



DEVELOPING THE TREE FRUIT INDUSTRY IN BRITISH COLUMBIA

**Prepared for the British Columbia
Fruit Growers Association
January 2007**

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EXECUTIVE SUMMARY

OVERVIEW OF THE PROJECT

The tree fruit industry creates significant economic activity in the growing, packing, processing, selling and transporting of tree fruits. In addition, the orchards serve as a major tourism draw by providing a park-like setting for tourists and residents to enjoy. In recent years, the economic health of the industry has become a major concern as BC growers, particularly those in the apple sector, face increasing competition. In response to these conditions, the British Columbia Fruit Growers Association commissioned the development of a strategic plan for the tree fruit industry. Specifically, the project was designed to:

- Identify and assess key issues that are strategically important to the overall long-term success of the BC tree fruit industry.
- Identify specific strategies and meaningful actions that industry, government and others can pursue to assist the industry to enhance its competitive position and build a stronger industry future.

THE THREE PHASES OF THE PROJECT

The project was undertaken in three phases. In the first phase, extensive research was undertaken to develop a profile of the tree fruit industry in BC, assess the competitive position of BC relative to other producing regions, identify key trends affecting the industry, review key issues that need to be addressed and identify potential strategies that could be implemented to address these issues. In the second phase, a series of public meetings and industry workshops were staged involving representatives of various stakeholder groups associated with the tree fruit industry in BC to confirm the key issues facing the industry and work to further define specific strategies and actions that should be taken to address them. Building on the results of the first two phases, the Steering Committee then worked with the consultant in the third phase to develop the strategic plan which:

- Defines the vision, goals and a set of objectives that represent targets for tree fruit industry in British Columbia.
- Defines the strategies that will be implemented towards achievement of these objectives.
- Outlines specific actions and initiatives that will be implemented under each strategy.

PROFILE OF THE TREE FRUIT INDUSTRY IN BRITISH COLUMBIA

- The BC tree fruit industry is a significant economic generator. The industry generated farm gate receipts of \$68 million in 2005, of which apples accounted for \$46 million, sweet cherries accounted for \$16 million, and other tree fruits accounted for \$6 million. In 2005, apples ranked tenth amongst BC agricultural commodities in terms of revenues.
- The tree fruit industry employs about 5,000 people on farm, over 1,000 in packinghouses, and about 1,000 more in support industries in addition to those involved in the food processing sector. There are approximately 1,800 growers (including 400 to 500 larger commercial growers), who farm about 18,000 acres of apples, pears, cherries, peaches, apricots, nectarines, prunes and plums. The industry is situated primarily 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.

- The value of farm gate receipts in the tree fruit sector has risen by less than the rate of inflation over the past 34 years. Although apples remain by far the largest tree fruit crop in BC, production acreage fell from 21,613 acres in 1971 to approximately 12,800 acres in 2005 (a decrease of 41%). The production acreage of other tree fruits also declined considerably since 1971, with pears suffering the largest decline (80%) followed by prunes/plums (72%) and peaches (44%).
- Declines in production acreage have largely been offset by increases in yields. With a move towards higher density plantings, average apple production per acre in BC increased from 13,859 pounds per acre in 1971 to 14,772 in 1981, 18,055 in 1991, and 24,398 in 2001.
- There are an estimated 2,500 people employed by 40 to 50 BC companies involved in processing tree fruits. These companies ship generate manufacturing shipments of about \$500 million annually (including products which are not made using tree fruits).
- BC accounts for about 30% of Canadian apple production but only about 2.5% of combined Canadian and US production. Washington State produces over twenty times the volume of apples produced in BC.
- Over the years, BC apple production has shifted from lower value to higher value varieties. For example, since 1995, the production share held by Red Delicious has decreased from over 35% to about 18% while the share held by McIntosh has decreased from about 33% to about 20%. On the other hand, the share held by Gala has increased from under 3% in 1994 to 28% in 2005. BC Tree Fruits is now the largest single marketer of Gala apples in North America.
- The value of BC sweet cherry production, in terms of farm gate receipts, has increased from \$5 million in 1998 to almost \$16 million in 2005, driven, in part, by the removal of apple acreage and replanting of late season cherry varieties which produce large, rain split resistant cherries. The late season variety commands a price premium in the market. BC produces more than 60% of the sweet cherries grown in Canada but less than 2% of the combined Canadian and US production.

KEY TRENDS AFFECTING THE INDUSTRY

Key trends and issues that are common to many of the jurisdictions and tree fruit commodities we reviewed include:

- All countries are struggling to deal with the impact of increased world production. All apple producing areas, except Eastern Europe, showed rapid production growth in the 1990s. The rise in China's apple production has been remarkable, with the country achieving six times the production levels of 15 years ago. China now accounts for over 40% of world production. In this same period, Poland increased production threefold, Brazil doubled its apple production, and Chilean production grew by 90%.
- Demand for fresh apples has been stagnant and has even declined in some regions. This is especially true in North America. Per capita consumption of fresh apples in North America fell from 8.1 pounds in 1991 to 6.8 pounds in 2005. Demand is stable in the Southern Hemisphere and in Europe. There has been a significant rise in demand only in China, driven largely by the ready availability of apples and rising household incomes.

- Production increases, which outpace increases in demand, have resulted in declining grower returns and suggest the need for a further shakeout in the world's apple production areas. High cost producers are finding it increasingly difficult to compete on a commodity basis and need other strategies to maintain market share.
- While overall profitability in the industry has declined in recent years, efficient producers who are able to differentiate their products continue to earn strong returns. The development and commercialization of new varieties has been a very successful basis for differentiation. New varieties, such as Ambrosia, generate significantly higher prices than older varieties. Producers have also been able to differentiate their products on the basis of quality, service, customer relations or customizing distribution to precise requirements of retailers.
- Safety can also be an important basis of differentiation. Organic products have been able to increase market share while continuing to command price premiums. Quality assurance, product traceability and food safety programs such as HACCP have become increasingly important.
- The tree fruit industry is evolving into a knowledge-based industry. There is increasing emphasis on the protection of cultivars through plant patents and trademarks. This has contributed to the emergence of "club varieties", which seek to generate and maintain premium prices by promoting demand through specialized marketing programs and by limiting the amount that any grower can produce. At the same time, crop management is intensifying with a trend towards higher planting densities and the use of cultural practices such as fertigation.
- Many jurisdictions are pursuing international partnerships related to the development of new cultivars. International partnerships help to spread the cost of development and commercialization activities. Furthermore, when the alliances involve producers from both hemispheres, the partnerships help to ensure year-round supply of the resulting product.
- Competition for scarce resources is an issue in many developed countries. In particular, land, water and labour are often in short supply in many jurisdictions. Urbanization is raising land prices beyond the benefit to be obtained from a commercial orchard and putting pressure on water supplies needed for human use. Tree fruit production is highly labour intensive.
- A major trend in developed countries is consolidation among growers. This is especially true in the US and New Zealand, where small older marginal orchards are withdrawing from the industry and production is increasingly controlled by large integrated operators with high density orchards.
- Other levels of the value chain are also seeing significant consolidation. The wholesale and retail sectors have seen significant consolidation and are now dominated by large corporations who wield extensive market power.

OPPORTUNITIES FOR DEVELOPMENT

The tree fruit industry in British Columbia is a cyclical industry that has experienced periods of strong economic growth and performance followed by periods where industry returns have been low, reflecting variations in supply conditions and the relative competitive position of BC producers. In the past few years, industry profitability has been low overall although some growers have continued to be very successful.

The results of our review indicates that there are very significant opportunities to revitalize the tree fruit industry in British Columbia by taking advantage of some of the key industry trends and improving our competitive position. More specifically, there are **opportunities** to strengthen our industry through:

- The development and commercialization of new varieties;
- Improving the quality of our fruit;
- Leveraging our reputation as a supplier of safe, healthy products;
- Building on the preference of British Columbians for local products;
- Improving the efficiency and effectiveness of operations at all levels of the industry; and
- Expanding existing markets and developing new markets for tree fruits, including value-added products.

In pursuing these opportunities, we can build on a number of **key industry strengths** including:

- Strong participation in replanting programs. BC producers have replanted about 9,000 acres of tree fruits to high density and new varieties since the inception of the Orchard Renovation Program in 1991;
- Proximity to major markets in Canada and the US;
- The long established research infrastructure, which has played a critical role in the development of the apple and cherry sectors;
- Increasing consumer interest in fresh, healthy products;
- A climate that is well suited for tree fruit production;
- An acceptance of change within the industry. Growers in BC have a long history in successfully adapting their operations to meet new challenges;
- Strong stakeholder commitment to the industry;
- A well-developed supporting infrastructure in terms of packing facilities, storage capabilities and marketing systems;
- Strong food safety and quality control systems; and
- A range of government support programs and initiatives.

Some of the **weaknesses** and challenges that have to be addressed or at least recognized in the development strategy include:

- Low economic returns for the industry overall in the past few years may constrain reinvestment, force some growers out of the industry and make the industry less attractive to potential new entrants and those in line to take over the family farm;
- BC faces some comparative disadvantages vis-à-vis Washington State in areas such as production yields and scale of operations. Furthermore, many retailers perceive that the quality of tree fruit from Washington State is equal to or better than the quality produced in BC;
- There are difficulties in accessing workers, particularly seasonal workers, given generational low rates of unemployment and a limited supply of temporary accommodation for pickers;
- Certain costs, such as labour and transportation, have risen sharply;
- Limited resources have been available for marketing and market research;
- The regulatory environment is complex; and
- There has been a lack of industry-wide planning and coordination. The tree fruit industry has traditionally been highly fragmented. However, this is beginning to change as the packinghouses and others are making greater efforts to cooperate and work together.

Some of the potential **threats** that needed to be taken into consideration in formulating the strategic plan

included:

- The rising value of the Canadian currency;
- Increasing urbanization, which can create conflicts in areas such as water and farming practices;
- Stagnant or declining per capita levels of fresh apple consumption in many areas of the world; and
- Strong global competition resulting from increased production, the liberalization of trade and technological advances that allow more products to be delivered quickly to any market in the world.

THE STRATEGIC PLAN

The main report outlines the strategic plan for the BC tree fruit industry in terms of the vision, primary focus, goals, objectives, strategies, and actions. The report also provides an action plan which outlines specific steps to be undertaken and identifies responsible organizations, target dates for implementation and resource requirements.

Vision Statement

The vision statement defines what the industry is seeking to become as events unfold over the next ten years or more.

“The tree fruit industry in BC is widely recognized as a vibrant, economically healthy and sustainable industry that enjoys a strong market position based on products that are clearly differentiated and of consistently high quality.”

The vision statement incorporates four key themes, including:

- A high profile (“BC is widely recognized”);
- A strong industry (“vibrant, economically healthy”);
- A sustainable industry (economically and environmentally); and
- Competitively strong (based on clearly differentiated and consistently high quality products).

Primary Focus

To achieve this vision, the tree fruit industry must be economically strong. As a result, the primary focus of the strategy is to facilitate development of a tree fruit industry that is growing (to ensure that we have a strong critical mass) and profitable so that we can maintain operations and attract new entrants into the industry on an on-going basis.

Pillars, Goals and Strategies

Reflecting the key issues affecting the industry, the results of the analysis, and the input provided by the industry, five key pillars have been defined that will provide the foundation for future development of the industry. A specific goal has been established with respect to each of these pillars. The five key pillars, the corresponding goals, and a summary of some of the related strategies and actions are provided below:

- **STRUCTURE: *We will have an industry structure that provides leadership and promotes development and profitability.*** Implementation of the strategy will improve the level of

coordination and cooperation within the industry by encouraging further integration in the operations of packinghouses, BC Tree Fruits, PICO, and the BC Fruit Growers Association. In addition, a Board or Steering Committee will meet regularly to review the progress made in implementing the strategy, track the impact on the industry, and adjust and update the development strategy as needed

- **QUALITY PRODUCTION:** *We will produce consistently high quality products that fully meet the expectations of our customers.* Actions will be taken to upgrade the quality, efficiency and effectiveness of production activities at the farm level and within the packinghouses. A Tree Fruit Innovation Council is to be established to provide a focus for research and development efforts and to secure funding for a strategic innovation fund, which would provide support for research, development and technology transfer activities focused on a range of issues. To support improvements in production quality, the existing grading and pooling systems will be reviewed and strengthened. In addition, consideration will be given to introducing new technology within the packinghouses. To encourage improvements at the farm level, efforts will be made to extend the replanting program for five years, facilitate increased use of automation in labour intensive operations, and strengthen and coordinate extension services.
- **MARKETS:** *We will strengthen the position of our products in the markets we serve.* A Tree Fruit Marketing Council is to be established to provide leadership and work to secure additional funding for marketing activities. Some of the key marketing initiatives that are proposed include generic promotional programs targeted at BC consumers, further leveraging of the School Health Snack Program, research into varied packaging, implementation of an export development program, further development of institutional markets, and promotion of value-added enterprises. In addition, efforts will be made to support the implementation of food safety programs on farms and within the packinghouses, increase access to information on opportunities and constraints associated with organic production, and research the feasibility of establishing an organic/SIR quarantine area.
- **PEOPLE:** *We will attract, develop and retain the human resources that we need at all levels of the industry.* In the immediate term, the highest priority is to meet the demand for seasonal workers. In order to increase access to seasonal workers, the plan is to work with local governments to address issues related to housing bylaws, establish a worker housing program, ease restrictions that constrain the ability for guest workers to work on more than one farm, promote employment opportunities to local groups, and enable vacationers to work as pickers. However, human resource issues in the tree fruit industry are not limited to seasonal workers. As a result, there are also plans to undertake a labour market analysis covering all levels of the industry and, based on the results, develop training and education to address key skill gaps.
- **NEW VARIETIES:** *We will successfully develop and commercialize new varieties on an on-going basis.* Give the importance of new variety development to the economic strength of the industry, implementing a coordinated and collaborative approach to the commercialization of new varieties is a high priority. To improve the effectiveness of development activities, a coordinating body is to be formed which will develop and implement a strategic plan, work to develop partnerships and facilitate testing.

A summary of the vision, focus, goals, objectives, strategies and actions of the Tree Fruit Industry Development Strategy is provided on the following pages.

