Focus On The Future

FOCUS ON THE FUTURE:
DEVELOPING THE AGRI-FOOD INDUSTRY IN BRITISH COLUMBIA

Final Report
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BRITISH COLUMBIA

EXECUTIVE SUMMARY

THE FOCUS ON THE FUTURE PROJECT

The agri-food industry is highly valued by British Columbians because of its impact on our economy, our food-security, and our physical environment. While we remain a net food importer, the industry serves as a very important source of food products and employment for British Columbians. As concerns about food safety increase so to does the importance we place on having a strong domestic industry that provides a measure of food security. We highly value agriculture land because it benefits the environment and protects significant areas of our green space from further urban development.

The agri-food industry is undergoing a period of unprecedented change. BC producers face increasing pressure from low-cost competitors at a time when the costs of many of our key inputs are increasing. Consumers are becoming more demanding, product life cycles are shortening, and the level of market segmentation is increasing. Consolidation is occurring at all levels of the food chain. Unemployment rates in BC have declined to a generational low, making it hard to attract and keep the workers we need. Environmental pressures and incidence of urban/rural conflicts are increasing. Technology is changing how we develop, produce and market our products.

How well we react to these changes will determine the future of the agri-food industry in BC. With this in mind, the Investment Agriculture Foundation of British Columbia, the BC Agriculture Council, the BC Food Processors Association and other organizations came together recently to commission the Focus on the Future project. Specifically, the project is designed to:

- **Identify and assess key issues** that are strategically important to the overall long-term success of the BC agri-food industry.

- **Identify specific strategies and meaningful actions that industry, government and the Investment Agriculture Foundation of BC can pursue** to assist industry to expand, diversify and enhance its competitive position and build a stronger industry future.

The project was undertaken in four phases.

- In *Phase I*, we undertook an environmental scan that consisted of reviewing more than 150 documents including strategic plans, SWOT analyses and industry profiles covering virtually all sectors and product groups within the industry. Based on this information, we developed a profile of the agri-food industry in BC and identified over 100 key issues highlighted as strategically important by various commodity and product groups. We then grouped and prioritized these issues, using criteria such as actionability, potential significance to the industry, and the extent to which these issues are shared across the industry.

- In *Phase II,* we first conducted a competitive analysis, comparing the characteristics of the agri-food industry in BC to the characteristics of other jurisdictions, most notably Alberta, Saskatchewan, Manitoba, Ontario, Washington State, and Oregon. We used the results of the competitive analysis, combined with a detailed literature review, to identify the major strengths, weaknesses, opportunities and threats facing the agri-food industry in BC. We also conducted an analysis of high priority issues facing the industry, reviewing the current situation in BC and identifying strategies and actions that have been employed elsewhere to take advantage of opportunities or address challenges.

- In *Phase III*, we staged a series of workshops throughout the province in order to build awareness of Focus on the Future, confirm the key opportunities and challenges that we had identified, and obtain input regarding potential strategies and actions that could be taken to address these issues. Approximately 300 people participated in the workshops.

- In Phase IV, we analyzed the results of the consultation process, compared the results to the previous research undertaken, developed a series of recommended strategies and actions, and prepared this draft report. We met with the Steering Committee and Advisory Committee in January to review the results of the research and obtain input regarding the priority strategies and actions.

The following sections of the Executive Summary provide a brief overview of the agri-food industry in BC, review our relative competitive position, highlight opportunities and challenges facing the industry in BC, and outline a series of the recommended strategies and actions.

PROFILE OF THE AGRI-FOOD INDUSTRY IN BRITISH COLUMBIA

- **The agri-food industry serves as the foundation for the agriculture & food cluster in British Columbia**. The production, processing, distribution and sale of food employed nearly 290,000 people in BC in 2003, representing about 14% of the provincial work force, and generated about $35 billion in revenues.

- **The agriculture and the food & beverage processing sectors generate over $8 billion in revenues annually and employ over 60,000 people**. Together, they account for about 2.3% of the provincial GDP and about 3.3% of provincial employment (one out of every 30 jobs). There are more than 20,000 farms and 1,000 food & beverage processors in BC. The agri-food industry is characterized by its diversity, with the agriculture and the food & beverage sectors each producing a very broad range of products targeted at a range of markets.

- **The sectors have been growing at a rate consistent with the overall economy**. Over the past four years, the agriculture sector has been growing at the rate of 2.0% per annum (in terms of farm gate receipts) while the food & beverage processing sector has been growing at the rate of 4.3%.

- **Both the agriculture and the food & beverage processing sectors are, on a per capita basis, smaller than their counterparts in other regions of Canada**. While BC accounts for about 13% of the Canadian population, it accounts for about 3.5% of farmland, 7% of farm gate receipts, 8% of farms, 8% of food & beverage manufacturing shipments, and 11% of agriculture and food & beverage processing employment in Canada.

Within Canada, BC accounts for:

- 13% of the population
- 7% of farm gate receipts
- 8% of food & beverage manufacturing shipments

- **The agri-food industry is an important contributor to regional economies throughout BC.** According to the latest data available, the Lower Mainland accounted for about 62% of the farm gate receipts in BC, the Thompson-Okanagan accounted for about 17%, and Vancouver Island/Coast region accounted for about 6%. While data is not available on the value of manufacturing shipments by economic region, we obtained an indication of the distribution of the

food & beverage processing sector by analyzing an industry directory and determining that 48% of the processors listed are located in the Lower Mainland, 17% are located in the Thompson-Okanagan, 13% are located in the Vancouver Island/Coast region, and 8% are located in each the Cariboo and Kootenays. Because firms located in the Lower Mainland tend to be larger than those located in other regions, the Lower Mainland accounts for the majority of industry shipments.

- **BC is a net importer of agriculture and food products.** Our exports, imports and the trade balance have each increased steadily over the past decade with the trade deficit rising from about $400 million in 1992 and $600 million in 1996 to $800 million in 2000 and over $900 million in 2004. In 2004, BC operated with a $144 million trade deficit in agriculture products (with deficits in fruit and potatoes & vegetables offsetting trade surpluses in floriculture & nursery and greenhouse vegetables) and an $829 million trade deficit in processed food and beverage products (excluding seafood), with significant trade deficits in fruit & vegetables, beverages, and other food products.

COMPARISON TO OTHER JURISDICTIONS

To gain further perspective regarding the agri-food industry in BC, we reviewed the characteristics of the industries in other jurisdictions such as Alberta, Saskatchewan, Manitoba, Ontario, Washington State and Oregon. The results regarding the size of the industry, access to skilled workers, costs of production, strength of the innovation support systems, access to financing, and access to markets are summarized in the table below.

COMPETITIVE POSITION OF THE BC AGRI-FOOD INDUSTRY RELATIVE TO OTHER SELECT JURISDICTIONS

Component	Relative Competitive Position of British Columbia
Size of the Industry	• BC's agriculture sector is the smallest of the seven jurisdictions in terms of both total and per capita farm cash receipts. • While the value of our food and beverage manufacturing shipments is the smallest on a per capita basis (and the total value of manufacturing shipments in BC is greater only than that in Saskatchewan and Manitoba), BC has grown at a faster rate than the other jurisdictions over the past five years. • Ontario and BC are the only jurisdictions for which employment in food and beverage processing is greater than employment in the agriculture sector.
Access to Labour and Management Skills	• BC benefits from a very well educated population. The percentage of the population in BC, aged 25 to 54 years, with a university degree is higher than in the prairie provinces or in Quebec. BC has more farm operators with university educations than other Canadian provinces. BC also has the largest proportion of farm operators engaged in off-farm employment. • Labour productivity in the agri-food industry tends to be lower in BC than in other jurisdictions (as defined by agri-food GDP per employee), which increases requirements for labour. • Unemployment rates have declined significantly in most regions, which has tightened the supply of skilled and unskilled labour.

Component	Relative Competitive Position of British Columbia
Costs of Production	• For food processing operations, BC locations tend to be less expensive than those on the US west coast in terms of the combined cost of labour, transportation, utilities, and taxes. However, other Canadian provinces tend to enjoy cost advantages vis-à-vis BC in areas such as land and labour costs. • Agriculture operations in BC can face some significant cost disadvantages. Wage costs and land costs have traditionally been higher in BC than in other Canadian provinces. In addition, historical data indicates that certain costs such as chemicals and fertilizers tended to be higher in BC than elsewhere. • When compared to Toronto, Calgary, Seattle and Portland, Vancouver has the highest average airfreight costs and the third highest road freight costs. • The cost competitiveness of BC and Canada is susceptible to the appreciation of the Canadian dollar, which has increased significantly against the US dollar over the past two years. All regions have been impacted by rising oil and natural gas prices.
Strength of the Innovation Support Systems	• Agri-food industry investment in R&D across all of the jurisdictions tends to be very low in comparison to the R&D expenditures of other economic sectors. Available data indicates that Canada is falling further behind the US with respect to investment in agri-food R&D. • Because of strong tax credit programs, after-tax R&D costs in BC are low compared to other Canadian provinces. Furthermore, R&D tax incentives in Canada are more attractive than those in the US.
Access to Financing	• In comparison to other jurisdictions, BC farms are more reliant on chartered banks as a source of financing. • Access to venture capital is lower in BC, particularly for companies in the agri-food industry. As a percentage of GDP, venture capital investment in BC is lower than in Ontario and Quebec and is much lower than in states such as Washington State and California.
Access to Markets	• BC enjoys a relatively strong local market, driven by the largest population amongst the western provinces and higher average annual food expenditures per household. • Ontario and the US states have the advantage of closer access to major markets (e.g. California and the US east coast). • BC is comparable to most other Canadian jurisdictions in terms of reliance on export sales. Unlike the prairie provinces and Ontario, BC has direct, year-round access to ports. The BC ports provide ready access to developing Asian markets.

OPPORTUNITIES FOR DEVELOPMENT

While recent changes in the agri-food industry are creating major challenges and some financial hardships for our companies, they are also creating significant opportunities to develop new products, develop new markets and do business in a new way. Three major opportunities that were identified through the consultation process and our research include opportunities to:

- **Expand our markets by adding greater value into our products and services.**

  BC producers are facing significant competition from other jurisdictions that may enjoy competitive advantages related to land and labour costs and other input costs as well as higher levels of government support. Strategies that have been used effectively to increase margins and overcome cost disadvantages include incorporating a higher value-added or premium component into products as well as developing products that are tailored to specific niche markets. A recent study indicates that about one-half of North American consumers are more concerned with quality and convenience than price.

  Incorporating greater value into our products and services will enable us to increase our sales, increase the profits we earn on those sales, and help overcome cost disadvantages. A recent survey by Statistics Canada found that food processing companies that introduce product innovations generate increased sales and report that the margins on their innovative products are higher than the margins on their traditional products. The premium or value-added nature of a product can be based on service, manufacturing processes, product characteristics such as quality of ingredients, taste appeal, formulation or product format (e.g. organic, low fat content, low in carbohydrates, functional benefits, etc.), presentation in terms of branding and/or packaging, origin, convenience, and point of sale. Having food safety and quality systems and informing the consumer about these systems through techniques such as certification, labelling and branding can also provide an important lever for achieving product differentiation.

- **Expand our share of the local market.**

  The food market in BC is strong, driven by a large and growing population, rising household incomes, and higher than average annual food expenditures per household. BC is a significant net importer of food products even though consumers tend to prefer local products because of a desire to support their own community and a perception that local products are safer, more nutritious and environmentally sensitive. Industry often earns a higher return on local sales because the value chain is shorter which means that producers can realize a higher proportion of the final selling price while incurring lower transportation costs.

- **Further develop international markets.**

  While technological advances and trade liberalization has opened up the BC market and other traditional export markets to low-priced competitors, they also provide opportunities for BC to continue to develop offshore markets. In particular, our proximity to the US (the largest market in the world) and our historic marketing relationships with Asia-Pacific combined with our location on the Pacific Rim provide a strong foundation for further expanding export sales.

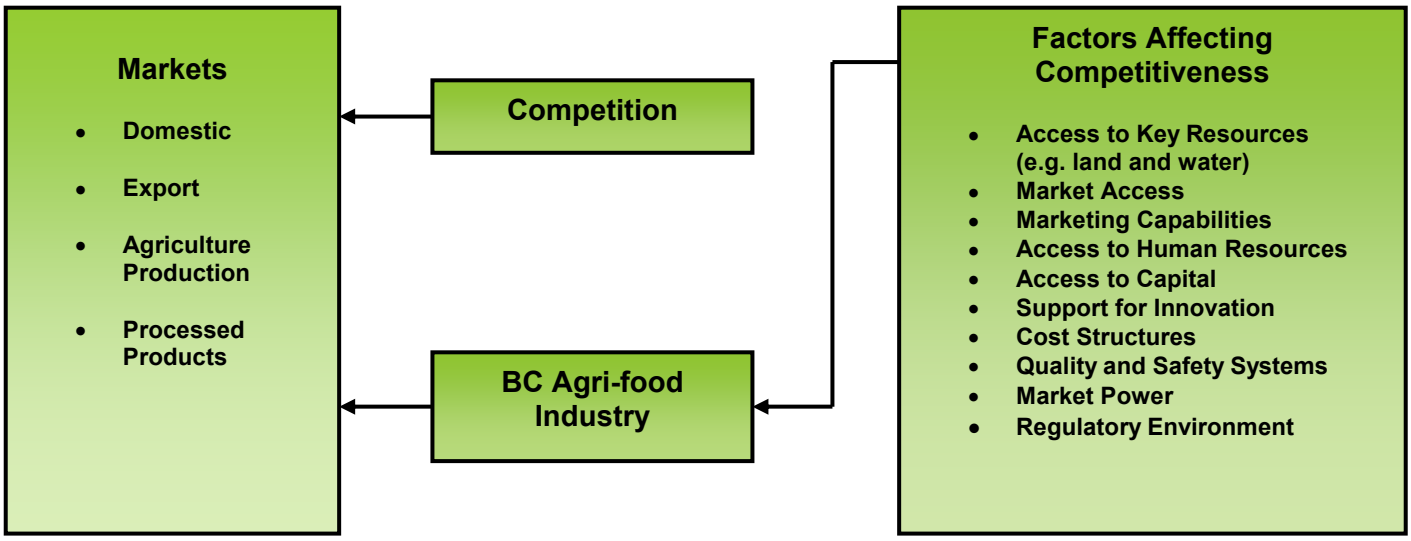
  Products differentiated on the basis of their added value will largely drive our future growth in export sales. Statistics indicate that exports of consumer-orientated food products have risen more than four-fold since 1990 and now account for one-half of agri-food exports from Canada. During that same period, our bulk exports actually declined in real dollar terms. The rising middle class of developing countries represents a significant potential market for our value-added food products.

MAJOR CHALLENGES

The challenge is to determine how we can better position ourselves to take advantage of these opportunities and changing industry conditions. As indicated in the chart below, the relative competitive

position of our industry is a function of various factors including our cost structures, marketing capabilities, ability to develop and adopt new products and processes, quality and safety systems, regulatory environment, and access to key resources, markets, human resources, and capital.

FACTORS THAT DETERMINE BC's COMPETITIVE POSITION



The main body of the report highlights the many strengths that we have in these areas including our world-class food safety and quality control systems, strong associations and agencies, proximity to major markets, growing demand in both local and international markets, good growing conditions including a mild climate, ability to produce a wide range of high quality products, the level of industry and government commitment to the industry, and a long established research infrastructure. Some of the major issues and challenges that will need to be addressed as we move forward are summarized in the following table.

SUMMARY OF MAJOR ISSUES AND CHALLENGES

Issue	Discussion
Access to Physical Resources: Land and Water	The Agriculture Land Reserve represents only about 5% of the land area of the province. This limited amount of available farmland, combined with urban development and other land use activities, has put pressure on the land base and water supplies necessary for agriculture.
Market Access	BC is well positioned geographically in relation to the US and the Pacific Rim with easy transportation access to large markets. However, trade barriers (particularly non-tariff barriers) are becoming an increasingly important issue for producers as we shift more of our focus towards export markets.
Marketing Capabilities	Marketing is the issue most commonly identified as a weakness of the agri-food industry in BC. Marketing becomes even more important as suppliers continue to move away from a commodity focus and up the value-added/specialty product spectrum. The industry needs to recognize the importance of marketing, undertake market research and collect market intelligence, and have the resources, capabilities and focus needed to implement strong marketing and branding programs.

Issue	Discussion
Access to Human Resources	As the agri-food industry grows and diversifies, the need for a broad range of management skills has also increased. Unemployment rates in BC are very low and competition from other industries for managers and skilled workers is very high. The industry's limited access to skilled workers and managers serves to constrain productivity and reduces the industry's ability to identify opportunities for improvement, implement change, and increase profitability.
Access to Capital	Access to capital is critical to the development of new products, the development of new markets, and making changes in how organizations operate. While the agri-food industry accounts for about 2.3% of provincial GDP, it accounts for only about 1.5% of new business investment. The inability to attract the required levels of capital, particularly patient capital, restricts our entry into new sectors and new products, creates a productivity lag, and ultimately reduces our competitiveness.
Support for Innovation	Given shifting markets, an increasing emphasis on value added products, and intense global competition, the extent to which the agri-food industry is able to effectively develop and use technology will largely determine its future successes. Despite the critical importance of innovation, the level of private and public sector investment in innovation in BC remains remarkably low.
Cost Structures	High input costs (notably land, labour, raw materials and fuel) not only reduce profits but also serve as an impediment to investment in the industry.
Market Power	The value chains are seeing significant consolidation, leading to more centralized, high volume buying operations that seek to make greater use of high technology and exercise market power to reduce costs. Small operators find it increasingly difficult to compete on price or produce sufficient volumes to be considered by the volume-based systems. Small operations may also lack the technology, marketing skills and capital needed to access these distribution channels. The average size of producers and processors in BC is significantly smaller than those in other jurisdictions, which can place us at a competitive disadvantage.
Local Processing Capacity	Availability of suitable processing capacity is a barrier in some regions of the province. Concerns were expressed in the workshops about the loss of local processing capabilities over time as well as the impact of processing regulations on the viability of small and on-farm processors.
Regulatory Environment	The regulatory environment is complex, resulting in significant costs for businesses while creating uncertainty that slows the rate of new investment and growth in the industry. Given the multiple levels of government with which the industry has to deal, workshop participants frequently reported instances of inconsistent and contradictory requirements as well as situations where significant regulatory changes were made but little guidance or support was provided regarding the implications for businesses, how they should respond, and what assistance is available to help them in making changes.
Environmental Sustainability	There is mounting pressure on farm operators to reduce the environmental impact of operations. The challenge is to find innovative ways to dispose of or reuse the by-products of agriculture production in an environmentally sustainable manner and reduce impacts on air and water.
Industry Cooperation and Coordination	Most industry organizations do not currently have the resources or capabilities needed to serve as strong champions or play a lead role in strategic initiatives. Given the shared nature of many of the constraints to development, combined with the small size of most of the organizations in the BC agri-food industry, it will be critically important for the various parties to work together in developing, resourcing and implementing initiatives to promote further development.

RECOMMENDED STRATEGIES AND ACTIONS

We need to take steps now to improve our competitive position, address the challenges and issues, improve the profitability of our producers and processors, and grow the industry. Towards this end, the report identifies five key strategic directions. These directions involve:

- Expanding our value-adding capabilities;
- Strengthening our competitive advantage in local markets;
- Building our ability to compete in international markets;
- Reducing costs and improving operations; and
- Enhancing the capacity of our industry organizations.

Each strategic direction is summarized in the table below and detailed in the main body of the report in terms of the intended objectives, the factors that will determine how successful we are, where we are currently falling short, and actions that can be taken to improve performance.

RECOMMENDED STRATEGIC DIRECTIONS AND ACTIONS

Strategy #1: Expand Our Value Adding Capabilities
Objective: **Enhance the market value of our existing products and develop opportunities for new products through innovation and differentiation, capitalizing on emerging and non-traditional market opportunities and enhancing value adding processing capacity across the province.**
Key Focus (Intended Outcomes): • Increased access to relevant market research • Increased government and industry investment in R&D • Increased level of new business investment • Greater utilization of resources available to promote innovation • Differentiation through added-value
Recommended Actions*:* • **Provide funding support to increase access to market research.** Market research will provide the basis for identifying market opportunities, assessing market potential, preparing business plans and marketing strategies, and determining research priorities. Recognizing that the benefits will be widespread, increased public funding support is recommended. • **Establish a strategic innovation program for the agri-food industry.** The strategic innovation program should establish priorities under a broad strategy for innovation; promote further development of the research infrastructure (with a particular focus on research centres of excellence); facilitate technical analysis, feasibility studies, venture assessments, adaptive research and technology adoption, and prototype development; coordinate existing sources of funding for innovation in BC; and provide support to increase the share of funding obtained from major Federal Government innovation programs (e.g. CFI and NSERC). • **Establish a virtual network of regional agri-food innovation clusters or centres**, incorporating a web portal and existing BC resources. The network can help businesses access technical information, assistance, research funding, advice regarding research tax credits, and other resources. • **Strengthen the ties between industry and research capabilities & resources already existing in BC** to facilitate technology transfer and greater industry input in the determination of research priorities. Potential mechanisms to help strengthen ties include meetings, tours, seminars and other events that will bring researchers and technology experts together with industry stakeholders. • **Assist the agri-food industry access the patient capital that it needs to be more innovative.** Patient capital is required to develop value-added products and establish, expand, modernize and restructure processing capacity in the industry. Actions could include establishing a venture capital program or other financing program, implementing an investment readiness program, and increasing awareness of opportunities to invest in the agri-food industry amongst sources of venture capital and angel investors.

Strategy #2: Strengthen Our Competitive Advantage in Local Markets

Objective: **Increase the value of local products sold in local markets, taking advantage of key competitive advantages including the inherent consumer preference for local products through product branding, promotion and strengthening relationships within the value chain.**

Key Focus (Intended Outcomes):

- Increased awareness of local market opportunities
- Strengthened marketing capabilities vis-à-vis the local market
- Increased access to local value chains (mechanisms for linking suppliers with local buyers including retailers, food service organizations and consumers)
- Strengthened consumer preference for local products
- Expanded capacity to produce products for the local market
- Improved image of the industry amongst local consumers as well as among potential managers, workers, investors and operators

Recommended Actions:

- **Re-establish a BC Branding program** including retail, food service, regional and special purpose campaigns such as for the 2010 Winter Games. There is strong industry support for a Buy BC type program, which identified and branded BC grown and processed products.
- **Develop and implement market and sector specific marketing plans and initiatives**.
- **Promote local and direct marketing systems**. One approach is to support the formation of farmers markets and regional brokerage services that will link producers and buyers. Another element is the education of consumers, retailers, and food services about what is available locally.
- **Provide training, workshops and other support related to changes in the value chain**. Producers and processors need to be aware of the changes that are coming and receive assistance that will help them to respond accordingly.
- **Implement an investment and processor attraction strategy**. The objective is to expand local processing capacity by attracting new investment and encouraging the relocation or rationalization of facilities from other regions into BC.
- **Encourage the development of strategic alliances and other cooperative efforts**. Through unified marketing, producer and processing groups can better achieve the volumes required by current distributors and retailers.
- **Implement initiatives to improve the image of the industry**. Emphasis should be put on the importance of the industry to BC economically and socially as well as the sophistication of the industry, the business opportunities, and the potential for satisfying careers.

Strategy #3: Build our Ability to Compete in International Markets

Objective: **Build world-class business capability through insightful competitive intelligence, leading edge response to market opportunities, and development of strategic alliances for creating and maintaining a positive BC market presence internationally.**

Key Focus (Intended Outcomes):

- Ready access to competitive intelligence
- More open access to key markets
- Increased utilization of resources available to assist exporters
- Increased resources and capabilities for international marketing

Recommended Actions:

- **Promote and coordinate industry cooperation and participation in the planning and implementation of key export market development strategies and programs**. Support can be provided by initiating market studies; providing access to strategic and timely customized intelligence, market information and knowledge; working with industry to increase awareness of the opportunities for exporting as well as the resources and programs that are available to assist; encouraging the development of strategic marketing alliances; showcasing BC producers and producers in target markets and building links with international buyers.
- **Continuing to push for greater market access**, address trade issues and seek to level the international playing field.

Strategy #4: Reduce Costs and Improve Operations

Objective: **Improve the competitive position of the agri-food industry in BC through the reduction of key costs, addressing key operational issues, and amending regulatory processes to ensure that industry needs are addressed.**

Key Focus (Intended Outcomes):

- Increased access to key management skills and expertise
- Increased access to skilled and unskilled workers on a full-time, part-time and seasonal basis
- More effective and efficient regulatory processes
- Increase access to land and water resources that are needed for production
- Reduction in urban/rural conflicts

Recommended Actions:

- **Develop a management skills and labour market strategy**, which defines the skill gaps of managers and workers, determines training needs and requirements, and establishes skill requirements and standards.
- **Establish on-the-ground support to increase access to industry expertise**. A major constraint to development is limited access, particularly local access, to expertise and advice for both technical and business related issues.
- **Increase access of producers and processors to training & education**. Training areas may include technology, business management, e-commerce, agribusiness entrepreneurship, marketing, finance, human resources, safety systems, risk management or crop/livestock issue specific training. Training can be offered through seminars, workshops, college programs, short courses, videos, literature, and online courses as well as through apprenticeships, scholarships, job shadowing, mentorships, coop positions and peer networks.
- **Work to recruit skilled managers and workers from other countries**.
- **Simplify regulatory processes, improve coordination among various levels of government, and ensure that processes are implemented in an effective manner** that facilitates meaningful input from industry and assists industry in adjusting to major changes in the regulatory environment.
- **Establish a senior level point person within the provincial government to champion key regulatory issues and adjustment initiatives**. Given the number of players in the private and public sectors that deal with the agri-food industry, it is useful to have a single individual or champion responsible for a given issue.
- **Develop a joint industry government strategy to ensure agri-food industry access to public resources of land and water**, competitive with other jurisdictions.
- **Promote initiatives to reduce urban/rural land use conflicts**. In many regions of BC, urban development has extended the boundaries of residential areas outward and brought urban and rural areas into direct conflict. Such growth affects the agri-food industry and the environment as well as the livability of the urban areas.

Strategy #5: Enhance the Capacity of Our Industry Organizations

Objective: **Build the capacity of industry organizations such that they can play an important role in advancing key strategic initiatives designed to grow and strengthen long-term industry profitability.**

Key Focus (Intended Outcomes):

- Organizations with the capabilities, credibility and resources needed to bring key parties together, plan initiatives, and facilitate or take a lead role in implementation
- Organizations that work together on initiatives to address common issues

Recommended Actions:

- **Provide government funding to complement industry support in helping build the capacity of industry organizations.** Government can also assist industry organizations adopt best practices, identify and access others sources of funding, and plan and implement their activities.
- **Increase communication and coordination between industry sectors and government**. The various sectors need to meet regularly with each other and with governments to plan strategic activities that will benefit all stakeholders and deal with cross-sectoral concerns.
- **Favour projects and initiatives that involved the development of strategic alliances**. Government can be an important broker that helps bring the groups together to begin the process of co-operation on both a sector and regional basis. A key strategy to foster strategic alliances is to give preference to projects that involve strategic partnerships.

HIGH PRIORITY ACTIONS FOR THE NEAR-TERM

The success of Focus on the Future will be determined by the extent to which government, industry and other key stakeholders are able to convert the strategic directions into action. In order to gain the buy-in of the major parties, a workshop session was staged involving representatives of the Steering Committee and the Advisory Committee established for the project. Based on the results of the session, 5 key priorities for action in the near-term were identified including:

- Provide project funding and other assistance needed to help industry organizations build their capacity to play key roles in enhancing the long term competitiveness of the sector, including funding of program management for implementing strategic initiatives of the Foundation, consolidating and streamlining services to their members, improving organizational effectiveness and development of sustainable funding options.

- Provide enhanced funding support for the development and implementation of projects that undertake strategic market research and trend analysis, disseminate market information, facilitate marketing skills development and build marketing alliances.

- Bring key government and industry stakeholders together to prepare a formal human resource gap analysis and launch an action plan that will enable the agri-food sector to better meet its needs for management skills as well as for skilled, unskilled and seasonal workers.

- Establish a comprehensive, forward looking Innovation Technology Hub for the BC agri-food and bio-product sectors, building on and enhancing existing research and development resources and infrastructure, and launch near term projects addressing priority needs.

- Implement actions to coordinate Branding BC activities of the 2010 Opportunities Strategy with the Partners in Healthy Eating initiative and other domestic and export branding initiatives.

I. INTRODUCTION

A. THE FOCUS ON THE FUTURE PROJECT

A number of organizations, including the Investment Agriculture Foundation of British Columbia, the BC Agriculture Council, and the BC Food Processors Association came together in 2005 to commission the Focus on the Future project to help guide and promote further development of the agri-food industry in British Columbia. Specifically, the project is designed to:

- **Identify and assess key issues** that are strategically important to the overall long-term success of BC agriculture producers and processors of food, beverage, nutraceutical and non-food products of agriculture.

- **Identify specific strategies and meaningful actions that industry, government and the Investment Agriculture Foundation of BC can pursue to assist industry to expand, diversify and enhance its competitive position and build a stronger industry future**. The initiative has adopted a high level, forward-looking business orientation and is not designed to be a government policy process or an industry wide strategy. The focus is on action.

The research component of the project was implemented in four phases. The major activities and outputs of each of the four phases are summarized below:

THE FOUR PHASES OF FOCUS ON THE FUTURE

Phase	Key Activities	Key Outputs
Environmental Scan	Collected and reviewed available data to develop a profile of the agri-food industry in BC and identify key issues that need to be addressed	Profile of the industry and identification of key issues
Competitive Assessment	• Assessed the key issues • Benchmarked BC against key competitive jurisdictions • Identified strategies undertaken in other jurisdictions to address these key issues	Assessment of key issues and identification of possible actions
Industry Consultation	Staged a series of workshops across the province with industry to obtain input on the key issues as well as on specific strategies and meaningful actions that can be taken to address these issues	Agreement on key issues and input on actions to be taken to address these issues
Definition of Strategies and Actions	Defined specific actions and strategies to be undertaken. Meeting was held with Steering Committee and Advisory Committee members to discuss strategies and highlight actions which are the highest priority in the near term	Definition of the actions and strategies

The project was implemented under the guidance of a Steering Committee and an Advisory Committee. A list of the members of each committee is provided in Appendix I.

B. OVERVIEW OF THE PROCESS

The steps that we have undertaken to complete each phase of the project are outlined in the following paragraphs.

- **Phase I: Environmental Scan**

  The agri-food industry has been the subject of significant research and consultation over the years. Rather than reinventing the wheel, we built on the extensive base of information that was already available. As such, the primary focus of Phase I was to assemble past reports, strategies, SWOT analyses, industry profiles and industry statistics from a wide variety of sources. The documents included strategic plans, SWOT analyses and industry profiles for a wide variety of sectors and issues including agriforestry, agritourism, apple and pear, beef, beekeeping, bison, blueberries, cattle & beef processing, cherries, dairy, emerging sectors, field vegetable, floriculture, food & beverage processing, food quality safety, fruits (peaches, nectarines, apricots & prunes), goats, grain, grapes, greenhouse vegetables, health products & functional foods, horses, horticulture, landscape & nursery, meat, mushrooms, oilseed, organic foods, sheep and lambs, skills development, small food processors, small lot agriculture, specialty chicken industry, value-added food & beverage manufacturing, and wine. A partial listing of the more than 150 documents that we reviewed during Phase I is provided in Appendix II.

  Based on this information, we:

  - Developed a profile of the agri-food industry in BC in terms of characteristics such as GDP, employment, growth, regional distribution, exports and imports.

  - Identified key issues that have been highlighted by the various commodity groups and food & beverage product categories. Over 100 issues were identified through the various reports and documents.

  - Identified 12 opportunities and challenges for further review in Phase II. To narrow the number down from the original list of over 100, we first grouped the issues into a number of key categories, conducted preliminary research into the various categories, and then assessed each category using criteria such as actionability, potential significance to the industry, and the extent to which the issues are shared across groups within the industry.

- **Phase II: Competitive Assessment**

  A major objective of the second phase of the study was to prepare for the industry consultation process, which was then undertaken in Phase III. To prepare for the consultation process, we:

  - Conducted a competitive analysis, comparing the characteristics of the agri-food industry in BC to the characteristics of other jurisdictions, most notably Alberta, Saskatchewan, Manitoba, Ontario, Washington State, and Oregon. The major characteristics of the agri-food Industry in other jurisdictions is highlighted in Appendix III while Appendix IV provides a series of tables and charts that benchmark BC against other jurisdictions on the basis of a variety of agri-food related indicators.

  - Used the results of the competitive analysis, combined with the literature review conducted in the first phase of the project, to identify the major strengths, weaknesses,

opportunities and threats facing the agri-food industry in BC.

- Analyzed each of the twelve major opportunities and challenges that were identified in Phase I. As part of our analysis, we prepared a brief introduction to the opportunity or challenge, highlighted sectors of the agri-food industry that specifically identified it as an issue, provided an overview of current situation in BC with respect to the issue, and identified actions and strategies that have been employed elsewhere to take advantage of the opportunity or address the challenge.

- Prepared a backgrounder document that summarizes the major opportunities and challenges. The backgrounder document was provided in advance to participants in the industry consultation process to serve as a basis for discussion.

- **Phase III: Industry Consultation**

  In Phase III of the project, we led a consultation process involving representatives of various stakeholder groups associated with the agri-food industry in BC to:

  - Build awareness and support for the initiative;
  - Confirm the key issues, opportunities and challenges facing the agri-food industry; and
  - Obtain input regarding potential strategies and actions that could be taken to address these issues.

  The main component of the consultation process involved a series of seven workshops held throughout the province in Nanaimo, Surrey, Abbotsford, Prince George, Dawson Creek, Vernon and Creston. The workshops were set up with the assistance of local organizations. Approximately 300 people participated in the workshops, including representatives of:

  - Industry associations, product and commodity groups, and members nominated by the associations;
  - Leading processors and processor groups;
  - Economic development and community groups with a focus on agriculture;
  - Retailers and hospitality sector stakeholders;
  - Universities, colleges, institutes and research centers;
  - Local, regional, provincial and federal government representatives;
  - Nutritionist and health professional representatives; and
  - Sources of capital (e.g. bankers, venture capital representatives and Community Futures representatives).

  The half-day sessions were held between October 26 and November 24. At each session, we first summarized the results of the review to date including a review of the major opportunities and challenges that had been identified. We then opened the floor to the participants, facilitating a group discussion of the key issues that are most affecting their organization, sector and region. We then broke the group into a series of round-table work-group teams, with each team taking a specific issue or group of issues and working to develop potential strategies and actions for addressing them. The results of the consultation process, including a summary of each session, are summarized in Appendix V.

- **Phase IV: Definition of Strategies and Actions**

  During the final phase of the project, we analyzed the results of the consultation process,

compared the results to the previous research undertaken, developed a series of recommended strategies and actions, and prepared this draft report. We met with the Steering Committee and Advisory Committee review the results of the research and identify the strategies and actions which are the highest priority in the near term.

C. STRUCTURE OF THE REPORT

Chapter II provides a profile of the agri-food industry in BC, including a review of the characteristics of both the agriculture and the food & beverage processing sectors. Chapter III first reviews the strengths, weaknesses, opportunities and threats facing the agri-food industry in BC and then compares the characteristics of our industry to those in other jurisdictions. Chapter IV presents a review of major opportunities and challenges, including a discussion of the nature of the issue, the current situation in BC, and related strategies or actions that have been undertaken in other jurisdictions or industries. Chapter V summarizes the results of the review and presents a series of recommended actions and strategies.

II. THE AGRI-FOOD INDUSTRY IN BRITISH COLUMBIA

Agriculture and food is big business. The production, processing, distribution and sale of food and agriculture products employed nearly 290,000 people in BC in 2003, representing about 14% of the provincial work force, and generated over $35 billion in revenues.

SIZE OF THE AGRICULTURE AND FOOD CLUSTER IN BRITISH COLUMBIA, 2003

Segment	Revenue ($ billions)	Employment
Agriculture & Related Services	$2.3	30,200
Fisheries	$0.6	4,300
Food and Beverage Processing	$6.0	31,100
Wholesale Food Distributors	$8.6	16,500
Transportation and Storage	n/a	1,719
Retail Grocery	$10.5	71,900
Specialized Retail (Health Food)	$0.2	3,260
Floral & Garden Retail	$0.8	4,700
Food Service Sector	$6.6	123,900
Other Support Services	n/a	681
Total	$35.6	288,260

As indicated above, the food service sector and the retail grocery sector are the largest components of this cluster. There are 9,400 food service establishments and 2,800 retail stores in BC, with retail grocery sales now accounting for over 50% of total BC retail sales.

Our primary focus in this report is on the agriculture sector and the food & beverage manufacturing sector. These two sectors generate approximately over $8 billion in revenues annually and employ over 60,000 people. The following sections of this chapter summarize the characteristics of the agriculture sector, the characteristics of the food & beverage manufacturing sector, and the level of international trade in these two sectors.

A. CHARACTERISTICS OF THE AGRICULTURE SECTOR

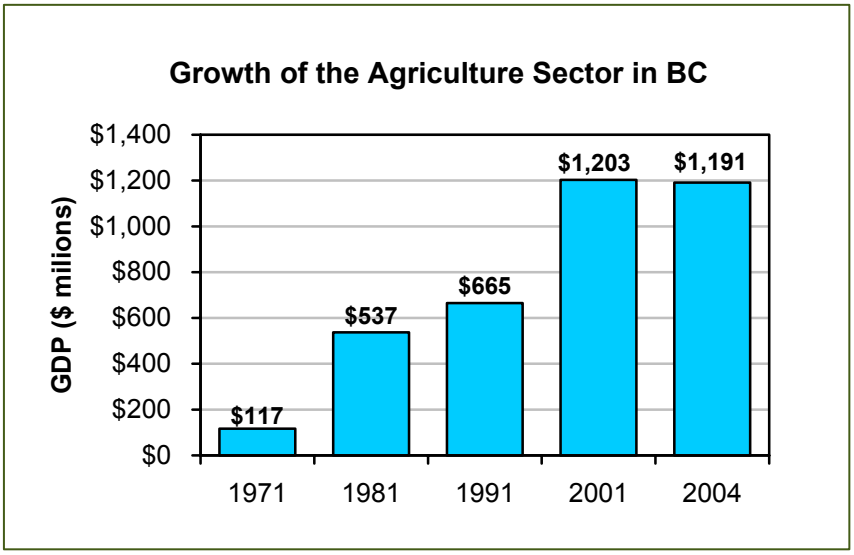
This section reviews key characteristics of the agriculture sector overall and by leading commodity groups.

1. Overview of the Agriculture Sector

Key characteristics of the agriculture sector in British Columbia include:

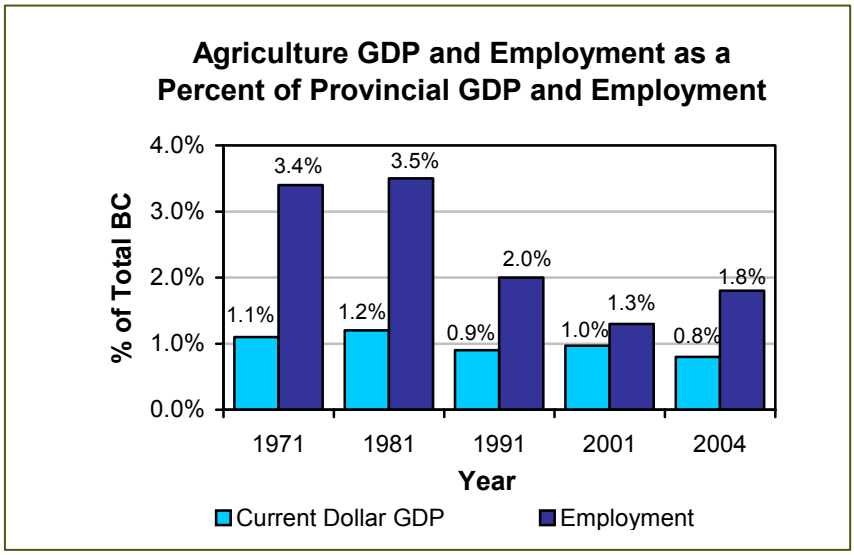
- **Since 1981, the agriculture sector has grown at the rate of about 3.5% per year in terms of GDP.**

Gross Domestic Product (GDP) is a measure of the value added to the economy by the current production. The value contributed by an industry is equal to the value of goods and services produced by the industry less the value of goods and products purchased and used in the production process. As indicated in the chart, according to Statistics Canada, the GDP of the agriculture sector has grown from about $117 million in 1971 to $1.2 billion in 2004. During the high inflation period of the 1970's, the GDP of the agriculture sector grew at the rate of 18% per annum (unadjusted for inflation). However, since 1981, the sector has only grown at the rate of 3.5% and the GDP actually declined slightly over the past three years.



- **In 2004, the agriculture sector accounted for about 0.8% of the provincial GDP and about 1.8% of provincial employment.**

The percentage of the total GDP in BC that has been generated by the agriculture sector has remained relatively consistent over the past thirty years, varying from about 0.8% to 1.2%. However, the labour productivity of the sector has increased sharply. As a result, while the agriculture sector accounted for more that one out of every thirty jobs in BC in 1981 (3.5% of provincial employment) that figure declined to about one out of every 56 jobs in 2004 (1.8% of provincial employment).



- **While the number of farms in BC has remained relatively consistent over the past 35 years, the there has been an increase in the production land area.**

The number of farms in BC increased by 6% from 19,085 in 1966 to 20,290 in 2001, while the area in production increased by 21% from 5.3 million acres to 6.4 million acres. The average farm is 315 acres, with the average strongly influenced by a small number of large acreages. Of the 20,290 farms in 2001, 26% were under 10 acres in size, 37% were 10 to 69 acres, 19% were between 70 and 240 acres, 10% were between 240 and 760 acres, and 8% were 760 acres or more. Only about one-half of the farms generated sales of over $10,000 in 2001.

The Agriculture Land Reserve totals about 4.7 million hectares, which represents about 5% of the land area of over 89 million hectares of the province. Of the 2.6 million hectares (6.4 million acres) categorized as farmland, about 59% is owned by the farm operators and 41% is rented or leased.

- **The 20,290 farms are operated by 30,320 proprietors, partnerships or corporations.**

  Since 1991, the Census of Agriculture has allowed respondents to report up to 3 operators per farm. In 2001, 47% of the farms reported more than one operator. Of the farms, 51% are operated by proprietorships, 34% are operated by partnerships, and 14% are operated by corporations.

- **The agriculture sector in BC tends to be smaller on average, than in other provinces.**

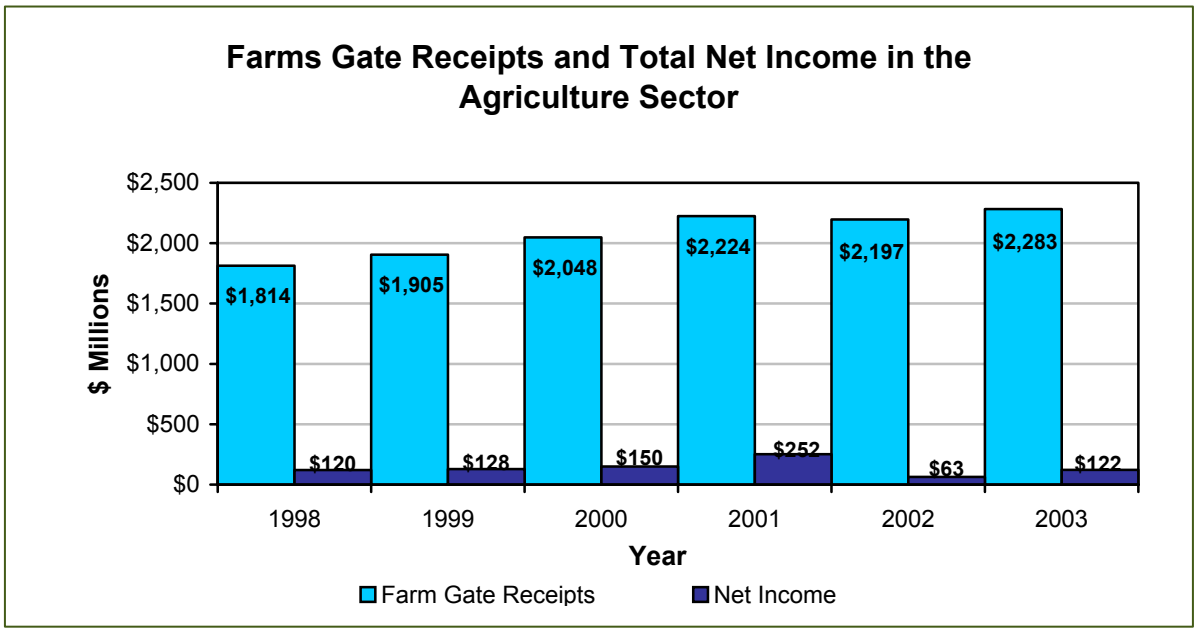
  While BC accounts for about 13% of the Canadian population, it accounts for about 3.5% of farmland, 8% of farms, and 8% of agriculture GDP, and 11% of agriculture employment in Canada.

- **Due mainly to high land values, British Columbia farmers have the highest net worth of all Canadian farmers.**

  In 2001, British Columbia farmers, with farm cash receipts over $10,000 per year, involved an average gross capital investment of $1,320,000 and an average net worth of $1,007,000 (compared to the Canadian average of approximately $800,000). British Columbia farmers also report incomes above the average Canadian farm incomes. The average net operating income of British Columbia farmers exceeded $53,000, the highest average of any province.

- **The net income of agriculture operations in British Columbia can vary significantly from year to year, reflecting a comparatively high level of economic risk.**

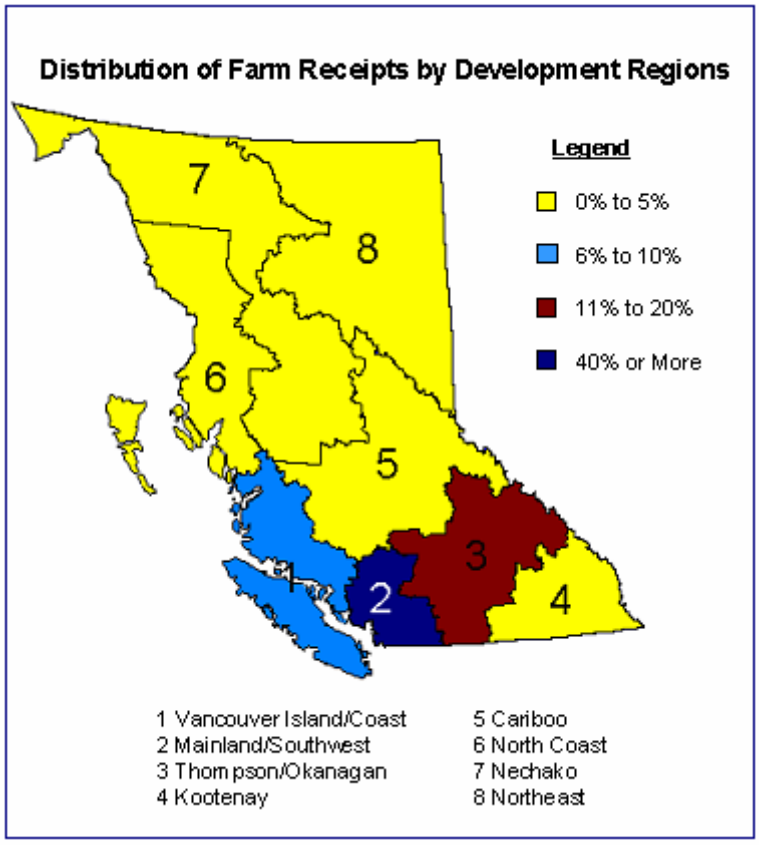
  As indicated in the chart, while farm gate receipts grew relatively consistently between 1998 and 2003, total net income varied significantly from year to year peaking at over $250 million in 2001 and bottoming at $63 million in 2002 in response to changes in price and key input costs.



- **On a regional basis, the agriculture sector is located primarily in the Lower Mainland and, to a lesser degree, the Thompson-Okanagan.**

The BC Government divides the province into eight economic regions, as shown in the accompanying map. According to the latest data available, the Lower Mainland accounted for about 62% of the farm gate receipts in BC, the Thompson - Okanagan accounted for about 17%, and Vancouver Island/Coast region accounted for about 6%. All other regions accounted for 5% or less of farm gate receipts.

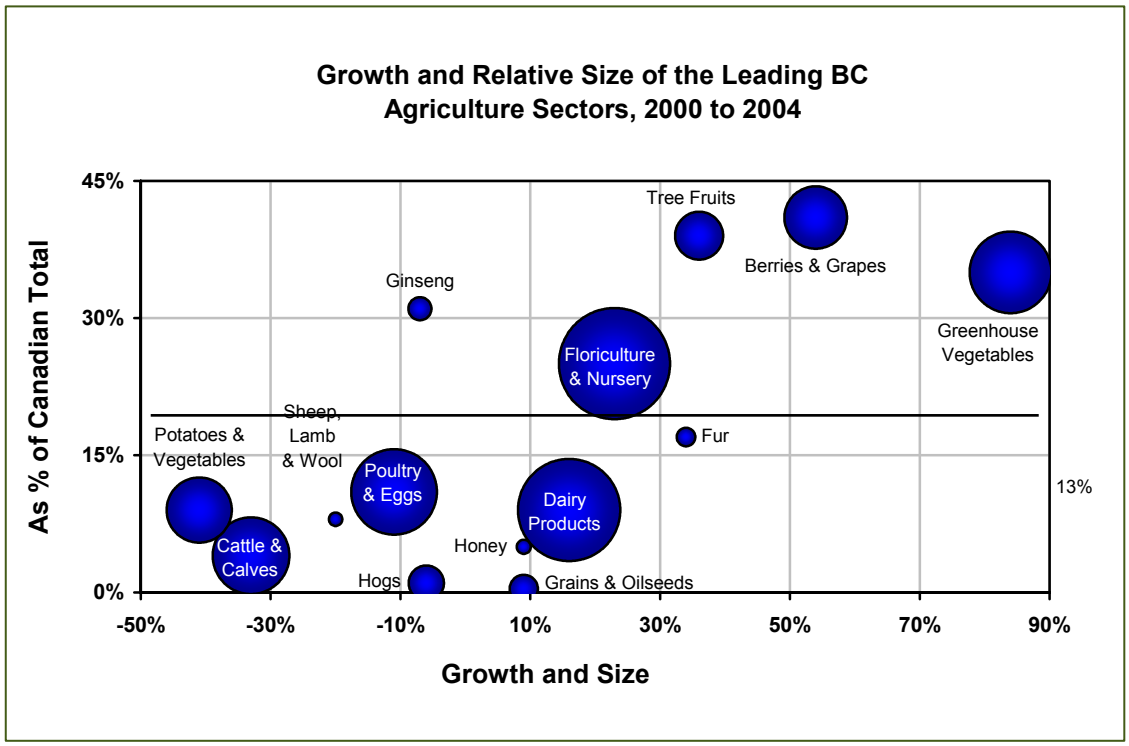
By farm type, the Lower Mainland is the major production area for greenhouses, field vegetables and nursery products as well as the majority of the dairy, poultry and hog production. The Thompson - Okanagan accounts for the majority of tree fruit and grape production. The Peace Region accounts for the majority of the production acreage for wheat. Beef/cattle operations are more evenly distributed throughout the province with significant operations in the Thompson-Okanagan, Cariboo, Peace River, and Lower Mainland regions.



