmarked for nutrition promotion and obesity prevention projects. Food taxes could also be effective when there are healthy substitutes, e.g. diet soft drinks relative to full calorie versions. It was also noted that taxes have had some success in reducing tobacco consumption.

Changing price support mechanisms for agricultural production. It has been suggested that changing agricultural price supports in Europe and North America would be an effective means of affecting food availability. Thus, price supports should be removed for foods currently consumed in excess. But according to the economic analysis just discussed, the extra supply produced as a result of increased incentives would probably be disposed of in world markets, rather than within Europe or North America, thus having little impact on the domestic diet. Moreover, the price of food in these regions barely reflects the farm gate price (because of “high margins in vertical price transmission”). Therefore, altering the price support mechanisms would have very little influence on the price of food. Moreover, current policies in place in the European Union

and Canada mean that the price of meat and dairy products are higher than they would be without price supports, indicating that removing them would not be favourable to healthy food choices.

Pricing in line with portion size. It was also suggested that food companies should charge relatively more for large portion sizes. This suggestion was challenged on the basis that consumers would not respond well to it, and that it would be difficult to implement since a lot of pricing decisions are made by franchisees, supermarkets, etc., out of control of the food company.

3. Broad Economic and Cultural Factors

3.1 Levering macroeconomic factors

Why this is a lever for change

Leveraging macroeconomic factors is a lever for change because obesity is an economic issue. Firstly, rising obesity reduces the productivity of an economy's labour force. This happens because of health-related work absences, obesity-related inefficiencies on the job and, for children, because obesity is an impediment to the education and learning. Secondly, rising obesity is a direct threat because it increases the resources that society will have to devote to health care and care for the disabled. The third, and possibly the most important, a link arises from the fact that a strong economy delivering a rising standard of living broadly shared throughout the population is a key condition underpinning the ability and willingness of a society to make progress in overcoming the threat. History tells us that material wealth created by economic growth makes a government and its citizens more willing and more able to address moral issues like public health threats. It is likely that obesity will be no exception.

What is needed to lever this point for change

Put into place policies that promote genuine economic growth in a pro-health manner.

This is essential in the developed world to ensure that there are resources and public support for obesity prevention. In the developing world, it is essential to ensure that undernutrition is resolved, but in so doing does not become replaced by obesity.

Study the economic costs of obesity. Talking an economics-based language is essential to bring the obesity challenge to the top of the political, corporate, media and investors' agenda. How much will obesity and dietary healthcare costs be in a business-as-usual scenario in 20 years? By how much will costs be reduced in 20 years if we act now and invest more in obesity prevention efforts? What will be the costs when 50% of the workforce is obese? What will be the cost for the company, for the individuals, for the health insurers? These questions need to be asked and answered if obesity prevention is going to get the attention it needs.

3.2 Levering food cultures and cultural change

Why this is a lever for change

Culture is when people are asked “why are you doing this?” and they do not know because they have always done it that way. This very much applies to eating. There are rules around the time of meals, the structure of meals, the order of dishes and consumption, etc. People apply these rules without even thinking about it. For example, in the United States, it is culturally acceptable to consume larger portions whereas in France it is not acceptable. Religious cultures are also important because they influence habits and customs like vegetarianism and fasting. But food cultures can change. In Japan, for example, habits that were once taboo, like standing while eating and drinking cold drinks, have been changed through the influence of fast food and soft drink companies. And unfortunately, the weight of history suggests that human culture has a tendency to move towards greater obesity. Cornucopia is seen as culturally desirable. In the United States, eating more beef was the American dream. In many different cultures around the world, eating more is seen as a sign of success. And everywhere, there is a tendency to eat more energy-dense, processed foods as the development progresses. Many believe that increased consumption of these processed foods undermines traditional, healthier food cultures. There are also cultures in which people think fatness is the ideal body type. Culture thus runs very deep into what and how people eat, but at the same time, it is also amenable to change. For this reason, leveraging food and eating cultures and cultural changes is a critical lever for change.

What is needed to lever this point for change

Four steps were identified to lever this point for change:

Take account of food and eating cultures in obesity interventions. Obesity interventions rarely address cultural factors. Lack of cultural understanding is one reason why many obesity interventions have failed. Interventions should aim to retain health aspects of eating cultures and change less healthy aspects. As an entry point, traditional and cultural practices that are non-obesogenic need to be identified.