OVERVIEW OF THE VISION, GOALS AND OBJECTIVES OF THE TREE FRUIT INDUSTRY DEVELOPMENT STRATEGY

Vision	The tree fruit industry in BC is widely recognized as a vibrant, economically healthy and sustainable industry that enjoys a strong market position based on products that are clearly differentiated and of consistently high quality				
Primary Focus	INDUSTRY GROWTH To ensure that the industry strengthens its critical mass by achieving sales increases in domestic and export markets			PROFITABILITY To ensure that grower profitability is sufficient to maintain operations and attract new entrants into the industry on an on-going basis	
Pillars and Goals	STRUCTURE <i>We will have an industry structure that provides leadership and promotes development and profitability</i>	QUALITY PRODUCTION <i>We will produce consistently high quality products that fully meet the expectations of our customers</i>	MARKETS <i>We will strengthen the position of our products in the markets we serve</i>	PEOPLE <i>We will attract, develop and retain the human resources that we need at all levels of the industry</i>	NEW VARIETIES <i>We will successfully develop and commercialize new varieties on an on-going basis</i>
Objectives	<ul style="list-style-type: none"> • Farm gate receipts and grower net income will grow faster than the rate of inflation, providing a return on investment sufficient to maintain operations and attract new entrants into the industry on an on-going basis • The industry will be highly integrated, with the cooperative packinghouses and coming together to form a single integrated entity whose activities are closely integrated with those of PICO and BCFGa • By 2012, the quality of tree fruit production will improve such that 75% of industry production will be in the highest grade categories, quality will not vary by more than 5% year to year, and claims will be under 1.75% for apples and 6.0% for cherries by volume. Retailers and wholesalers will rate the BC products at least equal in quality to those produced in competing regions • Average prices for British Columbia tree fruits will increase at greater than the rate of inflation and the price of 80% of varieties by volume will equal or exceed those generated in Washington State by 2008. To help achieve these higher average prices, British Columbia will move away from commodity markets and focus more on niche markets by generating at least 20% of our revenues from specialty varieties, specialty packs, and organics by 2012 • By 2009, no fruit picking or packing will be delayed through lack of labour, 80% of workers will be returning experienced workers, and sufficient, suitable housing will be available to meet the needs of guest workers • By 2015, at least 10% of sales revenues will be generated from varieties commercialized within the previous 10 years. To help drive the commercialization of new varieties, at least 3 new varieties will be under market development at any given time involving 50 or more acres in test production 				

OVERVIEW OF STRATEGIES AND ACTIONS DEFINED UNDER THE STRATEGY

STRUCTURE	<i>To have an industry structure that provides leadership and promotes development and profitability</i>
	<p>Facilitate further integration of industry operations</p> <ul style="list-style-type: none"> • Develop and obtain stakeholder agreement on an integration plan that incorporates an organizational study designed to fully amalgamate the packinghouses and the BCTF and integrates PICO and BCFGAs activities with the new entity, a business plan and budget that describes the operation of a fully integrated unit, and a transition plan to ensure efficiencies are achieved through rationalization of assets and operations • Implement the integration plan <p>Monitor the progress made in implementing the strategy</p> <ul style="list-style-type: none"> • Establish an on-going structure to monitor the progress made in implementing the development strategy, track the impact on the industry, and adjust and update the development strategy as needed
QUALITY PRODUCTION	<i>To produce consistently high quality products that fully meet the expectations of our customers</i>
	<p>Upgrade packing and grading technologies and processes within the packinghouses</p> <ul style="list-style-type: none"> • Form a Tree Fruit Innovation Council which includes representatives from industry, UBC, PARC and other key stakeholders and works to strengthen research efforts through defining research needs, sharing information, and promoting research projects, students internships and coops, and other initiatives • Establish a strategic innovation fund for the tree fruit industry to support research, development and technology transfer activities. The fund will be used to support technology and knowledge transfer activities, support an OUC chair in tree fruit, and increase funding for PARC projects and IPM research • Introduce a revised grading system at the packinghouses that focuses more specifically on maturity • Adopt pooling practices that reward picking at optimal maturity • Upgrade equipment and technology used by the packinghouses to improve the efficiency and effectiveness of processing operations while facilitating implementation of an improved grading system <p>Upgrade the quality, efficiency, and effectiveness of production at the farm level</p> <ul style="list-style-type: none"> • Increase the use of automation in labour intensive on-farm operations (e.g. the use of picking platforms and mechanized harvesting) • Extend the replanting program for five years to encourage grower adoption of newer varieties and high-density trees • Strengthen and coordinate the extension services available to promote efficient and effective horticultural practices among growers, particularly growers new to the industry • Increase the level of interaction between the industry and educational & research institutions to ensure that institutional activities reflect industry needs and priorities. Interaction will be facilitated through the use of industry advisory committees, workshops designed to identify research priorities, and the use of student coop and internship programs

MARKETS	<i>To strengthen the position of our products in the markets we serve</i>
	<p><i>Increase the demand for BC tree fruits and increase access to markets outside of BC</i></p> <ul style="list-style-type: none"> • Form a Tree Fruit Marketing Council to research, develop and implement an industry-wide marketing program for tree fruits • Implement an industry-wide marketing program. Key components of the promotion program may be to: <ul style="list-style-type: none"> • Support generic promotional programs targeted at BC consumers, leveraging the activities of the School Health Snack Program; • Explore varied packaging; • Develop institutional markets (e.g. schools, hospitals, prisons and other public facilities) including opportunities to place fruit vending machines in institutional settings • Develop an export opportunities program • Encourage the development of value-added enterprises to meet market demand through market research and education
	<p><i>Respond to the rising consumer demand for organic products and safety assurance</i></p> <ul style="list-style-type: none"> • Support the implementation of food safety programs on-farm • Support the implementation of food safety programs within the packinghouses • Provide information to growers regarding the opportunities and constraints associated with organic production, covering issues such as suitable locations, transition costs and time, market potential, premium possibilities, and government support programs • Research the feasibility of establishing an organic/SIR quarantine area
PEOPLE	To attract, develop and retain the workers that we need at all levels of the industry
	<p><i>Increase access to workers</i></p> <ul style="list-style-type: none"> • Work with municipalities regarding related housing bylaws to encourage less restrictive farm worker housing by-laws and seasonal septic requirements as well as a coordinate approach to housing inspection • Initiate a worker-housing program that will provide suitable accommodation for seasonal workers through assistance to growers infrastructure costs • Allow workers from one farm to work temporarily on another by modifying existing regulations • Increase awareness of seasonal opportunities amongst local residents by undertaking promotional programs targeted at key groups including students, natives and retirees, developing an employment website and working through local agencies • Work with the Federal Government to introduce a vacationers as pickers program
	<p><i>Identify and address other key human resource gaps and shortages facing the industry</i></p> <ul style="list-style-type: none"> • Undertake a labour market analysis to determine labour market needs, skill requirements, and skill gaps at all levels of the industry including seasonal workers, farmers and permanent farm staff, small business operators and managers • Develop education and training programs, workshops and other initiatives needed to address the critical skill gaps and shortages facing the industry

**NEW
VARIETIES**

To be continuously developing and commercializing new varieties

Facilitate a coordinated and collaborative approach to the commercialization of new varieties

- **Establish a coordinating body consisting of representatives from PARC, PICO, packinghouses, marketers, growers and other stakeholders** to oversee the commercialization of new varieties
- **Develop and implement a strategy and action plan** to ensure a strategic approach to new variety development and commercialization
- Research the business case for joint ventures and, where warranted, **develop more partnerships with others to develop new cultivars and access other varieties**
- **Designate expanded test acreage for new variety trials**



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The BC Fruit Growers Association appreciates the financial assistance provided to complete this report by the BC Ministry of Agriculture and Lands. Appreciation is also expressed for the individuals who devoted their time and effort in providing input and information for this report.

I. INTRODUCTION

A. PURPOSE OF THE PROJECT

The tree fruit industry has long been a core component of the agriculture sector in BC. The first commercial orchard was established in the Similkameen Valley in 1867. Settlers realized that fruit trees did well in the local climate and soon orchards were planted along the length of the Okanagan-Similkameen and Kootenay Valleys. As the technology became available to move water inland and to higher elevations, the slopes of these valleys also began to be planted in fruit trees. The growers began to organize themselves and the BC Fruit Growers Association was founded in 1889. In 1913, in response to poor economic conditions, the coop system was organized. In 1939, Tree Fruits Ltd. was created as a producer-owned central selling agency.

The tree fruit industry is still a significant component of the Okanagan and Kootenay regions, creating economic activity in the growing, packing, processing, selling and transporting of tree fruits. In addition, the orchards serve as a major tourism draw by providing a park-like setting for tourists and residents to enjoy. However, in recent years, the economic health of the industry has become a major concern as the industry, particularly the apple sector, faces increasing competition. While prices for many varieties have been declining, key costs such as labour, energy, and leasing costs have been increasing sharply resulting in declining returns to growers.

In response to these conditions, the British Columbia Fruit Growers Association has commissioned the development of a strategic plan for the tree fruit industry. Specifically, the project was designed to:

- **Identify and assess key issues** that are strategically important to the overall long-term success of BC tree fruit industry.
- **Identify specific strategies and meaningful actions** that industry, government and others can pursue to assist the industry enhance its competitive position and build a stronger industry future.

The project was implemented in three phases. The major activities and outputs of each of these phases are summarized below.

THE THREE PHASES OF THE PROJECT

Phase	Key Activities	Key Outputs
Discussion Paper	<ul style="list-style-type: none"> • Collect and review available data to develop a profile of the tree fruit industry in BC and identify key issues that need to be addressed • Review the competitive position of BC • Identify potential strategies that could be implemented in the short-term (quick hits) and longer-term 	Develop a profile of the industry, prepare a discussion paper for distribution to workshop participants, and identify priority activities that could be acted upon in the short-term
Industry Consultation	<ul style="list-style-type: none"> • Stage two workshops with the 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

Phase	Key Activities	Key Outputs
Preparation of Strategic Plan	<ul style="list-style-type: none"> Define specific actions and strategies to be undertaken Hold meetings with Steering Committee members to discuss strategies and highlight actions which are of the highest priority in the near-term 	Definition of recommended actions and strategies

B. WORK COMPLETED

An overview of the work completed in each phase of the project is provided below:

1. Phase I: Preparation of Discussion Paper

The objective of Phase I was to conduct research to develop a profile of the tree fruit industry in BC, assess the competitive position of BC, review key issues that need to be addressed and identify potential strategies that could be implemented in the short-term (quick hits) and longer-term. The specific steps that we undertook in the first phase of the project are as follows:

- **Conducted an initial meeting with the Project Steering Committee** to review the proposed work plan and specific outputs desired. A listing of the Steering Committee members is provided in Appendix I.
- **Collected and reviewed the available data and previous studies** to develop a profile of the tree fruit industry in BC and identify the key issues that need to be addressed. A partial listing of the reports and studies we reviewed is provided in Appendix II.
- **Established a website** for the project to describe the initiative, allow for input and provide project updates.
- **Developed a framework for assessing the relative competitive position of BC’s tree fruit industry** using a standard cluster model.
- **Compiled comparable data from other jurisdictions** with a significant tree fruit industry, with a particular focus on Washington State, Oregon, Ontario, California and New Zealand.
- **Conducted interviews with a sample of industry stakeholders and members of the Project Steering Committee** to obtain their input with regard to the key issues that need to be addressed and possible actions to address these issues. We conducted interviews with representatives of about 50 organizations including growers, packers, marketers, retailers, wholesalers, institutional buyers, industry associations, processors, government and research institutions. A partial listing of the representatives we interviewed in Phase I is provided in Appendix III.
- **Conducted an assessment of the key markets trends and opportunities** for development that have a significant impact on the BC tree fruit industry. We also identified examples of tree fruit industry development strategies employed in other jurisdictions and considered their relevance to BC. A summary of key issues, opportunities and strategies is provided in Appendix IV.

- **Completed a preliminary SWOT analysis** of the tree fruit industry in BC.
- **Prepared the Phase I report**, summarizing the major study findings to that point.

2. Phase II: Industry Consultation

In Phase II of the project, we undertook a consultation process involving representatives of various stakeholder groups associated with the tree fruit industry in BC to confirm the key issues facing the industry and work to further define specific strategies and actions that could be taken to address them. The consultations involved two public meetings (Oliver and Kelowna) and two workshops (Penticton and Kelowna). The objectives of the public meetings were to:

- Build awareness and support for the initiative;
- Provide an overview of the process;
- Drive people to the project website; and
- Encourage people to provide input, directly to Ference Weicker & Company or through the website.

The meetings included a short presentation with time allotted for discussion and questions. The objectives of the workshops were to:

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

The participant groups included representatives of a range of industry stakeholders including growers, packing houses, sales agencies, processors, and the support infrastructure including associations, councils, research facilities, sources of financing, and government. A total of 56 individuals attended the workshops. The agenda for the workshops included:

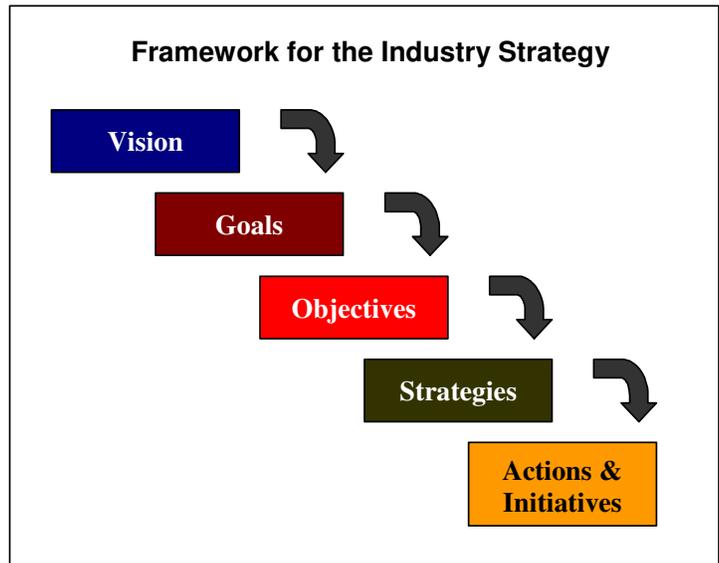
- An introduction by a member of the Steering Committee;
- An overview of the objectives for the workshop session;
- Presentation of the SWOT analysis, key opportunities and challenges, potential strategies and best practices by Ference Weicker & Company;
- Confirmation (validation) of the key opportunities and challenges by the participants through a facilitated group discussion, with a particular focus on identifying opportunities and challenges on which the participants would be willing to work;
- Breaking the group out into action teams (sub-groups) that took a specific challenge and developed strategies and recommendations for action by industry, government and/or others including recommendations on implementation. For each recommended strategy, the action teams were asked to identify the objectives, related actions, intended outcomes (benefits), possible resource requirements, and responsibilities for implementation; and
- Reporting back to the group by the action teams on their recommended strategies and actions.

The results of the workshops are summarized in Appendix V.

3. Phase III: Preparation of the Strategic Plan

Building on the results of the first two phases, the purpose of Phase III was to develop the strategic plan. To facilitate this process, we conducted a series of meetings with the Steering Committee to define the vision, goals and objectives for the plan, conducted further research into key issues, conducted interviews with representatives who may be involved in implementing various aspects of the plan, and worked with members of the Steering Committee to define specific actions and initiatives. The strategic plan:

- Presents the vision, goals and a set of objectives that represent targets for the strengthening the tree fruit industry in British Columbia. The objectives are actionable, time-bound, and measurable.
- Defines the strategies that will be implemented towards achievement of these objectives. The strategies represent commitments of time, resources, and money.
- Outlines specific actions and initiatives that will be implemented under each strategy. The strategy defines responsibilities, resource requirements, and timelines.



A framework summarizing the major components of the strategy is presented in Appendix V.

D. STRUCTURE OF THE REPORT

The report is divided into four chapters:

- Chapter II provides a profile of the tree fruit industry in BC
- Chapter III provides a competitive review of the industry including comparisons to other jurisdictions and a summary of the strengths, weaknesses, opportunities and threats.
- Chapter IV outlines the strategic plan in terms of the vision, goals, objectives, strategies, and action plan.

II. THE TREE FRUIT INDUSTRY IN BRITISH COLUMBIA

This chapter presents an overview of the tree fruit industry in BC that outlines the size of the industry, production and processing levels by commodity group, the structure of the industry, and the key markets.