2. Leading Commodity Groups

The accompanying chart summarizes the relative characteristics of the leading commodity groups in British Columbia. For each group, the chart shows:

- The value of farm gate receipts (shown by the size of the bubble);
- The increase (or decrease) in farmgate receipts over the past four years (shown on the X axis);
- BC farmgate sales as a percent of Canadian farm gate sales (shown on the Y-axis).



As indicated:

- The largest commodity groups in terms of farm gate receipts include floriculture & nursery ($465 million), dairy products ($392 million), poultry & eggs ($276 million), cattle ($220 million), and potatoes & vegetables ($160 million).

- Over the past four years, the fastest growing groups included greenhouse vegetables (grew by 84% between 2000 and 2004), berries and grapes (54%), tree fruits (36%), fur (up 34% from a very small base) and floriculture & nursery (23%). In contrast, there were significant declines in the farm gate receipts of potatoes and vegetables, cattle & calves, and sheep & wool. It should be noted that over any particular period can be significantly impacted by external factors such the avian flu (poultry and eggs) and BSE.

- Groups that, on a per capita basis, are significantly larger than the Canadian average include berries & grapes (41% of Canadian farm gate receipts), tree fruits (39%), greenhouse vegetables (35%), ginseng (31%), and floriculture & nursery (25%). On the other hand, the size of other groups such as poultry & eggs (11%), dairy products (9%), cattle (4%), and hogs (1%) are below the Canadian average.

The following table summarizes the characteristics of the leading commodities within the BC agriculture sector.

LEADING COMMODITY GROUPS WITHIN THE BC AGRICULTURE SECTOR

Commodity Group	2004 Farm Receipts ($ million)	Farms (Census data)	Acres	Primary Location	Annual Growth (Average 2000-04)	Exports ($ million)	Export Markets
Floriculture & Nursery	$465	669 Floriculture + 834 nursery	44,682	Lower Mainland	Medium (5.4%)	$344	US
Dairy Products	$392	829	155,830	Lower Mainland	Low (3.8%)	$1	US
Poultry & Eggs	$276	333 chicken 67 turkey and 620 eggs	25,589	Lower Mainland	Negative (-3.0%)	$3	US/Turkey
Greenhouse Vegetables	$252	227	4,563	Lower Mainland	High (16.5%)	$40 (2003)	US
Cattle and Calves	$221	5,023	4.1 million	Distributed throughout BC	Negative (-9.4%)	$11	US
Potatoes & Vegetables	$160	652	20,499	Lower Mainland	Negative (-12.5%)	$162	US
Berries & Grapes	$147	742	22,650	Thompson-Okanagan	High (11.4%)	$138	US
Tree Fruits	$88	1,895	18,625	Thompson-Okanagan	Medium (8.1%)		US
Hogs	$47	182	9,703	Lower Mainland	Negative (-1.6%)	$4	US
Grains & Oilseeds	$30	273	267,771	Peace	Low (2.2%)	$112	China/Japan
Ginseng	$20	n/a	400	Thompson-Okanagan	Negative (-1.9%)	n/a	Hong Kong/China
Forest Products	$16	n/a	n/a	n/a	Negative (-2.1%)	n/a	n/a
Forages	$14	2,087	632,798	Distributed throughout BC	Negative (-12.7%)	n/a	n/a
Fur	$13	n/a	n/a	n/a	Medium (7.7%)	$20	US
Sheep, Lambs & Wool	$7	1,865	n/a	Vancouver Island/LM	Negative (-5.4%)	$0	US
Honey	$7	169	5,312	n/a	Low (2.3%)	$0	Japan/US/Taiwan

Notes: Growth rates for poultry & eggs during this time period were affected by the Avian flu while growth rates for cattle and calves as well as forage crops were affected by BSE. Data on the value of ginseng exports is not available but would represent the major market for BC production. Forest products include Xmas trees and agro-forest products

As indicated in the table, there are five commodity groups that generated at least $200 million in farm gate receipts in 2004. A brief profile of the leading commodity groups is provided below:

- **Floriculture & nursery** generated $465 million in farm gate receipts in 2004. The floriculture industry, which has expanded sharply in recent years despite strong international competition, accounts for the majority of these farm gate receipts. The landscape nursery industry has also grown quickly, with grower sales more than doubling in the past 7 to 8 years. There are no marketing boards, set prices, or quotas. Much of the production is exported, primarily to the US.

- **Dairy products** has grown to nearly $400 million per year in farm gate sales, which represents close to 20% of BC agricultural production. Milk production in British Columbia has increased steadily over the years, from just over 350 million litres in 1965 to over 500 million litres in 1995 and to the current level of 600 million litres annually. These increases have been largely due to efficiencies, as the size of the dairy herd has remained constant. When taking into account direct employment on dairy farms and dairy processing plants, as well as the associated wholesale, retail and supply trades, the BC dairy industry is estimated to provide employment for about 11,000 people. The contribution to the provincial economy is estimated to be in excess of $1 billion dollars per year. The industry is regulated by a supply management marketing board.

- **Poultry and eggs** generated about $276 million in farmgate receipts in 2004. The industry consists of four major sectors: chicken (meat) growers, the layer (egg) industry, broiler breeders and turkey producers, each of which is regulated by a marketing board. In 2003, there were 531 egg and poultry producers licenses. Of these, 287 licenses were for chickens, 132 for eggs, 50 for turkeys, and 62 broiler hatching egg (B.H.E.). Growth rates for poultry & eggs reported between 2000 and 2004 was affected by the Avian flu. Overall, the industry value grew by approximately 4% between 1993 and 2003. BC produces about 13% of the chickens about 5% of the turkeys and 7% of the eggs in Canada.

- Farmgate receipts for the **greenhouse vegetable** industry totalled $252 million in 2004. In BC, commercial greenhouse operations occupy a growing area equivalent to 4,563 acres and produce a variety of vegetables including more than five varieties of tomatoes, sweet bell peppers, hot peppers, mini peppers, long English cucumbers, mini cucumbers, and butter lettuce. About 2,600 people are employed in the industry, including 2,000 at the farm level and 600 in packing, distribution and marketing. Sales have more than doubled over the past five years and increased by 380% since 1993. The US is a major market with exports to that country accounting for 75% of all sales. The industry is a world leader in the use of technology for climate control and non-chemical pest control. It also is well organized in regards to marketing, production, research, and industry development.

- The value of **cattle** sold in 2004 represented $221 million in farm gate receipts. BC is a net importer of beef as BC produced beef typically accounts for less than 1/4 (~20%) of the beef consumed in BC. Part of the reason for this is that BC lacks an available supply of feed grain to finish the animals and they are sent to Alberta for finishing and slaughter. BC slaughter plants are small specialty processors that serve niche markets and do not compete with the large plants in Alberta. BC has 3 federally registered establishments that slaughter cattle. In addition, there are about 40 provincial and non-licensed facilities in the province. These facilities are multi-species facilities, so processing capacity is shared by cattle with other livestock species. New processing regulations will have an impact on the production of cattle and other livestock in BC. Total provincial cattle slaughter capacity appears to be approximately 80,000 head per year. There are normally about 300,000 beef cows, 16,500 bulls and about 150,000 other animals in BC being fed

on pasture or grain. Growth rates for cattle reported between 2000 and 2004 was affected by the Avian flu.

- In 2004, BC produced **potatoes and field vegetables** with a value of over $160 million on 20,499 acres of land. Most of the production (over 75%) is in the Lower Mainland. Production can vary significantly from year to year depending on a variety of factors including weather. For example, poor weather in 1996, 1997, and 2000 produced market declines. Potatoes account for one third of field vegetables. Producers can market direct to consumers at roadside stands. Otherwise most marketing is under the auspices of the BC Vegetable Marketing Commission. British Columbia is a net importer of fresh and processed field vegetables with seasonality being the biggest factor in the trade imbalance. Almost 100% of exports are sold to the US.

- **Berries and grapes** generated farm gate receipts of $147 million in 2004. The biggest berry crop in BC is blueberries followed by raspberries, cranberries and strawberries. In 2004, blueberries accounted for 36% of berry and nuts sold in BC by value. Grapes come between raspberries and cranberries by total value of sales. In BC, grapes are grown in the Okanagan Valley, the Similkameen Valley, the Fraser Valley, and on the coastal islands. Most of the BC grape acreage (97%) is planted to wine grapes (about 50 cultivars are currently produced). There are 229 vineyards operated by independent grape growers and 139 owned by wineries as of 2004.

- The BC **tree fruit** industry generated farm gate receipts of $88 million in 2004. The industry consists of about 1,200 growers, of whom 400 to 500 are larger commercial growers, who farm about 18,000 acres of apples, pears, cherries, peaches, nectarines, apricots and plums. The industry is located in the Okanagan Valley from Salmon Arm in the north to Osoyoos in the south, the Similkameen Valley to the west and the Creston Valley in the Kootenays to the east. Tree fruits are also produced in the Fraser Valley and on Vancouver Island, on a much smaller scale. Fewer than 100 acres of apples are grown in the coastal area. BC is a price taker in the apple market and suffers when there are global surpluses. There have been problems in recent years especially with the traditional varieties of apples and soft fruit. The industry is now utilizing new varieties at higher densities for easier picking and the higher prices available for new varieties. There is no marketing board or quota system with most of the fruit sold fresh in Western Canada.

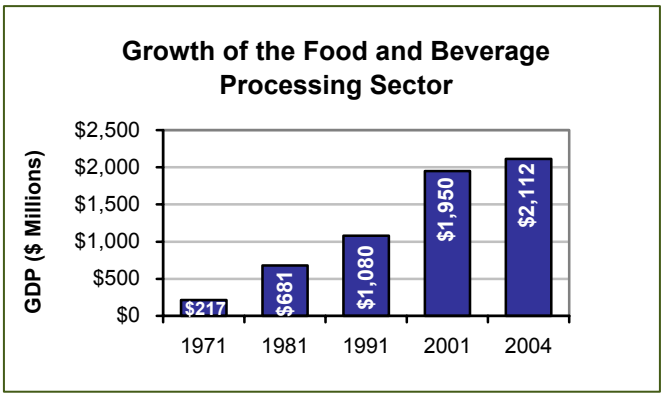
B. CHARACTERISTICS OF THE FOOD AND BEVERAGE SECTOR

1. Overview of the Food and Beverage Sector

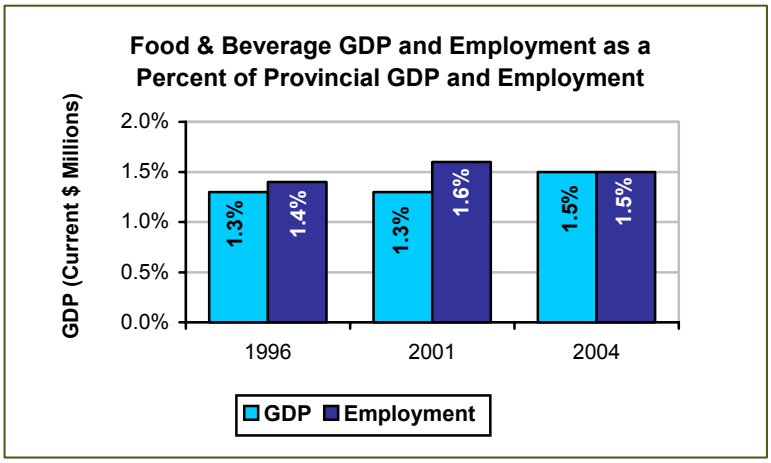
The major characteristics of the food and beverage sector in BC are as follows:

- **In 2004, the British Columbia food & beverage sector contributed approximately $2.1 billion to the provincial GDP.**

Over the past 33 years, the food and beverage sector has grown at the rate of 7% per year in terms of GDP. According to Statistics Canada, the GDP of the food & beverage processing sector grew from about $217 million in 1971 to $2.1 billion in 2004. Much of the growth in GDP occurred during the high inflation period of the 1970's, when the sector grew at the rate of 18%



(unadjusted for inflation). Since 1981, the sector has grown at the rate of about 5%.

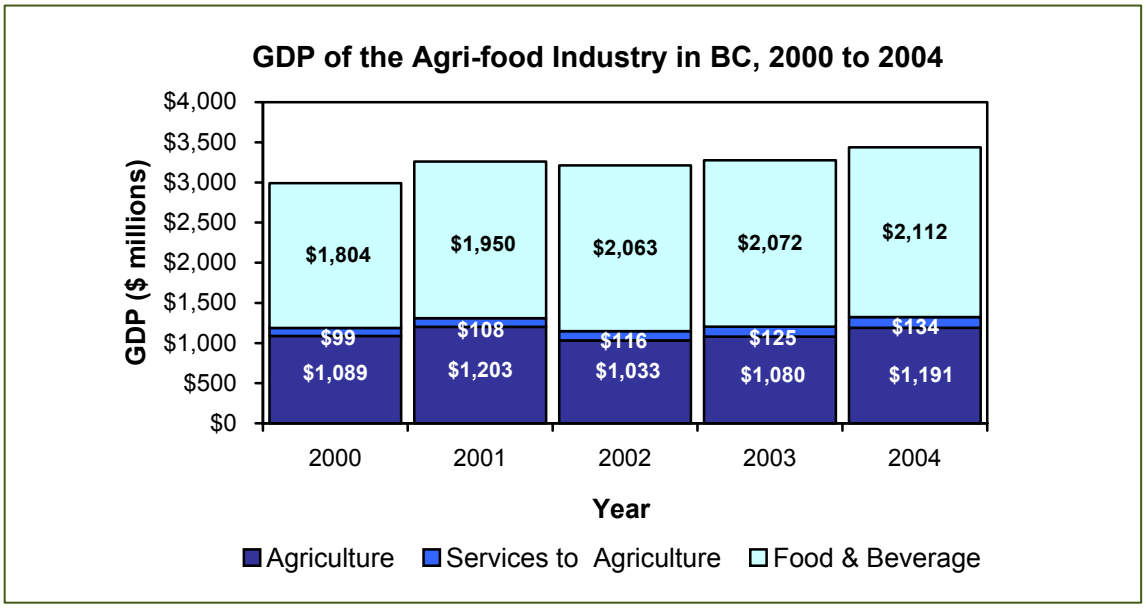


- **The food & beverage processing sector accounts for about 1.5% of the total provincial GDP and employment.**

  As indicated below, the relative importance of the food & beverage sector has increased somewhat over the past eight years.

- **The food and beverage sector accounts for the majority of the GDP generated by the agri-food sector.**

  In 2004, the agri-food industry generated about $3.4 billion in GDP (putting it in the top five contributors from the goods sector) of which the food & beverage sector accounted for $2.1 billion (61%).

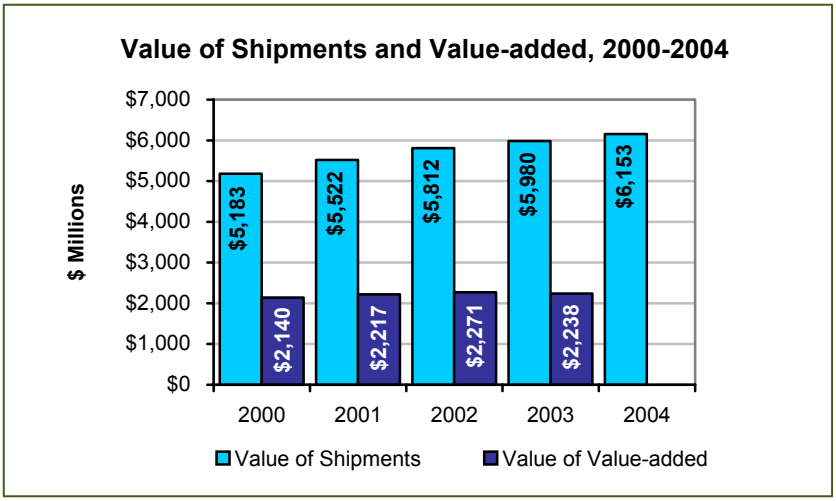


Combined, the agriculture sector, services to agriculture, and the food & beverage sector accounted for 2.4% of the total provincial GDP.

- **The value of goods shipped by BC processed food and beverage companies was estimated to total $6.15 billion in 2004, consisting of shipments of $5.02 billion in food products (including seafood) and $1.13 million in beverage products.**

  Value-added production represents the value of industry shipments less the value of the material inputs that went into the production of those products. As indicated below, value-added production is typically equal to only about 37% to 44% of the value of shipments highlighting the strong

linkages between this industry and the suppliers of foodstuffs and packaging.



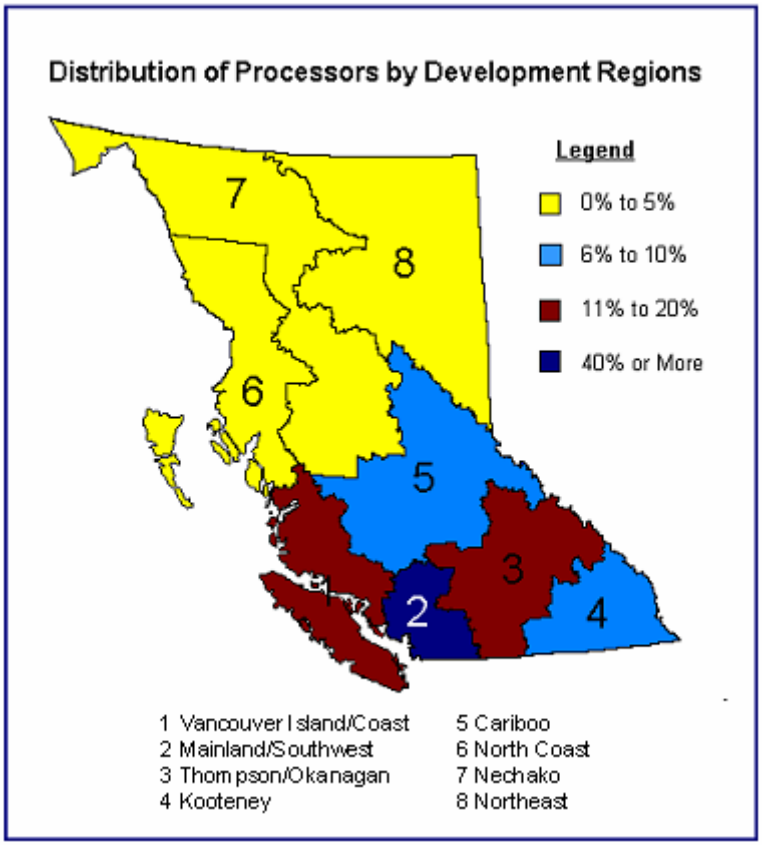
Data on manufacturing value-added is not yet available for 2004.

- **There are over 1,000 food and beverage processing businesses operating in BC.**

  According to Statistics Canada, there were 1,076 food and beverage businesses in BC in 2002. The average business shipped about $5 million in food and beverage products and most companies have under 50 employees.

- **Approximately one-half of the food processing firms are located in the Greater Vancouver area and the nearby Fraser Valley.**

  There is no data available on the value of manufacturing shipments by economic region within region. To obtain an indication of the distribution of the sector by economic development region, we reviewed the 2002 Directory of Food and Beverage Processors and allocated each of the listings to a development region. Overall, we found that 48% of the processors listed in the directory are located in the Lower Mainland, 17% are located in the Thompson – Okanagan, 13% are located on Vancouver Island/Coast region, and 8% are located in each the Cariboo and Kootenays. Because firms located in the Lower Mainland tend to be larger than those located in other jurisdictions, it is likely that the Lower



Mainland is the source for the majority of industry shipments. All other regions accounted for less than 5% of the processors.

In total, there were more than 1,100 listings in the directory. This is somewhat higher than the figure reported by Statistics Canada because some organizations are listed under multiple food & beverage categories and the directory also includes microprocessors that are not included by Statistics Canada. The distribution of listings by food product and region is summarized in the following table.

Regional Distribution Of Food And Beverage Processors
By Type Of Product

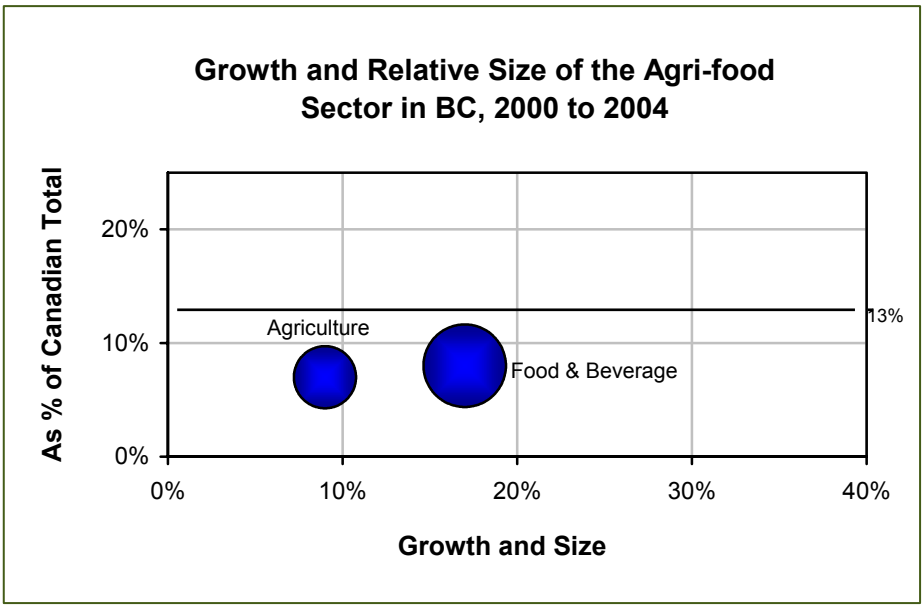
Food and Beverage Processors	Vancouver Island/ Coast	Mainland/ South	Thompson-Okanagan	Kootenay	Cariboo	North Coast	Nechako	Northeast	
1. Beverage Processors									
➢ Beer	6	13	6	2	-	-	-	-	27
➢ Carbonated/Flavoured Non-Alcoholic	-	9	1	-	-	-	-	-	10
➢ Coffees/Teas	2	11	5	4	-	-	-	-	22
➢ Distilled/Spirits	-	3	1	-	-	-	-	-	4
➢ Fruit and Vegetables Juices	2	7	7	1	-	-	-	-	17
➢ Water	3	13	4	2	-	-	-	-	22
➢ Wine/Cider/Other Alcoholic Beverages	13	10	52	-	-	-	-	-	75
2. Combination Product Processors	9	38	4	1	3	1	3	-	59
3. Condiments/Seasoning/ Flavouring/Other Miscellaneous	22	44	9	13	11	-	3	2	104
4. Confectionery/Snack Foods	5	29	4	4	2	-	-	1	45
5. Dairy/Dairy Product Processors	9	17	9	2	-	-	2	-	39
6. Eggs/Egg Product Processors	6	21	10	2	4	1	-	3	47
7. Flour/Grain Product Processors									
➢ Bakery Products	29	97	15	12	6	2	2	3	166
➢ Cereal/Pasta/Grain Products	3	20	2	2	-	-	1	1	29
8. Fruit and Berry Processors									
➢ Frozen/Canned/Further Processed	6	21	15	1	2	8	1	1	55
➢ Fresh-Cut	-	5	-	-	-	-	-	-	5
9. Soy Nut/Seed/Other Legume Processors	5	15	2	5	-	-	-	-	27
10. Meat-Beef/Pork Game Processors	7	33	9	3	15	-	4	1	72
11. Nutraceuticals and Functional Foods	8	68	18	6	2	-	1	-	103
12. Oils and Fats Processors	1	2	1	-	-	-	-	-	4
13. Poultry Processors	4	17	1	-	5	-	2	1	30
14. Vegetable Processors									
➢ Frozen/Canned/Further Processed	13	11	6	4	18	1	1	-	54
➢ Fresh-Cut	1	7	3	1	-	-	-	-	13
15. Microprocessors	-	43	8	27	25	2	8	4	117
Total Listings in the Directory	154	554	192	92	93	15	28	17	1146

- **The overall size of the food & beverage processing sector is smaller in BC than would be expected given our population base.**

  The population of BC represents about 13% of the Canadian population. However, the size of the food & beverage processing industry in BC represents only:

  - 8% of the value of processed food and beverage shipments in Canada (which totaled about $72 billion in 2003). The share declines to 7.8% if we exclude seafood products.
  - 11% of employment in the food and beverage industries in Canada (which totaled about 279,000 in 2004); and
  - 8% of the GDP generated in Canada by the food and beverage industries (excluding fish products) in Canada (which totaled about $26 billion in 2003).

  The accompanying chart compares the relative size and recent growth rates of the food & beverage and agriculture sectors in BC. As indicated, both sectors are below the national average in terms of per capita size and the food & beverage sector grew by 17% over the past four years (about 4% per annum) while the agriculture sector grew at the rate of 9% (about 2% per annum).

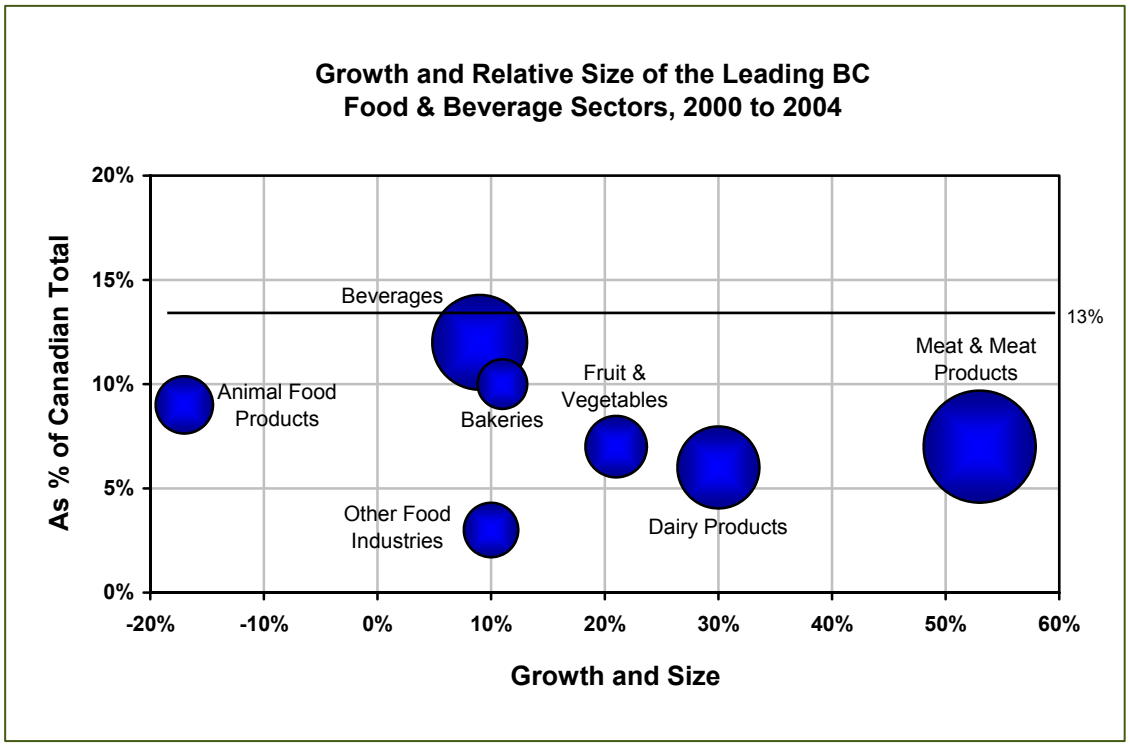


2. Leading Product Groups

The food & beverage processing sector consists of a series of product groups including meat & meat products (including both red meat and poultry), beverages, dairy products, animal food products, fruit & vegetable products, bakery products, and other food industries. The accompanying chart summarizes the relative characteristics of the leading food & beverage product groups in British Columbia. For each group, the chart shows:

- The value of manufacturing shipments in 2004 (shown by the size of the bubble);
- The increase (or decrease) in shipments over the past four years (shown on the X axis);

- BC shipments as a percent of Canadian shipments for that product category (shown on the Y-axis).



As indicated:

- The largest commodity groups in terms of manufacturing shipments in 2004 include meat & meat products including poultry ($1.6 billion), beverages ($1.1 billion), and dairy products ($841 million).

- Over the past four years, the fastest growing groups included meat & meat products including poultry (grew by 53% between 2000 and 2004), dairy products (30%), fruit and vegetable products (21%), and bakery products (11%).

- None of the groups within the food & beverage processing sector is, on a per capita basis, larger that the Canadian average. BC accounts for about 12.5% of Canadian beverage shipments. However, we account for only 6% to 7% of Canadian shipments of meat & meat products, dairy products, and fruit & vegetable products shipped.

A short profile of the leading food & beverage product groups is provided below:

LEADING PRODUCT GROUPS WITHIN THE BC FOOD & BEVERAGE SECTOR

Product Group	2004 Manufacturing Shipments ($million)	Establishments (Listings)	Primary Location	Annual Growth (Average 2000-04)	Exports ($ million)	Export Markets
Meat and Meat Products	$1,576	72 beef & pork 30 poultry	Lower Mainland Cariboo	High (11.1%)	$241	US/Taiwan/Japan/ South Korea
Beverages	$1,130	106 alcohol 75 other	Wine: Thompson – Okanagan; Other: Lower Mainland	Low (2.2%)	$98	US
Dairy Products	$841	39	Lower Mainland Thompson-Okanagan Vancouver Island	Medium (6.7%)	$12	US/Japan
Fruit & Vegetables	$477	55 fruit 67 vegetable	Lower Mainland Thompson-Okanagan Vancouver Island	Medium (5.0%)	$129	US
Animal Food Products	$414	n/a	Distributed throughout BC	Negative (-4.6%)	$56	US/Japan
Other Food Industries	$374	n/a	n/a	Low (2.5%)	$137	US
Bakery Products	$311	166	Lower Mainland	Low (2.8%)	$87	US

A brief profile of the major product groups is provided below:

- In 2004, BC shipped nearly $1.6 billion worth of **meat and meat products**. This represents almost 24% of all food and beverage shipments. It is a significant increase from the $1.0 billion shipped in 2000. The processed meat sector has been under strain due to the outbreak of BSE and Avian Influenza. In addition, there are issues such as waste disposal that are increasing costs. Concerns have also been reported regarding a lack of skilled labour, insufficient capacity and low cost competition.

- The total value of **beverage** shipments in BC rose from $1.0 billion in 2000 to over $1.1 billion in 2004. Alcoholic products including wide, beer, cider, and distilled spirits accounts for majority of BC shipments. Leading non-alcoholic beverages (excluding dairy and fruit juices which are contained in other categories) include soft drinks, coffee, tea, and water. There are approximately 110 wineries of various sizes in the province. Most of the wine industry is based in the Okanagan while the most other beverage manufacturers are located in the Lower Mainland.

- The value of manufacturing shipments for **dairy products** totaled $841 million in 2004. Over 70% of BC's milk production is in the Fraser Valley. The market for mainstream dairy products can be classified as a mature market with growth in demand is largely tied to population growth. However, there is also a growing market for value added dairy products such as yogurt and various cheeses.

- Processed **fruit and vegetable** shipments totaled about $477 million in 2004, representing 8% of BC's total food and beverage shipments. Fruits and vegetables are sold fresh, chilled, frozen, canned, preserved, sweetened, dried and as juice. The sub-sector has undergone significant change during the last two decades in response to changing consumer demand for new and different products, the rationalization of processing plants, and the evolution of a more open trading environment.

- The value of **animal food product** shipments totaled about $414 million in 2004, representing 6% of BC's total food and beverage shipments. The estimated annual value of production, excluding pet food but including fish and specialty feeds for agriculture, is $305 million to $335 million. Over 1 million tonnes of feeds are sold each year of which agriculture bulk feed sales account for about 875,000 tonnes, bagged feeds account for 62,000 tonnes and aquaculture feed accounts for about 75,000 tonnes. The segment employs about 300 people.

- The value **of bakery product** shipments has also increased up slightly from $279 million in 2000 to $311 million in 2004. Over time, the wholesale bakery industry has slowly evolved to a structure that favors more centralized, scale production, which has resulted in the reduction in the number of plants. Firms in this sub-sector produce a wide variety of products including, but not limited to, bread, pizza dough, cakes and pies, muffins and pastries, cookie, crackers, pasta, and tortillas.

On the following page, we have provided a list of some of the largest food & beverage manufacturers in British Columbia (drawn from the BC Manufacturers' Directory, a business directory maintained by BC Stats on behalf of the Government of BC).

Company	Location	Employees	Primary Product
Meat Product Manufacturing			
Britco Pork Inc.	Langley (District)	180	Meat
Grimm's Fine Foods Ltd.	Richmond	280	Meat
J.D. Sweid Ltd.	Burnaby	300	Meat
Lilydale Food Products	Port Coquitlam	200 to 499	Poultry
Schneider Foods Inc.	Surrey	225	Meat
Superior Poultry Processors Ltd.	Coquitlam	200	Poultry
Sunrise Poultry Processors Ltd	Surrey	400	Poultry
Fruit and Vegetable Preserving and Specialty Food Manufacturing			
Allied Food Services	Vancouver	100	Frozen Vegetables
Golden Valley Foods Ltd.	Abbotsford	165	Jams and Sauces
Lucerne Foods Ltd. - Processing Plant	Abbotsford	100	Frozen Food
Okanagan Similkameen Co-Op Growers Ass'n	Oliver	150	Fruit and Vegetable
Sepp's Gourmet Foods Ltd.	Surrey	230	Frozen Foods
Snowcrest Packers	Abbotsford	150	Frozen Foods
Sun-Rype Products Ltd.	Kelowna	400	Dried Fruit and Fruit Juices
Dairy Product Manufacturing			
Island Farms Dairies Co-Operative Association	Victoria	300	Dairy
Saputo Foods Ltd (Abbotsford Plant)	Abbotsford	120	Dairy
Bakeries and Tortilla Manufacturing			
English Bay Batter (Vancouver) Inc.	New Westminster	100 to 199	Cookies and Crackers
Gizella Pastry Ltd.	Vancouver	100 to 199	Baked/Frozen Products
Gourmet Baker Inc.	Burnaby	200 to 499	Bakeries
Original Cakerie Ltd, The	Delta	300	Pre-Cooked Frozen Foods
Other Food Manufacturing			
Canadian Innovatech Inc	Abbotsford	150	Alternative Foods
Canterbury Coffee Corp.	Richmond	130	Coffee
Freybe Gourmet Food Ltd.	Langley	250	Seasoning and Dressing
Golden Boy Foods Inc.	Burnaby	200	Peanut Butter and Nuts
Leading Brands of Canada, Inc.	Vancouver	220	Beverages
Murchie's Tea-Coffee Ltd. Est. 1894	Richmond	120	Coffee
Que Pasa Mexican Foods	Richmond	116	Mexican Food
Sunrise Soya Foods	Vancouver	100	Tofu and Soy Beverages
Beverage Manufacturing			
Calona Vineyards	Vancouver	100 to 199	Wine
Cascadia Brands Inc.	Vancouver	200	Beer
Coca-Cola Bottling Ltd.	Coquitlam	200 to 499	Beverages
Labatt Breweries British Columbia	New Westminster	200	Beer
Molson Canada	Vancouver	3200	Beer
Okanagan Spring Brewery	Vernon	223	Beer
Pepsi Bottling Group	Delta	200 to 499	Soft Drinks
Grain and Oilseed Milling			
Hain Celestial Canada - Yves Veggie Cuisine	Delta	230	Soy & Tofu
Nature's Path Foods Inc.	Richmond	250	Organic Breakfast Products
Rogers Foods	Chilliwack/Armstrong	100	Milled Flour and Cereal
Sugar and Confectionery Product Manufacturing			
Dynamic Chocolates Inc.	Delta	160	Chocolate Confectionery
House of Brussels Chocolates	Vancouver	130	Chocolate Confectionery
R.C. Purdy Chocolates Ltd.	Vancouver	500 to 999	Confectionery
Rogers' Chocolates Ltd.	Victoria	140	Chocolate
Rogers Sugar Ltd.	Vancouver	205	Sugar

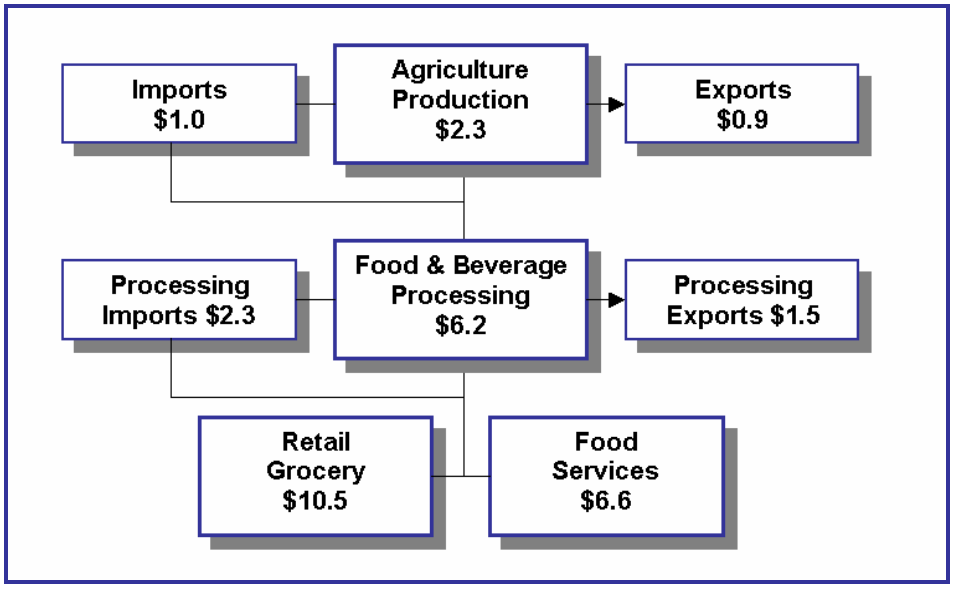
Source: BC Manufacturers Directory

C. INTERNATIONAL TRADE

1. Overview of Production, Imports and Exports

The size of food industry in British Columbia at the agriculture production, food & beverage processing, and retail/food services levels is illustrated in the following chart. As indicated, in 2004, the agri-food industry operated a trade deficit (imports exceeded exports) at the both agriculture production and food & beverage processing levels.

Overview of BC Agri-food Industry in 2004 ($ Billions)



2. Trade Balances By Commodity and Product Category

In 2004, BC operated with a $144 million trade deficit in agriculture products, with deficits in fruit and potatoes & vegetables offsetting surpluses in floriculture & nursery and greenhouse vegetables.

International Trade Balance in Selected BC Agriculture Commodities, 2004

Selected Commodities	Imports ($ millions)	Exports ($ millions)	Trade Balance ($ millions)
All Commodities	**$1,013**	**$869**	**-$144**
Floriculture & Nursery	$95	$344	$249
Dairy	n/a	$1	$1
Poultry & Eggs	$35	$3	-$32
Cattle & Calves	$5	$40	$35
Potatoes & Vegetables	$354	$11	-$343
Greenhouse Vegetables*	$11	$162	$151
Fruits	$419	$138	-$281
Hogs	n/a	$4	n/a
Grains & Oilseeds	$32	$112	$80
Fur	$1	$20	$19
Honey	$4	$0	-$4

BC operated with an $829 million trade deficit in processed food and beverage products (excluding seafood), with significant deficits in fruit & vegetables, beverages, and other food products.

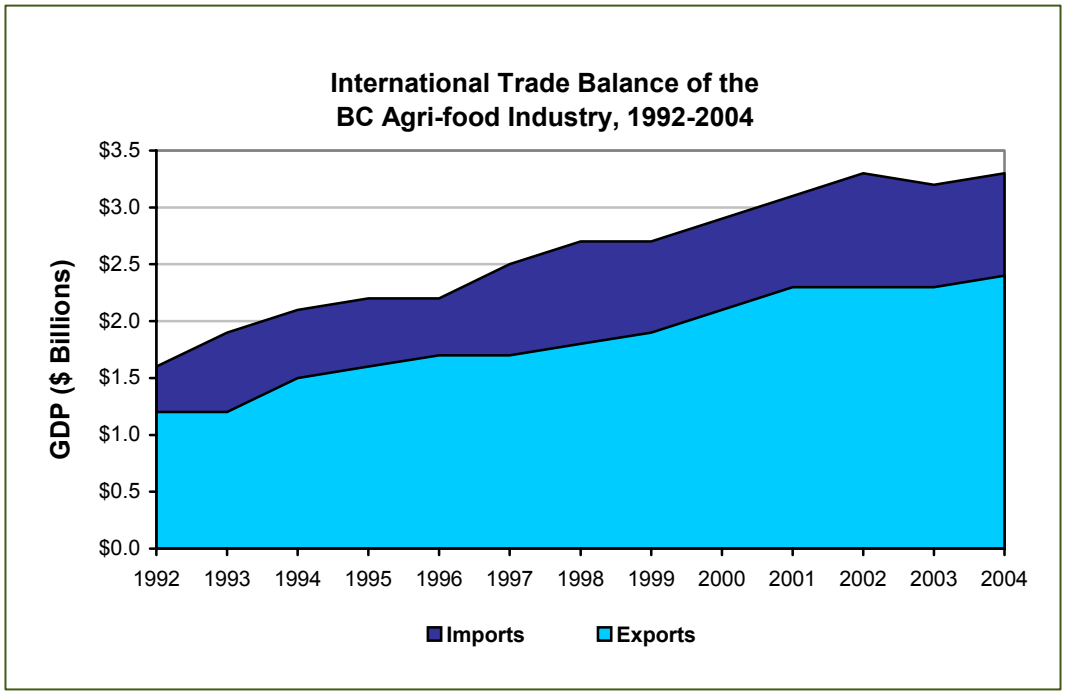
International Trade Balance in Selected BC Processed Foods & Beverages, 2004

Selected Product Groups	Imports ($ millions)	Exports ($ millions)	Trade Balance ($ millions)
All Product Groups	**$1,789**	**$960**	**-$829**
Meat and Meat Products	$227	$241	$14
Fruit and Vegetables	$376	$129	-$247
Dairy Products	$33	$12	-$21
Animal Food Products	$52	$56	$4
Bakeries & Tortillas	$114	$87	-$27
Other Food Industries	$317	$137	-$180
Beverage Industries	$267	$98	-$169

The trade balance in poultry & eggs, cattle and calves and meat and meat products in 2004 were affected by the impacts of the Avian flu and BSE.

3. Trade Balance Over Time

Exports, imports and the trade balance have each increased steadily over the past decade. Overall, the trade deficit has increased from about $400 million in 1992 and $600 million in 1996 to $800 million in 2000 and over $900 million in 2004.



III. COMPETITIVE REVIEW OF THE BC INDUSTRY

This chapter first highlights strengths, weaknesses, opportunities and threats facing the agri-food industry in British Columbia and then compares the characteristics of the industry in BC to the characteristics in other jurisdictions.

A. STRENGTHS, WEAKNESSES, OPPORTUNITIES AND THREATS

In order to identify key strengths, weaknesses, opportunities and threats facing the agri-food industry in British Columbia, we conducted a detailed review of past reports, strategies, SWOT analyses, and industry profiles prepared by sector and product groups and associations. In total, we reviewed 65 documents that contained some form of SWOT analysis of selected commodities groups, product groups, and components of the BC industry. As a means to summarize the results of these analyses, we tabulated how frequently specific issues were identified as strengths, weaknesses, opportunities or threats. The results are shown in the chart on the following page (the number of brackets indicated how many of the 65 reports identified the issue). The issues that were most commonly identified are highlighted in the following paragraphs.

1. Strengths

Key strengths that were commonly identified by the various commodity and product groups included:

- **Food safety and quality control systems**

  Many sectors report satisfaction and confidence in the safety and quality systems that enable BC to market safe and healthy products. These systems help to maintain the reputation of British Columbia as a jurisdiction with a clean, healthy and safe environment for food production and processing. The focus group reaffirmed this positive feature of BC agriculture.

- **Experienced and strong associations and marketing agencies**

  Those sectors with well-organized and well functioning industry associations and marketing organizations see this as a key to industry health. The ability to cooperate on marketing initiatives and other issues is a significant strength. They result in reduced costs, more effective efforts and better issue resolution.

- **Proximity to major markets**

  The most significant market is the United States and the proximity to this market is seen as a major advantage for BC agriculture. BC's position on the edge of the Pacific Rim, where there are many growing Asian economies, is also viewed positively.

- **Growing demand for agriculture products**

  An increasing population in BC is creating some increase in demand especially in the growing ethnic communities. Demand is also rising in BC's largest trading partners.

SUMMARY OF ISSUES FOR THE SWOT ANALYSIS

Opportunities

- Niche/Valued Added Products/Markets (40)
- New Technology/Innovation/Research (34)
- Improved Quality/Safety Control (28)
- Export Markets (23)
- Increased/Targeted marketing & Market Research (23)
- Rise in Consumer Demand for Healthy Products (13)
- More Workforce/Managers Training/Education (12)
- Partnerships/Alliances (12)
- Increased Sales in Local/Canada Markets (11)
- Industry Cooperation/Coordination (10)
- Import Replacement (10)
- Increasing Demand (Often More Than Supply (8)
- Production Increase Through Better Management (7)
- Increasing Ethnic Population (6)
- New Product/Species (6)

Strengths

- Food Safety/Quality Control Systems (16)
- Experienced and Strong Associations/agencies (13)
- Proximity to Major Markets (12)
- Technology/Research Infrastructure (11)
- Good Marketing Expertise/Programs (11)
- Growing Demand (11)
- Diversity of Products/Potential Products/Processing (11)
- Support, Research, Programs of Government (10)
- Climate (9)
- Good Industry Cooperation on Issues and Research (9)
- Industry Embracing of New Technology (9)
- High Quality Physical Environment (8)
- Consumer/Retailer Preference for Local Products (8)
- Emerging Sub Sectors/Niche Products (8)
- Management Expertise (8)
- Increasing Demand for Healthy/Organic Products (7)
- High Level of Entrepreneurialism/Motivation (6)
- Skilled/Educated Workforce (6)
- Proximity to BC Markets (6)
- BC Reputation as “Supernatural”, Healthy (6)
- Good Reputation of BC Products - Quality/Healthy (6)
- Production Increasing (6)
- Good Quality Raw Materials (5)
- Direct Marketing/Producers Set Prices (4)
- Growing Population/Markets (4)
- Vertical Integration (4)
- Transportation System (4)

SWOT ANALYSIS

Weakness

- Lack of Knowledge/Skills RE Markets/Marketing Poor Market Programs (20)
- Government Regulations/Policy/Processes (19)
- Poor Industry Communication/Cooperation (16)
- Low Economics of Scale/Critical Mass (14)
- Low Skilled Workforce (11)
- Lack of Good Associations/Champions (10)
- Poor Technology/Research Infrastructure/ Activities (10)
- Lack of Training/Training Programs (8)
- Raw Material Costs/Availability/Quality (7)
- Transportation Costs (6)
- Lack of Industry Statistics/Data (6)
- Land Costs (6)
- Product Volume/Timing & Mix Often Inappropriate (5)
- High Labour Costs (5)
- Lack of Venture Capital (5)
- Lack of Short Term Labour (4)
- Lack of Experience/Poor Media/PR (4)
- Environmental Opposition/Regulations (4)
- Underdeveloped Shrinking Processing Sector (4)
- Lack of Proper Equipment (4)
- Fragmented Industry (4)
- Distribution Infrastructure Problems (4)
- Market Power of Larger Players (4)
- No Unified Approach to Labour Issues/Outmoded Standards/Human Resource Issues (4)

Threats

- Global Competition-Cost/Volume (38)
- Regulatory Uncertainty/Complications/Cost (16)
- Disease and Pests-Related Costs (15)
- Cost of Production Inputs (13)
- Environmental Protection Pressure (11)
- Urbanization Urban/Rural Conflict (10)
- Poor Industry Cooperation/Info Sharing (10)
- Demand for Pure/Safe/Healthy Products (9)
- Demand/Price Fluctuations (9)
- US Trade Practices (9)
- Low Investment Levels/Financing Issues (7)
- Tariff/Non/Tariff Barriers (7)
- No Industry Strategy (6)
- International Subsidies (6)

- **Good climate**

  Parts of BC have a mild climate without severe winter conditions. This is especially true in the agriculturally rich Fraser Valley and the Lower Mainland. These areas are home to significant greenhouse operations, which benefit from this climate. The mild conditions greatly reduce the costs of heating the greenhouses. Focus groups held in the Lower Mainland also mentioned this as a strategic advantage.

- **Long-established research infrastructure**

  Many sectors are pleased with the research and development efforts of the government directed at the industry. The major agricultural research centres such as Summerland are viewed positively and seen as having a significant impact on the efforts to stay apace with necessary innovations in production and processing technologies.

- **Good marketing expertise and programs**

  As stated above, those parts of the industry that belong to organizations that effectively organize marketing efforts are pleased with the results. There is also satisfaction with certain government efforts to provide marketing information, financing and other assistance in establishing new markets.

- **Diversity of products, potential products and processing techniques**

  There are a wide variety of agricultural products being produced by BC producers and processors. This is sometimes viewed as a negative due to lack of economies of scale and industry fragmentation. However, the diversity works in the industry's favour in that much of the rising demand is for niche or value added products. The small BC operations are favourably suited for this type of production.

