

Challenging Our Past: Preparing for the Future

Ideas and Questions
for
Agriculture and
Agri-Food Policies

Synthesis Report
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Executive Summary

“An Integrated Approach for Success”

The Canadian Agri-Food Policy Institute (CAPI) is creating a national dialogue on the issues facing the country’s agri-food sector, and the policy options required to better position this sector in the economy. CAPI’s work is based on three themes: food and wellness, sustainability and viability. This document, the Institute’s first Synthesis Report, aims to set out significant trends that are influencing the shape of the sector. The report provides a snapshot of our work program, and identifies emerging policy themes and linkages across our thematic areas.

The agri-food sector’s fiscal situation demands change. Our capacity to be competitive demands change. As described in this report, we need to transform the sector’s very approach to policy-making. To position the sector for the future, we need a total food industry response, one that is met by a total government response. We need to have a longer-term destination in mind so we can, collectively, work over time to position the country for an ever-changing world, and create a more innovative, sustainable and prosperous Canada.

We need to respond to a variety of key drivers of change facing the country:

- ▶ **Consumer/Retail Expectations:** Global retail standards and consumer expectations will drive food standards and label indices to include: carbon footprint, water usage, nutritional value, etc.
- ▶ **Supply Chain Disconnects:** Misaligned policies and working in isolation from each other prevent the agri-food and health sectors from achieving greater success.
- ▶ **Fiscal Pressure:** Government spending in the agri-food sector will come under increasing pressure, driven in part by escalating healthcare costs.
- ▶ **Climate Variability:** Fluctuating weather patterns will increasingly impact water use, soil health and cultivation practices and the need to focus on adaptation.
- ▶ **Agriculture Policy:** Objectives remain unclear for the agri-food sector, in turn raising questions about the purpose and impact of program design. Policy objectives remain disconnected between the agriculture, food and health, and environmental sectors.

While CAPI's work is unfolding and responding to a number of these factors, key themes are emerging. A vibrant agri-food sector is pivotal to Canada's future economic success, the health of its citizenry, and an overall sustainable society. This report outlines an initial set of principles that could be the building blocks for a vision that gets us there:

- ▶ Ensure policy clarity
- ▶ Target policy
- ▶ Improve collaboration among stakeholders and policy convergence
- ▶ Empower consumers
- ▶ Position the sector for market access
- ▶ Enable innovation
- ▶ Emphasize adaptation (not mitigation to respond to a changing climate)

The illustrations below present the issues and the desired direction (figures 1 and 2):

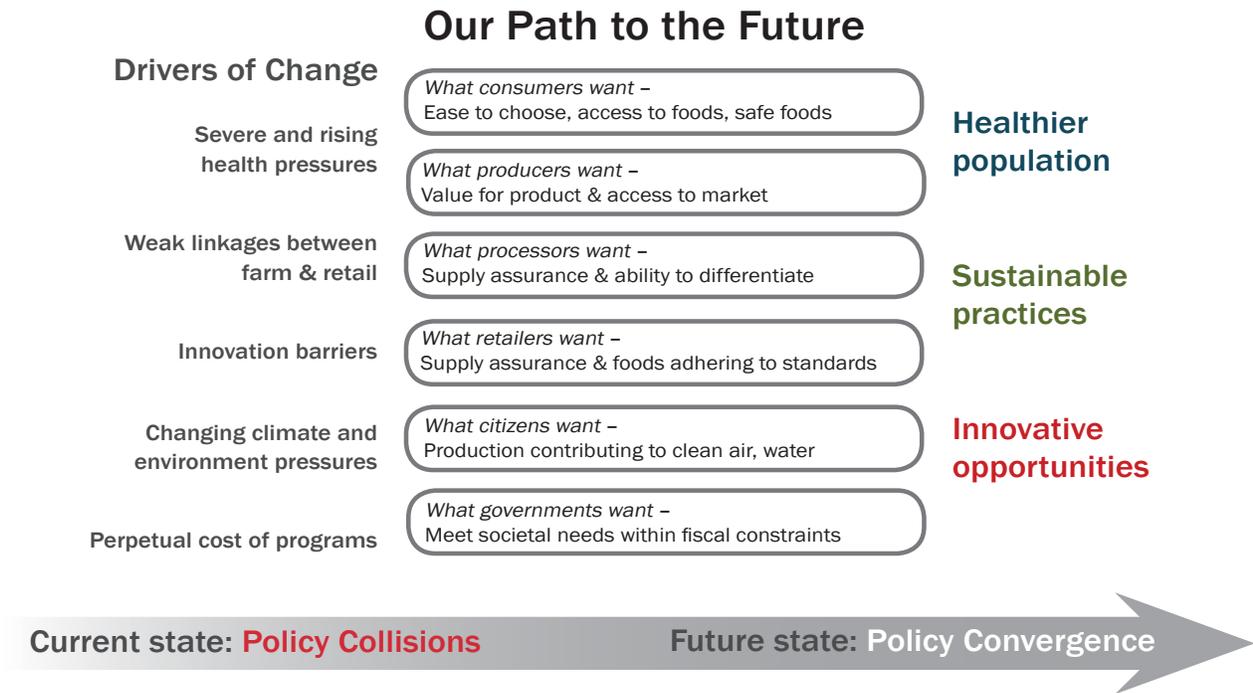


Figure 1. The Current State: Major drivers of change confront Canada; expectations are hindered. The Future State: A vision based on shared goals is needed that spans the segments.
 [Note: stakeholder segment requirements are indicative.]

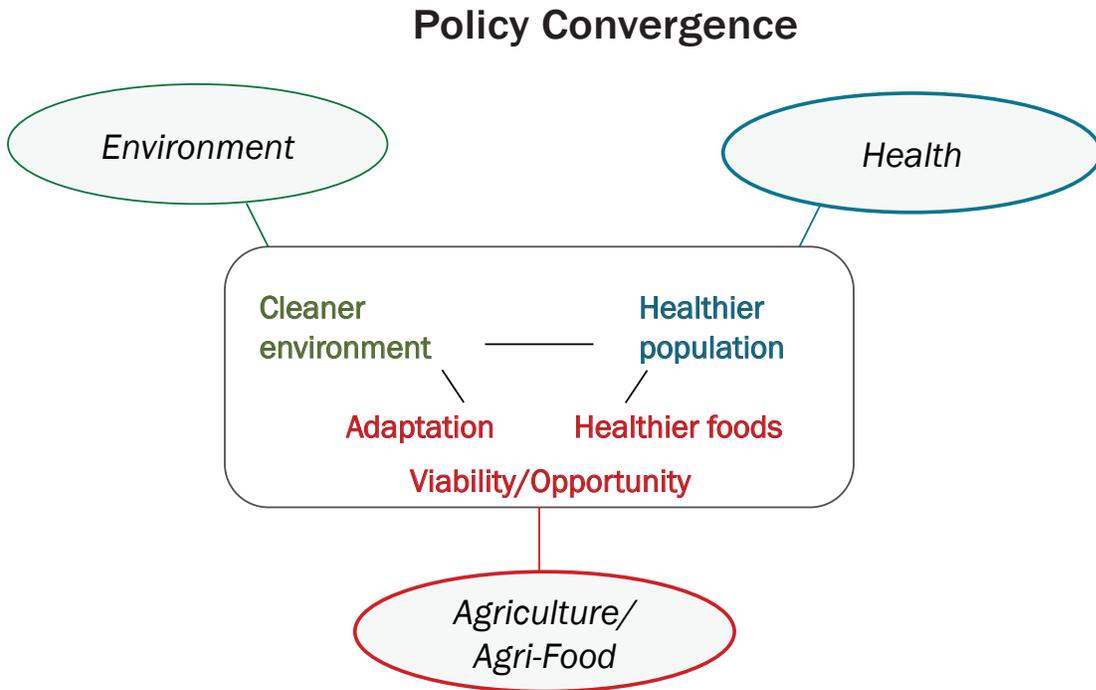


Figure 2. Policy Convergence: The Agriculture and agri-food sector can make an expanded contribution to Canada and its economy and progress can be realized in part through the support of public policy convergence – where societal policy objectives complement and support one another.
 [Note: other policy agendas can become integrated, such as trade policy.]

