

# *Moving Forward on Vision and Action for Canadian Agriculture*

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**CAPI**

*The Canadian Agri-Food  
Policy Institute*

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# Preface

The Canadian Agri-Food Policy Institute (CAPI) serves as an independent voice on agri-food policy issues in Canada. CAPI identifies emerging issues, trends, and policy issues in the agri-food sector that require further study and coordination on a national basis. CAPI is represented by key stakeholders from across the agri-food supply chain on its seven member Board and its 12 member Advisory Committee. The federal and provincial departments of agriculture and food support the work of CAPI and seek CAPI's input on policy issues.

In its forward-looking approach, CAPI engages a wide range of national and international experts to undertake specific studies focusing on agri-food issues and trends.

CAPI provides a framework for the development of future agricultural policy options by: commissioning studies, convening expert panels to review and critique these studies, conducting sessions for stakeholders to input their views, and disseminating the proceedings to agri-food industry associations, businesses operating in the agri-food supply chain, farm organizations, governments, other national and international bodies, and universities.

The Institute seeks to secure the future of Canadian agricultural producers by enhancing their linkages with downstream components of the food chain, and ultimately with all consumers. Beyond its work with the agri-food chain, CAPI seeks to establish links between agriculture and food and the health and wellness of Canadians, current and future industrial opportunities for agricultural production, stewardship of the natural environment, and preservation of Canada's rural communities.

CAPI envisages that these links between agriculture, food, health, and agro-products will provide primary producers, processors, and food manufacturers with new opportunities – while beneficially impacting all stakeholders, including consumers in both rural and urban communities.

This paper provides a perspective on the future operating environment that will affect the agriculture and food sector, offers a future direction for the agriculture and agri-business sector, and highlights strategies that can help achieve the proposed direction. An investment attractive to the agricultural and agri-business sector will allow the sector to provide meaningful solutions to Canadians and provide the foundation for a rural renaissance. We hope that this paper contributes to the dialogue and resulting decision-making on the future of the sector and next generation of policy. This report is available on the CAPI website ([www.capi-icpa.ca](http://www.capi-icpa.ca)). Comments can be sent to the address below.

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# Executive Summary

This report is being made available to invoke discussion on the future direction of agriculture and, through associated stakeholder dialogue, facilitate forward movement on needed action for Canadian agriculture through the next generation of agricultural policy.

Previous CAPI reports have indicated the need for a repositioning of the Canadian agricultural sector, and for a fundamental change in the policy and regulatory framework affecting the agricultural, food, and agro-products sectors. A long-term vision and statement on strategic direction can help guide necessary repositioning or change.

CAPI believes that it is time for the sector to do something both *stark* and *bold*, and has developed a vision and statement on strategic direction for consideration by the sector and for consideration and implementation by Ministers and senior officials in government.

The proposed vision is ...

## **“Agriculture and Agri-Food ... Providing Solutions that Contribute to the Quality of Life of Canadians”**

The strategic direction is based on the vision that the Canadian agriculture and agri-food industry is a solutions provider that contributes to the quality of life for Canadians, in areas such as health, energy, and the environment. The six pillars that support this vision are:

- The health and well-being of Canadians through foods that help prevent diseases and lower health care costs associated with chronic diseases
- The health and well-being of Canadians through a safe and secure food supply that guards against infectious diseases and lowers health care costs associated with acute diseases
- Sustainable production practices to protect and secure the environment and natural resources such as water, land, and air
- Sustainable approaches in the bio-economy producing functional foods, feed, renewable energy, fibres, and many other bio-products
- Differentiation in the marketplace based on natural and climatic advantages
- Attractive investment opportunities in the agriculture, agri-products & food sectors.

Action through strategies and initiatives must occur to achieve the desired outcome. All of these initiatives have implications on the policy and regulatory framework that will influence action and decision-making by sector participants.

These proposed strategic initiatives to move forward on the vision are in the areas of:

- Fostering innovation and commercializing new technologies
- Effectively overcoming major weaknesses and regulatory obstacles
- Building on natural advantages and agri-food sector strengths
- Improving health of Canadians through foods
- Delivering on local food demands
- Strategically seizing global opportunities
- Differentiating in the marketplace
- Delivering on sustainability
- Addressing farm sector specific issues
- Assisting in repositioning and maintaining capacity

Adopting these strategic pillars as part of the policy framework for the sector will generate very positive results for farmers, agri-businesses, food companies, rural Canada, and for Canada as a whole through the creation of a new operating environment for the sector. Removing regulatory barriers of the past and creating an environment more conducive to profitable farming is essential. Timeliness of action is also critical since, in today's global environment, indecision is a weakness and delay can cause opportunities to be lost to global competitors. Manufacturers of nutraceuticals and many bio-products locate where commercialization approvals are speedy and markets are readily accessible.

The benefits of implementing the vision through the strategic pillars and associated strategies, policies, and initiatives are evident. These benefits are clear for farmers, where investment and market opportunities emerge to capture profit potential. Many business opportunities will emerge for farmers and rural-based businesses to succeed in the marketplace. These benefits are also clear for agri-business and food manufacturers as the new operating environment provides significant investment opportunities in new technologies, new industries, and new product areas.

A rural renaissance should occur in Canada providing opportunity and quality of life for rural Canada. The foundation for this rural renaissance is the range of new opportunities created for farmers and for entrepreneurs in rural Canada. Profitable farm operations and biomass-processing plants located close to primary production can create renewed economic vigour in many rural areas across Canada.

The resulting innovation and adaptation of science and technology, will create opportunities for Canadian business, improve the health and quality of life of all Canadians, and enhance environmental stewardship. Following this suggested strategic path provides a solid reason to invest in the sector, as it provides solutions to all Canadians, whether as food products, industrial products, or renewable energy.

The cost of complacency and inaction is too high to contemplate. Inaction by policy makers and by the sector is not an option. Inaction, or the "status quo", only means that overall the agricultural sector will decline and will not participate in the bio-economy. Investment dollars will be attracted outside the sector, and rural Canada will not benefit from this emerging industry. Canada can lead in the bio-economy, but to do so, the weaknesses and regulatory impediments that inhibit growth must be addressed.

Achieving the vision requires investment and, more importantly in a globalized world, attracting capital into the Canadian agri-food sector, versus other sectors. This capital is being invested in other countries, such as the U.S., due to its market size and more receptive regulatory environment.

An overarching thrust in the next generation of agri-food policy must be to make Canada an attractive place to invest compared to competing areas. This must be a core part of the policy environment, and includes the necessary action of eliminating Canada's weaknesses, including many regulations rooted in the past. Only by doing so will Canada be able to achieve this vision for the agriculture, agri-products, and food sectors; including new opportunities and profitability for the primary agricultural sector, healthier citizens, serving global niche markets based on the Canadian advantage, and a safe sustainable food supply – thereby creating the foundation for a Canadian rural renaissance.



# 1.0 Repositioning the Framework Guiding Agricultural Policy

Fundamental change is required in the policy and regulatory framework affecting the agricultural, food, and agro-products sectors. This need was highlighted by CAPI in two previously released CAPI reports<sup>1</sup>, and was reinforced by attendees at the February 2006 CAPI Forum<sup>2</sup> “Working Towards a New Direction for the Agri-Food Sector”. The policy implications were developed by CAPI as material for the forum, and highlight the need for repositioning (Annex I).

A long-term vision and statement on strategic direction should guide any repositioning or change. Development of such a statement to guide and enable change was initiated by CAPI at the February 2006 Forum. Moreover, the imperative for change has only increased as the operating environment affecting the agricultural, food, and agro-products sector continues to change. As a result, CAPI, in its role as a change agent in the policy area, decided to release this paper on “Moving Forward on Vision and Action in Canadian Agriculture”. Development of this paper was supported by three papers, which were prepared for CAPI<sup>3</sup>, and by a workshop with individuals representing various components of the agricultural, food, and agri-products sector.

In this context, this report provides a vision or strategic direction for consideration by the sector, provides an indication of a possible future operating environment for the sector, and provides a number of strategies and initiatives that are required to achieve the desired outcome. As will be noted in this report, by acting on these initiatives, the agricultural sector can be a solution provider to Canadians and be the foundation for a rural renaissance. Equally, if action is not taken to address our current situation and the weaknesses hampering the sector, then in all probability, the sector and rural Canada will be in an era of long-term decline.

An investment attractive to the agricultural and agri-business sector will allow the sector to provide meaningful solutions to Canadians and provide the foundation for a rural renaissance. We hope that this paper contributes to the dialogue and resulting decision-making on the future of the sector and next generation of policy.

## 1.1. Stocktaking – The Need For Change

The agricultural sector must operate in the present and anticipate the future. An excellent overview of the situational factors and current operating environment affecting the production sector was provided in the November 2005 CAPI report entitled “Factors Affecting Current and Future Farm Income Prospects” and the associated commissioned papers. An overarching theme is the need for change and guidance through a vision for the sector.

While not an excuse for retaining the status quo, it must be noted that many farmers operate profitable and successful farm businesses. These farm operations exist in each commodity sector and in each region of the country. As noted in a prior report commissioned for CAPI entitled “Case Studies of Profitable Farm Operations”<sup>4</sup> these farms are not all large scale farms, but have in common that they are operated using sound

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<sup>1</sup> These include a November 2005 report “Factors Affecting Current and Future Farm Income Prospects,” and the February 2006 report “Working Towards a New Direction for the Agri-Food Sector,” which are available on CAPI’s website at [www.capi-icpa.ca](http://www.capi-icpa.ca).

<sup>2</sup> The proceedings of this forum are available on the CAPI website at [www.capi-icpa.ca](http://www.capi-icpa.ca).

<sup>3</sup> These papers are: (1) “Major Trends Impacting Farming and the Agri-Food Industry in the Future,” prepared by John Oliver of Maple Leaf Concepts; (2) “Drivers of Change in the Canadian Agri-Food industry and Possible Future Scenarios,” prepared by David Sparling, Executive Director of the Institute of Agri-Food Policy Innovation; and (3) “Change in the Agri-Food Sector: Use of Bilateral and Multilateral Trade Agreements,” prepared by Peter Clark and Gord LaFortune of Grey, Clark & Shih.

<sup>4</sup> “Case Studies of Profitable Farm Operations,” prepared by MeyerNorrisPenny and available on the CAPI website [www.capi-icpa.ca](http://www.capi-icpa.ca)

management fundamentals and understand their management constraints affecting growth, and then actively work to resolve and/or advance their management practices. Other data provided by CAPI in its prior reports indicates that many farm operations are profitable and have solid financial results. These farmers are successful businesspeople.

However, this profitable farm income situation is not the case for all farm operations. Some are not profitable and rely on other income sources to support the associated household. This latter situation is driven by a variety of reasons, ranging from small-scale farm operations, poor management skills, operating in a declining commodity market, entering into a retirement phase and deciding not to invest in the operation, achieving lifestyle considerations, and farming on a part-time basis to seek the tax and financial advantages of being classified as a farmer.