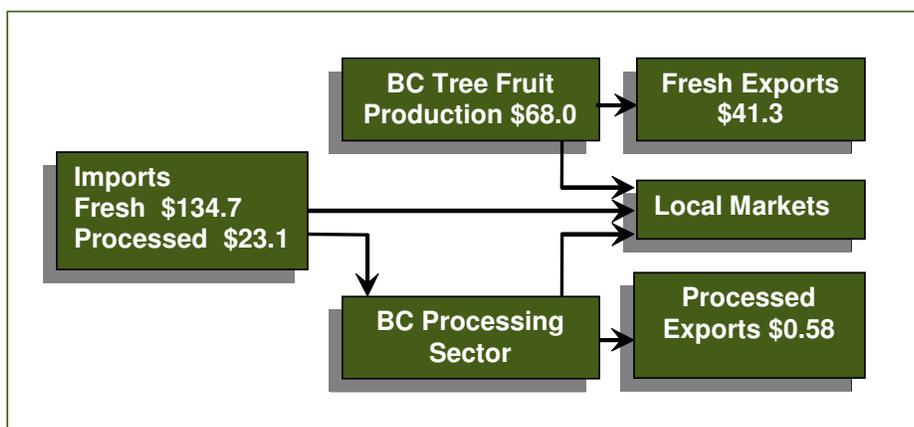
A. CHARACTERISTICS OF THE TREE FRUIT INDUSTRY

Key characteristics of the agriculture sector in BC include:

- In 2005, the BC tree fruit sector generated about \$68 million in farm gate receipts.

An overview of the size of the BC tree fruit industry is provided in the chart below.

OVERVIEW OF BC TREE FRUIT INDUSTRY IN 2005
(\$ MILLIONS)

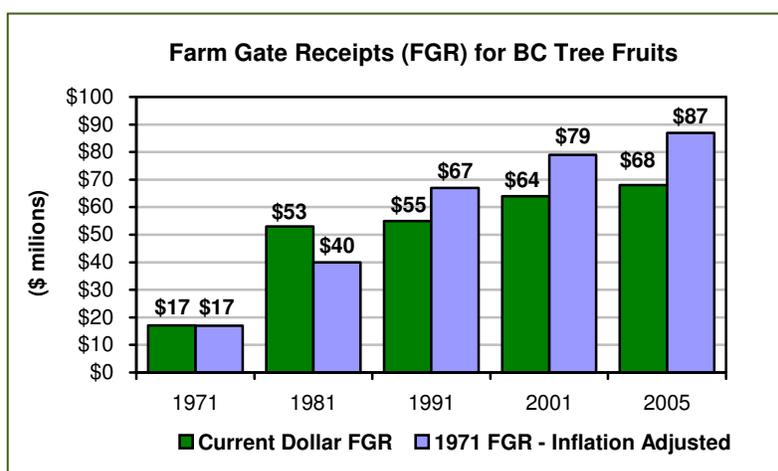


In 2005, apples ranked tenth amongst BC agricultural commodities in terms of revenue. If we group together the farm cash receipts of the various tree fruits, the combined sector would be ranked fifth in size (\$68 million) amongst the crop sectors behind floriculture (\$465 million), greenhouse vegetables (\$252 million) potatoes and vegetables (\$160 million), and berries and grapes (\$147 million). In 2004, tree fruits represented 8% of total crop revenues and 4% of all agriculture (crops and livestock) farm cash receipts. Sweet cherries were the seventh fastest growing farm commodity in BC between 1995 and 2004 with 120% growth in value behind only greenhouse tomatoes, greenhouse peppers, blueberries, beans, grapes and nursery products.

Data is not available on the size of manufacturing shipments. However, based on a review of various industry directories, we estimate that there are 40 to 50 BC companies involved in processing tree fruits including juices as well as frozen, canned, fresh cut and further processed products. According to the available data, we estimate that these companies employ about 2,500 people in BC. Using the industry average of just under \$200,000 in manufacturing shipments for every person employed, we estimate the value of manufacturing shipments of these companies to be about \$500 million. However, these totals would include many products manufactured by these companies which are not made using tree fruits. A more detailed profile of the processing sector is provided later in this chapter.

- The value of farm gate receipts in the tree fruit sector has risen by less than the rate of inflation over the past 34 years.

As noted below, the value of farm gate receipts increased from \$17 million in 1971 to \$68 million in 2005, equal to an average annual increase of 4.1%. However, when adjusted for inflation, the compound annual growth was actually -0.8%. As indicated in the chart below, after being adjusted for inflation, the \$17 million in farm gate receipts in 1971 is equal to about \$87 million in 2005 dollars. This indicates that farm gate receipts have actually declined in size by about 22% over the past 34 years.



- The industry is concentrated 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.

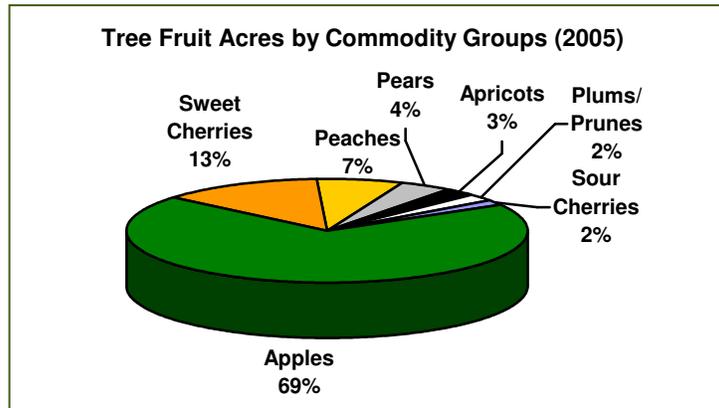
As indicated below, the Okanagan, Similkameen and Kootenay region accounted for about 99.5% of BC tree fruit production in 2004.

2005 SALES BY REGION ('000 LBS)

Tree Fruit	Vancouver Island	Okanagan Similkameen Kootenay	Fraser Valley	BC
Apples	720	258,470	420	259,610
Pears	17	11,672	0	11,689
Sweet Cherries	0	8,842	0	8,842
Sour Cherries	0	1,667	0	1,667
Peaches	18	6,982	0	7,000
Apricots	0	1,067	0	1,067
Nectarines	0	1,062	0	1,062
Prunes	0	1,203	0	1,203
Plums	35	123	0	158
Total	790	291,088	420	292,298

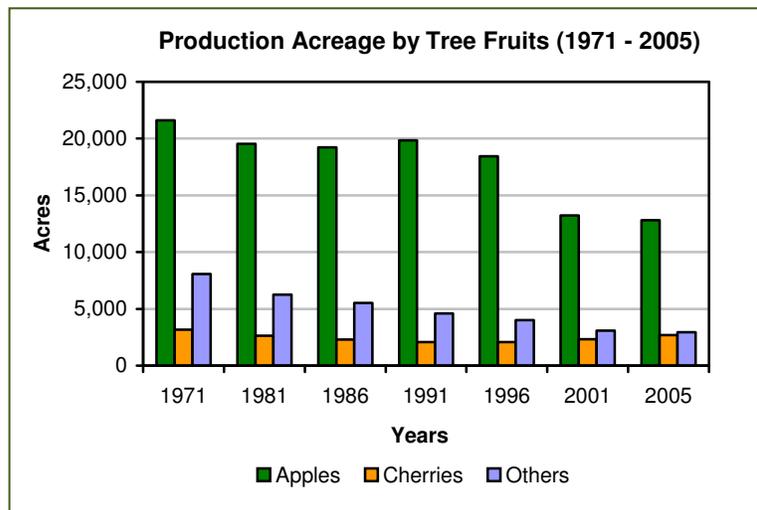
- The industry consists of about 1,800 growers who farm about 18,000 acres of apples, pears, cherries, peaches, apricots, nectarines, prunes and plums.

Apples account for the largest production acreage (69% in 2005) among tree fruits in BC. Sweet cherries are a distant second at 13% followed by peaches (7%).



Although apples are by far the largest tree fruit crop in BC, production acreage of apples fell from 21,613 acres in 1971 to approximately 12,800 acres in 2005 (a decrease of 41%). Some of the apple and pear acreage have been converted to other crops such as grapes, cherries and vegetables. Some orchards are being converted to (non-tree fruit) hobby farms.

The production acreage of all tree fruits declined considerably between 1971 and 2005 as noted below. Pears suffered the largest decline (80%) followed by prunes/plums (72%), and peaches (44%).



- **The tree fruit industry employs about 5,000 people on farm, over 1,000 in packinghouses, and about 1,000 more in support industries in addition to those involved in the food processing sector.**

Labour is required for pruning, planting, thinning and harvesting. Soft fruits are all harvested by hand and pickers need to be experienced. Wages are often paid hourly but in other cases on a piecework basis. Sources of farm labour include local residents, students, visitors from Quebec

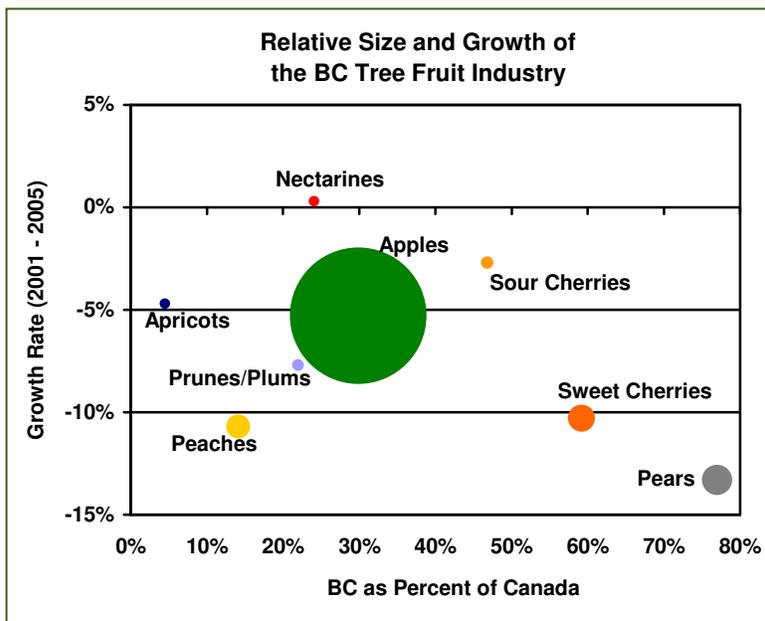
and other provinces, as well as the Indo Canadian community. In addition, there has been a steady increase in the number of foreign workers. In 2004, four Mexican workers were hired. This rose to 66 in 2005 and, as of July 2006, 274 workers have been approved for hire. It is likely that a program will be put in place with the Caribbean Commonwealth nations for next year. In 2004, it was estimated that the cooperative packinghouses employed 111 full-time employees and 680 seasonal workers with a payroll of over \$16 million annually.

B. PRODUCTION BY TYPE OF TREE FRUIT

The following chart highlights the size of each tree fruit crop in BC. For each group, the chart shows:

- The volume of production (shown by the size of the bubble);
- BC production volume as a percent of Canadian production volume (shown on the X-axis);
- The increase (or decrease) in production volume over the past four years (shown on the Y-axis).

As indicated, the volume of apples produced in BC is much higher than the volumes associated with other tree fruits. BC accounts for about 30% of apple production in Canada and, over the past five years, apple production in BC has declined by about 20% (an average of 4% per year). Each of the tree fruit commodities experienced negative growth in volume between 2001 and 2005, with the exception of nectarines which posted a slightly positive growth rate.



The table on the following page summarizes the characteristics of the leading commodities within the tree fruit sector in terms of the area, volume and value of production, and major markets. The following sections summarize the characteristics of the different commodity groups.

LEADING COMMODITY GROUPS WITHIN THE TREE FRUIT SECTOR 2005

Commodity Group	Growers	Acres Planted	Average Acres/Grower	Production (million lbs)	Farm Gate Receipts (\$ million)	Average Farm Gate Receipts/Acre	Exports (\$ million)	Major Markets
Apples	1,200	12,800	10.7	259.6	\$46.03	\$3,597	\$26.9 (fresh) \$0.4 (juice)	Local fresh wholesale market, direct sales, processing market, and exports to the US, Mexico, Taiwan, the UK, Indonesia, Costa Rica
Pears	200	750	3.8	11.6	\$2.32	\$3,100	\$0.2 (fresh)	Local wholesale market plus farm and roadside sales and processed markets
Sweet Cherries	1,051	2,400	2.3	8.8	\$15.64	\$6,518	\$13.7 (fresh)	Local market plus exports to the UK, Belgium, Germany, Taiwan, Netherlands, and the US
Sour Cherries	86	300	3.5	1.6	\$0.40	\$1,340		
Peaches	333	1,300	3.9	7.0	\$2.16	\$1,665	-	Local wholesale market plus farm and roadside sales and processed markets
Apricots	180	500	2.8	1.0	\$0.46	\$926	-	Farm and roadside sales plus local wholesale market
Nectarines	-	-	-	1.0	\$0.48	-	-	Local wholesale market plus farm and roadside sales
Prunes/Plums	360	400	1.1	1.3	\$0.45	\$1,133	-	Local wholesale market plus farm and roadside sales
Total	N/A	17,665	-	292.2	\$67.97	-	-	-

Source: BC Ministry of Agriculture and Lands

1. Apples

Approximately 1,200 apple growers in BC produced about 260 million pounds of apples worth \$46 million in 2005. Lower prices and production volumes resulted in lower returns than in 2003 and 2002 although returns were better than in 2004.

The percent of production sold directly (farm and roadside apple sales) has increased steadily since 1996 as farmers seek to take advantage of the higher prices associated with direct sales. The percentage sold fresh wholesale has decreased slightly while the percentage of processed apples sales has remained relatively steady at around 20% of production. Processed sales represent culls and generate negative returns for growers.

Apple Production by Type of Sale, BC (1994 - 2005)											
Year	FRESH SALES						PROCESSED SALES			TOTAL SALES	
	Fresh Wholesale			Farm and Roadside Sales			Quantity '000 lb	Price \$/lb	Value \$' 000	Quantity '000 lb	Value \$' 000
	Quantity '000 lb	Price \$/lb	Value \$' 000	Quantity '000 lb	Price \$/lb	Value \$' 000					
2005	195,069	0.23	44,044	9,684	0.43	4,189	54,857	-0.04	-2,194	259,610	46,038
2004	201,436	0.14	27,760	8,209	0.54	4,423	60,554	-0.05	-3,028	270,199	29,156
2003	235,797	0.28	65,821	4,720	0.48	2,265	43,965	-0.05	-2,197	264,606	60,282
2002	246,256	0.29	71,034	6,093	0.50	3,029	47,497	-0.04	-1,832	299,846	72,231
2001	280,430	0.24	66,786	3,860	0.74	2,849	38,416	-0.05	-1,747	322,706	67,887
2000	239,138	0.15	37,037	1,147	0.98	1,128	79,990	-0.05	-4,000	320,275	34,165
1999	239,036	0.20	47,794	1,225	0.60	731	52,383	0.00	-210	292,644	48,316
1998	347,396	0.12	41,683	1,725	0.70	1,201	77,722	-0.05	-3,831	426,843	39,053
1997	178,623	0.19	34,643	1,150	0.56	646	83,795	-0.04	-3,352	263,568	31,936
1996	253,176	0.19	47,153	850	0.70	595	78,959	0.02	1,737	332,985	49,485
1995	301,808	0.23	70,332	0	0.00	0	48,340	0.10	4,670	350,148	75,001
1994	320,402	0.17	54,276	2,870	0.41	1,191	94,670	-0.04	-4,099	417,942	51,367

Source: BC Ministry of Agriculture and Lands

Production has not fallen at the same rate of the production acreage as the shift to new high density plantings has helped to increase productivity. Average production per acre increased from 13,859 pounds per acre in 1971 to 14,772 in 1981, 18,055 in 1991, and 24,398 in 2001.