Introduction

With *Growing Forward*¹ (2008-2013) now well underway, it is appropriate and necessary to foster a dialogue about future directions for the Canadian agri-food industry, in order to set the stage for the next generation of policies starting in 2013. The purpose of this paper is to: explore the external environment within which future policies may be shaped; synthesize emerging findings, research and ideas; and outline ideas and questions that may assist in focusing debate and vision development over the next few years.

- ▶ The paper begins with an outline of the role and mandate of the Canadian Agri-Food Policy Institute (CAPI) in contributing information and analysis upon which discussions of future directions can be based.
- ▶ Then, the principle drivers for policy direction are examined to identify the issues and conditions within which policy decisions are likely to be made.
- ▶ The three priority areas for CAPI are then described, with the purpose of identifying questions, ideas and possible directions within the three areas: food and wellness, sustainability² and farm and value chain viability.
- ▶ Also, the linkages across these three CAPI priorities are identified, to seek understanding of the interactions among various jurisdictions for policy assessment and development.
- ▶ Finally, some conditions for policy development as well as ideas, questions and suggestions are provided, derived from the assessment of the drivers and implications for the priority areas of CAPI.

As noted throughout the report, CAPI has initiated a number of research activities that provide evidence to sustain the ideas and directions the Institute has identified as central to the future of the Canadian agri-food industry, or which question or modify some of these ideas. As a result, this “synthesis” report will remain an open document that will be updated in a year (Spring 2011) to fully reflect the outcomes and ideas gathered from the research underway.

The CAPI Role

The Canadian Agri-Food Policy Institute (CAPI) is shaping a national dialogue among stakeholders on the policy models that will enable Canada to thrive in the emerging agri-food world.

As an independent policy forum, CAPI's work is focused on being relevant to the unfolding policy process leading up to – and beyond – the renewal of *Growing Forward* in 2013. To do so, the Institute has assembled three Leadership Panels to guide its work and help define the novel policy options needed to address three guiding questions (see sidebar).

Advisory in nature, the Leadership Panels include a broad representation from the private sector, academia, NGOs and government. (Panel members are listed on CAPI's website.) CAPI has also reached out to many others through its own symposia, through external conferences, individual stakeholder consultations and through reports produced for wider dissemination on its website. As well, CAPI's own Advisory Committee, an umbrella body to provide guidance, provided input to the Institute on its approach.

CAPI's approach fulfills its mandate.³ The Institute is focused on stimulating thoughtful dialogue but not necessarily to seek consensus. But in creating a forum for discussion, it aims to provide a "safe place" for the exchange of ideas and debate across the agriculture and agri-food sector, academia, government and others. CAPI is a catalyst for dialogue. It is focused on presenting ideas and models for the future policies needed to support a more competitive and profitable agri-food sector.

GUIDING QUESTIONS

Food and wellness

connection: Can we afford to eat the same way?

Sustainability: Can we afford to produce our food the same way?

Viability: Should we change the way governments support the agriculture sector?

The Drivers of Change: Issues and Context

This section provides an overview of seven principle drivers of change influencing the prospects for agriculture. These drivers constitute the backdrop for CAPI's unfolding work, which is focused on some, but not all, of the issues and opportunities confronting the sector.

1. Global Food Production and Consumption: *The Need to Produce More*

In the past two years, considerable volatility has occurred in prices for agricultural commodities. Most analysts attribute the causes, generally, to regional supply problems, substantial increases in speculation on commodity futures markets, and the rapid growth in demand for ethanol and biodiesel (which rely on cereals and oilseeds). Other analysts point to disturbing longer term trends which underlie the market volatility of the past two or three years, which can lead to continuing and increasing market volatility for the future.

Over the next 40 years, global food demand is expected to increase by 70-80 percent as world population reaches nine to 10 billion people, and as non-food demand for cereals and oilseeds as feed stocks for industrial materials continues to grow. To achieve stable prices over the next four decades, production must increase by 1.7 to 1.9 percent annually. However, current global production research investments are only providing about 1.2 to 1.4 percent in annual increases in production. In fact, global public research investments in crop productivity have been in decline since at least the 1990s and the comparatively stronger private sector research investments have largely been offshore. Canadian investments in public research for agriculture and food continue to fall, even though most studies indicate a very high rate of return on such investments.⁴ Given the seven to 15 year lag time it typically takes for research investments to bear results, nearly two of the four decades to 2050 will have passed before productivity levels can reach the levels required for production increases to meet annual demand growth.⁵

The world cereals and oilseeds markets continue to move to shorter supply lines from farm to final uses, resulting in stock levels in world markets considerably lower than has been historically the case. With these lower stock levels, markets become much more vulnerable to greater volatility arising from small, short term variations in regional supply. Over the next several years, the demand for all farm products will be sustained, and characterized by greater volatility, higher prices, higher costs and limited margins for producers. At the same time, a shift will occur toward healthier diets, greater non-food demands for agricultural commodities, and increased consumption of meats as incomes rise, particularly in Asia.

Over the past several decades, agricultural prices have been declining in real terms. The rapid

increases in incomes, particularly in Asia, and the growing demands placed on agricultural production for innovative industrial materials such as biofuels, biofibres, plastics and the like, may result in sustained higher real prices and costs for agriculture in the coming decade. While these changes offer substantial opportunities for the agri-food chain, greater research investments in resources, new technologies, varieties and processes will be needed to achieve productivity gains to moderate cost increases. These changes represent a substantial paradigm shift for the policy framework ahead. Policymakers will use business risk management (BRM) and other policies to accelerate rather than slow adjustment, and will need to find approaches which offer positive adjustment for the Canadian agri-food chain (e.g., innovation and R&D investments).

2. Global Climate Change and the Environment: *The Need to Be Sustainable*

Canada's cold climate has historically offered natural protection against a range of plant, animal, and soil borne pests. However, given the global warming trend, a growing threat exists of invasive species, such as plants, pathogens and insects. Although most analysts suggest that modest global warming will lengthen frost-free growing periods in Canada, creating new opportunities for crop production, these gains may be offset by greater variability in moisture levels, particularly in western Canada. However, should global warming become more severe, the effects on agriculture are "unambiguously negative."⁶ Effectively, water availability becomes one of the most critical inputs in Canadian agriculture and maintaining soil quality will require continuous adaptation of production processes and practices for the future; as well, plant breeding may also play a significant role in permitting Canada to regain market share. In general, some of the natural advantages that Canada has enjoyed may well diminish as climate change continues. Throughout its economy, and in society at large, Canada will face the challenge of mitigating the effects of climate change; but agriculture and food, more than any other sector, will face the additional problem of climate variability and the need to find ways to adapt to changing weather patterns.

The 2009 United Nations Climate Change Conference in Copenhagen, Denmark ended with little immediate or urgent agreement on limiting greenhouse gases (GHGs). It may be some years yet before any global agreement on GHGs can be reached. Nonetheless, domestic pressures continue to be exerted in Canada, the US, and Europe to take stronger actions to limit GHGs, including suggestions for imposing trade barriers on imports from countries that do not have GHG reduction programs in place. While the WTO is resisting linking trade agreements and trade actions with commitments to climate change actions, the US is already considering measures which use trade barriers against exporters who fail to meet US carbon requirements. The underlying fear is that if a developed country imposes the costs of GHG reductions on its own industry outside of an international agreement, imports will become increasingly competitive, and domestic production will move offshore to benefit from lower costs and a more open GHG environment.

For Canada, climate change policies are inextricably linked with US approaches and policies, due to Canada's huge trade dependence on American markets. However, while national policies and approaches are evolving in a North American context, local and provincial actions are also underway that affect agriculture. These local and provincial actions, which add to costs of farming operations, occur through regulations on livestock enterprises, crop and resource management, and protection of water courses and the like. These initiatives reveal two essential points of view that are in play. One viewpoint supports the "polluter pays" approach, whereby regulations are being designed to internalize the externalities associated with farming, such as pollution of air, ground and surface water. That is, while society in the past bore the costs of pollution from farms, farms should be expected to pay for these costs in the future. The other view supports the concept that society benefits from lower pollution levels and carbon capture on farms, and should be willing to pay farmers for these environmental goods and services.