- **Support, resources and programs of government**

  The government efforts (at all levels) are viewed very differently by different sectors. There is also variety in how government efforts are viewed on individual issues. However, there is a significant level of support and appreciation for government efforts by a number of sectors.

- **Industry embracing of new technology**

  This is another area that differs greatly sector-to-sector. Some sectors do not appear to be embracing technology and innovation as rapidly as others. However, many sectors are adopting new processes and techniques that are greatly enhancing their competitiveness. Some areas such as greenhouses are highly technical in their operations.

2. Weaknesses

Key weaknesses that were commonly identified by the various commodity and product groups included:

- **Limited knowledge, skills and resources available for marketing, and market development.**

  Many members of the industry indicate that they are dissatisfied with their own knowledge and skill

levels in regards to marketing. They desire to have more market information and assistance with marketing efforts and believe that this is at least partly a public sector responsibility. There is a significant desire for government programming assistance for accessing new markets. The need for this type of information and skill set was a common theme in the focus group sessions.

- **Government regulations, policies and processes**

  There is a reduced level of government support of the agriculture sector in Canada. This is due in part to the urbanization of the population, which reduces the public's knowledge and appreciation of farm practices. The industry has not on the whole done a good job with public relations in a time of ever more demanding consumers. Regulations are often more geared to public concerns with the practices of the industry rather than with its health and profitability.

  The regulatory environment was mentioned often during the workshop sessions as an impediment to development. Of particular concern were regulations regarding processing, transportation, pesticide registration, and food safety.

- **Poor industry communication and co-operation**

  Many sectors, especially those without strong industry associations, report poor communication and a lack of coordinated action within the sector. Producers and processors often act in a competitive rather than a co-operative manner. There is a lack of appreciation of the potential for partnerships and alliances within and between sectors.

  Many focus groups expressed concern that their industry was not able to achieve cooperation on a regional basis. Many opportunities had been lost due to the inability to mobilize joint actions.

- **Low economies of scale and a lack of critical mass**

  Many of the farms and other members of the value chain are small and unable to enjoy economies of scale. Their small size also makes it problematic to respond to the demands from the large consolidated retailers. The trend is to large consolidated companies with the ability to influence price and product decisions of producers. The large companies prefer to deal with single source suppliers, which puts pressure on producers and wholesalers. A lack of economies of scale reduces margins and is a disincentive to investors.

  Small farms have fared particularly poorly in the last few years. Realized net farm income in Canada declined from over $3 billion in 1989 to a loss of almost $5 billion in 2003. Farmers are increasingly taking off farm employment and the government is providing farm support payments due to the primary producer being unable to cover costs from market revenue. Between 1993 and 2003, Canadian farm debt grew 104%.

  Comparisons with the US are illustrative of the financial position of Canadian farms. Per farm income in the US in 2004 was $43,178 in Canadian dollars while Canadian farms averaged $24, 606. In 2003 the average farm in the US was carrying a debt of $113,402 while the Canadian farm dept load average was $199,024.[1]

1 Measuring the Level of Need, Canadian Federation of Agriculture

- **Under-developed technology and research infrastructure, particularly related to new product development**

  Although some sectors are satisfied with the level of assistance they receive for technology and innovation, others are not. They do not believe that there are sufficient resources focussed on technology and innovation targeting their sector. Often the sector is too small to have specialized facilities dedicated to researching narrow issues and information sources are not sufficiently developed or utilized to make up for the lack of formal research structures.

  This area was seen as a high priority by many of the focus groups. There was concern that there was little R&D occurring relating to certain sectors and that the information regarding R&D activity and technological advances were not readily available.

- **Low skilled workforce**

  Education levels in the agriculture sector are generally lower than those in other industries. Low wages, poor working conditions and the image of agriculture as a non-skilled area discourage those workers with high skills from considering the industry as a career choice. The focus group participants, especially those in outlying regions were particularly concerned with this issue. One major concern was the inability to compete with other industries that were able to offer higher wages.

- **Lack of good associations or champions**

  Due to the small size and fragmented nature of the industry there are many sectors that are not represented by a cohesive organization that can adequately represent their interests in dealing with government or other organizations. A lack of champions is the result of the independent nature of (especially) producers and a reported lack of appreciation of the benefit of co-operation. Many focus groups complained that their associations lacked resources and were operated by volunteers who could not dedicate sufficient time and energy to the sectors' issues.

- **High land costs**

  Urbanization is encroaching on many traditionally farm use areas and raising the value of the land due to its suitability for residential and other development. In the Lower Mainland, there is a high demand for hobby size farms or country estate type properties that is also driving up land prices. This threat was confirmed by the focus groups in the Lower Mainland and the Okanagan.

- **Raw material costs, availability and quality**

  Some processors indicate that there are significant problems accessing the high quality raw materials they need for processing the niche products in demand by the market. There are issues of material access in sufficient quantities and on a regular basis due to the size and fragmentation of the production sector.

- **Lack of training participation and training programs**

  Industry representatives complain about the lack of training and education that is specifically targeted to the needs of agriculture. There are some targeted programs but most are at a relatively

low skill entry level. There is also an issue with low participation in the training and education offerings by the existing workforce. This may be due to lack of interest or the inability of employers to finance training because of narrow margins. The traditional method of transferring farm technology knowledge, that of father to son, is breaking down as the next generation is often not interested in carrying on with the family farm.

Focus groups in the interior were particularly concerned about the lack of agriculture programs at their community colleges. There were indications that the issue was the inability to attract enough students to justify offerings.

- **Increasing transportation costs**

  This issue has become critical with the recent rise in fuel costs. Producers located outside of the Lower Mainland are facing significantly higher charges to ship their produce to the main market of Vancouver. In addition, the tighter security controls at the US border are lengthening shipping times and thus raising the total cost of exporting to the US. Some focus groups also indicated that inter-provincial transportation regulations were also a cost factor.

3. Opportunities

Major opportunities that were commonly identified by the various commodity and product groups included:

- **Niche and valued added products**

  Due to global competition the industry is unable to effectively compete on price in the commodity markets. As an alternative, many operations are turning to small value added niche markets to meet the demand for specialty products from health and quality conscious consumers. There are significant and growing opportunities in this sector. For example organic foods comprise 2% of Canadian food consumption but is growing at a rate of 20% annually. All of the focus groups recognized this as an area of opportunity.

- **New technology, innovation and research**

  There is room for further applications of technological innovation in the agricultural production and processing areas. Further advances in both growing and processing technologies will allow cost reductions and the development of the niche products in such high demand. An increase in the use of technology by producers is necessary to keep pace with the technological changes in other businesses. The focus group participants were mainly concerned with their inability to access reliable information regarding technological advances in their field.

- **Improved quality and safety controls**

  Although the quality and safety control system is generally viewed positively, there is still room to increase the confidence of consumers in BC's ability to produce safe, high quality food products. There will be a payoff from further enhancing the province's reputation as a clean, environmentally friendly jurisdiction. The further growth of the organics sector should be a large part of this development.

- **Targeted marketing and market research**

  Many sectors believe that there is room to enhance the market intelligence now available to the industry. The view is that specific jurisdictions should be targeted with specific product lines and that the decisions about how to implement such marketing campaigns need to result from further and more intense market research.

- **Export markets**

  Many sectors believe that there are untapped opportunities in both the US and other foreign markets. Again, the principal products that are seen as having potential are the healthy, high quality niche products. Areas such as organics and nutraceuticals are seen as not having reached their export market potential.

- **Partnerships and alliances**

  Consolidation in the processing and distribution sectors have made it more difficult for small operators to sell their product. The answer to this industry development is seen by many as an extension of the system of partnerships and alliances within and between sectors. These are needed to achieve economies of scale and mutual cost reduction through coordinated action.

- **Rise in consumer demand for healthy products**

  Even before the recent scares of mad cow and avian flue, the rise in demand for safe and health food products was impressive. Organic produce is taking over more and more shelf space in supermarkets and major multinationals are entering this and other health food areas that were formally the domain of small niche marketers. Consumers want to know where their food has come from and that its safety can be depended on.

- **More workforce and managers training and education**

  The potential for a higher skilled work force and management includes promoting cost reduction, increased productivity and new product development. There are currently efforts underway provincially to increase the attractiveness of the industry as a career choice. While there is the perception that agriculture is a low skill industry, many jobs require a significant degree of technical skill. .

- **Increased sales in domestic markets**

  The potential for increasing sales locally will come from a rising population, increase in the ethnic population and import replacement opportunities. Many products are imported due to convenience and the nature of the distribution system that are or could be produced locally. Many focus group participants saw opportunities in increased penetration of local markets. There was a high degree of support for buy local campaigns.

4. Threats

Potential threats that were commonly identified by the various commodity and product groups included:

- **Strong global competition**

  The trade in agricultural products has been globalized through both the liberalization of trade and the technological advances that allow more products to be delivered to any market in the world in a very short time period. North American producers are competing not only with each other but also with foreign, often lower cost producers who can compete also on quality and volume. Many competing jurisdictions also enjoy the benefit of larger subsidies that are available to Canadian producers.

  New low cost suppliers have emerged to compete for market share. These include Argentina, China, India, Malaysia and Turkey. Another successful emerging supplier is Brazil. In just 5 years this country has grown to be the largest exporter of beef and chicken, the second largest in soybeans and soybean oil and the fourth largest in pork.[2]

- **Regulatory uncertainty and related complications and costs**

  Many sectors complain that government regulations are often vague, contradictory, and overly burdensome. Compliance with unnecessary regulations can be a major contributor to costs that significantly reduce margins. Producers especially are often dealing with three levels of government each with its own set of regulations. Also, regulations are often designed for large operations and compliance by small-scale operations is untenable. Other competing jurisdictions are often not encumbered with similar regulations. There was a great deal of discussion in the focus group sessions regarding the regulatory environment. There was a great deal of concern regarding a lack of coordination between various levels of government and even between ministries within the same government. Regulations are often contradictory and confusing.

- **Disease and pests-related costs**

  Controlling outbreaks such as mad cow or avian flu can be devastating for a sector. In addition environmental regulations often restrict or ban the use of control medium that have traditionally been sufficient to control a pest or disease. Also, a lack of harmonization of related regulations between the US and Canada creates situations where imports are blocked due to the use of chemicals recently banned in the US and replace by a product not yet approved in Canada.

- **Cost of production inputs**

  Labour costs are often sited as a major issue that greatly reduces margins in the agri-food industry. Land costs are another major issue.

- **Environmental protection pressure**

  Along with demands for healthy and safe produce, the public is more and more concerned that the production of food does no harm to the environment. There is growing pressure to produce with reduced amount of chemical aids for pest control or production increases. Responding to these concerns can raise producers' costs considerably. Other competing jurisdictions are often not

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encumbered with similar regulations. Some focus groups indicated that they were being required to spend increasing amounts of time and money to meet rising standards in this area.

- **Urbanization with urban/rural conflicts**

  There are increasing numbers of urban/rural conflicts being reported as developments encroach on traditional farmland. New residents are annoyed by farm production smells and noises, surface water for agriculture is threatened by urban run off of septic and other contaminants and there is increased pressure on water costs and availability. This also tends to raise the cost of land and remove some land suitable for agricultural from the sector. Focus groups in the Lower Mainland and the Okanagan were very concerned with this issue.

- **US trade practices**

  Despite the existence of the free trade agreement between the US and Canada there exist a number of trade restrictions that limit the movement of agricultural products into the US market. There are both tariff and non-tariff barriers employed to restrict competition from Canadian goods.

- **Poor industry cooperation and information sharing**

  The fragmented nature of the agriculture industry is not just a function of its size and diversity but appears to extend to include a lack of cooperative efforts and absence of organized sharing of technological and market information. Partly a function of poor organization and partly the independent nature of the players the phenomena is a real threat to future prosperity. Many in the focus groups, especially in the interior complained that operators still acted like competitors instead of moving to cooperate in the face of industry changes.

- **Demand for pure, safe and healthy products**

  Consumers are more and more focused on quality and safety issues. The trend is to products that can be traced from source and proven to promote the health of the consumer. As an indication of this organic product growth in North America is in double digits. This trend is not only domestic but dominates the export trade (especially to Europe).

B. COMPARISON OF BC TO OTHER JURISDICTIONS

1. Overview of the Agri-food Industry in Selected Provinces

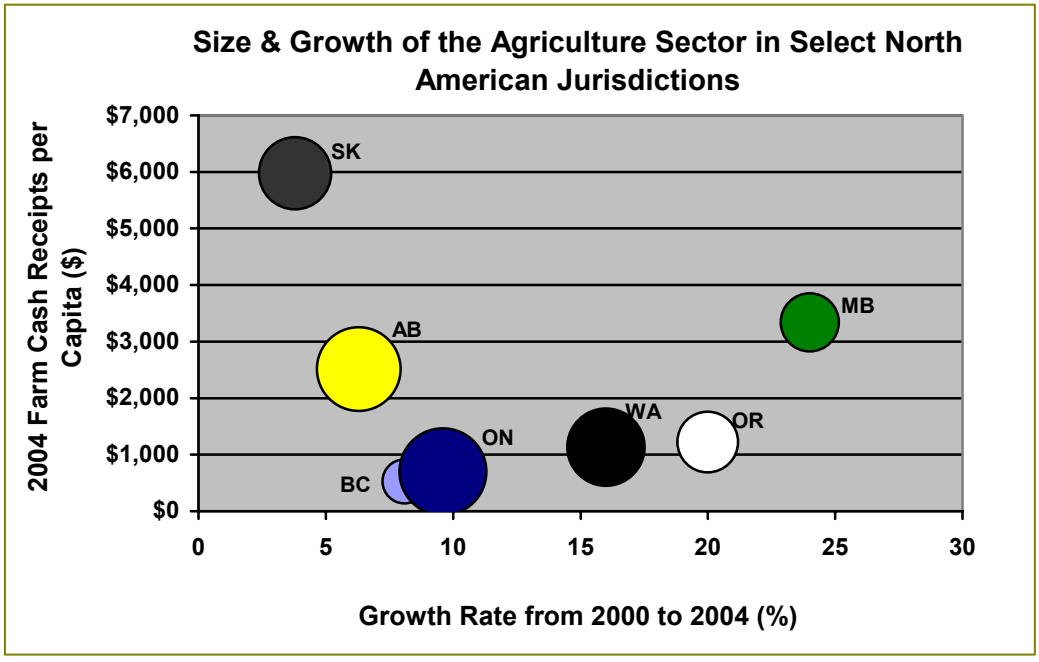
To gain further perspective regarding the agri-food industry in BC, we reviewed the characteristics of the industries in Alberta, Saskatchewan, Manitoba, Ontario, Washington State and Oregon. A short profile of each region is provided in Appendix III. The major characteristics of each of the agriculture sector and the food & beverage processing sector in each of these provinces and states are summarized in the table below.

CHARACTERISTICS OF AGRI-FOOD INDUSTRY IN EACH JURISDICTION

Region	Agriculture Sector		Food & Beverage Manufacturing Sector			Agri-food GDP as % of Total GDP (2002)
	Total Farm Cash Receipts (2004 $Billion)	Employment (2001)	Manufacturing Shipments (2004 $Billion)	Employment (2003)	Number of Processors (2003)	
BC	$2.2	23,500	$6.1	31,100	1127	2.3%
AB	$8.0	49,900	$9.9	24,900	622	3.1%
SK	$5.9	44,000	$2.1	6,125	254	6.6%
MB	$3.9	25,500	$3.0	8,000	289	6.9%
ON	$8.6	75,400	$32.1	97,838	2550	3.0%
WA	$6.8	45,138	$12.5	44,445	906	1.9%
OR	$4.2	28,019	$6.7	24,776	581	2.3%

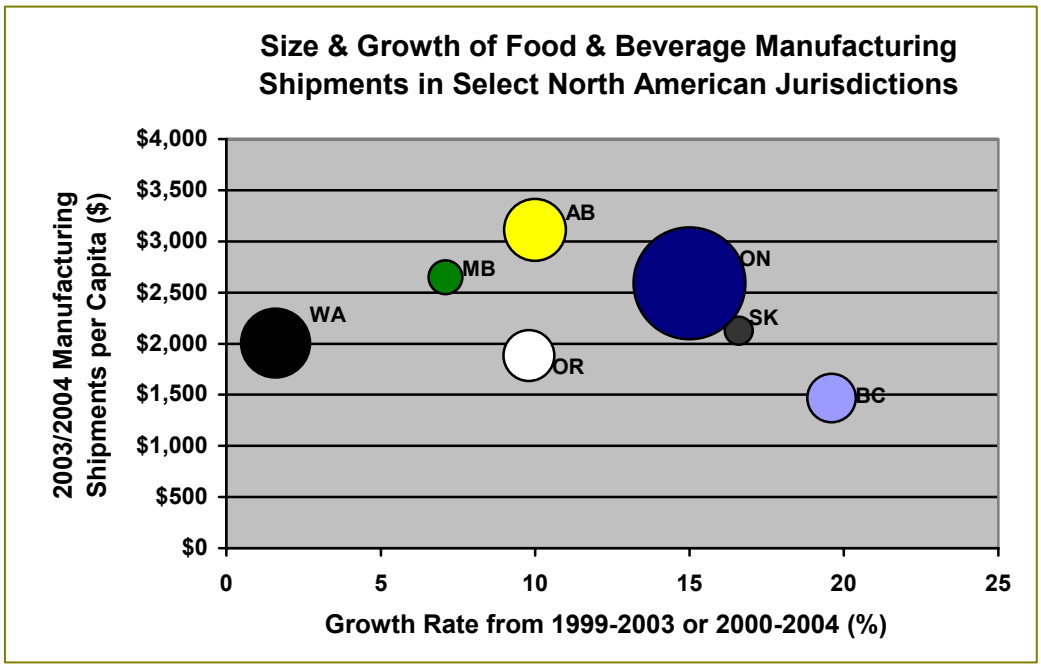
Note: US figures have been converted into Canadian currency at the rate of US$1 = $1.18 Canadian. Washington State and Oregon employment data is from 2002, and manufacturing shipments and GDP data is from 2003. Saskatchewan and Manitoba food & beverage industry employment data is from 2002.

When compared to the other jurisdictions, the agriculture sector in BC is the smallest in terms of both total and per capita farm cash receipts and it has experienced relatively little growth between 2000 and 2004. The small size and low growth of the sector relative to other jurisdictions suggest that the sector is facing some significant and persistent barriers to growth.



With respect to the food and beverage processing sector, manufacturing shipments in BC are the smallest on a per capita basis and the total value of manufacturing shipments in BC is greater only than that in Saskatchewan and Manitoba. However, BC outperformed all the other jurisdictions in

manufacturing shipments growth in recent years pointing to a relatively more robust outlook for the sector.



The ratio of food and beverage processing shipments to farm gates is higher in BC than in other jurisdictions (with the exception of Ontario), reflecting the relative importance of value-added production. Despite the comparatively small size of the sector, BC has more agri-food processing and value-added operations than the other jurisdictions except Ontario. As a result, the average size of processors tends to be smaller in BC than in other jurisdictions.

BC's agri-food GDP accounts for a relatively smaller portion of total provincial GDP compared to other Canadian provinces since BC is more dependent on traditional industries such as forestry/wood products, commercial/business services and transportation.

Alberta's agri-food industry is larger than the BC industry but it has been growing at a slower pace than that in BC in recent years. The agri-food industry in Alberta is export oriented. In 2004, exports of primary and processed agricultural and food products totaled $4.9 billion. The gain was primarily driven by a 29% increase in value added exports. Of the total Alberta agri-food exports, about one-half went to the US ($2.3 billion). Japan was the next largest export market ($713 million) followed by Mexico ($484 million). The top five Alberta agri-food exports in 2004 were beef ($1.5 billion), wheat ($934 million), pork ($358 million), canola seed ($357 million) and processed potatoes ($231 million). Alberta competes with BC as a major agri-food products distribution center. Goods from Alberta are shipped to western Canada and the rapidly expanding markets in the pacific and northwestern US, as well as Pacific Asia and the Russian Far East.

Saskatchewan's per capita farm cash receipts are significantly higher than those in BC. Although the food and beverage manufacturing sector in Saskatchewan is smaller than that in BC, its growth in recent years has been strong. The top five Saskatchewan agriculture exports in 2003 were wheat ($1.4 billion), canola ($443 million), plant products ($320 million), flax ($185 million) and lentils ($161 million). The top three export destinations were US ($707 million), Japan ($601 million) and European Community ($477 million). The largest food categories in Saskatchewan by number of firms are: meat products (30%), flour

milling and bakery products (20%), and fruit and vegetable products (10%). Saskatchewan is internationally recognized as a leader in the agricultural biotechnology industry with 30% of the national industry located in Saskatoon.

Manitoba's agriculture sector grew at a significantly faster pace than that in BC between 2000 and 2004. Unprocessed or bulk exports account for more than half of Manitoba's agri-food exports. Although Manitoba's food and beverage manufacturing shipments are smaller than those in BC; on a per capita basis, manufacturing shipments are higher than those in BC.

Although Ontario's agriculture sector is larger than that in BC, the two provinces are similar in terms of per capita farm cash receipts. Ontario's food and beverage manufacturing sector is considerably larger than that in BC in terms of both total and per capita manufacturing shipments. It is the second largest manufacturing sector in Ontario and it has registered strong growth in recent years. Most (87%) Ontario agri-food exports are destined to the US and about two-thirds of Ontario agri-food imports are from the US. The top five Ontario agriculture commodities in terms of market receipts in 2004 were dairy products ($1.5 billion), hogs ($1 billion), floriculture and nursery ($945 million), cattle and calves ($782 million) and vegetables ($7 million). Ontario's agri-food industry has a strong research base and diversified product lines. Ontario produces more than 200 agricultural commodities, a diversity unmatched in most parts of the world. The province is a leader in food technology research and development. There are more than 500 scientists in Ontario doing basic and applied agri-food research.

Washington's agriculture sector is larger than that in BC on a total and per capita basis and the agriculture sector has grown at a faster rate than that in BC in recent years. However, the food and beverage manufacturing sector has seen very little growth compared to BC's double digit growth. The top five Washington agriculture commodities in terms of production value in 2003 were apples (US$ 1.16 billion, with a 13% increase over 2002, apples represented 20% of the total agricultural value produced in the state), milk (US$ 675 million), wheat (US$ 521 million, a 5% increase over 2002), potatoes (US$ 489 million, a decrease of 5% from 2002) and cattle and calves (US$ 475 million, an increase of 5% from 2002). Washington ranked seventh among the US states in 2002 in terms of crop production value whereas its ranking was 24th in terms of livestock and poultry production value. Washington's overall ranking was 11th. Some of Washington's advantages in the agri-food industry include its reliable production of high quality crops, cost effective energy prices, and ability to quickly and efficiently ship products to the rapidly growing Asian marketplace.

Oregon's agriculture sector is larger than that in BC and its growth has been strong relative to BC in recent years. Oregon's food and beverage manufacturing shipments are similar to BC on a total and per capita basis but, in terms of growth, it lags BC. The top five Oregon agriculture exports in 2004 were wheat and products (US$ 171 million), vegetables and preparations (US$ 158 million), seeds (US$ 111 million), fruits and preparations (US$ 106 million) and nursery products (US$ 35 million). The top five Oregon agriculture commodities in terms of production value in 2004 were greenhouse and nursery products (US$ 817 million), cattle and calves (US$ 503 million), hay (US$ 381 million), milk (US$ 363 million) and grass seed (US$ 350 million). In 2003, Oregon ranked first among all the US states in the production of various types of grass seeds and berries, hazel nuts and cut Christmas tress. Crop production accounted for 71% of total agricultural production whereas livestock and poultry products accounted for 23%. The tremendous diversity of Oregon's agricultural commodities - more than 250 commodities - matches the geographical and climatic diversity within the state. There are at least seven distinct growing areas ranging from dairies along the Oregon Coast to the large dry land wheat farms of the Columbia Basin, from the rich soils of the Willamette Valley to the wide-open rangeland of Southeastern Oregon. This diversity has allowed Oregon's agriculture sector to increase its value of production in 11 of the past 12 years.

2. The Building Blocks of Cluster Development

The rate of development of any economic cluster, including the agri-food industry, is a function of a number of key building blocks or economic drivers including:

- Access to labour and management skills;
- Access to other key inputs needed by the industry (e.g. land, energy, and raw materials);
- The strength of the innovation support system (e.g. the research capabilities and infrastructure as well as technical capabilities of the industry);
- Access to financing such as debt and equity financing, including venture capital;
- Access to markets (e.g. proximity to major markets, trade barriers, and impacts of consumer trends);
- The transportation infrastructure; and
- Macro-economic conditions (e.g. economic conditions or demographic changes in the population);

To better understand how the agri-food industry in BC is positioned, we conducted an extensive review of available data on the characteristics of each of the regions. The results are summarized in Appendix IV, with some of the major findings highlighted in the following table.

COMPETITIVE POSITION OF THE BC AGRI-FOOD INDUSTRY RELATIVE TO OTHER SELECT JURISDICTIONS

Component	Relative Position of British Columbia
Access to Labour and Management Skills	• **Overall, the population of BC is very well educated**. The percentage of the population in BC, aged 25 to 54 years, with a university degree is higher than in the prairie provinces. Moreover, the percentage of the Canadian population with a college or university education is the highest amongst countries in the G7. • **BC's farm operators are well educated**. BC has more farm operators with university education than other Canadian provinces as well as the largest proportion of farm operators engaged in off-farm employment • **Labour productivity tends to be lower in BC than in other jurisdictions,** (as defined by agri-food GDP per employee). • **BC produces fewer graduates with business management degrees,** as percent of total university graduates, when compared to US west coast states. • **Wage costs have traditionally been higher in BC than in other Canadian provinces** (with the exception of Ontario). However, in terms of salary costs, Vancouver has significant cost advantage over US west coast cities. Real average hourly wage costs in all of the Canadian jurisdictions declined between 1998 and 2003. • **Unemployment rates tend to be higher in BC than in Washington State and the prairie provinces,** which somewhat increases the supply of unskilled labour.

Component	Relative Position of British Columbia
Other Key Inputs	• **For food processing operations, BC locations tend to be less expensive than those on the US west coast** in terms of the combined cost of labour, transportation, utilities, and taxes. However, other Canadian provinces tend to enjoy location cost advantages vis-à-vis BC. • **In particular, electricity costs can be significantly lower in BC than in other jurisdictions.** However, all regions are being impact by rising oil and natural gas prices. • **Agriculture operations in BC can face some significant cost disadvantages**. Statistics Canada ceased publishing input cost data on farm operations in the late 1990s. However, the data available prior to that indicates that costs such as chemicals and fertilizers tended to be higher in BC than in other Canadian jurisdictions because of factors such as lower production volumes and the mix of crops products
Strength of the Innovation Support Systems	• **Agri-food industry investment in R&D tends to be very low in comparison to the R&D expenditures of other economic sectors.** • **Canada is falling further behind compared to the US with respect to investment in agri-food R&D.** Between 1990 and 2002, US public research expenditures on agriculture as percent of agriculture GDP increased steadily whereas Canada registered a declining trend • **Across all sectors, BC's innovation performance lags behind Ontario and US jurisdictions** in terms of performance indicators such as GERD to GDP ratio, per capita industrial R&D expenditures, participation in federal R&D programs and number of innovative firms. • **After-tax R&D costs in BC are low compared to other Canadian provinces.** Furthermore, R&D tax incentives in Canada are more attractive than those in the US as they provide more flexibility and utility
Access to Financing	• **Real estate provides an important source of collateral for loans.** The average net worth of BC farms is higher than than in other Canadian Provinces, due mostly to higher real estate values. • **The ratio of farm debts to farm gate receipts for farms in Canada remains high across the jurisdictions**, reflecting the recent challenges (such as BSE and drought) faced by the farms. • **In comparison to other jurisdictions, BC farms are more reliant on chartered banks as a source of financing.** • **Across all sectors, access to venture capital is lower in BC in terms of both early stage and later stage financing**. The amount of venture capital invested in BC is significantly lower than in Ontario and Quebec although the level of venture capital investment did increase sharply in 2004. As a percentage of GDP, venture capital investment in BC is lower than in Ontario and Quebec and is much lower than in the high-tech centres of Washington State, California and Massachusetts.
Access to Markets	• **BC's GDP per capita and average annual food expenditures per household compare favorably** with most Canadian and US west coast jurisdictions. • **BC has the largest population amongst the western provinces.** • **Unlike the prairie provinces, BC is net importer of agri-food** which may provide opportunities for import replacement. • **BC is comparable to most other Canadian jurisdictions in terms of reliance on export sales**. Provinces with high levels of exports, as percentage of food and beverage manufacturing shipments, experienced greater growth in recent years highlighting the importance of export markets for sustained growth. • **Ontario and the US states have the advantage of closer access to major markets** (e.g. California and the US east coast)

Component	Relative Position of British Columbia
The Transportation Infrastructure	• Unlike the prairie provinces and ON, BC has **direct, year-round access to ports.** The BC ports provide ready access to Asian markets. • However, **Vancouver has the highest average air freight costs and the third highest road freight costs** when compared to Toronto, Calgary, Seattle and Portland.
Macro-economic Conditions	• **The cost competitiveness of BC and Canada is susceptible to the appreciation of the Canadian dollar** which has recently gained strength against the US dollar • **BC's corporate tax rate is competitive within Canada**, although it is higher than the rate in US west coast states. BC's average personal tax rate is lower than that in SK and MB but higher than in the other jurisdictions.

IV. REVIEW OF OPPORTUNITIES AND CHALLENGES FACING THE INDUSTRY

One of the objectives of Phase I of the study was to identify key issues that may represent opportunities and/or challenges for the industry in BC. Over 100 issues were identified through our research. Given that the focus of this project is to identify specific strategies and meaningful actions that can be undertaken to promote development of the industry, it was important to narrow down the list to focus on those issues considered to be of highest priority. To prioritize the issues, we considered a variety of key criteria. The criteria are listed below.

- **Key to the potential development of the agri-food sector**

  To be considered a high priority, the issue should represent an opportunity to further develop the agri-food sector or represent a challenge that will have to be met to pursue the opportunities that are available.

- **Actionable in the short to medium term**

  The project is not intended to address issues that would require years of effort to resolve or actions the will take years to develop and implement. The primary focus is on issues that are actionable within 1 year.

- **Business focused**

  The project is intended to address the business realities of the industry. The focus is on increasing the economic viability of the sector and its members.

- **Cross-sectoral (broad focus)**

  When possible, issues and actions that affect more than one subsector of the agriculture industry will be given priority. Similarly, in later phases, actions that may address more than one issue will be given highest priority.

- **Potential impact**

  Issues and actions that have a high level of significance in the sense that their resolution could have a large impact on the industry will have priority.

- **Likelihood of success**

  Issues that have resisted attempts at resolution in the past and appear unlikely to be significantly addressed within the context of this project will be accorded a low priority. Those that have been successfully addressed in other jurisdictions or sectors will be given higher priority.

- **Measurable impact**

  Industry and government support for action tends to be strongest when the projected impacts are measurable and can be clearly demonstrated.

- **Reasonable resource requirements**

  Resource limitations are a fiscal reality for both industry and government. Any issues and actions that would require significant expenditures, vis-à-vis the size of the industry and the potential benefits, will not be feasible.

- **Provincial focus**

  Issues and actions that require inter-jurisdictional cooperation would be much more difficult to implement. Issues and actions that have their origins and their potential solutions within the province will have priority including Federal Government actions within the province.

After applying these criteria, we identified twelve issues, opportunities or challenges as potentially high priorities for action for industry, government and the Investment Agriculture Foundation of BC including:

- Supporting the development of value-added products and capabilities;
- Working to further develop export markets;
- Enhancing our marketing expertise, capabilities, and efforts for local as well as for export markets;
- Improving our innovation performance;
- Increasing access to skilled workers and managers;
- Increasing access to financing, particularly venture capital;
- Building upon our strong quality and safety systems;
- Positioning ourselves to take better advantage of the changes in the value chain;
- Improving the level of industry cooperation and coordination (including coordination with government);
- Reducing the costs of production;
- Enhancing environmental sustainability; and
- Increasing access to the physical resources required for production (e.g. land and water).

Government regulations are an important issue for both the agriculture and food & beverage processing sectors. Although not specifically highlighted as a separate issue, government regulations are an integral part of many of these issues including costs of production, quality & safety systems, environmental sustainability, access to physical resources, marketing, labour issues, access to finance, and coordination between industry and government.

These issues were confirmed through the consultation process undertaken during Phase III of the project. Early in each session, the attendees were asked to identify their top two or three concerns, write them down and submit them to us on a small card. The combined results from all sessions are detailed in the table below.

ISSUES MOST COMMONLY IDENTIFIED AT THE WORKSHOP SESSIONS

Opportunity, Challenge or Issue	Number of Attendees Identifying the Issue
Costs of operations	77
Government regulations	53
Marketing skills, resources/branding	52
Access to skilled labour	51
Local marketing/consumer awareness	46
Access to capital/financing	40
Lack of innovation	32
Lack of processing and value-added capacity	31
Poor industry cooperation/collaboration	31
Access to physical resources/land/water	30
Need for niche/value-added products	30
Poor industry image	24
Access to seasonal/low cost labour	17
Urban/rural conflicts	16
Environmental pressures	14
Safety and quality issues	13
Poor management skills	12
Lack of information	11
Low prices	10
Accessing export markets	9
Trade barriers	8
Lack of economies of scale	6
Lack of new entrants/aging farmers	6
Value chain challenges	5
Weak associations	5
Distance to markets	5
Transportation delays/traffic/border	4
Certification pressures	4
Develop alternative uses for crops	4
Waste management	3
Need for affordable seasonal housing	2
High taxes	2

The following sections provide a brief overview of each opportunity or challenge, highlight sectors of the agri-food industry that have specifically identified each as an issue, provide an overview of current situation in BC with respect to the issues, and identifies actions and strategies that have been employed elsewhere to take advantage of the opportunity or address the challenge.

A. DEVELOPMENT OF VALUE-ADDED PRODUCTS AND CAPABILITIES

1. The Opportunity

BC producers are facing significant competition from other jurisdictions that may enjoy competitive advantages related to land costs, labour costs and other input costs as well as higher levels of government support. Strategies that have been used effectively by some producers and jurisdictions to increase margins and overcome cost disadvantages include incorporating a higher value-added or premium component into their products as well as developing products that are tailored to specific niche markets. These can involve adding value to existing mainstream product or developing enhanced products or new emerging products such as biofuels.

The premium or value-added nature of a product may be based on one or more characteristics including:

- Uniqueness of appearance (e.g. tomatoes on the vine, specialty mushrooms)
- Quality of ingredients, the production or manufacturing process, or the finished product;
- Sensory appeal (e.g. flavour, consistency, mouth feel, aroma or appearance);
- Formulation or product format (e.g. low fat content, low in carbohydrates, functional benefits, etc);
- Presentation in terms of branding and/or packaging;
- Convenience (e.g. chicken kabobs or ready to eat vegetables); and
- Point of sale.

Traditional elements such as freshness, naturalness, brand and price are being complemented by a desire for value-added and environmentally sustainable practices. Quality systems such as tracing and identity preservation can also be value-added features. Examples of value-added or premium products can be found in areas as diverse as specialty crops, wine making, regional branding, cleaning and bagging grain, pasta processing, organic agriculture, service-embedded products and ready-to-eat convenience meals.

Niche markets are growing in organics, ethnic foods, high quality convenience based products and functional foods. This is a rising demand for products that support consumer demand for health and lifestyle products. A recent Ipsos Reid survey indicated that a majority of Canadians have made health based adjustments to their diet. There is a growing emphasis on zero tras-fats, low sodium, healthy/high fire, reduced sugar, allergen identification, and fortification as consumers seek to manage their health and prevent disease.

2. Sectors Specifically Highlighting the Opportunity or Issue

Some of the sectors that specifically highlighted value-added and/or niche market products in their SWOT analyses and or development strategies include:

- Bee Keeping
- Small lot agriculture
- Berries
- Horticulture
- Food and beverage
- Beef
- Grain, Oilseed, Pulse/Forage Seed
- Tree fruit
- Floriculture
- Dairy
- Greenhouse vegetables

3. Situational Analysis

- **The market for value-added products and niche market products has been growing rapidly.**

  The market for specialty value-added agricultural products has grown to an extent that it has shifted much of the activity from commodities to niche market consumer products. A recent overview by Senauer (2000) provides the results of numerous studies that show that about half of all U.S. consumers are more concerned with quality/convenience than they are with price. Among the fastest growing markets are ethnic products, organic/natural foods, and kosher products. Since many of these markets are growing at 10 to 20 percent per year (versus an overall food market that inches up at a much slower rate) there is significant growth potential. Demand for specialty foods has been increasing as a result of a number of factors including ageing of the population, a trend to smaller households, more women working outside the home, increased demand for quality, freshness, and "healthy" foods, and concentration of discretionary purchasing power into fewer hands. It has been estimated that the size of the specialty food market is over $30 billion in North America.

- **The ethnic food market in the US is large and growing.**

  About 30% of US residents are considered ethnic. The ethnic food market in that country is estimated at US$75 billion dollars a year. This market is expanding due to new immigration as well as the diversifying tastes of Americans.

- **Organic foods are a major component of the value-added market.**

  Canadian sales of organic food are expanding at the rate of about 12% to 14% per year and researchers estimate that organic sales will jump from the 1.8 percent share of the retail market they held in 1999 to 4.4 percent by 2010. Agriculture Canada predicts that the organic sectors will grow by 20% annually in Canada. The US market for organics is forecast to total $30.7 billion by 2007 (Datamonitor Analysis). Thirty-nine percent of Americans use organic products (Natural Marketing Institute).

- **Functional foods and nutraceuticals are another rapidly growing segment of the market.**

  Nutraceuticals are any natural food or food ingredient considered to provide medical or health benefits, including the prevention and treatment of diseases. The U.S. nutraceutical market will reach a value of $35.4 billion by 2006 driven by an ageing population.

  Functional foods fall within the broader category of nutraceuticals and are typically defined as foods or beverages with added ingredients that improve health by preventing or reducing the risk of disease. Sales in the US of these types of products are forecast to exceed $30 billion by the end of the decade.

- **The market for value-added or premium products is not limited to North America.**

  Countries in the Pacific Rim are experiencing huge financial growth and are therefore moving to a quality based market.

- **BC already manufactures a wide range of value-added and niche market products that demand a premium in areas such as functional foods, organics and ethnic foods, with a**

particular focus on products that support consumer demand for health and lifestyle products.

For example, in 2001, sales of BC Health Products and Functional Foods companies totalled more than $1.5 billion. The majority of sales are in the retail, producers/growers and ingredient supply sectors. Canada is the main market for health products and functional foods but there are also exports to the US and Asia.

- **Opportunities have been identified for a wide variety of products in BC.**

  Examples of some of the specific opportunities that have been identified and pursued by various sectors include organic milk and yogurt; prepared chicken products; fresh or top-quality produce; exotics; specialty baby food; Halal, Kosher and hormone free, grass fed cows; nutraceuticals, herbals and botanicals; functional foods; ethnic (especially Asian) foods; and greenhouse vegetables such as culinary cucumbers, medicinal herbs, watercress, wasabi, Chinese vegetables, eggplants, snap beans, hot peppers and sugar peas.

- **Producers interested in developing establishing or expanding value-added capabilities or pursing niche markets may face some significant constraints to development**.

  Examples of potential constraints include:

  - The regulatory environment creates many issues for the industry. The cost of meeting regulatory standards may discourage producers from becoming small niche product processors.
  - Access to capital has been limited for the sector due to high risks. Value added manufacturing can be a highly capital intensive operation. There can be significant amounts of development work to perform before profits are made. Western Economic Diversification does provide some funding through the Agricultural Value-Added Loan Program, delivered in co-operation with Farm Credit Canada (FCC). This Loan Program is designed to improve access to patient debt capital for small and medium-sized processors in this sector.
  - Capital costs for value-added start-ups are considerable. Many producers are discouraged from becoming processors of value-added products due to costs of converting to this type of operation.
  - Related skill levels are scarce. There is little training available for value-added processors and access to information is limited by resources and logistics.
  - There is a lack of industry co-ordination in the sector. Niche product producers need to come together to create a plan to overcome obstacles such as limited capital and investment for start up, shifting product demand, incomplete technical skills and resources, and access to volume based markets.

4. Potential Strategies for Development

Diversifying into efficient value-added operations and developing niche markets can help producers and processors in higher cost jurisdictions such as BC to both retain market share and increase their margins. By improving their market position, producers can reduce existing pressures to compete on the basis of productivity, farm size or on price. A move away from reliance on bulk commodities and conventional products may enable producers to be less vulnerable to price fluctuations caused by low-cost and subsidized market entrants.

Some of the strategies that have been employed by industry and governments in other jurisdictions to promote the development of value-added and niche markets include:

- **Establish agencies dedicated to promoting value-added products.**

  Governments and industry groups often react to specific issues by establishing an arms length agency to undertake development work to address the problem. Many have done this to promote the development of value-added products. In Alberta, for example, the Alberta Value-Added Foundation is a not-for-profit organization that uses networks, knowledge sharing, mentoring, technical support and financing to achieve its aims.

- **Help ensure there are processing facilities available.**

  This could be done through establishing industry coops and shared facilities or by supplying low cost financing for such facilities. There are also regulatory issues involved and these need to be dealt with.

- **Establish or expand facilities to develop and test new products.**

  These facilities can be stand alone or attached to academic institutions as part of an agriculture and food program. There are numerous examples of these types of facilities. In Alberta, the Alberta Food Processing Development Centre works with the processing industry to promote new technologies, processes and products. Alberta also has the Alberta Sensory Evaluation Centre. Other examples are the Manitoba Food Development Centre, the Saskatchewan Food Industry Development Centre, the Oregon Food Innovation Centre that is a part of Oregon State University, the Alberta Center for Agri-Industrial Technology and the Saskatchewan POS Pilot Plant. The POS plant provides micro, small and large scale bioprocessing services to the cosmetics and fragrance, functional foods, animal feeds and nutraceutical industries. The micro-scale equipment means new products can be assessed and commercialized more quickly.

- **Provide financing to promote the development and marketing of value-added products.**

  Many producers wish to become processors but do not have the capital needed for the conversion to value-added operations. Also, the research involved in developing, testing and promoting new products can be significant. Some jurisdictions subsidize this process either through providing related services, grants to educational and research agencies or providing funding directly to businesses. The Alberta Value-Added Foundation has programs to support private sector from the pre-commercialization phase as well as academic organizations doing related research. Alberta also has the Agri-Processing Incentive Program that cost shares related projects with industry. Saskatchewan has the Agri-Value Program that provides assistance for new product development and market assessment.

  Other examples of programs include the US Department of Agriculture Value-Added Producer Grants, the Missouri Department of Agriculture Value-Added Loan Guarantee Program and the Alberta Planning and Assessment for Value-added Loan Program. The Alberta program is targeted at producers considering establishing or expanding a value-added enterprise. Scotland has the Organic Aid scheme that provides payment for land in conversion, payment for selected capital activities, extended advisory support and maintenance grants for continued support.

- **Provide information about market opportunities and procedures.**

Information can be provided through industry associations, online or targeted individuals. Alberta produces a number of publications designed to facilitate increased processing activities. These include:

- Value-Added Agriculture: case studies on research and marketing;
- Business Basics for Alberta Food Processors;
- Market Guide for Alberta Food Processors: Market & Distribution Channels; and
- Alberta Agricultural Processing Directory.

The USDA produces "Alternative Enterprises - Value-Added Agriculture", a fact sheet discussing the why, how and what to be successful in developing a value-added agricultural enterprise. The Tennessee Department of Agriculture has an interactive web site called "Evaluating the Potential of Success for Value-Added Products" where processors can assess the likeliness of marketing success for value-added products. The Centre for Profitable Agriculture at the University of Kentucky publishes "How to Get Value-Added Products Into Local Grocery Stores" and "Marketing for the Value-Added Agricultural Enterprise"

The Manitoba Value-Added Agropreneurship Initiative targets Manitoba's food agropreneurs and small business owners to help them achieve a distinct competitive advantage through increased knowledge and strategy development.

B. DEVELOP EXPORT MARKETS

1. The Opportunity

Exports are an increasingly important market for BC suppliers. Exports (inter-provincial and international), as a percentage of the value of all agri-food sales, rose from 18.4% in 1992 to 21.5% in 2002. According to many sectors, there are untapped opportunities to further expand sales in export markets. In particular, our proximity to the US (the largest market in the world) and our historic marketing relationships with Asia-Pacific combined with our location on the Pacific Rim provide the basis for further expanding export sales.

The specialty products mentioned in the previous issue are particularly suited to exploiting export market opportunities. In fact, value-added niche markets and products largely drive growth in export sales. BC has the advantage of being located next to the huge US market that is demanding increasing amounts of healthy, safe, and nutritious specialty items.

2. Sectors Specifically Highlighting the Issue

Some of the sectors that specifically highlighted export market development in their SWOT analyses and or development strategies include:

- Fruit juices
- Bottled water
- Sugar and Confectionery Products
- Floriculture and Nursery
- Dairy
- Horses
- Grapes
- Blueberries
- Value-added food and beverage
- Beef
- Poultry
- Specialty chicken
- Greenhouse vegetables
- Mushrooms
- Wine
- Beer

3. Situational Analysis

- **There is an opportunity to take advantage of increasingly open world trade.**

  Liberalization of trade under the WTO should help BC exporters to continue to develop offshore markets. However, this trade liberalization also opens up the BC market and other traditional export markets to low-priced competitors.

- **There are still significant trade barriers to overcome.**

  Some countries use protectionist measures such as tariff rate escalations. Tariff escalation is the practice of setting lower tariffs on primary bulk products and higher tariffs on processed products. This practice protects the domestic processing of the importing countries and discourages processing in the exporting countries.

- **BC is well positioned geographically in relation to its major and potential trading partners.**

  Location is still viewed as a significant advantage for BC exporters. BC is a neighbour of the US, the largest market in the world. In addition, historic marketing relationships with Asia-Pacific and location on the Pacific Rim provide the basis for further developing exports into this growing marketplace.

- **BC may benefit from further diversifying our export markets**.

  The US is by far BC's largest export market for agricultural products (in 2003, 64% of Canada's agriculture export sales were to the US). The heavy reliance on the US market can have a number of disadvantages, including:

  - A trend towards increasing greater trade barriers. For example, the United States continues to invoke protectionist measures against British Columbia agricultural products such as tomatoes.
  - The increased US security is creating issues with border delays.
  - The rising Canadian dollar is reducing a traditional trade advantage.
  - The US uses public funding to promote US agricultural projects in export markets.
  - Canada's independent pesticide registration system for minor crops such as horticulture is not harmonized with the US and producers may not choose to register their products in the smaller Canadian market. Sometimes the approval process can produce a two-year lag. Also, the US re-registers older chemicals as new ones are approved and Canadian users of the older chemicals may no longer be able to export their product to the US.

- **BC must maintain a reputation for high quality, safe agricultural products**.

  Strong standards relating to environmental, quality and safety issues are an important element of developing high quality consumer products and helps position these products in elite markets by enhancing the reputation of BC products.

- **Some assistance is available in developing export markets.**

The federal government operates a system of trade commissioners located in a number of foreign countries to assist with export activities. The Export Development Corporation offers export receivables insurance and export financing. NORTHSTAR Trade Finance Inc. supports small and medium-sized Canadian exporters by offering financing to creditworthy foreign buyers of eligible Canadian support goods and services. ExportSource is Team Canada Incorporated's on-line resource for export information and contacts. It provides information relating to all trade-related government departments and agencies including preparing to export, marketing research, marketing your exports, and entering the market.

- **Canada's strict environmental regulations can be seen as an impediment to exports.**

  For example, the health products and functional foods providers export most of their products and feel that federal regulations are detrimental to their industry. Strict environmental regulations are viewed as a burden because foreign competitors may not be held to the same high standards.

- **Canadian growth in agricultural exports is driven by value-added products.**

  Exports of consumer-orientated products have risen more than four-fold since 1990 and now account for one half of agriculture exports. In that same period, our bulk exports have declined in real dollar terms.

4. Potential Strategies for Development

Increasing exports and developing external markets can significantly increase profit margins. It can also provide a degree of security by diversifying the customer base. Reliance on a limited number of markets leaves the industry vulnerable to a variety of variables. Reducing reliance on the US market can help mitigate threats of tariff and non-tariff trade barriers from that jurisdiction.

Some of the strategies that have been employed by industry and governments to promote the development of export markets include the following.

- **Provide systematic market intelligence to existing and potential exporters.**

  The most common form of assistance to exporters is using public resources to investigate export opportunities. Activities range from desk research to the placing of trade officers in other jurisdictions to monitor opportunities (Washington State has six agriculture trade representatives posted overseas). Common forms of assistance are supplier databases, matching buyers and suppliers, and strategy design. The Canadian federal government provides many of these services through its Agri-Food Trade Service. Washington State has the Washington State International Marketing Program that provides market intelligence and assists companies to access related federal programs.

  Saskatchewan has established the Saskatchewan Trade and Export Partnership to provide these services and Ontario Export Inc. undertakes similar activities. Saskatchewan has researched, identified and posted specific product opportunities in a variety of markets. Saskatchewan trade missions to Russia have recently resulted in contracts for seed equipment manufacturers from that province.

- **Provide financial assistance for exporters.**

Many jurisdictions provide financial support for a range of activities including trade shows, international trade missions, group promotions, and branding strategies. Others provide loan guarantees and other risk mitigation funding. Washington State provides financing to exporters through the Washington State Export Finance Assistance Centre. Funding includes working capital loans, export credit insurance, and loan guarantees to lenders making loans to foreign buyers.

- **Provide training and advice regarding export marketing.**

  Most of the organizations mentioned above also provide training and individual consulting services to exporters. Training ranges from how to export to specific jurisdictions and how to identify opportunities to how to undertake product promotion and make marketing contacts. Many jurisdictions encourage the forming of export consortia and provide training in the development and operation of these entities.

  The Ontario Government offers the PROFIT (Program to Raise Ontario Foods International Trade) seminar to companies interested in learning about the mechanics of exporting food and beverage products to the United States. For example, Thyme and Truffles Inc. in Toronto introduced an unknown frozen product category to US distributors a decade ago with significant help from government programs that helped the company understand exporting requirements and connect with US buyers.