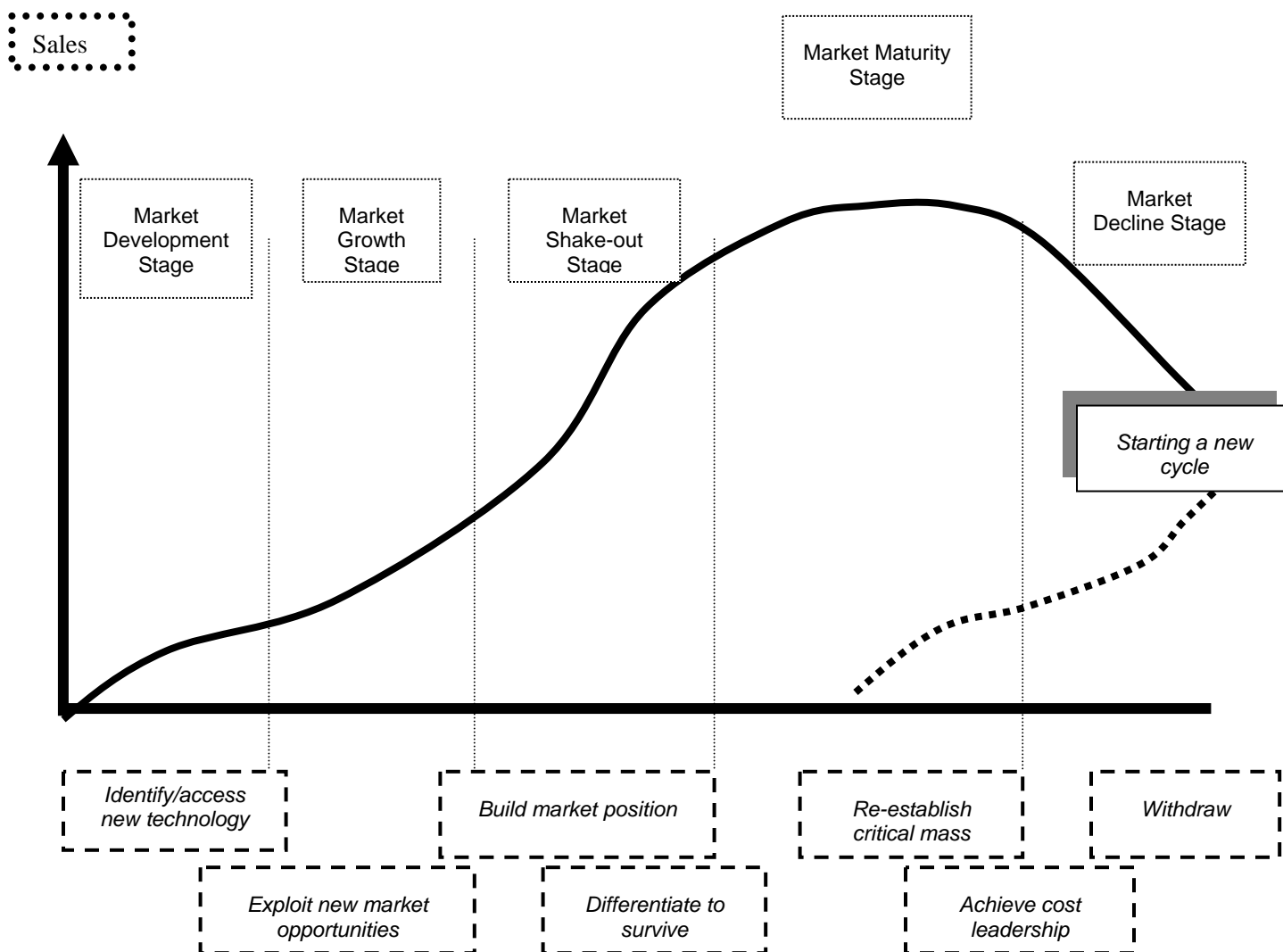
On the policy and regulatory front, unfortunately much of agricultural policy and programming has been dedicated to the immediate past and maintenance of the status quo. This policy and regulatory approach has not helped resolve fundamental sector issues, has negatively affected innovation, and inhibited change. Consequently, the farm sector has moved from crisis to crisis hoping for enough public funding (via subsidies or co-shared insurance programs) to keep farmers financially afloat and in business.

## **1.2. The Unmistakable Reality Affecting Agriculture**

At the aggregate level, there is a current reality that affects production agriculture in all developed economies, whether in Canada, the U.S., Australia, or the European Union. This reality is the strategic choice over the balance of public support to the segments of the agriculture and food industry that are in a mature to declining stage in relation to the choice to invest in the future through innovation and responding to new market opportunities.

As the economy evolves, there are certain segments of the agri-food sector where sales are flat or in decline, with the trend in prices and the tighter profit margins reflecting this situation. In declining industries, the business imperative is to withdraw resources from that sector, and for those businesses that remain to be the low cost supplier. (See Exhibit # 1) Tobacco production can be used as an example of an industry in decline.

*Exhibit 1 Changing Business Imperatives and the Market Lifecycle of Products*



New market opportunities create growth and opportunity for parts of agriculture. This occurred when the former Soviet Union decided to purchase significant amounts of grain on the world market in the 1970s. This also currently the case in the corn market – the incentives provided by the U.S. government to produce ethanol and increase its energy security. And this is expected to be the case in the future as the middle class emerges in China and fulfils its appetite for a variety of food products. As noted, growth will occur in certain product categories as the linkage between foods eaten and overall health and well-being is better understood.

Innovation, whether in new markets, new technologies, or new processes is a foundation for growth in the agriculture, agri-products, and food sectors.

### 1.3. Strategic choices for businesses choosing to be in an industry

When an industry is approaching a mature stage, a number of businesses may decide to do nothing and incur the price/cost or margin squeeze. This is the “do nothing” or “status quo model” choice which can be a rational decision for certain producers.

However, many proactive businesses in such an industry adopt one, or both of two strategic choices:

### **Choosing a business model within a sector**

The first strategic choice is to remain in the industry and decide to do one or more of the following:

- Differentiate to survive
- Have sufficient critical mass (or scale)
- Be the low cost provider

As an example, a wheat producer can differentiate by producing organic wheat, can achieve scale by being part of a selling group to access markets that require scale, or invest in approaches that allow the operation to be a low-cost supplier of wheat using innovation and technologies to lower the cost profile.

### **Innovating to create new opportunities**

The second strategic choice is for these firms to invest in innovation and technologies to develop new market opportunities. The emergence of the greenhouse vegetable industry by former field vegetable and suppliers of greenhouse flowers is such an example. At a more macro level, the advent of canola, and the recent positioning of flax as a nutraceutical, as a source of fibre for many building materials, and as a feed ingredient is another example of using technologies to access new market opportunities.

For firms that decide not to adopt either of these approaches, the price/cost squeeze will continue, with the consequence that returns to resources employed will decline. For some operations, non-farm income sources are secured to ensure adequate family incomes.

Traditional agricultural policy has generally supported the status quo in mature sectors through price supports and/or support of a proxy of gross margin or gross profit. Such approaches on their own do not provide for the new market opportunities that are made available through investment, entrepreneurship, and innovation. The latter requires a different focus of policy, which provides the incentive structure for investment in innovation, discovery science, commercialization of discoveries, adoption of new technologies, and adaptation of known technologies for new applications.

### **Full-time farming as a business model**

Primary agriculture has at least 150,000 separate business units when farm operations of over \$10,000 in gross income are considered. However, over three-quarters (77%) of these operations account for one-quarter (25.5%) of farm output, and these are the farms that have less than \$250,000 in gross income. The remaining 23% of farms, which is under 40,000 farms, produce 74.5% of the output<sup>5</sup>. Furthermore, there were fewer than 15,000 farm operations that had sales over \$500,000 in 2004, which would generate net profits of \$75,000 based on a 15% net profit margin. For many full-time business model operations this sales volume is the minimum required to generate a reasonable income to support a household, after considering operating expenses.

The majority of farm operations which have sales under \$250,000 per annum operate under the part-time business model, with off-farm income as the other source of income. Some of these operations are based on the model of using farming to improve their long-term financial position, while other part-time operations used to be a prior full-time operation that did not choose to adopt one of the above strategies, and therefore relied on an off-farm

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<sup>5</sup> Based on Statistics Canada's 2004 Farm Financial Survey

income source to retain a farm operation. As well, some of these operations under \$250,000 in sales are business that are operated by semi-retired producers who will continue to farm until they choose to fully retire.

In the future, farming will continue to have both of these types of operations – however, the larger and full-time operations will tend to be where the innovations and new business approaches will occur.

## 1.4. A Strategic Direction for the Agri-Food Sector

Engaging stakeholders in developing longer-term strategies of 10 to 15 years usually proves to be a very tough task. This is in part due to a continuous price/cost squeeze affecting the majority of farmers. As a result, farmers, the agri-industry, and federal and provincial governments (which are also caught in a cost squeeze) realize that something has to change. What that something is and what strategies should be followed has led to much discussion and consultation, but not always agreement. Currently, the federal government in concert with the provinces and territories, is in the midst of consultations to help shape the next generation of agricultural and agri-food policy.

This is the time for the agri-food sector to do something stark and bold... a not too common occurrence in agriculture. This is the time to develop a long-term vision and strategic direction that mobilizes the hearts, minds, and pocket books of the various stakeholders in the industry. This is the time for a strategy that all stakeholders can embrace and support.

To look for the stark and bold strategy there must agree on some “bedrock” foundation facts of today’s situation and develop a plan based on certain assumptions and trends about tomorrow. It is assumed that all in the agri-food sector can agree to the following underlying facts:

- The current status quo is not sustainable or financially feasible in the future.
- More profitable opportunities are required to keep farmers investing in their operations in rural Canada.
- Canada has been a leader in the production of specific commodities marketed to the world but at the mercy of global over-production and constant cost/price pressure forced on the primary producer – the farmer.
- Globalization is real and everywhere. Canada cannot erect trade barriers or regulatory hurdles to shield against globalization. Canada must be aggressive and develop sustainable value that can be defended in the world.
- Health care costs in Canada will continue to increase and will be the top priority for government, with the agriculture and food sector having the opportunity to offer solutions that can reduce health care costs through the foods supplied to Canadians.
- Investment is made for future opportunity and by not preserving a questionable status quo. The knowledge intensive bio-economy is real, is here today, and will create potentially huge new value for agriculture in the future.
- The present pain must be dealt with and at the same time the future opportunity indicated by the bio-economy. To achieve success on both fronts will require new strategies, new people, and new ideas. Both current pain and future opportunity must be dealt with at the same time.

In this context, CAPI has taken on the challenge to assist in this process of developing a vision and strategic direction for the agri-food sector to guide change that can benefit not only farmers and rural citizens, but also to improve the quality of life of all Canadians through agriculture and food.

A CAPI-endorsed strategic direction for the agriculture and agri-food sector is illustrated in Exhibit 2. This strategic direction is based on the vision that the Canadian agriculture and agri-food industry is a solutions provider that contributes to the quality of life for Canadians, in areas such as health, energy, and the environment. This vision is based on opportunities available to the sector as well as some of the unique strengths of the Canadian agri-food sector.

This contribution to the quality of life is through six supporting pillars:

### **Disease prevention through food**

The first pillar encompasses the contribution to the health and well-being of Canadians through foods and food products that prevent diseases and lower the associated health care costs. While doing so, new opportunities are created for primary producers.

### **A safe and secure food supply system that guards against infectious diseases**

The second pillar is to further build on the safe and secure food supply lines to further guard against food-borne illnesses and infectious diseases. This leverages the Canadian strength of traceability within the Canadian sector, leading to lower health care costs for citizens and global customers.

### **Sustainable production protecting our natural resources**

Equally important are the next two pillars associated with sustainability and the bio-economy. The third pillar enhances the quality of life through protecting and securing the natural resources of water, air, land, and our overall environment and development of the rural area. As well, in some market channels there is a demand for local foods to further sustainability. Sustainable production helps develop Canada's rural areas.

### **Sustainability through the bio-economy**

The fourth pillar contributes to quality of life by using the advantages of the bio-economy to supply food, food attributes and functional foods, energy and fuel, fibres and building materials, and other bio-products that have food, feed, and industrial applications. Primary agriculture supplies specific renewable biomass products to bio-refineries for sustainable production of the many products that add to the quality of life of Canadians without degrading the environment.