Finding a way through these opposing objectives will take time and concentrated effort. Certainly, some of the negative externalities in agriculture can be internalized to farms, but the societal gains from positive externalities also need to be recognized and considered for public funding. The most significant issue concerns who will pay for the impacts on the environment, and the derivative consequences for production costs and processes, trade competitiveness and sector growth.

3. Global and Domestic Financial Conditions: *The Need to Be Affordable*

Canada appears to have escaped some of the worst immediate effects of the financial crisis of 2008-09, although longer term negative effects on Canada may prove to be more significant given Canada's high dependence on imports and exports with the US. Slow growth in the US will mean slow growth in Canadian exports to that country, and in the Canadian economy more generally. The financial crisis has left nearly all developed countries with large deficits and growing debt. Even though Canada remains in better shape than almost all other countries in this regard, pressures on federal spending stemming from the financial crisis will continue for some years, as will pressures on long-term lending in agricultural production.

Canada's Parliamentary Budget Officer has regularly pointed to a "structural deficit" for the federal government, created by lower taxes and higher spending over the past few years. Coupled with the added spending for economic stimulus, he suggests spending must be reduced or taxes be raised to eliminate this structural deficit that he estimates at \$16.3 billion for the fiscal year 2013-14⁷, even though the 2010-11 Federal Budget projects the federal deficit to be \$1.8 billion in 2014-15. For agriculture, the greatest pressure will be focused on the BRM funding, the perpetual support programs in agriculture.

Business risk management has been the centerpiece of federal-provincial-territorial (F/P/T) policy agreements for several years, controlling the vast majority of F/P/T annual program-related expenditures. Of the total BRM and non-BRM funding, BRM accounts for \$3.5 billion (2007-08), 67 percent of all federal funds spent on agriculture and agri-food programs, and 73 percent of all provincial spending on programs for the sector.⁸ These figures represent all spending by federal-provincial-territorial governments on agriculture. For the components included in the *Growing Forward* agreement with the provinces, an average of \$260 million annually will be devoted to non-BRM spending. Comparing this funding to the BRM programs alone, it means that about 92 percent of all *Growing Forward* spending will be on BRM and only 8 percent on investments in technology, sustainability and long term viability.⁹ Even with current programming and levels of funding, production agriculture interests continue to demand even greater funding levels to ameliorate specific natural disasters (e.g., drought, flood), trade effects (e.g., country of origin labelling, BSE), and depressed farm incomes.

Supply management provides an effective risk management mechanism for roughly 20 percent of Canadian production (in dairy, poultry and eggs) without incurring direct governmental expenditures. Nonetheless, the program design severely limits opportunities for export, and makes up a disproportionate share of Canada's eligible amber support¹⁰ under the WTO agreement. Fiscal restraint in Canada will not likely exert pressure on changing supply management, although any agreement in the WTO which reduces Canada's ceiling on amber support will force an eventual trade-off between reducing market price support in supply management and direct expenditures in BRM.

In conclusion, budgetary restraint will be a hallmark of governments in Canada for the foreseeable future. Allowing for re-allocations, increases in overall funding levels will prove to be very difficult. The pressing questions relate to the underlying purposes of these programs, whether the programs

Microeconomic theory makes it clear that with many sellers of a commodity, and no restrictions on entry, firms will enter the market until total returns are driven down to the level of long run average costs. Agriculture is often used to exemplify this concept. As a result, the only way producers can succeed in such a market is to use superior management and technology to drive down costs faster than other producers on a continuing basis. Clearly, some producers in all sizes of farms are able to accomplish this, while others are less successful. As well, economies of size are common in agricultural production, such that larger firms will enjoy some cost advantage as long as they follow strong management practices and employ the best applicable technology. The only alternative to the competitive pressures in commodity production is to produce specialized products, differentiated by quality or process characteristics in the marketplace. These products offer premiums over commodity prices. However, the gains from such specialized products is understandably transient; as more and more producers adopt the management, technology and capacity needed for the production of such products, prices decline over time to long run average costs.

In either case, the most applicable strategy in production agriculture remains the early and continuous application of strong management practices, use of the best available technology, and producing what consumers want.

have met current objectives, whether the historical purposes are relevant for sharply different market conditions, and whether these programs remain affordable in the future. Equally important will be the trade-off between direct expenditures and market price support as trade agreements lower the ceiling on agricultural support mechanisms.

4. WTO and Trade Liberalization: *The Need for Global Markets*

The WTO negotiations have been at a standstill since initial drafts were tabled in 2005, and again in 2009. Global trade liberalization is simply not on the national or international agendas of the major WTO participants, and is not expected to be so for some time. An early closure on a trade liberalization agreement would likely mean a “small” outcome, with few gains in trade access and domestic policy reductions in agriculture. However, the longer the negotiations persist, the more likely a small agreement will result, simply to complete the trade round. Equally, gaining agreement for resumption of another round of trade liberalization negotiations after the close of the Doha Development Round becomes more difficult.

This situation has led to a growing emphasis on bilateral or regional trade liberalization agreements by Canada and other countries. Canada remains in negotiations with Korea and has begun discussion with the European Union on a free trade agreement. However, Canada’s gains from bilateral trade liberalization have slowed substantially, particularly in the case of Korea. The US reached (but Congress has not ratified) a bilateral trade deal with Korea. Yet Korea has refused to proceed on a nearly identical agreement with Canada, largely over the issue of beef imports, even though Korea agreed to imports of beef from the US. Hence, Canada remains out of a premium Asian market, and so exports its beef products as a commodity to the US.¹¹

Essentially, neither global nor regional/bilateral trade agreements for Canada hold much hope for improved market access for agriculture and food products in the next 5 to 10 years, particularly market access that sets Canada ahead of other competing nations. Even with improved access in other markets through trade agreements, all other country members to the WTO or regional agreements would share in such access. Finding a way to set Canadian products apart from those of other competing nations in domestic and international markets with differentiated qualities and attributes must be a component of Canada’s domestic and trade strategy.

5. Canadian Advantages and Disadvantages: *The Need to Find Canada's Niche in the World*

Canada continues to maintain a reasonably positive world image for its agriculture and food system, even though specific events such as the bovine spongiform encephalopathy (BSE) scare have created considerable setbacks. Nonetheless, the growing mercantilism embodied in the “100 kilometre diets”, “buy national/local”, geographical indications¹² and country of origin labelling are strengthening around the world and may erode the natural advantages and image which Canada has enjoyed. In view of these trends, finding a niche for Canadian products will be critical to ensuring profitable long term growth in the agri-food chain. The goal is for Canada to become the preferred international platform for the production and processing of commodities, products, and ingredients for domestic and international consumers.

Under international trade rules, Canada can impose higher standards for food safety and environmental impacts on Canadian production and processing than the generally accepted trade standards, so long as imports are only required to meet the generally accepted standards. Currently, a small part of federal-provincial-territorial (F/P/T) program funding is directed to food safety and environmental protection. Redirecting more program funding toward these areas may offer Canada an opportunity to distinguish its products on domestic and world markets, with the potential for longer term price premiums. The most significant unknown is whether such price premiums will emerge in the market, and whether they will be large enough to offset the additional producer and processor costs associated with Canada imposing higher standards on its agri-food chain.

The Global Food Safety Initiative

(GFSI), launched in 2000, is attempting to consolidate and harmonize the various food safety, quality and environmental requirements, as well as community and social developments to meet requirements established by major retailers. GlobalGap, a private sector organization, is setting international standards in food safety, quality, labour rules, and environmental impacts in the production of fresh fruit and vegetables, other crops and meats. Regional and national efforts, including EurepGap, KenyaGap, AmeriGap and others, are already underway. Only 24 Canadian producers out of more than 81,000 producers in the world were certified by GlobalGap in 2007. Kenya had over five times as many producers certified than Canada as of 2007. By 2010, well over 700 producers were registered in Canada.

The emergence of low cost suppliers (Brazil, India, China, Eastern Europe, etc.) has affected Canada's position in agri-food markets and placed pressure on Canadian producers who supply domestic markets. Moreover, these low cost suppliers, and globalization trends, place considerable pressure on Canada's efforts to achieve growth in export markets. Assuming that exports from the agri-food sector, including differentiated value-added exports, are required for the sector's viability and its ability to contribute to the Canadian economy, then policies respecting these exports also require convergence with Canada's approach to trade.