Encourage eating as a social activity. Eating meals together as families or in other social settings increases enjoyment of food. Moreover, the subliminal, mindless eating associated with obesity can best be controlled in situations that are ritualized, socialized, that happen as regularly as possible in a collective social context.

Take steps to re-enthrall people with food. People are more likely to consume healthy foods when they enjoy them. If people are told to eat something because it is good for them, they are more likely to shun it. Food education thus should not only aim to increase knowledge of nutrition, but a love of food. This is already starting to happen. In the United States, for example, people are really re-discovering the value of food and there is a growing interest in the craft of cooking again. Important here is that people need to

learn how to cook, since cooking creates a cultural engagement with and enjoyment of food.

Retaining traditional food cultures. Freedom is one of the dominant ideologies of the western market economy, but many non-western cultures welcome children into stable, nurturing extended family structures where duty and responsibility override individualism as the dominant value system. Studies demonstrate that family-centered cultures produce happier and easier to control children. They are also more likely to respect traditional eating cultures. Retaining these traditions is critical in the developing world as a means of preventing the same path towards obesity taken in western countries.

4. Innovation in Food Supply Chains

4.1 Empowering the fruit and vegetable supply chain

Why this is a lever for change

Empowering the fruit and vegetable supply chain is a lever for change because fruits and vegetables are the foods that everyone knows we need to eat more of! But people do not eat enough fruits and vegetables. In the United States, for example, 90% of the population is not meeting the current recommendation for fruits and vegetables consumption. The question, then, is how to empower the supply chain to encourage greater demand for fruits and vegetables among adults and children.

What is needed to lever this point for change

There was a significant amount of discussion about the challenges to increase the supply of and demand for fruits and vegetables. Eight inter-related actions were considered necessary to overcome these challenges.

Developing partnerships to overcome fragmentation in fruit and vegetable markets and programs. There is a lot of fragmentation in fresh produce markets. It is a complex, global market. Apples producers are competing with strawberry producers who are competing with orange produces, etc., and they all want a larger share of the market, so they argue among themselves. There is also a lot of fragmentation among programs to promote fruit and vegetable consumption. Partnerships are therefore needed to ensure that solutions are found within the fruit and vegetable supply chain as a whole; a fragmented approach will never achieve what is needed to meet and create demand for fruits and vegetables.

Creating funding mechanisms to support the development of fruit and vegetable promotion programs. There are many different fruit and vegetable promotion programs, but they are fragmented and have very little funding. Moreover, this funding is highly fragmented, mixed between government and private entities. A solid focal point is needed to bring these funding mechanisms together.

Increasing advertising and promotion offruits and vegetables. At the moment, very little money is invested in advertising and promoting fruit and vegetable consumption. In the United States, it represents 2% of all advertising expenditure. This is largely because there is too little profit in growing fruits and vegetables, so there is no surplus to allocate to marketing efforts. But more marketing is needed as a means of increasing demand. The challenge is to find the funding for it. A “check-off” program¹ would be very difficult to operate in the highly-fragmented fruit and vegetable industry, so other sources of revenues are needed.

Making fruits and vegetables accessible and affordable to people on low incomes. In developed countries, poor areas often lack retail sources of fruits and vegetables. Attractive places to purchase fruits and vegetables, like farmers markets, are often in wealthier neighbourhoods and are expensive. Policies are needed in urban areas to encourage development of supermarkets and farmers markets in order to encourage people with limited economic means to purchase more fresh fruits and vegetables.

Increasing the convenience of buying and eating fruits and vegetables. In a time-starved world, people do not want to spend time purchasing fruits and vegetables when they then have to cook them – and in the meantime they go to waste in the refrigerator. Action is needed to increase the convenience of fruit and vegetable products, such as by introducing high quality frozen produce that can be easily prepared. Families also need to be educated about the easiest and most convenient way of preparing fruits and vegetables.

Providing fruits and vegetables in schools. Though there are many excellent examples of school fruit and vegetable schemes worldwide, these programs are often small in scale and struggle for financing. Greater coherence, coordination and funding is needed to scale-up these schemes. These schemes should provide a secure supply of a diversity of fruits and vegetables at sufficient volume (see also the “Schools” lever described below).