In 2005, the most common apple variety grown in BC was Gala (accounting for over one-quarter of production) followed by McIntosh, Red Delicious and Spartan. Average prices are a function of the fresh market for the variety and the percentage of production which can be sold fresh. On a per pound basis, average prices were highest for Ambrosia apples (by a wide margin) followed by Braeburn, Granny Smith and Gala. Of the leading varieties, prices were lowest for Red Delicious and Golden Delicious.

Apple Production by Variety, BC (2005 - Preliminary Estimates)						
Variety	Quantity*	Quantity*	Value*	Average Price*	Fresh*	Processed*
	'000 lb	Percentage	\$' 000	\$/lb	Percentage	Percentage
Gala	66,891	25.5%	\$13,850	\$0.20	86%	14%
McIntosh	49,426	18.9%	\$6,473	\$0.13	63%	37%
Red Delicious	47,295	18.1%	\$4,118	\$0.09	83%	17%
Spartan	39,249	15.0%	\$7,710	\$0.22	85%	15%
Golden Delicious	18,358	7.0%	\$2,088	\$0.12	75%	25%
Other Apples	15,320	5.8%	\$270	\$0.03	25%	75%
Fuji	12,406	4.7%	\$2,017	\$0.19	79%	21%

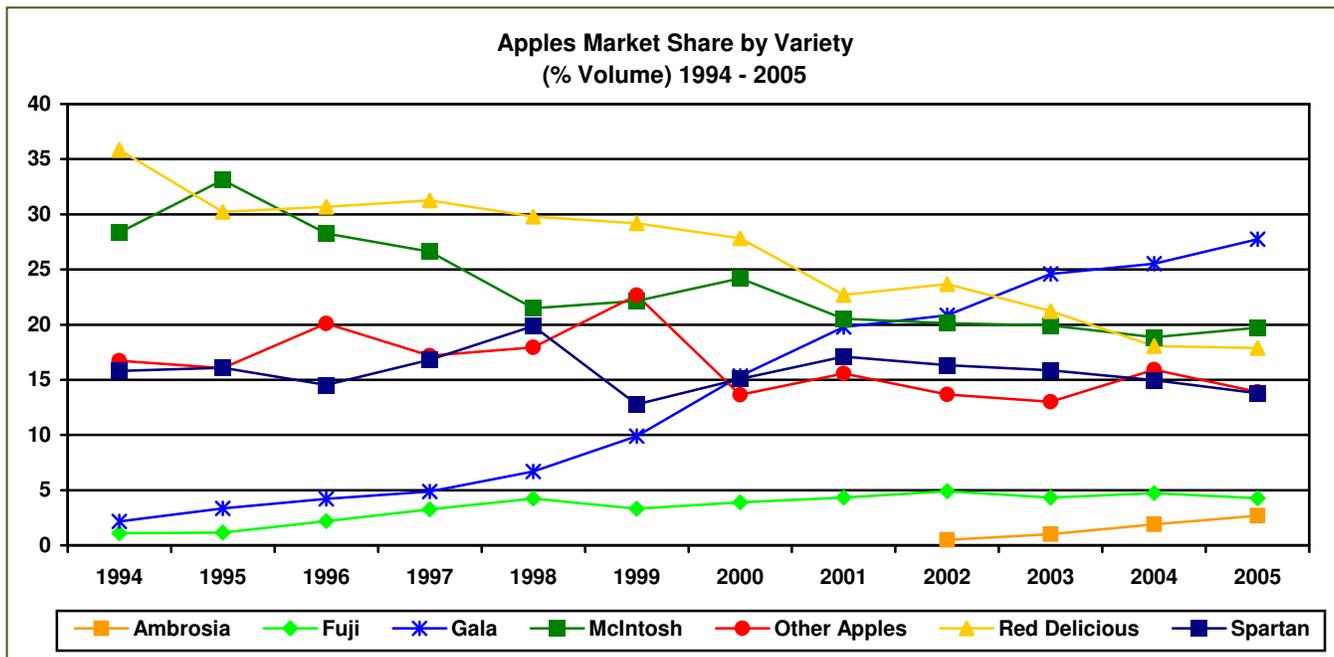
Apple Production by Variety, BC (2005 - Preliminary Estimates)						
Variety	Quantity*	Quantity*	Value*	Average Price*	Fresh*	Processed*
	'000 lb	Percentage	\$' 000	\$/lb	Percentage	Percentage
Ambrosia	4,988	1.9%	\$3,765	\$0.56	100%	**
Granny Smith	2,952	1.1%	\$701	\$0.21	85%	15%
Jonagold	2,278	0.9%	\$240	\$0.14	100%	**
Braeburn	2,022	0.8%	\$446	\$0.24	100%	**
Summer Apples	805	0.3%	\$171	\$0.17	100%	**
Total	261,990	100.0%	\$45,267	\$0.18	79%	21%

* Quantity, value, average price, and fresh and processed percentage by variety do not include farm and roadside sales

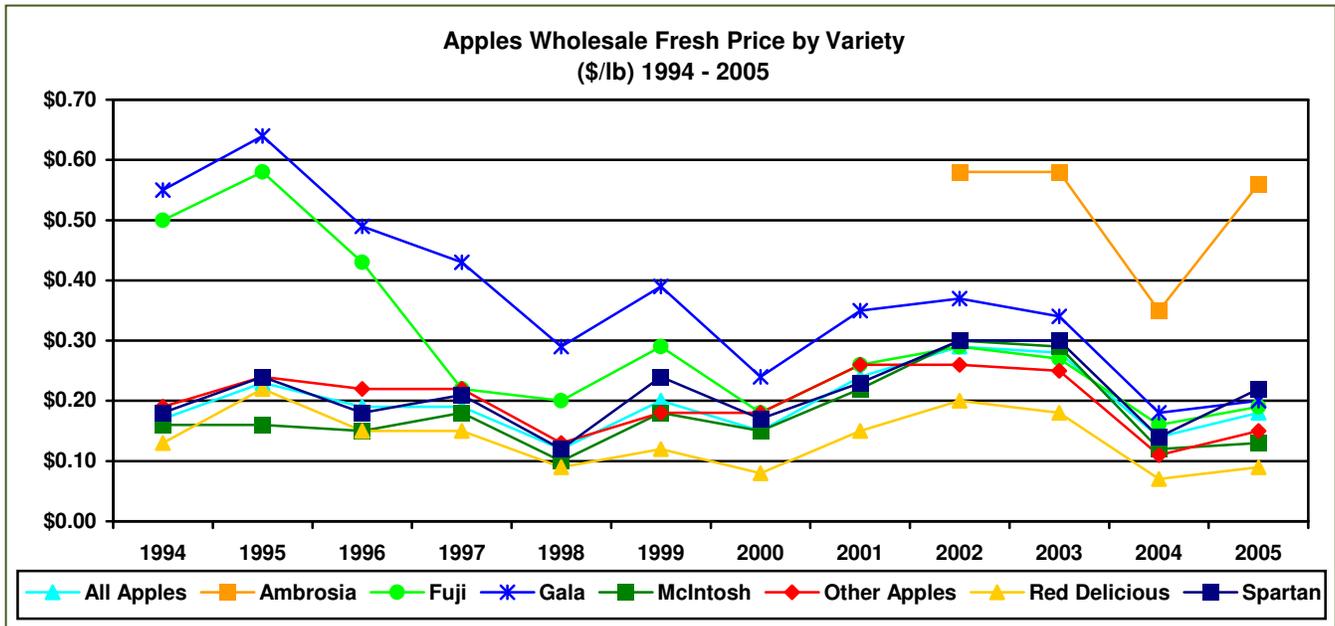
** Processed quantity is included in "Other Apples"

Source: BC Ministry of Agriculture and Lands

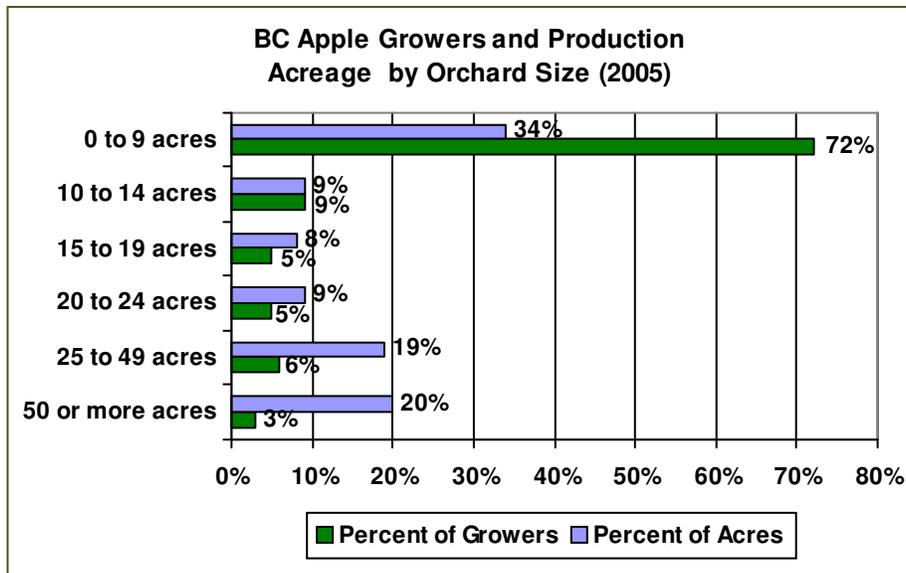
Over the years, the share of total BC production held by the varieties has changed significantly. As illustrated below, over the past twelve years, the production share held by Red Delicious has decreased from over 35% to about 18% while the share held by McIntosh has decreased from about 33% in 1995 to about 20% in 2005. On the other hand, the share held by Gala has increased from under 3% in 1994 to 28% in 2005. The market share for Fuji increased but reached a plateau at about 5% of production. The BC climate is not particularly well suited for varieties such as Fuji and Braeburn.



A review of price data indicates that differences in wholesale fresh prices were a major contributor to the shift in production. In the mid-1990s, there was a substantial price premium for Gala and Fuji apples (reaching 30 to 40 cents per pound in 1995). However, the price premium has narrowed over the years as the availability of these varieties has increased. The price data indicates that the prices of all apple varieties (with the exception of Ambrosia, which is in an early stage of market development) tend to move in concert with each other (i.e. the same annual patterns) with Gala and Fuji continuing to earn a small price premium.



To assess the relative degree of concentration in the industry, we have combined available data on the number of apple growers and production acreage with the results of a 2005 Synovate survey of growers. Based on the results, we have developed rough estimates of the relative distribution of production acreage. As indicated below, we estimate that 72% of the growers have 9 or fewer acres in apples and that these growers account for about 34% of the industry production acreage. In contrast, 3% of growers have 50 or more acres in production and these growers account for about 20% of the industry production acreage. This analysis suggests that the top 15% of growers (about 180 growers) account for about one-half of the industry production acreage and perhaps an even higher percentage of the volume of production (to the extent that the average productivity of their operations may be higher than that for the industry overall).



2. Pears

Around 200 pear growers in BC produced 12 million pounds of pears worth \$2.3 million in 2005. Both prices and production volumes were lower than in previous years. BC’s pear production of 12 million pounds represents about 50% of the Canadian crop of Bartlett pears and all of the commercial production of Anjou pears.¹ The key pear varieties grown in BC are Bartlett and Anjou, with minor production of Bosc and others.

For both pears and apples the major competitor is Washington State, which has a somewhat similar climate and growing season but produces 15 to 20 times more apples and pears annually than BC. BC pear volumes and sales have decreased significantly from 23 million pounds valued at \$3.4 million in 2000 to less than 12 million pounds (preliminary estimate) valued at \$2.3 million in 2004. Pears have not seen large scale replanting, in part, because it takes a relatively long time for new pear plantings to come into production. Some of the traditional (non-ALR) pear growing areas in the East Kelowna area have been developed for housing.

Pear Production by Type of Sale, BC (1994 - 2005)											
Year	FRESH SALES						PROCESSED SALES			TOTAL SALES	
	Fresh Wholesale			Farm and Roadside Sales			Quantity '000 lb	Price \$/lb	Value \$' 000	Quantity '000 lb	Value \$' 000
	Quantity '000 lb	Price \$/lb	Value \$' 000	Quantity '000 lb	Price \$/lb	Value \$' 000					
2005	9,042	0.23	2,114	697	0.50	347	1,950	-0.07	-137	11,689	2,325
2004	10,915	0.20	2,152	1,146	0.56	637	1,292	-0.07	-90	13,153	2,699
2003	12,251	0.23	2,828	1,250	0.55	688	1,950	-0.07	-137	15,451	3,379
2002	14,160	0.27	3,787	1,415	0.55	783	2,129	-0.07	-146	17,704	4,424
2001	18,456	0.22	4,127	14	0.86	12	2,207	-0.07	-157	20,677	3,982
2000	21,947	0.16	3,460	15	1.20	18	1,340	-0.07	-91	23,302	3,387
1999	21,332	0.25	5,264	14	0.57	8	3,600	-0.05	-180	24,946	5,092
1998	20,929	0.22	4,586	16	0.93	15	0	0.00	0	20,945	4,601
1997	17,763	0.14	2,487	14	0.57	8	0	0.00	0	17,777	2,495
1996	12,368	0.29	3,634	14	0.70	10	0	0.00	0	12,382	3,644
1995	16,736	0.21	3,477	0	0.00	0	95	-0.04	-4	16,831	3,473
1994	11,660	0.24	2,773	28	0.65	18	1,732	-0.08	-144	13,420	2,647

Source: BC Ministry of Agriculture and Lands

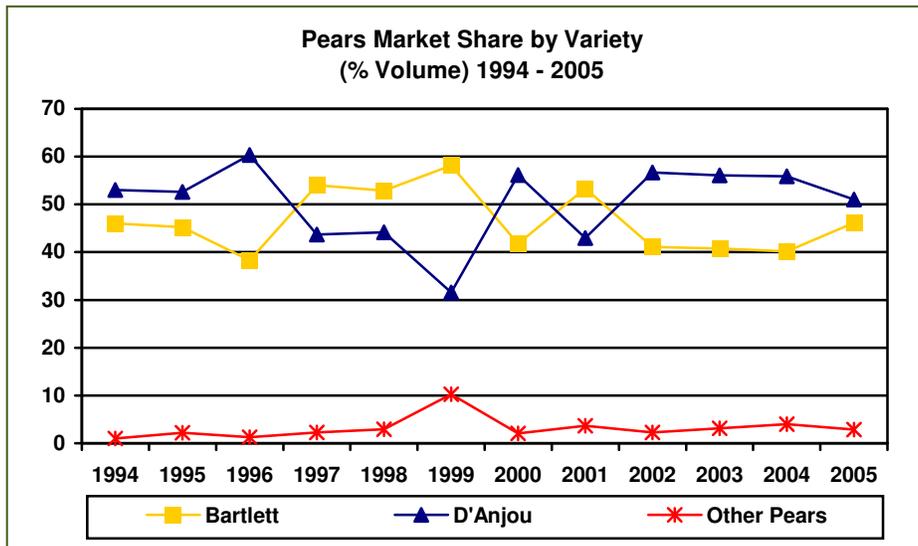
Farm and roadside sales of pears have increased sharply after 2001 as farm and roadside prices consistently command higher premiums relative to fresh wholesale prices.