6. Retail Markets: *The Need to Assure Continued Market Access*

In today's market, retailers and food services are demanding increased standards well above current international trade standards, without much change by way of price premiums. In order to merely gain entry to the large food retail and service chains, producers and processors must meet these higher private standards or face price discounts or very limited market access for a product. In North America and Europe, consolidation of private standards into a half-dozen alternative sets of standards is already underway; these product and process standards are significantly above national food safety and environmental requirements for imports at retail and food service outlets.

Canada does not have "international class" food processors; nor does it have internationally-known food retailers (such as Wal-Mart, Carrefour, Tesco, Ahold) domiciled in Canada, even though many of the world-scale processors and retailers operate in Canada. The outstanding issue is whether Canada can create a domestic environment to attract the large international processors, retailers and food services to source product and ingredients in Canada, and to increasingly use Canada as a preferred platform for processing products for consumers in Canada and abroad. From a policy perspective, at issue are the actions Canada needs to take to attract and maintain investments for domestic and international processors, to encourage appropriate and targeted levels of research and development, and to complement policies on differentiating Canadian products and ingredients in terms of quality and other attributes.

While national regulatory systems are necessary, the requirements to access store shelves with food and related products are increasingly dictated by the world-class processors and retailers. These requirements meet or exceed national standards, and will continue to rise over time, well above the national regulatory requirements. They include requirements well outside the current scope of national regulation. The large world food retailers and processors will dominate the establishment of these requirements. In 2009, the only Canadian-based food retailer to make the top 25 was Loblaw, in 24th place.¹³ Similarly, the top 25 food processors (such as Kraft, Nestlé, Parmalat, Altria) in the world will meet or exceed the requirements of retailers, and set the rules for purchasing farm products and ingredients for the majority of the industry. In 2008, only one company based in Canada made the top 25 processors of Canada and the US, Maple Leaf in 22nd position.¹⁴ As a result, Canada is unlikely to influence these emerging private standards in any significant way, whereas other competing countries and their companies will be helping to design these standards in such a way as to provide themselves an advantage.

Attempting to transform the “lethargic”¹⁵, “slow”¹⁶ regulatory system in Canada has proven very difficult. An alternative strategy for the agri-food industry would be to adopt the emerging private retail requirements as the long term baseline for market entry. In turn, changes in the national regulatory standards may be necessary to allow the application of private standards across the industry.

In conclusion, as prerequisites for product entry into the commercial agri-food chain, retailers and food processors will continue to establish standards of food quality, safety, environmental soundness, social and community well-being, labour relations and sustainable resource uses on an international basis. These standards will be well above minimum national standards and requirements. Premiums for products meeting these requirements will likely persist for a period of time, but they will progressively erode as an increasingly greater share of suppliers come to meet the requirements. For goods not meeting the private retail requirements, bulk commodity prices will remain in the market, but market access for these commodities may erode over time as the supply of products meeting the standards grows. Fundamentally, while shorter term premiums may exist, the long term issue may not be about a premium for high quality and other attributes for Canadian products and ingredients, but more likely about assured access to global and local markets.

7. Food, Diet and Health: *The Need to Improve the Way We Eat*

The link between healthy diets and human wellness is well established, and has significant budgetary implications in many countries.¹⁷ The connection between assuring access to and consumption of healthy foods will be a factor in helping to address the medium-term healthcare costs for the Canadian population. One of the greatest public healthcare challenges facing Canada is the overweight and obesity “epidemic”.¹⁸ In British Columbia, healthcare costs are rising by an estimated eight percent annually, compared to revenue increases of only three percent per year. Under current policies and revenue projections, healthcare costs in the province may reach over 70 percent of total expenditures by 2017-18.¹⁹

Leading chronic diseases: cardiovascular diseases, cancers, and diabetes:

“These diseases are preventable. Up to 80% of heart disease, stroke, and type 2 diabetes and over a third of cancers could be prevented by eliminating shared risk factors, mainly tobacco use, unhealthy diet, physical inactivity and the harmful use of alcohol.”
(WHO, 2008)

The greatest share of healthcare costs in Canada is directed to treatment of illnesses, with only a small share directed to maintaining wellness. Even though the connection between eating habits and wellness/illness has been established, little evidence exists associating these habits with healthcare costs, making it difficult to generate a debate on this link within the agri-food chain or

with the citizenry more generally. Considerations for policy and funding changes and trade-offs, and the specific programs or measures, need to be explored more fully to enhance Canadian wellness through food consumption habits.

For the agriculture and food industry, it is important to consider the policies that can be implemented to supply healthier diets for Canadians, and to identify the benefits that can be derived for the agri-food chain from this shift to healthier foods. CAPI's 2009 report *Building Convergence* advanced the concept of a Canadian Diet to promote domestic consumption of nutritious foods sourced from Canada and to brand Canadian foods for export (competing against the Mediterranean Diet for instance).²⁰ From a wider perspective, a framework for convergence between agriculture, food and health policies is needed to jointly address the farm to food to health continuum for the benefit of all Canadians.

In conclusion, these seven drivers of change form the backdrop of the work CAPI is currently pursuing.

Focusing on CAPI Priorities

At its Annual General Meeting in June 2009, the CAPI Board of Directors confirmed the Institute's three-year objectives (see sidebar) and research strategy, after input from its Advisory Committee and with broad input from consultations with academia, government and the agri-food chain organizations.

CAPI's three diverse Leadership Panels have been guiding the Institute's research program as a means to advance the Institute's work and address key issues facing the Canadian agri-food chain. As this program unfolds, CAPI has been reaching out to stakeholders to inform them of this work and to seek their input, through stakeholder conferences, CAPI symposia, consultations and the Institute's website.

The following section provides a synopsis of the research program.

CAPI's THREE-YEAR OBJECTIVES

Shape a national dialogue

Policy models for the emerging agri-food world

Define Canada's advantage

Food & wellness, sustainability, viability

Develop the policy linkages

Improve competitiveness and profitability of the sector

Leadership Panel on Food and Wellness Connection

CAPI believes in helping families eat better, an objective that presents important new opportunities for the agri-food sector. By enhancing the connections between health, food and agriculture, we can achieve many benefits and help address important challenges facing Canada. Given the healthcare concerns and costs evident in Canadian society today, **can we afford to eat the same way?**

Building on research published in CAPI's 2009 report *Building Convergence*, our 2010 Leaders Summit on Food for a Healthy & Prosperous Future explored whether we are doing enough to leverage the connections among health, food and agriculture.

PROJECTS

Report:

Building Convergence: Toward an Integrated Health & Agri-Food Strategy for Canada (McGill World Platform for Health and Economic Convergence, August 2009)

Symposium:

Leaders Summit on Food for a Healthy & Prosperous Future (Montreal, QC, February 2010)

Case studies:

Advancing Canada's Food and Health Agenda: Case Studies in Healthy Foods (Richard Ivey School of Business, April 2010)

Report:

A Pathway to a Healthy & Prosperous Future (a post-Leaders Summit report; May 2010)

CAPI and its partners recognize that Canadians and Canada's food and healthcare systems face real struggles, including:

Consumers remain largely uninformed, confused and concerned about the food they eat. Insufficient credible information is available.

Farmers, in many respects, are faced with unsustainable farm economics given commodity price pressure; yet they are asked to invest in innovation without a clear view to how such investments will generate more farm income. Many farmers are being forced to make up a greater share of their incomes from government payments and from off-the-farm income.

Food processors, manufacturers and retailers are working to respond to this shift in consumer demand by bringing healthier products to market. But they face their own challenges: making effective claims to motivate positive food choices; getting novel foods to market fast enough; responding to the fact that multi-nationals are increasingly less likely to support research and development and manufacturing investment in Canada, a vital link in our food supply network. Intense competition is putting significant pressure on the profit margins of Canadian farms, leaving less money for innovation.

Healthcare systems and health organizations are pressured by both an aging population and significant diet-related health issues.