Providing subsidies and/or greater investment for fruit and vegetable production in developed and developing countries. The effectiveness of subsidies are not known, but it is noteworthy that in developed nations, meat, dairy, cereals, etc. are subsidized whereas fruits and vegetables are not. In developing countries, too little investment is made in producing fruits and vegetables as a result of budgetary constraints.

Leveraging modern and traditional retail to increase access to fruits and vegetables in developing countries. Evidence suggests that supermarkets in some developing countries have enhanced the availability and reduced prices of some fruits and vegetables. There could be greater complementarities between supermarkets and the informal sector, since informal market stalls that sell fruits and vegetables can be located immediately outside supermarkets, encouraging consumers to buy when they use the supermarket. Supermarkets can also sell more expensive Grade 1 fruits and vegetables, and the

¹ That is a fund collected from producers of a particular agricultural commodity used to promote the commodity.

informal sector the lower grades; this means that fruits and vegetables can be provided through both forms of retail to consumers with different levels of income.

4.2 Building shorter, local food chains

Why this is a lever for change

Shorter food chains are a lever for change because they can change our whole relationship with food. They represent a move towards quality, a return to an emphasis on taste, crop diversity, family farms and connections to the land. This is especially the case for children, who can more easily make the connection between the food they consume and health when they can know how food is grown and are involved in the process. More specifically, local food chains provide fresh produce, support family farms, protect genetic diversity, preserve farming as a way of life, and keep money in the community. They can help reframe the obesity issue into one about healthy eating, healthy environments and a healthy relationship with food rather than a strictly technical, nutritional issue.

What is needed to lever this point for change

Three steps were identified as needed to lever shorter food chains for change:

Conducting community food assessments. A Community Food Assessment is the first step needed to building shorter food chains. It is a community-based strategic planning process that examines a community's food, nutrition and agriculture assets, determines needs and opportunities for coordinated responses and guides participants in linking food sector activities. These assessments can then be used to guide the development of local food initiatives.

Development of local food initiatives. These include: *Buy Local* campaigns, which coordinate efforts to encourage the consumption of locally grown fruits and vegetables; farmers markets, which are growing fast in North America; and local procurement, which involves large private and public sector organizations purchasing from local sources.

Teaching children in schools to grow food and exposing children in schools to local foods. Coordinated efforts in schools to teaching children about growing food and their local food environment can be an important step in encouraging a healthy relationship with food. (See also the “Schools” lever below.)

5. Leveraging Schools, Children and Families

5.1 Making schools catalysts for healthy eating

Why this is a lever for change

Schools are a simple but profound way to teach children about food and nutrition. There are many reasons why schools represent such a strong lever for change. Schools are places that already exist, so there is no need to start from scratch. Schools are already committed to children. Schools are places where communities come together and think about social action. And schools are a place where children can be exposed to great food. Moreover, schools are not just an entry point for leveraging change among children, but their parents, since the children can pass on what they learn to their parents. Often it is assumed that parents can teach their children, but this is difficult when they often do not know about healthy eating themselves.

What is needed to lever this point for change

There was a great deal of discussion around the role of schools, and a considerable number of actions suggested in order leveraging this point for change, as follows:

Develop school food policies. Each school should develop its own food policy, with guidance from ministries of health, education, and agriculture. Concerned community members and agencies, schools, parents, students, local farmers, health care practitioners, community organizations that serve youth, and the public-at-large should be involved in developing these policies.

Develop standards for school foods and meals that put children's health first. What is best for children's health should be the guiding principle for setting nutrition standards in schools. Government at all levels need to play an important role here by developing standards for school meals and foods sold outside of meal programs, as well as setting national nutrition policies, school health policies and providing the resources for school meals programs.

Increase the status of school foodservice personnel. To motivate real change in school meals, school food service personnel need to gain a higher status, such as through increased pay or accountability.

Work with the food industry to reduce the calories available in schools. Experience shows that it is possible to work with industry to improve the nutritional quality of foods available in schools, such as foods sold in vending machines. One example from the United States is the guidelines produced by the Alliance for a Healthier Generation in conjunction with the American Beverage Association. These guidelines aim to reduce calories consumed in schools and to increase nutrition. Evidence suggests that consumption of full calorie sodas in schools in the United States is declining as a result of voluntary industry action. However, some public health advocates also believe that these

drinks should be eliminated from schools altogether and tap water made freely and easily available.