### **Leveraging Canada's natural advantages**

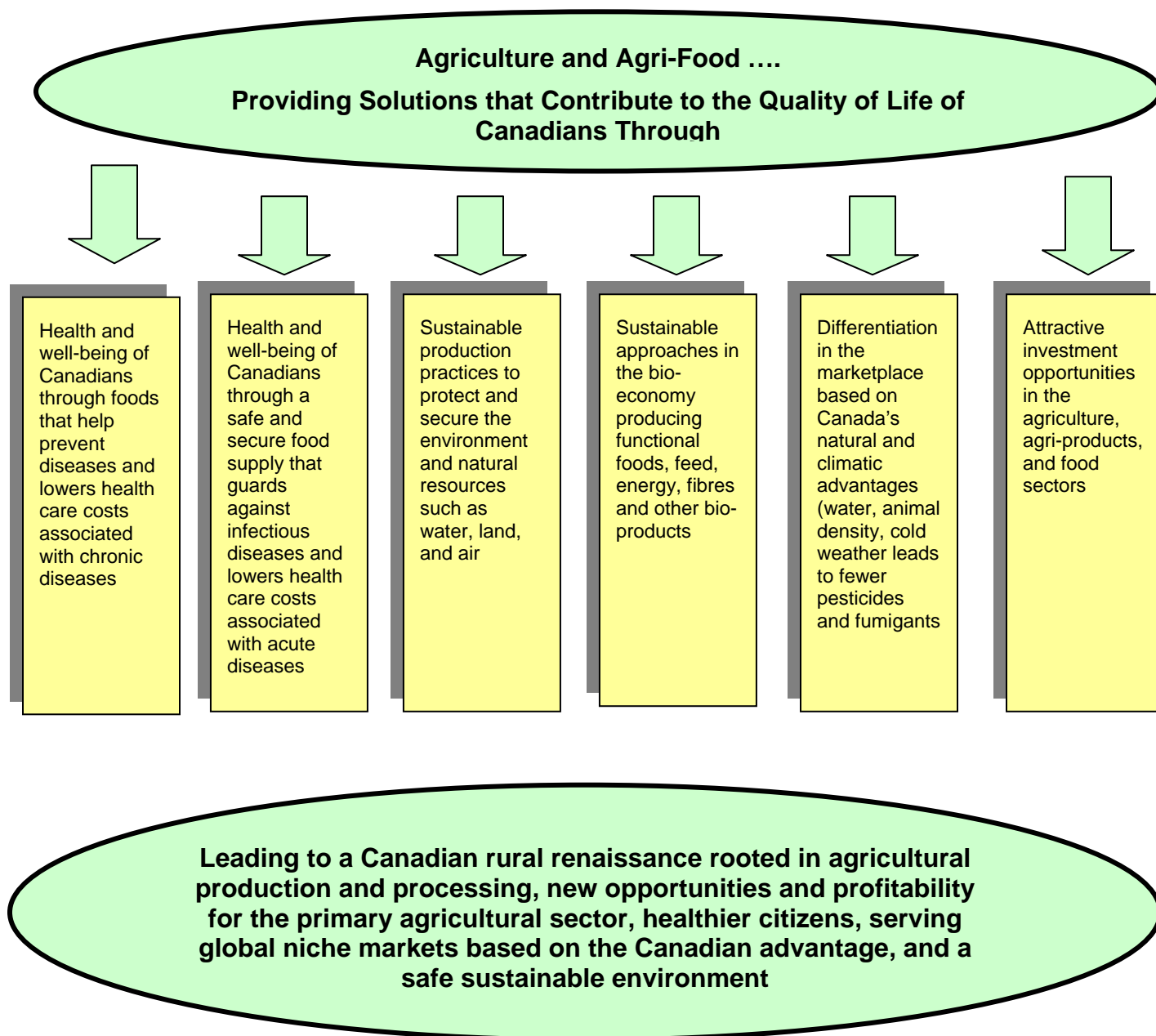
The last pillar, which supports all of the other pillars, is that quality of life is enhanced through the agriculture and agri-food sector developing these health and sustainability solutions based on our natural advantage. Canada's geography, land base, water supplies, and climate provide natural advantages that can not be readily duplicated, providing for sustainable advantages that are differentiable from competing supplying countries. For example, Canadian climate with the cold winters results in a low reliance on crop protection materials compared to warmer climates. Certain crops have superior performance in the Canadian climate – for example, flax on the prairies, or cranberries near our fresh water basins, or trout using our ample fresh water. These same food products also provide significant health benefits, and in many cases the whole plant can be used for food, feed, fuel, and fibre market applications. This differentiation also applies to our safe and secure supply chains where consumers around the globe can be assured of the sustainable production, processing and logistics practices to deliver a safe and secure food supply from Canada.

This pillar supports the marketing and sales of Canadian agri-food products around the globe, with the Canadian advantage satisfying niche market requirements worldwide. Agri-food exports are a large contributor to economic activity across Canada.

### Attractive investment opportunities in the sector

The last pillar highlights the necessity of an attractive investment climate at all levels in the supply chain, whether in primary production; processing of agricultural products into feed, fibre, renewable energy, and other bio-products; and manufacturing of food products. Profit opportunities in specific market will attract the necessary capital. An attractive investment climate also implies regulations and a regulatory climate that is conducive to investment and innovation in the Canadian sector. Without these basic requirements the necessary levels of investment and innovation will not occur. The Canadian agri-food sector must be an attractive investment opportunity to facilitate commercialization of new technologies and products in Canada. Without an attractive investment climate it will be difficult to realize the vision.

*Exhibit 2 Agriculture and Food Vision and Pillars of Strategic Direction*



## 1.5. The Resulting New Operating Environment

Adopting these strategic pillars as part of the policy framework for the sector will have very positive results for farmers, agri-businesses, food companies, rural Canada, and Canada as a whole through the creation of a new operating environment for the sector.

First, and foremost, for farmers this means more choices, new opportunities for investment, and more markets providing profitable returns. Many business opportunities will emerge for farmers and rural based businesses to succeed in the marketplace.

For agri-businesses and food processors, the new operating environment provides significant investment opportunities in new technologies, new industries, and new product areas.

This operating environment created by the suggested policy and regulatory shift will result in a Canadian rural renaissance. The foundation for this rural renaissance is the range of new opportunities created for farmers and for entrepreneurs in rural Canada. Profitable farm operations, biomass-processing plants located close to primary production, can create renewed economic vigour in many rural areas across Canada.

Last but not least, implementation of these strategic pillars in the vision will result in healthier citizens and a safe sustainable environment for all Canadians to enjoy. Overall citizen well-being will increase and health care costs can be reduced.

### Innovation Supports the Strategic Direction of the Vision

Innovation is a key element of the choice available to businesses. It also undergirds each of the five strategic direction pillars that support the vision. Innovation, science, and the adaptation of knowledge and technology is required to fully achieve the linkages between food and health, develop sustainable production practices, move to the bio-economy, build on Canada's current strengths and natural advantages, and ensure the food supply is not a vector for infectious diseases.

Suggested strategies and actions for achieving the vision are highlighted in the next section. The proposed strategic direction, which is built on Canadian strengths, opportunities and key trends,<sup>6</sup> reflects a desired operating environment for agriculture. The operating environment will be affected by global trends, with a few of the key global trends that affect the Canadian agri-food sector highlighted in Annex III. Other factors that must be considered are discussed in Annex IV, including trade considerations. Weaknesses which must be overcome to realize the vision are noted in Annex V, and sector strengths that are opportunities to be built on for differentiation are listed in Annex VI. These annexes profile the environment, which shapes the proposed strategies.

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<sup>6</sup> A listing of key factors is provided in Annex II.



## 2.0 Required Strategies to Achieve the Desired Outcome

Strategies used to achieve the vision and associated strategic direction must be aligned with the key trends and associated opportunities, other issues facing the sector, and the sector strengths that should be leveraged; these strategies must also effectively address sector weaknesses. At the same time, certain strategies are required to ensure that the necessary human capital, investment, and capacity remain in the sector as the sector repositions in line with the vision and the associated strategic direction.

Strategies for consideration by the agri-food sector and both levels of government<sup>7</sup> are offered in the following areas to:

- Foster Innovation and Commercialize New Technologies.
- Effectively Overcome Major Weaknesses
- Build on Canada's Natural Advantages and Agri-Food Sector Strengths
- Improve Health of Canadians Through Foods
- Deliver on Local Food Demands
- Seize Global Opportunities
- Differentiate in the Marketplace
- Deliver on Sustainability
- Address Farm Sector Specific Issues
- Assist in Repositioning and Maintain Capacity

### 2.1. Foster Innovation and Commercialization of New Technologies

#### **Incentives and subsidies for investments that develop the bio-economy**

Capital is attracted to areas of high return. An example is the high level of investment in energy security in the U.S. through ethanol plants, with this investment encouraged by attractive per-litre subsidy rates. This strategy builds capacity in areas deemed important to a country. The bio-economy is part of Canada's future, and stimulative levels of government support will attract the needed investment. The form of subsidization to attract needed capital should depend on whether the need is for more basic research, compared to commercialization of a discovery, or investment in bio-refinery capacity. Government support can range from tax policy considerations (for instance, faster amortization, lower tax rates, and so on), to grants for specific types of science activity, to government loan guarantees, to per-unit-of-output subsidies. (federal & provincial)

#### **Researchers at universities own the intellectual property rights**

Canada has many solid researchers, whether at universities or at government research stations. This strategy is designed to provide the incentive to researchers to focus on science that has commercial value, subject to the

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<sup>7</sup> At the end of each high-level strategy is an indication of the level of government that needs to be involved in executing the strategy.

commercialization occurring within Canada. This can result in capital teaming up with researchers to create companies that take science to the market.<sup>8</sup> (federal & provincial)

### **Government research focus on open-source enabling and backbone technologies**

Canada also has many solid researchers at government research facilities. The focus of government researchers should be on research that has a broad public benefit, such as enabling and backbone technologies that support Canadian strengths and natural advantages. As well, research administration should not focus on intellectual property protection, but rather view the research as open source within Canada, upon which other researchers and private institutions can build specific applications. (federal & provincial)

## **2.2. Effectively Overcome Major Weaknesses and Regulatory Obstacles**

### **Minimize regulatory burden**

Regulatory burden imposed on producers can be removed in a number of ways. Minimizing regulatory burden and costs includes a review of current and proposed regulations and their benefits and costs, to the economy, to society, as well as to producers and processors. Regulations with undue burden that have small benefits need to be amended to be less burdensome to ensure that the benefits of regulation do not exceed the costs. As well, in the cases of regulations where the societal benefit is large, such as with the environment, producers are provided compensation to offset regulatory burden and compliance costs. This should be considered since farmers are not able to pass on these costs through the market, as most farm products do not use a cost-plus-pricing approach. (federal & provincial)

### **Harmonize regulations and standards and regulatory processes with the U.S.**

Regulatory processes can be harmonized with the U.S. for crop protection materials, labeling and food additives. Concurrent registration/approval can occur through coordinated activities and acceptance of data and findings by U.S. agencies. As well, harmonized minimal standards for food products should be pursued, with the recognition that some companies and sectors may want to use their own standards that exceed the agreed upon minimal standard. This strategy is also required to move forward on the strategic direction of improving the well-being of Canadians through the food, through labeling and related health information. (federal)

### **Harmonize regulations and standards between the provinces**

Actions must be taken to allow for the free movement of agricultural products between the provinces, with some provincial regulations still impeding the free flow of products between provinces. Provinces can work together to remove such provincially based regulations that restrict inter-provincial trade. (federal & provincial)

### **Eliminate NAFTA inconsistencies and move to a true continental market**

This strategy is to ensure that the continental market intended by the free trade agreements is achieved to provide benefits to agriculture and food and not a competitive disadvantage. Actions taken to ensure a continental market in agricultural inputs, which include actions on the regulatory harmonization front are necessary. Within NAFTA, agreement on phytosanitary measures are essentially absent and must also be addressed with this strategy. (federal)

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<sup>8</sup> It can be noted that one of the reasons that the Waterloo region has many start-up companies and successful companies that have linkages to the University of Waterloo is because faculty members and not the university own the intellectual property. Research In Motion and the BlackBerry® device is but one example.

## **Create the environment for development of Canadian-based multinationals**

Many of the other strategies proposed will create a more conducive operating environment for the growth of Canadian-based multinational agri-business and food companies. (federal & provincial)

### **Align focus and investment activity with a vision**

Investment and resource allocation can be aligned with a vision for the sector that is embraced by key decision-makers. The vision and strategic direction proposed by CAPI is one that can be considered by the agricultural and agri-food sector and be part of the policy and regulatory environment affecting the sector. (federal & provincial)

## **2.3. Build on Natural Advantages and Agri-Food Sector Strengths**

### **Focus research on cold-climate crops and technologies**

One of Canada's natural advantages includes cold-climate crops. These crops have health benefits (for example, flax and cranberries) and more research can identify other positive health and bio-economy benefits. With this strategy, research at public institutions is focused on cold-climate crops, their attributes, health benefits, new uses, and associated production technologies. Such research activities can help leverage a unique Canadian advantage. (federal & provincial)

### **Enhance disease-free status through additional bio-security measures**

Canada is blessed with low animal population densities across its vast rural landscape, which provides natural advantage for controlling animal diseases that could affect human health. These strategies would be to use science-based principles to ensure certain density thresholds, to ensure appropriate animal/human population densities near urban areas, and to ensure bio-security and traceability measures are seamlessly in place across Canada. Through these investments, Canada can leverage this advantage in many global markets. (federal & provincial)

## **2.4. Improve Health of Canadians Through Foods**

### **Fund research on the linkage between Canadian foods and health**

More basic research is required on the linkage between food and health. This strategy calls on the focus of research to be on Canadian foods, in which Canada has a natural advantage to allow for many of the rewards of research to remain within Canada. Crops such as flax, oats, barley, cranberries, some cole crops, and other storable fruits and vegetables would be included in this strategic focus. (federal & provincial)

### **Promotion programs focused on well-being and food**

Another strategic thrust to improve the health of Canadians is through programs that inform citizens about the linkage between food and health, and in particular those foods that are more unique to Canada. A part of this strategy is to ensure that labeling regulations are amended to allow food manufacturers to provide health-related information to consumers through advertising, package information, and content labels. (federal & provincial)

### **An animal health program focused on bio-security and containment**

While Canada has developed bio-security and on-farm food safety programs, more needs to be done to ensure that infectious diseases of animal origin are minimized or eliminated. This includes more research on disease pathways, prevention programs, handling procedures, and more focus on bio-security and containment. The focus must be on bio-security and containment, and may require certain animal handling and manure disposal approaches based on minimum separation distances. (federal & provincial)

## 2.5. Deliver on Local Food Demands

### Promotion programs focused on local foods

An ever-growing opportunity is for producers to supply local consumers with locally grown and processed food products. Provincial governments are well-positioned to design and support local food promotion programs, which increase consumer awareness of local foods, whether through retail outlets or food service operations. (provincial)