Governments struggle with reconciling societal priorities, such as health, consumer protection, fiscal management, innovation and competitiveness. Moreover, the availability of the science and methodologies needed to make the link between food and health are considered inadequate by some, but more than sufficient by others.

The Leaders Summit demonstrated that we can no longer expect these challenges to be resolved by any of the participants in isolation.

The presentations made at the Summit (see CAPI's website) revealed how stakeholders are recognizing the mutual benefits of linking health and agriculture. Provincial governments are working across ministries to improve population health by increasing access to healthier foods. Large and small companies alike are increasing market-share by sourcing healthier ingredients and foods for their customers and consumers. The scientific community is demonstrating that research on the nutritional attributes of foods is the basis for creating new market opportunities.

Drivers of success to leverage the benefits of linking health and agri-food: new collaboration models, evidence-based decisions, and clear, credible information for everyone.

The Summit revealed certain drivers of success that could leverage the benefits of linking health and agri-food, such as: the need for diverse stakeholders to collaborate well beyond traditional interactions; the need to make evidence-based decisions as a basis for innovation; and, the need for clear, credible information in order to make sound decisions from the consumer to the regulator.

Governments can play a pivotal role in this initiative. In particular, new mechanisms must be established to bridge the decision-making silos. Pan-government priority-setting should start with the most senior levels of government, such as a joint meeting of ministers of health, health promotion and agriculture. Evidence-based decisions are critical to demonstrating the nutritional value of foods, and are essential to supporting regulatory approvals for new foods. Agriculture should be considered as part of Canada's "S&T" (science and technology) plan. Consumers need better information to help make healthier purchasing decisions (i.e., determining effective labelling for easy identification of nutritional value; interest also exists in the environmental footprint of products). Businesses need a regulatory process that speeds approvals for new foods, provided the supporting evidence is sound. All stakeholders have a role. Governments, which work across the sectors, require a plan to support a health/agri-food agenda. We need a different approach. CAPI is developing a pathway, or action plan, to help scope out the case for change and present an approach for stakeholders to move forward together.

Leadership Panel on Sustainability

Increasing climatic variability can manifest itself in many ways and differently across regions. In the Prairies, for instance, extreme weather events and increasing variability means that a changing climate is expected to increase the demand for drought and heat resistant crops. This region could also see new opportunities for crops as longer growing seasons emerge. Conditions could present wide swings in favourable and unfavourable growing conditions during the same growing season. The situation is unpredictable. With this changing climate backdrop in mind, **can we afford to produce our food the same way?**

How do farmers, and others in the agri-food sector, adapt and what are the policies needed to support them? Given the considerable timelines required to develop new technological and plant breeding solutions, what has to be done now to position the sector for such change?

PROJECTS

Research:

Analysis on EG&S Policy
Options Fostering Adaptation of
Canadian Farmers to Climate
Change (forthcoming, Summer
2010)

Symposia:

Adapting Agriculture to a
Changing Prairie Climate
(Winnipeg, MB, March 2010)
&
Implications of Increasing
Climate Variability on
Agriculture in the Great Plains
(Kansas City, MO, March 2010)

Summary:

Notes from climate change
symposia (forthcoming, Spring
2010)

Farmers pride themselves in their determination to adapt to changing conditions. Researchers and innovators bring science and technology solutions forward to help farmers adopt new methods to cope with change. As well, governments support initiatives that foster best management practices that can help the sector adapt.

To date, considerable attention has been devoted to mitigating climate change, and how to cut GHG emissions. CAPI believes that there should be increasing focus on adaptation. Whether one agrees fully in climate change or not, the practical point is how to cope with increasingly variable production conditions. This is about the new crops, varieties and technologies that are needed. This is about investment decisions needed now and over the medium-term to position Canada for the future.

CAPI has been involved in an emerging dialogue to address the impact of climate change on the northern Great Plains/Prairies (refer to symposia, sidebar). Weather does not respect the 49th parallel; this region is a food supply engine for the world. CAPI will be promoting ideas for a Canada-US research agenda to ensure that food sustainability and farm viability remain a policy priority.

Ecological Goods & Services

CAPI has initiated a study that is attempting to identify agri-food policies that will induce best management practices (BMPs) that, in turn, produce certain desired ecological goods and services (EGS). EGS are needed to address food sustainability needs, help the sector adapt to changing climate pressures, meet environmental objectives, and position Canadian producers to cope with North American climate change regimes. Ultimately, the results should offer guidance about who should pay for the provision of EGS through BMPs in Canadian agriculture. CAPI will issue a report in mid-2010.

Adaptation should be the focus: Whether one agrees fully in climate change or not, the practical point is how to cope with increasingly variable production conditions. This is about the new crops, varieties and technologies that are needed. This is also about the policies and investments needed now to position Canada for the future.

The logic model being used in the study begins with identifying the environmental concerns in agricultural production. To address these concerns, BMPs are identified which produce selected EGS (such as clean water), and foster adaptation of farming practices to meet both economic and societal needs. These approaches to sustainable agricultural production will be evaluated with respect to emerging policies and programs in Canada and the US. The research can be used to identify the most cost effective and efficient instruments to achieve sustainability objectives (instruments may include regulation, taxation, insurance arrangements, subsidies, market-based mechanisms, or a combination of measures).

Clearly, some of the changes in production practices represent cost reductions for producers, while benefiting society as a whole. For example, improved crop nutrient management will lower the potential run-off of nutrients. The policy and program issues in this case relate to the actions needed to foster the adjustment on farms over time, with benefits accruing to both producers and society. In other cases, producers will face increased costs to meet sustainability objectives which serve societal needs. As a result, the policy and program approaches will need to explore the most appropriate mechanisms to implement such BMPs so that farm/food production viability is maintained while society benefits from the changes.

These issues span many jurisdictions and society at large. Environmental quality is deeply connected to the health of Canadians in terms of air and water quality, which adds further complexity to the policy debate. Policymakers need to generate the information and methodologies that will stimulate open debate. This discussion is critical to establishing a strategic policy framework that will enable agricultural and food production to remain both sustainable and economically viable.

Leadership Panel on Viability

CAPi's "core business" is to elevate the calibre of public policy dialogue in Canada by presenting policy proposals and points of view on the future of agriculture and agri-food. To undertake this mission, we need to be well versed in agriculture policy in Canada, including the objectives and analysis used to derive these policies and the results obtained. A key "task" is to know how to rigorously evaluate public policies. We need to be able to assess if policies meet prescribed objectives. We need to be able to assess if objectives should be maintained, modified or rejected and replaced by others. Also, we need to ascertain if the analyses used to assess and reach those objectives are appropriate and whether they, too, should be maintained, modified or replaced. Furthermore, we need to understand the varying agricultural policies in key countries abroad, as it is helpful to examine other perspectives. The central question before us is: **should we change the way governments support the agriculture sector?**

The emerging findings from the Part A research (see sidebar) is based on these three broad observations:

PROJECTS

Research:

"Part A" – Understanding the Structure of Canadian Farm Incomes (a series of short papers developed by the George Morris Centre; forthcoming, Summer 2010)

"Part B" – Analysis and assessment of policy rationale and objectives; supply chain competitiveness (Fall 2010)

"Part C" – Evaluation of policy scenarios and presentation of policy model options for discussion (early 2011)

Objectives: Policy objectives and goals are not well articulated;

Measures: Measures of farm performance are imprecise and general; and,

Farm type: There are major differences in the types of farms (e.g., commercial vs. several lifestyle farming types). These observations suggest that policy design requires re-thinking.

In *Growing Forward*, the underlying economic rationale for business risk management (BRM) programming is that – in view of the high level of weather risk (along with trade, policy and other non-climate risks) – without some form of governmental risk protection farms will under-invest in agriculture, be less productive and competitive domestically and internationally, use lower levels of technology, and be more vulnerable to ceasing/reducing farm operations because of a bad year. Does BRM programming have the effect of slowing adjustment or

offsetting short-term economic disruptions? Given the potential reversal of declining real prices and costs in agriculture, a program portfolio that encourages more rapid adjustment to changing demand, environment and health needs may well be required.