Change the entire paradigm around school food. In addition to nutritional standards, there needs to be a paradigm shift around school food. Three things are needed: (i) delicious, nutritious food in the cafeterias; (ii) hands-on, experiential learning and cooking as well as gardening classes, and (iii) a link with the academic curriculum. There needs to be a paradigm shift in which the perception that schools promote healthy eating becomes the norm, not the exception. Work is needed to increase the status of school food, so that it becomes “cool” rather than something to be disdained.

Provide fruits and vegetables in schools. Though there are many excellent examples of school fruit and vegetable schemes worldwide, these programs are often small in scale and struggle for financing. Greater coherence, coordination and funding is needed to scale-up these schemes. To be successful, these schemes should provide a secure supply of a diversity of fruits and vegetables at sufficient volume.

Coordinate and scale-up existing school-based initiatives to make them last. There are lots of different programs in schools with different aims and objectives which could be used combined to help address obesity. They need to be packaged together to promote school health. There is also a cacophony of initiatives specifically aimed at promoting healthy eating and addressing obesity. But many of them have not lasted. The challenge, then, is how to make these programs sustainable over the long term.

Evaluate impact of school-based initiatives. Monitoring of the large number of different initiatives is needed to see if they are actually having some impact. Evaluative structures should be based on specific metrics with regular measurement.

5.2 Engaging children and families

Why this is a lever for change

All too often, no-one asks children about what needs to be done and what will work to help encourage healthy eating and prevent obesity. But children are in a unique position to solve their own problems and through engagement, can become empowered to make the right decisions. This is why *engaging children* is a lever for change. Market research shows that mothers are the food gatekeeper in most households, at least in the United States, so they need to be engaged as well. The entire family setting is in fact an important means through which children develop dietary habits for life.

What is needed to lever this point for change

Children, parents and entire families need to be empowered and leveraged to create change, as follows:

Empower children. To create change in a tangible way, children need to be asked for their opinion about what needs to be done and what will work. They need to become part of the dialogue. This can be done through youth focus groups or advisory boards. Importantly, too, they need to partake in activities where they empower themselves and other children to make healthy choices. One example is the *Life in Action* program in Canada, in which children learn in a non-didactic way about healthy eating at home and about community-based activities. For example, the program goes into schools and provides workshops for children that allow them to explore the meaning of healthy, active living in greater depth with the guidance of a specially trained facilitator.

Encourage good parenting. Often parents raise children without clear guidance, letting them eat whatever they want, and so they develop terrible eating habits. But evidence suggests that parents who set limits for young children in a way that translates into a child-empowered system over time are less likely to have obese children. Another related parenting practice is modelling: children need to see parents eating healthy in order that they will do so themselves.

Build on parent power. Mechanisms are needed to empower parents who are concerned about obesity and healthy eating so that they can lobby governments and industry for change. One such mechanism is the “parents’ juries” set up in Australia and the United States around the issue of marketing food to children.

Leverage family values. It is often the case that governments and industry act to change when there is a strong societal ideal linked to policy objectives. “Family values” are one such ideal that could be linked to the obesity epidemic. Many people are attracted to the idea of a family sitting down to eat, of caring for each other. Thus the ideal of family values could be better leveraged to drive policy change.

APPENDIX 1

EXPERT MEETINGS: THEMES AND DESCRIPTIONS

Policy Innovations that Would Promote Global Market Expansion and Penetration of Canadian Agricultural Products that Have High Health-Value (W. McKnight)

The relationship between food and health has always been implicitly recognized, but more recently that relationship is being propelled to higher levels of consciousness among consumers, policy makers, agricultural producers and food companies. Concern has been growing over the global obesity epidemic, the use of potentially harmful ingredients such as trans fats and the overall nutritional quality of processed foods. This presents significant market expansion and penetration opportunities on both domestic and global markets for those agricultural products that have intrinsically high health value.