- **Establish "Export Councils".**

  There is a model of such councils in the United States. These are regionally based groups that assist exporters and potential exporters to access information, skills and knowledge. These councils could create "chains" or networks of people who represent export excellence and make them available to agri-food exporters. Through its export market initiatives, Oregon has recently accessed previously untapped markets in Korea for meat products and China for wine.

- **Focus on limited number of products.**

  Many jurisdictions have selected a small number of export ready products for strategic export marketing efforts in the appropriate countries. Products are selected that have the potential to be readily accepted in the target market and modifications are made to the processing, safety protocols or branding style to facilitate further market penetration.

C. ENHANCE MARKETING EXPERTISE, CAPABILITIES AND EFFORTS FOR LOCAL AS WELL AS EXPORT MARKETS

1. The Opportunity

To gain market share, especially for niche products and export markets, BC producers and processors need to further develop their marketing skills. There are marketing programs in the major universities in the province; however, industry representatives suggest that the level of industry investment in, and government support for, marketing is limited. In addition, some sectors lack a coordinated approach to the issue made more necessary due to consolidation in the distribution industry.

Many sectors recognize that there is a great need for improving the marketing capabilities of the industry. This appears to be true for both commodities and value-added products. The need is probably greatest in the niche/value-added areas, as many of these products are new to market. In

addition, many of these products are being manufactured by producers who are transforming themselves into processors but who have little marketing experience.

A wide range of constraints related to marketing have been highlighted in the industry literature that we have reviewed. These include:

- Lack of knowledge regarding markets and marketing;
- Lack of marketing skills;
- Limited brand image;
- Limited appreciation and use of internet for marketing;
- Lack of marketing support programs;
- Lack of marketing infrastructure;
- Lack of marketing education programs;
- Inflexible regulated marketing systems;
- Lack of a focus on necessary marketing activities;
- Uncertainty among growers with regards to marketing structure;
- High marketing costs;
- Lack of sector wide marketing initiatives;
- Informal marketing systems; and
- Lack of market research on opportunities and tools.

2. Sectors Specifically Highlighting the Issue

Some of the sectors that specifically highlighted marketing issues in their SWOT analyses and or development strategies include:

- Field Vegetables
- Fruit Juices
- Organics
- Grain, Oilseed, Pulse & Forage Seed
- Horses
- Specialty chicken
- Food and Beverage
- Small scale food processors
- Agriforestry
- Agritourism
- Health and Functional Food
- Small lot agriculture
- Horticulture
- Mushrooms

3. Situational Analysis

- **Because of a focus on commodity products that compete largely on the basis of price and availability, the industry has not traditionally placed a high priority on developing marketing capabilities.**

  BC has relatively few large producers in either the agriculture or food & beverage processing sectors.

- **Some sectors have access to marketing assistance**.

  The criticism of the marketing infrastructure was not consistent across all sectors. Some areas reported a level of satisfaction with the marketing efforts of their sector, association or marketing organization.

- **Many products are regulated by formal marketing organizations.**

  Eight marketing boards and commissions are established and operating in BC, including:

  - BC Broiler Hatching Egg Commission;
  - BC Chicken Marketing Board;
  - BC Cranberry Marketing Commission;
  - BC Egg Marketing Board;
  - BC Hog Marketing Commission;
  - BC Milk Marketing Board;
  - BC Turkey Marketing Board; and
  - BC Vegetable Marketing Commission.

  The efforts of supply management agencies to develop programs for marketing specialty products receive mixed reviews from the industries involved. Some critics of the efforts have referred to them as prohibitive, ineffective, unresponsive and economically nonviable.

- **BC's "Buy Local" campaign has been relatively successful.**

  There are over 1,200 companies and associations using the Buy BC logo in their advertising and promotional materials, with over 5,000 Buy BC products identified at major grocery retailers. The program, "Buy BC", is now being operated under license by the BC Agricultural Council. A Canadian wide study recently indicated that one in ten Canadians prefer to buy Canadian food products. [1]

- **Local small-scale marketing organizations are lacking.**

  In BC, there are few formally organized regional or provincial marketing networks or co-operatives in place to facilitate the movement of local value-added products into the marketplace. This means that many opportunities for import replacement are lost. Also, there is no one to lead the formation of alliances with local retailers and distributors to increase local consumption of local products.

- **Due to lack of size, the industry need to undertake cooperative marketing**

  This is necessary to achieve the critical mass necessary to satisfy the volume demands of the large retailers. Individual producers lack the necessary economies of scale to quality as high volume supplies.

- **Other jurisdictions provide more support for agriculture marketing than does BC.**

  Other jurisdictions support agricultural product marketing through public sector funding which may give them an advantage not enjoyed by BC producers.

4. Potential Strategies

Marketing becomes much more important as suppliers move away from commodities and move up the value-added/specialty product spectrum. Without up-to-date marketing intelligence and marketing

[1] Consumer Perceptions of Food Safety and Quality, Ipsos-Reid Corporation, 2004.

skills, any industry in the increasingly competitive marketplace will find itself at a distinct disadvantage. Enhancing the marketing skills of the agriculture industry is key to a profitable future.

Some of the strategies that have been employed by industry and governments to promote the development of marketing expertise include the following:

- **Implement marketing and branding programs.**

  Many jurisdictions have implemented buy local campaigns. These campaigns can be provincial/state or regionally based. One international example of note is the successful branding campaign in Wales of local produce under the title of "True Taste" that promoted local fresh product. This was accomplished through extensive industry co-operative efforts. In Alberta, a "Dine Alberta" promotion links Chefs with producers to promote local produce. The “From the Heart of Washington” Program is a marketing campaign to increase demand for specialty crops locally. Oregon has a state-wide “Brand Oregon” campaign. Upcoming development such as the 2010 Winter Games provides opportunities to increase the profile of the local industry. There is much support for a campaign based on the successful BUY BC program.

- **Promote farm direct marketing systems.**

  The marketing of farm produce directly to the end buyer provides the producer with higher returns, has import replacement potential, and satisfies the consumer demand for traceability. Many jurisdictions encourage this practice. One approach is to support the formation of farmers markets. Another element would be the education of consumers about what is available locally.

  One strategy pursued by some jurisdictions is to develop case studies and business planning for farmers markets, on farm sales and direct to retail marketing. The University of Arizona publishes a Direct Farm Marketing and Tourism Handbook with information on business planning, and advertising. Washington State Department of Agriculture publishes a Handbook for Direct Farm Marketing. There is a North American Farmers' Direct Marketing Association that supports agritourism, on-farm retail, farmers' markets, pick your own, consumer-supported agriculture, and direct delivery which has links to the BC industy.

- **Establish agri-food marketing education programs.**

  Jurisdictions that have a large part of their economy based on agriculture have incorporated agriculture specific marketing programs in a college or university. A part of many education programs are industry-driven best practice demonstration projects. Western Michigan University has a Food Marketing Program. California State Polytechnic University has a Food Marketing & Agribusiness Management/Agricultural Education Department (FMAM).

- **Build capacity through training and information.**

  The need for capacity building is highly significant especially among small operators. A highly useful skill that could be promoted is the use of e-commerce. Washington Sate has established the Small Farm and Direct Marketing Program to address this issue. The program provides technical assistance to address small producer marketing issues such as:

  - Direct marketing strategies and regulations;
  - Market barriers for small farms;

- Farmers market development;
- Chef-farm connections;
- Farm-to-Cafeteria connections;
- Value-added farm products;
- Eco-labels and organic certification;
- Agricultural tourism;
- Grant development and resources; and
- Legislation affecting small farms.

Washington State University has a Small Farms Program that provides information and education programs for those involved in local food systems. The program helps develop local markets for small producers. Through handbooks, information sessions and consulting services, Washington State has facilitated the creation of a number of farm-to-cafeteria programs that link producers directly with institutions to market local products.

Numerous other methods are used to increase information flows regarding things such as best practices and marketing opportunities. These include forming networks, conferences and online information sources. Another suggestion was to establish Agriculture Business Incubation Centres to focus on marketing skills and information.

- **Encourage marketing innovation by industry groups.**

  For example, many government and marketing organizations provide financial incentives to encourage producers and processors to develop new products.

- **Fund related research.**

  The University of Connecticut has a Food Marketing Policy Centre that researches food and agricultural marketing and related policy questions in order to provide information that can contribute to improved performance of the food production and marketing system.

D. IMPROVE INNOVATION PERFORMANCE

1. The Opportunity

Innovation is commonly defined as a process through which economic value is extracted from knowledge through the generation, development and implementation of ideas to produce new or improved products, processes and services. Recognizing its importance, governments across North America and abroad have incorporated research and innovation as the centerpiece of their economic development policies. Research indicates that:

- Technological progress is responsible for up to one-half of the growth of the US economy, and is one of the principal driving forces in long-term growth and increases in living standards.

- Innovation is a major driver of job growth. The Government of Ontario reported that, over a 10 year period, two out of every three new jobs were created in technology-based industries.

- The importance of innovation continues to increase. To remain competitive, firms now must innovate more rapidly than ever before due to globalization, stronger competition, the growing impact of information and communications technology, and the high pace of scientific and

technological change. In its Innovation Strategy, the Government of Canada noted that a much heavier emphasis is being placed on knowledge than in the past to the point where knowledge is now the main source of competitive advantage.

- Innovation is the primary determinant of standard of living. After a review of international studies regarding the link between the development and application of science & technology and prosperity, Industry Canada concluded that the results "show that countries with higher output measures of fundamental innovation have higher labour productivity and higher incomes; and countries with less innovation have lower labour productivity and lower incomes".

- Innovation confers real competitive advantages to companies and regions. These advantages can be much more difficult for competitors to overcome than comparative advantages achieved through strategies such as business subsidies (which are more easily replicated).

Being a relatively high cost production area, British Columbia has even more reason than other jurisdictions to embrace technological innovation as a tool for competitiveness. However, the innovation support system for the agri-food industry in BC remains underdeveloped. Innovation requires access to modern equipment, funding for research and development and technology acquisition, qualified experts, graduates with appropriate skills, and technical and other relevant information. Meeting the need for improvements in innovation will greatly enhance the competitive nature of the industry.

2. Sectors Specifically Highlighting the Opportunity or Issue

Some of the sectors that specifically highlighted research, development and innovation issues in their SWOT analyses and or development strategies include:

- Agriforestry
- Horticulture
- Food and Beverage
- Grain, Oilseed, Pulse & Forage Seed
- Mushrooms
- Small scale food processors
- Health and functional food
- Landscape and nursery
- Greenhouse vegetables

3. Situational Analysis

- **Past research has demonstrated that technological innovation is closely linked to business growth and prosperity**.

  This is as true in the agri-food industry as it is in engineering or computer science. A recent survey by Statistics Canada on the nature and extent of innovation in the industry found that companies in the food processing industry that introduce product innovations tend to reap the economic benefits. The survey was conducted during the winter of 2004 on behalf of Agriculture and Agri-Food Canada and covered about 800 establishments. More than one-third (37%) of these establishments introduced product innovations to the market during their three fiscal years ending in 2003. Of those that did, nearly two-thirds (64%) reported that the margins on their innovative products were higher than the margins on their traditional products. For the purpose of the survey, product innovation was defined as both goods and services whose fundamental characteristics or intended uses were new, or differed significantly from other products or services, produced by the industry in North America.

A previous Statistics Canada study indicated that food-processing companies that adopted high technology experienced markedly higher productivity growth and market share increases than companies that did not. “Adoption of information and communication technologies (ICTs), such as local and wide area networks and inter-company computer networks, are positively associated with higher productivity growth throughout the 1990s. Transfer of information both within and between organizations is closely associated with productivity growth. Adoption of advanced process control and advanced packaging technologies are also linked to higher productivity growth.” (Economic Analysis Research Paper Series - iv - Statistics Canada 11F0027 No. 012)

- **Many sectors expressed dissatisfaction with the technological support available in BC.**

  The research and innovation infrastructure in British Columbia is given mixed reviews by the sector documents with some sectors reporting adequate support and others not. The main issues cited by those expressing concern included:

  - an inability to perform technology transfer;
  - a lack of knowledge of modern processing technology;
  - the need for research to develop new products;
  - low investment in storage technologies;
  - antiquated processing technologies;
  - a lack of assistance in new product development; and
  - the need for long distance shipping innovations.

- **There are some well-established research facilities available to agri-food industry in BC.**

  Some of the key components of the research infrastructure in British Columbia include:

  - Pacific Agri-Food Research Centre: Aggassiz (Intensive Crop Culture, Integrated Pest Management, Soils, and Poultry Nutrition);
  - Pacific Agri-Food Research Centre: Summerland (Horticulture and Environment, Food Science and Biotechnology);
  - UBC Dairy Education and Research Centre, Agassiz;
  - UBC Faculty of Agricultural Sciences (food security and the sustainable, integrated use of resources); and
  - The BCIT Food Processing Resource Centre.

- **Despite the importance of innovation, it appears that government expenditures on agriculture R&D have not been increasing.**

  The Government of Canada has recognized that investments in R&D and innovation are critical to the development of economic clusters. However, it appears that neither the Federal Government nor provincial governments have significantly increased their expenditures related to agri-food industry. In fact, the limited data that is available suggests that government expenditures were no higher in 2003 than they were in 1991.

Government Research Expenditures on Agriculture
1990-91 - 2002-03 Fiscal Years
(Millions $)[2]

	1990-91	1995-96	2002-01	2002-2003
Federal	276.9	281.9	298.1	285.5
Provincial	132.2	133.9	129.3	123.8
Total	409.1	415.9	427.3	409.3

-
- **As a result, the United States spends more on public research on agriculture than Canada.**

  Our biggest agricultural trading partner has been increasing public support for agricultural R&D while support in Canada remains somewhat static as indicated below.

AGRICULTURE R&D EXPENDITURES AS A SHARE OF GDP[3]

	Canada	US
1990-91	3.4%	3.3%
1995-96	3.1%	4.3%
2000-2001	2.6%	5.0%
2001-2002	3.0%	5.1%

- **Public sector investment in this area provides good returns.**

  Research is an important element of the technological infrastructure that generally has high rates of return that greatly benefit producers. The Government of Alberta, for example, has estimated the return on investment from agricultural research and development dollars to the agricultural industry at 8700%.

- **BC's share of federal agriculture R&D spending appears to be very limited.**

  One indicator of the low level of activity is the fact that, for the last year that figures were available, (1996), only 108 of the 2218 federal professional full-time equivalents involved in agriculture R&D worked in BC. While BC accounts for about 13% of the Canadian population, it accounted for less than 5% of the researchers.

- **R&D investment by private agriculture related companies in BC is very low.**

  For the latest year for which we were able to find data (1996), Canadian Agriculture R&D investment was estimated at $194.6 million. BC's share of this was only $6.6 million (about 3% of the Canadian total).

- **Private companies in Canada fund much of their own R&D.**

  Self-financing is the largest source of R&D financing for Canadian Companies, accounting for 55.1% of expenditures in 2001. Other Canadian sources (includes funds from related companies,

[2] "An Overview of Canadian Agriculture and Agrifood System", C1.4.
[3] Ibid., C1.5

from R&D contracts for other firms and grants and contracts from the provincial government) accounts for 27.5%, foreign sources contribute 13% and the federal government accounts for 4.3%.

- **A variety of programs provide assistance related to research and innovation**.

  Under a program called the Matching Investment Initiative, the federal government will match up to one-for-one industry R&D contributions to collaborative research projects. The Agri-Food Futures Fund (a joint federal/provincial program) is designed to accelerate the pace of innovation across the agri-food sector and facilitating adoption of new technology. The Investment Agriculture Foundation supports initiatives related to research and development such as the Islands Agri-food Initiative, the Health Products and Functional Food Initiative, and the Food & Beverage Processing Industry Initiative. Both the BC and Federal governments provide tax credits related to R&D activities.

4. Potential Strategies for Development

Given shifting markets, an increasing emphasis on value added products, and intense global competition, the extent to which the agri-food industry is able to effectively develop and use technology will largely determine its future successes. Investment in research and development is clearly important for the food & beverage industry. For the agriculture sector, it can result in reduced average costs of production, increased returns from higher yields, improved quality of products, improved disease and insect resistance, and new uses for agricultural products. Some of the strategies that have been employed by industry and governments to promote innovation in the sector include the following:

- **Establish or expand research institutes dedicated to agriculture issues.**

  There are many examples of agriculture research institutes focussing on basic R&D, applied research and technology transfer activities. The Alberta Food Processing Development Centre is a fee for service facility that provides sensory evaluation, benchtop development, pilot plant development and interim processing. The Alberta Food Science and Technology Centre conducts applied research in post-harvest handling, storage and processing.

  Some facilities are special purpose. For example, the Prairie Agricultural Machinery Institute is involved in applied research and testing of farming practices. Oregon State has 14 branch stations that undertake agriculture research related to the area they are based in.

  The Guelph Food Technology Centre is an example of industry co-operation to incorporate technology. It is an independent, industry-driven, not for profit organization that helps companies develop new products, design new processes, train staff and implement safety and quality systems. The Agricultural Research Institute of Ontario selects and recommends area of research that will be of the most benefit to the province's industry.

  Manitoba's agriculture related research infrastructure includes the following:

  - Agriculture and Agri-Food Canada's Research Centres (Brandon, Winnipeg and Morden);
  - Food Product Development Centre;
  - Canadian International Grain Institute;
  - University of Manitoba's Faculties of Agricultural and Food Sciences, and Human Ecology;
  - National Centre for Agri-Food Research in Medicine in Winnipeg;
  - Richardson Centre for Functional Foods and Nutraceuticals;
  - Canadian Malting Barley Technical Centre;

- Canadian Grain Commission, Grain Research Laboratory; and
- University of Manitoba research facility for Nutraceuticals and Functional Foods.

- **Focus on improving technology transfer.**

  This can be accomplished through the provision of relevant information to producers and processors, subsidizing the implementation of new technology, or providing wage subsidies for science and technology professionals who will guide the technology transfer process. The Canadian National Research Council IRAP program has regional representatives who facilitate commercial applications of new technology through funding and technical advice. The Alberta Food Processors Association Market Technology Program helps processors identify, develop and adopt related technology and innovation. Another strategy would be to establish and fund technology centres and incubators on a regional basis to facilitate technology transfer at the local level. Efforts can also be extended to discovering available technology world-wide that would be of benefit if incorporated by the industry.

- **Increase funding for Agri-food Research and Development.**

  A number of jurisdictions have programs that subsidize R&D either through the establishment of a research agency or the provision of funds to researchers and companies. Alberta has an Agricultural Research Institute that is the lead agency in the province for "funding, co-ordinating and promoting strategic agricultural initiates in research, development and technology transfer for the agriculture and agri-food sector." The Alberta Agriculture Funding Consortium funds both basic and applied research activities.

  Manitoba's Agri-Food Research and Development Initiative has leveraged federal funding for provincial agricultural R&D. The Canada-Newfoundland and Labrador Technology Adoption Program supports new technology, diversification, secondary processing and research and development activities related to the agriculture sector. The Saskatchewan Agriculture Development Fund supports a Strategic Research Program at the University of Saskatchewan which creates food chairs. Chairs have been established in the following areas:

  - Material utilization and bioprocess engineering
  - Protein quality and utilization;
  - Lipid quality and utilization;
  - Feed research and development;
  - Meat processing;
  - Soil biological processes;
  - Soil nutrient management; and
  - On-farm food safety.

- **Increase industry/university collaboration on research.**

  Measures could be taken to increase the communication and collaboration between agriculture industry sectors and the academic researchers. More efforts can be made to identify industry R&D needs that could be met by university based research. More communication between industry groups and the UILO's of the universities could be encouraged.

Other strategies include promoting coop programs, faculty exchanges, and advisory committees to increase industry/university contacts. An Ontario report recommended the formation of an agriculture "think tank" comprised of all agriculture stakeholders to set research priorities.

- **Establish regional agriculture innovation centres**

  These centres would have an innovation expert to provide advice to the industry and an innovation fund to finance innovation on a local level.

E. INCREASE ACCESS TO SKILLED WORKERS AND MANAGERS

1. The Opportunity

Many segments of the BC agricultural sector indicate that they are unable to hire suitably skilled workers and managers. Some of the factors that contribute to this are a lack of educational opportunities, a reluctance of producers and processors to invest in training, strong competition from other sectors, and an unfavourable image of the industry which can make it difficult to attract skilled people. Specific skill gaps have been identified in a variety of areas including product development, marketing, quality systems, traceability, language skills, business management skills, and entrepreneurial skills.

Another factor is that people employed in the agriculture and agri-food sectors tend to be less educated in general than those who are employed in other sectors. For example, about 39% of men and women who identify their primary occupation as agriculture report having some form of post-secondary education (university or other) as compared to about 53% of the people employed in other sectors.

The lack of access to skilled workers and managers has the following impacts:

- Constrains productivity;
- Reduces industry ability to identify opportunities for improvement, implement change, and increase profitability; and
- A lack of entrepreneurs can contribute to a stagnant industry that lags other jurisdictions in market access and new product development.

2. Sectors Specifically Highlighting the Opportunity or Issue

Some of the sectors that specifically highlighted access to skilled workers and managers as an issue in their SWOT analyses and or development strategies included:

- Agriforestry
- Food and Beverage
- Grain
- Floriculture
- Mushrooms
- Greenhouse vegetables
- Fruit Juices
- Agritourism
- Aboriginal Agriculture
- Health and functional food
- Landscape and nursery

3. Situational Analysis

- **Formal education in agricultural skills is somewhat limited.**

The University of British Columbia is the only university in BC with a faculty of Agricultural Sciences. This faculty has a number of program options under the main topics of: Agroecology; Community & Environment; Food, Nutrition & Health; Global Resource Systems; and First Nations Initiatives. In 2003, there were 122 Bachelors, 33 masters and 9 doctorates awarded by this faculty. Simon Fraser University offers a Master Program in Pest Management Sciences.

The following table summarizes various agriculture related programs available in BC at the college level.

COLLEGE PROGRAMS RELATED TO THE AGRI-FOOD INDUSTRY

Institution	Bachelor	Certificate	Diploma	Apprenticeship
University College of the Fraser Valley		Horticulture Crop Production	Horticulture Crop Production and Protection	Dairy Production Technician
		Livestock Production		
		Integrated Pest Management		
		Milker training		
Malaspina University College		Horticultural Technician		
Okanagan College	BSC in Soils Water Management			18 wk Horticulture Pre-Apprenticeship program
Thompson Rivers University		Horticulture	Horticulture and Management	
		Animal Welfare	Animal Health Technology	
North Island College		Greenhouse Management		
College of the Rockies			Horticulture Technician (Cancelled due to low enrollment last year)	
BCIT		Food Safety	Food Technology	
Camosun College		Horticulture Technician		
Capilano College		Landscape Horticulture		

- **There is a lack of obvious career tracks in the industry.**

  There is a shortage of apprenticeship opportunities in the agricultural industry. Often farmers or processors are required to implement their own training programs. Also lacking are upgrading programs through which workers can be taught new skills leading to management positions.

- **Farm owner succession is an issue in BC.**

  In the farm sector, skills have traditionally been passed from generation to generation. However, this system of skills transfer is breaking down as the percentage of children who follow their parents into farming continues to decline. Farm operators are aging, which contributes to the seriousness of the issue. Of the 30,320 farm operators in BC in 2001, 8% were under 35, 54% were aged 35 to 54 and 38% were 55 years of age or older.

- **The industry does not appear attractive to workers or managers.**

  Employee turnover rates are high, attributable in part to competition for skilled labour from other sectors. Much of the agricultural working conditions are viewed as inferior to other sectors. Also, the industry is not widely recognized by youth as an attractive career option, due to its image and perceptions of the type of employment available. Modern farming and processing operations are complex, involving increasingly greater demands for technical, business, marketing, and management skills. However, this does not appear to be widely recognized and these types of careers are not often associated with agriculture.

- **Agriculture related education and training is not a priority of the education sector.**

  The agri-food sector has generally not been a major focus for education and training institutions even though there are more farm workers in BC than the combined number of workers in primary forestry, fishing and mining and this workforce requires significant skill enhancement.

- **Agriculture human resource issues do not appear to be a public policy priority.**

  Efforts to address human resource issues in the agri-food sector have been constrained by an ad-hoc approach to the issues, limited resources applied to capacity building, and a lack of proactive strategies including coordinated and consistent long-term strategies. Agriculture lacks the public sector labour market development tools that have been established in other industries to support employers and workers.

- **The lack of organized unions may be a factor in the lack of educational opportunities.**

  There is very little unionization in primary agriculture. There is some in the processing sector: most of the chicken and egg processing plants are unionized. Unions often are a source of apprenticeships and training programs.

- **There are a number of factors that constrain the willingness of producers and processors to provide worker training.**

  Factors such as tight profit margins, the small size of many operations, and high employee turnover rates have limited the willingness of employers to invest in training for their workers.

- **Producers and processors have limited human resource skills**

  Owners and operators need human resource training to improve their recruitment and retention rates.

- **The Canadian Agriculture Skills Services in now available in BC.**

  This is an Agriculture and Agri-Food Canada program that is open to farmers with incomes less than $45,000 and sales over $10,000 and new farmers. Training support is supplied according to family income levels. Formal and informal training as well as expenses are eligible.

4. Potential Strategies

The sector needs to address its human resource issues such as the unattractiveness of the industry as a career, the low skill levels in workers, managers and farmers, and the lack of related training and education programs. Some of the strategies that have been employed by industry and governments to address these issues include the following:

- **Develop and offer training to farmers and farm managers.**

  Many jurisdictions target the farm producer for further education and training to improve the production process, processing possibilities and marketing skills. Training areas could include technology, business management, safety systems, human resources, risk management or crop/livestock issue specific training. Training can be offered in a variety of ways including seminars, short courses, videos, literature, and on line courses. Also possible are programs using job shadowing, mentorships, and coop positions.

  The Canadian government offers some assistance in this area through the Canadian Agricultural Skills Service which is intended to “help farmers and their spouses increase family income through improved farm practices” through a number of training courses. Another example of this type of programming is the Alberta Innovation in Agribusiness Management Fund that supports initiatives related to human resource management, risk management and succession and transition.

  The Agriculture Institute of Management in Saskatchewan delivers farm business management education in Saskatchewan including:

  - e-commerce training;
  - agribusiness entrepreneurship training;
  - consultant workshops;
  - conference speaker sponsorships;
  - market prospects; and
  - online training.

  The Eastern Washington Agriculture, Food Processing Partnership was designed to address the issue of an increasingly technical industry simultaneously laying off unskilled workers and experiencing a shortage of skilled workers. The program’s major elements were:

  - an assessment model to pinpoint and quantify skill gaps of workers;
  - analysis to determine training needs, locations and amounts;
  - establishment of skill standards;

- career ladder developed to bridge from farm to processing plant; and
- customized training that recognized time, location, cost, and content needs of employers.

The program resulted in significant wage gains for participants.

- **Fund individuals directly who want to purchase training.**

  Instead of developing and delivering courses, some programs subsidize individuals who want to select their own training packages. Funding can be offered to employees or owners/managers of related operations. This method allows individuals to access training not available in the immediate area of jurisdiction. An example of this type of program is the Alberta Leadership and Management Development Program that is targeted at primary producers.

- **Introduce the concept of agriculture as a career early in the school system.**

  Many jurisdictions including BC have introduced agriculture related subjects into the K to 12 system. The most common approach is to provide educational materials to teachers such as lesson plans, stories, and multimedia products. In the later grades materials are provided that relate to the sophistication and diversity of agriculture career options. Another possibility would be to support 4H clubs.

- **Develop and offer training to farm workers.**

  Farm workers often have low levels of formal education and often lack basic English language skills. Many jurisdictions address this issue through farm worker targeted training programs. One barrier to this type of training is that the agriculture operators often are unable to finance such training. Some jurisdictions provide the training free or at greatly reduced cost to overcome the reluctance of producers and processors to further reduce margins with this type of expenditure. Examples of these type of worker education programs include:

  - Washington State Agriculture Education Services: pesticide safety (targeted at Hispanic workers); and
  - Saskatchewan Agriculture and Food Green Certificate Farm Training Program that improves technical skills and knowledge, attitudes and behaviours and production efficiencies.

- **Establish Peer Networks.**

  Peer networks can be a valuable source of professional development. They can become highly effective learning networks where individuals can obtain information, advice and practical education from people in their own industry. Alberta has undertaken a Peer Network Project that focuses on the agriculture industry. The four key strategic initiatives under this program are:

  - Establish structures and processes that facilitate peer group formation;
  - Foster the establishment of two types of peer groups - production forums and business management forums;
  - Establish a dynamic resource network comprising of subject matter experts, professionals and reference material to meet the ongoing needs of participants; and
  - Establish interregional linkages with other agricultural peer networks and learning organizations and intra-sector linkages with other industries.

- **Provide financial incentives to study agriculture related subjects.**

  Many industry groups use this strategy to attract bright students to their fields of work. Government or industry can offer financial incentives to students to enter agriculture related areas of study. The incentives can target production, processing or any other part of the food value chain. Priority can be given to areas of greatest need for educated workers, managers or researchers. Some jurisdictions focus on Masters and PhD programs that include related research activities.

- **Subsidize wages for short-term agriculture related work experience.**

  The most common form of this type of programming is the summer job subsidy. These programs are intended to provide career-related experience with the objective of attracting and retaining students in the agriculture industry.

- **Mount a public relations campaign to improve the image of agriculture.**

  The public could be made aware of the realities of modern agriculture through a series of media placements. Emphasis would be put on the sophistication of the industry and the potential for satisfying careers. "Growing the Future" is a Saskatchewan radio-based marketing campaign that promotes agricultural diversity and celebrates Saskatchewan success stories

F. INCREASE ACCESS TO FINANCING, PARTICULARLY PATIENT CAPITAL

1. The Opportunity

Access to capital is critical to the development of new products, the development of new markets, and making changes in how organizations operate. For example, it often takes five to seven years or even longer to bring new products or processes to market. As such, the availability of knowledgeable and patient capital to finance and nurture the development of new markets and commercialization of new products can be the single most important factor determining the success of businesses. As one writer put it, "The reality of the current industry in Canada, and in other countries, is that it is not always the company with the best product that succeeds; often times, it is the company that has the best access to capital or the company that is most creative in finding these sources of capital that will ultimately succeed."

The following table summarizes the most common sources of capital at various stage of business development.

COMMON TYPES OF FINANCING BY SIZE OF FIRMS

Sources By Stage of Development ($ Revenues)	**Start-up**	**Very Small** (Under $200,000)	**Small** ($200,000 to $5 Million)	**Medium** ($5 Million-$25Million)	**Large** (Over $25 Million)
Personal assets and resources/ friends and relatives	■	■	■		
Household mortgages, personal credit, and micro-loans	■				
Business loans		■	■	■	■
Retained earnings			■	■	■

Sources By Stage of Development ($ Revenues)	**Start-up**	**Very Small** (Under $200,000)	**Small** ($200,000 to $5 Million)	**Medium** ($5 Million-$25Million)	**Large** (Over $25 Million)
Partner(s)			■	■	
Angel Investors			■	■	
Venture Capital				■	■
Non guaranteed institutional loans				■	■
Sale of equity shares					■

Some of the major sources of external capital for business development in BC include:

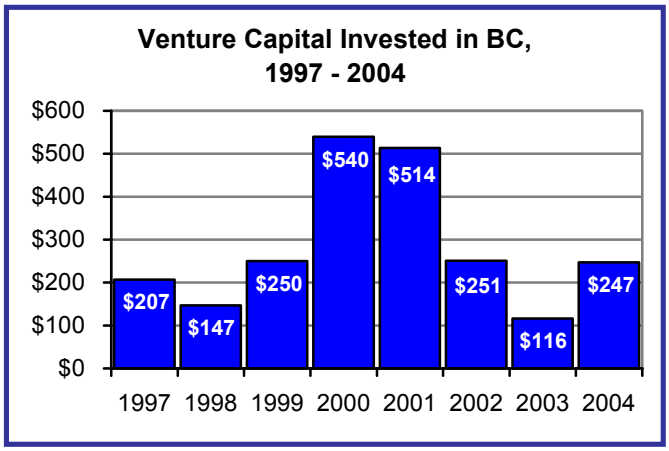
- *Angel investors*

  The term "angel investor" is often used to describe an informal private investor. The network of angel investors in Western Canada is very informally structured which can make it difficult to link potential investors and businesses. Angels invest their personal funds, expertise and experience in a business in exchange for an equity stake (usually minority) in the company. They differ from venture capitalists in that they are using their own money. Venture capitalists also tend to focus on high technology while angels tend to have more diverse interests.

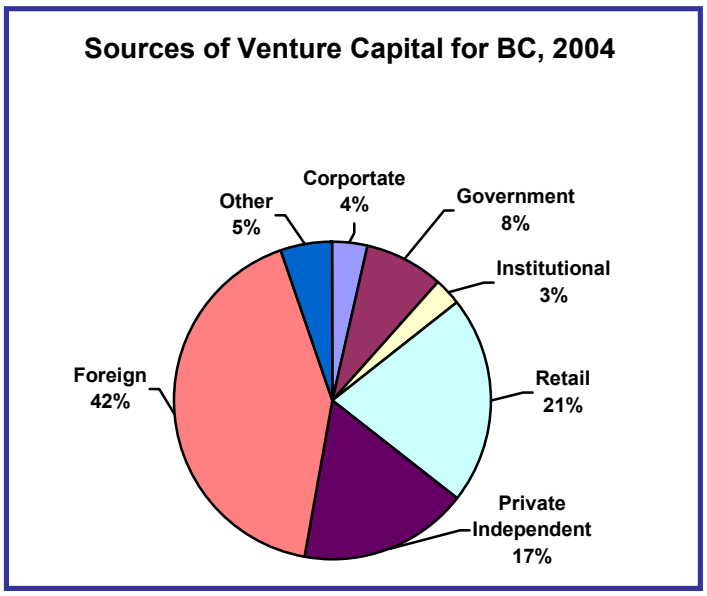
  According to the Canadian Angel Investment Network, angel investors are currently investing over $3 billion in Canadian small business each year (in comparison, the value of venture capital invested in Canada each year is under $1.8 billion) and this number would be substantially higher if these angels were better able to find and review investment opportunities. A recent study estimates that about 60% to 80% of arm's length, early stage, private equity is angel investment. The size of angel investments varies widely, but most commonly ranges between $30,000 and $250,000.

- *Venture Capital*

  The amount of venture capital invested in BC companies tends to vary widely from year to year. In 2004, while the value of venture capital placed in Canada increased from $1.66 billion to $1.76 billion, the value placed in BC increased from $116 million to $247 million. Sixty-two BC companies received investments in 2004. At $79.8 million, Victoria's Aspreva Pharmaceuticals Corp. was the recipient of the largest venture capital placement in Canada in 2004.



  In 2004, the primary sources of venture capital in BC were foreign investment, retail funds, and private independent funds.



The Government of BC's Equity Capital Program encourages investment in BC businesses by providing BC investors with a 30 percent refundable tax credit. The investment can be made directly or through a holding company, called a Venture Capital Corporation (VCC). Two related tax-credit programs, the Community Venture Capital Program (CVCP) and the New Media Program (NMVCP), operate very much like the ECP. The allowable maximum tax credit budget is currently $20 million per year for these three program which would allow up to $66.7 million to be raised and tax-credited. An example of a venture capital corporation that was established under the Equity Capital Program is WUTIF Capital (VCC) Inc., which is a $30 million seed investment fund established for the purpose of investing in promising technologies such as those being developed at BC's universities and institutions.

Investors can also receive tax credits of 30% for investments in labour-sponsored funds. The Working Opportunity Fund, which is BC's largest venture capital fund, invests equity capital in small to medium sized businesses in BC's emerging industries such as information technology, life sciences, advanced manufacturing, film & entertainment, and environment sectors. During its thirteen-year history, WOF has invested over $370 million in 95 BC companies.

- *Business Development Bank*

  The Business Development Bank of Canada (BDC) is a leading source of venture capital and debt financing for businesses in BC. The BDC authorized loans of $178 million in BC in fiscal 2005 (increasing the portfolio to $702 million). Across Canada, BDC authorized 78 venture capital investments of $118 million in 2005, increasing the investments outstanding to $348 million.

- *Community Futures*

  Community Futures is also an important source of debt financing for small and medium sized businesses, particularly in rural BC. The program is delivered through a series of 34 Community Futures Development Corporations (CFDCs) located throughout BC. The primary objective of a CFDC is to enhance the overall well-being of the community by increasing economic activity and, often more importantly, by empowering community members to take an active role in the development of their community and thus building community capacity to deal with economic change and labour force adjustments. CFDCs annually provide about $20 million in loans to businesses in their regions across BC.

The Canadian Community Investment Network Co-op is a national co-operative dedicated to strengthen the capacity of its members who include micro-loan funds, community loan funds, co-op funds, financial institutions and social investment funds.

2. Sectors Specifically Highlighting the Issue

Some of the sectors that specifically highlighted financing as an issue in their SWOT analyses and or development strategies include:

- Health products and functional foods
- Organics
- Food and Beverage processing
- Horticulture
- Mushrooms
- Small scale food processors
- Value added food and beverage
- Floriculture

3. Situational Analysis

- **The need for capital is increasing in the agri-food industry.**

  The need for change in the agri-food industry sector has increased the demand for patient capital. This funding is essential to finance the required innovations necessary to maintain competitiveness. These innovations take time to develop and implement and patient capital is essential to the cycle. In addition, operations are becoming larger, more complex and increasingly cash intensive due to automation and growth. This is particularly true in technology intensive sectors such as greenhouse vegetables. The food processing sector has seen major increases in capital inputs and a reduction in labour inputs since the 1960's.

- **In particular, capital is needed to exploit emerging opportunities in value-added products.**

  It is difficult to raise capital for new product development or to modernize plants. The food-processing sector needs capital for technology and for the growing number of producers that see the advantages of transforming into processors.

- **Given the importance of the agri-food industry to the economy, the level of new investment remains low.**

  While the amount invested annually is significant in real dollar terms (e.g. over $400 million last year), the total investment for the agriculture and food & beverage sectors represents only about 1.5% to 1.8% of the total private sector investment made in British Columbia even though the sector accounts for about 2.4% of GDP.

BC INVESTMENT EXPENDITURES 1993-2002
($ Millions-Current)

	2000	2001	2002	2003	2004
Agriculture	158.9	157.6	202.2	178.2	201.7
Food & Beverage Manufacturing	116.6	125.0	133.4	127.8	199.6
Total, Agriculture, Food & Beverage	**275.5**	**282.6**	**335.6**	**306.0**	**401.3**
Total Investment in BC	16,407.8	18,391	18,513.7	19,699.5	23,802.9
Percent of Invested in Food System	**1.7%**	**1.5%**	**1.8%**	**1.6%**	**1.7%**

- **The agri-food industry receives a small proportion of venture capital invested in Canada.**

  In the period 1996 to 2003, venture capital investment in Canada totaled $20.8 billion. Venture capital investment in traditional agriculture in that same period totaled $57 million while primary food

processing totaled $102.6 million, representing only 0.3% and 0.5% respectively of the amount invested.

- **Traditional sources of capital tend to be less available to emerging companies in the agri-food industry.**

  Traditionally banks and other capital lenders tend to finance projects that are lower risk, higher return and occupy more established markets. On the other hand, most venture capitalists are not very familiar with the agri-food industry. As a result, innovative agri-food related opportunities have difficulty in accessing capital because they are often considered too new or too risky for bankers and are not on the radar screen of most venture capitalists.

- **There are some government sponsored financing programs.**

  Western Economic Diversification Canada (WD) offers the Agricultural Value-Added Loan Program in cooperation with Farm Credit Canada (FCC). This Loan Program is designed to improve access to patient debt capital for small and medium-sized processors in this sector. The food & beverage processing sector is eligible under the provincial government's Equity Capital Program, although most companies in the agriculture sector are not. Agri-food sector venture capital funds tend to be government sponsored.

- **Despite the concerns of investors, available data suggests that the return on capital earned in the food processing sector compares favourably with the returns of other sectors.**

  The return on capital averaged over 10% in each of 1990, 1995 and 1998 as indicated below.

Average Rate of Return to Capital (%)[4]

	Food-Only Processing	Non-Food Processing	Food Retail	Non-Food Retail	Food Service	Economy
1990	13.07	6.3	12.98	10.76	12.29	7.61
1995	11.57	12.7	15.07	5.96	8.18	9.02
1998	10.9	8.4	12.93	9.56	9.07	7.61
Ave.90-98	11.6	7.5	12.1	7.0	9.1	7.3

- **Members of the industry often lack financial skills**

Producers often do not understand finances and the reporting requirements of financial institutions. There is poor communication between banks and the industry that results in a poor understanding of the requirements. It is difficult for producers to find the time and money to obtain these types of skills.

4. Potential Strategies

The ability to attract both patient and venture capital will be crucial for the development of new products, processes, and expansion of capacity. The inability to attract the required levels of capital will restrict entry into new sectors and new products, create a productivity lag, and ultimately reduce competitiveness. Some of the strategies that have been employed by industry and governments to attract investment to the sector include the following:

[4] Ibid., A3.2

- **Establish a financing agency for the agri-food industry.**

  Some jurisdictions have created institutions specifically for financing agricultural enterprises. Some are government agencies while others are industry initiatives. Some services these enterprises offer include:

  - Term debt financing;
  - Export financing;
  - Guarantees;
  - Operating lines of credit;
  - Special contracts for inventory purchase;
  - Capital sourcing;
  - Leasing services;
  - Consulting; and
  - Financial restructuring.

  These organizations can also play a role in helping agriculture operations to find available grants and other sources of investment. Examples of these types of agencies include the Alberta Agriculture Financial Services Corporation, the Manitoba Agricultural Credit Corporation, the Ontario ACC Farmers' Financial, and the Cascadia Revolving Fund based in Oregon. Saskatchewan has a livestock loan guarantee program and a hog loan program.

  AVAC is a corporation started by the Alberta and Canadian governments to increase access to investment capital for value-added ideas and innovations. Alberta's AVAC, started with seed capital of $45 million has committed $31.3 million to 154 early stage projects. Eleven projects have entered the start-up & revenue stages, 20 other projects will be ready for "start-up capital" once their 'early stage work is completed and six clients are likely to become 'investment grade' in venture capital terms. There are 15 other financed projects touted as success stories.

- **Make direct investments in agriculture enterprises.**

  There are jurisdictions that have vehicles for making direct investments in specific operations. These are normally agencies that are arms length from government or the result of an industry co-operative initiative. These organizations pursue investment strategies designed both to keep them self-sufficient and promote specific high potential areas of agriculture. Operations pursuing value-added export markets and new technological applications are usually targeted. One example of this type of organization is Saskatchewan's Ag-West Bio Inc. This agency provides direct investments as well as assistance in locating other grants and investments for start-ups or expanding companies. The target is early stage technologies that present high risk for private capital sources.

- **Subsidize costs of activities related to attracting investments.**

  Funding can be made available to agriculture enterprises to improve their attractiveness to investors. These activities would normally be related to improving the sophistication of the management tools and documentation that investors prefer to have available. They may include business plans, marketing plans, feasibility studies and market development plans.

- **Establish Managed Investment Pools.**

There is potential for the government to take a role in creating financial instruments that are of interest to investors. Managed Investment Pools could present investments that would be more diverse and have lower managed risk than those presented by single enterprises. Clustering and industry coops could be encouraged to facilitate the creation of these types of financial instruments.

- **Include agriculture production in Venture Capital Corporation Programs.**

  Currently agriculture production is not a part of the BC Venture Capital Corporation Program. Inclusion of agriculture in this program or the formation of a separate agriculture venture capital program would provide tax incentives for investment in the industry.

G. BUILD UPON OUR QUALITY AND SAFETY SYSTEMS

1. Opportunity

The food customer worldwide is becoming more knowledgeable and more demanding in regards to the quality and safety of food products**.** The assurance of food safety especially has become critical to entering new markets. Quality and safety are becoming increasingly important purchase criteria and provide a clear basis for product differentiation. If there is a problem with the real or perceived safety of a product, demand will fall off immediately. BC agriculture can take profitable advantage of these trends if it is able to meet these demands while remaining price competitive.

A GlobeScan Inc survey of 11 countries found that a majority of citizens in developed countries see food safety as more important than nutrition and price. This survey company also surveyed Canadians about their food related concerns. The table below illustrates the top safety issues for Canadian Consumers.

Factors	% of Canadians Concerned
Pollution where food is produced	94%
Bacterial contamination	91%
Chemical pesticides	90%
Disease from animals	89%
Tampering/poising of foods	86%
Hormones	83%
Contamination from inadequate packaging	83%
Antibiotics	81%
Artificial preservatives	79%
GMOs' or biotechnology	77%

Consumers appear willing to pay a premium for such products, which presents an opportunity for local producers and processors both with respect to import replacement and in the export markets. As an example, when the beef industry introduced a grading system, consumers were willing to pay more for better quality meat. Paying more attention to this consumer demand will present many opportunities for increased revenue.

Canadians believe that food produced in this country is superior to that imported. In an Ipsos Reid study Canadians rated Canadian produced food very highly with "about nine in ten people in each

region giving Canadian food a quality rating of 'good' or 'excellent'."[5] This same report suggests that "a traceability system would have a positive impact on consumer confidence in food safety."[6]

2. Sectors Specifically Highlighting the Issue

Some of the sectors that specifically highlighted quality and safety issues in their SWOT analyses and or development strategies include:

- Agritourism
- Health product and functional food
- Small lot agriculture
- Cherries
- Horticulture
- Mushrooms
- Greenhouse vegetables
- Bison
- Beef
- Field vegetables
- Wine
- Tree fruit
- Lamb
- Wine
- Small food processors

3. Situational Analysis

- **Implementing safety and quality systems can be expensive and beyond the reach of small operators.**

  Producing quality and safe niche products involves the high cost of meeting quality and safety standards. This can be prohibitive for many small processors. Many smaller operations have few resources to dedicate to safety and quality control systems.

- **Related regulations can inhibit growth in the area.**

  Regulations regarding quality and safety have been introduced but regulations alone may not ensure quality and safety and may in fact impede sector growth if the regulations are developed for large-scale commercial farms. There is also confusion regarding the recognition of certification programs. Some jurisdictions and even some distributors do not recognize government safety inspections but require their own.

  There is criticism that regulations in this area are not innovative or flexible. There is no effort to find other, less costly ways of ensuring safety. In addition there are complaints of too few government inspectors in some areas.

- **Investments in innovation are necessary to ensure quality and safety.**

  Research and development efforts are necessary for the development of innovative technologies, techniques and practices that will improve safety and quality. This is necessary to develop systems such as food tracking that will help position food products as safe and high quality and thus improve market access and value-added opportunities.

- **On farm food safety programs have many benefits to the industry.**

[5] Consumer Perceptions of Food Safety and Quality, Ipsos-Reid, 2004 p.ii.
[6] Ibid. p. viii.

Producers may remain unaware of the importance of opportunities in improving safety and quality standards. Potential benefits to producers participating in an on-farm food safety program include improved agri-food safety; maintained or enhanced market access; increased consumer confidence, and decreased liability through demonstrated due diligence.

4. Potential Strategies

Having food safety and quality systems and informing the consumer about these systems through such techniques as certification, labelling, branding and public communication strategies is critical to increasing the value for the industry, attracting premiums and expanding markets. Complying with this market demand can be a costly exercise but, without it, sales will be compromised and suppliers may be replaced with others able to address the issue satisfactorily. Some of the strategies that have been employed by industry and governments to promote quality and safety in the sector include the following:

- **Encourage Industry groups to co-operate on the issue.**

  Industry groups could be encouraged to meet and discuss voluntary implementation of the Canadian On-Farm Food Safety Program as well as other initiatives that would help reassure domestic customers and export clients that the food produced is of high quality and entirely safe. Industry actions could include commodity specific trace-back and identity preservation initiatives. An Ontario greenhouse co-operative has developed a successful quality program that involves independent monitoring of the fruit and immediate feedback to the individual growers.

- **Increase access to food safety information for producers and processors.**

  Ways to accomplish this objective include food safety information lines, web sites, food safety workshops, and providing information to industry associations. The USDA operates a web site (www.foodsaftey.gov) that is billed as the gateway to government food safety information. The Food Safety Network at the University of Guelph provides research, commentary, policy evaluation and public information on food safety issues using electronic networks, databases and field research.

- **Increase the consistent interpretation and enforcement of food safety standards.**

  This is mainly a government function that will help to ensure that standards are uniform with other Canadian jurisdictions to avoid interprovincial or intraprovincial inconsistencies.

- **Support the implementation of safety programs.**

  Some producers and processors, especially small operations, face significant costs to implement new food safety regulations and standards. Some jurisdictions provide varying levels of assistance to these operations when implementing programs to comply with new expectations. Ontario has the Meat Plant Assistance Program which provides assistance to operators of non-federally registered slaughter plants (abattoirs) and free-standing meat plants for expenditures required to meet the new provincial meat regulations.

- **Fund related research.**

  Funding could be provided to food safety research that would improve detection methods, reduce the risk of food contamination and help design effective regulations and policies. Ontario funds

research designed to facilitate the adoption of food safety protocols. The main objectives of this program are:

- Development/validation of testing methods for the detection of pathogens and chemicals for use in laboratory and field settings;
- Identification of emerging hazards and contaminants; and
- Risk analysis, risk assessment, risk management and control in food safety.

- **Develop and implement a communications strategy regarding food safety.**

  The industry can develop a long-term communications strategy that will maintain public confidence in the food system and establish this confidence as a competitive advantage.

H. TAKE ADVANTAGE OF CHANGES IN THE VALUE CHAIN

1. Opportunity

Two related issues that are affecting development of the industry in BC are:

- **Increasing concentration at various levels of the value chain is affecting how business is conducted.**

  The processing, distribution and retailing sector systems have seen significant consolidation and are now dominated by large corporations. Consolidation is being driven by opportunities to increase bargaining power, expand market access, expand access to raw materials, and capture efficiencies. As the food cluster consolidates, it is increasingly emphasizing value chains that are vertically integrated, resulting in a push to adopt new value chain management practices, downward pressure on costs and an increase in the demand for large volumes and consistent supply at a low price. This is true for food as well as other industries.

  It has been projected that the top 12 retailers in the United States will soon control about 40% of the general merchandise market. The past decade in Canada has been marked by consolidation and restructuring, coupled with the entry of US retailers such as WalMart and various specialty retailers. The five largest Canadian retailers now account for 60% of grocery sales.