In Canada, BRM policies and program parameters are tightly restrained by the WTO, NAFTA and bilateral trade arrangements, and the threats of trade retaliation. The BRM management programs have drifted toward longer term income support, which is an equally important policy objective for the sector. A major issue is the amount of risk protection that Canadian farms need from governments to maintain a stable, sustainable, productive and competitive industry, and to what extent the risks should be borne by farm households themselves.

The policy challenge: In the aggregate, why does the farm income challenge persist despite decades of financial support? Why have these policies “failed”? What policy would be needed to help make the sector more resilient? The answers are fundamental if we want to avoid perpetuating unsuccessful policies (i.e., policies aiming to raise farm income have not worked).

In Canada, roughly 80 percent of gross farm receipts come from less than 20 percent of the farms. The vast majority of net farm income is even more concentrated in a small number of larger farms. A large group of “farms” represents part-time farming and minimal net farm income within the household, where the primary occupations and incomes of household members are based on non-farm activities.²¹ For most of these households, income from farming is clearly ancillary to the household use of its labour and capital, and income instability from the farming enterprise has a negligible impact on overall household income stability.

For some households, part-time farming can represent a means of entry to larger scale farm operations over time, with less emphasis on off-farm employment. In other cases, part-time farming simply represents a stable household environment that distributes its labour and capital between farming and other employment. The dynamics of farm entry and exit are not well understood. Nor is the extent to which off-farm household income can build and sustain a viable farm operation, or the extent to which allocating labour and capital across agriculture and non-farm employment can generate household stability. In households with less than an \$80,000 to \$100,000 range in gross revenue, where a small portion comes from farming, policymakers need to consider whether either income stability or income supplements are needed.

Farm level outcomes result from the interplay of farm level decisions and a number of macro factors affecting the viability of farm operations. Various broad-based forces shape the operating environment of the agri-food sector, such as the regulatory environment, market competition from lower cost suppliers, and the value of the Canadian dollar. Several factors suggest that the policy foundation – the underlying rationale for agri-food program designs – needs to be re-examined. These factors include the changes in markets and possible changes in price trends, the structure of

farm and household incomes, competition from suppliers in both the northern and southern hemispheres, the challenge of sustainable production for an expanding global food demand, new and rising private standards, and emerging dietary needs. The historical objective of slowing adjustment on farms and the program designs it spawned may need to be replaced with a policy approach that is more responsive to marketplace signals. This policy approach also needs to have a broader agri-food supply chain focus in order to meet changing market demands, environmental concerns, and health needs. CAPI is questioning this rationale and undertaking further work in this area.

Canada needs a new model: Canadian agriculture policy, programs and measures must evolve to optimize the potential of our agricultural and agri-business sector. To get there, we need to clearly identify what are the objectives of policies, how to properly assess them, and then use this information to design a winning combination of policies to enhance our competitive prospects and meet societal objectives.

Linking the CAPI Priorities

Part 1: Shifting the way we think about policy-setting

In anticipation of the successor to Agriculture and Agri-Food Canada's *Growing Forward* policy framework (2008-2013), CAPI proposes that certain key principles be considered as guideposts for a new approach to policy-making. These proposed ideas and approaches are intended to provoke thinking about how policy should be developed.

- 1. Shift to proactive policy:** An interesting parallel exists between the expenditure patterns for healthcare costs, environmental costs and agriculture program funding in Canada. In healthcare, the greatest share of funding is directed to treatment after illness or injury takes place. Focusing on prevention shifts attention to “diet” as a significant means to improve population health outcomes. For the environment, considerable funding goes toward the amelioration of negative environmental outcomes, even though much of the environmental legislation and regulations impose assessment requirements prior to investments or changes in resource use. In agriculture, the greatest share of funding is directed to ameliorating farm income conditions through BRM programs from the effects of weather and other impacts. Shifting funding toward “prevention” in all three areas would represent a significant paradigm shift. Doing so could offer opportunities not only in agriculture and agri-food, but also in enhancing the sector's competitiveness, the quality of the environment, and the health of Canadians. Policy-making must shift its focus from being “reactive” to “proactive”.
- 2. Adopt policy convergence:** The policies and programs required to address the health and wellness of Canadians – environmental and climate change pressures and sustainability and viability of the agri-food chain – span a number of governmental mandates beyond agriculture. They include: health, food safety, environment, rural and community development, industry, natural resources, and foreign policy and trade. It is time for policy-making to converge.

The related and equally important component of the paradigm change is the recognition that considerable complementarities and positive benefits can accrue from combined policy approaches in health, the environment and agriculture. Some measures are underway, including cooperative efforts between government departments and agencies in health and agriculture. For instance, they are promoting access to and consumption of fruits and vegetables. As well, the Canadian Institute for Health Research has begun interdisciplinary research under

the Collaborative Health Research Projects, exploring the benefits to a number of sectors, including agriculture.

As societal recognition grows of the role of food in determining the health outcomes of Canadians, the health sector will be increasingly induced to explore food policies that affect production and processing methods throughout the agri-food chain. Similarly, since production agriculture is a significant source of GHGs, the environmental sector will necessarily overlap with agriculture and food policies by setting prescriptions for carbon footprint reductions throughout the food and agriculture sectors, as well as other parts of the economy. Improving the environmental footprint of agricultural production will likely have an effect on air and water quality, which can also contribute to the health of Canadians.

CAPI believes that stakeholders should prioritize defining the process and responsibilities of achieving policy-making convergence across government departments. Assisting farmers to reach these requirements may help considerably in overcoming the initial costs involved at the farm level.

By better connecting the policies and programs across governments and levels of government, the Canadian agri-food sector will be better positioned to succeed in domestic and international markets.

Changing the way we think about policy-setting:

1. Shift to a proactive policy
2. Adopt policy convergence
3. Ensure policy clarity and evaluation

3. **Ensure policy clarity and evaluation:** Clearly identifying the vision and policy goals for the agri-food sector is essential. In part, this involves taking a pan-government approach given the convergence of the issues (noted above). This also requires using the right data and analytics to gauge policy performance. Evaluation creates the basis for an open dialogue among stakeholders on policy priorities.

Policy clarity is required to ensure policy relevance for the agriculture and food industry. For example, in order to meet the requirements of the future marketplace, should we progressively integrate government funding and program design for BRM with non-BRM program objectives such as environmental stewardship, healthy foods and diets, and food safety improvements?

Part 2: The Path Forward

The fiscal situation demands change. Our capacity to be competitive demands change.

For example, across the country today, current health spending nears half of all provincial spending and continues to rise. In the years ahead, forecasted health budgets will consume considerably higher percentages of total provincial spending. Ontario and British Columbia both estimate that healthcare costs could consume some 70% of their respective provincial budgets in a matter of years.²² What monies will be left over for other priorities, including agriculture?

Today, agriculture program spending consumes 92% of the allocations of *Growing Forward*, the federal government's agricultural policy framework. Where is the money going that is needed to support future drivers of success: product innovation, environmental adaptation, export promotion, etc.?

To achieve clear objectives for Canada's agriculture sector, we need to transform the very approach the country takes to policy-making.

Provincial governments are forecasting healthcare costs that could consume some 70% of future budgets.

Agriculture support programs consume 92% of program dollars, leaving a small proportion for investment in innovation, adaptation and promotion.

We anticipate that the work of CAPI's three Leadership Panels will start to converge because the issues facing the sector are linked. In short, the economic viability of the agriculture and agri-food sector depends on how all players in the supply chain – from producers to retailers – are responding to the marketplace. For example, consumers are showing greater demand for healthier and more sustainably-produced products.

Summary of Emerging Policy Ideas & Key Questions:

To position Canada for the future, we need a total food industry response, one met by a total government response.

Stakeholders seek a sustainable Canadian agri-food sector; it a sector that provides healthy choices for consumers while delivering reasonable returns to each link in the chain. We need an integrated vision that creates an innovative, sustainable and prosperous Canada.

CAPI is responding to a number of these changes, in an effort to propel Canada toward a more vibrant agri-food sector. The following tables outline an initial set of principles that could be the building blocks for a vision that gets us there.