Growing Forward, the upcoming agriculture policy framework, will promote global competitiveness for Canadian Products in general by continuing to help businesses to position their products in key targeted international markets in the *Brand Canada* initiative, which develops consumer research and analysis, industry benchmarking studies, and brand-based marketing tools. This work would help Canadian businesses position their products better in key markets. Other components of the *Growing Forward* policy framework also provide market intelligence and support to exporters in the forms of training and development opportunities as well as work with industry and foreign governments to retain, expand and attract new investment through the development/distribution of promotional materials (brochures, customized business case proposals) and the undertaking.

The objective of this expert panel is to identify further policy innovations that could potentially be included in the International Association for Food Protection (IAFP) that would push the boundaries of what existing policy framework in either agriculture or health in Canada can do to help increase market expansion and penetration opportunities on GLOBAL markets for those agricultural products that have intrinsically high health value. These issues will be discussed in the specific context of pulse.

Policy Innovations to Promote Changes in Cultural Values and Social Norms to Shift Food Choice and the Driver of the Food Supply and Demand in a Healthier Direction (W. Balesco)

Cultures vary in the values they attach to food in relation to health: some rationally emphasizing health and nutrition or symbolically favoring natural and/or organic foods, others focusing on hedonism or guilt, and a large number viewing food as a core social engine. Social norms attached to food, eating and body weight are many. Cultural values and social norms of a kind other than those attached to food also shape the activities, interactions and transactions within and between health and agri-food systems that shape supply and demand. These relate for instances to the view on the relative moral value

attached to profit making motives; to the degree of nurturance and protection given to children or to the concept of family; to the relative dominance of the individual vis-à-vis the society; or to the degree of guidance the state can appropriately have over an individual.

Policy that Supports the Development and Deployment of Nutrigenomics for Food and Public Health Innovation (A. El-Sohemy)

Nutrigenomics (or Nutritional Genomics) is the science that explores how nutrients and food bioactives interact with genes to affect health outcomes. One of the major goals of research in this area is to provide a scientific basis for improving dietary recommendations to populations as well as providing personalized dietary advice to individuals. Genetic variations affecting absorption, distribution, metabolism and elimination can help explain some of the inconsistencies among population-based studies relating diet and disease by providing a more accurate measure of exposure of target cells to the bioactive compounds of interest. Nutrigenomics is enabling us to unravel the complex mixture of compounds in our diet to establish the role of biologically active compounds in optimizing human health. Identifying relevant diet-gene interactions will benefit individuals seeking personalized dietary advice as well as improve public health recommendations by providing sound scientific evidence linking diet and health. There is also an opportunity to apply the knowledge generated by nutrigenomics research to create *functional foods* that have value-added health benefits beyond meeting basic nutritional requirements. The objective of this expert panel is to identify policy innovations that can support the development and deployment of nutrigenomic research for food products and public health policy innovation that are targeted in a more precise manner to benefit both socially and economically.

Policy that Supports the Development and Deployment of Food Innovations with Novel Health Attributes (D. Sparling)

Canadian food companies have the ability to create new food products with clearly defined health benefits that are not present in currently available products. This can be accomplished through both product and process innovations. Product innovations can include everything from functional foods and natural health products to biotechnology designed to improve or increase functional components of crops. Process innovations can include tightly directed process changes such as redesigning feeding regimes to incorporate Omega 3 into dairy products or broad system-wide changes such as the recent move to organic production.

The objective of this expert panel is to identify policy innovations that can support the development of food products with novel health attributes through the application of new science and both product and process innovations, while striking the appropriate balance between the health risks to the consumers with the financial risk to the investors.

Policy that Drives Health through Value Chain Innovation Agendas (D. Sparling)

The ultimate cost of health conditions associated with food provides both consumers and governments with a powerful incentive for change. Are Canadian companies responding quickly enough with healthier product formulations and improved processing methods? Are they taking advantage of opportunities to reduce potentially harmful ingredients and/or fortify products with healthy ingredients? What can be done to encourage food manufacturing companies to make healthier food products a major priority in their innovation agenda?