### Networking forums and showcase centres

Capitalizing on this opportunity also requires networks that allow for the formation of alliances between producers to ensure that supply stock-outs do not occur and that a continuous supply is made available to deliver on the local food supply promise, subject to seasonality considerations. Networking forums and showcase centers will allow for food retailers, food processors, and primary producer to network and form supply arrangements and/or enter into vertical strategic alliances. Both levels of government can ensure that the necessary infrastructure is in place to support local food networks. (federal & provincial)

### Buy local foods as part of government procurement policy

An effective strategy is to ensure that governments and government agencies, which range from schools to crown agencies to institutions, implement and execute buy local food procurement policies. Such initiatives will develop the infrastructure and capacity to deliver local in-season and storable local foods into local markets. (federal & provincial)

## 2.6. Strategies to Seize Global Opportunities

### Pursuit of bilateral trade agreements

Canada is being left behind in market access by not being as aggressive as other countries in entering into bilateral trade agreements. As other exporters enter into these agreements, trade is diverted away from Canada and the potential for new opportunities is also lost to these signatories. A bilateral trade strategy must be pursued to ensure the Canadian agri-food sector retains and expands market access. (federal)

### Ensure the Canada brand promise is delivered

Positioning the Canadian agri-food sector in international markets as a country that has a safe and secure food supply, and one with a concern for the environment and sustainability, requires that Canada has the capability and the willingness to follow through on such actions. Delivering on this strategy requires that the basic infrastructure is in place across the agri-food system for food safety programs, traceability, bio-security, execution of a science based animal health strategy focused on disease prevention and containment, and sustainable production. (federal & provincial)

## 2.7. Differentiate in the Marketplace

### Position Canada in the global market on differentiable and sustainable attributes

Canada can position itself in global markets based on attributes such as quality, integrity, compliance with food safety programs, environmental stewardship, and supply of unique Canadian foods (for instance, flax, salmon, maple syrup, Saskatoon berries, and so on). Other positioning points are low animal populations densities and the consequent implications on infectious diseases, use of fresh water, and minimal use of pesticides due to the Canadian climate. Canada can redefine certain market segments by this repositioning strategy based on some Canadian advantages. The strategy is for the federal government in concert with industry (food manufacturers and

exporters) to develop a positioning message, with a sustained communications program into key markets to build market position based on the market differentiation. (federal)

### **Secure and traceable supply chains**

Delivery on the Canada brand promise requires that secure and traceable supply chains are in place. Strategies must ensure that on-farm and beyond farm gate food safety programs have 100% compliance for food products that are exported, and as well that full traceability is in effect such that customers have assurance of compliance with protocols through the supply chain. An element of this strategy is ensuring that developing this infrastructure is seen as a public good and funded by both levels of government. (federal & provincial)

## **2.8. Deliver on Sustainability**

### **Ensure production practices maintain our fresh and safe water supplies**

Strategies and programs are required to ensure that Canada's fresh water remains a strategic asset to Canada and to the long-term success of the agri-food industry. This will ensure a sustainable position in supplying food to countries that are short of fresh unpolluted water. (federal & provincial)

### **Develop infrastructure and protocols to demonstrate sustainable practices**

Canada is a world leader in ensuring environmental sustainability through programs such as nutrient management programs, farm environmental plans, and animal welfare protocols. Producing food in a sustainable manner is an attribute that is required by increasingly more consumers, with the result that Canada must have a strategy to ensure that production follows certain verifiable minimal standards. (federal & provincial)

## **2.9. Address Farm-Sector-Specific Issues**

### **Act to reduce domestic subsidy levels in the U.S., and EU**

Through multilateral forums, such as the World Trade Organization, among others, , Canada must continue to seek and build coalitions with other countries to have levels of domestic support (including green programs) reduced to provide for a more level playing field for the primary production sector. (federal)

### **Change trade rules regarding trade action and domestic support**

Currently, an importer can frustrate trade with a countervailing duty on Canadian exports due to Canadian subsidies, when the level of subsidization in the importing country is as large, or larger than in Canada. Canada should pursue a bilaterally focused strategy with its major trading partners, such as the U.S., to not allow countervail cases in agricultural and food products when the level of domestic support to the sectors is comparable in each country. This type of agreement should reduce the concern over market access issues in trade between Canada and the U.S. (federal)

## **2.10. Assist in Repositioning and Maintaining Capacity**

### **Ensure programs are adequate to maintain productive capacity**

Strategies are required to ensure that Canada's productive capacity is maintained to allow the primary and processing sectors to respond to the opportunities that are emerging. These strategies should not prevent human and capital resources from freely withdrawing from the agri-food sector; however, they should allow these important resources to remain for decision makers that choose to remain in the sector for the next generation. (federal & provincial)

### **Invest in building human capital**

Human capital is fundamental to success in the new economy. Strategies are required to allow the necessary human capital base to expand throughout the supply chain, whether in the research lab, using technology to produce primary products, or using technology to process and package primary products into value added market ready products. (federal & provincial)

### **Minimum Canadian content at food retail**

The productive capacity of the Canadian agri-food sector must be retained for the well-being of Canadians and the economy. A strategy that ensures retailers and food service operators have a minimum Canadian content (whether as purchases or SKUs) is a way to ensure that there is a demand pull for Canadian grown and manufactured food products. This can be a mandatory program, or a program that offers tax credits for certain levels of compliance. Such a program can stimulate investment in capacity similar to the required minimum level of ethanol in motor fuels. (federal & provincial)

### **Incentives for minimal “green” requirements in energy and specific products**

Investment in green technologies and products that are based on biomass will occur based on government-initiated incentives. These incentives can be tax credits, regulated minimal requirements, or direct subsidies. This strategy can apply in areas such as energy, certain consumer products, specific automobile parts, types of equipment, building materials, and new buildings. (federal & provincial)

These strategies, if implemented, can help the sector achieve the vision set out at the beginning of this document. There are also obvious implications for the next generation of agriculture and agri-food policies, as highlighted in the following section.

## 3.0 Implications and Considerations

The suggested strategies have direct implications for the next generation of agricultural and agri-food policy. In this section we briefly address those implications.

### 3.1. The Benefits of Action

The benefits of action on implementing the vision through the strategic pillars and the strategies, policies, and initiatives highlighted in the prior section are clear and evident. These are clear for farmers, where investment and market opportunities emerge to capture profit potential. These benefits are also clear for agri-business and food manufacturers through the opportunities being created through the new operating environment being proposed. A rural renaissance will occur in Canada, providing opportunity and quality of life for rural Canada. Science and technology, and the resulting innovation and adaptation, will create opportunities for Canadian business while, at the same time, improving the health and quality of life of all Canadians. Following this suggested path provides a solid reason to invest in the sector, as it provides solutions to all Canadians, whether as food products, industrial products, energy, or through the environment.

### 3.2. The Cost of Inaction and Complacency

The cost of inaction and complacency is too high to ignore. Inaction by policy makers and by the sector is not an option. Inaction, or the “status quo”, only means that overall the agricultural sector will decline and will not participate in the bio-economy. In general, the overall health of the production sector will rely on commodity markets exports, implying that Canada’s higher cost structure agriculture must compete with lower cost agriculture, whether in South America, Eastern Europe, or Asia. Inaction will result in an untenable long-term situation for the whole sector. Investment dollars will be attracted outside of the sector, and rural Canada will not benefit from the emerging bio-economy.

Moreover, Canada cannot afford to take the middle ground and not create the climate for implementing the vision. A middle-ground solution, while enabling Canada to participate on the fringes of the bio-economy, will essentially result in Canada being a follower and not a leader in a new economy that is ideally suited for Canada and plays to Canada’s strengths. Significant innovation and investment will not occur in Canada with a middle-ground approach, which limits the vast potential. Canada can lead, but to do so, the weaknesses that were identified that inhibit growth, particularly the regulatory impediments must be addressed. If they are not addressed, Canadian policy makers are choosing a middle ground and explicitly choosing not to take a leadership role in the bio-economy.

### 3.3. Sector Engagement

The vision and supporting strategies involve the entire agri-food sector, from discovery science through to marketers of agri-food products. This requires an engagement of the entire agri-food sector in providing input into the next generation of agriculture and agri-food policy. The engagement must go further through belief, commitment, and embracing of the vision and strategies to ensure that decisions are made consistent with the direction suggested for the agri-food sector. All stakeholders, whether primary producers, food manufacturers, Ministers, or regulators, require this engagement.

As a result, consultation is required with all levels and segments of the agri-food supply chain. This requires input from the private sector, including large and small processing operations, as well as entrepreneurial organizations. The private sector will be more willing to provide input if the belief is there that their input will be considered and be part of forthcoming actions – dithering will not be tolerated by the private sector.

### **3.4. A Focus on Effective Execution of the Policy Initiatives**

A fundamental consideration is that a strategy is only as good as its execution. This applies to any business as well as to government policy. A shortcoming of the Agricultural Policy Framework (APF) was that in some areas the APF was weak on implementation plans, and in many cases there was inadequate infrastructure in place to effectively deliver/implement the APF elements. This weakness cannot recur with the next generation of policy. Timely action is needed.

The suggested strategies have roles and responsibilities for both levels of government. In many cases these are shared responsibilities, with the implication that agreed upon mechanisms are required for effective implementation and execution.

### **3.5. Program Funding in the Next Generation of Agri-Food Policy**

The suggested CAPI vision and adopting the associated proposed strategies will require a rebalancing of public funds from direct support to programs that support innovation, creating more infrastructure and capacity, supporting development of supply chain attributes, and promotion. By doing so, Canada's expenditure profile for the agri-food sector will move in the direction of that in Australia and the U.S.

### **3.6. Making Canada an Attractive Place to Invest**

Achieving the vision also requires investment, and more importantly in a globalized world, attracting capital into the Canadian agri-food sector, versus other sectors and this capital being invested in other regions, such as the U.S. due to its market size and more receptive regulatory environment.

An overarching thrust in the next generation of agri-food policy must be to make Canada an attractive place to invest in relation to competing areas. This should be a core part of the policy, and includes the very necessary action of eliminating Canada's regulatory weaknesses. By implication, this will require the federal and provincial governments to take an economy wide view of the next generation of policy, as other government bureaucracies are involved, such as in health, environment, industry and commerce, and trade. Only by doing so will Canada be able to achieve this vision for the agriculture, agri-products and food sectors, and create the foundation for a Canadian rural renaissance.



## Annex I Summary of Policy Implications

The February 2006 CAPI Discussion Document entitled “Working Towards a New Direction for the Agri-Food Sector” highlighted policy implications associated with the current situation in the agricultural sector. The implications on government policy and associated regulations were summarized in that document around the following themes:

- Focus of government policy
- Access to markets
- Policy, farm incomes and support
- Innovation
- Regulations

### Focus of government policy

- Government attention and support should be for the entire agri-food supply chain to achieve the full benefits of a healthy agri-food supply chain.
- Government policy and regulations should be supportive of innovation (adaptation of existing technologies and discovery through science) throughout the agri-food supply chain.
- Government policy needs to support basic research and development (R&D), applied R&D to solve farm-specific production issues and boost productivity, and extension activities.
- Government expenditures on the agri-food sector need to be rebalanced. More emphasis is required in those areas that provide for long-run competitiveness and sustainability in areas such as application of R&D to improve crop health and animal health. With rebalancing, some form of programs may be required to assist in the transition process.
- A forward-looking government policy is required to develop and support within Canada markets for non-food products such as renewable fuels.
- Government policy-makers should consider separating farm policy (for example, supporting innovation) from rural social policy (for instance, ensuring sufficient jobs and infrastructure are available in rural Canada), and from broader economic and environmental policy (such as supporting bio-processing facilities in rural areas).
- Government resources provided as part of farm policy should benefit commercial-business-focused farmers and not provide assistance to lifestyle farmers (unless this is an explicit rural development/social policy);
- The Government should consider revisiting the issue of whether certain extension-type services, which are not being supplied through the market, are required, and where government should invest in supporting the needs of business-focused farmers.

## Access to markets

- Domestic market opportunities should include processed foods that are imported and not manufactured in Canada.
- The government should consider placing more emphasis on bilateral trade arrangements as a means of opening up markets to Canadian agri-food exporters.
- The federal government should use forums such as the WTO to achieve a reduction in subsidies and improved market access.
- The regulatory system should facilitate development of new markets, and not restrict access to products and markets (for instance, through restriction on varieties and genetics, pesticide regulations, and un-harmonized regulations).
- Government programs may be required to assist farmers in the transition to the new management systems (with food safety protocols, traceability, environmental considerations) that provide for marketplace differentiation (a Canadian advantage) through integrated supply chains that deliver specified product attributes and information to end-users.
- Government support for value chain initiatives should continue as they bring segments of the supply chain together to discuss and resolve industry issues and collaborate on initiatives.
- Access to markets can be enhanced through government-supported initiatives that support formation of joint ventures and second generation cooperatives to provide producers with critical mass to enter into arrangements (such as strategic alliances) with buyers to deliver on market requirements and/or value added activities (such as processing, ethanol production).