Pear Production by Variety, BC (2005 - Preliminary Estimates)						
Variety	Quantity*	Quantity*	Value*	Average Price*	Fresh*	Processed*
	'000 lb	Percentage	\$' 000	\$/lb	Percentage	Percentage
D'Anjou	5,606	51%	\$877	\$0.16	82%	18%
Bartlett	5,072	46%	\$1,024	\$0.20	81%	19%
Other Pears	314	3%	\$75	\$0.24	100%	0%

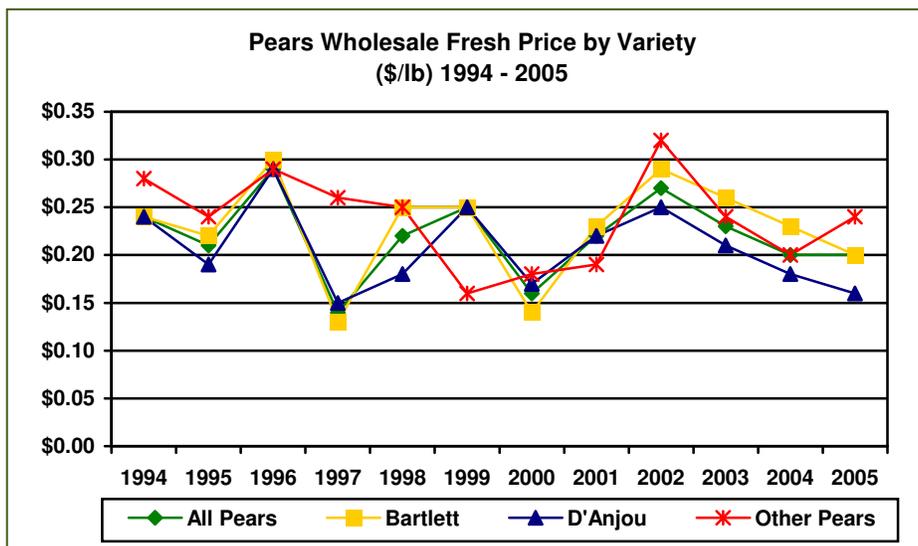
* Quantity, value, average price, and fresh and processed percentage by variety do not include farm and roadside sales
 Source: BC Ministry of Agriculture and Lands

The volumes and prices of fresh wholesale and processed sales have remained relatively steady over the years. In recent years, D'Anjou has accounted for a small majority of production.

¹ Canadian Apple. Agriculture and Agri-Food Canada Statistics Online. Available at: <http://atn-riae.agr.ca/applecanada/statistics-e.htm>



The varieties of pears follow similar year-to-year trends in terms of prices with Bartlett and other pears commanding a small average premium in recent years.



3. Cherries

The 2001 census reported 1,051 farms with a total of 2,332 acres in sweet cherries and 86 farms with a total of 277 acres in sour cherries. Most, if not all, of the farms with sour cherries also grow sweet cherries. The largest 40 to 50 producers likely accounts for more than 80% of the cherry tonnage. Most operations are less than 10 acres in size; a few are 25 acres or more.

BC produces more than 60% of the sweet cherries grown in Canada. The growth in the industry has been significant over the past ten years and is driven, in part, by the removal of apple acreage and replanting of late season varieties which produce large, rain split resistant cherries. The majority of sour cherries in

Canada are produced in Ontario. Sour cherries are overproduced in the US (Michigan is the largest producer) and are normally subject to marketing orders and low prices. This limits any opportunity or reason for expansion.

The cherry industry is located in the fruit growing areas of the Okanagan, Similkameen, and Creston valleys. The BC cherry industry has been very profitable in recent years for early adopters who replanted late season varieties. Sales of cherries totaled about \$20 million in 2005, including \$15.6 million for sweet cherries and about \$400,000 for sour cherries.

Cherries can be consumed in many forms including fresh, frozen, canned, juice, wine, brined, and dried. In addition, maraschino cherries are made from sweet cherries. From 70% to 90% of the BC sweet cherry crop is typically sold fresh. Those that cannot be effectively marketed during the harvest season or those that do not meet fresh-grade standards are processed.

Sweet Cherry Production by Type of Sale, BC (1998 - 2005)											
Year	FRESH SALES						PROCESSED SALES			TOTAL SALES	
	Fresh Wholesale			Farm and Roadside Sales			Quantity '000 lb	Price \$/lb	Value \$' 000	Quantity '000 lb	Value \$' 000
	Quantity '000 lb	Price \$/lb	Value \$' 000	Quantity '000 lb	Price \$/lb	Value \$' 000					
2005	7,620	1.95	14,859	920	0.90	828	302	-0.15	-45	8,842	15,642
2004	11,863	0.89	10,558	3,220	1.10	3,544	1,378	0.00	0	16,463	14,102
2003	10,965	1.10	12,061	2,640	1.25	3,300	970	0.00	0	14,575	15,361
2002	6,266	1.46	9,148	1,800	1.50	2,700	555	0.00	0	8,621	11,848
2001	13,056	1.17	15,275	0	0.00	0	629	-0.09	-54	13,685	15,221
2000	5,019	1.07	5,370	0	0.00	0	0	0.00	0	5,019	5,370
1999	5,435	1.33	7,229	0	0.00	0	0	0.00	0	5,435	7,229
1998	10,014	0.51	5,057	0	0.00	0	0	0.00	0	10,014	5,057

Source: BC Ministry of Agriculture and Lands

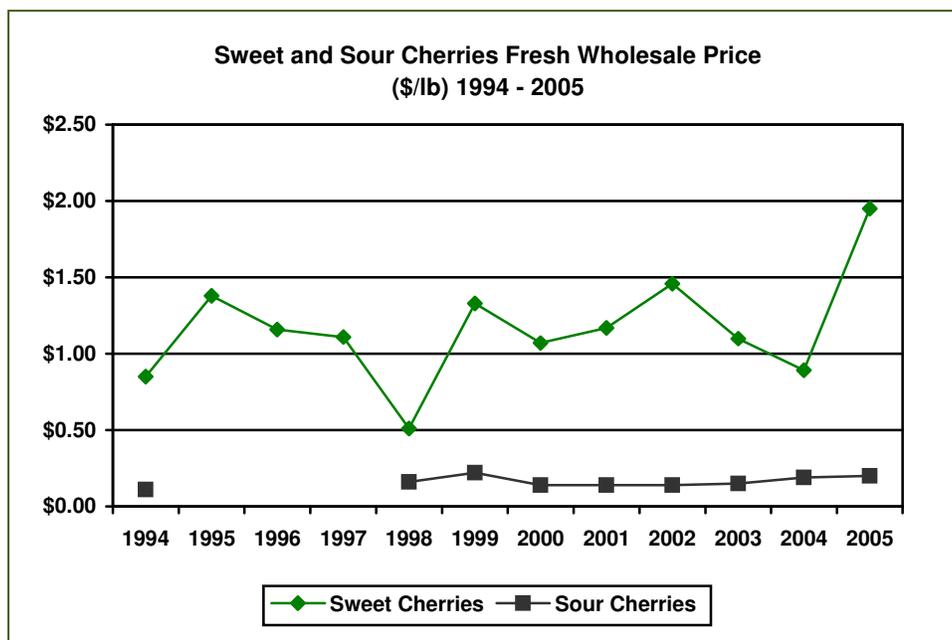
Most of the sour cherry production goes to the processing market. Cherry product processing is very limited in BC with much of the sour cherry crop exported to the Washington State for processing. The processed products are primarily used in baking and cooking.

Sour Cherry Production by Type of Sale, BC (1998 - 2005)											
Year	FRESH SALES						PROCESSED SALES			TOTAL SALES	
	Fresh Wholesale			Farm and Roadside Sales			Quantity '000 lb	Price \$/lb	Value \$' 000	Quantity '000 lb	Value \$' 000
	Quantity '000 lb	Price \$/lb	Value \$' 000	Quantity '000 lb	Price \$/lb	Value \$' 000					
2005	0	0	0	92	0.95	87	1,575	0.20	315	1,667	402
2004	0	0	0	110	0.95	105	2,000	0.19	380	2,110	485
2003	0	0	0	100	1.00	100	2,500	0.15	375	2,600	475
2002	0	0	0	0	0.00	0	1,860	0.14	260	1,930	330
2001	0	0	0	0	0.00	0	1,860	0.14	255	1,860	255
2000	0	0	0	0	0.00	0	1,860	0.14	255	1,860	255
1999	0	0	0	0	0.00	0	1,400	0.22	308	1,400	308
1998	0	0	0	0	0.00	0	1,600	0.16	256	1,600	256

Source: BC Ministry of Agriculture and Lands

BC sweet cherries are predominantly late season varieties and thus command a price premium in the international fresh cherries market. Over the past twelve years, the average prices for sweet cherries

have ranged from about \$0.51 per pound to \$1.95 per pound.



Prices of sour cherries have remained low but relatively steady over the years.

4. Peaches

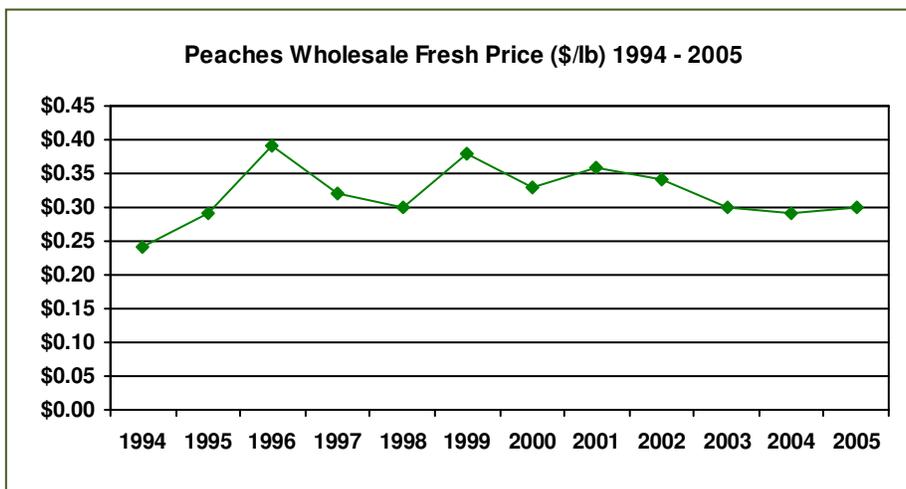
There are approximately 330 peach growers in BC. In 2005, an estimated 7 million pounds of peaches were produced from approximately 1,300 acres in production. Peaches are grown in the southern areas of the Okanagan, Similkameen, and Creston valleys. BC produces about 20% of the Canadian production. The major varieties grown in BC are Red Haven, Early Red Haven, Glohaven and Cresthaven. Peaches are the main soft fruit crop grown in BC due largely to demand and the ease of handling. However, peach trees are susceptible to winter damage.

The fresh wholesale market has absorbed about 70% of the production in recent years. However, farm and roadside sales of peaches have increased sharply over the past few years as a result of the higher prices that can be generated through direct sales.

Peach Production by Type of Sale, BC (1998 - 2005)											
Year	FRESH SALES						PROCESSED SALES			TOTAL SALES	
	Fresh Wholesale			Farm and Roadside Sales							
	Quantity '000 lb	Price \$/lb	Value \$' 000	Quantity '000 lb	Price \$/lb	Value \$' 000	Quantity '000 lb	Price \$/lb	Value \$' 000	Quantity '000 lb	Value \$' 000
2005	5,128	0.30	1,538	1,344	0.51	679	528	-0.10	-53	7,000	2,165
2004	7,384	0.29	2,124	3,385	0.56	1,879	530	-0.10	-53	11,299	3,968
2003	7,863	0.30	2,354	3,075	0.71	2,168	330	-0.04	-12	11,268	4,510
2002	6,553	0.34	2,228	2,530	0.70	1,783	101	-0.10	-10	9,184	4,001
2001	10,705	0.36	3,850	33	1.12	37	282	-0.08	-23	11,020	3,864
2000	6,354	0.33	2,071	32	1.25	40	0	0.00	0	6,381	2,111
1999	9,909	0.38	3,765	33	0.91	30	0	0.00	0	9,942	3,795
1998	12,202	0.30	3,661	42	1.05	44	0	0.00	0	12,244	3,705

Source: BC Ministry of Agriculture and Lands

The chart below illustrates the fresh wholesale prices of peaches between 1994 and 2005. Prices have remained relatively steady over the past three years.



5. Apricots

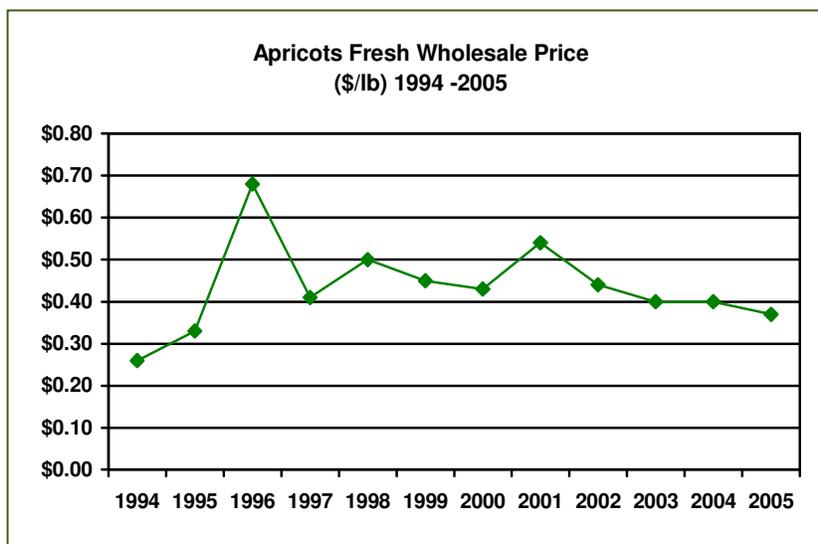
Apricots are produced primarily in the south end of the Okanagan Valley and the Similkameen Valley in the Cawston-Keremeos areas. The major varieties in BC are Goldbar, Goldstrike and Rival. Apricots are a short season, specialty crop that needs to be grown, harvested and marketed with special care. Relatively few acres of apricots have been replanted compared to other commodities. There are an estimated 180 apricot growers producing on approximately 400 acres.

In 2005, there were about one million pounds of apricots grown in BC with a farm gate value of \$0.46 million. The relative share of fresh wholesale, farm and roadside, and processed sales of apricots has varied from year to year. Farm and roadside sales have exceeded fresh wholesale sales for the last two years.