The change in the relationship between food and health presents new challenges for food companies, but it also creates new opportunities to add value by increasing the health profiles of processed food products. Canadian food companies lag behind companies in many parts of the world in their investment in product innovation and in the number of healthier food products they introduce to the market. Recently, Ontario food processing companies have identified the need to increase innovation as a strategic priority for moving the industry ahead, with healthy products as an important component of an innovation agenda. Food companies in other parts of the country have also identified the need to innovate and to incorporate health into their products. In some cases, companies change formulations to improve the nutritional profile with little fanfare, preferring to avoid a discussion of the relative healthiness or unhealthiness of even the improved products.

This expert panel will examine the factors needed to drive health into the innovation agendas of Canadian food products and make both health and innovation a top of mind consideration for Canadian food companies.

Policy Innovations for Effective Consumer Information Systems (A. Drewnowski)

Canada is at the forefront of nutrition labelling, with the introduction in 2002 of a mandatory system being widely regarded as ground-breaking policy development in consumer information from a health policy perspective. Under this system, the labels of most pre-packaged foods sold in Canada must carry a *Nutrition Facts* table. Consumer interests and health needs, combined with recent advances in nutritional science, contributed to the innovative design and content of the *Nutrition Facts* table. The mandatory regulations include updated criteria for nutrient content claims to better address consumer health issues. For the first time in Canada, diet-related health claims are allowed that highlight the relationship of certain nutrients and foods with the reduction of heart disease, cancer, high blood pressure and osteoporosis.

Beyond nutrition labelling, systems of nutrient profiling and front-of-package coding have been recently the objects of extensive development and debate. Nutrient profiling is defined by the Food Standards Agency of the UK as the science of ranking individual foods based on their nutrient composition, moving from providing nutritional information to ranking individual foods. These attempts to classify foods based on their healthfulness and/or nutrient density may be useful for educational purposes or for regulatory purposes.

In Canada and in the US, these are used for information and educational purposes. In the EU the focus is now on regulatory issues.

Policy that Shifts the Economic Drivers of Food Costs and Prices to Promote a Healthy Diet across the Socio-Economic Spectrum (P. Thomassin)

Obesity and other chronic diseases tied to poor nutrition are more prevalent and complex in poorer population segments. Food products and services of high-nutritional density such as fruits and vegetables are typically more expensive than products of lesser-nutritional density. Increasingly we know that low-income communities are surrounded by a higher density of fast-food restaurants, and urban agriculture community gardens and so forth are lacking. This virtual expert panel brings together leading economists and policy makers to examine the structural and contextual drivers of Canadian food costs and prices and discuss policy innovation that can help develop the nutritional quality of diets.

Policy Innovations that Promote Health through Shorter Food Supply Chains and Urban Agriculture (V. Bhatt)

Local food economies, community-supported farming and novel approaches to urban agriculture have been seen as viable innovations that can contribute to more sustainable and balanced development and to the availability of a fresher and more diversified food supply at the same time. For rural economies, these innovations can improve the income of small-scale farmers and producers. Urban agriculture can promote health as it fosters a better integration of the social, economic and environmental facets of life in the cities. This virtual expert panel will examine the structural and contextual drivers of success and failure in such development, and discuss policy innovations that can help scale up the impact these may have on the social and economic well being of individuals, businesses and communities.

Policy Innovations to Foster a Better Integration of Health and Pleasure in Strategy, Operations, Marketing and Menu in the Foodservice Industry (J. LeBel)

More recently, the relationship between food and health is being propelled to higher levels of consciousness among consumers, policy makers, food manufacturers and foodservice operators. Being the last and the most visible link in the food chain, the foodservice industry has been frequently finger pointed for its contribution to the global obesity epidemic, from the use of harmful trans fats to the aggressive promotion of high-caloric density foods.

People eat away from home out of pleasure or necessity. Although a growing number of constituents within the foodservice industry recognize the need and urgency of acting to reverse the situation, numerous operational challenges and concerns hamper progress. How can foodservice operators and culinary experts from the different segments of the foodservice industry better help consumers to eat healthy when away from home, while catering to taste, convenience and the many drivers of individual choice? What stands in

the way of foodservice operators in putting health at the forefront of their strategic and operational agendas? What stands in the way of consumers in making healthful decisions when eating away from home? What can be done to encourage foodservice operators to develop and promote healthier fare? What are the potentially most fruitful areas to be addressed/changed first in producing substantial advances in moving towards more healthful fare on restaurant menus?