## Policy, farm incomes and support

- Farm income prospects depend on a healthy Canadian food processing and manufacturing sector.
- Government policy directed at the farm sector should be based on the business-focused farmer and their needs (infrastructure support, and so on).
- Government expenditures to support incomes, rather than stabilize incomes, is counterproductive, as these income-support expenditures do not all remain in the farm sector; rather, the net effect is that these benefits accrue with input suppliers and users of the products – such income-supporting measures raise the cost profile and potentially lowers returns.
- The level of direct government payments to producers should reflect the need for relief from disaster and fluctuations in income.
- Countervailing market power of farmers within the supply chain can increase through being part of integrated value chains which respond to end-user requirements, and through global farmer initiatives.
- Alternative measures to aggregate farm income should be considered when formulating policy.
- Measures of farm profitability are required to assist in policy decision-making.
- Official measurements and reporting of farms should be based on a more meaningful minimum-size criteria than the current one, which considers sales greater than \$10,000.

## Innovation

- Innovation can result in improved farm incomes when the innovation can not be rapidly duplicated in other countries and when an innovation delivers benefits through the value chain to consumers.
- Post-farm-gate innovation is extremely important for the overall agri-food sector.
- Government expenditures on research and development have not kept pace with need, or with past expenditures levels. This trend must reverse to provide the needed substantial investment on behalf of the agri-food sector.
- Government expenditures should increase on basic R&D and applied R&D on areas that support agri-food sector supply chain strategies.
- R&D requires economies to scale and such activity and funding by government should be concentrated through centers of excellence and industry clusters.
- Government policy can facilitate innovation and commercialization of new technologies in the agri-food sector through mechanisms such as:
  - direct expenditures on R&D
  - tax-policy for innovation
  - a regulatory environment that is conducive to innovation being registered in Canada
  - programs that result in commercialization of these innovations within Canada
- The overall approach to innovation may require change to allow farmers to be larger beneficiaries of innovation. This could occur through farmers collectively contributing to R&D through innovation levies (a check-off), which would allow them to access technology at lower costs, with the technology owners being reimbursed through a national levy. The institutional design could also change, whereby farmer cooperatives would receive innovation funds through the check-off innovation levy, contract out research, and make resulting technologies available to members, or to the sector at minimal cost.

## Regulations

- Regulatory issues are critical and must be urgently addressed in a manner than is consistent with “smart regulations” and that does not destroy (reduce) farm income.
- Current and impending regulations prevent farmers from developing new crops and other innovations to supply market requirements.
- The regulatory system needs to accommodate opportunities available to the agri-food industry (such as regulations regarding labeling, health claims, market access).
- The regulatory system can not be adding unnecessary costs throughout the agri-food supply chain (from input suppliers to primary production through to food manufacturing), but needs to facilitate a competitive agri-food industry.
- Some regulations are damaging the processing sector and removing value from the agri-food supply chain, while other regulations add value by helping the sector differentiate food products.

- The cost of regulations on the farm sector needs to be more fully understood by policy makers.

## Annex II Key Factors Affecting the Future Operating Environment

A summary of the key factors (key success factors, opportunities, trends, weaknesses, etc) that will affect the Canadian agri-food sector over the next 10 to 15 years are noted below.

### Demand factors<sup>9</sup>

- Health and well-being of individuals and linkage to food
- The bio-economy, bio-refinery production of fuels, fibre, ingredients, feeds, and so on
- Shift of economic power to Asia
- Trend to consumer demand for local and natural production.
- Market requirement for a secure supply chain; biosecurity and animal health.
- Multilateral trade negotiations, bilateral and regional trade agreements.
- The value of the Canadian dollar.
- Domestic food demand growth through population growth and demographics.

### Competing supplier factors

- Globalization of products and markets
- U.S. and EU subsidy (domestic support) levels
- Volume and cost of off-shore food supplies available to North America

### Canadian supply factors

- Availability of water for production and processing of agricultural products
- Innovation and commercialization of innovation/technologies in Canada
- Understanding the Canadian advantage/disadvantage

### Structural factors

- Absence of Canadian-based multinational agri-food companies
- Lack of focus or vision to attract investment in the sector
- Concentration of economic power in the supply chain
- Supply chain connectivity with consumers and market requirements

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<sup>9</sup> Some of these factors can also be contained under other headings.

## **Moving Forward on Vision and Action for Canadian Agriculture**

- Strategic alliances and networks in the supply chain
- Strong rural economies to support a vibrant agricultural production economy

### **Societal (and public good) factors**

- Society's demand for sustainability
- Linkage between the environment and food production

### **Government factors**

- Regulation and regulatory reform in the agri-food supply chain
- Harmonization of regulations and standards with major trading partners
- Canadian policy dysfunction within the continental NAFTA
- Ability of governments to subsidize farmers to levels comparable to the U.S.

## Annex III Key Global Trends and Associated Opportunities

The vision and the strategic direction must be based on where society is headed and on related important global trends. The key global trends that will impact the direction of society over the next 10 to 15 years include:

- Globalization of products and markets;
- The shift of economic power to Asia;
- The dominance of “health” in the everyday decisions of every person on earth;
- Society’s demand for sustainability;
- The emergence of the bio-economy; and
- Science and technology continuing to shape the sector.

These important global trends that will shape our agri-food sector are briefly discussed below.<sup>10</sup>

### III.1 Globalization of Products and Markets

The fall of the Berlin Wall and the rapid awareness and acceptance of information technology brought the “global village” into every living room in the world. As noted author Thomas L. Friedman states, “the world is flat.” Through the reduction of tensions between former enemy nations, such as China and U.S., and greater movement to freer trade, products are (and will be) manufactured where technology, good people and low wages naturally come together.

This phenomena has lead to Brazil being the number one exporter of products such as soybeans, beef, and chicken. Through globalization, countries such as Brazil, India, and China will become suppliers of many basic foodstuffs.

Large buyers such as Wal-Mart set the standards and the price of products. Global product mandates are let by companies to the area of the world which can best produce a product with high quality and low cost. Regionally focused suppliers cannot compete and will be purchased by global competitors. Accumulation of “mass” and removal of competition has become the operating strategy of the multinationals.

There are certain factors that underpin the trend, and include:

- Reduced barriers to trade.
- Access to low-cost labour becomes key decision factor by product manufacturers.
- Shift to Asia and within Asia as manufacturing strategy to control costs, makes site selection
- Over short- to medium-term (to 2018), China benefits, and over the longer term Pakistan and Bangladesh benefit as well as other developing Asian nations

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<sup>10</sup> Parts of this section borrows heavily from a paper prepared for CAPI by John Oliver of Maple Leaf Concepts entitled “Major Trends Impacting Farming and the Agri-Food Industry in the Future,” which can be accessed through the CAPI website [www.capi-icpa.ca](http://www.capi-icpa.ca)

## Impact of Globalization Trend on Canadian Farmers and Agriculture

There are numerous impacts of globalization on the Canadian farm sector, including:

- Suppliers concentrate and dictate price of products. Monopolies are extended by global reach of suppliers and their ability to deal with regulatory officials and erect barriers.<sup>11</sup>
- Reach for “mass” and market access reduced food manufacturers and retail grants to a few globally who set direction and price.
- There are no safe and secure markets. Cost and capability to deliver product becomes the key determining factor in purchase decisions. Customers become competitors in many cases.
- Farmers become even more at the mercy of the market with traditional customers while competition becomes fierce for new customers.
- Public health incidents and unplanned happenings like BSE are known globally instantaneously and markets are affected and can close over night.
- Media and activist groups shape public perception. Anti technology activists slow down access to new technologies.
- Safety and security of food supply becomes top priority for all nations.
- Backup of inventory and cost of carrying inventory falls on the weakest link (the least able to bear the weight financially), which is the farmer.
- Bilateral trade with emerging economic giants becomes stronger focus and need for future versus reliance on multilateral WTO global approach.
- Canada has probably the worst set of variables to deal with globalization:
  - Historic attachment to certain commodities, such as wheat
  - Vulnerability to protectionist policies of major agricultural producing areas (that is, Canada cannot compete with U.S. or EU treasuries)
  - Canadian dollar is a petro-dollar and responds to oil prices. In many ways Canada oil riches work against the Canadian farmer.
- Health and sustainability are the value currencies of the new age (the first 30 years of the 21st century). Canadian agriculture has the opportunity at home and abroad to develop and market a health formula including many products.
- The knowledge-intensive bio-economy plays to Canada’s strengths –abundant, good farm land; good farmers; and good science. Canada can set the world standard.

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<sup>11</sup> As an example, from 1984-2004, 20 research-based agricultural chemical manufacturers were reduced via merger and sale to three giant manufacturers plus four medium- to large-sized manufacturers globally.



- Proprietary products and climate-benefited products can withstand the receding tide to Asia, with Canada's climate able to produce certain crops from a climatic natural advantage that can be scaled and sold on a semi-proprietary basis at increased prices creating sustainable new value.

## III.2 Economic Power Shift to Asia

The World Bank forecasts that in the 2020-2025 period, China will become the largest single economy in the world. According to the latest United Nations population forecasts, by 2050, China and India alone will account for 3.3-billion people, or 37% of the earth's 8.9-billion people. Other Asian nations, such as Bangladesh, Philippines, Pakistan, and Indonesia, will add approximately 20%, giving Asia 60% of the world's total population by 2050.

In addition to number of people, the life style change brought by increasing affluence and the emergence of rapidly expanding middle class means that Asia will become the dominant consumer purchasing block. North American consumer purchasing power will decrease as a percentage of the total, but European and North American food tastes will continue to lead the world.

In addition to growth, the life style change by Asian consumers again points to health and the environment as the two major concerns over the next two decades. India, China, and Korea, which are rapidly developing nations, are already showing health care signals paralleling the U.S. and Canada. Over the last 40 years, heart disease, cancer, and stroke have been the top diseases of people 40 years of age and older in China and Korea. This is one of the distinguishing characteristics of a country becoming a developed nation. The infectious disease concerns of undeveloped nations give way to chronic diseases like heart disease.

This shift in economic power to Asia means that the following are likely:

- China and India will become points of equilateral economic power triangle with U. S. by 2015.
- By 2025, China will become the dominant single economic power in the world with the power that stature brings.
- The potential will increase for power coalitions of nations to develop around China and U.S. axis.
- Increasingly affluent consumers will emerge as a middle class in Asian societies.
- Demand will increase for a diversified food basket, away from rice- and starch-based diet and toward animal proteins and vegetable.
- Competition for sources of minerals, energy, and fresh water will become fierce.
- India and China will undergo a shift from low-cost sourced goods and services to information-driven societies. Low-wage manufacturing shifts away to other Asian nations.

### Impact of Economic Power Shifts to Asia on Canadian Farmers and Agriculture

There are numerous implication of this trend for the agricultural sector in Canada, including:

- Shift in diet from starch-based foods (rice) to animal protein and vegetable oils will open up huge consumer markets at increased volumes and prices.
- There is real concern that not enough land will be available to grow feed grains to meet animal protein demand.

- China will face a fresh water crisis, and will have to decide whether to use this critical resource for farming or industrial purposes.
- In 2020, the grain deficit in China alone could equal global trade in wheat in 2000.
- Canada must make serious approach to major nations in Asia-- China, India, Korea, and Pakistan – to align our strengths to their weaknesses and vice-versa. Canada has fresh water to produce food; they may need to ration fresh water.
- Canada has a huge “trust”bank with the nations of Asia. Canadian production systems and food safety methods can open the door to increased exports.
- Asian consumers (like Europeans) like fresh food and the daily-trip-to-the-market-approach. Canada can gain more business by concentrating on delivery methods to play a “fresh food daily” game.
- Canada must attempt to secure preferred markets positions and hopefully bilateral free trade agreement. New business at greater volumes and prices will be available.
- Along with other major exporting countries, Canada must realize that Asian consumers will be king from 2012 onward. In particular, China will be dominant and that view will be reinforced by the 2008 Summer Olympics.
- Inputs to Asian agriculture particularly China, India, and Korea will be regulated like the U.S. Federal Department of Agriculture. Canada must put its regulatory capability on stage and drive towards harmonized systems.
- Growth of chronic diseases of aging, compounded by extensive smoking and pollution of the atmosphere, will force India, China, Korea, other emerging Asian nations to adopt preventative health care focus and prescribed diet.
- Western-style disease of cancer, stroke, and heart disease will replace infectious diseases amid move to developed nation status in these Asian countries.

### III.3 Health and Quality of Life

Whether someone is an impoverished person in a poor nation searching for a scrap of food, or an affluent consumer in the western world designing a daily menu of healthier food choices, the will to live a longer and more healthy life drives daily activities. Health is a many-faceted driver of behaviour. It involves disease control, disease prevention, and diet choices, all with one desired outcome – the person lives a longer life at a higher level of quality.