Principle 1: Ensure policy clarity

THE NEED	EMERGING POLICY IDEAS/QUESTIONS
<p>We need policy clarity.</p>	<ol style="list-style-type: none"> 1. Should the main thrust of agriculture policy be focused on commercial agriculture?
<p>Clear objectives for the agriculture sector are required to ensure that Canadian agriculture can define its position in the world.</p>	<ol style="list-style-type: none"> 2. Rural policy is also important but is it a matter involving broader social policy which goes well beyond the scope of agriculture policy?
<p>Clear objectives need to be delineated, measured and evaluated.</p>	

Principle 2: Target policy

THE NEED	EMERGING POLICY IDEAS/QUESTIONS
<p>Support programs need to facilitate more rapid adjustment in production agriculture in order to assure long term resource sustainability, continuity of investment in technology and best management practices.</p>	<ol style="list-style-type: none"> 1. Should support funding for farm households which need little assistance in net household income stability/risk management be reduced or eliminated?
<p>An economically viable sector is the means to contribute measurably to food safety and quality, human health and wellness, environmental goods and services. A viable sector can make the investments required to allow Canada to be the preferred platform for products and ingredients in the food chain.</p>	<ol style="list-style-type: none"> 2. Should such programming be focused on the farm households which rely on agriculture as the principal source of household income?
<ol style="list-style-type: none"> 3. What should be the policy priorities given the budgetary constraints for the foreseeable future? 	

Principle 3: Improve Collaboration & Convergence

THE NEED	EMERGING POLICY IDEAS/QUESTIONS
<p>To address the broad challenges facing society (i.e., health and wellness of Canadians, sustainability and viability of the food chain), all entities in the supply chain need to be involved in finding solutions; for government, these issues span a number of mandates, including agriculture, health, health promotion, environment, rural and community development, industry, natural resources and foreign policy/trade.</p>	<ol style="list-style-type: none"> 1. A systemic approach is required to facilitate collaborations across the agri-food value chain – from producers to retailers – and engage health partners and multiple levels of governments in order to enable consumers to make healthier food choices.
<p>Defining the process and responsibilities to achieve policy-making convergence across government departments is a priority.</p>	<ol style="list-style-type: none"> 2. Pan-government policies are required. New mechanisms for policy-making are needed. At the federal level, CAPI suggests that a joint meeting of ministers of health, health promotion and agriculture can advance the health/agri-food connection. This should be emulated by joint meetings of federal/provincial deputy ministers, ADMs, and across other departmental working groups.
	<ol style="list-style-type: none"> 3. Should agriculture and environment departments jointly set environmental requirements for the management and stewardship of agricultural resources? Should agriculture and health departments jointly establish food safety and health requirements at all levels of farm and food production? How can they work together to encourage industry to meet and exceed the emerging international private standards?

Principle 4: Empower consumers

THE NEED	EMERGING POLICY IDEAS/QUESTIONS
<p>Making it easier for consumers to choose nutritious foods will drive the entire supply chain to compete to offer “better for you” products.</p>	<ol style="list-style-type: none"> 1. We need to facilitate healthy choices. Clear, simple product labelling is required. (Industry and government must be aligned on a credible tool.)

Principle 5: Position for market access

THE NEED	EMERGING POLICY IDEAS/QUESTIONS
<p>Retailers and food processors will establish standards of quality, safety, environmental soundness, social and community well-being, and sustainable resource uses, on an international basis, well above minimum national standards and requirements, as prerequisites for product entry into the commercial food chain.</p>	<ol style="list-style-type: none"> 1. Ultimately, as global private sector standards take hold, product labelling will include carbon footprints, water impacts, as well as nutritional information. How should governments encourage or facilitate the sector to adapt to emerging standards?
<p>All parts of the supply chain will need to respond to meet these standards. This may not necessarily deliver premiums for products meeting these requirements, but there will likely be price discounts and limited market access for goods not meeting the requirements.</p>	<ol style="list-style-type: none"> 2. Should agri-food support programs be tied to performance in subscribing and adhering to such standards?

Principle 6: Enable innovation

THE NEED	EMERGING POLICY IDEAS/QUESTIONS
<p>Agri-food businesses need a regulatory process that speeds approvals for new foods – provided the evidence is sound. Policy mechanisms are needed to measure progress.</p>	<ol style="list-style-type: none"> 1. Evidence-based decisions are critical to demonstrating the nutritional value of foods, and essential to supporting regulatory approvals for new foods.
<p>Identifying the nutrition values of ingredients/foods is a basis for innovation.</p>	<ol style="list-style-type: none"> 2. Agriculture should be considered for inclusion in Canada’s science and technology (“S&T”) plan.
	<ol style="list-style-type: none"> 3. What are the research priorities to improve the nutritional value of current and potential future Canadian products?

Principle 7: Emphasize adaptation

THE NEED

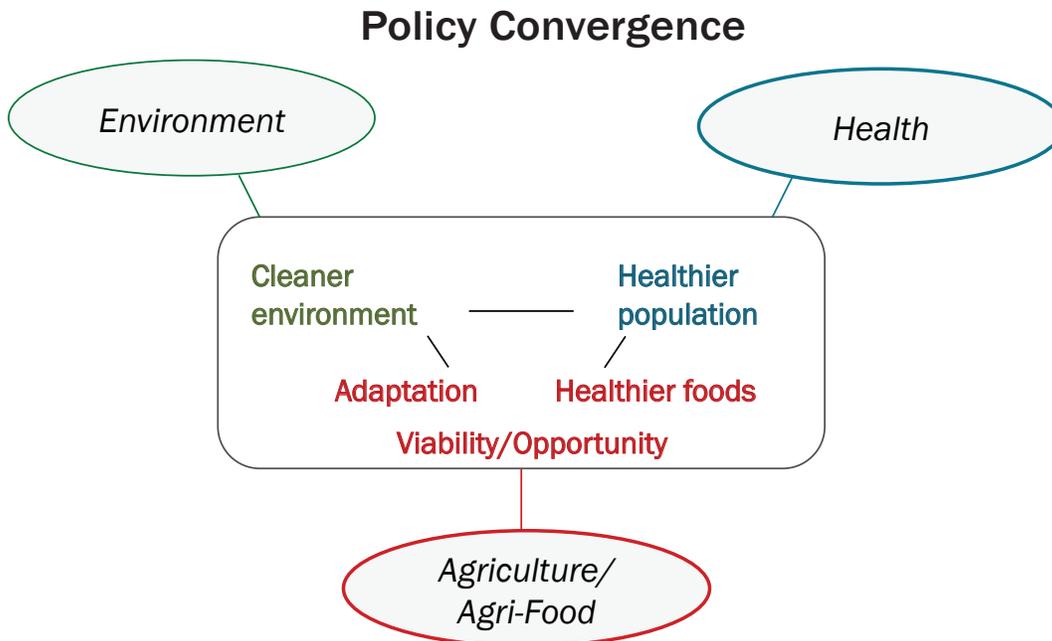
Coping with increased climate variability means focusing on “adaptation”. Adaptation is critical to ensuring food sustainability, farm viability and environmental response.

EMERGING POLICY IDEAS/QUESTIONS

1. Adapting to climate change requires focusing on the new crops, varieties and technologies that are needed. This is also about the policies and investments needed now to position Canada for the future. It is about focusing less on “mitigation” and more on “adaptation”.
2. We need to seek out a process for facilitating Canada-U.S. collaboration on adaptation (particularly relevant for the Prairies/Great Plains), including a shared research agenda.
3. Fostering good environmental practices means clarifying who pays. It also means determining whether good environmental practices are deemed to be an enabler for resource sustainability, new technology adoption and competitiveness, or are largely deemed to be a subsidy.
4. How producers respond to changing climate conditions has a material impact on annual productivity. For instance, this has ramifications for crop insurance and support programs when weather events create crop losses. How can Canada proactively respond to these and other linkages?

Conclusion

A strategic policy framework is needed that encompasses the health and wellness of Canadians, responds to the increased pressures for sustainable practices, and assures the viability of the agriculture and food value chain. This is the dominant conclusion emerging from CAPI's initiatives. For Canadian agriculture and the agri-food sector, these goals can be realized in part through the support of public policy convergence:



Canada has the opportunity to become the preferred platform for the production and processing of resources, commodities, products and ingredients for domestic and international consumers. The issue is how to translate this scenario into the right framework, one that adapts policy and program directions to the pressures of climate change and variability, fiscal limits, food and health linkages, and emerging private sector requirements in the markets of the future. The work of CAPI's Leadership Panels is helping to develop key ideas. Principles for such a framework are also presented in this document.