- **Strong competition and the trend to rationalization of processing operations have restricted growth in the food processing sector in BC.**

  BC accounts for 13% of the Canadian population but less than 8% of the value of processed food and beverage shipments.

There may be opportunities to take advantage of the changing business environment to improve our competitive position within the value-chains and expand the processing sector in BC.

2. Sectors Specifically Highlighting the Opportunity or Issue

Some of the sectors that specifically highlighted the restructuring of the distribution and processing sectors as an issue in their SWOT analyses and or development strategies include:

- Food and Beverage processing
- Food retail
- Horticulture
- Pork
- Grains
- Beef
- Wine
- Health products/functional foods
- Field Vegetables

3. Situational Analysis

- **The ownership concentration has had a significant impact on production, processing and distribution systems in BC.**

  Margins have declined as the economies of scale and resources available to these large companies increase their ability to compete with smaller enterprises. The changes resulted in fewer and larger customers, pressure on prices, and an increased focus on technology and logistics. It has reduced the number of processors in BC and profiled the absence of a developed distribution infrastructure.

- **The concentration also appears to widen the gap between prices received by producers and retailers.**

  In a study prepared for the Canadian Agri-Food Policy Institute (CAPI) in May 2005, researchers Jean-Philippe Gervais and Bruno Larue conclude: "The high degree of concentration at the retail, food processing and farm input manufacturing levels are often identified as the most important contributing factors to explain increases in retail to farm price spreads." The large corporations have a high degree of market power which allows them to take their profits from the production side of the sector instead of the consumer side.

- **The restructuring has had a negative impact on the processing industry in BC.**

  The number and flexibility of processing facilities has been reduced and BC producers hoping to develop niche products are having difficulty accessing processing services. The existing production/processing/distribution system is not flexible enough to respond to new demands so some products are imported due to ease and speed. Single-use processing plants remain empty/underutilized for a major part of the year. There is a lack of secondary processing for sectors such as grain, oilseeds or pulse crops

  The sector requires capital for technology but capital investment in the sector remains low. This is especially critical for small producer-processors. Another impediment to developing processing is the protectionist trade practices of some countries. Some jurisdictions set lower tariffs on primary bulk products and higher tariffs on processed products. This protects their domestic processing and discourages processing here.

  Some of the other issues associated with processing in BC that have been highlighted in the past include:

  - a lack of knowledge of modern processing technology;
  - antiquated equipment;
  - lack of processing equipment;
  - general decline in processing capacity in some regions;
  - lack of seasonal labour for processing plants;
  - independence of processing firms inhibits cohesiveness and industry-wide-action;

- federal government policies that are perceived to favour provinces with the largest food processing sectors; and
- the high cost of processing in BC especially for small operations.

If BC industry is able to cooperate and pursue strategic approaches to dealing with these value chains, market share can be increased. This will require a degree of vertical and horizontal integration to gain market power and reduce costs.

- **There is a strong emphasis on shortening the pipeline, from original concept to store shelf.**

  Various value-chain management systems have been introduced including quick response (QR) systems, electronic data interchange, electronic automatic replenishment systems, just-in-time manufacturing and vendor-managed inventory. Retailers are narrowing the range of suppliers used and are placing additional responsibilities on manufacturers. For shippers to be competitive, they must offer full load shipments that allow for the efficiency of operation at large distribution centers. This trend makes it more difficult for local processors and wholesalers to get shelf space in large retail stores.

- **The markets are increasingly relying on large distributors to reduce time and management requirements.**

  Single suppliers lack the technology, market skills, volume and capital necessary to compete with the large companies. Markets and retail chains resist buying directly from processors. Time and management constraints make it difficult for them to track and administer purchase relationships with independent processors.

- **Financial performance in food & beverage manufacturing and basic farming are closely linked to size of operation**.

  Large enterprises in food processing earned an average rate of return on long-term capital of 13% between 1990 and 1998. Medium enterprises earned 10%, and smaller enterprises averaged 8%. Food processing, with a 12% average rate of return, was more profitable than the manufacturing sector, with an 8% rate of return.[7]

  Operating income for very large farms in Canada increased by 66% over the last decade while for the smaller operations it was flat or negative.

- **Accessing the retail sector and the growing food service segment will require changes in scale and consolidation in the BC industry.**
  If shippers of BC product do not make these changes, market share will decrease. While the first impacts of these trends were felt by producers, local processors and retailers are also being squeezed by national and international retailers and food service distributors. Particularly vulnerable are small-scale food processors that cannot supply volume product demanded by consolidated buyers. The trend is beginning to affect niche product markets as well. For example, the organic system has seen centralization with the markets dominated by a few large players.

- **The value chains in BC are underdeveloped and fragmented.**

[7] "Empowering Canadian Farmers in the Marketplace"

Value chains are seen as replacing individual companies in the marketplace. "In the future, agri-food producers, processors, logistic service providers and retailers will no longer compete as individual entities. Rather, they will collaborate as a strategic 'value chain' competing against other value chains in the market place. " (Jan van Roekel)

4. Potential Strategies

Consolidation of the value chain elements presents opportunities and challenges to BC producers and processors. An approach that encourages industry cooperation and other adjustments to the operation of value chains will be necessary to maintain competitiveness in the changing marketplace. Some of the strategies that have been employed by industry and governments to promote efficient value chains in the sector include the following:

- **Encourage the formation of marketing coops.**

  Most distributors will not work with small suppliers as it is not cost effective and reliable. Producers would be encouraged to form cooperatives that would be able to provide the volume necessary to be attractive to distributors. Enhanced industry cooperation to the point of forming marketing and distribution cooperatives may be necessary. This is one way to achieve necessary economies of scale and simplify the procurement process for buyers.

- **Facilitate alliances within and improvements to food value chains.**

  Industry groups need to be encouraged to collaborate and network on a vertical basis by the sharing of information within partnership groups. The members of the value chain need to understand each other's roles and needs. Some jurisdictions have done this through "meet the buyer" or "walk the chain initiatives" to increase awareness and cooperation. Another method is to disseminate best practice supply chain management examples. Industry experts believe that value chain management is critical for competitiveness.

  Value chain programs need to:

  - create common understanding of the concept;
  - involve the entire industry at each step;
  - assist chain members to listen actively to the concerns of other chain members; and
  - encourage the industry to innovate, adapt and change.

  "Value chains are vertical, strategic alliances that focus on specific market opportunities. Over the long-term, value chains seek to optimize combined expertise and capabilities of all participants. A successful chain addresses consumer needs, drives out unnecessary costs and increases value along the entire chain. " (George Schrijver, Principal, WCM Consulting). Saskatchewan's Value Chain Program provides funding for value chain projects dealing with the following:

  - Market assessment;
  - Product development;
  - Test marketing;
  - Feasibility analysis;
  - Verification of opportunities;
  - Education and awareness;
  - Trade shows and missions;
  - Organizational development;

- Business and marketing plan development;
- Value chain design;
- Safety and quality assurance; and
- Traceability

Alberta has a similar value chain program. There is a Centre for Food Chain Research at the Imperial College, London, England.

A private company, Groupex Systems Canada Inc. allows small businesses to achieve chain level discounts on products. Groupex does this by using the volume of its members to provide savings on restaurant supplies & services such as soft drink, coffee, bread, chemical, grocery distribution and dairy. The company is owned by the Canadian Restaurant and Foodservices Association.

Vertical integration needs to be promoted to enable producers to have greater power within the value chain, which can increase margins and make investing less risky.

- **Support the creation of processing operations.**

  The conversion from producer to producer processor or the establishment of a processing facility are both high risk and capital intensive. Financial assistance for capital and or operating expenses in the start up phase would encourage more operators to enter this sector.

  In Washington State the Port of Pasco, City of Pasco, Franklin County Public Utility District, and the Tri-City Industrial Development Council partnered to build and market a 250-acre food processing park with timesaving benefits that get plants approved, built and operating quickly. The Center provides food processors with in-place environmental permits, which enables companies to fast-track plant construction; an industrial wastewater treatment plant that is City owned, operated and permitted; sewer, water and natural gas systems which exceed standard capacity; an electrical substation; and a prime location within the fertile Columbia Basin.

- **Provide technical assistance regarding processing processes**

  Some jurisdictions maintain public sector staff with processing expertise in a number of specialty areas who provide one on one technical assistance to existing and potential processors.

- **Encourage the relocation and growth of related individual businesses.**

  This can be done through business attraction and retention campaigns and the formation of business incubators. More operations in a given region will promote cooperative efforts that can increase market power.

- **Encourage consolidation and integration in the industry.**

  Large-scale operations in both the production and processing sides will be more able to compete in the new value chain environment. Already the incomes of very large farms are increasing. These operations should be encouraged to explore forward integration in order to be better positioned to obtain market power through control of the value chain.

I. INCREASE THE LEVEL OF INDUSTRY CO-OPERATION AND COORDINATION

1. The Issue

The BC agriculture industry is somewhat fragmented with many small sub-sectors. It is often difficult for these groups to form strong associations that can lead them in addressing common problems strategically. Coordination of efforts will be increasingly necessary to deal with the changes in the industry.

Specific of the concerns that have been expressed by various sectors regarding this issue included:

- A fragmented industry;
- Weak or non existent industry umbrella organization;
- No coordinated approach to public relations and the media;
- Lack of coordinated response to crisis/issues;
- Poor communications;
- Lack of coordinated marketing;
- Politics and confrontational intra-industry relationships; and
- Lack of comprehensive industry strategies.

2. Sectors Specifically Highlighting the Opportunity or Issue

Some of the sectors that specifically highlighted industry cooperation and coordination issues in their SWOT analyses and or development strategies include:

- Beekeeping
- Health and functional foods
- Food and beverage
- Horticulture
- Mushrooms
- Feeds
- Berries
- Agriforestry
- Small lot agriculture
- Small scale food processors
- Landscape and Nursery
- Poultry

3. Situational Analysis

- **Strong industry associations are key to sector success.**

  A strong industry association is often a critical element in the development of a sector. The benefits of an industry association can include the following:

  - providing access to market intelligence and other vital information;
  - developing local market and import replacement strategies;
  - promoting technology transfer and adaptation;
  - creating a unified voice for affecting policy directions;
  - creating industry identity and promoting good public relations;
  - providing education and advice;
  - coordinating standards and certifications;
  - organizing sectors to restrict overproduction;
  - joint lobbying of government;
  - promoting investment; and
  - providing cooperative marketing opportunities.

Without a strong industry association, a sector is vulnerable to harmful regulatory decisions that will adversely affect the investment climate. It also is handicapped in attempts to educate the public about issues such as food safety and industry practices.

- **Many opportunities are lost through a lack of coordination.**

  Many distributors and retailers now require volumes that many sectors can only provide through cooperative efforts. The industry must also utilize alliances of various types to invest in technology and innovation to ensure competitiveness and profitability.

- **Industry cooperation may not be easy to encourage in BC.**

  It appears to some that individualism is the norm in BC and that this restricts the ability to build a common vision and work collectively on a regional, provincial or sectoral basis. Anther is issue that relatively new immigrants that are in the sector do not participate in efforts to address sector issues.

- **Industry cooperation helps promote success in many areas.**

  If the industry is not unified, it will lose opportunities to work with other parts of the sector to eliminate costs, increase productivity and market in volume. Companies that do not leverage partners will not be as successful as those who do. Partnering facilitates necessary strategic flexibility. Jurisdictions with successful commercial cooperatives also achieve success in value chain formation.

4. Potential Strategies

Given the shared nature of many of the constraints to development, combined with the small size of most of the organizations in the BC agri-food industry, it will be critically important for the various parties to work together in developing, resourcing and implementing initiatives to promote further development. Some of the strategies that have been employed by industry and governments to promote industry cooperative efforts include the following:

- **Encourage and support the formation of industry associations.**

  Industry associations could be subsidized at least in the formative stages and for those sectors without sufficient size to fund their own organization. Government could be the broker that brings the sectors together to begin the process of co-operation within the context of formal organizations. A mandatory farmer registration program could also be implemented to fund industry organizations.

- **Support organizations that already exist.**

  Many industry groups are run by volunteers with little time or energy to commit to the issues of the sector or the region. These groups could be provided with resources to increase membership and help resolve local issues.

- **Encourage and support the formation of industry co-operatives.**

  As part of a strategy to prepare industry sectors to operate within modern consolidated value chains many jurisdictions facilitate the formation of a variety of special purpose agriculture co-operatives. Saskatchewan provides consulting and financial assistance for the development of value-added

agriculture projects using a co-operative business structure. The Saskatchewan Livestock Loan Guarantee Program assists the establishment of production associations that can borrow funds on the strength of a government guarantee. Alberta provides loans to facilitate the processing, distribution and marketing of farm products by co-operative associations. Saskatchewan and Alberta encourage the formation of "New Generation" Co-operatives. A new generation co-op has the following features:

- keeps the one member one vote rule of a traditional coop;
- restricts membership to those fully committed to the business venture;
- allows for a share class to have an associated delivery contract;
- allows for investment shares;
- restricts business activity to agriculture.

The Manitoba Agricultural Credit Corporation provide financing to producers for start-up or equity shares in agriculturally based new generation processing co-operatives.

- **Encourage other strategic alliances.**

There are many more opportunities for co-operative action outside of associations and co-operatives. Strategic alliances can be fostered by promoting increased communication and networking between individual firms both vertically and horizontally. Companies in the same and cross sectors could be brought together to explore potential co-operative initiatives. Other networking initiatives can be explored such as conferences, seminars, literature and interactive on line sites.

J. REDUCE THE COSTS OF PRODUCTION

1. The Issue

BC is viewed by many as a relatively high cost jurisdiction for agriculture and this is borne out by the high cost of some of the key inputs such as land, labour and raw materials. In addition, recent fuel cost increases have had a significant impact both for transportation and for greenhouse production**.** Having high input costs not only reduces profits but is a major impediment to investment in the industry as BC suffers from the reputation of being a high cost location to pursue agriculture. If input costs remain high, margins will remain low, investment will flow elsewhere and the sector will be even more vulnerable to global competition

2. Sectors Specifically Highlighting the Opportunity or Issue

Some of the sectors that specifically highlighted input costs in their SWOT analyses and or development strategies include:

- Agriforestry
- Goats
- Food and Beverage Processing
- Field Vegetables
- Mushrooms
- Blueberries
- Bison
- Hogs
- Beef
- Pork
- Poultry
- Wine
- Grain, Oilseed, Pulse/Forage Seed
- Sheep and lambs
- Floriculture
- Greenhouse vegetables
- Small scare food processors
- Landscape and Nursery

3. Situational Analysis

- **Raw materials, while of good quality, are perceived by processors as being higher priced than in other jurisdictions.**

  An as example high feed costs for livestock are a serious issue for the relatively large livestock sector. Feed is available at lower cost in the Prairie Provinces.

- **Labour costs are higher than in many jurisdictions.**

  This is true of the high volume food producing jurisdictions especially in South America and Asia. Also, many labour costs are higher in BC than for Canadian prairie competitors. Labour can be the largest single production cost. Labour costs range from an average of 6% of production costs in commercial poultry farms to 85% of production costs in some berry farms. The average cost of labour is 24% of operating costs across all types of farms**.**

- **Energy costs are rising.**

  Traditionally a cheap energy jurisdiction, BC is experiencing energy cost rises for such sectors as the greenhouse vegetables where natural gas is used for heat. Natural gas prices have risen by a factor of 5 in the last five years. On farm energy production would be one way to mitigate costs but regulatory impediments has limited the potential in this area.

- **Transportation costs are rising**.

  BC's excellent transportation system has traditionally been an advantage for producers and shippers of food products. However, recent dramatic rises in fuel costs are challenging this advantage. This combined with slower border crossings after 9/11 is raising export costs to the US, BC's largest export market. Also, inter-provincial transportation regulations are uncoordinated and often cause increased costs due to necessary modifications to truck loads and other affects.

- **Urbanization is raising the cost of land.**

  Urbanization is encroaching on many traditionally farm use areas and raising the value of the land due to its suitability for residential and other development. In the Lower Mainland, there is a high demand for hobby size farms or country estate type properties which is also driving up land prices.

4. Potential Strategies

- **Establish a form of extension services**

  The British Columbia Government formally offered extension services to producers through experts who provided advice on cost reduction and other technical areas. Many jurisdictions still provide such services and they are generally viewed as highly valuable.

- **Promote on-farm production of renewable energy**

  As energy costs rise there is growing interest in on farm energy production. This can be done through the use of production by-products or stand-alone energy generation such as hydro electricity or windmill production. There are a number of farm based wind power cooperatives in

the United States and Europe that either sell power to utilities or reduce farm energy purchase needs.

- **Investigate possible tax exemptions.**

  There have been suggestions from the industry in BC that the government consider PST exemptions for farm purchases. The Manitoba government has provided tax relief by reducing the portion of farm property assessment which is subject to taxation. In Ontario, farm properties satisfying the eligibility requirements will be identified for the Farm Property Class and will be taxed at 25% of the municipal residential tax rate

- **Reduce taxes on fuel used on farm**

  Some jurisdictions subsidise the costs of fuel through reduced tax rates. The Alberta Farm Fuel Benefit is designed to offer motor fuel to Alberta farmers at prices competitive with those paid by farmers in other parts of North America. The benefit is made up of a fuel tax exemption and the Alberta Farm Fuel Distribution Allowance, which further reduces the cost of diesel fuel. As of November 2004, the tax exemption portion of the benefit allows farmers to purchase marked gasoline and diesel, exempt of the nine (9) cents per litre provincial fuel tax. The Alberta Farm Fuel Distribution Allowance further reduces the cost of marked diesel fuel by six (6) cents per litre. The current fuel tax on propane is six and one-half (6.5) cents per litre and propane used for farming purposes is exempt from this tax. In Saskatchewan, Fuel Tax Exemption Permit holders (i.e. farmers, commercial fishers, trappers and loggers) may purchase 80% of their gasoline tax exempt.

K. ENHANCE ENVIRONMENTAL SUSTAINABILITY

1. The Issue

There is mounting pressure on farm operators to reduce the environmental impact of their operations. There are concerns with waste disposal as well as water and air contamination. “Green wastes” such as manure are increasingly difficult to dispose of as the volumes are increasing and urbanization is reducing the areas where it can be absorbed. The challenge is to find innovative ways to dispose of or reuse the by-products of agriculture production in an environmentally sustainable manner.

2. Sectors Specifically Highlighting the Opportunity or Issue

Some of the sectors that specifically environmental issues in their SWOT analyses and or development strategies include:

- ❑ Agriforestry
- ❑ Cattle
- ❑ Hogs
- ❑ Poultry

3. Situational Analysis

- **Consumers are increasingly concerned about on farm activities as they relate to food attributes.**

  Among the areas where farm-based food attributes are gaining importance with the public include:

  - Concerns with animal welfare;

- Concern about treatment of wildlife;
- Assurance of certified organic; and
- Assurance of non-GMO.

In BC there are regulations that protect wildlife habitat on farms but there is not compensation to farmers for the costs of this protection.

- **Consumers want assurances that farm practices are environmentally sustainable**.

  This concern is often related to the desire for organic product. Environmental degradation caused by agricultural practices have resulted in support for organic principles and practices among consumers and environmental groups.

- **Producers need to find innovative ways to become environmentally sustainable**.

  There is an increasing interest in "green technologies" that result in soil improvements, reduce contaminations, result in a healthier environment and ease the conflicts in urban/agriculture interfaces. The use of these technologies often results in increases in operating costs for producers and innovative methods need to be found to mitigate these costs while continuing to protect the environment.

- **There is support for environmental sustainability.**

  In BC the Agriculture Environment Partnership Initiative (AEPI) and Agricultural Environment Stewardship Initiative (AESI) provide funding to farmers and ranchers to address environmental issues, enhance environmental sustainability and reduce the impacts of wildlife on agriculture. Fifteen million dollars was been allocated for the AEPI, which included $3 million committed from the BC Ministry of Agriculture, Food and Fisheries (MAFF) to address related wildlife damage compensation and $990,000 for the AESI. MAFF has increased their commitment to wildlife damage compensation, reflecting support through to 2008.

4. Potential Strategies

- **Help producers identify environmentally sustainable practices.**

  Alternative green technologies practices in other jurisdictions could be examined and illustrated to producers to facilitate adoption. Environmental and cost benefits could be emphasized.

  The Ontario Environmental Farm Plan (EFP) is a risk assessment tool and educational process that encourages farmers to incorporate best practices in their farming activities. Through peer-run workshops the process allows participants to learn about best practices and to apply technically sound solutions to identified potential risks in an environmental action plan. The plan has produced a self-assessment workbook for farmers to use.

- **Use tax incentives to reward agricultural operators who use these practices and encourage others to develop environmentally sensitive practices.**

  Various sectors have proposed that tax incentives be used to compensate producers for incurring costs that benefit all of society. Such incentives could promote conversion to organic production and the environmentally sustainable methods of dealing with waste.

- **Undertake green technology research**

  Such research would facilitate the application of suitable technologies. It would also confirm that environmental concerns and regulations are science-based and sector specific. The research could support applications of technologies such as integrated pest management and such practices as the use of alternative fuels such as biodiesel.

  The Manitoba Livestock Manure Management Initiative funds innovative research in the disposal and use of livestock by-products.

- **Promote the reuse of waste for power generation or other revenue producing activities**.

  One of the most significant issues in the environmental area for farm production is the disposal of animal waste such as manure. Composted manure can be use for a variety of applications such as erosion control, landscaping, and fertilizer.

  Other technologies used to convert manure into useable products include mechanical devices to separate the solid portion of the manure from the liquid portion, aeration of the wastewater and anaerobic digestion.

  Manure can also be burned to power electric generators. Anaerobic digestion has been used to produce methane gas for on farm use or converted to electricity and sold to utilities. Such biogas projects have many benefits. These projects are capable of the following:

    - Reduce odors;
    - Provide high-quality fertilizer;
    - Reduce surface and groundwater contamination;
    - Destroy pathogens and weed seeds;
    - Reduce atmospheric emissions of methane;
    - Provide on-farm energy; and
    - Create jobs related to the design, operation of facilities.

The USDA Environmental Quality Incentive Program funds waste management facilities and the US Department of Energy supports biogas projects. Many states also have projects to promote biogas projects.

Some jurisdictions undertake a centralized collection, composting and use of manure in government owned facilities. Oregon has a digester that converts manure from approximately 4000 dairy cows into electricity. In 2004, the facility generated about 1.3 million kilowatt-hours of electricity. Portland General Electric (PGE) has built a small manure digester at CalGon Farms dairy in Polk County. It handles the manure from about 400 dairy cows and generated about 236,000 kilowatt-hours of electric energy in 2004.

L. INCREASE ACCESS TO THE PHYSICAL RESOURCES REQUIRED FOR PRODUCTION

1. The Issue

The Agriculture Land Reserve totals about 4.7 million hectares, which represents about 5% of the land area of over 89 million hectares of the province. The limited amount of available farmland, combined

with urban development and other land use activities, has put pressure on the land base to such an extent that BC has the highest farm real estate values in Canada. Because of this scarcity and other factors, security of access to suitable land and water resources are significant issues for agriculture, especially the livestock industry.

2. Sectors Specifically Highlighting the Opportunity or Issue

Some of the sectors that specifically highlighted land and water access issues in their SWOT analyses and or development strategies include:

- Cattle
- Grapes

3. Situational Analysis

- **A number of competing uses put pressure on access to crown land.**

  Competing uses for crown land in British Columbia include forestry, mining, recreation, and protection of wildlife. In fact in some areas increasing wildlife numbers are competing for forage on crown land currently used for forage. In other areas, there is a degree of forest encroachment on forage land. Noxious weed encroachment on range land is another factor in some areas.

- **Urban encroachment is impacting farm operations**

  In the Lower Mainland and the Okanagan significant amounts of arable land is being utilized for residential and recreational developments.

- **Cost of clearing land is a constraint for expansion.**

  To clear available forested land requires paying for clearing the land in addition to stumpage fees. These costs are a real disincentive for producers to expand the amount of land in use.

- **Competing uses for water supplies are affecting agriculture operations.**

  Water use for urban development, industry and recreation limit the ability of agriculture to expand. In some areas of the province, agriculture is the largest user of water through irrigation operations. Increased use of metering is an indication that water supply is increasing seen as a limited resource that is increasing in value. Ground water licensing is seen by some as a possibility in the future. Water use per capita in BC in higher than in many other jurisdictions.

- **Water supply is under pressure from climate change**

  Forecasts are for reduced supply and increased demand for water in many areas of the province such as the arid areas of BC: Eastern Vancouver Island, high plateau rangeland, and the Okanagan-Similkameen valleys. Occasional droughts can complicate the situation.

- **Additional land is being removed from the ALR.**

  Municipalities have been given greater influence on the removal of land from the ALR. This could result in additional loss of land suitable for agriculture operations.

- **The BC Integrated Land Management Bureau coordinates access to, and/or information about, the province's natural resources.**

  About 90% of BC is crown owned and thus the management of these lands is a critical factor in the agriculture industry being able to expand. The BCILMB's activities include:

  - coordinating and accepting applications for access to Crown natural resources (tenures, permits, licences, Crown grants, etc.) through regional Front Counter BC – Natural Resource Opportunity Centres;
  - delivering natural resource authorization adjudication services on behalf of mandated ministries;
  - developing, implementing and revising land-use plans;
  - managing and delivering resource information; and
  - prioritizing and coordinating recovery planning for broad-ranging species-at-risk.

4. Potential Strategies

- **Promote water conservation in agriculture operations**

  Supporting irrigation efficiencies and enhanced water management practices by producers would increase the supply. Also, strategies to reduce pollution of water supplies and ground water resources would mitigate the scarcity.

- **Investigate the potential for using more Aboriginal land for agriculture**

  Some cattle operations are already using Aboriginal land for grazing livestock. There is additional potential for the use of this category of land. Also, developing agreements with aboriginal groups in advance of treaty settlements could help facilitate utilization of some treaty lands for agricultural purposes.

- **Investigate the opportunities for use of lands infested with pine beetle.**

  Vast areas of the province will be deforested due to the pine beetle infestation. There may be opportunities to convert some of this land into agriculture uses. Analysis of the suitability of areas for conversion may be necessary.

- **Intensify research regarding invasive plants and irradication programs.**

  Invasive plant species greatly reduce the amount of range land available to grow acceptable forage. Effective strategies need to be developed to deal with this blight.

- **Reduce land clearing costs.**

  Producers would like to see stumpage on land cleared for agriculture use to be reduced to make it more economic to clear the land. There is also some support for the reinstatement of clearing credits previously offered.

V. STRATEGIES AND ACTIONS

The agri-food industry is highly valued by British Columbians because of its impact on our economy, our food-security, and our physical environment. While we remain a net food importer, the industry serves as a very important source of food products and employment for British Columbians. As concerns about food safety increase so to does the importance we place on having a strong domestic industry that provides a measure of food security. We highly value agriculture land because it protects significant areas of our green space from further urban development, particularly in areas that face strong urban pressures such as the Lower Mainland, Okanagan and southern Vancouver Island.

The agri-food industry is undergoing a period of unprecedented change. BC producers face increasing pressure from low-cost competitors at a time when the costs of many of our key inputs are increasing. Consumers are becoming more demanding, product life cycles are shortening, and the level of market segmentation is increasing. Consolidation is occurring at all levels of the food chain. Unemployment rates in BC have now declined to a generational low, making it hard to attract and keep the workers we need. Both environmental pressures and incidence of urban/rural conflicts are increasing. Technology is changing how we develop, produce and market our products.

How well we react to these changes will determine the future of the agri-food industry in BC. Simply put, we need to take steps now to improve our competitive position, improve the profitability of our producers and processors, and grow the industry. Towards this end, this chapter identifies five key strategic directions. These directions involve:

- Expanding our value-adding capabilities;
- Strengthening our competitive advantage in local markets;
- Building our ability to compete in international markets;
- Reducing costs and improving operations; and
- Enhancing the capacity of our industry organizations.

Reflecting the input provided by the Steering Committee and the Advisory Committee, the chapter concludes by defining specific actions which represent the highest priorities in the near-term.

A. KEY STRATEGIC DIRECTIONS

Each strategic direction is detailed in the following paragraphs in terms of the intended objectives, the factors that will determine how successful we are, where we are currently falling short, and actions that can be taken to improve performance.

Strategy #1: Expand Our Value-Adding Capabilities

Objective

The objective is to enhance the market value of our existing products and develop opportunities for new products and processes through innovation and differentiation, capitalizing on emerging and non-traditional market opportunities and enhancing value adding processing capacity across the province.

Incorporating greater value into our products and services will enable us to increase our sales, increase the profit margins we earn on those sales, and help overcome cost disadvantages. A recent survey by Statistics Canada found that food processing companies that introduce product innovations generate

increased sales and report that the margins on their innovative products are higher than the margins on their traditional products. The premium or value-added nature of agriculture and food products can be based on service, manufacturing processes, product characteristics such as visual appeal, quality of ingredients, taste, formulation or product format (e.g. organic, low fat content, low in carbohydrates, functional benefits, etc), presentation in terms of branding and/or packaging, origin, convenience, and point of sale. Having food safety and quality systems and informing the consumer about these systems through techniques such as certification, labelling and branding can also provides an important lever for achieving product differentiation, increasing the value for the industry, and expanding markets.

Key Success Factors

Strong value-adding capabilities require:

- An in-depth understanding of consumers and markets, particularly emerging opportunities and the basis for product differentiation.

- Strong research and development capabilities. Innovation requires access to modern equipment, funding for research and development, technology acquisition and implementation, qualified experts, graduates with appropriate skills, and technical and other relevant information.

- Close relationships between industry and the research and development infrastructure. Strong linkages are required to facilitate industry input in determining research priorities as well as to facilitate transfer of the results of research into industry.

- Ready access to capital and other resources that industry needs to build additional value into their products and services and to invest in equipment and facilities. Firms now must innovate more rapidly than ever before due to globalization, stronger competition, the growing impact of information and communications technology, and the high pace of scientific and technological change.

Key Issues

Key issues and constraints that need to be addressed through action include:

- *Access to key market research that can inform company strategies and assist in establishing research priorities is very limited*. Few sector-wide or target market research studies have been undertaken and few companies or industry organizations are able to fund such research on their own. Market research is critical to understanding market potential, consumer purchase criteria, buying processes, and the most appropriate basis for differentiation.

- *We do not invest sufficiently in research and innovation*. Innovation drives competitiveness. BC has a long established R&D infrastructure for agriculture and there have been some notable successes. For example, research efforts by the Summerland Research Station, the Wine Research Institute, the Institute for Sustainable Horticulture, and the UBC Faculty of Agriculture Sciences have resulted in profitable new product or process developments. While the level of government funding has been increasing somewhat, the level of private and public sector investment in innovation in BC remains remarkably low is comparison to other jurisdictions in Canada and the United States.

- *Our level of new business investment is low, driven in part by limited access to patient capital.* Access to capital is critical to the development of new products, the development of new markets, the expansion and updating of facilities, and making changes in how organizations operate. While the agri-food industry accounts for about 2.4% of provincial GDP, it accounts for only about 1.5% of new business investment. The inability to attract the required levels of capital restricts our entry into new sectors and new products, creates a productivity lag, and ultimately reduces our competitiveness.

- *The agri-food industry makes comparatively little use of the many government and non-government resources that are available to facilitate innovation.* For example, the Federal Government has established a variety of resources, networks, and programs to encourage innovation. However, in part because they have not placed a high priority on innovation to date, many producers and processors have not taken advantage of these resources.

- *Access to support services is limited in the outlying areas and is a significant constraint to the amount and extent of innovation activities undertaken by producers and processors.* Companies are most likely to work with facilities within approximately one-hour distance of their facilities with both firms and researchers loosing interest if they do not have close proximity which allows for personal interaction. The producer or processor who needs to make modest incremental advancement that involve existing technologies do not need to contact a technology source working on state-of-the-art R&D. More appropriate sources of support might be a technical college or vocational institution and access to mobile pilot scale equipment.

Recommended Actions

Actions that can be taken to expand our value-adding capabilities include:

- **Provide funding support to increase access to market research.**

  Funding is required to enable market research to be undertaken and made available to industry stakeholders. This research will provide the basis for identifying market opportunities, assessing market potential, identifying distribution channel needs, requirements and participants, preparing business plans and marketing strategies, and determining research priorities. The key will be to bring together key industry stakeholders, government and research institutions around key market research projects, to ensure that the research is targeted, will meet industry needs and will be acted upon. While some form of industry contribution will be required, most of the research cost should be paid by government or funding agencies, recognizing that the benefits will be widespread and many of the key stakeholders have limited resources available.

- **Establish a strategic innovation program for the agri-food industry.**

  The strategic innovation program should:

  - Establish priorities under a broad strategy for innovation. Priorities should focus largely on key opportunities to incorporate added value into our products and services (e.g. responding to emerging opportunities such as health & wellness, convenience foods, etc) and pursuing emerging industry opportunities such as bio-products. In addition, research and development can focus on other key issues such as environmental sustainability, energy, and resource issues.

- Promote further development of the research infrastructure supporting the agri-food industry, with a particular focus on encouraging establishment and expansion of research centres of excellence that bring resources together to focus on key issues where BC could have a competitive advantage.

- Support and facilitate other activities related to innovation including technical analysis and feasibility studies, venture assessments, adaptive research and technology adoption, and support for prototype development. The three pillars of the ACAAF program are designed to support project that test or pilot approaches and solutions, transfer research results into market opportunities, and gather, analyze and share information that contribute to future agri-food policy directions.

- Coordinate existing sources of funding for innovation available in BC and seek to lever additional funding available for research activities from various sources including government and industry.

- Provide support to increase the share of funding obtained for agri-food research in BC from key sources such as major Federal Government innovation programs (e.g. CFI and NSERC). For example, funding could be provided to assist research centres, academe and industry prepare applications for research funding.

- **Establish a virtual network of regional agri-food innovation clusters or centres, building on existing BC resources to assist industry become more innovative.**

  The function of the network is to strengthen linkages that exist between industry and the many resources that are already available to organizations innovate. For example, the centres could help businesses access technical information, resources and assistance, research grants and other resources. Rather than establishing stand-alone innovation centres, the objective would be to establish a virtual network that incorporates a web presence complemented with links to local resources including staff resources at research facilities, development organizations, colleges, and other facilities. Preliminary work in creating a BC Research Consortium is underway.

  A wide variety of resources are already on-line that would be of interest to regional agri-food businesses. However, these resources tend to be scattered over a wide range of sites and are generally not designed with the needs of producers and processors in mind. A portal would work to improve access to, and provide a context for the use of, the many programs, services, and resources (including Internet resources) available. The portal would help users better define and understand their needs, create awareness of existing resources, and facilitate initial contact and the collection of information. Issues of rural access to high speed Internet need addressing for benefit to all areas of BC. The efforts should be coordinated with the National Research Council Industrial Technology Advisors, the Canadian Technology Network, and the BC Regional Science and Technology Network.

- **Strengthen the ties between industry and research capabilities & resources already existing in BC.**

  The agri-food industry needs to make greater use of the existing research and development infrastructure. To help strengthen ties, groups can organize meetings, tours, seminars and other events that will bring researchers and technology experts together with industry stakeholders. Industry groups could articulate their research needs and technology issues in

these types of forums. Other strategies include promoting coop programs, faculty exchanges, and advisory committees to increase industry/university contacts. More communication with the University Industry Liaison Offices is an important part of this process.

Improving technology transfer can be accomplished through the provision of relevant information to producers and processors, subsidizing the implementation of new technology, providing wage subsidies for science and technology professionals who will guide the technology transfer process, and working through the proposed network of regional innovation clusters. The BC Innovation Council has regional councils that could be utilized.

Efforts can also be extended to discovering available technology world-wide that would be of benefit if incorporated by the industry. The NRC IRAP program does some of this work through regional representatives who facilitate commercial applications of new technology through funding and technical advice. This program should be promoted to producers and processors so that more of its resources are directed at agri-food issues.

- **Assist the agri-food industry access the patient capital that it needs to be more innovative and expand value-adding capability.**

  Patient capital is required to develop value-added products and establish, expand, modernize and restructure processing capacity in the industry. Many producers wish to become processors or add further value to their products, but do not have access to the capital needed. Actions that can be taken to increase access to capital include:

  - Review options to establish and better utilize existing venture capital programs or other financing programs. The Provincial Government's Equity Capital Program could facilitate the creation of this type of fund (under this program, investors receive a 30% tax credit for investing in a venture capital fund). Alternatively, a program could be developed based on WD's Loan Investment Fund Program model, which provides a loan loss reserve to reduce the risk for financial institutions.

  - Implement investment readiness programs. One of the reasons agri-food businesses are not able to access venture capital is that many have no experience with presenting their business to this type of audience and they are not sure of what investors want to know. Those seeking investors need training and practice in presenting their business to experienced venture capitalists and angel investors. Investor readiness programs can take the form of mentoring, workshops, and expert analysis of business plans or a combination of these initiatives. A confident, prepared entrepreneur with detailed documentation will be much better suited to approach a variety of financing sources.

  - Increase awareness of opportunities to invest in the agri-food industry amongst sources of venture capital and angel investors, and to work with existing venture capital user groups such as BC Biotech. Angel forums in Vancouver and many other jurisdictions have been highly successful. Some regions are also developing on-line investor matching services.

Strategy #2: Strengthen local market competitive advantage

Objective

The objective is to increase the value of local products sold in local markets, taking advantage of key competitive advantages including the inherent consumer preference for local products through product branding, promotion and strengthening relationships within the value chain.

Consumers tend to prefer local products because of a desire to support their own community and a perception that local products are safer, more nutritious and environmentally sensitive. Another benefit of marketing locally is that the shorter value chain associated with local sales means that producers can realize a higher proportion of the final selling price while incurring lower transportation costs.

Key Success Factors

Building local market competitive advantage requires:

- Being awareness of the local market opportunities and options that are available.
- Creating consumer awareness of local products through identification programs and differentiating those products in the minds of the consumers. An important part of achieving differentiation is instilling and reinforcing a positive image of the BC agri-food industry amongst the local population.
- The availability of local processors and producers capable of producing products and service levels that meet the needs of the local market.
- The availability of marketing mechanisms through which local production can be marketed to local buyers at the retailer, food service, and consumer levels.

Key Issues

Key issues and constraints that need to be addressed through action include:

- *Marketing is the most commonly identified weakness of the agri-food industry in BC.* At the present time, there are no broad, province wide marketing initiatives underway to identify local products and to encourage people to buy locally. Marketing will become even more important as suppliers continue to move away from a commodity focus and up the value-added/specialty product spectrum.
- *Changes in the value-chain are making it more difficult for producers and processors to gain market access, even to local markets.* The distribution and marketing systems are seeing significant consolidation, leading to more centralized, high volume buying operations that seek to make greater use of high technology and exercise market power to reduce costs. Small operators are finding it increasingly difficult to compete on price or produce sufficient volumes to be considered by the volume-based systems. Small operations may also lack the technology, marketing skills and capital needed to compete against larger companies in these value chains. The average size of producers and processors in BC is significantly smaller than those in other jurisdictions, which can place us at a competitive disadvantage.

- *Availability of suitable processing capacity is a barrier in some regions of the province.* Concerns were expressed in the workshops about the loss of local processing capabilities over time as well as the impact of processing regulations on the viability of small and on-farm processors.

- *There is a need to improve the image of the industry amongst local consumers as well as among potential managers, workers, investors and operators*. The industry should be seen as an attractive area in which to work, develop a career, and operate a business. It should have a reputation as an environmentally friendly local source of safe and quality food. It should be viewed as an important part of the local and provincial economy.

Recommended Actions

Actions that can be taken to strengthen local market competitive advantage include:

- **Re-establish a BC Branding program including retail, food service, regional and special purpose campaigns such as for the 2010 Winter Games.**

  There is strong industry support for a branding campaign based on the successful Buy BC program that identified and branded BC grown and processed products. Many jurisdictions have implemented buy local campaigns. These campaigns can include both provincial and regional components. Local alliances with groups such as retailers and local Chefs can be used to promote local produce. Upcoming platforms such as the 2010 Winter Games provide significant opportunities to raise the profile of the local industry, both within BC and outside of the province.

- **Support development and implementation of market and sector specific marketing plans and initiatives.**

  The approach to marketing needs to be strategic and focussed on specific markets, sectors and regions. Much of the industry does not have the resources or capabilities needed to undertake this task on their own as the associations are small and staffed with volunteers. Funding can be provided to enable industry organizations to conduct market research as well as plan and implement marketing initiatives. Technical assistance can be provided to help industry deal with issues such as direct marketing strategies and regulations, the use of e-commerce, market barriers for small producers, farmers market development, chef-farm connections, farm-to-cafeteria connections, eco-labels and organic certification, agri- tourism, grant development and resources, and legislation affecting small producers. Another option is to establish an umbrella marketing organization for agri-food that would be responsible for this activity.

- **Promote local and direct marketing systems.**

  The marketing of food products directly to retailers, the food service industry and end consumers in the local community can provide the producer with higher returns, has import replacement potential, and help satisfies the consumer demand for traceability. Many jurisdictions encourage this practice. One approach is to support the formation of farmers markets and regional brokerage services that would link producers and buyers. Another element would be the education of consumers, retailers, and food services about what is available locally.

A strategy pursued by some jurisdictions is to make available case studies and business plans for farmers markets, on farm sales and direct to retail and food service marketing. Others publish "how-to" manuals on direct farm marketing with information on business planning, and advertising. There is a North American Farmers' Direct Marketing Association that supports agri-tourism, on-farm retail, farmers' markets, pick your own, consumer-supported agriculture, and direct delivery.

- **Provide training, workshops and other support to assist local producers adjust to changes in the value chain.**

  There is a strong focus on adopting new value chain management practices, taking costs out of the system, and streamlining supply channels. The adoption of new value-chain management systems (e.g. electronic automatic replenishment systems, just-in-time manufacturing and vendor-managed inventory systems) can make it challenging for local producers and processors to gain market access. Producers and processors need to aware of the changes that are coming and receive assistance to enable them to respond accordingly.

- **Implement an investment and processor attraction strategy.**

  The objective is to promote the opportunities and competitive strengths of specific regions as a means to expand local processing capacity by attracting new investment and encouraging the relocation or rationalization of facilities from other regions into BC. One element of an investment attraction strategy is the development of business cases for processing facilities. This would be especially useful when attempting to establish a small regional processing facility. The business case could be used to attract both public and private sector financing for the creation and operation of the facility. The demonstrated economic impact would help bring local and provincial governments onside and facilitate the necessary regulatory approvals. The case could be developed by a local association or by a regional economic development professional.

- **Encourage the development of strategic alliances and other cooperative efforts that will expand marketing and processing capabilities.**

  Strategic alliances and cooperatives represent potential strategies through which a fragmented industry, which lacks economies of scale, can achieve a level of success in the modern value chain environment. Unified marketing, producer and processing groups can better achieve the volumes required by current distributors and retailers. They can also undertake joint marketing campaigns with local and international targets. Funding could be provided for consulting and financial assistance related to the development of specific initiatives. A loan guarantee program or revolving loan program could assist with the establishment of production groups, capabilities, cooperatives and associations.

- **Implement initiatives to improve the image of the industry.**

  The public can be made aware of the realities of the modern agri-food industry through a series of media placements. Emphasis should be put on the importance of the industry to BC, its accomplishments on issues such as the environment, and food quality and safety, as well as the sophistication of the industry, the business opportunities, and the potential for satisfying careers. One possibility is a radio-based marketing campaign that promotes the diversity of the industry and celebrates success stories.

Many jurisdictions have introduced agriculture and agri-food related subjects into the K to 12 system. The most common approach is to provide educational materials to teachers such as lesson plans, stories, and multimedia products. In the later grades, materials are provided that relate to the sophistication and diversity of career options.

The 4H clubs have been a traditional and successful method for introducing young people to rewards of the industry. These clubs could receive support either directly or through regional associations. They could be a source for promotion of coop positions and scholarships.

Strategy #3: Build our ability to compete in international markets

Objective

The objective is to build world-class business capability through insightful competitive intelligence, leading edge response to market opportunities, and development of strategic alliances for entering and maintaining a positive BC market presence internationally.

While technological advances and trade liberalization has opened up the BC market and other traditional export markets to low-priced competitors, it also provides opportunities for BC to continue to develop offshore markets. In particular, our proximity to the US (the largest market in the world) and our historic marketing relationships with Asia-Pacific combined with our location on the Pacific Rim provide a strong foundation for further expanding export sales.

Products differentiated on the basis of their added value will largely drive our future growth in export sales. Statistics indicated that exports of consumer-orientated food products have risen more than four-fold since 1990 and now account for one-half of agri-food exports from Canada. During that same period, our bulk exports actually declined in real dollar terms. The rising middle class of developing countries represents a significant potential market for our value-added food products.

Key Success Factors

Competing successfully in international markets requires:

- Ready access to competitive intelligence that provides actionable information on market opportunities, the competitive situation, market potential, sales processes, and key strategies.
- Open access to key markets, which are not unduly restricted by tariff or non-tariff barriers.
- Taking full advantage of the many resources that are available to assist exporters. Examples of these resources include export guides and tools, market research, export training programs, regional trade networks, trade fairs, seminars and missions, the agri-food trade service, export loan guarantee programs, and trade commissioners.
- Having the resources and capabilities to market our products successfully in international markets.

Key Issues

Key issues and constraints that need to be addressed through action include:

- *Needed market information is difficult to access.* Without up-to-date marketing intelligence and marketing skills, any industry in the increasingly competitive marketplace will find itself at a distinct disadvantage. In some situations, market information and competitive intelligence on key markets and segments is simply not available. In other situations, information is available but local producers do not have the time and resource to collect and analyze or are not familiar with where it can be accessed.

- *Trade barriers are becoming an increasingly important issue for producers as we shift more of our focus towards export markets*. Many jurisdictions have been implementing trade practices, which create barriers that severely restrict the BC industry's ability to develop and maintain export markets. For example, our biggest trading partner, the US, continues to impose tariff and non-tariff barriers to limit the movement of agricultural products into the US market. The US and other jurisdictions also significantly subsidize their industries, which restrict the ability of BC products to compete in the marketplace.

- *Most producers and processors have limited experience in international marketing and have limited resources available for this purpose.* Developing new markets for consumer-oriented products typically requires significant lead times and considerable resources. The small and diverse nature of the industry is a challenge for the development

Recommended Actions

Actions that can be taken to build international business capability include:

- **Promote and coordinate industry cooperation and participation in the planning and implementation of key export market development strategies and programs.**

  Support can be provided by:

  - Initiating market and product specific market studies;

  - Providing access to strategic and timely customized intelligence, market information and knowledge;

  - Working with industry to increase awareness of the opportunities for exporting, the requirements, and the resources and programs that are available to assist.

  - Encourage the development of strategic marketing alliances, which may be multi-regional and cross-sectoral. Government and funding agencies can play a role in promoting and financing the development of partnerships and strategic alliances.

  - Showcasing BC producers and producers in target markets and building links between BC producers and international buyers through initiatives related to the 2010 Winter games, outgoing and incoming missions, networking events, and promotional materials;

  - Strengthening relationships with appropriate Canadian and international agencies.

- **Continue to push for greater market access, address trade issues and seek to level the international playing field.**

  At the recent agriculture ministers' meeting in Regina, ministers from across Canada agreed to continue to push for changes so that Canada's producers and processors can compete fairly and equitably in global markets.

Strategy #4: Reduce operational costs and improve operations

Objective

The objective is to improve the competitive position of the agri-food industry in BC through the reduction of key costs, addressing key operational issues, and amending regulatory processes to ensure that industry needs are addressed.

At a time when the competitive environment has never been tougher, the industry in BC is facing rising input costs, increasingly complex regulatory processes and issues, and other changes in its operating environment which require significant changes in the products we produce and how we do business. Even before recent increases in land, labour, fuel and other input costs, BC was already viewed by many as a relatively high cost jurisdiction. We need to find ways to build upon our strong history to further strengthen the competitiveness and performance of the industry.

Key Success Factors

Improving the competitive position of the agri-food industry in BC will require:

- ➢ Access to the widening and deepening set of skills needed to manage operations in an increasingly sophisticated agri-food industry.
- ➢ Ready access to both skilled and unskilled workers on a full-time, part-time and seasonal basis.
- ➢ Regulatory processes which are effective and efficient, consistent with the development objectives of the agri-food industry, and implemented in a manner that facilitates input from industry and assists industry in adjusting to major changes in the regulatory environment.
- ➢ Access to land and other resources that are needed for production.

Key Issues

Key issues and constraints that need to be addressed through action include:

- *As the agri-food industry grows and diversifies, the demand for a broad range of management skills has also increased*. Operations now require a diverse range of management skills covering areas such as production management, human resource management, marketing, and financial management. As a result, many segments of the industry identify management capabilities as a key constraint to development. Limited access to key management skills serves to constrain productivity and reduce industry's ability to identify opportunities for improvement, implement change, and increase profitability. In addition, a lack of trained

entrepreneurs can result in an industry that lags other jurisdictions in new market and new product development.

In the past, the provincial government's agriculture extension services were relied on to help with the development of the financial and technical skills of managers and employees. There is also an issue of succession, as some aging producers and processors report that they it can be difficult to find family members or others to take over the operations.

- *The industry is experiencing greater difficulty in accessing the skilled and unskilled workers it needs.* Unemployment rates in BC are at a generational low and competition from other industries for workers (as well as managers) is very high. Some factors that contribute to a lack of skilled workers include the limited range of educational opportunities specifically relevant to the industry, comparatively low education levels amongst existing workers, a reluctance of producers and processors to invest in training (because of resource constraints and concerns about employee turnover), strong competition for workers from other sectors, and an unfavourable image of the industry which can make it difficult to attract skilled people.

- *The regulatory environment is increasingly complex, resulting in significant costs for businesses while creating uncertainty that slows the rate of new investment and growth in the industry.* Given the multiple levels of government with which the industry has to deal, workshop participants reported instances of inconsistent and contradictory requirements. In addition, many noted situations where significant regulatory changes were made but little guidance or support was provided regarding the implications for businesses, how they should respond, and what assistance is available to help them in making changes. Some aspects of the regulatory environment that were specifically highlighted in the workshops included restrictive and costly processing regulations, increasing quality and safety requirements, a lack of innovation in supply management sectors, increasingly strict environmental requirements, and inconsistent inter-provincial transportation regulations. Rather than decreasing, it was noted that the level of red tape in the industry is increasing.