Agriculture is touched and shaped daily by health professionals whether looking to prevent disease, reacting to toxic substances in food, or imposing public health standards for certain infectious diseases, as happened recently with SARS and Asian Flu.

There are certain key factors that underpin the health trend, including:

- Health-care delivery costs and responsiveness are the main political focus.
- Aging population/“boomer” class with knowledge, money, and the desire to live forever shape the health care system.

- Health is recognized as a societal public good.
- Economics and knowledge force shift to prevention from treatment in the future.
- Obesity, and its consequences, gains priority (with heart disease) as targets of prevention.
- Diet/Nutrition move to health system agenda as key component of prevention strategy. Food system “contaminants” take on greater profile and higher media noise.
- Consequences of affluence/western style diet become issues in emerging nations of Asia, particularly China, India, Korea, Taiwan;
- The need to fund health care delivery agendas limits abilities of government to satisfy other needs of society.
- High-profile disease issues, such as SARS or Asian Flu, raise fears of a pandemic and disrupt usual daily patterns of society.
- Prevention and management of potential pandemics emphasize the need to increase the security of person, diet, and environment.

### **Impact of Health Trends on Canadian Farmers and Agriculture**

The impact of this health trend on farmers will occur in many ways, including the following:

- Canada has historically tried to support farmers with a combination of federal/provincial programs and crisis-inspired “ad hoc” subsidies. In the future, over 50% of provincial tax dollars will be directed to health care delivery. This will be apparent by 2010 or before. Provincial participation will be limited and few dollars can flow to farmers (as subsidies), as health and education are provincial priorities.
- The Canadian health care community is aware the status quo is not sustainable but has not yet embraced a “healthy diet”-based alternative. Aligning agriculture and health (medical community) can set a working model for the world.
- The closer the alignment of health and agriculture the greater the image of farming as a solution provider and, indeed, a public-good industry. In such a situation, more public funding (federally) could be made available to agriculture especially for research.
- Since health is perceived to be a public good and in Canada good health is a citizen’s entitlement, and a defining fact of Canadian citizenship, farmers must engage in the debate. Nutrition based on good science is the foundation of preventative health-care delivery. Agriculture can be a solution provider to the health care industry. Farmers must believe they can be solution providers and credible partners with the medical community.
- The aging population in the developed world and increasing affluence and prematurely aging population in new economic giants open new market for trait-based/functional ingredient strategies tailored to specific health conditions in global markets.
- Contamination of food with toxins, bacteria or fungi brings food into the public health arena. The media’s frenzy to get the story out creates immediate awareness. Farmers and industry are given a black eye about lack of attention to food safety.

### III.4 Society's Demand for Sustainability

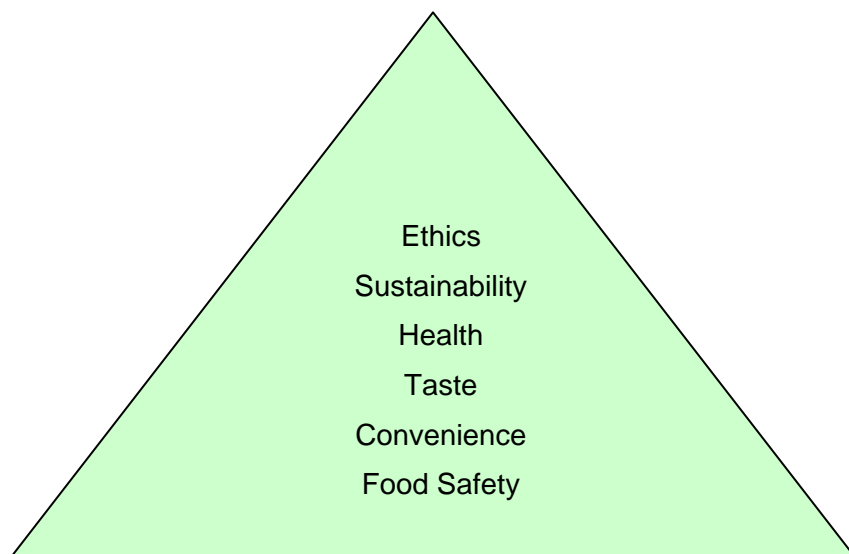
Sustainability is largely viewed as environmental sustainability resulting in that society's demand that every contemplated action by industry be viewed through a "green" lens. In the future, sustainability will also take into account how food is produced, how water is stewarded and managed, and how garbage will be disposed of. All of this is focused on leaving as minimal an impact as possible on the individuals' daily space as well as taking responsibility for future generations. The goal is to leave the smallest environmental footprint possible.

The need for sustainability has been re-enforced by widespread acceptance of climate change (global warming), increasing energy costs and disease epidemics caused by drinking polluted water. Governments will move to mandatory regulations. Leading edge manufacturers and retailers will move ahead of government, with Wal-Mart's recent announcement on sustainable production systems for food products as a vivid example.

Green will be the dominant color. Greenhouse gas emissions, hybrid or electric cars, and natural products will be part of everyday conversations. Fossil fuels, agriculture, and garbage disposal industries will be front and centre in the demand for "greener" solutions. "Ethically justifiable" will become the new anti-genetically-modified-organism (GMO) equivalent.

Accordingly there is a distinct hierarchy of consumer requirements, which is illustrated in Exhibit 3. For example, in less developed countries and in emerging economies, food safety, security, and affordability are primary consumer requirements. However, as economies advance and as less disposable income is expended on food, other requirements must also be satisfied, including attributes of the impact of food on health and well-being, sustainability of production practices, and ethical issues surrounding food production and consumption.

### Exhibit 3 Hierarchy of Consumer Requirements



What this demand for sustainability by society means includes the following:

- Sustainability has a strong public profile as a public good.
- Climate change registers with all aspects of society.
- Environmental sustainability takes on an “ethics and morality” perspective.
- Every product and service is viewed through a sustainability lens.
- Companies and product marketers move to marketing defined environmental benefits of their products and impose criteria on suppliers.

### Impact of Society’s Demand for Sustainability on Canadian Farmers and Agriculture

Some of the impacts of this trend are as follows:

- Driven by concern over effect of global warming on the environment and concern about farming practices causing water pollution, how farming is being done (production practices) will be constantly in the media.
- Agriculture is both a contributor to greenhouse gas emissions and a partner in reducing greenhouse gas emissions. Agriculture must find a way to build a strong base as a solution provider.
- The most visible impact of agricultural practices is as a source for water pollution and as the major user of fresh water (70% fresh water use). Urban pressure in water-restricted areas of the world will force agriculture to move areas of production. Southeast Asia and the southwestern U.S. will face greater tensions than western Europe or western Canada.
- Sustainability has the potential to quickly move to a burning issue if, for example, food prices rise dramatically as a result of bio-fuels (crop diversion to fuels as a replacement for fossil fuels) conflicting with food and feed use.

- Canada can lead the world by re-enforcing our position as stewards of the environment, a position Canada already occupies (based on polling supporting the Canada Brand).
- Agricultural practices will be under the microscope but we have many more tools to use in creating sound environmental solutions.
- Canadian agriculture can set standards for the rest of the world to follow. We must always stay as “natural” as possible and know the outcome of our practices on the environment.
- Fresh water access and management is a major determinant of future farming success. Agriculture has a chance to lead national development of fresh water management policies and should take on this high-profile responsibility.
- Attention to sustainability, recording our practices and crafting marketing messages which appeal to international consumers can be a salable differential for Canadian food products.

### III.5 The Bio-Economy as the Major Driver of Economic Development

The essential need to develop the bio-economy is driven by factors: the reality of global warming and climate change; and the reality of a finite supply of fossil fuels and the need to find alternatives. The end of the Second World War heralded the arrival of the chemical age, and the '80s and '90s became the information technology age. The early decades of the 21st century are the age of biological solutions made by man to provide new solutions, new products, new value – with a reduced environmental impact.

Energy prices and outright supply of oil and natural gas to meet the needs of the developed world, let alone the developing world, has been the key to open the door to the bio-products economy. The inability to replace traditional oil discoveries (as in the Middle East) with new finds at comparable prices provides an economic foundation for the bio-economy. Political instability and the clash of religious ideologies has heightened uncertainty and underscored urgency. The U.S. strategy of lessening energy supply dependence on an unstable Middle East has turned corn and soybean commodities into a sought-after feedstock for bio-fuels. This is the first large wave of the bio-economy. New products with superior functionality and economic competitiveness are on the horizon.

The bio-economy is going to be a knowledge-intensive economy where science leads to technology, which in turn leads to product innovation. The foundation of the bio-economy will be agriculture and science using critical feedstocks of energy, fresh water, and land. Recognizing this fact and building a sound strategy that leads to the development of the bio-economy will create new and sustainable value.

What the emergence of the bio-economy means the following things:

- The industrial revolution of agriculture beyond historic food, feed, and fibre will move rapidly over the next decade.
- Energy (demand/availability/security of supply) is main driver of speed of movement to bio-economy.
- Bio-fuels satisfy need of (partial) energy security and rural infrastructure/diversification.
- Managed use of limited non-renewable energy sources takes on “morality” perspective.
- Bio-based and sustainable products become real (production economics) alternates to fossil-fuel-based.
- Priorities shift from public and private research to bio-based and sustainable.
- Agriculture and forestry become the industrial foundation for the bio-economy.

## Impact of the Bio-Economy on Canadian Farmers and Agriculture

Some of the more salient impacts of the bio-economy on the farm sector include:

- Agriculture is the foundation on which the bio-economy is built. Countries which allow their agricultural base to deteriorate over the next 10 years will not be able to participate in the new wealth creation.
- Only countries with the right mixture of sizable farms, good farmers and good farmland will have the natural ingredients to participate in the bio-economy.
- Agricultural industry profile increases and agricultural industry is increasingly seen as a solution provider to society for the bio-economy.
- Since the bio-economy is a sustainability and fossil fuel alternative, it is high profile and subject to political intervention, both positive and negative. Incentives (such as U.S. ethanol tax/tariff incentives) provide false security and are vulnerable to the winds of political change.
- The bio-fuels opportunity has the potential to build expectations, which are unreal and impossible to achieve. In any strategy linked to the bio-economy, good planners should have contingency plans for the perfect storm of: (a) increase in feedstock cost, (b) decrease in oil and gas prices, and (c) lessened or no tax or subsidy incentives.
- Agriculture must see the bio-economy as a move away from traditional feed and fibre. The bio-economy is the true industrialization of agriculture.
- The bio-economy takes Canadian farming to a different and profitable product outcome. It opens the door for diversification but must be planned on a sound and realistic basis.
- There is the potential for a gold-rush attitude, especially around bio-fuels and especially at this time. Much opportunity for new value creation is apparent, but more efficiency must be brought into the production process. There is much yet to be achieved in bio-fuels by developing and applying new technologies.
- Most bio-products outside bio-fuels will offer sizable benefits to consumers and should be able to stand the fuels-versus-food conflict on the horizon.
- The moral question of whether it is right to take an acre of food-production potential and substitute this acre as a production unit of bio-products still needs to be debated. It could happen within three years. Agriculture must arm itself in advance for this debate.
- Rural infrastructure benefits as production plants must be close to feedstock supply.

### III.6 Science and Technology Continues to Shape the Sector

Production technologies drove the changes in the last century. During this century, change will result from the convergence of core science and technology areas to create new scientific platforms for the sector, and with it will come new business models. The core technology areas that will drive change to 2020 are:

- Genomics
- Nutrigenomics
- Biotechnology

- Open Source Biotechnology
- Nanotechnology
- Information and Information Management<sup>12</sup>

### Genomics – Understanding Life

Understanding gene function and interaction through genomics provides a blueprint for changing the genetic structure of plants and animals to achieve selected attributes. Decoding genomes is getting faster, cheaper and more widely used. Scientists will soon have the potential to understand the major part of the genome of different plants and animals and design breeding programs that will revolutionize traditional breeding and biotechnology programs. The biotechnology model of looking for the one gene to solve one problem will end. Instead, breeders will select for attractive genetic combinations, changing the nature of genetics in many species at speeds not considered plausible in the last century.

However, with this information and power comes responsibility – the responsibility to ensure that the new breeds are safe for people and the environment, and that genetic diversity is protected as a resource and also as our heritage. Ethics and sustainability will be front and centre with this new technology.