Apricot Production by Type of Sale, BC (1998 - 2005)											
Year	FRESH SALES						PROCESSED SALES			TOTAL SALES	
	Fresh Wholesale			Farm and Roadside Sales			Quantity '000 lb	Price \$/lb	Value \$' 000	Quantity '000 lb	Value \$' 000
	Quantity '000 lb	Price \$/lb	Value \$' 000	Quantity '000 lb	Price \$/lb	Value \$' 000					
2005	395	0.37	146	640	0.50	320	32	-0.09	-3	1,067	463
2004	996	0.40	398	1,048	0.60	629	274	-0.09	-25	2,318	1,003
2003	1,236	0.40	494	688	1.25	860	66	-0.09	-6	990	1,348
2002	687	0.44	302	450	0.90	405	120	-0.05	-6	1,257	701
2001	1,170	0.54	632	0	0.00	0	126	-0.05	-6	1,296	626
2000	1,376	0.43	597	0	0.00	0	0	0.00	0	1,376	597
1999	1,250	0.45	563	0	0.00	0	0	0.00	0	1,250	563
1998	1,482	0.50	741	0	0.00	0	0	0.00	0	1,482	741

Source: BC Ministry of Agriculture and Lands

The fresh wholesale price of apricots has been on a declining trend since 2001.



6. Nectarines

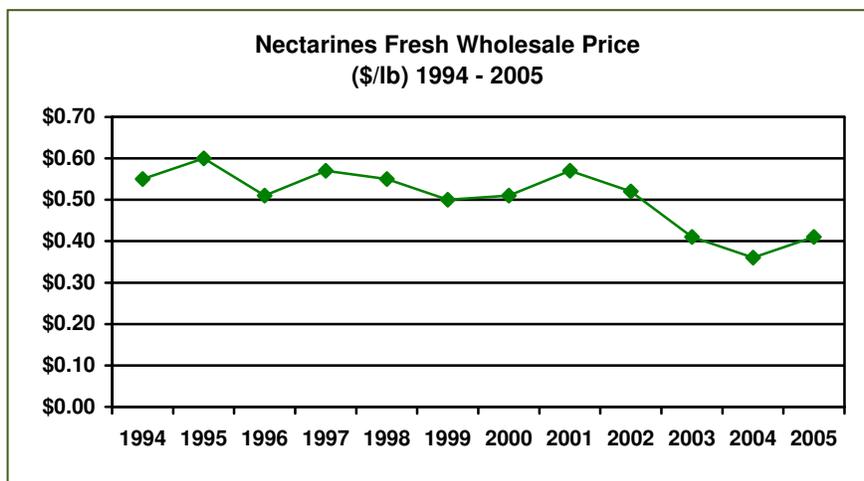
There are 200 acres of nectarines in BC. In 2005, there were about one million pounds of nectarines grown in BC with a farm gate value of \$0.48 million. Nectarines are produced primarily in the South Okanagan/Similkameen regions. The main BC varieties are Red Gold, Independence and Fire Brite. Fire Brite and Independence are early full red fruit but smaller in size than the more common Red Gold.

Nectarines are generally harvested in July and August and sold to truckers, fruit stands and the wholesale market. While the majority of production still goes into the wholesale fresh market, the percentage of production sold direct through farm and roadside sales continues to increase.

Nectarine Production by Type of Sale, BC (1998 - 2005)											
Year	FRESH SALES						PROCESSED SALES			TOTAL SALES	
	Fresh Wholesale			Farm and Roadside Sales			Quantity '000 lb	Price \$/lb	Value \$' 000	Quantity '000 lb	Value \$' 000
	Quantity '000 lb	Price \$/lb	Value \$' 000	Quantity '000 lb	Price \$/lb	Value \$' 000					
2005	601	0.41	246	410	0.60	246	51	-0.10	-5	1,062	487
2004	843	0.36	303	360	0.60	216	82	-0.10	-8	1,285	511
2003	843	0.41	345	336	0.70	235	36	-0.06	-2	1,215	578
2002	527	0.52	274	210	0.70	147	11	-0.07	-1	748	420
2001	963	0.57	547	52	0.81	42	36	-0.10	-3	1,051	586
2000	536	0.51	237	0	0.00	0	0	0.00	0	536	237
1999	1,054	0.50	527	0	0.00	0	0	0.00	0	1,054	527
1998	1,531	0.55	842	0	0.00	0	0	0.00	0	1,531	842

Source: BC Ministry of Agriculture and Lands

Washington State and California are BC's main competitors. The chart below illustrates the fresh wholesale prices of nectarines between 1994 and 2005. Prices declined through the \$0.50 per pound level in 2003 and have not recovered since.



7. Prunes/Plums

In 2005, there were 1.2 million pounds of prunes and 158,000 pounds of plums grown with a farm gate value of \$0.45 million. There are approximately 360 acres dedicated to prune and plum production in BC on 97 farms. BC accounts for about one-half of Canadian prune and plum production.

The demand for prunes, which comes primarily from consumers of European origin, may be declining. Older plantings have been removed and have been replaced under the orchard renovation replant program. Prune plantings are stable and current plantings are considered adequate. Fresh wholesale sales account for the bulk of prune sales as indicated below.

Prune Production by Type of Sale, BC (1998 - 2005)											
Year	FRESH SALES						PROCESSED SALES			TOTAL SALES	
	Fresh Wholesale			Farm and Roadside Sales			Quantity '000 lb	Price \$/lb	Value \$' 000	Quantity '000 lb	Value \$' 000
	Quantity '000 lb	Price \$/lb	Value \$' 000	Quantity '000 lb	Price \$/lb	Value \$' 000					
2005	1,028	0.29	298	120	0.55	66	55	-0.08	-4.0	1,203	360
2004	1,503	0.40	601	660	0.72	475	10	-0.05	-1.0	2,173	1,073
2003	1,356	0.40	542	760	1.10	836	60	-0.05	-3.0	2,176	1,375
2002	1,085	0.40	434	550	1.20	660	48	-0.05	-3.0	1,683	1,091
2001	1,776	0.38	675	0	0.00	0	61	-0.05	-2.8	1,837	672
2000	1,749	0.30	522	2	0.85	2	0	0.00	0.0	1,743	524
1999	662	0.24	159	4	0.75	3	0	0.00	0.0	666	162
1998	846	0.34	288	4	0.95	4	0	0.00	0.0	850	291

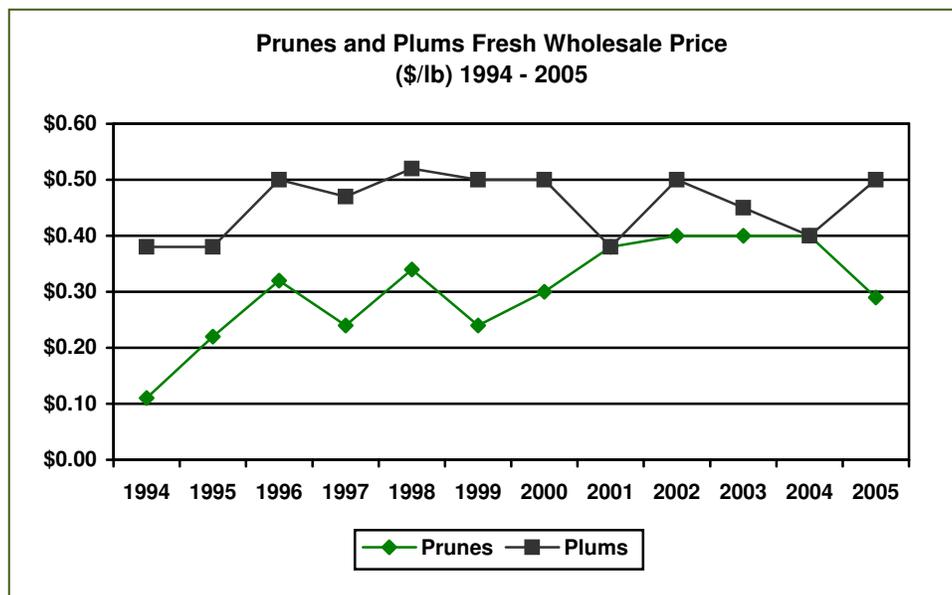
Source: BC Ministry of Agriculture and Lands

Both European and Japanese varieties of plums are grown in BC. Italian varieties are harvested during August and September and sold to the fresh market only. Japanese varieties such as Black Amber and Friar are large black plums and are also sold to fresh markets. Farm and roadside sales have been greater than or roughly equal to fresh wholesale sales for the last four years reversing the trend of previous years. There is no processing market for plums.

Plum Production by Type of Sale, BC (1998 - 2005)											
Year	FRESH SALES						PROCESSED SALES			TOTAL SALES	
	Fresh Wholesale			Farm and Roadside Sales			Quantity '000 lb	Price \$/lb	Value \$' 000	Quantity '000 lb	Value \$' 000
	Quantity '000 lb	Price \$/lb	Value \$' 000	Quantity '000 lb	Price \$/lb	Value \$' 000					
2005	75	0.50	38	83	0.66	55	0	0.00	0	158	93
2004	49	0.40	20	135	0.62	84	0	0.00	0	184	104
2003	49	0.45	22	45	0.80	36	0	0.00	0	94	58
2002	25	0.50	13	40	0.75	30	0	0.00	0	65	43
2001	34	0.38	13	4	0.75	3	0	0.00	0	38	16
2000	28	0.50	14	44	0.75	33	0	0.00	0	72	47
1999	163	0.50	82	52	0.85	44	0	0.00	0	215	126
1998	326	0.52	170	52	0.95	49	0	0.00	0	378	219

Source: BC Ministry of Agriculture and Lands

The chart below illustrates variations in the prices of prunes and plums between 1994 and 2005.



C. OVERVIEW OF THE KEY PLAYERS

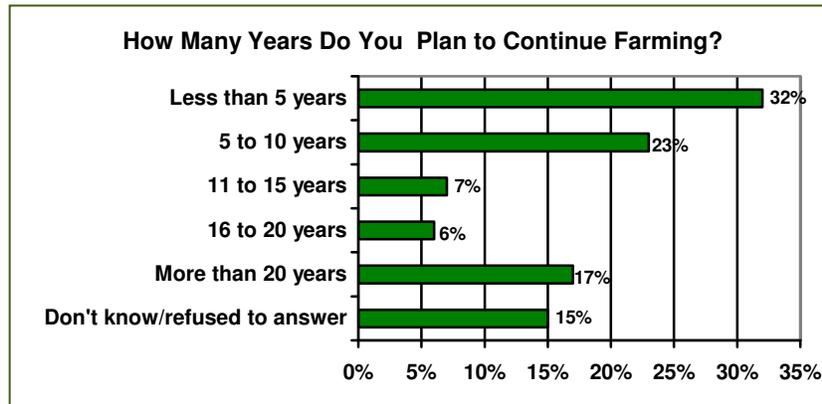
The tree fruits industry includes growers, packinghouses, sales agencies, processors and a support infrastructure which includes associations, councils and research facilities. A profile of these stakeholders is provided below.

1. Growers

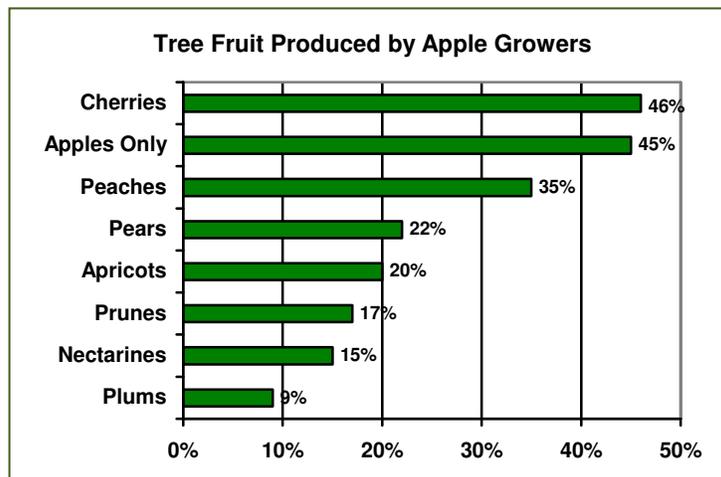
Some of the major findings of a recent industry survey, conducted by Synovate in 2005, include:

- The financial health of the industry has weakened in recent years. Over 80% of growers reported that their 2004 apple crop revenues decreased compared to 2003 with an average decline of nearly 50%. Larger growers were especially likely to have experienced sizeable decreases in revenue. In response to the declines, tree fruit growers are increasingly using other sources of funding to operate their farms.

- Production acreage is likely to continue to decline. Three-in-ten growers plan to leave the industry within the next 5 years while a further 23% plan to leave in 5 to 10 years.



- There is strong overlap in production, with most growers producing a range of tree fruits. Of the apple growers surveyed, 45% grow apples only while 46% also grow cherries, 35% also grow peaches, and 22% also grow pears.



2. Packing Houses

The sector has a relatively well-organized packing and marketing system in place. Four major packinghouses pack about 75% of the apples production and a much smaller percentage of the soft fruit crop. Three of the four packers participate in a consortium called the *Okanagan Tree Fruit Company Ltd.*, including BC Fruit Packers Cooperative, Okanagan North Growers Cooperative and SunFresh Cooperative Growers.

- *The BC Fruit Packers Cooperative*, operating since 1904, has approximately 500 growers in the Kelowna, Summerland and Penticton areas. BC Fruit Packers Cooperative is itself an amalgamation of cooperatives. The most recent amalgamation took place in the early 1980s. The cooperative handles approximately 120 million pounds or 150,000 bins of apples and approximately 12 million pounds of pears annually.

- *The Okanagan North Cooperative* has approximately 150 growers in the Vernon and Lake Country areas, the northern most apple growing region in North America. The cooperative is grower owned and ships over 63 million pounds of apples each year.
- *Sun-Fresh Cooperative* was founded in 1998, uniting Naramata Cooperative Growers Exchange and the Monashee Cooperative Growers Association. The cooperative has 200 growers in the Oliver, Osoyoos, Similkameen and Naramata areas and handles 50 to 55 million pounds of fruit annually from two plants. Fruit varieties include cherries, apricots, peaches, nectarines, prunes, pears and numerous varieties of apples.

The fourth major packer is *Okanagan Similkameen Cooperative Growers Association*, which has 150 growers in the Oliver, Osoyoos, Similkameen and Kaleden areas. The cooperative fruit volume consists of 90% apples and 10% soft fruit and averages 20,000 to 25,000 tonnes per year. In addition, *Direct Organics Plus* is an organic grower cooperative in the Similkameen Valley. *Direct Organics Plus* represents 150 acres of farmland in organic production, and owns and operates a packing facility and warehouse.

In addition to these cooperatives, there are 13 independent packers (Blacksage Orchards, Cawston Cold Storage, Dawson Farms, Desert Fruits, Desert Produce, Fairview Orchards, Fernandes Farms, Gemini Orchards, Gold Star Fruit Company, Grant Thellin, J. Ferreira, Oliver Fruit House, Southern Fruit Packers, and Westbank Packers).

The major packinghouses have field services available to growers to assist with spray, nutrition, replanting and other general horticultural advice. The Okanagan Similkameen Coop (OSC) has been the only cooperative packinghouse actively packing cherries in the past few years. It packs early and mid season varieties as well as a minor portion of the late season varieties. The independent packinghouses pack the majority of the late season export-bound cherries. Some independents are orchardists packing their own crops, some pack for others in addition to themselves, and some independent houses pack for groups of orchardists. The larger packinghouses have modern sorting and grading facilities as well as conventional and control atmosphere storage. Westbank is the only independent packinghouse with controlled atmosphere storage.