- *The incidence of urban/rural conflicts is increasing*. Participants in our workshops noted that urban developments encroach on traditional farmland, new residents complain of production smells and noises, surface water for agriculture is threatened by urban run off of septic and other contaminants, urban development is contributing to increased flooding, and increased population levels and economic activity are placing greater pressure on the available water supply.

- *Competition for vital physical resources, particularly land and water, is increasing*. The Agriculture Land Reserve totals about 4.7 million hectares, which represents about 5% of the land area of over 89 million hectares in the province. This limited amount of available farmland, combined with urban development and other land use activities, has put pressure on the land base to such an extent that BC has the highest farm real estate values in Canada. Because of this scarcity and other factors, security of access to suitable land and water resources are important issues for agriculture, especially the livestock industry.

Recommended Actions

Actions that can be taken to improve competitiveness, reduce operational costs, and address operational issues include:

- **Develop a management skills and labour market strategy.**

  The industry would benefit from a comprehensive management and labour market strategy that recognizes the increasing need for advanced skills. Such a strategy would include:

  - An assessment model to pinpoint and quantify skill gaps of managers and workers;
  - Analysis to determine training needs, locations and amounts;
  - Establishment of skill requirements and standards;
  - Career ladder developed to bridge from farm to processing plant; and
  - Customized training that recognized time, location, cost, and content needs of employers.

  This initiative would best be undertaken as a joint initiative between the Ministry of Agriculture and Lands, the Ministry of Advanced Education and the Ministry of Labour as well as Agriculture & Agri-Food Canada and Human Resources and Skills Development Canada. The implementation phase may require the support of all of these agencies. As well the participation of the industry will be essential in all phases.

- **Establish on-the-ground support to increase access to industry expertise.**

  A major constraint to development is limited access, particularly local access, to expertise and advice for both technical and business related situations. The industry would benefit from the establishment of highly targeted extension services, which would focus on key issues related to high priority initiatives such as marketing programs or technology transfer. The priorities could be set provincially or regionally, based on input from industry and government, with the extension representatives providing on-the-ground support for implementation.

- **Increase the access of producers and processors to training and education.**

  Many jurisdictions target producers and processors for further education and training to improve the production process, processing possibilities and marketing skills. Training areas could include technology, business management, e-commerce, agribusiness entrepreneurship, marketing, finance, human resources, safety systems, risk management or crop/livestock issue specific training. Training can be offered in a variety of ways including seminars, consultant workshops, college programs, short courses, videos, literature, and online courses. Specific training programs can be developed or funding can be provided for individuals who want to select their own training packages. Also possible are programs using apprenticeships, scholarships, job shadowing, mentorships, coop positions and peer networks. Peer networks can be a valuable source of professional development. They can become highly effective learning networks where individuals can obtain information, advice and practical education from people in their own industry.

  In addition to targeting people already in the industry, some jurisdictions use financial incentives to attract bright students to study agriculture related subjects**.** Government and/or industry can offer financial incentives to college or university students to enter agriculture related areas of study. The incentives can target management, production, processing, research or any other part of the food value chain. Priority can be given to areas of greatest need for educated workers, managers or researchers. Some jurisdictions focus on Masters and PhD programs that include related research activities. Summer (or other period) job subsidies can also attract new entrants by facilitating work experience in the industry**.**

- **Work to recruit skilled managers and workers from other countries**.

  One solution to increase access to skilled managers is to target skilled, experienced agri-food professionals from areas with high unemployment. There appears to be potential to target some European countries with this type of program. Implementation of this type of initiative will require the participation and approval of the Federal Government. Once federal approvals were in place, recruitment of these individuals could be done through local industry associations, country specific media and industry publications, and other initiatives.

- **Simplify regulatory processes, improve coordination among various levels of government, and ensure that processes are implemented in a manner that facilitates meaningful input from industry and assists industry in adjusting to major changes in the regulatory environment.**

  The new meat processing regulations is an example where coordination needed to be improved and industry requires assistance in adjusting to the changes. Processors must deal with three layers of government and multiple ministries, particularly within the Provincial Government. Participants in the workshops regularly reported receiving differing messages from differing ministries with respect to the intent and impacts of the processing regulations. This causing significant confusion, is very time consuming and costly, slows the rate of new investment, and reduces the likelihood that industry will be able to adjust successfully to the new regulations.

- **Establish a senior level point person within the provincial government to champion key regulatory issues and adjustment initiatives.**

  Given the number of players in the private and public sectors that deal with the agri-food industry, it is useful to have a single individual or champion responsible for a given issue such as working to clarify and coordinate the introduction of new regulations (e.g. processing regulations) and mitigate the potential negative impacts. The individual would work closely with industry, associations, and government to coordinate activities, highlight the implications for businesses, determine how industry should respond, and assist them in making changes. A key objective would to be to develop common response strategies that could be implemented by much of the industry, which would limit the extent to which each business would have to reinvent the wheel in developing their own response strategies.

  This point person would most likely be a provincial government employee who would have the resources and connections that would assist in this type of endeavour. Alternatively, a staff member of a related arms-length organization such as an industry organization could be used. More than one “point person” (potentially from different organizations) could be involved in different issues at the same time.

- **Develop a joint industry government strategy to ensure agri-food industry access to public resources of land and water, competitive with other jurisdictions.**

  Resources, particularly land and water, will continue to be under increasing pressure as the population increases, demand from industry increases, and climate change both reduces the water supply and increases demand for water especially in the higher populated and the arid areas of BC. Key issues include ensuring that the agri-food industry continues to have access to these public resources while ensuring that the industry continues to develop and adopt conservation practices and technologies that enable us to make the most effective use of the resources that are available. Potential strategies include conducting research related to land

and water use, working to raise public awareness of the industry's dependence on water, linking security of water access to maintenance of the ALR, and gaining industry representation in land and water policy development processes.

- **Promote initiatives to reduce urban/rural land use conflicts.**

  In many regions of BC, urban development has extended the boundaries of residential and commercial areas outward and brought urban and rural areas into direct conflict. Such growth affects the agri-food industry and the environment as well as the livability of the urban areas. It is important that all levels of government be committed to the Farm Practices Protection Act as well as the principles of "right to farm legislation" while working to manage potential conflicts through appropriate agriculture planning, increasing awareness of the importance of the agri-food industry, ensuring that the local planning processes and bylaws are consistent with agriculture viability, and developing a clear and consistent regulatory environment.

  Intensification of animal and poultry operations near urban centre has created significant challenges for dealing with animal waste. A range of innovative, long-term solutions need to be pursued focusing on technological enhancements to production systems, use of waste for cost effective production of energy and marketable by-products and options for locating in areas with lower urban/rural conflict.

Strategy #5: Enhance industry organizational capacity

Objective

Industry associations and other organizations have an important role to play in advancing key strategic initiatives designed to grow and strengthen long-term industry profitability. The objective of this strategy is to build the capacity of organizations such that they can play an important role in bringing key parties together, forging strategic partnerships, planning key initiatives, and facilitating or taking a lead role in implementation.

A strong industry organization can promote industry development by building and strengthening linkages within industry, government, and the research infrastructure. It can support initiatives that may address key issues facing the industry such as the need to increase access to market research and competitive intelligence, increase investment in R&D, increase access to skilled workers, increase access to investment capital, develop and demonstrate new technology, enhance technology commercialization, increase awareness of industry capabilities, and increase the profile of the industry.

Key Success Factors

Enhancing industry organizational capacity requires:

- ➢ Having organizations with the capabilities, credibility and resources needed to bring key parties together, plan initiatives, collectively fund initiatives and facilitate or take a lead role in implementation.

- ➢ Creating an environment where various organizations are encouraged to work together on initiatives to address specific needs that may be common across sectors, regions or groups.

Key Issues

Key issues and constraints that need to be addressed through action include:

- *Most organizations do not currently have the resources or capabilities needed to serve as a strong champion or play a lead role in strategic initiatives.* The small size of many of the sectors means that most industry organizations have limited resources (cash or in-kind) that they can contribute to specific initiatives. Some sectors are too small (or isolated geographically) to have any type of organization dedicated to their issues

- *While Focus on the Future has identified many issues that are common across multiple sectors and regions, industry organizations have generally had little experience to date in working with others on issues of common interest.* Mobilizing the industry for cooperative efforts has been a challenge given the size and diversity of the sectors as well as a lack of history in working together. However, the shared nature of many of the constraints to development, combined with the small size of most of the organizations, means that it will be critically important for the various parties to work together in developing, resourcing and implementing initiatives to promote further development. Industry needs to unite behind strong champions in order to undertake joint efforts around issues such as marketing, research, human resources, production and processing as well as make its voice heard by the industry, public and government.

Recommended Actions

Actions that can be taken to enhance industry organizational capacity include:

- **Provide funding and other assistance to complement industry support in helping build the capacity of industry organizations.**

  While a strong industry organization may be critical to the development of an industry, the private sector is often not in a position to provide the financial support necessary to operate the organization because the industry sector has not yet reached a critical mass and/or is in an early a stage of development or transformation where businesses are preoccupied with their own survival. As such, government funding is often the only option available.

  Government funding to build organizational capacity could be provided in the form of project funding (where the funding is provided for one or more specific initiatives on some form of a cost-shared basis with funding agencies providing most of the funding) or as funding linked to the implementation of very specific mandates defined by the funding source or sources. Government can also assist industry organizations in areas such as adopting best practices, identifying and accessing others sources of funding, and planning and implementing their activities.

- **Increase communication and coordination between various industry sectors and government.**

  Industry sectors often act in isolation both from other agri-food sectors and from the government. A much higher level of communication and coordination is necessary to overcome many of the barriers to development faced by the industry and ensure regulatory clarity and coordination. The various sectors need to meet regularly with each other and with governments

to plan strategic activities that will benefit all stakeholders and deal with cross-sectoral concerns. All facets of the industry and the government must work in a partnership that maintains a broad perspective in regards to critical issues and focuses on commonalities that can be dealt with in a joint manner.

Where the need arises for industry to lobby the government, it should be done in a united or joint manner when possible. The industry should strive to "speak with one voice" in order to increase its influence and facilitate needed changes. Small sectors working in isolation do not have the resources or the influence to impact government actions. The sectors must join forces, decide on critical issues and work as a united group.

- **Favour projects and initiatives that involved the development of strategic alliances**.

  The industry is too small and fragmented to work in isolation. Government can be an important broker that helps brings the groups together to begin the process of co-operation on both a sector and regional basis. A key strategy to foster strategic alliances is to give preference to projects that involve strategic partnerships.

B. HIGH PRIORITY ACTIONS FOR THE NEAR TERM

The success of Focus on the Future will be determined by the extent to which government, industry and other key stakeholders are able to convert the strategic directions into action. In order to gain buy-in of the major parties, a workshop session was staged involving representatives of the Steering Committee and the Advisory Committee established for the project. Based on the results of the session, 5 key priorities for action in the near-term were identified including:

- Provide project funding and other assistance needed to help industry organizations build their capacity to play key roles in enhancing the long term competitiveness of the sector, including funding of program management for implementing strategic initiatives of the Foundation, consolidating and streamlining services to their members, improving organizational effectiveness and development of sustainable funding options.

- Provide enhanced funding support for the development and implementation of projects that undertake strategic market research and trend analysis, disseminate market information, facilitate marketing skills development and build marketing alliances.

- Bring key government and industry stakeholders together to prepare a formal human resource gap analysis and launch an action plan that will enable the agri-food sector to better meet its needs for management skills as well as for skilled, unskilled and seasonal workers.

- Establish a comprehensive, forward looking Innovation Technology Hub for the BC agri-food and bio-product sectors, building on and enhancing existing research and development resources and infrastructure and launch near term projects addressing priority needs.

- Implement actions to coordinate Branding BC activities of the 2010 Opportunities Strategy with the Partners in Healthy Eating initiative and other domestic and export branding initiatives.

APPENDIX I: MEMBERS OF THE PROJECT STEERING COMMITTEE AND THE ADVISORY COMMITTEE

The Investment Agriculture Foundation of BC is the sponsor of this initiative. Overall direction is provided by an Advisory Committee, consisting of senior level leaders from agriculture, food and beverage processing, government and the Foundation. The role of the Advisory Committee is to:

- Identify areas of focus for research, analysis of competitive factors, broad industry consultation and communication of findings;
- Review and approve reports from each phase of the project;
- Identify priorities for action by industry, government and the Foundation; and
- Monitor initiative progress over time and make adjustments to resources and priorities to ensure long term success of the initiative.

The Membership of the Advisory Committee includes:

- Walter Goerzen, Chair, Investment Agriculture Foundation
- Dick Klein Geltink, President, BC Agriculture Council
- Fred Knoedler, Director, BC Food Processors Association
- Rory McAlpine, Deputy Minister, Agriculture, Food and Fisheries
- John Berry , Director, Agriculture Agri-Food Canada
- Bert Miles, Treasurer, Investment Agriculture Foundation

Project management is provided by a Project Steering Committee of industry, government and Foundation members. More specifically, the Steering Committee is responsible for timely completion of the project including:

- Confirming the terms of reference for the RFP;
- Reviewing proposals, short list and interview candidates, select contractor;
- Reviewing analysis/reports, providing comment and direction for the contractor;
- Reviewing and finalizing the stakeholder consultation strategy and plan;
- Lead implementation of the stakeholder consultation;
- Reporting progress and providing recommendation to the Advisory Committee; and
- Reviewing and finalizing the Communications Plan to disseminate findings

Members of the Steering Committee include:

- Bert Miles, Chair, Treasurer, Investment Agriculture Foundation of BC
- Joe Sardinha, Representative, BC Agriculture Council
- Agnes Jackson, Representative, BC Agriculture Council
- Sandy Mathies, Representative, BC Agriculture Council
- Rick Pipes, Representative, BC Food Processors Association
- Steve Thompson, Executive Director, BC Agriculture Council
- Margaret Bancroft, Deputy Director, Agriculture and Agri-Food Canada
- Don Low, Industry Specialist, Ministry of Agriculture, Food and Fisheries
- Rob Simon, Executive Director, Investment Agriculture Foundation of BC
- Al Helmersen, Communications Manager, Investment Agriculture Foundation

APPENDIX II: PARTIAL LISTING OF REPORTS REVIEWED IN PHASE I

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- British Columbia AGROFORESTRY Strategic Plan , 2003 – 2008, SYLVIS Environmental.
- British Columbia AGRI-TOURISM Alliance: Industry Strategic Plan Year 2002-2005, December 2002.
- BC BEEKEEPING Industry Strategic Plan. Submitted to: BC Investment Agriculture Foundation Agri-Food Futures Fund, May, 2004. by Strategic Planning Committee BC Honey Producers Association.
- A Strategic Plan For the FOOD & BEVERAGE PROCESSING Industry, Submitted by The British Columbia Food & Beverage Processors Steering Committee, January 2004.
- British Columbia FOOD QUALITY AND SAFETY Steering Committee Food Quality and Safety Strategic Plan 5 Year Plan 2004/05 – 2008/09, May, 2003.
- HEALTH PRODUCT AND FUNCTIONAL FOOD INDUSTRY, 5 YEAR STRATEGIC PLAN 2002-2006. Agri-Food Futures Fund – Health Product and Functional Food Industry Initiative, 2003.
- ISLANDS AGRI-FOOD INITIATIVE, Strategic Plan, 2003 – 2008, Agri-Food Futures Fund.
- ISLAND FARMERS' ALLIANCE STRATEGIC PLAN 2003 – 2005.
- BC Agriculture Labour Market and SKILLS DEVELOPMENT INITIATIVE, an Initiative under the agri-food futures fund, Three Year Strategic Plan 2004 – 2006. BC Agriculture Council, 2004.
- British Columbia ORGANIC SECTOR Initiative Strategic Plan 2002/03 - 2004/05 Certified Organic Associations of British Columbia, 2002.
- SMALL LOT AGRICULTURE Strategic Growth and Development Plan 2002 – 2006, Small Lot Agriculture Steering Committee, August 2002.
- BC LANDSCAPE AND NURSERY ASSOCIATION STRATEGIC PLAN. 2004-2007.
- Economic Strategy for AGRICULTURE IN THE LOWER MAINLAND Artemis Agri-Strategy Group, 2002.
- The Okanagan Partnership: OKANAGAN Sustainable Prosperity Strategy, ICF Consulting, San Francisco, 2004.
- Industry Development Strategic Plan for the BC GREENHOUSE VEGETABLE INDUSTRY 2002 – 2006 BC Greenhouse Growers' Association April 2002.

- British Columbia MUSHROOM INDUSTRY: Strategic and Operational Plan 2001-2005.
- The MUSHROOM INDUSTRY in British Columbia: A Vision for the Future, Advanced Resource Consulting Ltd. & the BC Mushroom Marketing Commission, 2001.
- BC Meat Industry Enhancement Strategy, BC Food Processing Association, 2004.

B. INDUSTRY PROFILES

- Industry Profile: BISON, January 2004. Ministry of Agriculture, Food and Fisheries: Industry Competitiveness Branch.
- Industry Profile: GOATS, January 2004. Ministry of Agriculture, Food and Fisheries: Industry Competitiveness Branch.
- BC GRAIN, OILSEED, PULSE & FORAGE SEED Profile, May, 2004.
- An Overview of the British Columbia GRAPE Industry, December 2004.
- Industry Profile: HORSES, January 2004. Ministry of Agriculture, Food and Fisheries: Industry Competitiveness Branch.
- An Overview of British Columbia's PEACH, NECTARINE, APRICOTS, PLUM AND PRUNE Industries, December 2004.
- Industry Profile: SHEEP AND LAMBS, 2004. Ministry of Agriculture, Food and Fisheries: Industry Competitiveness Branch.
- Industry Profile: BLUEBERRIES. 2003. BC Ministry of Agriculture, Food and Fisheries Industry Competitiveness Branch.
- Industry Profile: FLORICULTURE. 2003. BC Ministry of Agriculture, Food and Fisheries Industry Competitiveness Branch.
- Industry Profile: GREENHOUSE VEGETABLES. 2003. BC Ministry of Agriculture, Food and Fisheries Industry Competitiveness Branch.
- Overview of CATTLE AND BEEF PROCESSING in British Columbia, Prepared for British Columbia Cattlemen's Association By Andrew Raphael, Dr. Stewart J. Campbell, Bob France, 2003.
- Socio-Economic Survey of the BEEF INDUSTRY in British Columbia, a report prepared for the British Columbia Cattlemen's Association, December 2001, Forest Policy Services Ltd.
- Review of the BC FOOD AND BEVERAGE PROCESSING industry. Ference Weicker & Company, 2000.
- An Overview of the BC FIELD VEGETABLE INDUSTRY 2003. BC Ministry of Agriculture, Food

and Fisheries Industry Competitiveness Branch.

- BC APPLE AND PEAR INDUSTRY PROFILE, 2004, BC Ministry of Agriculture, Food and Fisheries Industry Competitiveness Branch.

- BC CHERRY INDUSTRY PROFILE, 2005, BC Ministry of Agriculture, Food and Fisheries Industry Competitiveness Branch.

C. SWOT ANALYSES

- The HORTICULTURE Sector; Strengths, Weaknesses, Opportunities, and Threats and Associated Key Issues Prepared for Agriculture and Agri-Food Canada And the Horticulture Sector Value Chain Roundtable, March 2004.

- SWOT Analysis of the BC Agriculture FOOD AND BEVERAGE VALUE CHAIN.

- BC WINE INDUSTRY – Challenges and Opportunities, Final Report, 2001.

D. OTHER BC AGRICULTURE TOPICS

- British Columbia Agri-Food Outlook Forum, Strategic Context. MAFF, 2004.

- EMERGING SECTORS in Agriculture: New Industries and New Opportunities, M. Tatiana Robertson Emerging Sector Development Information Coordinator, December 2003.

- ENVIRONMENTAL SCAN VALUE-ADDED FOOD AND BEVERAGE MANUFACTURING IN BRITISH COLUMBIA John Schildroth, Trade Competition Branch, 1998.

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- Managing SPECIALTY PRODUCTS in B.C.'s Management System.

- Recommendations for Managing SPECIALTY AGRI-FOOD PRODUCTS in B.C.'s Supply Managed System Prepared for Minister of Agriculture Food and Fisheries Prepared by George Leroux Dec. 20th, 2004.

- Agri-food Outlook Forum, June 14 &15, 2004 Breakout Group Discussion Notes Summarized.

- Summary Report on Agricultural Issues in British Columbia: Public Opinion and Perceptions: A Report for the Investment Agriculture Foundation.

- VALUE-ADDED AGRICULTURE IN CANADA Report of the Standing Senate Committee on Agriculture and Forestry, 2004.

- A Market Assessment and Program Review of the SPECIALTY CHICKEN INDUSTRY in BC and the BCCMB New Entrant Program. BC. Serecon Management Consulting Inc. 2004.

- Review of SPECIALTY PRODUCTION AND MARKETING in the Regulated Marketing Sector, BC Farm Industry Review Board, 2005.

- Fast Stats: AGRICULTURE AND FOOD, 2004. BC Ministry of Agriculture Food and Fisheries.
- AGRICULTURE 2001 And Historical Comparisons BC SUMMARY May 2002.
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- SMALL SCALE FOOD PROCESSING, Consultation Event, May 2001, Prepared by Colleen Shepherd Community Venture Development Services (CVDS).
- Strategic Business Case SMALL SCALE FOOD PROCESSOR Association (SSFPA) Prepared by Sandra Mark, Frank Moreland, Clare Kirkby-Yazganoglu and Mary Murphy Community Venture Development Services April 2003.
- Access to Crown Land - State of the Industry Report to the Provincial Cabinet , BC Cattlemen's Association, 2005.
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- Specified Risk Material Disposal Options & Impact On BC's Beef Industry's Competitiveness In The New BSE Reality, By Andrew Raphael CHARTERED ACCOUNTANTS & BUSINESS ADVISORS.
- BC FOOD TECHNOLOGY: Infrastructure Review, Ference Weicker & Company, 1999.
- A Study of Current and Future Markets for British Columbia's MUSHROOM INDUSTRY. Advance Resource Consulting, 2000.
- Preliminary Report on WINE TOURISM, British Columbia Wine Institute, 2002.
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- Agriculture Environment Partnership Initiative: Annual Report, 2004

E. OTHER

- Trends in U.S. Agriculture. US Department of Agriculture, 2000.

- Organic Food. Strategic Information Services Unit. Alberta Agriculture, Food and Rural Development, 2004.
- Food Retailing in the 21st Century. The Food Marketing Institute, Washington, D.C., 2005.
- The U.S. Food Marketing System, 2002. Competition, Coordination, and Technological Innovations Into the 21st Century. US Department of Agriculture. Agricultural Economic Report No. 811. 2002.
- Supermarket Challenges and Opportunities for Fresh Fruit and Vegetable Producers and Shippers: Lessons from the US Experience, Dr. Roberta L. Cook, Department of Agricultural and Resource Economics, University of California, Davis, 2004.
- The Growing Natural Foods Market: Opportunities and Obstacles for Mass Market Supermarkets. Ness J. Richman, The Retail Food Industry Center, University of Minnesota. 2002.
- The Odyssey Report: An Industry Quest for Solutions. Agricult8ral Odyssey Group. Ottawa, Ontario. 2002.
- Strategic Policy Issues for Agricultural Research in Canada, George L. Brinkman, Professor, Department of Agricultural Economics and Business, University of Guelph. CURRENT, Agriculture, Food and Resources Issue, November, 2004.
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- Consumer Perceptions of Food Safety and Quality, Prepared for: Agriculture and Agri-Food Canada, Ipsos-Reid Corporation, Winnipeg, MB, 2004.

APPENDIX III: CHARACTERISTICS OF THE AGRI-FOOD INDUSTRY IN OTHER JURISDICTIONS

This appendix highlights some of the key characteristics of the agri-food industry in Alberta, Saskatchewan, Manitoba, Ontario, Washington State and Oregon.

A. ALBERTA

- In 2004, Alberta's total farm cash receipts were $8 billion. In 2003, Alberta accounted for 20.5% of Canadian farm cash receipts generated from primary agriculture.
- Although Alberta's total farm cash receipts are higher than those in the other western Canadian provinces, Washington, and Oregon and are only slightly lower than those in Ontario, growth in this sector has been slow between 2000 and 2004.
- The agri-food industry in Alberta is export oriented. In 2004, exports of primary and processed agricultural and food products totaled $4.9 billion. The gain was primarily driven by a 29% increase in value added exports. Of the total Alberta agri-food exports, about one-half went to the US ($2.3 billion). Japan was the next largest export market ($713 million) followed by Mexico ($484 million).
- The top five Alberta agri-food exports in 2004 were beef ($1.5 billion), wheat ($934 million), pork ($358 million), canola seed ($357 million) and processed potatoes ($231 million).
- In 2003, Alberta's food and beverage manufacturing shipments totaled $9.5 billion.
- Alberta has the highest per capita food and beverage manufacturing shipments but the sector has seen relatively moderate growth between 2000 and 2004.
- In 2004, food and beverage manufacturing industries were tied with petroleum and coal products industries, as the largest manufacturing sectors in the province. Each of these sectors accounted for 18.7% of total provincial manufacturing shipments.
- Fertile land and climate that supports world class agricultural production; strategic location with access to international markets; highly skilled, educated, innovative work force and entrepreneurial spirit that reflects Alberta's pioneer heritage are some of the strengths of Alberta's agri-food sector. With effective road, rail, and air links to markets, Alberta has become a major distribution center. Goods are shipped to western Canada and the rapidly expanding markets in the Pacific and northwestern US, as well as Pacific Asia and the Russian Far East. Alberta's extensive network of research and development facilities help develop and commercialize products and processes. Agricultural research has resulted in better production methods, new crop varieties, and the largest, most varied genetic pool of breeding livestock in the world. The Leduc Food Processing Development Centre, part of the Alberta Government, assists Alberta, Canadian and International companies in product development. This center has recently completed a $5.5 million expansion and serves as a leading resource for companies at any stage of development.

B. SASKATCHEWAN

- In 2004, Saskatchewan's total farm cash receipts were $5.9 billion. In 2003, Saskatchewan accounted for 16.6% of Canadian farm cash receipts generated from primary agriculture.
- Saskatchewan's per capita farm cash receipts are significantly higher than those in the other western Canadian provinces, Ontario, Washington and Oregon but the sector has seen very little growth between 2000 and 2004.
- The top five Saskatchewan agriculture exports in 2003 were wheat ($1.4 billion), canola ($443 million), plant products ($320 million), flax ($185 million) and lentils ($161 million). The top three export destinations were US ($707 million), Japan ($601 million) and European Community ($477 million).
- In 2003, Saskatchewan's food and beverage manufacturing shipments totaled $2 billion.
- Saskatchewan's food and beverage manufacturing shipments are the smallest among the other western Canadian provinces, Ontario, Washington and Oregon but between 2000 and 2004, the sector's growth rate came second only to British Columbia.
- The largest food categories in Saskatchewan by number of firms are: meat products (30%), flour milling and bakery products (20%), and fruit and vegetable products (10%).
- Most of the estimated 300 food and beverage processing establishments in Saskatchewan are small-to-medium in size with about 75% having less than 20 employees. There are about 50 food processors actively exporting product from Saskatchewan.
- Saskatchewan has nearly half the arable land in Canada and is a world leader in the production of wheat, oats and barley. The province has diversified its agriculture base and moved significantly into intensive livestock production as well as a variety of crops to meet niche market demands in the world. Saskatchewan is internationally recognized as a leader in the agricultural biotechnology industry with 30% of the national industry located in Saskatoon. The food processing industry is supported by proximity to raw materials, transportation efficiencies, abundant labor supply, and strong industry and institutional support. The industry has had the opportunity to make many advances during the last decade as research in the food sciences is ongoing at the University of Saskatchewan's College of Agriculture and Saskatoon's Food Centre.

C. MANITOBA

- In 2004, Manitoba's total farm cash receipts were $3.9 billion. In 2003, Manitoba accounted for 10% of Canadian farm cash receipts generated from primary agriculture.
- Between 2000 and 2004, Manitoba's total farm cash receipts grew at a rate faster than that in the other western Canadian provinces, Ontario, Washington and Oregon.
- In 2000, Manitoba accounted for 10.8% of Canadian agri-food exports.
- Unprocessed or bulk exports accounted for 51.8% of the 2004 total, up from 47.9% in 2003. Bulk exports were primarily field crops, and were valued at $1.762 billion, 18.6% more than in 2003.

- Exports in semi-processed or intermediate form accounted for 26.3% of the 2004 total, and were primarily from livestock, oilseed and oat crushing, and pulse crops. Exports totaled $894.6 million in 2004, close to the 2003 level, but more than 75% above 1994.
- Exports in processed form accounted for 22% of total exports in 2004, slightly below the 23.3% of 2003. Processed exports totaled $748.4 million in 2004, 3.6% more than 2003, and were primarily meat and potato products, and honey. Since 1994, processed exports have increased more than 6-fold.
- Agriculture, directly or indirectly, accounted for about one dollar in eight of production in Manitoba's economy in 2002. For every dollar of net income produced by primary agriculture in Manitoba, about $1.90 is generated in the overall Manitoba economy.
- In 2003, Manitoba's food and beverage manufacturing shipments totaled $3.2 billion.
- Although Manitoba's food and beverage manufacturing shipments are smaller; on a per capita basis, Manitoba is second only to Alberta.
- Food and beverage processing is the most important manufacturing industry in Manitoba, producing more than $3 billion worth of goods and services, or over one-quarter of the province's total manufacturing output.
- Manitoba is well known for its pork and is home to four modern, federally-inspected, high-throughput hog processing plants. Manitoba is also home to the largest value-added processing plant of eggs in Canada, and Manitoba egg processors apply some of the most advanced products and technology in North America. In addition, the province is home to three major potato processing operations that produce frozen products for international markets. Industry strengths include highly productive agricultural resource base (with more than 7.7 million hectares or 19 million acres presently used for crop and livestock production), variety of raw materials supply (Manitoba's soils and climatic conditions are well suited for the production of a wide range of crops including cereals, oilseeds, pulses and horticultural crops), low factor costs (the food processing industry benefits from low cost, high-quality raw materials, a stable workforce and the lowest energy costs in North America) and R&D infrastructure.

D. ONTARIO

- In 2004, Ontario's total farm cash receipts were $8.6 billion. In 2003, Ontario accounted for 24.4% of Canadian farm cash receipts generated from primary agriculture.
- Ontario's total farm cash receipts are higher than those in the western Canadian provinces, Washington, and Oregon but on a per capita basis, farm cash receipts are only higher than those in British Columbia. The sector has also experienced moderate growth between 2000 and 2004.
- 87% of the value of all Ontario agri-food exports in 2001 was to the US while 68% of the value of all Ontario agri-food imports in 2001 was from the US.
- The top five Ontario agriculture commodities in terms of market receipts in 2004 were dairy products ($1.5 billion), hogs ($1 billion), floriculture and nursery ($945 million), cattle and calves ($782 million) and vegetables ($7 million).

- In 2003, Ontario's food and beverage manufacturing shipments totaled $31.4 billion.
- Ontario's food and beverage manufacturing shipments are significantly higher than those in the western Canadian provinces, Washington, and Oregon and on a per capita basis, Ontario is second only to Alberta and Manitoba. In terms of growth between 2000 and 2004, Ontario is second only to British Columbia and Saskatchewan.
- Food processing is the second largest manufacturing sector in Ontario.
- Ontario's agri-food industry has a strong research base and diversified product lines. Ontario produces more than 200 agricultural commodities, a diversity unmatched in most parts of the world. The province is a leader in food technology research and development. There are more than 500 scientists in Ontario doing basic and applied agri-food research. There are 10 public and private research institutes working on advanced agri-food technologies. The combination of high-quality local food ingredients, a skilled and educated workforce, low business costs, central location, world class research facilities and an excellent transportation system help Ontario the compete against over jurisdictions in the agri-food industry.

E. WASHINGTON STATE

- In 2004, Washington's total farm cash receipts were $6.8 billion.
- Washington's total farm cash receipts are only lower than those in Alberta and Ontario but the state's growth in this sector between 2000 and 2004 has outperformed both Alberta and Ontario.
- The top five Washington agriculture commodities in terms of production value in 2003 were apples (US$ 1.16 billion, with a 12.9% increase over 2002, apples represented 20% of the total agricultural value produced in the state), milk (US$ 675 million, slightly above the US$ 674 million in 2002), wheat (US$ 521 million, a 4.9% increase over 2002), potatoes (US$ 489 million, a decrease of 4.6% from 2002) and cattle and calves (US$ 475 million, an increase of 5.4% from 2002). These five commodities had a combined value of US$ 3.32 billion, or 57% of the 2003 total value for all commodities, unchanged from last year.
- Washington ranked seventh among the US states in 2002 in terms of crop production value whereas its ranking was 24 in terms of livestock and poultry production value. Washington's overall ranking was 11. Washington ranked first in apple production and aquaculture. Washington is the largest exporter of frozen vegetables and french fries and ranks 2nd to California in grape production, value and acreage.
- Agriculture accounts for 13% (US$ 28 billion) of Washington State's US$ 223 billion economy. For every US$ 1 of agricultural raw product, an additional US$ 4-6 is generated as products travel through processing and market channels to the end consumer.
- In 2003, Washington's food and beverage manufacturing shipments totaled $12.3 billion.
- Washington's food and beverage manufacturing shipments are second only to Ontario but the sector has seen very little growth between 1999 and 2003.
- Food processing is Washington's second largest manufacturing industry after transportation equipment. In 1996, the food processing industry shipped products worth US$ 9.83 billion. This

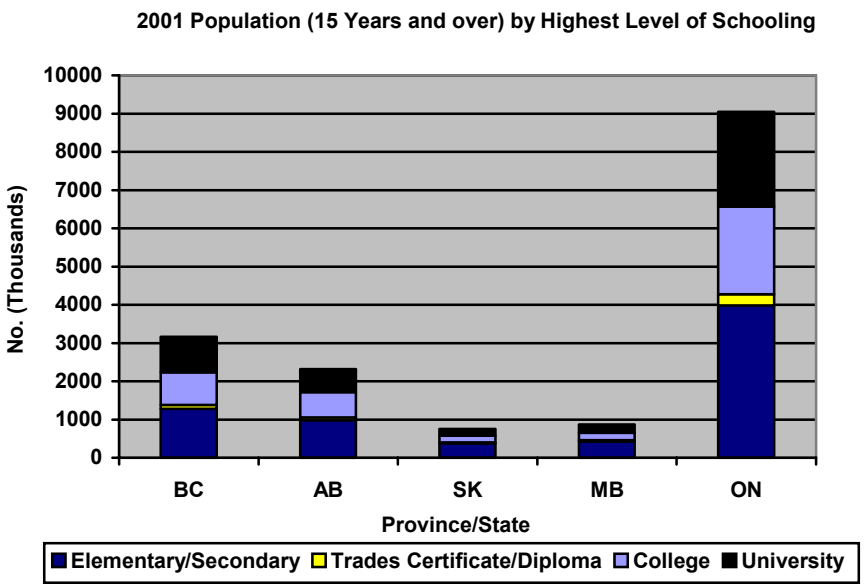
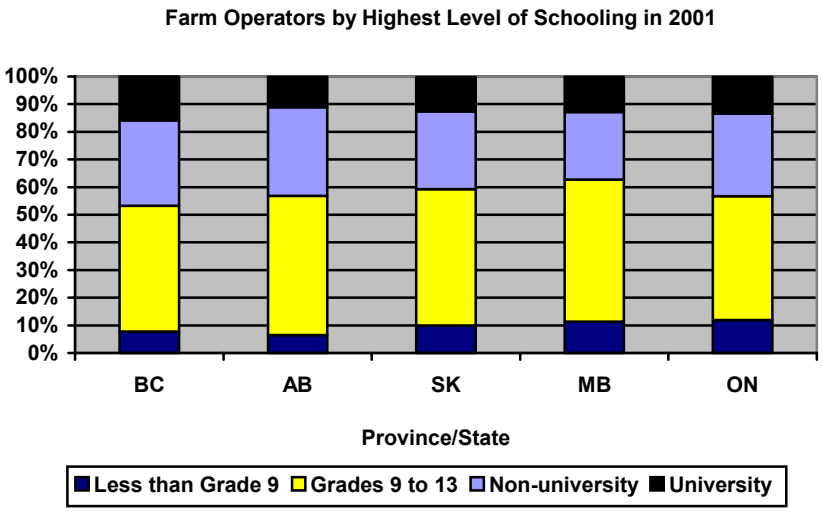
represented 13.7% of the state's total value of manufacturing production. 14% (US$ 1.37 billion) of food processing's total value of production was shipped to foreign export markets.

- Historically, Washington's Olympic Peninsula economy has been driven by harvesting and managing its very rich natural resources whereas Washington's North Central, Wenatchee and Yakima regions have had economies focused on agriculture and the abundance of fertile farmland to grow on. Some of Washington's best advantages include its reliable production of high quality crops, cost effective energy prices, and ability to quickly and efficiently ship products to the rapidly growing Asian marketplace. Closely tied with Washington's agricultural tradition is value added processes with specific focus on food processing. Raw product modification in the form of food processing capitalizes on existing agricultural activities and creates a diverse industry cluster. State research centers and higher education institutions continue to contribute to areas of increasing crop yield, decreasing crop inputs, environmentally compatible pest control methods, crossbreeding and hybridization.

F. OREGON

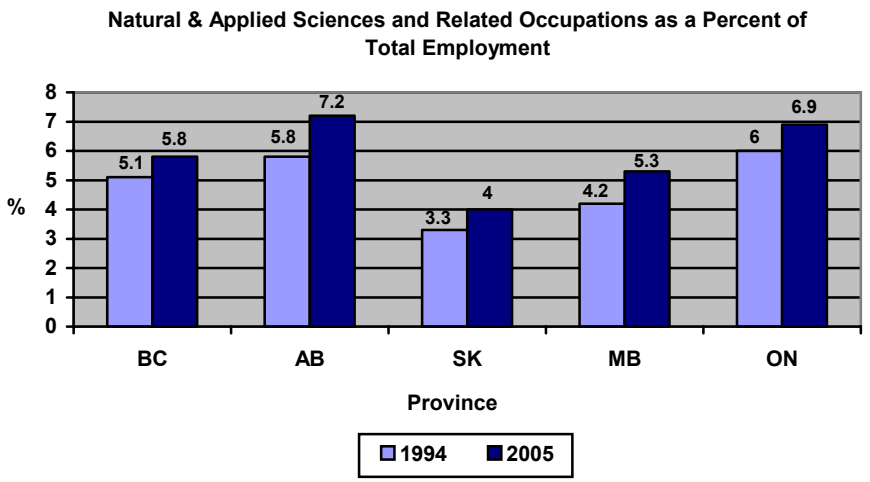
- In 2004, Oregon's total farm cash receipts were $4.2 billion.
- Oregon's agriculture sector is smaller in terms of total farm cash receipts but its growth between 2000 and 2004 is second only to Manitoba**.**
- The top five Oregon agriculture exports in 2004 were wheat and products (US$ 171 million), vegetables and preparations (US$ 158 million), seeds (US$ 111 million), fruits and preparations (US$ 106 million) and nursery products (US$ 35 million).
- The top five Oregon agriculture commodities in terms of production value in 2004 were greenhouse and nursery products (US$ 817 million), cattle and calves (US$ 503 million), hay (US$ 381 million), milk (US$ 363 million) and grass seed (US$ 350 million).
- In 2003, Oregon ranked first among all the US states in the production of various types of grass seeds and berries, hazel nuts and cut Christmas tress. Crop production accounted for 70.8% of total agricultural production whereas livestock and poultry products accounted for 23%.
- In 2003, Oregon's food and beverage manufacturing shipments totaled $6.7 billion.
- Oregon's food and beverage manufacturing shipments are similar to British Columbia on a total and per capita basis but in terms of growth, it lags British Columbia.
- Agriculture remains a leading industry in Oregon. Its tremendous diversity - more than 250 commodities - matches the geographical and climatic diversity within the state. There are at least seven distinct growing areas ranging from dairies along the Oregon Coast to the large dry land wheat farms of the Columbia Basin, from the rich soils of the Willamette Valley to the wide-open rangeland of Southeastern Oregon. That diversity has allowed Oregon agriculture to increase its value of production in 11 of the past 12 years.

APPENDIX IV: BENCHMARKING OF BC AGAINST VARIOUS AGRI-FOOD RELATED INDICATORS

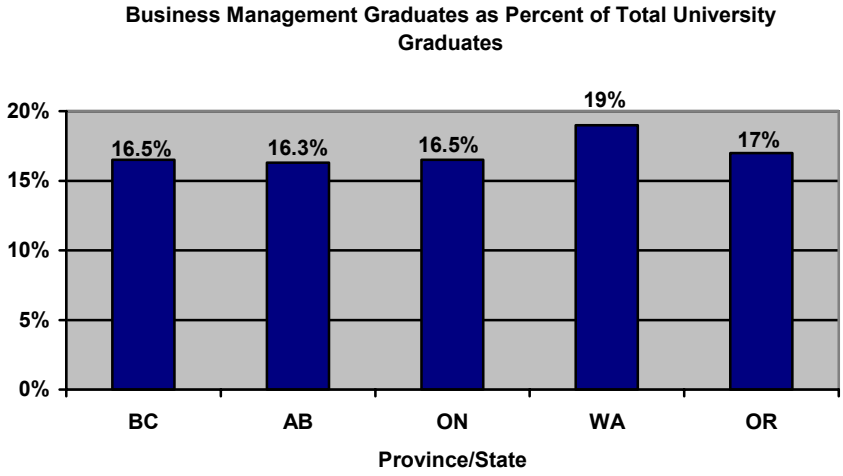
Access to Labour and Management Skills	
BC boasts a well-educated population compared to other western Canadian provinces but there is room for improvement relative to ON (Source: Statistics Canada).	
The percentage of farm operators with university education in BC is higher than that in select Canadian jurisdictions (Source: Statistics Canada).	

Access to Labour and Management Skills

Except SK, all the other select provinces have managed to increase the percent of the population employed in Natural & Applied Sciences and related occupations by a greater extent than BC between 1994 and 2005 (Source: Statistics Canada).

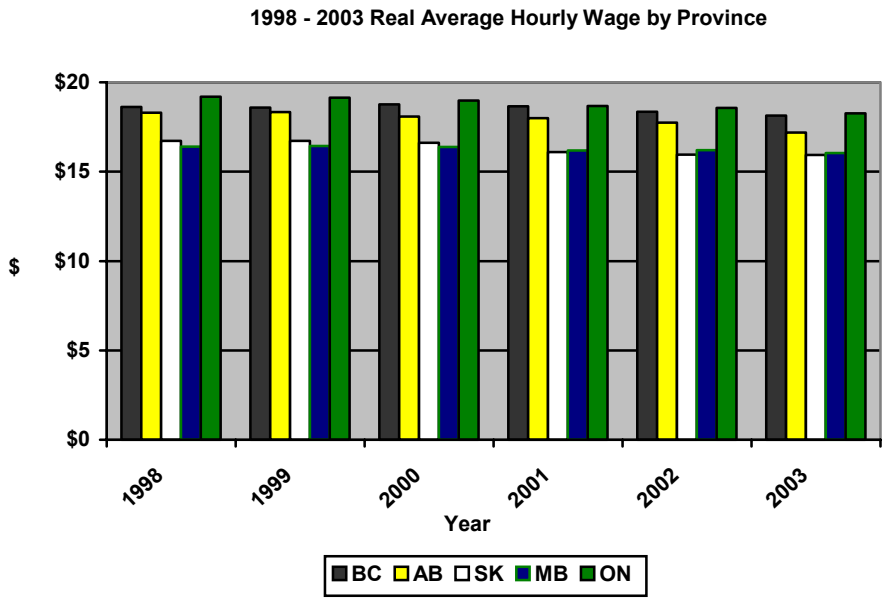


The proportion of Business Management graduates in relation to total university graduates in BC is competitive when compared to select Canadian jurisdictions but there is room for improvement relative to WA and OR (Source: Statistics Canada & US National Center for Education Statistics).

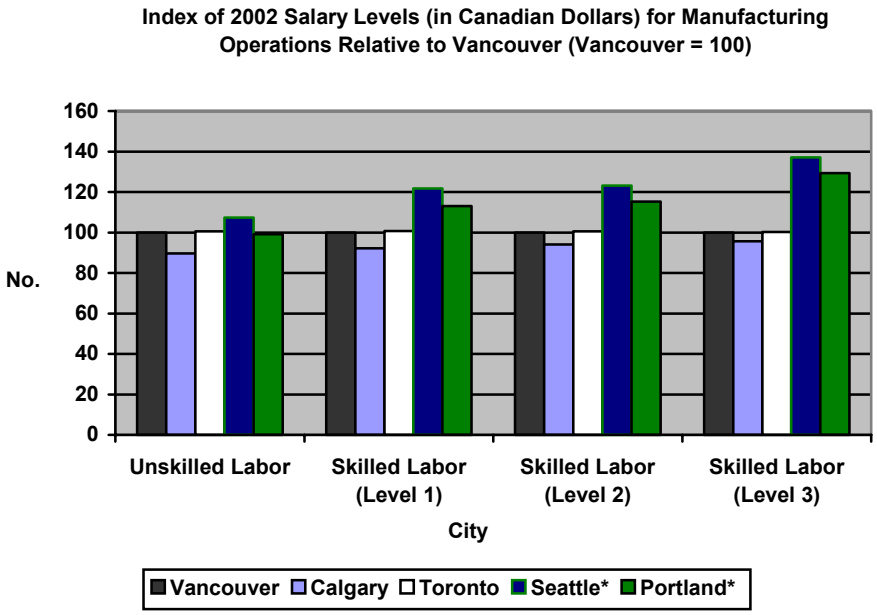


Access to Labour and Management Skills

The real average hourly wage has declined in all the select Canadian jurisdictions between 1998 and 2003; during that period, SK and MB had the lowest real average hourly wage followed by AB, BC and ON (Source: Institute of Chartered Accountants of British Columbia).



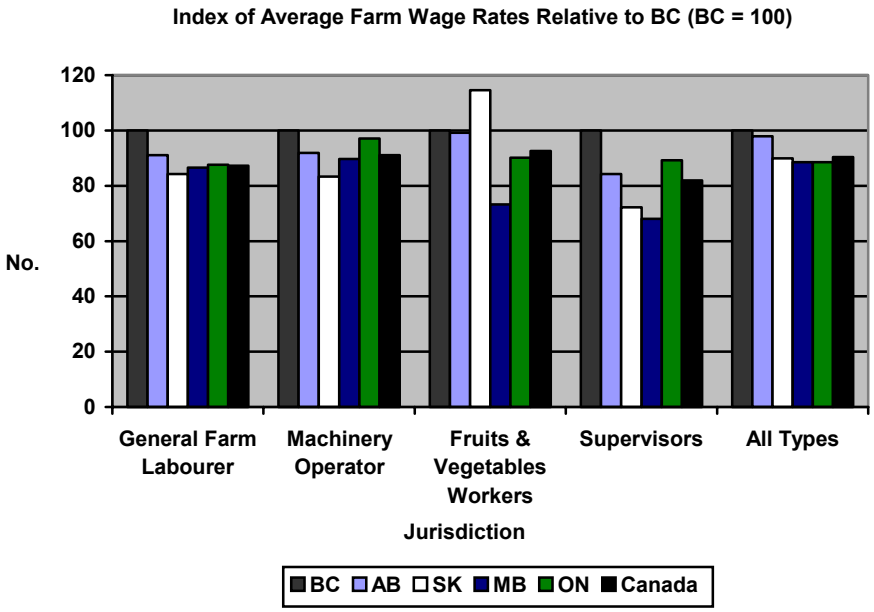
While Calgary is less expensive than Vancouver in terms of salary costs, Vancouver has significant cost advantage over select North American cities, especially Seattle and Portland (Source: KPMG).