### Nutrigenomics – Matching Diets and Genetics

Genomics may also reach out to the dinner table. Nutrigenomics is based on the premise that if a scientist knew your genes and your lifestyle, then a perfect individualized diet could be designed. This is not futuristic, as it already occurring, albeit on a limited dimension. For example, at Byerly's grocery stores in Minneapolis, for \$99 you can buy a genetic test kit made by Sciona Inc. Take a cheek swab, complete a questionnaire on your diet and lifestyle and send it to the company. Your sample is tested for five genes and a personalized diet is created, optimized for your body and lifestyle. While the real benefit of this program may lie more in the nutrition advice than in the genetic testing, it does mark the beginning of a trend linking genomics, diet, and health, improving health and effectively creating markets of one. Getting there will mean new product and service opportunities.<sup>13</sup>

### Biotechnology – Programming Life

In agriculture, biotechnology has focused on input traits (herbicide resistance) in a few commercially important field crops. However, scientists will make major strides in achieving biotechnology's full potential to program life by 2020. Building on advances in genomics, biotechnologists will develop crops with different combinations of input and output traits, improving production and creating specific health or bio-processing properties. However, such modifications will be just application of biotechnology tools. There will be new treatment strategies for diseases and organisms designed for treating waste or converting biomass to industrial products more efficiently. The challenges to genetically modified (GM) crops in selected markets will mean that scientists will use an array of strategies to achieve desired attributes, including non-modified breeding approaches.

The major biotechnology crops will continue to be controlled by multinational firms who have the scale and resources to develop and deliver them on a global scale. However, as biotechnology becomes easier and less expensive, smaller markets bypassed by multinationals will be attractive to Canadian firms. Canada still has a major public plant breeding and research program. This resource can (and should) be applied to products and

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<sup>12</sup> More information and discussion on some of these topics and on other drivers of change can be found in a report prepared for CAPI by David Sparling, Executive Director of the Institute of Agri-Food Policy Innovation entitled "Drivers of Change in the Canadian Agri-Food industry and Possible Future Scenarios," which can be accessed through the CAPI website [www.capi-icpa.ca](http://www.capi-icpa.ca)

<sup>13</sup> Byerly's has even added a nutritionist to help customers make food choices.



markets that build on Canadian advantages. Focus will be vital to maximizing the impact of Canada's limited scientific resources.

## Open Source Biotechnology

For many biotechnology firms, patents have been essential for securing venture capital funding or licensing technologies to other firms. Since biotechnology innovations are often built on multiple previous inventions, developing new products requires multiple licenses. Many researchers worry that it has reached the point that patenting and licensing are stifling innovation, particularly for small-market products. A group of researchers at CAMBIA in Australia have taken a lesson from the software industry and created an open-source biotechnology platform modeled on the Linux computer operating system. Researchers can use the tools and methods of other contributing scientists and then add their discoveries to the collective knowledge pool. By removing issues related to freedom to operate, this approach may make it easier for small firms and developing nations to build their biotechnology businesses. However, Linux is built by a global community of computer programmers who don't need expensive equipment to run and years of research to produce a product. Access to research and development resources and the long timeframes for commercializing biotechnology products will be significant obstacles for the CAMBIA model.

## Nanotechnology

Nanotechnology, doing things at a scale measured in billionths of a metre, is a technological wild card for the industry. Unlike genomics and biotechnology, nanotechnology includes inorganic as well as biological science, everything from paints to manipulating proteins. The agri-food industry is only beginning to explore nanotechnology applications. Nanotechnology sensors built into packaging and other applications will soon provide early detection capabilities for pathogens and diseases. Nanotechnology drug delivery will improve the health impacts of drugs and nanotechnology modification of genes and proteins will create more precise abilities to perform biotechnology modifications. Other applications will improve food or bioproduct processing efficiency or reduce environmental impacts. The impact of nanotechnology on the agri-food industry is predicted to be more incremental than disruptive in the short to medium term, primarily improving the performance of current technologies and processes rather than revolutionizing the industry.

The long-term goal for nanotechnology includes manufacturing on a molecular scale. Beyond 2020, if molecular manufacturing is successful, production will become dramatically faster, with lower environmental impacts and different product characteristics. Nanotechnology will be a disruptive technology that will revolutionize the production of food, as it will with all other materials.

## Information and Information Management

When it comes to information technologies and information management, the agri-food sector (excluding retail) could best be described as a late adopter. The advances in communication and information technologies will continue to drive change in the industry. Radio frequency identification (RFID) tags will be everywhere, replacing bar codes with a technology that we can read information from but also write information to. Paired with geographic information systems (GIS), RFID will provide the ability to continually track products and processes, to analyze and optimize production and distribution. This is just beginning to occur with RFID tags in cattle. Data transmission will be ubiquitous; we will be able to communicate from anywhere quickly and easily. Discussions about food traceability will eventually end; we will trace all products everywhere.

Wal-Mart's insistence on pallet-level RFID has accelerated the adoption of this technology and companies are already observing the benefits in terms of reduced out-of-stock instances.

There will be more information to collect, manage, share and understand. It will come from greater understanding of food and our ability to formulate and engineer it to deliver specific attributes and benefits. It will come from better understanding of the complex relationship between natural environments and the processes used to produce food. It will come from the scientists, company personnel and competitors. Finally, but most important, it will

come from customers, who will tell firms what is important to them and what they will pay for particular products and services. Businesses that don't work hard to listen and respond will fail.

If information is a key to success and there will be so much more available, how can managers cope? Many already feel that they can barely keep up. Except at retail, information management has not been a high priority for much of the food industry. That must change, particularly if we wish to further segment agri-food markets and capture every bit of value from all food components. The industry needs flexible, easy-to-use systems and people trained to use them.

Management of information will be a challenge across Canada. The challenge will be to draw on experiences in other sectors and develop networks of systems linking information and knowledge across the industry. The performance of the food sector will depend on the effectiveness of those networks. While independent systems may be efficient in managing internal information, the cost to innovation and competitiveness comes when valuable network information cannot penetrate the system or gets trapped in the system. The problem of network information management is particularly challenging for small organizations. Eighty percent of the thousands of food companies and most of Canada's farming companies have fewer than 50 employees. Many have rudimentary information management capabilities. Industry networks can be a major support to innovation in the industry but they will be more effective if they are focused on specific goals, such as quality improvement. Goals help validate membership in and contribution to the network.

The Internet also provides new ways to connect to customers and partners to buy, sell, or inform. A quick check of amazon.com reveals more than 100,000 gourmet food products, many direct from producers. Direct-to-customer strategies using the Internet are now an option for many food and other rural businesses.

The agri-food industry has been slow to adopt the Internet as an aid for training and knowledge management. Issues related to infrastructure as well as education and training are holding the industry back. That will change with the next generation of farmers; everything from websites, electronic training programs to podcasts will allow rural Canadians to reach out for new ideas, knowledge and tools. However, it is vital to encourage and support this vital trend.

The bottom line for Canadian agriculture is that no other country in the world has the combination of good science, good farmland, good farmers, water, and energy. This is Canada's strategic position to win or lose. It is a question of belief, will, and action.

## Annex IV Other Factors That Must Be Considered

There are other factors which will affect the future of the Canadian agri-food sector that must be considered. These include:

- Consumer demands for natural, organic and local
- Security of the supply chain and bio-security
- Discipline on agricultural subsidies used by countries such as the U.S and the EU
- Accessing markets through bilateral agreements

The following is a brief discussion of these other forces affecting the sector over the next 10 to 15 years.

### IV.1 Consumer Demands for Natural, Organic, and Local

Globalization of our food system is undoubtedly a key trend. However there are forces beginning to counter the globalization and industrialization of the food industry. This counter trend is for foods that are natural, organic, and/or locally produced. These consumer demands are a simple reflection of consumer requirements for health, ethics, and sustainability, as noted in Exhibit 3.

A growing segment of the population favours farming practices that have less impact on the environment and which produce products viewed as more “natural”. Many producers and food companies are adopting different production, processing, and distribution strategies to change their environmental footprint and to move into different markets where consumers are willing to pay more for products they view as more natural.

Prince Edward Island’s Food Trust<sup>14</sup> is an example of a cooperative grower initiative to bring more sustainable food production practices to PEI food producers, but in a way which also brings new and innovative products to the marketplace. Their innovative program for “Fresh Obsessions Potatoes” has taken what is generally an undifferentiated commodity and created a range of products depending on how the consumer plans to cook them. Their patented display case offers different potatoes for every preparation mode with preparation instructions for each.

On the organic front, in North America organic food products typically make up about 1-2% of their respective markets but they are growing at about 15-20% per year. Organic foods have moved from being a niche market with small scale production in some product lines, with multinational food manufacturers having organic product lines, which attests to the strength and growth in this market. The global market for organic products is estimated to be around \$23 billion. Organic production does support local agriculture, but it is rapidly becoming a major global industry. Organic production and products move around the world in response to the supply and price of available products and the local production capabilities. Organic production has been a major aid to increasing incomes for farmers in many developing nations. Both globalization and the use of organic production and marketing to support developing nations will continue. One of the challenges for the industry is securing supply that is sufficient to meet a rapidly expanding demand.

A more recent manifestation is the move toward promoting local food. Many cities and regions support local food systems to bring together local producers with local citizens and local food processors and food service operators. An example is Local Flavour Plus, a non-profit organization that brings farmers and consumers together to share in the benefits of environmentally and socially responsible food production, which through a food-service

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<sup>14</sup> PEI Food Trust can be found at <http://www.foodtrustpei.com>

distributor is supplying local foods to select restaurants and food-service operations at the University of Toronto. These programs are also supported by calculating “food miles”, which is the distance food travels to the consumer. Minimizing food miles directly minimizes the energy used to transport food. These consumer demands are supported by the more traditional “in-season” promotions of local products such as “Foodland Ontario”.<sup>15</sup>

For farmers and food companies the key to successfully supporting the buy local programs in retail or food processing is to make buying local the easy choice, as well as the responsible choice. Companies will continue to support the programs only if they help or at least don’t hinder their business. This means that local suppliers must be organized, making it clear what and when they can supply and meeting deliveries on time with the right quality and quantity. For producers, joint ventures and/or cooperative marketing groups may be the key to collecting the resources and volume needed to make buying local easy for customers.

On a related front, while companies are becoming larger and more global, they also recognize their responsibilities to their customers, shareholders and the societies in the countries where they operate. They are taking more care in using healthy food ingredients, creating policies aimed at buying local products, and changing hiring and employee management practices to pay more attention to local needs and concerns.

## **IV.2 Security of the Supply Chain and Bio-security**

Security of the food supply chain is one of the more important requirements that must be delivered on by any supplier, and by the Canadian agri-food sector as a whole. This includes delivering specific product attributes (such as organic, Grade A, or specific genetic attributes such as high oil content) as well as a safe and bio-secure product. Today’s management information systems do allow for delivering on these attributes, as well as having the necessary traceability requirements.

Globalization enables human and animal diseases to spread much more quickly than they did in the past, and a serious human or animal disease can shut down trade in an instant with devastating effects. This has been obvious in the cases of BSE in North America, and Food and Mouth Disease in other regions. A major terrorist attack on the food system could accomplish the same result. To protect both citizens and trade, the Canadian agri-food system needs to address these global issues on a global or at least multinational scale, coordinating systems and regulations across borders to prepare defenses and recovery strategies in advance.

It can be noted that our success in moving information, products and people around the world quickly is also one of the big threats to the system, and an incentive for local sources of supply.

When global organizations change their purchasing practices, the impacts are often immediate and fundamental changes to practices throughout their supply chains. Significant changes to animal welfare practices have occurred as major retailers and food service operators change their procurement policies. Major food-service operator requirement of full traceability for its meat products will likely remove any resistance to implementing full chain traceability.

## **IV.3 Discipline on Agricultural Subsidies in the U.S. and the EU**

One of the basic issues facing the primary agricultural sector in Canada is the level of domestic subsidies provided in relation to the support provided by the U.S. This stark difference in approach will continue to have a distinct impact on the grain and oilseed sector in Canada. The fundamental difference is that U.S. farm policy targets its support to the grain and oilseed sector, while support is more generally available to all commodity sectors in Canada through whole farm programs. As a result, the more highly subsidized grain and oilseed sector in the U.S. ensures that there is an abundant supply of feedstocks to drive further economic activity, whether as

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<sup>15</sup> As energy costs increase and consumers worry more about global energy consumption, this measure could take on a significant meaning.

livestock production through low-cost and abundant feedstuffs, or as ethanol facilities to supply energy security to the U.S. In this environment, it is much more difficult for Canadian grain producers to compete for two reasons: (1) U.S. producers have higher returns by the amount of the larger U.S. subsidy; and (2) the cost of tradable inputs (such as farm machinery) and operating inputs (such as crop protection materials and fertilizer) are higher as they are based on economic conditions in the subsidized U.S. grain market.

Currently the only forum to address domestic support issues is the multilateral World Trade Organization (WTO). However, these negotiations have been stalled for a variety of reasons, including the difficulty of negotiating with 149 member countries at the table with multiple agendas. There can be no agreement without consensus, and when consensus does occur on a single undertaking it most likely will be at the lowest common denominator. The WTO multilateral approach is becoming increasingly prevalent, however other mechanisms are not currently available to replace the WTO. Until the Doha Round is restarted, it will be difficult to effectively address domestic support issues in countries with large treasuries supporting agriculture.