3. Sales Agencies

In BC, there are two major market suppliers, BC Tree Fruits Ltd. (BCTF) and ProFresh Marketing:

- *BC Tree Fruits Ltd.* sells 75% of the apples and 30% of the soft fruits produced in the BC tree fruit industry. BC Tree Fruits is the largest marketer of Gala apples in the Pacific Northwest although it is a smaller supplier than the major companies in Washington State for most other varieties. The remaining 25% of apples and 70% of soft fruits are marketed through the independent packinghouses, independent sales agents, and farm direct sales. BC Tree Fruits is owned by BC Fruit Packers Cooperative, Okanagan North Cooperative, Sun-Fresh Cooperative Growers, and Okanagan Similkameen Cooperative Growers.
- *Pro Fresh Marketing International Ltd.* of Kelowna operates as a brokerage and exporter of fresh fruits: plums, apricots, peaches, pears, cherries, apples and grapes.

In addition, there are approximately 20 smaller suppliers. Cherry producers use three main methods of packing and sales including packing with independent houses and selling through independent sales agents; packing with cooperative packing houses and selling through BC Tree Fruits; and packing their own cherries and selling through independent sales agents or directly. Some independents market their

own cherries. Cherries are sold through independent sales agents such as Graham Nelson & Associates, Pro-Fresh International, and Global Fruit Brokers, and Nelson Roy Associates in addition to BC Tree Fruits which is the single largest marketer. In addition to marketing cherries to wholesalers, independent sales agencies may market directly to chain and big-box retail stores. Lower grade, lesser value cherries are often sold to truck peddlers. Domestic and overseas wholesalers are also used.

4. Processors

The vast majority of soft fruit is sold fresh and only a very small portion is processed. Processing of apples is mainly into fruit juices with some sold as a dried product. Leading processors include:

- *Sun-Rype Products Limited*, of Kelowna is the major fruit processor in BC. Sun-Rype produces a range of juice and fruit snacks. The product line includes 17 juice varieties. It has one of the most efficient, high-tech fruit processing operations in North America. Sales in 2005 were \$125.4 million. The company employs 425 people. Sun-Rype was incorporated on May 13, 1946 and operated for 47 years as a fruit growers' cooperative. In 1993, a capital restructuring was completed which allowed the company to distribute equity shares to its individual grower owners. In 1996, Sun-Rype completed its transformation from a cooperative to a publicly traded company when its common shares were listed and posted for trading on the Toronto Stock Exchange.
- *Summerland Sweets* is a family owned business based in Summerland. It produces bottled and canned jams and jellies, marmalades, fruit jelly candy, fruit syrup, brandy syrups and fruit based wine. The company has been operating since 1962.
- *Kettle Valley Dried Fruit Co.* is a part of SunOpta, a Toronto-based company. Sun-Opta purchased 100% of the outstanding shares of Kettle Valley in April 2003. Kettle Valley produces natural and organic fruit bars and fruit leathers with an apple base and markets these products under the Kettle Valley and Frunola brands. Kettle Valley also provides dried apple as an ingredient to food manufacturers. The company operates two production facilities in Summerland, and is currently constructing a third plant in Washington State. Kettle Valley also produces a number of private label products for customers in the US, Canada and the UK. The Company's products are sold through agents and distributors, including Wild West and Simply Organic, to the health food and mass markets as well as to various school districts who have mandates to improve the dietary content of student lunches. Kettle Valley product offerings include natural and organic snacks. Kettle Valley currently utilizes oat fiber produced by Opta and expects to add other vertically integrated ingredients from the Company's food operations as it expands its products offerings. The Company's Kettle Valley fruit bar operations grew significantly in the fourth quarter of 2004 due primarily to private label contracts.

Dakota Gourmet, Sun-Opta Group's roasting and packaging arm, markets their products through natural and mass market grocery retailers, mass merchandising, US School meal programs and other distribution channels. The Group also markets dried fruit snacks to the US school meal program for the SunOpta Fruit Group. The products are sold under the Kettle Valley Real Fruit Snacks, Frunola and Dakota Gourmet Labels as well as by contract under various private label brands.

A number of other smaller operations process fruit products in a variety of ways, usually fresh cut, frozen or juiced. A partial listing of tree fruit processors in BC, drawn from the BC Manufacturers' Directory maintained by BC Stats as well as other sources, is provided below. We have identified the number of employees where such data was available from secondary sources.

LISTING OF TREE FRUIT PROCESSORS IN BC

Company	Location	Fruit Products	Number of Employees
Fresh Cut			
Allied Foods Services	Vancouver	Fresh cut fruit	100
Beland Organic Foods Ltd.	Sechelt	Fresh cut fruit	
EFCON Inc.	Port Coquitlam	Fresh cut and juice	
English Bay Blending	Delta	Fresh cut fruit	
Islands West Manufacturers Ltd.	Victoria	Fresh cut/frozen	50 - 99
Mukhtiar & Sons Packers Ltd.	Abbotsford	Fresh cut fruit	
Pacific Coast Fruit Products Ltd.	Abbotsford	Frozen/fresh/juice	
Sun Rich Fresh Foods Inc.	Richmond	Fresh cut fruit/fruit salads	
Tamaric Inc.		Apple slices	
Yen Bros. Food Service Ltd.	Vancouver	Cut/diced/package fruits	
Frozen/Canned/Further Processed			
Ambercott Acres	Cawston	Dried fruit/snack mixes	
Appleberry Farms Ltd.	Victoria	Jam	6 - 14
BOBOBABY Inc.	Burnaby	Fruit puree	
Bremner Foods Ltd.	Delta	Fruit jelly/juice	
Brookside Foods Ltd.	Abbotsford	Fruit chips	75
Caramoomel Products Inc.	Kelowna	Fruit butter	3
EnWave Corporation	Vancouver	Apple chips/dried fruit	
Golden Boy Foods Inc.	Burnaby	Dried fruit	200
Golden Valley Foods Ltd.	Abbotsford	Jams, spreads	165
Hazelmere Organic Farm	Surrey	Dried fruit	
Kettle Valley Dried Fruit	Summerland	Dried fruit/energy bar	25 - 49
Nutri-Loc Corporation	Delta	Dried fruit	
Sandel Foods Inc.	Surrey	Fruit fillings	25 - 49
Service Packing Co. Ltd.	Vancouver	Dried fruit	50
Smokey Acre Farm Produce	Prince George	Canned fruit	
Snowcrest Packers Ltd.	Abbotsford	Pureed and frozen fruit	150
Summerland Sweets Ltd.	Summerland	Candy/jam/syrup	11
Sun-Rype Products Ltd.	Kelowna	Dried fruit	400
Sun Stream Fruit Ltd.	Okanagan Falls	Dried fruit	
Tickleberry's	Okanagan Falls	Chocolate covered/dried	
Voila Foods Inc.	Vancouver	Fruit butter/juice	
Zebroff's Organic Farm	Cawston	Dried fruit/juice	
Juice			
Coca-Cola Bottling Ltd.	Port Coquitlam	Juice	200 - 499
Fort Wine Company	Fort Langley	Juice and fruit wine	

Company	Location	Fruit Products	Number of Employees
Happy Planet Foods	Vancouver	Juice and smoothies	
Leading Brands of Canada	Richmond	Juice	220
Life Crystals Canada Inc.	Oliver	Juice	
Nature's Pop Sales	Kelowna	Juice	
Okanagan Sunshine	Oliver	Juice	
Pacific Coast Fruit Products Ltd.	Abbotsford	Frozen/Fresh/Cut/ Puree/Concentrate, Fruit Juice	
Pepsi Bottling Group	Delta	Juice	200 - 499
Sun Plus Products	Surrey	Juice	
Sun-Rype Products Ltd.	Kelowna	Juice/concentrate	400
Whistler Water Inc.	Burnaby	Juice	

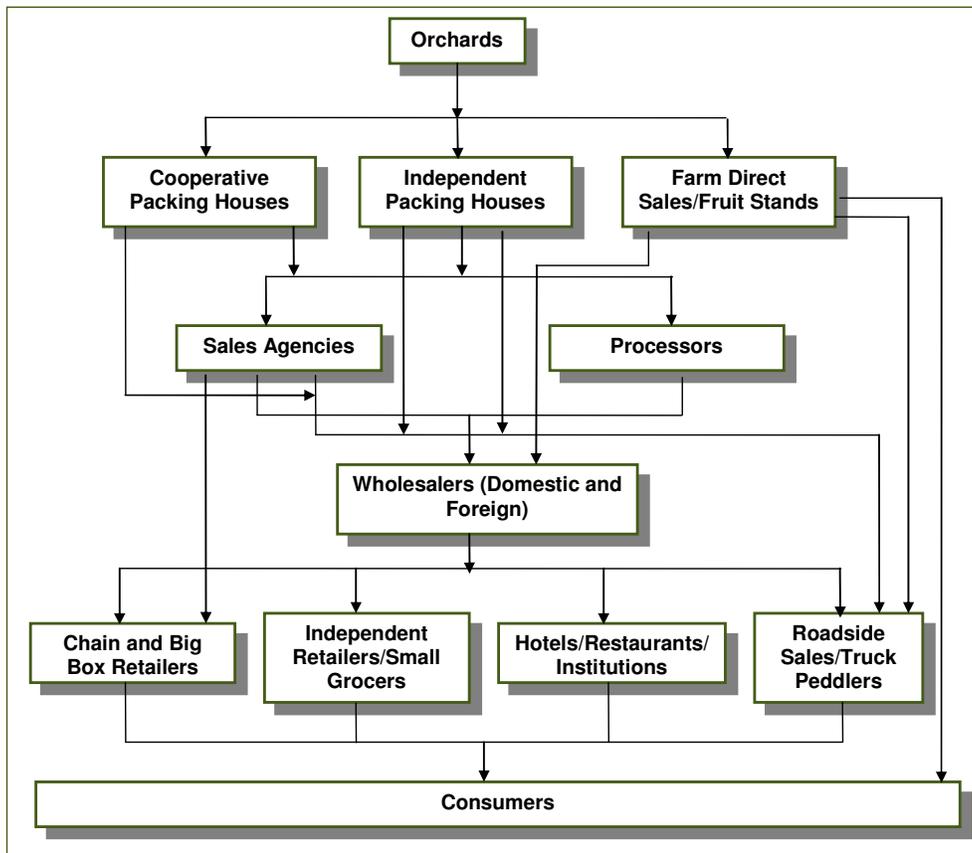
Sources: BC Ministry of Agriculture and Lands, BC Manufacturers' Directory

Based on the data reported in various directories, we estimated that there are 40 to 50 BC companies involved in producing tree fruit based products (generally in addition to a variety of other products) and that these companies employ about 2,500 people.

5. Wholesalers and Distributors

An overview of the basic distribution channels for tree fruits is provided in the chart below.

DISTRIBUTION CHANNELS FOR TREE FRUIT



As indicated, the primary distribution channels involve:

- *Direct sales, including farm and roadside sales, to consumers and truck peddlers.* Many roadside outlets in the region supply the local and tourist trade with fresh, direct to the consumer sales of fruit and vegetables. Some growers will sell directly to the consumer as well. In addition, many of the packinghouses have stores with seasonal fruit for sale. There is also a small but growing agri-tourism industry with farm tours, markets, and restaurants for the summer tourist market that helps promote direct sales.

The percentage of farm gate receipts generated from direct sales varies from less than 4% for apples to 60% for apricots.

FARM AND ROADSIDE SALES AS A PERCENT OF TOTAL SALES BY COMMODITY (2005)

Commodity	Farm and Roadside Sales ('000 lbs)	Total Sales ('000 lbs)	Farm and Roadside Sales as a % of Total Sales
Apples	9,684	259,610	3.7%
Pears	680	11,672	5.8%
Sweet Cherries	920	8,842	10.4%
Sour Cherries	92	1,667	5.5%
Peaches	1,344	7,000	19.2%
Apricots	640	1,067	60.0%
Nectarines	410	1,062	38.6%
Prunes/Plums	203	1,361	14.9%

Source: BC Ministry of Agriculture and Lands

- *Sales through packinghouses to wholesalers, retailers and the institutional trade.* The packinghouses sell produce through sales agencies such as BCTF, ProFresh, and Nelson Roy Associates and to processors such as Sun Rype, Kettle Valley Dried Fruit and others. Both the sales agencies and the processors sell to retailers and wholesalers such as Overwaita Food Group, Sobeys, Westfair Foods, Federated Coops, HY Louie, VanHolme and McDonalds Consolidated. The wholesalers, in turn, market produce and processed products to retailers including chain retailers and small grocers as well as the food service industry. In addition, a portion of the production is sold to institutional markets including educational institutions, hospitals and care homes, correctional facilities, or transportation companies such as BC Ferries.

We conducted a survey of 12 leading wholesalers and retailers operating in BC. Some of the major findings from these interviews include:

- *The majority of the apples and cherries purchased by the wholesalers and retailers are grown in BC.* On average, the representatives estimate they purchase 85% of their apples in BC, 10% in Washington State, and 5% from other sources.
- *The volume of apples purchased is increasing.* Over the last 3 to 5 years, the wholesalers and retailers have increased their apple purchase volumes by an average of 10%. All the interviewees

attributed increased volumes to the rising population and increasing numbers of retail outlets served. Per capita consumption does not appear to have increased.

- *The main purchase criteria are quality and price.* Other considerations mentioned were taste and size.
- *The wholesalers and retailers generally believe Washington State apples are of equal or better quality and can be less expensive for at least some varieties.*
- *Ambrosia and Gala were most commonly identified as apple varieties which are growing in demand.* Seven wholesalers and retailers view gala as rising in popularity and five wholesalers and retailers mentioned Ambrosia as gaining popularity. Other varieties mentioned as increasingly popular included Pink Ladies (3) and Fuji (3). Varieties seen as declining in popularity included Red and Golden Delicious (8), McIntosh (3) and Spartan (1).
- *All wholesalers and retailers interviewed supported the development of new varieties.* The wholesalers and retailers reported significant demand for new varieties and recommended that the industry should make new variety development a high priority.
- *The wholesalers and retailers are introducing new varieties.* All but one of the ten wholesalers and retailers have introduced a new apple variety in the last year with the other introducing a new variety in the last two years. Every retailer intends to continue adding new varieties in the near future.
- *The wholesalers and retailers had a variety of suggestions for increasing demand for tree fruit.* The recommendations included:
 - Focus on increasing demand in BC;
 - Improve the quality;
 - Improve grading;
 - Undertake print advertising;
 - Develop new value-added products;
 - Undertake in-store promotions; and
 - Promote new varieties.

5. Associations and Councils

Organizations that work for the industry include:

- The *BC Fruit Growers Association* represents over 1000 growers and is the main grower organization for safety net programs, regulation lobbying, grower education and other activities.
- The *Okanagan Kootenay Cherry Growers Association* is an association of cherry growers that provides members a newsletter, educational sessions, funding for research and promotes minor use registrations.
- *New Variety Development Council.* Ambrosia apple growers have organized a promotion and quality development council to introduce new varieties. The Council, collects a levy (per box) on Ambrosia apples sold in BC, has developed a marketing strategy and is working on plans to develop a two-year program of Ambrosia market launch, undertake consumer promotion and research on quality, and establish quality standards and protocols. The Council is a grower driven

organization that cooperates with industry packinghouses and marketing agencies.