Reconciling the pressures across the many mandates and stakeholders is critically important in finding acceptable approaches in policy and program designs for the future. This represents a significant paradigm shift in strategic approaches within agriculture and food, as well as in health and the environment.

To facilitate change, a vision is needed on where we in Canada are headed. A vibrant agri-food sector is pivotal to our future economic success, our health, and a sustainable society.

Endnotes

1. *Growing Forward* is Canada's five-year federal, provincial and territorial policy framework for agriculture.
2. "Sustainability" in common usage has assumed an increasingly broad definition which may include not only resource sustainability but also the sustainability, viability, and economic profitability of farms and downstream firms, as well as the environmental, social and community attributes necessary for viable longevity within and around the food chain. For this paper, the word "sustainability" is restricted in meaning to sustainable food production systems that are affected and shaped by environmental and climate considerations and those relating to production practices and resources. For the economic profitability of the farm and food chain, the term "viability" is used.
3. CAPI's Charter directs the Institute "to provide independent, unbiased and credible input to the Canadian agricultural policy debate and policy development process". As an agricultural policy forum, it promotes dialogue "by gathering intelligence and sharing results; identifying emerging issues in the agricultural sector that should be coordinated and addressed on a national basis; bringing together a wide range of expertise and new voices to examine existing and emerging issues in the agricultural sector; discussing alternative solutions to issues before they become polarized; providing balance when polarization within the agricultural sector is unavoidable; and providing advice and a third-party perspective when agricultural policy decisions are made."
4. Keith O. Fuglie, and Paul W. Heisey, 2007. "Economic Returns to Public Agricultural Research". United States Department of Agriculture, Economic Research Service, Economic Brief. Accessed 4 January 2010 at: <http://purl.umn.edu/6388>. See also the research lead by Richard Gray. One example is: Richard Gray et al. (2008). "Returns to Pulse Crop Research and Development and the Management of Intellectual Property Rights". December 2008. A Report to the Saskatchewan Pulse Growers. Accessed 23 March 2010, at: http://www.ag-innovation.usask.ca/Publications_for%20Download/2008_Returns_to_SPG_research_Final_report.pdf
5. Julian M. Alston, Jason M. Beddow, and Philip Pardey, 2009. "Mendel versus Malthus: Research, Productivity and Food Prices in the Long Run". University of Minnesota, Department of Applied Economics, Staff Papers. Accessed 4 January 2010 at: <http://purl.umn.edu/53400>
6. John Quiggin, 2009. "Agriculture and Global Climate Stabilization". Paper presented at the IAAE Conference, Beijing, China, 19 August 2009. Accessed 4 January 2010 at: <http://purl.umn.edu/53204>
7. Assessment of the Budget 2010 Economic and Fiscal Outlook. p. ii. Parliamentary Budget Officer. March 2010. Accessed at: http://www2.parl.gc.ca/Sites/PBO-DPB/documents/Budget_2010_Outlook.pdf
8. Data calculated from "Farm Income, Financial Conditions and Financial Assistance Data Book", April 2009 Update, Section C. Agriculture and Agri-food Canada. BRM includes production insurance, income support and stabilization, ad hoc and cost reduction and financing assistance. Non-BRM includes programs for social and labour initiatives, research, food inspection, food aid, marketing and trade, rural and regional development, environment, education and extension.
9. The \$260 million for average annual non-BRM funding in the *Growing Forward* agreements is taken from the 11 July 2008 press release by AAFC, following the federal government's agreement with the provinces and the territories. This is compared to the actual BRM spending for 2007-08, all of which is including in the federal-provincial-territorial agreements, except for federal and/or provincial ad hoc programs outside the F/P/T agreement.
10. Canada's limit for amber programs under the WTO consists of two parts: direct governmental expenditures plus "market price support" (MPS). MPS is calculated as the domestic price minus the base period world price times domestic volume. These are the two components of the total amber subsidies (AMS, aggregate measure of support) for which Canada has a ceiling limitation. In the WTO negotiations, modalities have already been tabled in draft that would reduce the total ceiling of AMS for

Canada. This means that either the direct BRM expenditures and/or the MPS must be reduced. MPS for Canada is a larger share of the current amber calculation than the share of supply management in farm production, hence it is disproportionate to the size of the industry. The conflict arises over sharing the reductions between MPS and direct expenditures under a renewed WTO agreement. For MPS, this would mean reductions in the spread between border and domestic prices for milk and feathers, that is, lower administered prices within Canada. The conflict will necessarily reopen the “balanced position” which has been negotiated within the Canadian commodity groups, because it substantially weakens one of the three pillars of SM, administered pricing. Fiscal restraint only affects direct expenditures; it does not affect the MPS, since it is a consumer subsidy. Coupled with the proposed reductions in AMS in the WTO, it is entirely possible that fiscal restraint will reduce BRM expenditures enough to allow the MPS portion to remain in place. This scenario also calls into question the “balanced position” in Canada’s trade stance and suggests the need to have a contingency plan for Canada. Among other sources, see: Mike Gifford and Bill Dymond, May 2008. “The Doha Round of WTO Negotiations: Implications For The Canadian Dairy Processing Sector.” Centre for Trade Policy and Law. Carleton University/University of Ottawa.

11. Richard Barichello, 2009. “Korea-Canada FTA Negotiations and the Korea-Canada Beef Problem.” Paper presented at the IATRC Meeting, Fort Myers, Florida, 13-15 December 2009.
12. H el ene Ilbert and Michel Petit, 2009. “Are Geographical Indications a Valid Property Right? Global Trends and Challenges”. *Development Policy Review*, 27 (5): 503-528. Exclusive use of location names for specific products registered with the WTO include champagne from Champagne in France, scotch from Scotland, and basmati rice from Pakistan and India.
13. <http://www.foodprocessing.com/articles/2008/313.html>. Accessed 4 April 2010.
14. http://supermarketnews.com/profiles/top25/top_25_food_retailers_worldwide/. Accessed 4 April 2010.
15. Al Mussell, 2009. “Moving Functional Foods Forward: A Strategic Approach”. *Functional Food and Nutrition Strategy*. (PowerPoint, slide 22). George Morris Centre.
16. Canadian Agri-Food Policy Institute, 2009. *Regulatory Reform in Canada’s Agri-Food Sector*. Discussion Paper. p. 58. Accessed at: <http://www.capi-icpa.ca/pdfs/CAPI-Regulatory-Framework-4March2009.pdf>
17. WHO, 2008. *2008-2013 Action Plan for the Global Strategy for the Prevention and Control of Noncommunicable Diseases*. p. 5. Accessed 23 March 2010 at: http://whqlibdoc.who.int/publications/2009/9789241597418_eng.pdf
18. Report from Ontario’s Chief Medical Officer of Health, *Healthy Weights, Healthy Lives*, 2004.
19. John Millar, 2010. “What’s Working: Progress and Success.” Presentation at the Leaders Summit on Food for a Healthy and Prosperous Future sponsored by CAPI, 17 February 2010. Accessed on 23 March 2010 at: <http://www.capi-icpa.ca/LeadersSummit/presentations.html>
20. *Building Convergence: Toward an Integrated Health and Agri-Food Strategy for Canada*. Discussion Paper prepared for CAPI. p. 9. McGill World Platform for Health and Economic Convergence. August 2009.
21. As an example, 56 percent of “farm households”: earn between \$10,000 to \$100,000 per farm in annual gross farm revenues; earn only 3.5 percent of Canadian net farm income (including program payments), less than any other gross income class; earn 8 percent of gross farm revenues but obtain 13 percent of all program payments; lose 8 cents per dollar of gross farm sales when program payments are excluded, but have average household incomes of \$56,663 annually. Data for 2007 from AAFC, available on the AAFC website.
22. In 12 years (2022) healthcare costs could reach 70%: Ontario Speech from the Throne, 2010; John Millar, 2010.