This reality heightens the need for a repositioning of many parts of the Canadian agricultural sector out of traditional commodity markets. These markets are influenced by two forces: higher subsidy levels by countries such as the U.S., and the lower cost production for many basic commodities out of countries in South America, Asia, and Eastern Europe.

Canada can seek to improve market access through bilateral and regional trade agreements, but it is unlikely that Canada could effectively address domestic support through these measures.<sup>16</sup>

#### IV.4 Accessing Markets through Bilateral Agreements

The basic problems with the WTO as a negotiating forum has and will continue to place more emphasis on bilateral and regional liberalization. It is usually easier to achieve agreement in regional and bilateral trade agreements because these are smaller bodies with relatively few members and more easily defined and addressed issues and gains. Consequently, many WTO members have turned to regional and bilateral agreements as another means of advancing trade liberalization.

Bilateral and regional trade agreements can successfully address market access issues affecting goods as they cross borders, tariff reductions, reciprocal recognition of standards and preferential treatment in safeguard actions. Bilateral and regional trade agreements could also successfully address export subsidy issues by prohibiting the use of export subsidies to support sales of agricultural commodities within the free trade area or customs union. Bilateral and regional agreements could successfully address these issues because it is possible to identify the specific agricultural commodities being traded within the free trade area.

Canada has concluded bilateral and regional agreements with five parties and has six negotiations pending. Canada is currently negotiating with South Korea (without much luck) and has not yet completed negotiations with any other country for group of countries for the last five years. In contrast, the U.S. has concluded bilateral and regional agreements with 13 parties and has seven negotiations pending. Mexico has concluded bilateral and regional agreements with 11 parties and has four negotiations pending. Canada has not concluded a bilateral in the last five years. Korea has completed eight such agreements.

Canada must urgently engage in “catch up” in negotiating bilateral and regional trade agreements. These agreements will help to secure new market access and preserve existing market access, but they will not resolve the problems of farm support in the U.S. and the EU, which are political imperatives and which are not likely to be addressed over the next 10 years.

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<sup>16</sup> More insight and analysis on the topic of multilateral and bilateral trade agreements can be found in a report prepared for CAPI by Peter Clark of Grey, Clark & Shih entitled “Change in the Agri-Food Sector: Use of Bilateral and Multilateral Trade Agreements”, which can be accessed through the CAPI website [www.capi-icpa.ca](http://www.capi-icpa.ca)

## Annex V Inherent Weaknesses to Overcome to Realize the Vision

While the sector has strengths and some unique advantages, the agri-food sector has some inherent weaknesses that need to be overcome to realize the vision and the strategic direction in each of the pillars.

The key weaknesses that must be overcome include:

- Regulatory burden and costs imposed on primary production
- Regulatory processes in relation to the U.S.
- Canadian policy dysfunction within the continental NAFTA market
- Absence of Canadian-based multinational agri-food companies
- Lack of focus or vision to attract investment in the sector

These are briefly discussed below in the following sections.

### V.1 Regulatory Burdens and Costs Imposed on Primary Production

Society's demands for sustainability, verification of responsible production practices, and protection of the environment have resulted in a highly regulated environment in which production agriculture must operate. This regulatory burden has resulted in compliance costs that are currently incurred by farmers, with no ability to offset these costs through the market. The costs of regulations that are incurred by producers are increasing each year, and is limiting agricultural production potential. For example, certain nutrient management regulations apply to production units that are over a minimum size, and some operators have purposefully scaled back operations to avoid the cost of complying with these regulations. Other operations have simply withdrawn resources from producing the specific product. These actions, while rational for the farm operation, can be counterproductive for the complete agri-food sector.

At the same time, producers question some of the regulations, such as the moratorium on hog industry expansion in Manitoba to control phosphorous loading into Lake Winnipeg, when it is argued that hog production contributes to 1% of the phosphorous loading into the lake. This is an example of the urban populace imposing their demands on the rural populace, and farmers in particular, without addressing the overall costs and benefits of the regulation.

This increased regulatory burden is a major weakness on primary producers. One option advanced by some producer interests is that society should compensate producers for the compliance costs incurred by producers.

### V.2 Regulatory Processes in Relation to the U.S.

The Canadian agri-food system has been placed at a disadvantage relative to the U.S. This disadvantage stems from a number of fronts, including:

- The larger size of U.S market over which to spread regulatory costs compared to the size of the Canadian market
- The longer delay in obtaining regulatory approval in Canada versus the U.S.

- The inability to obtain concurrent regulatory approval in both countries based on different regulatory processes, timetables, and requirements
- Different regulatory requirements in food processing plants operating on both sides of the border, with higher regulatory costs imposed on Canadian operations
- The apparent focus with Canadian regulators on the use of precautionary principles in comparison to U.S. regulators
- The U.S. regulatory system recognition of health claims associated with food labeling and the general reluctance to provide such well-being information on Canadian food products

This situation has resulted in many costs to the performance of the Canadian agri-food system. These range from horticulture producers not being able to access readily available crop protection materials in use in the U.S., which results in lower yields, lower crop quality, and/or higher residue levels of older chemistry on Canadian crops. Moreover, Canada's import regulations allow imports of products produced in the U.S. using crop protection materials not registered for use in Canada.

As well, this regulatory situation has resulted in investors and agri-business deciding not to seek registration of products, processes, and technologies in Canada and instead preferring to seek only U.S. approval. Furthermore, subsequent investment activity has occurred in the U.S., and not in Canada due to the approved market being in the U.S.

This major weakness must be addressed in the any forward looking agri-food policy, with built-in accountabilities for resolution within specific time frames. Harmonization on many input-based regulations<sup>17</sup> has been highlighted on many occasions and requested by producer groups since at least the advent of free trade agreements between Canada and the U.S in the late 1980s. Immediate action is required on this front.

### **V.3 Canadian Policy Dysfunction within the Continental NAFTA Market**

The operating environment of the agri-food sector can be characterized as a continental market in outputs, but restrictions and/or differences on inputs, standards, regulations and policies, a situation that adversely affects the Canadian farmer and food manufacturer.

In the late 1980s, Canada entered a fundamentally new era through the free trade agreements negotiated with the U.S. (CUSTA), and then Mexico, known as NAFTA. These agreements provided market access into the U.S. and Mexico, while allowing U.S. suppliers increased access to the Canadian market and the removal of tariffs on products shipped between these two countries. The end result is a continental market for most agricultural and food products.

However, the continental market applies mostly to agricultural outputs. This continental market philosophy does not currently apply to standards and regulations on a number of agricultural outputs and does not apply to many agricultural inputs or the supporting regulatory standards. As an example, a grain farmer competes on price with their U.S. counterpart on the grain product, but the U.S. farmer has access to a broader array of approved inputs (such as crop protection materials) and fewer restrictions on grain varieties that can be legally grown. At the same time, many of these inputs are priced by input suppliers on a national basis since each product must be approved for use in a country, and with a separate and high-cost regulatory system that must be spread across a lower sales volume in the smaller Canadian market results in higher priced inputs that must be employed in Canada.

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<sup>17</sup> It should be noted that some output-based regulations can be a source of differentiation in certain markets. As well, companies that exceed minimal standards can also create a source of differentiable advantage.

At the same time, progress has been slow in harmonizing a number of standards between the two countries to facilitate the free trade in final products. Marketing of products can be more difficult when different grade standards are used in Canada versus the U.S. Food manufacturers have similar issues when labeling and health claim standards are so vastly different between the two countries.

These above differences would be less of an issue if the Canadian market were as large as the U.S. market, when in fact Canada is around one-tenth of the U.S. market, and the prosperity of the Canadian agri-food industry depends on being competitive with U.S. suppliers in the U.S. marketplace.

Furthermore, agricultural policy is very national in flavor, with nothing resembling a continental approach to farm policy. This has resulted in advantage to U.S. grain producers at the expense of Canadian grain producers.

This dysfunctional policy operating environment is a major weakness that is limiting the growth and potential of the Canadian agri-food sector – whether at the input supply level, at the farm production level, or at the food processing level. Progress on achieving the vision will be very difficult without adequately addressing this pervasive weakness.

### **V.4 Absence of Canadian-Based Multinational Agri-Food Companies**

Another weakness that Canadian agriculture must contend with is that Canada has an absence of Canadian-based multinational food companies.<sup>18</sup> This is a weakness as Canadian food companies must compete on a world stage with large multinational companies. While individual companies are successful exporting Canadian food products in specific product lines, the weakness is that the scope of large multinationals is not being leveraged to sell more Canadian products in a country, and new products and opportunities are not being delivered from Canadian operations. As well, the benefit of innovative activity within these companies is not being realized in Canada. Having Canada as an attractive place to invest can work to overcome this weakness.

While many multinationals operate in Canada, these operations are essentially branch plants with decisions on product mandates and investments in innovation made at corporate headquarters. As a result, the Canadian agri-food sector is not the first mover and adoption of innovation and new technologies. This situation results in lost opportunity and economic activity.

This situation does provide the opportunity for primary producer to become involved in value-added and processing activities through business structures such as second-generation co-operatives as well as through other business structures. Some farmer-owned entities operate ethanol plants in Canada, and supply organic food products to Canadians. This can easily be extended to ventures in processing of flax for nutraceuticals, bio-refineries for alfalfa, and so on.

### **V.5 Lack of Focus or Vision to Attract Investment in the Sector**

Currently, there are 97 ethanol plants across the U.S., with another 62 under construction and yet another 135 proposed. Ethanol production capacity is at 5.08-billion gallons per year, which may increase to 8.7-billion gallons per year with the capacity under construction. Current production consumes 21% of the U.S. corn crop. Ethanol production has become a major focus of U.S. policy, which is first and foremost a policy of energy security. U.S. farmers are engaged in the “war on terrorism” through producing energy for U.S. energy self-sufficiency. This has created a major focus for the farm sector and agri-business, with a consequence of a rural renaissance in America.

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<sup>18</sup> There are some companies attempting to compete on this world stage, including McCain Foods in potato products and Maple Leaf Foods, with the latter in its restructuring deciding to move out of the global fresh pork business.



In contrast, there is no apparent focus or vision for the Canadian agri-food sector, or for most segments therein. Any national focus has been defensive and reactive, whether fighting trade action, contending with the economic fall-out of BSE, debating whether the Canadian Wheat Board (CWB) should remain as the monopoly exporter of prairie wheat, contending with burdensome regulations, or lobbying for more adequate long term sector support. Accordingly, there is no forward-looking and strategic focus for the sector.

A vision and related strategic direction, such as offered by CAPI in this report, is required to offset this weakness. This strategic direction must be embraced by the agri-food sector, which includes input suppliers, farmers, processors, and stakeholders that provide support and services to the sector. Equally, this strategic direction must be embraced and acted upon by government and enshrined in policy and regulation. As well, the private sector needs to be engaged to help realize the vision.

A strategy for the agri-food sector must account for specific weaknesses. If these are not adequately addressed, the likelihood of being successful in achieving the desired outcome will be very low. These weaknesses, as they stand, are significant barriers to progress.

## Annex VI Direction Built on Strengths for Sustainable Differentiation

The previous Annexes have highlighted some of the key trends and factors that will shape the future operating environment of the Canadian agri-food sector. The agri-food sector strategies and the next generation of agriculture and agri-food policies must account for this operating environment.

Successful strategies are built on leveraged strengths; and on factors that embody a comparative and/or natural advantage. The Canadian agri-food sector does have some natural advantages and strengths that can serve as a foundation for the future of the sector. These include:

### Natural Advantages

- Large supplies of fresh water (may not be close to productive land)
- Land with capability to produce
- Cold-climate agriculture that provides a natural advantage to produce crops with less reliance on pesticides
- Cold-climate agriculture that provides a natural advantage to produce certain crops
- Large land areas with low animal population densities across Canada and near urban areas

### Other Sector Strengths

- Low use of fertilizers and fewer heavy/toxic metals in soils
- Canada is a guardian of the natural environment and land stewardship
- Diverse geographic area with a wide menu of crops and food products
- Disease-free status, associated bio-security protocols to minimize disease outbreaks, and emergency preparedness programs to minimize spread of any disease
- Infrastructure in place to supply products with specific attributes (identify preservation, traceability, food safety programs through the supply chains)
- Producer of safe foods due to compliance with world class standards and food safety protocols
- Proximity to the U.S. market
- Canadians are trusted in the world and considered honest
- Discovery science at public institutions

These natural advantages and strengths can be leveraged to pursue the opportunities noted in the key global trends in the preceding Annex. Furthermore, a review of these strengths along side the strategic direction pillars indicates that these strengths and natural advantages are part of the proposed direction for the agriculture and food sector.