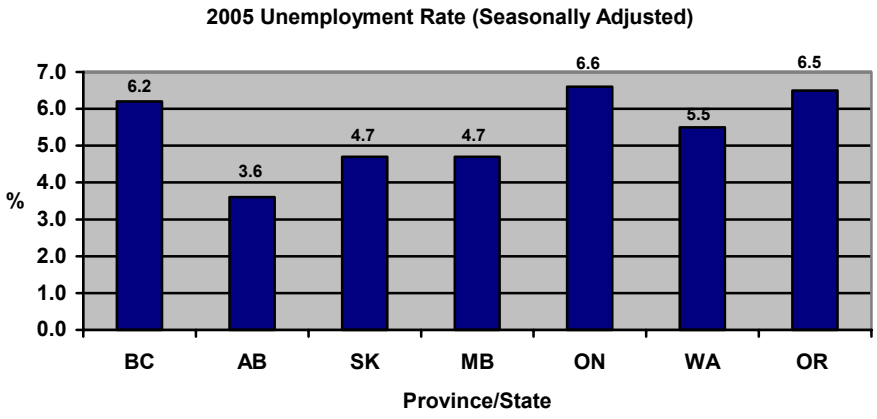
* 1 US$ = 1.4 Canadian$

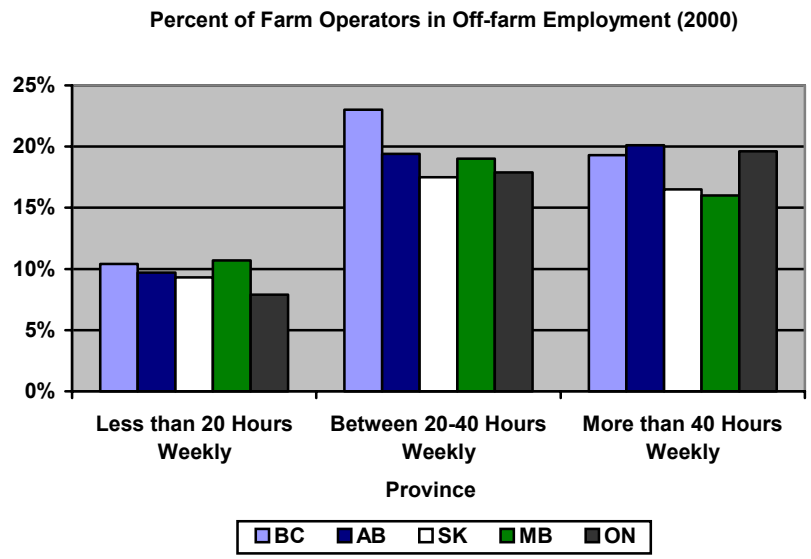
Access to Labour and Management Skills

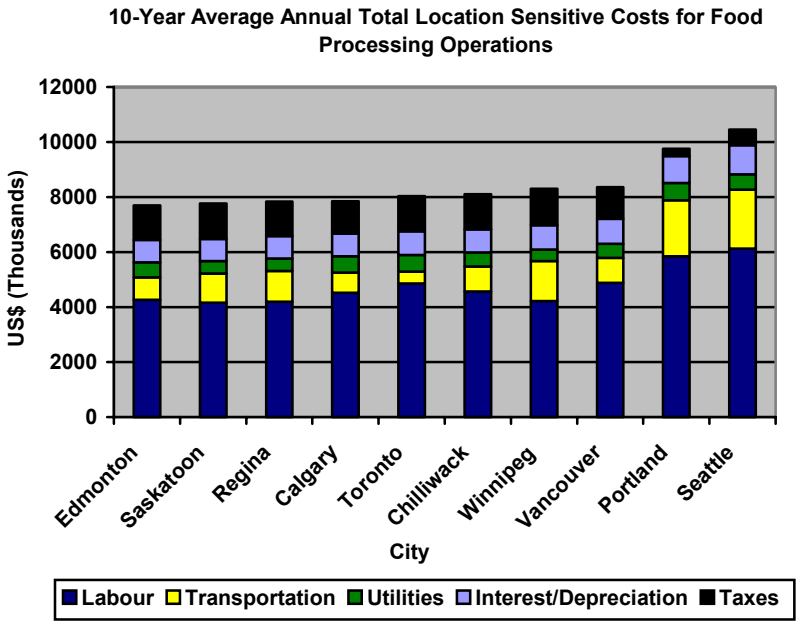
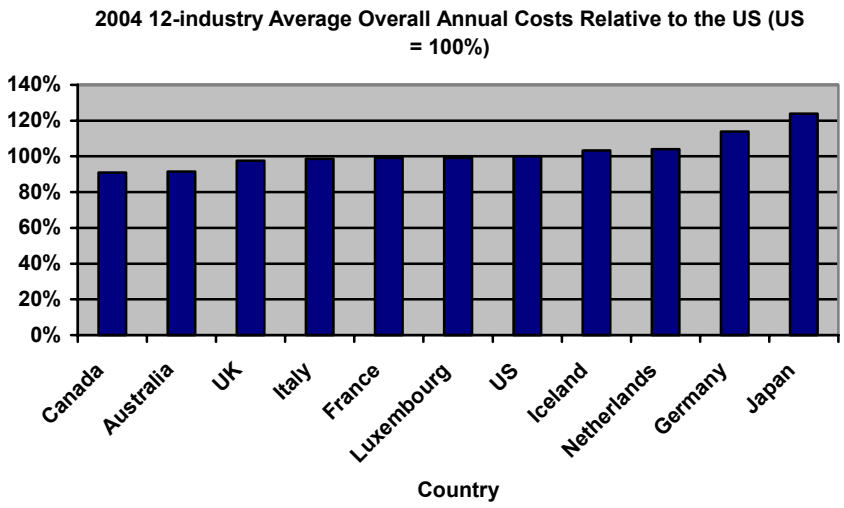
Statistics Canada has discontinued tracking input costs by province. The latest data available (prior to 1999) indicates that, with the exception of fruits and vegetables workers in Saskatchewan, BC's average farm wage rates were higher than those in other provinces as well as the Canadian average. Data from that period also show that other costs, such as chemicals and fertilizers were higher in BC that in other provinces.



BC's unemployment rate is high compared to the other western Canadian provinces and WA but lower than that in ON and OR (Source: Statistics Canada & US Bureau of Labor Statistics).



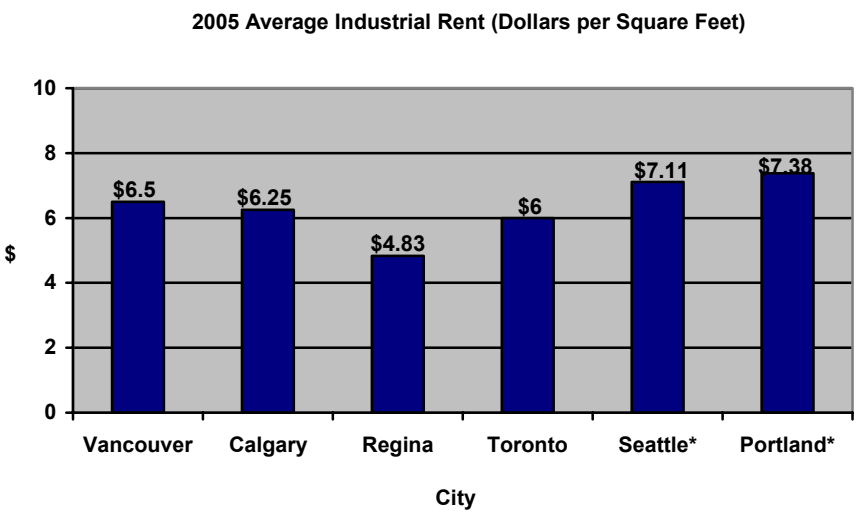
Access to Labour and Management Skills	
Overall, BC has the largest proportion of farm operators engaged in off-farm employment (Source: Statistics Canada).	
BC lags most select North American jurisdictions when it comes to agri-food GDP per job (i.e. productivity is lower than in most other jurisdictions) (Source: Various Sources).	

Access to Other Key Inputs	
BC locations are less expensive than select western US locations for food processing operations; however, BC locations do not fare well when compared to other Canadian locations (Source: KPMG).	
Among 10 industrialized countries, Canada has the biggest cost advantage for select manufacturing operations relative to the US (Source: KPMG).	

Access to Other Key Inputs

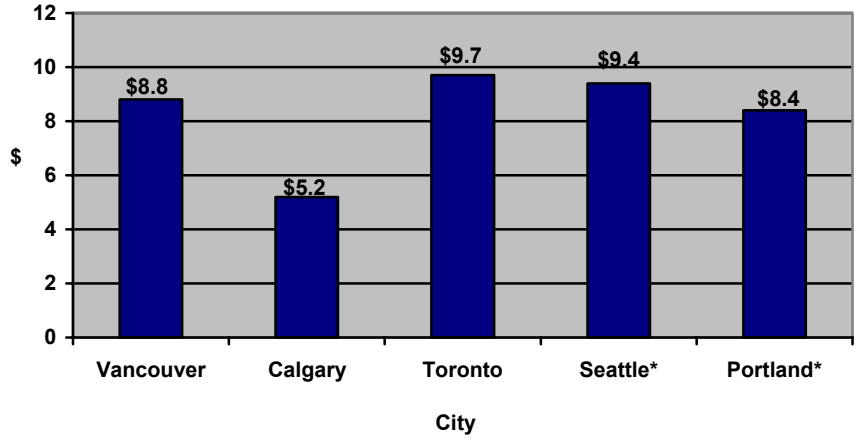
The average industrial rent in Vancouver is higher than that in select Canadian cities but lower than that in Seattle and Portland (Source: Colliers International).

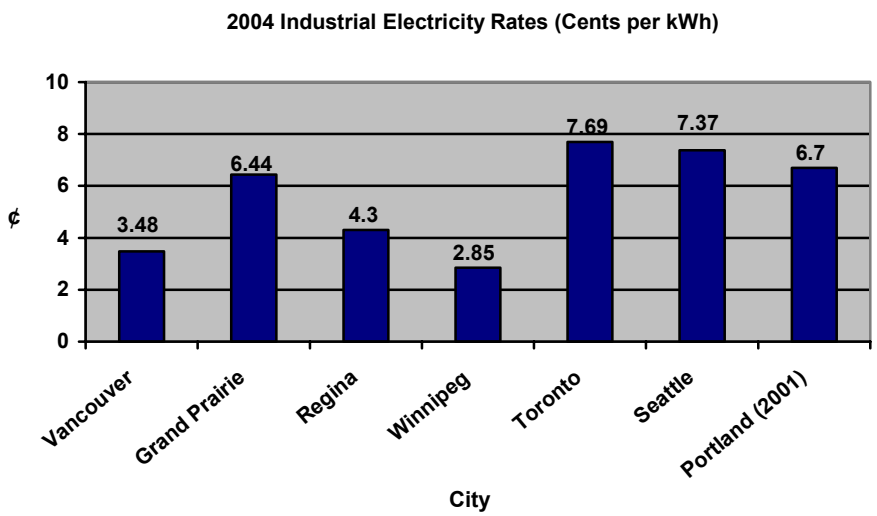
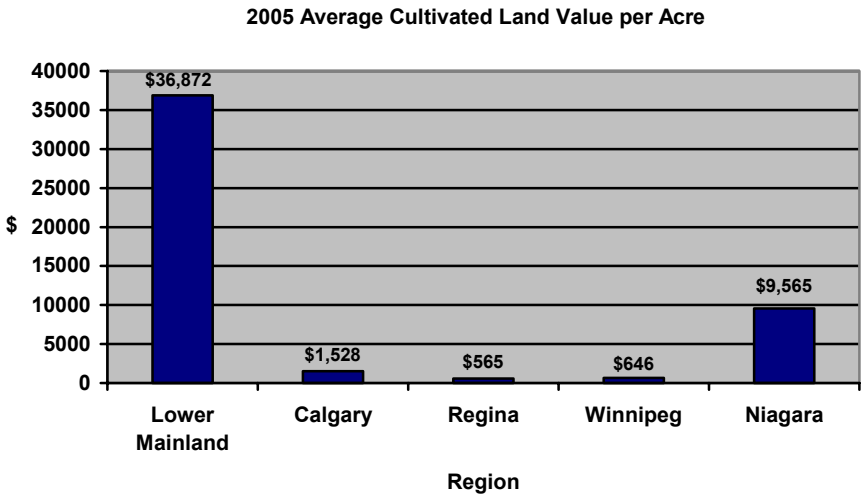
* 1 US$ = 1.18 Canadian$



The industrial land cost in Vancouver is higher than that in Calgary but competitive when compared to select North American cities (Source: Colliers International).

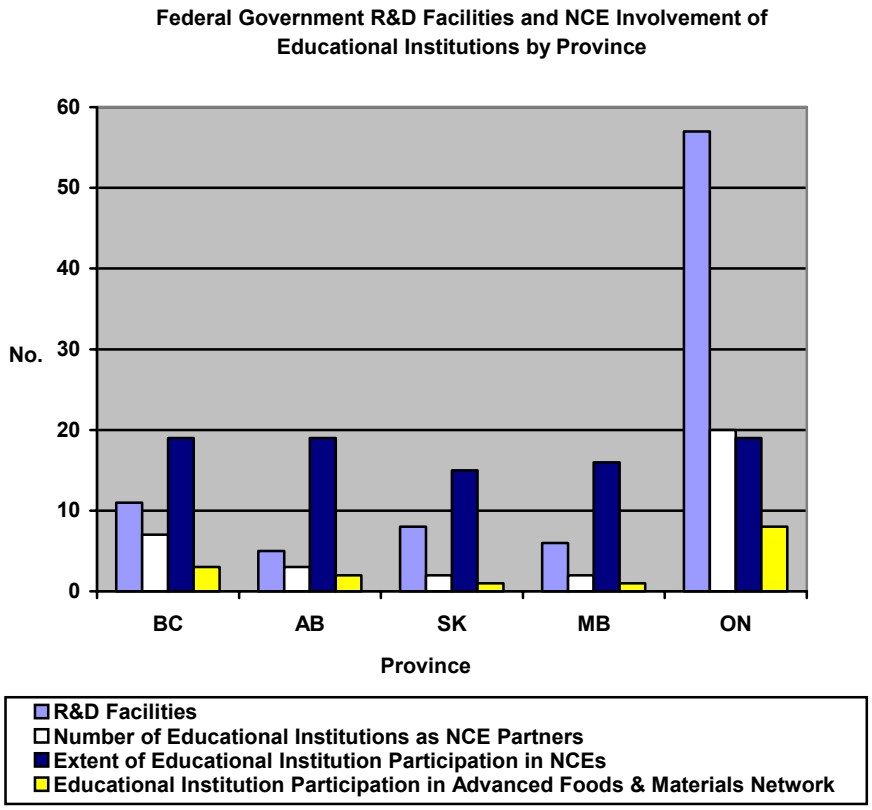
* 1 US$ = 1.4 Canadian$



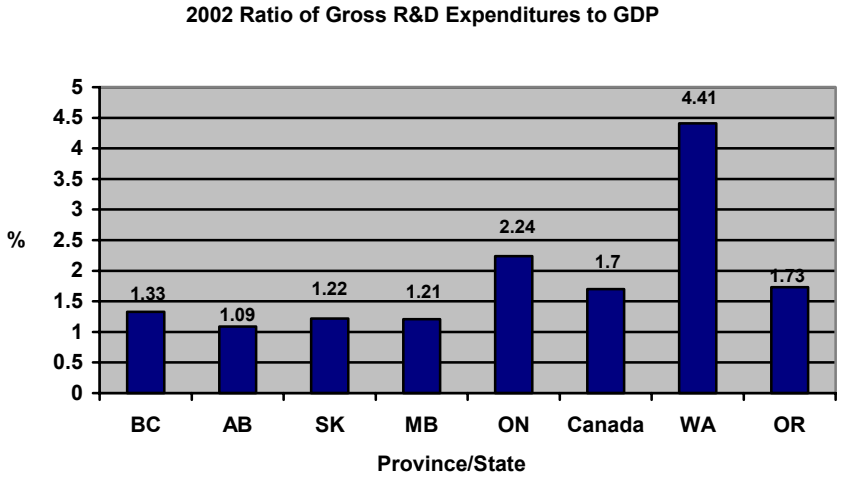
Access to Other Key Inputs	
Vancouver has one of the lowest electricity costs among select North American cities (Source: Manitoba Hydro & KPMG).	
Average farmland value in the Lower Mainland region of BC is significantly higher than that in other provinces, based on a sample of properties from select regions (Source: Farm Credit Canada).	

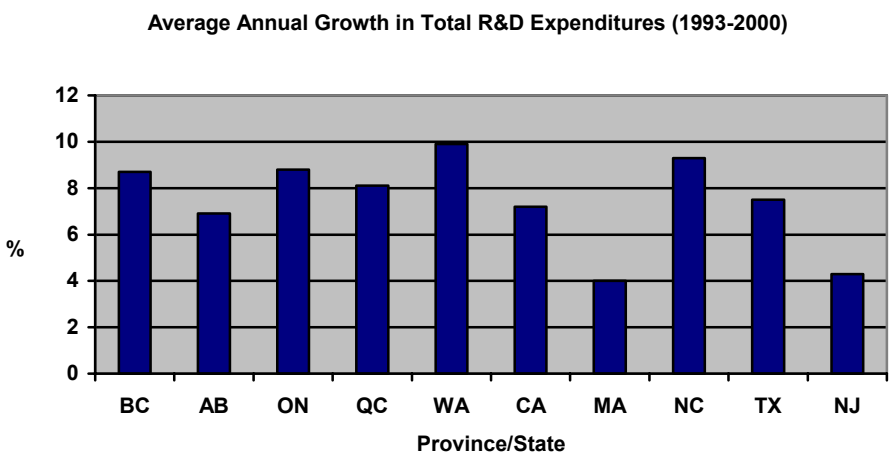
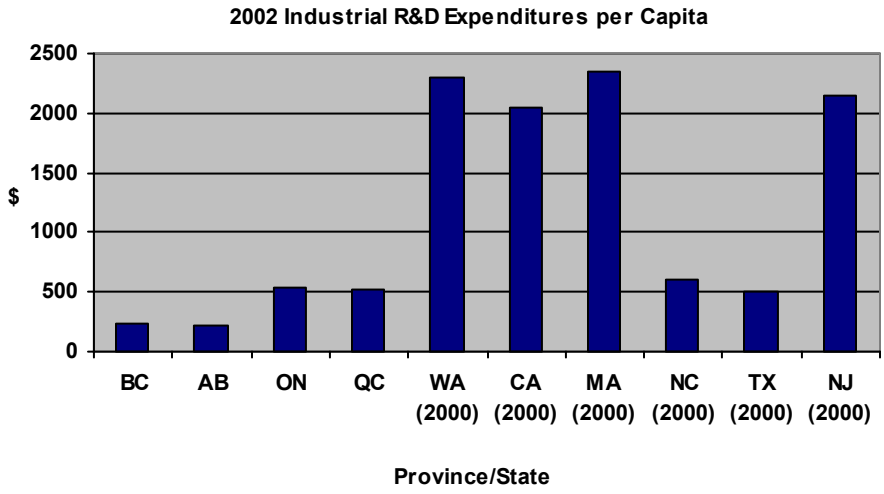
Strength of the Innovation Support Systems

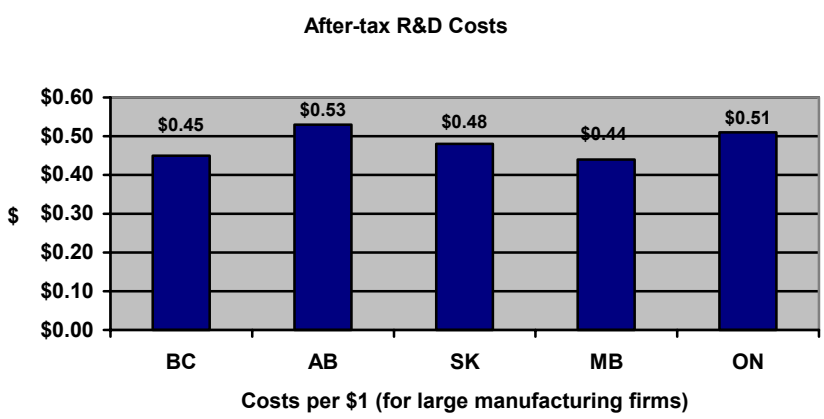
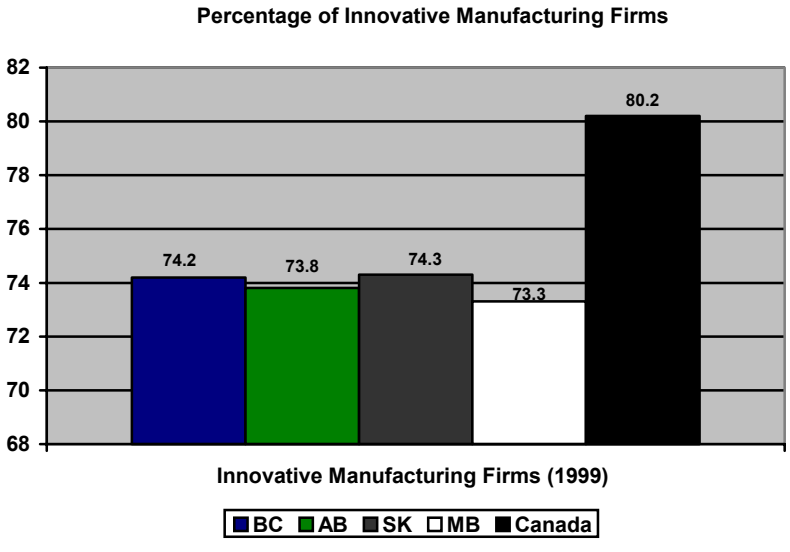
BC participates in the Networks of Centres of Excellence (NCE) program to a greater extent and has more federal government R&D facilities than any other western Canadian provinces but lags significantly behind ON (Source: The Networks of Centres of Excellence Program).

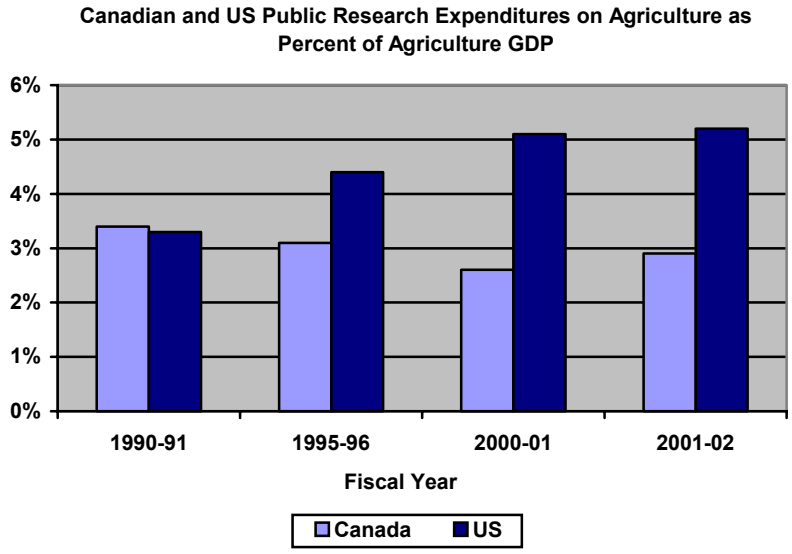


BC's Gross Expenditures on R&D as a percentage of GDP is significantly lower than that in select Canadian and US jurisdictions as well as the Canadian average. BC fares better when compared to the other western Canadian provinces (Source: Statistics Canada & US Innovation Index).



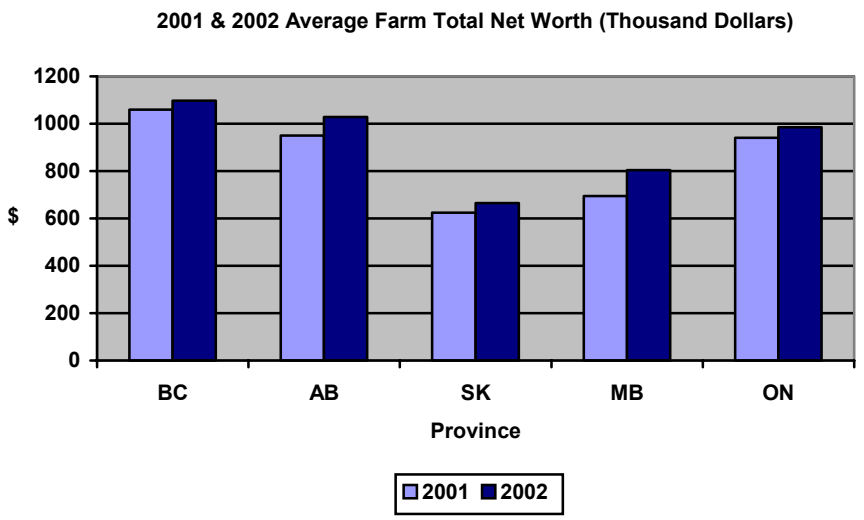
Strength of the Innovation Support Systems	
However, the overall growth in R&D expenditures in BC has been strong compared to select Canadian and US jurisdictions (Source: Statistics Canada & US Innovation Index).	
BC trails select Canadian and US jurisdictions when it comes to per capita industrial R&D expenditures (Source: Statistics Canada & US Innovation Index).	

Strength of the Innovation Support Systems	
After-tax costs of R&D in BC are among the lowest in select Canadian jurisdictions (Source: Government of BC).	
R&D tax incentives in Canada are more attractive than those in the US as they provide more flexibility and utility (Source: Conference Board of Canada).	• Capital R&D expenditures are eligible for 100% immediate deduction in Canada whereas such expenditures are capitalized and depreciated in the US over a period of time • All direct and indirect current and capital expenditures are eligible for tax credit in Canada whereas in the US, only certain types of expenditures are eligible • R&D activities eligible for tax credit are more broadly defined in Canada compared to the US • In Canada, R&D tax credits are based on all eligible expenses whereas in the US, credits are based on incremental eligible expenses to a maximum of 50% of total eligible expenses • R&D tax credits are available in Canada indefinitely whereas in the US, they are subject to periodic sunset dates with no guarantee for extension
BC has fewer innovation driven manufacturing companies relative to the national average (Source: Statistics Canada).	

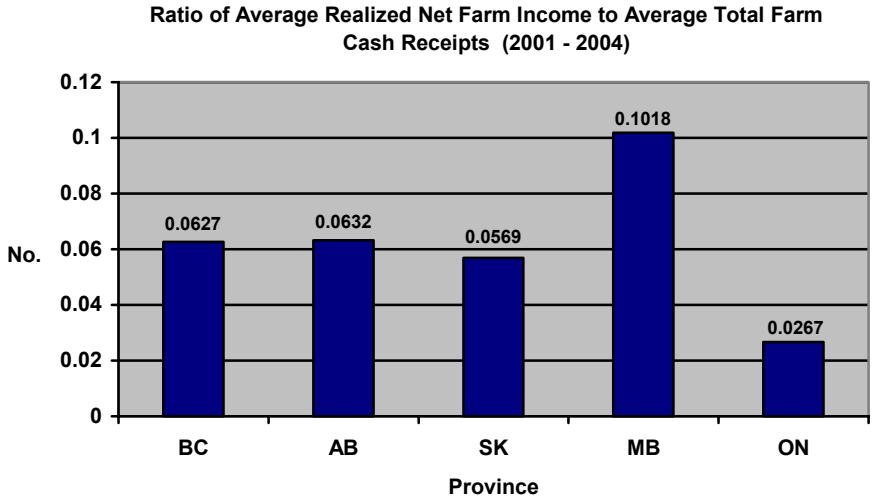
Strength of the Innovation Support Systems	
US public research expenditures on agriculture as percent of agriculture GDP has been increasing steadily since 1990-91 and from a level below Canadian expenditures in 1990-91, US expenditures reached a significantly higher level compared to Canadian expenditures in 2001-02 (Source: Statistics Canada, Agriculture and Agri-food Canada, US Department of Agriculture & US Department of Commerce).	

Access to Financing

The average farm net worth increased in all the select Canadian jurisdictions between 2001 and 2002 (Source: Statistics Canada & Agriculture and Agri-food Canada).

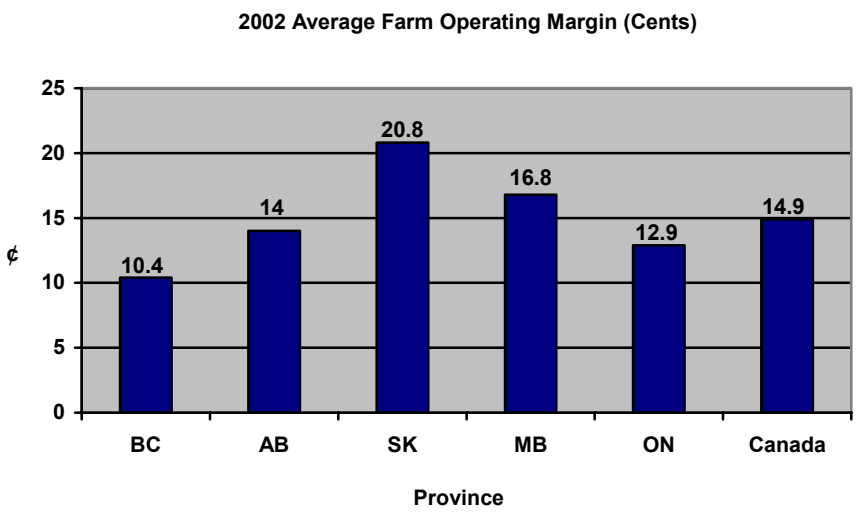


MB farms retain the highest portion of farm cash receipts as farm income followed by AB and BC (Source: Saskatchewan Agriculture and Food & Ministry of Agriculture, Food and Rural Affairs, Ontario).

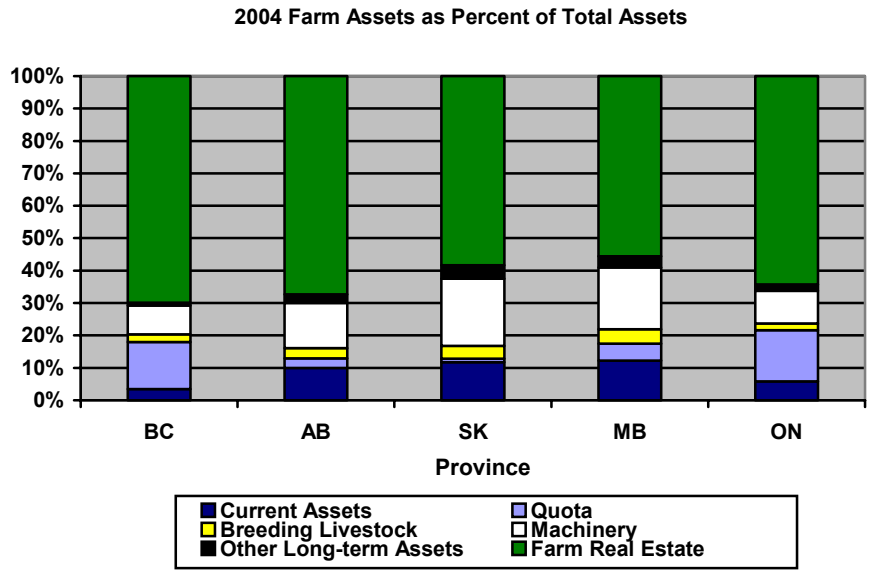


Access to Financing

BC farms have the lowest average operating margin among select Canadian jurisdictions (Source: Statistics Canada).

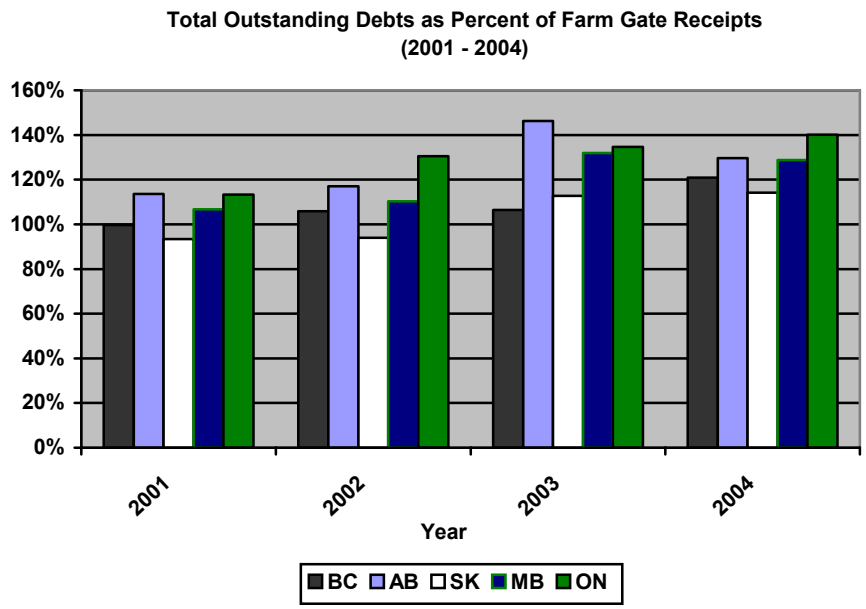


BC farms derive more value from real estate than machinery or other long-term assets when compared to select Canadian jurisdictions; a relatively higher proportion of current assets comes from quota for BC and ON farms unlike AB, SK and MB (Source: Statistics Canada).

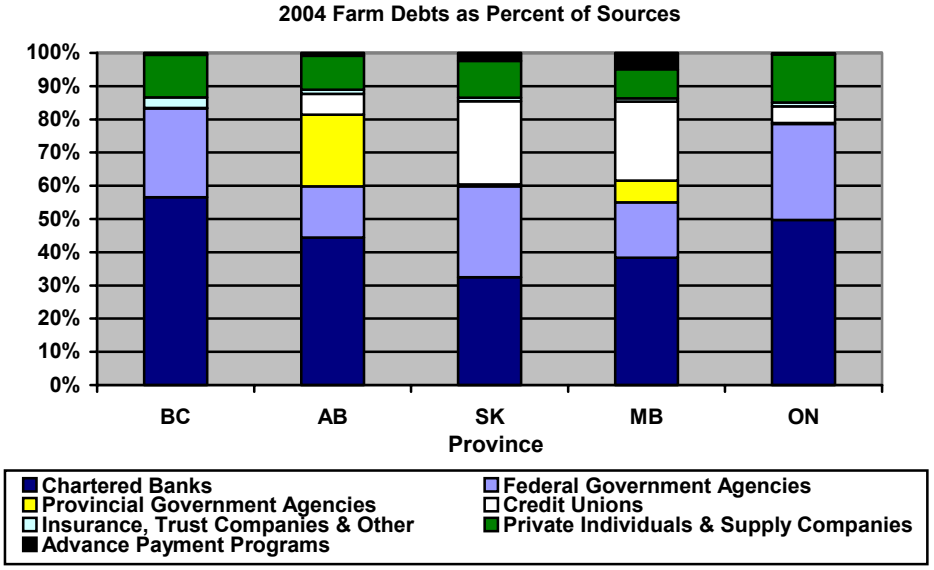


Access to Financing

The ratio of debts to farm gate receipts for farms in select Canadian jurisdictions is high and in general, it has been increasing since 2001 (Source: Statistics Canada).

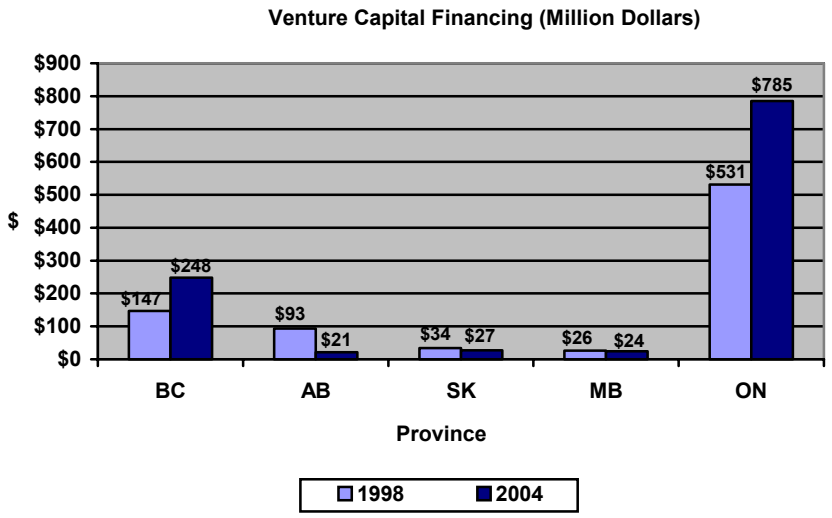


A relatively larger proportion of BC farm debts comes from chartered banks when compared to select Canadian jurisdictions; BC farms borrow relatively fewer amounts from provincial government agencies, credit unions and advance payment programs (Source: Statistics Canada).

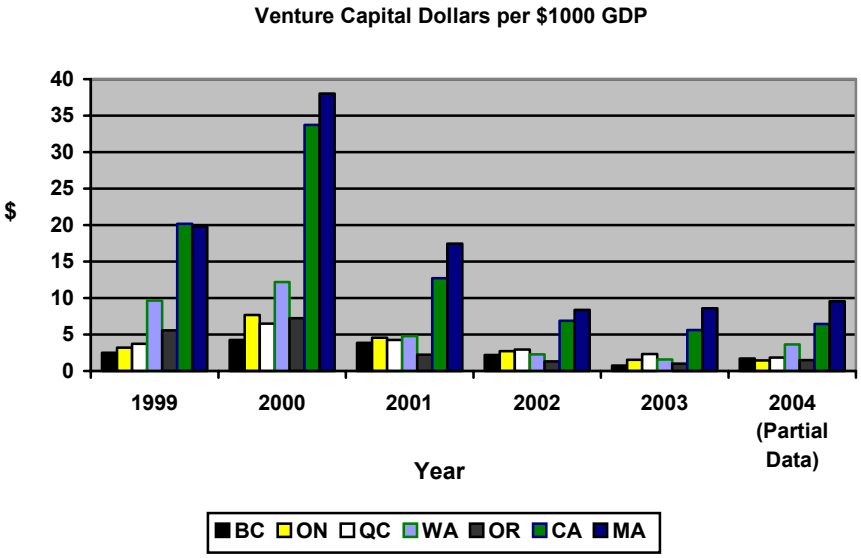


Access to Financing

BC has attracted more venture capital funds than any other western Canadian province but lagged significantly behind ON (Source: Thomson Macdonald).

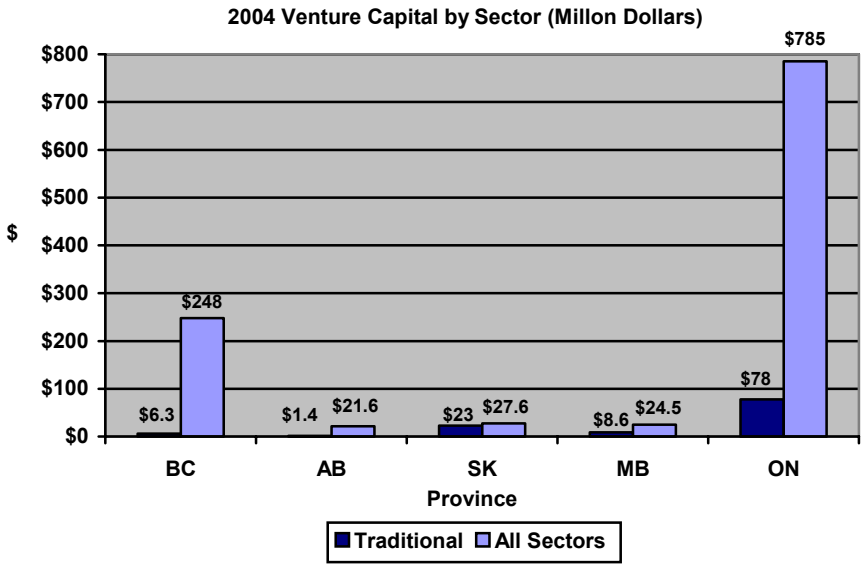


BC narrowed down the gap in venture capital funds per $1000 GDP with ON and QC in 2004 but lagged behind select US states (Source: Various Sources).



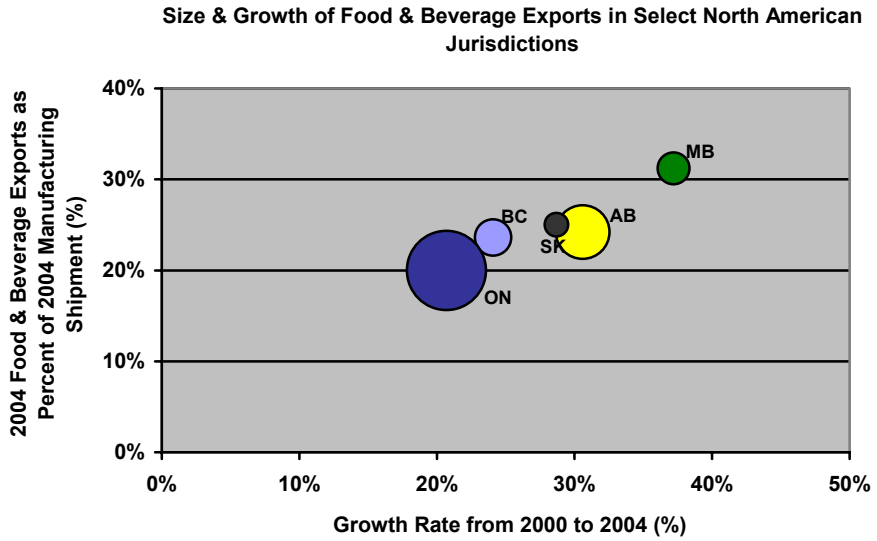
Access to Financing

With the exception of SK, Canadian provinces receive most venture capital funds in sectors other than traditional (Source: Thomson Macdonald).

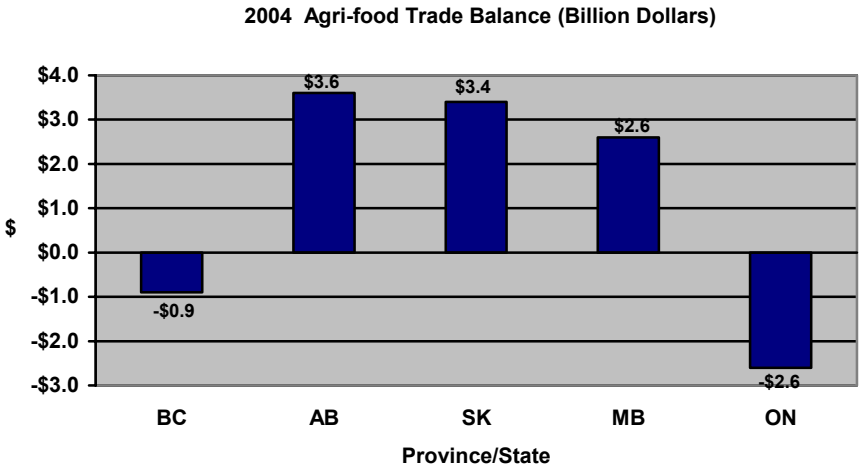


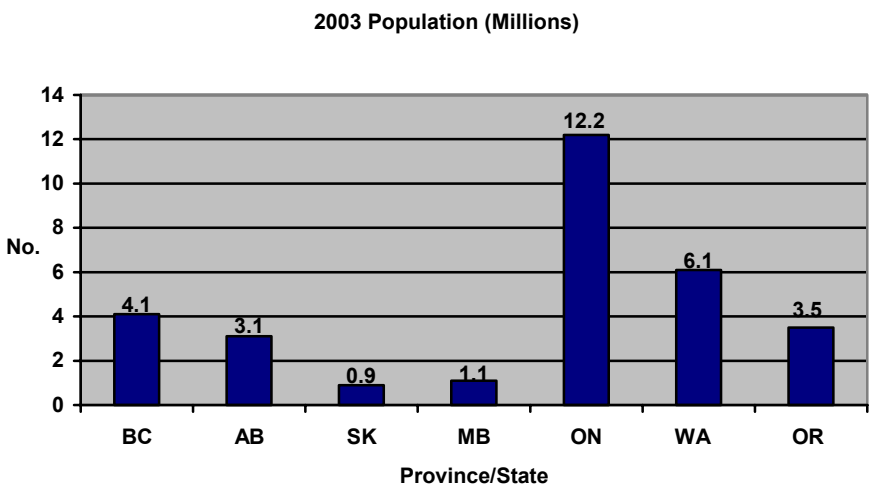
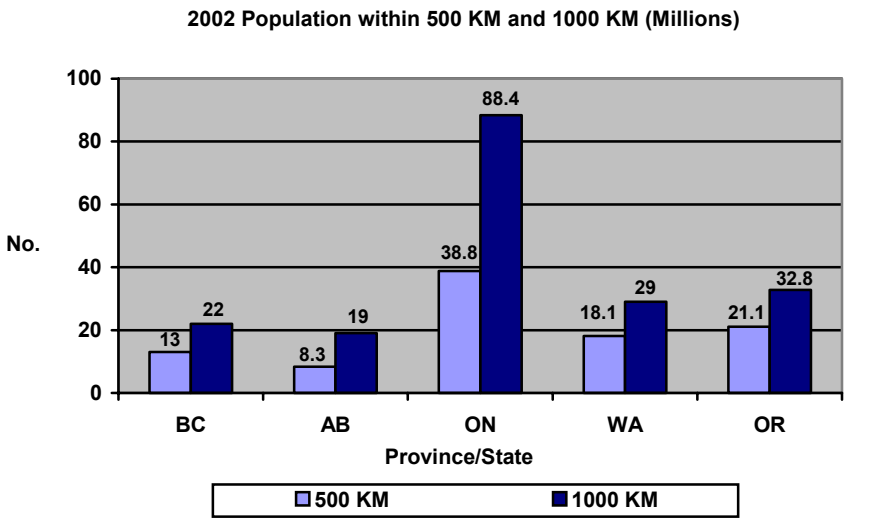
Access to Markets

BC food and beverage exports as a percentage of food and beverage manufacturing shipments is lower compared to the other western Canadian provinces although it is higher than that in ON (Source: Industry Canada & Agriculture, Food, and Rural Development, Alberta).



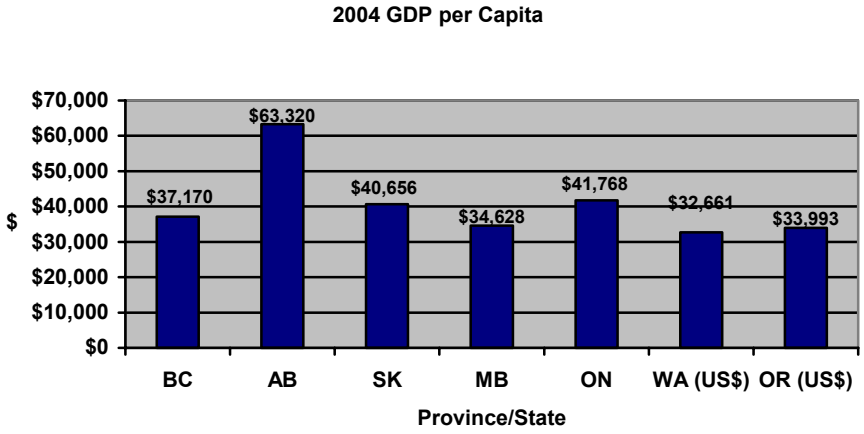
While ON has a larger agri-food trade deficit than BC, BC is the only western Canadian province with a negative agri-food trade balance (Source: Industry Canada).



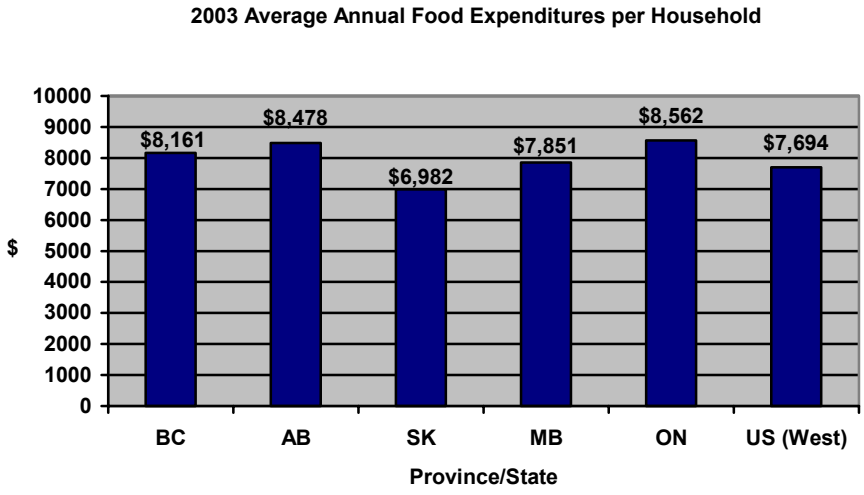
Access to Markets	
BC has the largest population among the western Canadian provinces (Source: Statistics Canada & US Census Bureau).	
BC has significantly less population within 500 KM and 1000 KM of its perimeter compared to ON, WA and OR (Source: Statistics Canada & US Census Bureau).	

Access to Markets

BC's GDP per capita compares favorably with select Canadian and US jurisdictions but it is significantly lower than that of AB (Source: Statistics Canada & US Bureau of Economic Analysis).



Average annual food expenditures per BC household are higher than those in most select North American jurisdictions except AB and ON (Source: Statistics Canada & US Bureau of Labor Statistics).



The Transportation Infrastructure

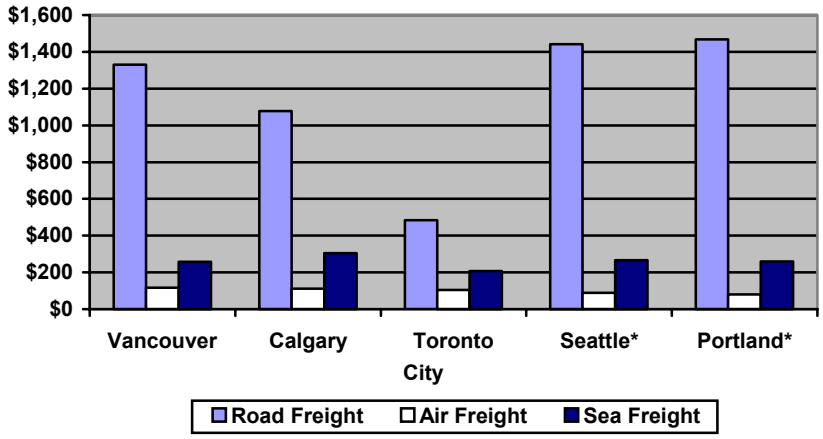
BC, WA and OR have direct, year-round access to ports (Source: KPMG).

City	*Port Access*
Vancouver, BC	Vancouver
Calgary, AB	Vancouver - 590 miles (950 km) west
Saskatoon, SK	Thunder Bay - 988 miles (1,590 km) east Vancouver - 1,063 miles (1,710 km) west
Winnipeg, MB	Thunder Bay (seasonal) - 441 miles (710 km) east Vancouver - 1,237 miles (1,990 km) west
Toronto, ON	Toronto (seasonal) New York - 513 miles (825 km) southeast
Seattle, WA	Seattle
Portland, OR	Portland

Vancouver has the highest air freight costs and the third highest road freight costs when compared to select North American cities (Source: KPMG).

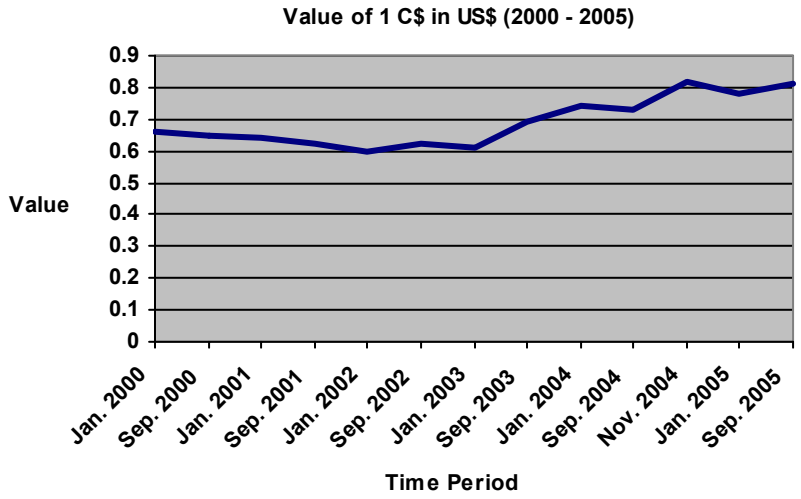
* 1 US$ = 1.4 Canadian$

2002 Average Road, Air & Sea Freight Costs for Select Manufacturing Industry Groups (Thousand Dollars)



Macroeconomic Conditions

From a five-year low of .60 cents in January 2002, the Canadian dollar (C$) has recently risen close to its five-year high of .82 cents in November 2004 (Source: Bank of Canada).



BC's corporate tax rate is competitive with select Canadian jurisdictions (Source: Statistics Canada & Federation of Tax Administrators).

Jurisdiction	*General Corporate Tax Rate (%)*
BC	13.0
AB	11.5
SK	17.0
MB	15.0
ON	14.0
WA	No State Income Tax
OR	6.6

BC's average personal income tax rate is competitive only with SK and MB (Source: BC Progress Board, Federation of Tax Administrators & CCH Tax and Accounting).

Jurisdiction	*2004 Average Personal Income Tax Rate (%)*
BC	11.06
AB	10.0
SK	13.0
MB	14.1
ON	8.78 (not including surtax)
WA	No State Income Tax
OR	7.0

APPENDIX V: SUMMARY OF RESULTS OF THE WORKSHOP SESSIONS

In Phase III of the project, we led a consultation process involving representatives of various stakeholder groups associated with the agri-food industry in BC to:

- Build awareness and support for the initiative;
- Confirm the key issues, opportunities and challenges facing the agri-food industry; and
- Obtain input regarding potential strategies and actions that could be taken to address these issues.

The main component of the consultation process involved a series of seven workshops held throughout the province in Nanaimo, Surrey, Abbotsford, Prince George, Dawson Creek, Vernon and Creston. The workshops were set up with the assistance of local organizations. Approximately 300 people participated in the workshops, including representatives of:

- Industry associations, product and commodity groups, and members nominated by the associations;
- Leading processors and processor groups;
- Economic development and community groups with a focus on agriculture;
- Retailers and hospitality sector stakeholders;
- Universities, colleges, institutes and research centers;
- Local, regional, provincial and federal government representatives;
- Nutritionist and health professional representatives; and
- Sources of capital (e.g. bankers, venture capital representatives and Community Futures representatives).

The half-day sessions were held between October 26 and November 24. At each session, we first summarized the results of the review to date including a review of the major opportunities and challenges that had been identified. We then opened the floor to the participants, facilitating a group discussion of the key issues that are most affecting their organization, sector and region. We then broke the group into a series of round-table work-group teams, with each team taking a specific issue or group of issues and working to develop potential strategies and actions for addressing them. The results of the consultation process, including a summary of each session, are summarized in the following paragraphs.

I. SUMMARY OF THE SESSIONS

A. IDENTIFICATION OF KEY ISSUES

At the beginning of each session, the attendees were asked to identify their top two or three concerns, write them down and submit them to us on a small card. The combined results from all sessions are detailed in the table below.

ISSUES MOST COMMONLY IDENTIFIED AT THE SEVEN SESSIONS

Opportunity, Challenge or Issue	Attendees
Costs of operations	77
Government regulations	53
Marketing skills, resources/branding	52
Access to skilled labour	51
Local marketing/consumer awareness	46

Opportunity, Challenge or Issue	Attendees
Access to capital/financing	40
Lack of innovation	32
Lack of processing capacity	31
Poor industry cooperation/collaboration	31
Access to physical resources/land/water	30
Need for niche/value-added products	30
Poor industry image	24
Access to seasonal/low cost labour	17
Urban/rural conflicts	16
Environmental pressures	14
Safety and quality issues	13
Poor management skills	12
Lack of information	11
Low prices	10
Accessing export markets	9
Trade barriers	8
Lack of economies of scale	6
Lack of new entrants/aging farmers	6
Value chain challenges	5
Weak associations	5
Distance to markets	5
Transportation delays/traffic/border	4
Certification pressures	4
Develop alternative uses for crops	4
Waste management	3
Need for affordable seasonal housing	2
High taxes	2

B. RECOMMENDATIONS

After a general discussion of the issues, the participants at each session were split into groups to develop recommendations to resolve some of the issues that had been identified. A summary illustrating the wide range of recommendations is provided below.

- **Local Marketing**
  - Educate local consumers
  - Buy BC type program
  - Local branding
  - Local processing
  - Support for association programs
  - Support farmers markets
  - Media campaign
  - Alliances with retailers, distributors, financial institutions
  - Local processing
  - Cooperative distribution system
  - Independent broker
  - Increase producers marketing skills re direct marketing
  - Umbrella organization to coordinate

- **Improve Industry Image**
  - Illustrate career opportunities
  - Illustrate business opportunities
  - Illustrate economic impact
  - Umbrella organization to run campaign
  - Emphasize safety, health, economic impact
  - Need for self sufficiency
  - Use champions and local organizations
  - Mandatory school courses

- **Improve Industry Cooperation and Coordination**
  - Coordinate lobbying
  - Point person on key initiatives
  - Support to increase capacity of local organizations
  - Marketing cooperatives
  - Local marketing
  - Prevent overproduction
  - Joint lobbying
  - Strengthen associations

- **Govt Regulations**
  - Simplify processing regulations
  - Improve government stakeholder consultation processes
  - Maintain ALR I
  - Use local inspectors
  - US harmonization
  - Resolve conflicting regulations
  - Improve communication with government
  - Coordinated lobby efforts
  - Improve coordination between three levels and industry

- **Value-added chains**
  - Respond to consolidation/market power
  - Smaller producers band together
  - Promote vertical integration

- **Innovation**
  - Increased R&D by government to reduce risk
  - Marketing boards need to shift focus to more supportive actions
  - Extension services/advice restored
  - Work more with universities and colleges
  - Drive innovation in key sectors
  - Review other jurisdictions programs
  - Use marketing boards to promote innovation
  - Establish an Agriculture Innovation Council
  - Establish regional Innovation resource centres
  - Establish an Agriculture Innovation Fund
  - Provide access to innovation experts

- **Access to physical resources**

- Secure access to water
- Water metering
- ALR protocols – remove politics
- Long term crown land leases
- Illustrate economic impact
- Management plans
- Restrict urban sprawl

- **Human Resources**
  - Restrict urban sprawl
  - Apprenticeships
  - Seasonal training
  - Online training
  - Subsidize on-farm training
  - Connection to community colleges
  - Early exposure to education through 4H and other early education programs
  - Job shadowing
  - Mentoring
  - Coop positions
  - Focused immigrant program
  - Illustrate career options
  - Training managers and farmers in HR
  - Youth staff recruitment program
  - Extension services to facilitate education and training

- **Quality & Safety**
  - Confront Avian flu
  - Standard certification programs
  - Incentives to adopt safety programs
  - Harmonized certification standards
  - Strengthen association to help
  - Engage foreign born producers to participate
  - Commodity specific

- **Financing**
  - Use of partnership with existing programs
  - Own more of the value chain
  - Coop model
  - Adjustment programs for capital projects
  - Government capital search service

- **Marketing skills, resources**
  - Compete on quality
  - Mentoring
  - Agriculture Business Incubation Centre (Abbotsford)
  - Branding programs
  - Develop niche markets
  - Community kitchens
  - Training
  - Marketing incubator
  - Sector specific marketing plans

- More research and programming
- Focus on value added
- Umbrella marketing org

- **Local Processing**
  - Umbrella marketing org
  - Clarification of regulations
  - Case study to illustrate need and potential
  - Tax incentives
  - Reduce Alberta companies control of meat processing
  - Mobile processing facility
  - Biofuel use

- **Input Costs**
  - Biofuel use
  - Low water rates
  - Conservation, covenants, land banks
  - On-farm energy production
  - Use bio-waste
  - Reduce fuel tax
  - Energy rebate
  - PST rebate
  - Alberta model subsidy program

II. INDIVIDUAL WORKSHOP DESCRIPTIONS

A. NANAIMO

Held: October 26, 2005
Attendance: 55

1. Identification of key issues

The attendees were asked to identify the issues that are most important to their organization, sector or region. The results are detailed in the table below.

ISSUES MOST COMMONLY IDENTIFIED AT THE NANAIMO WORKSHOP

Opportunity, Challenge or Issue	Number of Attendees
Need to improve/expand local marketing activities	10
Need to increase access to workers and education programs	9
Need to access to capital	9
Need to establish, expand or strengthen the local processing sector	9
Marketing expertise need to be improved	6
Need to improve the level of industry cooperation	5
Promote development of more value added products	5
Regulations regarding small processors	5
Increase access to sufficient and affordable water	5
Address the rising cost of land	4

Opportunity, Challenge or Issue	Number of Attendees
Succession issues	3
Need to increase support for innovation/R&D	2

After the attendees identified their top issues, there was an open discussion of some of the issues. The major issues that were highlighted during this part of the session included:

- **Access to affordable and suitable processing facilities is limited.**

  Processing capacity has been steadily declining on Vancouver Island and producers must send produce and animals off island for processing. This raises costs, reduces margins, negatively impacts viability.

- **Government regulations regarding on farm processing are intensifying.**

  Increasingly stringent regulations regarding on farm processing, especially of meat products, threatens to end this practice for many producers. This would eliminate a much needed revenue source and even endanger farm status for some.

- **The quota system has reduced island production.**

  Much of the quota for some products, especially eggs, has been taken off the island and never replaced. This makes it necessary to "import" products and reduces the economic viability of the industry in some areas.

- **Access to technical expertise is limited.**

  Expertise in the areas of cost reduction and technological innovations is difficult to access. Some government expertise exists but, without formal extension services, this expertise is not regularly shared with producers.

- **Food production on Vancouver Island is declining.**

  The amount of food produced on Vancouver Island is declining. This reduces economic activity, raises costs and creates the risk that a crisis in the distribution system would result in food shortages. For example, if the avian flu pandemic materializes, there is speculation that the island would be quarantined and local food production would have increased importance.

- **There is an overemphasis on niche products and markets at the expense of traditional producers.**

  The trend is to support the development of niche products and related marketing. This can result in not enough attention being paid to the needs of traditional producers.

- **Land values are rising steadily.**

  The high cost of land means that farm expansion is unlikely. As it becomes more valuable, certain lands may be converted to urban development and lost to farm production.

- **Government regulations can create monopolies.**

  Government policy, particularly with respect to on-farm processing, is viewed by many as facilitating the creation of monopolies. The fear is that government is intentionally promoting consolidation to the detriment of the small producer.

- **There are opportunities for import replacement.**

  Given the imbalance between food produced locally and the amounts entering the local market, there are opportunities to substitute local produce for that being brought in.

- **There is a need to educate consumers.**

  There is a need to raise the awareness of consumers about the importance of buying local. In addition, the consumer needs more information about what really is local. Misleading labelling of products to imply local production when that is not the case must be countered. A "Buy BC" type program that identifies local product is seen as good model for local marketing and education of consumers.

  The public also needs to be better educated regarding career and business opportunities in agriculture. This could be done through support for 4H clubs and promotional programs in the early school grades.

- **Competition from big players is intense.**

  The consolidation of the industry's distribution system has seen retailers demanding lower prices and higher volumes. The small producer has little chance to compete with large production companies to supply the "big box" type merchandisers.

- **There is a need for small producers to increase cooperation.**

  The industry is fragmented and lacks strong representation. There is potential for increased influence and efficient joint activities through more intensive cooperation. One method to enhance this cooperation is to more aggressively support the regional organizations that currently exist.

- **More relevant R&D is needed.**

  Neither government nor private industry is making significant investments in R&D in the province. Innovation is crucial to industry growth and development.

- **Marketing boards need to shift focus.**

  Many see the marketing board regulations as being restrictive and counterproductive to industry prosperity. There is a feeling that the Boards need to be more aggressive in areas such as the promotion of innovation and expanding markets.

- **Government stakeholder consultation processes are not inclusive.**

  Consultation exercises often appear to ignore small producers and their concerns and issues are not brought forward in these forums.

2. Suggested Strategies And Actions

After the general discussion, we identified six issues that were of particular interest to the attendees. The group was then broken into six work teams, by having each attendee select the issue that was of greatest interest to them. Each team then worked to develop strategies and actions that could be undertaken to address the issue. The leader from each of the six teams presented their suggestions to the overall group. The suggestions are summarized below.

- **Work to increase access to affordable and relevant processing infrastructure.**

  The work team was worried about increasingly restrictive regulations that would affect on farm processing. The fear is that some producers may not be able to keep animals and would thus lose their farm status. The suggestion was that the regulations be performance based rather than infrastructure and process based and that grandfathering of existing operations be considered. Local public health officials could be used to ensure food safety. These inspectors would be more available and more affordable.

  The group was also concerned about the limited processing capacity on Vancouver Island. They believe efforts should be made to process animals and other products locally to improve the economic viability of the local industry. This was seen as more feasible now due to rising transportation costs.

- **Ensure access to sufficient and affordable water.**

  Water is crucial to agriculture. The suggestion was to keep water rates low for agriculture applications. Region-specific water strategies should be considered. Industrial users are taking large amounts of water and charging for this privilege could be considered.

- **Review ALR protocols to protect farmland.**

  The group was concerned that removing ALR land was counterproductive to promoting needed community agriculture and its contribution to local economies. A renewable lease system for ALR land could be considered. There was concern about the influence of municipal governments in ALR decisions that often resulted in urban development replacing farmland.

- **Increase access to financing for producers and processors.**

  The most pressing need was seen to be increasing access to patient capital. It was recommended that extension services be expanded to enable producers to obtain advice on how to achieve cost reductions and better utilize technology. In addition, it was recommended that Investment Agriculture Foundation modify its eligibility criteria to increase access to funding.

- **Ensure access to training and trained workers.**

  There is a need to promote long-term employment in the industry and create apprenticeship opportunities. Training could be seasonal and on line. On farm training could be subsidized. Better connections to community colleges were seen as having potential to increase training offerings. Support should be offered to enable children to have early exposure to agriculture through 4H and other early education programs

- **Increase the ability to market products locally.**

  The team supported the branding of local products through the use of logos, packaging and other marketing techniques and a "buy local" type campaign. There was a feeling that the "Buy BC" campaign should be revitalized and provided at no cost to producers as it was previously. This could be facilitated by providing support to local agriculture organizations that could take the lead on such a campaign.

- **Facilitate cooperation among small producers.**

  The group believed that regional farm organizations should be strengthened to the point where they can represent the interests of small regional producers. Membership should be built up and relationships improved with policy makers. The increased cooperation may lead to cooperative buying and selling. Another suggestion was for existing grant programs to be based on criteria other than minimum gross farm revenue.

- **Modify marketing board regulations and focus.**

  The group believed that marketing board regulations needed to be more flexible. It was also suggested that the boards should be become more active in promoting innovation, increasing public awareness and supporting increased agriculture R&D. The opinion was expressed that the boards should also support new product development and aggressive marketing initiatives.

- **Review the definition of agriculture.**

  Concern was expressed that the definition of agriculture and related support was too narrow to accommodate many mixed operations. For example, agroforestry should be a recognized farming activity and this sector should be included in stakeholder discussions.

- **Vancouver Island needs to be ready for the potential disruption of the avian flu**

  There is a need for a crisis prevention and a management plan to deal with the potential economic and societal effects of the pandemic. A potential strategy could include the creation of warehouses in bio-regional economic development plans for bio-regional processing co-packing facilities combined with small-scale specialty quota so locals can buy local and in effect be the investors in these bio-regional food systems.

B. ABBOTSFORD

Date: November 10
Attendance: 37

1. Identification of Key Issues

The attendees were asked to identify the issues that are most important to their organization, sector or region. The results are detailed in the table below.

ISSUES MOST COMMONLY IDENTIFIED AT THE ABBOTSFORD WORKSHOP

Opportunity, Challenge or Issue	Number of Attendees
Access to skilled workers and managers	16
Need for better marketing and related skills	14
Need for more industry cooperation	8
Need to improve industry image	8
Restrictive government regulations	7
Need for increased innovation	6
Urban/rural conflicts	5
Access to capital	4
Need for new product development	4
Lack of processing capacity	4
Access to necessary physical resources	4
Environmental pressures	4
Lack of economies of scale	4
High cost of production	4
Restrictive trade barriers	3
Need for improved safety systems	3
High land costs	2
Transportation costs/lack of infrastructure	1

After the attendees identified their top issues, there was an open discussion of some of the issues. The major issues that were highlighted during this part of the session included:

- **There is a need to develop better marketing skills and programming.**

  The group saw marketing as an essential component of any competitive strategy. Increased skills in this area was seen as critical in their efforts to operate in a value chain dominated by large distributors and retailers.

- **The industry needs to cooperate in joint marketing.**

  This was seen as necessary to achieve the critical mass necessary to satisfy the volume demands of the large big box type retailers. Individual producers lack the necessary economies of scale to qualify as high volume suppliers. The industry would benefit from the formation or enhancement of associations, coops and strategic alliances directed at marketing efforts.

- **Producers need to improve their financial analysis skills.**

  The feeling was that many producers did not have a clear understanding of their production costs and their margins. Such information is seen as critical for making pricing and selling decisions.

- **Many government regulations restrict the industry's ability to compete.**

  A range of government regulations involving the Canadian Food Inspection Agency, pesticide regulations, and labour issues were mentioned. There were complaints that federal, provincial and local regulations are not coordinated, resulting in duplication and contradictory regulations.

Also, there is a lack of harmonization with US regulations. This is seen as a significant cost factor for many producers and processors.

- **Government regulations are often not based on science.**

  The group felt that government often instituted regulations for political reasons and not factual ones. The government was seen as often regulating in response to the poorest producer. Also, regulations often did not consider small operators but were based on large operations that could better afford compliance.

- **There is a need to develop better management skills.**

  The group felt that producers and processors often did not have sufficient skills to manage their operations as they grew. Businesses often grow beyond the skills of the owner. It was felt that producers and processors in this situation should increase their skill level through education and employ experts when necessary.

- **There are significant barriers to attracting investment.**

  Some of the barriers to investment attraction include the lack of economies of scale, a lack of scaleability, management issues, a lack of regulatory harmony with the US, and regulations based on popular opinion versus science. Investment was considered key to innovation.

- **Environmental pressures are increasing.**

  Both the public and government seem to have an increasing sense that production and processing are bad for the environment. Again, this was seen as often the result of politics and perceptions, rather than fact. Increasing environmental restrictions increase costs. There was seen to be a need to educate the public regarding the role of agriculture and the true nature of the related environmental issues.

- **Urban encroachment is an issue.**

  As urban development approaches agriculture operations, conflicts arise due to disparate objectives of the two groups. Residents object to noise, smell and perceived environmental damage. Farmers and processors are concerned about pollution of ground water and other impacts from high-density residential development.

2. Suggested Strategies And Actions

After the general discussion, we identified five issues that were of particular interest to the attendees. The group was then broken into five work teams, by having each attendee self-selecting the issue which was of greatest interest to them. Each team worked to develop strategies and actions that could be undertaken to address the issue. At the conclusion of the session, the leader from each of the five teams presented their suggestions to the overall group. The suggestions are summarized below.

- **Ensure access to skilled workers and managers**

  This is a need to have more training available to workers and managers. Some of the strategies that were suggested included job shadowing, mentorships, coop positions, enhanced high school career and personal planning programs, onsite training, and better connections with educational

institutions. It was also noted that work needs to be done to improve the image of the industry with potential workers, highlighting the fact that wages are comparable to that in other service industries. School programs illustrating the role of agriculture and the potential careers should be increased. In addition, the migrant workers program needs to become more responsive to industry needs, better housing will have to be secured, and relations with the Mexican consultants should be improved.

- **Increase industry cooperation and coordination**

  A range of strategies were suggested to improve industry cooperation and coordination including forming cooperatives to joint market product in volume; coordination of education on cross-sector issues; develop local markets and import replacement strategies on the local level; organize sectors to prevent overproduction; and joint lobbying of government regarding multiplayer regulatory environment. The most appropriate approach to cooperation and coordination may vary by commodity or product segment.

- **Improve the image and profile of the industry**

  There was a feeling that the public relations efforts of the industry had not been effective. The suggestion was for a coordinating group to develop a strategy with a simple direct message that would be often repeated. The message would include factors such as how healthly and safe BC food is; where food actually comes from; the economic impact of buying local; and the need for self sufficiency in the food supply. It was recommended that the program should be a long term effort (e.g. 10 years) and involve high profile champions. The coordinating group could distribute funds to local organizations to propagate the message.

- **Modify government regulations.**

  The government needs to be encouraged to form regulations based on science not uninformed perceptions. There needs to be a high level of coordination between the various jurisdictions and a harmonization of rules with the US in many areas. The main strategy was seen as a public awareness campaign to change people's misconceptions. Then there would be more of a possibility of regulatory change. Farmers are seen by the public as believable so mobilizing them for such a campaign should be effective. Coordinated and joint lobbying by all sectors is also necessary

- **Improve the marketing of BC products**

  The key was seen as competing on quality to find larger and more profitable markets. Significant niche markets need to be identified. Marketing activities should be coordinated, possibly by industry associations. The focus must be on commercial producers not lifestyle hobbyists. Some of the strategies for improving marketing that were suggested included a mentoring system; reintroducing the Buy BC program; supporting an Agriculture Business Incubation Centre; implementing branding programs; developing niche markets; and establish community kitchens.

- **Industry coordination of marketing efforts could include the formation of "new age cooperatives**."

  Marketing must be approached as a specialty with dedicated resources not as an add-on to some one who is already busy. And the skill levels of marketing staff must be increased through

training, mentoring and innovative support systems. A marketing "incubator" was suggested where marketing skills, market intelligence and analysis and related programming could be developed. Sector specific marketing plans were seen as important.

- **Increase access to financing**

  It was recommended that the variety of programs already in existence work more closely together to focus on agriculture financing.

C. PRINCE GEORGE

Attendance: 35
Date: November 16, 2005

1. Identification of Key Issues

The attendees were asked to identify the issues that are most important to their organization, sector or region. The results are detailed in the table below.

ISSUES MOST COMMONLY IDENTIFIED AT THE PRINCE GEORGE WORKSHOP

Opportunity, Challenge or Issue	Number of Attendees
High input costs	13
Government regulations regarding on-farm/other processing	11
Need to improve local marketing efforts	10
Need for better marketing in general	9
Lack of local processing facilities	8
Access to skilled labour	7
Low prices and profits to producers	6
Access to capital	5
Need for joint industry initiatives	4
Access to industry info	4
Access to technical info	4
Need to educate consumers re: local products	4
Environmental pressures	3
Low economies of scale	3
Distance to markets	3
Need for more entrepreneurial spirit	2
Access to resources	2

After the attendees identified their top issues, there was an open discussion of some of the issues. The major issues that were highlighted during this part of the session included:

- **Lack of local processing facilities**

  This was seen as an issue mainly for the cattle industry but was also mentioned as an issue for vegetable growers. Livestock are not finished in the region but are shipped to Alberta for finishing and processing. There are no large processing facilities available in British Columbia for the cattle industry. Two large firms in Alberta control that part of the industry.

- **Production costs**

  Transportation costs were the most often mentioned as an issue for local producers. Rising fuel costs and the distance to major markets are a significant concern. Rising fuels costs contributed to increased cost of material and equipment that must be brought into the region. Energy costs were also seen as significant.

- **Government regulations**

  Government regulators were viewed as indecisive and inconsistent, especially regarding upcoming regulations relating to meat processing, both on-farm and for potential commercial processors.

- **Access to capital**

  Access to debt financing and patient capital were seen as major barriers to expansion of the industry. Financial institutions' requirements for loans were seen as over onerous. Venture capital has not been accessed extensively.

- **Lack of government regulatory coordination**

  A major complaint about the public sector was that the various levels of government and even different ministries within one government were not coordinated in regards to regulating the industry. This creates situations of conflicting rules and confusing overlaps in jurisdiction.

- **Poor local marketing**

  The group believed that there was potential to market more produce locally but that this opportunity was not being exploited to the extent that it could be. Better local marketing efforts were seen as necessary to realize the potential. Part of this would be the education of local consumers regarding what is available locally.

- **Poor soil and other science**

  There were complaints that local growing conditions had not been sufficiently studied and that more effort in this area would produce positive results. Other jurisdictions were seen as being more responsive to producer needs in this area.

- **Poor industry communication and cooperation**

  Industry efforts to improve the local situation were seen as fragmented and uncoordinated. There appears to be a need for much more communication within the industry and the sectors and more joint initiatives. Such initiatives could include joint marketing efforts.

- **Poor access to information**

  Many producers felt that their ability to access information relevant to their industry including technical information was very limited. There was mention of the fact that many in rural communities lacked high-speed internet which limited their ability to access this type of information in a timely manner.

- **Lack of economies of scale**

  Local producers are small and fragmented and lack sufficient size to realize significant market power. To be effective in the marketplace the sectors will need to join forces to represent higher volumes to distributors.

- **Succession issue**

  Due to low profitability and a poor image, the industry is not attracting new entrants nor is it enticing the children of farmers to take up the career. There is a concern that there will be very few farmers available in the next generation to carry on agriculture production.

2. Suggested Strategies And Actions

After the general discussion, we identified five issues that were of particular interest to the attendees. The group was then broken into five work teams, by having each attendee self-select the issue that was of greatest interest to them. Each team worked to develop strategies and actions that could be undertaken to address the issue. At the conclusion of the session, the leader from each of the five teams presented their suggestions to the overall group. The suggestions are summarized below.

- **Develop the local market**

  The key in this area was seen to be the education of consumers regarding the availability and quality of local produce. Various strategies for achieving this were suggested included supporting farmers markets, media campaigns and buy local programs. Support was expressed for the return of the BUY BC program.

  Encouraging the development of local processors was also seen to be an effective strategy to facilitate local consumption of local produce. Also suggested were efforts to convince local retailers to stock local produce through a cooperative marketing system.

- **Develop local processing capacity**

  The objective was seen to be the establishment and enhancement of inspected processing facilities that could legally market produce to a variety of markets. The most pressing need is a clarification of regulations in this area.

  The group suggested that a business plan or case study be developed to illustrate the potential of such facilities to government and the consumer. The industry should develop this rationale as a joint initiative that will illustrate to government that they speak with a strong collective voice. Local government was seen as being particularly ignorant of the potential economic impact of this concept. Such a development would enhance the viability of local producers as well as the local communities.

  Processing development will require significant capital and there was the suggestion that among other efforts to attract capital government could use tax incentives in this area as it has for other industries.

- **Coordinate government regulatory efforts**

The group felt that the objective in this area should be the development of regional solutions for regional problems. Too often blanket solutions are developed for the whole province that do not consider local conditions. Also, the existence of three levels of government and ministries with overlapping mandates creates situations of confusion and contradictory information regarding the regulatory system. Regulations must be clear and easily understood.

The group wanted to focus pressure on all levels of government to work together to identify regional issues and develop regional policies. Intense lob by efforts will be needed to accomplish this. Local government should be one target of such lobbying to ensure that the importance and potential of the industry is understood.

- **Reduce input costs**

A significant area of concern was access to water. The group felt that government should pay particular attention to the water needs of agriculture as this resource might become more costly. Water rates should be kept low for food production. They also believed that industry conservation efforts in this area would be productive.

The other major input considered was land. Access to reasonably priced land will be necessary to increase local sustainable agriculture production. This can be done through the ALR, tax incentives, conservation covenants and land banks.

Another potential cost savings would be through the use of on-farm energy production. There is potential from hydro, wind, and fuel burning systems. Fertilizer costs could be reduced through increased utilization of local bio-waste. There was also support for a further reduction in the fuel tax for farm operations.

- **Develop "export" markets**

In addition to regional markets, the group saw opportunities to develop non-regional markets. The main issue in this area was seen as the control of the cattle processing industry by out-of-province firms. The US only allows processors to own 10% of the cattle they process. This was seen as a suitable policy for Canada.

Another strategy would be to promote the Canadian age verification system, which is superior to the US system. This and other efforts are needed to increase consumer confidence in the product. A possibility is to use the image of rancher internationally to promote the wholesomeness of the products.

The development of high quality niche products has significant potential to reduce the reliance on a small number of markets and to offset imports. This would require the development of a processing capacity. The group also felt that there needs to be significantly more resources directed to market research and marketing programs. Other jurisdictions were seen as being more supportive of industry marketing efforts than BC.

D. DAWSON CREEK

Attendance: 31
Date: November 17

1. Identification of Key Issues

The attendees were asked to identify the issues that are most important to their organization, sector or region. The results are detailed in the table below.

ISSUES MOST COMMONLY IDENTIFIED AT THE DAWSON CREEK WORKSHOP

Opportunity, Challenge or Issue	Number of Attendees
Cost of production	12
Marketing and branding	12
Transportation cost and infrastructure	8
Lack of processing facilities	7
Access to financing	6
Local product ID and marketing	6
Access to labour	5
Development of niche products	5
Need for alternate uses for crops	4
Subsidies and trade barriers	4
Low commodity prices	4
Weak industry cooperation	3
Weak associations=poor lobbying	3
Access to supplies	2
Poor economies of scale	2
Environmental Sustainability	1
CFIA regulations	1

After the attendees identified their top issues, there was an open discussion of some of the issues. The major issues that were highlighted during this part of the session included:

- **The Identification of local produce through packaging and labeling**

  Local produce is not always identifiable and needs to have distinctive packaging and labeling. Often product has a Canadian label even though the contents have been imported and were only packaged in Canada.

- **Difficulties with local product placement**

  Local producers often do not have enough volume to meet the demands of the large chains. Chains outlets are required to use products approved and purchased by their head offices. In the cattle industry, a lack of feedlot capacity, the loss of the live cattle exchange, and monopoly control of processing requires that most product must be sent to Alberta.

- **Low cost competition**

  In the commodity markets, foreign low cost competition is difficult to counter. Other jurisdictions with lower production costs subsidize their industry and use trade barriers to restrict imports. Their industry is often not as restricted by environmental considerations as is the Canadian industry. The result is low prices for commodities.

- **Alternate uses needed for bulk commodities**

The ability to produce large crop quantities is not an issue. What is needed are other markets and other uses for the products, especially the grains. There are a number of non-food uses for grains that have potential. These include bio-diesel and ethanol. The construction of an ethanol plant was supported by the group.

- **Local industry associations are weak**

  Due to a lack of resources, the local representative groups of the agriculture industry are not seen as effective. Most are run by volunteers who do not have significant amounts of time or resources to spend on industry issues. Consequently, the industry's lobbying efforts are very limited in scope and not very effective.

- **Producers have poor marketing skills**

  Regional farmers do not have training or experience in marketing agricultural products. They concentrate on production and have little time to acquire these types of skills.

- **There is a lack of capital sources**

  Access to capital is a significant issue in the Peace Region. The sector is viewed as high risk and traditional sources of startup and patient capital are reluctant to invest in the sector.

- **There are transportation issues**

  The high cost of transportation and the distances that must be covered are a significant disincentive to marketing regional product outside of the region. In addition there is a shortage of railroad cars necessary to transport grain.

2. Suggested Strategies And Actions

After the general discussion, we identified five issues that were of particular interest to the attendees. The group was then broken into five work teams, by having each attendee select the issue that was of greatest interest to them. Each team then worked to develop strategies and actions that could be undertaken to address the issue. The leader from each of the five teams presented their suggestions to the overall group. The suggestions are summarized below.

- **Improve marketing/branding**

  The group believed that marketing efforts should focus on value added products and the utilization of all products and byproducts of production. The strategy would be for all parts of the sector to work together in a self-sustaining, integrated system that would see waste products such as liquid manure utilized by other parts of the sector, surplus grain used in an ethanol plant and industry cooperation formalized in a coop type arrangement.

- **Improve access to financing**

  The group felt that best way to attract financing was for the local industry to become more vertically integrated. The producers need to own more of the value chain to increase margins and make investing less risky. The coop model was also supported by this group to facilitate the industry cooperation and coordination necessary to accomplish the vertical integration. The

group recommended that a champion take this project on and use existing models of integration to educate producers of the potential of this approach.

- **Increase processing capacity**

  This group also liked the idea of a champion that would advocate for increased processing capacity in the region. Suggestions for strategies included tax incentives to facilitate the construction of processing facilities, introduction of a mobile slaughter facility, and harmonization of government regulations relating to processing. The mobile facility could include a traveling inspector.

  Another possibility was the establishment of a facility to create fuels from grains and the subsequent mandate of the use of biofuels in BC. Again it was emphasized that the industry had to achieve and high level of cooperation in this area and "speak with a united voice."

- **Modify government regulations**

  The suggestions put forward included increasing fuel tax rebates and energy rebates, providing subsidy programs based on the Alberta model, and PST rebates. The group suggest that subsidies or rebates could be linked to the commodity in that, when commodity prices went up, the subsidy would go down (giving relief when it was needed and removing it when it was not).

  This group believed another important area was slaughter regulations. The present system was seen as a hindrance to on-farm value-added operations. They believed that producers should have more input into this area of regulation.

- **Improve access to labour**

  Due to competition from the oil and gas sector, it is difficult to attract labour to agriculture. The shortage was seen as getting worse with the aging of the farmer and a lack of succession possibilities. There need to be efforts to present agriculture as a desirable career option. Another suggestion was a focused immigrant program, targeted at countries such as Germany where there is high unemployment.

  Greater education for the agriculture labour force was seen as imperative. A suggested strategy was to form closer links to local educational institutions in order to develop training programs.

E. SURREY

Attendance: 43
Date: November 21

1. Identification of Key Issues

The attendees were asked to identify the issues that are most important to their organization, sector or region. The results are detailed in the table below.

ISSUES MOST COMMONLY IDENTIFIED AT THE SURREY WORKSHOP

Opportunity, Challenge or Issue	Number of Attendees
Cost of production	16
Government regulations	13
Need more value added products	11
Need more innovation	11
Lack of skilled labour	10
Opportunity to access export markets	9
Poor image of the industry	8
Access to capital	6
Urban/rural issues	6
Access to low cost labour	6
Need to improve local marketing	5
Limited management skills	5
Safety issues	5
Poor industry cooperation	4
Waste management issues	3
High taxes	2
Transportation delays/traffic/border issues	2

After the attendees identified their top issues, there was an open discussion of some of the issues. The major issues that were highlighted during this part of the session included:

- **High cost of production**

  The costs of production specifically mentioned included energy, fuel, land and labour. There was particular concern regarding energy costs for greenhouse growers and fuel costs for other sectors.

- **Poor management skills**

  It appears to be difficult to attract good operations managers to the industry. Lower wages than other sectors were mentioned as one contributing cause. Limited management skills slow the rate of innovation. Operators tend to be fearful of change and are more likely to add labour than innovate to fix a problem.

- **Low level of public sector support**

  The group cited that the agriculture sector in other jurisdictions receives greater support in the areas of innovation, processing, value added products and financing. Alberta was mentioned as one region that provides more significant support to its agriculture sector.

- **Poor marketing efforts**

  International negotiations could change current regulations regarding supply-managed commodities. This and other changes in the industry make marketing effectively more important than every. BC marketing efforts are often seasonal rather than year round. Producers often do not have access to marketing expertise and are left to develop their own strategies. Associations are often weak and do not have the resources to assist members with marketing. In this issue, as well, other jurisdictions were seen to be more supportive of industry efforts than BC.

Local marketing efforts need to be improved as well. There are opportunities to sell local food locally, based on safety and quality. Other jurisdictions were seen to be doing much more than BC to promote the local sale of local products.

Training and funding support for marketing efforts were seen as critical to improving marketing performance.

- **Lack of processing capacity**

  There were a number of complaints by different sectors represented at the meeting that there is insufficient processing capacity in the province. This situation will be exacerbated by the coming regulations that will restrict much of the on-farm meat processing that occurs now.

- **Lack of skilled and unskilled labour**

  There are serious problems with accessing workers for the labour intensive jobs in the industry. Some participants were using Mexican labour through the federal program. However, they were not able to access enough workers as they are competing with companies with easier and cheaper access to the workers under this program.

  Skilled labour is also in short supply. This is seen as largely being the result of the negative image that the industry projects and the fact that young people are not aware of the careers available in the sector.

- **Restrictive Regulations**

  There were complaints about over restrictive environmental regulations. Also mentioned was the sometimes contradictory policies and regulations of the three levels of government with which the industry is forced to deal with. For example, several operators have been frustrated by the restrictions on independent power generation.

- **Rural/Urban conflicts**

  There is increasing pressure on the land base from residential development. It was noted that new residents of formally rural areas complain about farm operations and lobby local government for more restrictive regulations to limit nearby farm operations.

- **Poor industry image**

  There is a need for public education regarding where food comes from and how safely it is produced. Also, the group felt that the economic impact of agriculture should be emphasized in consumer education efforts as well as those targeting politicians.

  The group felt that the best public relations can be obtained from promoting the food itself. Some greenhouse operators have begun to have open houses and school tours to educate their urban neighbours.

- **Need for more innovation**

Innovation is critical to industry progress in many areas. Other jurisdictions were seen as being much more supportive of innovation development and implementation than BC. Other governments help mitigate the risk of new innovation.

2. Suggested Strategies And Actions

After the general discussion, we identified five issues that were of particular interest to the attendees. The group was then broken into five work teams, by having each attendee select the issue that was of greatest interest to them. Each team worked to develop strategies and actions that could be undertaken to address the issue. The leader from each of the five teams presented their suggestions to the overall group. The suggestions are summarized below.

- **Increase access to human resources**

  Owners and operators need human resources training to improve their recruitment and retention rates. The group suggested an integrated recruitment program that improve the image of the industry as a desirable career area. This strategy would include starting programs in the public schools as early as the elementary grades to promote a positive image of working in agriculture. Another suggestion was to create an industry marketing program, staffed by youth, to attract other youth to the area. This program would include coop positions.

- **Increase the rate of innovation**

  The industry needs improved innovation in every area of industry operations. Educational institutions need to cooperate with government and the industry to use their resources to promote innovation through education and research. Government needs to provide funding to reduce the risk associated with the process of innovation development and adoption. Due to the nature of the industry, the government needs to take the lead in R&D efforts.

  The group wanted to review related programs in other jurisdictions. Their preference was to identify key sectors and drive innovation in those sectors. Another suggestion was to mobilize the marketing boards to assist small operators with their innovation needs. Also, a separated entity, potentially an “innovation council”, could be formed to lead the initiative and form the necessary partnerships to realize the potential.

  The group supported innovative approaches to environmental issues and especially waste reduction and reuse.

- **Develop a strong BC brand**

  The group was very interested in the development and promotion of a BC brand as has been done in other jurisdictions. This would be done to increase the awareness of the public regarding the existence of locally produced food products. The suggestion was for an umbrella group to create this brand on the model of BC wine’s VQA program.

  The most important thing about the branding exercise would be to emphasize quality. A coordinated message should be developed and a number of promotional campaigns implemented by the industry as a whole cooperating in common efforts.

- **Promote vertical integration in the industry**

The industry is seen as fragmented and lacking economies of scale, conditions which restrict the development of value added products. To overcome these barriers will require a coordinated multi-sector effort that will facilitate vertical integration of the industry. All stakeholders need to become involved from the producer, through processors, distributors and retailers. Value-added opportunities need to be identified and fast traced.

- **Improve government and industry coordination**

The agri-food industry has to deal with four levels of government. There is poor communication between agencies, between levels of government and with industry. A lack of coordination creates situations where contradictory policies and regulations are imposed by agencies working in isolation. The government needs to work with industry to improve communication and to coordinate related legislation in areas such as processing regulation, land use planning, urban conflicts, waste management and other environmental issues. Government needs to consider the industry when making decisions in areas such as transportation infrastructure.

The industry needs to speak to government with a single voice, possibly through strengthened associations. But the industry needs to coordinate its efforts and provide government with a unified position on common issues. Communication was seen as the key to successful resolution of these issues.

F. VERNON

Attendance: 20
Date: November 22

1. Identification of Key Issues

The attendees were asked to identify the issues that are most important to their organization, sector or region. The results are detailed in the table below.

ISSUES MOST COMMONLY IDENTIFIED AT THE VERNON WORKSHOP

Opportunity, Challenge or Issue	Number of Attendees
Local marketing/consumer awareness	11
Government regulations	7
Safety and quality issues	6
Access to Land	6
Environmental pressures	6
Access to water	5
Lack of innovation	5
Value chain challenges	5
Access to capital	4
Access to skilled labour	4
Certification pressures	4
Costs of production	4
Lack of new entrants	3
Marketing in general	3
Lack of information	3
Poor industry image	2
Access to seasonal labour	2

Opportunity, Challenge or Issue	Number of Attendees
Need for affordable seasonal housing	2
Weak associations	2
Lack of processing capacity	1
Access to water	1

After the attendees identified their top issues, there was an open discussion of some of the issues. The major issues that were highlighted during this part of the session included:

- **Access to land and water**

  Access to these resources is critical for all sectors. Growing urbanization, complicated regulations, and growing pressure for conservation are threatening the ongoing availability of these resources necessary for agricultural operations

- **Lack of appreciation of agriculture economics**

  The concern was expressed that government decisions regarding agriculture are based on politics and not science. The point was made that growing grass has a much higher value than growing trees but this is not recognized.

- **Access to capital**

  A cattle rancher indicated that previous government programs, which provided long-term loans at reasonable interest rates, had been withdrawn.

- **Need to develop local/domestic markets**

  There are opportunities for import replacement by developing the domestic marketplace. The potential was illustrated by the BSE situation, where more meat products were sold domestically when foreign markets were closed.

  Domestic markets can be more reliable and more feasible due to transportation and distribution costs. However, there is a need for more research to determine the import replacement opportunities and consumer preferences. Efforts need to be made to educate the public about the availability, safety and quality of local produce. Local retailers need to be lobbied to support the area where they do business.

- **Lack of innovation**

  More innovation resources are needed to develop niche products and improve production efficiencies. There are also opportunities to use innovation to improve environmental sustainability, which is a highly marketable attribute.

- **Restrictive government regulations**

  The group complained that the government was totally concerned with control and regulation to the exclusion of assistance and promotion. One issue is pesticide registration system, which sees common products used in other jurisdictions unavailable to Canadian producers. Also, regulations are geared to large operations and application of regulations designed for big companies may not be tenable for small operations.

- **Lack of industry cooperation and coordination**

  Some of this problem is the result of the fragmented nature of the sectors and the lack of scale. Small associations often work with volunteer workers and are unable to organize collaborative efforts or access programming. Industry coordination will be necessary to offset the market power of retailers who are demanding their own certification processes.

  Another factor is that new immigrant industry entrants (50% of producers) are not involved or informed about issues and programs. They remain unengaged with the rest of their sector.

- **Shortage of labour**

  There are shortages of both skilled and unskilled labour. There are some immigrant worker being brought in but now there is a need for affordable seasonal housing for this group that is acceptable to local municipalities. There were complaints that local educational institutions are not producing skilled workers for the local industry. It was noted that new entrants are hard to attract and the average age of farmers is climbing

- **Safety, quality and certification pressures**

  Certifying operations can be very costly and there is confusion about who recognizes which certification process. Some Canadian ones are not recognized by other countries. Also, some large retailers are requiring their own certification process to be implemented before they will purchase products.

2. Suggested Strategies And Actions

After the general discussion, we identified three issues that were of particular interest to the attendees. The group was then broken into three work teams, by having each attendee select the issue that was of greatest interest to them. Each team then worked to develop strategies and actions that could be undertaken to address the issue. The leader from each of the three teams presented their suggestions to the overall group. The suggestions are summarized below.

- **Focus on the development of local markets**

  The group believed that there were opportunities in both the regional market and the larger Canadian domestic market. They believed that the focus should be on feeding ourselves, not on the export market.

  Efforts should be made to increase consumers desire to buy local produce, through education and promotional programs. Regional products need to build a separate identity and emphasize their safety, health and quality. Marketing needs to build on the trust people have in farmers and producers need to increase their market skills and learn how best to market direct.

  Direct marketing such as farm markets should be supported to shorten the supply chain and improve profits. Also, alliances should be built with local independent retailers, food service business and distributions. A cooperative distribution system possibly using an independent broker could be utilized to reduce costs.

- **Enhance safety and certification programs**

Standardized certification programs are now essential for marketing products. Programs should be coordinated and designed to be recognized by national and international agencies. The industry must take the lead in this attempt to build consumer confidence but government will need to play a role by providing incentives and helping to make it affordable for small producers.

Government can also lead research in this area and help to strength associations that can play a role in developing standardized program. The food safety guidelines will need to be commodity specific. The efforts in this area will also need to engage the foreign born farmers who are not yet involved

- **Maintain access to land and water**

Agriculture needs secure and affordable access to resources such as land and water to operate. One way to help to ensure this is to develop economic arguments that illustrate the importance and contribution of the sector to the overall health of the economy.

The group believed that the Okanagan Water Basin Board should have a high profile to help it save water for agriculture. The group also supported the development of a resource management plan for the Okanagan Valley that considered the needs of agriculture. A water metering system was proposed that promoted conservation but did not direct all the savings to urban users.

The security of tenure on crown land including long-term leases needs to be encouraged. This would include reducing the influence of politics on the use of ALR land. Also possible is the use of logged land for cattle grazing. Urban sprawl needs to be restricted.

G. CRESTON

Attendance: 25
Date: November 24

1. Identification of Key Issues

At the beginning of the session the attendees were asked to identify their top three concerns, write them down and submit them. The results are detailed in the table below.

ISSUES MOST COMMONLY IDENTIFIED AT THE CRESTON WORKSHOP

Opportunity, Challenge or Issue	Number of Attendees
Cost of production	15
Government regulations	9
Marketing information and skills	8
Need more innovation	8
Accessing to physical resources	6
Poor industry image	6
Access to capital	6
Industry and other information	5
Poor management skills	5
Need more value added products	5
Poor industry cooperation	5
Access to low cost labour	3

Lack of skilled labour	3
Lack of processing	3

After the attendees identified their top three issues there was a general open discussion of the issues. The issues that arose during this part of the session are outline below.

- **Inter-Provincial transportation regulations**

  Differences in transportation regulations between provinces creates additional costs and supply and marketing barriers. The complexity of the regulations creates extensive paperwork and differing DOT regulations regarding size and weight can reduce access to supplies.

- **Weak associations**

  Strong regionally based organizations are even more important now that government has downsized its support services to agriculture. Decision regarding funding are often made at a distance and local funding pools administered by local organizations would be cheaper and more efficient, increase access to funding and help build local associations.

  The weakness of local resource-poor organizations means that there is a lack of recognition of the importance of agriculture. Local government and the local consumer are unaware of the economic impact of the industry. Associations are commodity based and this precludes the industry from speaking with a unified voice to government.

- **Government regulations**

  Regulations are often uncoordinated and designed for large producers. For example the new stricter processing regulations will mean that it will not be economic to build local abattoirs without financial assistance

  Regulations regarding safety and security were seen as Government driven and not consumers driven. Consumers education is necessary to explain the changes and hopefully to make consumers willing to pay extra for safer products. Also, the regulations are not seen as being innovative or flexible to find other, less costly ways of ensuring safety.

  Another regulatory issue was the lack of government inspectors in the region. The closest one is in Osoyoos. This impedes communication with the regulators.

- **Access to physical resources**

  Access to land and water are affected by government regulations regarding crown land. Access is often restricted and tenures are not secure. Regulations in this area are often uncoordinated between levels of government. Also ALR land is being sold for recreation property which takes it out of production.

- **Access to capital**

  Financing is necessary to support value added and niche market development. One issue is that producers often do not understand finances and the reporting requirements of financial institutions. There is poor communication between banks and industry which results in a poor understanding of the requirements. It is difficult for producers to find the time and money to

obtain these types of skills.

- **Industry information and support**

  The industry has a need for support in both technical and business areas. The industry is much more complicated than it used to be and overworked farmers and processors are hard pressured to obtain advanced skill levels. This used to be provided by provincial government extension services. Competing jurisdictions have strong extension services and support for niche market development. The government extension used to assist with training and information that is unavailable locally.

- **Poor industry image**

  The lack of industry awareness among the public means that the industry is left with an anachronistic image. The farmer is seen as unskilled, careers uninteresting and food sources unrealized. This makes it difficult to attract new entrants, retain families in the industry, and undertake effective lobbying efforts.

- **Declining innovation**

  Innovation is another key to the development of value added products and niche markets. Many advances in the industry can be traced to public sector research efforts and the declining government support for R&D is viewed with apprehension

- **High operating costs**

  Operating costs have been increasing in recent years This has been due mainly to rising fuel costs and the exchange rate.

2. Suggested Strategies And Actions

After the general discussion the attendees were divided into groups and given an issue area to discuss and suggest strategies and actions to address the issue area. The results of their discussions were then presented to the group. The presentations are summarized below.

- **Financing**

  The group felt that the government needs to take a role in providing finance in the way of adjustment programs. A local need is for an abattoir to process local meat products. Due to stricter regulations this will require a facility of significant cost. Another area that needs financing is a facility to deal with waste disposal from farming operations.

  Another role of government should be to assist with the search for alternative financing sources.

- **Innovation**

  A combination of attitude, fear, lack of understanding and knowledge restricts innovation in the local agriculture sector. The group suggested that to promote innovation a local innovation resource center be established to facilitate access to related resources, facilitate access to funding, as well as information on available technology and current R&D activities.

The group proposed that the government employ an innovation expert to facilitate related services. It also proposed an R&D tax credit that was easier to access and methods to increase the level of communication with producers and processors about new technology..

They also proposed an innovation fund to fund related capital projects and education projects. This fund would assist with technology access by supporting visits by experts on the use of leading edge technologies.

- **Local Marketing**

The group proposed local marketing promotion program on the model of BUY BC. Local market opportunities need to be identified and exploited. Branded products need to be introduced to develop more value in the consumer's mind for local products. Island Farm Dairies was cited as an organization that had successfully implemented this type of program.

A promotion program should target an increased awareness of community benefits of buying local such as increased community viability, food safety and security and promoting sustainable agriculture products.

Local grower and processor groups should be formed and work to build their skills and capacity in marketing. These groups should form alliances with other regional groups such as financial institutions, retailers, food service companies and tourist organizations. There was a suggestion for an overall group in the region to provide leadership in this area.

- **Business/management skill levels development**

The group believed that a public service like the previous government extension services would be the best vehicle to develop the various skills necessary for successful agriculture operations. This type of service would increase the accessibility to information on regulations, markets and technology and practical expertise.

The group believed that there should be an early start in the development of agriculture related skills. They felt that this would be best accomplished through a mandatory educational program starting early in the grade school system.

New entrants would be encouraged by an increased level of support. Extension is not considered a subsidy, so it wouldn't attract trade retaliation