6. Research Facilities

Two key organizations associated with tree fruit research in BC include the Pacific Agri-Food Research Station and Okanagan Plant Improvement Co. Ltd.:

- The *Pacific Agri-Food Research Station (PARC)* is a Federal Government research facility that has been operating since 1914 on 790 acres outside Summerland. Research is focused on the agriculture sector locally, regionally and nationally. The main areas of work include horticulture and environment, food science and biotechnology. There are various research programs that have potential for fruit crops including crop diversification, apple breeding, post harvest pathology, soil fertility and plant chemistry, tree fruit nutrition/soil chemistry, integrated control, insect behaviour ecology, IPM, and pesticide resistance and biotechnology. Other relevant areas include plant/pathogen interactions, plant virology, modified atmosphere packaging, sensory evaluation and functional foods. Current cherry research at PARC includes new variety development and research into insect, disease, and weed control, water management, and tree nutrition.

PARC research addresses four National Science Programs: Environmental Health, Sustainable Production Systems, Food Safety and Quality, and Bioproducts and Bioprocesses. The following is a breakdown of the number of researchers within each Science Program that do some or all of their work related to tree fruits.

- § Environmental Health: There are ten researchers in this Program. The work covers climate change-impacts and adaptation, biological control of insect pests, insect behavioural ecology, insect toxicology, pesticide risk reduction and minor use, plant viruses, insect population ecology, postharvest pathology, and soil fertility, water and nutrient management.
- § Sustainable Production Systems: There are two researchers working on fruit breeding and orchard management studies.
- § Food Safety and Quality: There are five researchers that work on food engineering, postharvest physiology, sensory evaluation and food microbiology.
- § Bioproducts and Bioprocesses: There are five researchers working on gene expression and fruit quality, molecular virology, plant biotechnology, and functional foods, nutraceuticals and bioprocessing.

Not all the researchers devote all of their time to tree fruits. However, they all have or recently have had projects related to tree fruits.

- *Okanagan Plant Improvement Co. Ltd. (PICO)* markets new tree fruit and berry varieties including those developed at PARC. The company provides tree fruit and berry variety rights management and virus free budwood production to transfer the discoveries of its plant breeding partners into the marketplace. PICO directs market research, develops marketing strategies and conducts promotional campaigns aimed at advancing the production and sale of new varieties. Their clients range from small, independent farmers to large-scale growers, and fruit companies and nurseries. The company also coordinates grower tests of new varieties.

BC Fruit Growers' Association (BCFGA) is the sole shareholder in PICO. The PICO Board has six voting Directors appointed by BCFGA and one non-voting Director appointed by Agriculture and Agri-food Canada (AAFC) who is likely to be a Senior Manager at PARC.

D. GEOGRAPHIC DISTRIBUTION

BC is the major soft fruit producer for Western Canada while Ontario is the major soft fruit producer for Central and Eastern Canada. The majority of BC tree fruit (60%) is sold fresh in Western Canada. The remainder is sold in other provinces and offshore markets. On the export side, the US is the major customer for BC apples, peaches, prunes and plums, and apple juice. Taiwan is the largest export market for cherries while Indonesia purchases the most pears.

In 2005, BC generated \$93 million trade deficit in the tree fruit and tree fruit products which we produce. There was a trade deficit for every type of tree fruit.

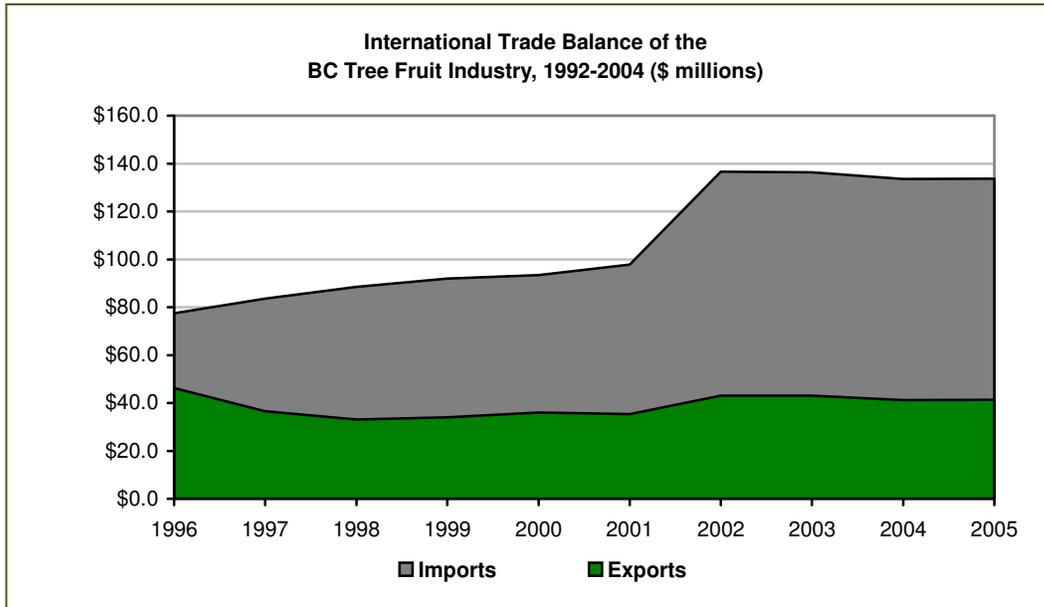
TRADE BALANCE IN SELECTED TREE FRUIT PRODUCTS, 2005 (\$ MILLIONS)

Selected Commodities	Imports	Sources	Exports	Markets	Trade Balance
Fresh					
Apples	\$47.0	US (85%) NZ (11%)	\$27.0	US (68%) Mexico (13%)	(\$20.0)
Pears & Quinces	\$26.0	US (57%) China (28%) Australia (10%)	\$0.2	Indonesia (46%) New Zealand (23%) Singapore (19%)	(\$25.8)
Cherries	\$18.5	US (99%)	\$13.7	Taiwan (43%) UK (12%) Netherlands (12%) US (10%)	(\$4.8)
Peaches/Nectarines	\$13.6	US (90%) Chile (9%)	-	US (100%)	(\$13.6)
Apricots	\$1.0	US (97%)	\$0.0		(\$1.0)
Plums	\$5.5	US (82%) Chile (17%)	\$3.0	US (100%)	(\$5.5)
Dried/Processed					
Apples	\$1.9	Germany (100%)	-	Germany (100%)	(\$1.9)
Cherries	\$1.0	US (100%)	\$0.0		(\$1.0)
Apricots	\$2.0	Turkey (93%)	\$0.0		(\$2.0)
Prunes	\$5.0	US (20%) France (15%)	\$0.0		(\$5.0)
Juice					
Apple Juice	\$13.3	China (52%) US (36%)	\$0.4	US (65%) Hong Kong (10%)	(\$12.9)
Total	\$134.7		\$41.3		(\$93.5)

Source: Statistics Canada

The majority of Southern Hemisphere fruit is imported during off-season periods (winter and spring) when BC grown fruit is not available. The main impact of imported fruit during our season is on price; it generally results in lower prices for BC growers.

Imports and the trade imbalance have increased steadily over the past decade as imports have increased and exports have decreased. As indicated below, the trade deficit increased from about \$31 million in 1996 to \$92 million in 2005.



III. COMPETITIVE REVIEW OF THE BC INDUSTRY

The BC industry is a very small player in the world tree fruit market and cannot out-produce the competition; neither can it compete on price given the high costs of production. The consolidation of the retail market with the subsequent pressure on prices has also created a difficult competitive situation. Consequently BC has been a price taker in what has essentially become a commodity market. The potential for the future of the BC tree fruit market appears to be in differentiating its products through quality and other measure to secure niche markets.

This chapter summarizes this situation through an analysis of the characteristics of the tree fruit industry in other jurisdictions as well as a review of sample of cost of production models, and highlights the strengths, weaknesses, opportunities and threats facing the tree fruit industry in BC.

A. THE TREE FRUIT INDUSTRY IN OTHER JURISDICTIONS

1. Overview of Worldwide Production

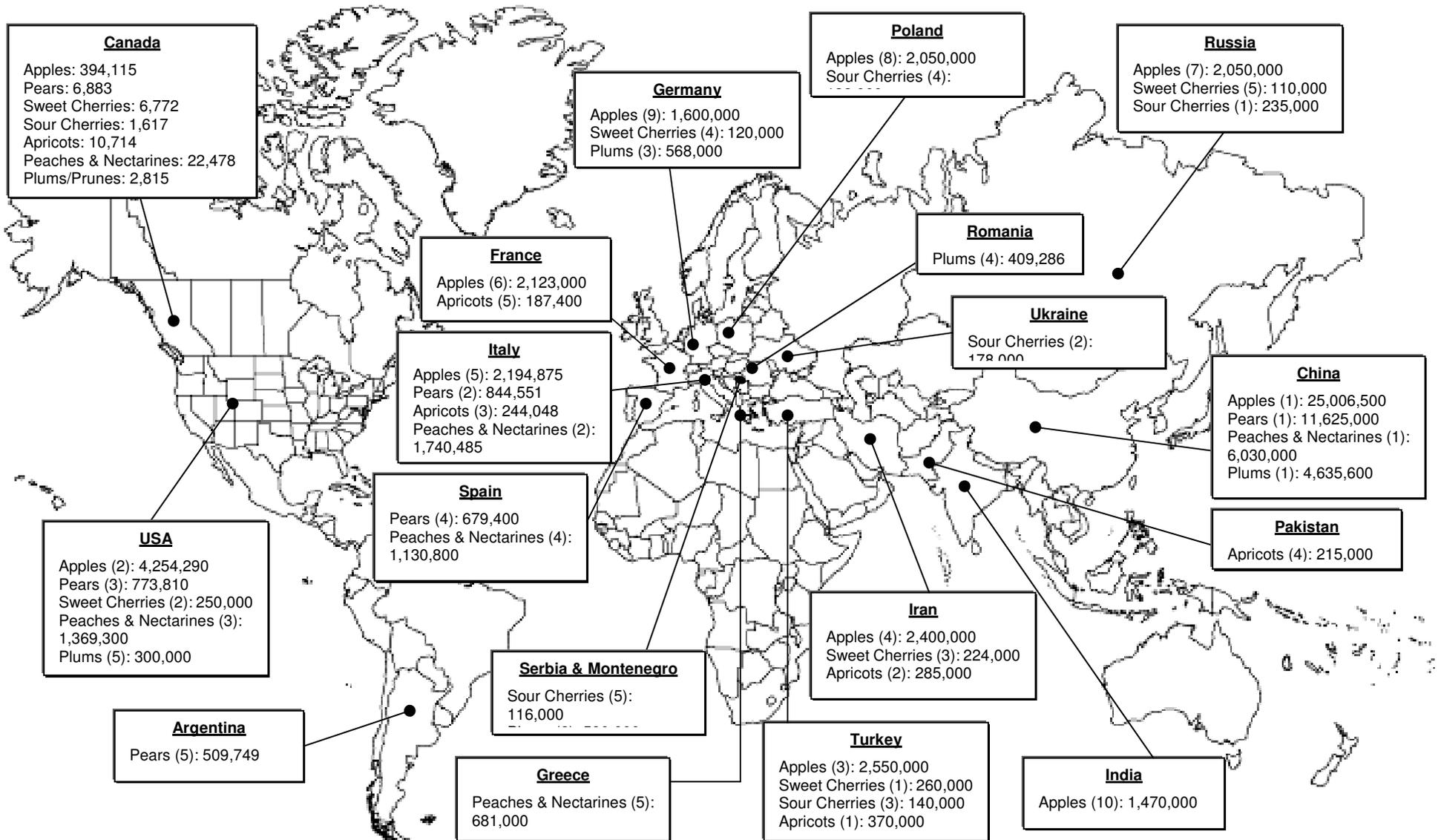
The major producers of the various tree fruits are highlighted on the map on the following page. The ranking of each country in terms of total volume produced is shown in brackets on the map. A brief summary of world production, imports and exports of selected tree fruits is provided below:

- China has dramatically increased its apple production over the last decade and now accounts for almost one-half of world production. Most of its growth may be attributed to acreage expansion as its average yields, although improving, remain well below the world average. Chinese government policies are currently focusing on diversification of the fruit industry, which is contributing to less acreage being planted in apples and the replanting of old orchards with new varieties.

As a very large, low-cost producer, China has had a major impact on higher cost production areas. In response, some countries have sought to apply trade restrictions against China. For example, the US recently won an anti-dumping action against Chinese apple exports. The top world apple exporting countries are China, France, Italy, Chile, the US and South Africa while the top world apple importing countries are Germany, the UK, Netherlands, Russia, Belgium-Luxembourg, Spain and the US.

- Sweet cherries are produced commercially in 64 countries with the leading sweet cherry producers being Turkey, the US, Iran, Germany and Russia. While the acreage has increased over the past 10 to 15 years, production has not increased significantly as yields have declined in some regions including Central and Eastern European countries as well as some Middle Eastern countries. There are about 100 sweet cherry cultivars grown in the major production regions around the world today.
- China is also the leading pear, peach, nectarine and plum producer. Other leading producers include Italy (pears, peaches and nectarines), the US (pears, peaches and nectarines), Germany (plums), Spain (pears, peaches and nectarines), Argentina (pears) and Serbia (plums). World pear production has been increasing but US production has been decreasing as fewer acres are planted to pears each year because of increasing world competition. Peach production is also decreasing in the US, is stable in the EU, and is increasing in China and South America (particularly in Chile). The major import markets for pears are primarily in Europe and include Germany, Russia, the Netherlands, the UK, Italy, France and Mexico.

**TOP WORLD PRODUCERS OF TREE FRUIT (2005)
METRIC TONNES**



2. Overview of North American Production

The volume of selected tree fruits produced in various North American jurisdictions is highlighted below. BC ranks sixth amongst apple producers (behind Washington State, New York, Michigan, California and Ontario), fifth amongst sweet cherry producers (behind Washington State, California, Oregon, and Michigan), and fifth amongst pear producers (behind Washington State, California, Oregon, and Ontario).

**MAJOR PRODUCERS OF TREE FRUITS IN CANADA AND THE US
(METRIC TONNES - 2005)**

Jurisdiction	Apples	Pears	Sweet Cherries	Sour Cherries	Peaches	Apricots	Nectarines	Prunes/Plums
Washington	2,630,822	376,482	124,284	7,484	18,960	5,352	10,433	3,266
New York	471,734		726	3,402	3,628			
Michigan	353,800		25,038	94,347	10,158			1,814
California	161,024	181,400	47,809		349,195	68,479	216,773	1,814
Ontario	154,221	5,352	1,281	6,078	17,928	204		1,678
BC	117,756	5,302	4,011	756	3,175	484	482	618
Quebec	78,154	141	2					86
Oregon	65,771	177,772	25,945	136	2,540			1,361
Nova Scotia	39,372	431	11		68			91
Idaho	36,280		1,542		7,256			1,814
Utah	17,233		1,633	12,698	4,263	222		

Source: BC Ministry of Agriculture and Lands, Economic Research Service/USDA

The table on the following page highlights that BC is a relatively large tree fruit producer within Canada but is comparatively small relative to US and world production across all of the tree fruit commodity groups. For example, while BC accounts for nearly 30% of Canadian apple production, it accounts for only 2.5% of combined Canada and US production and only 0.2% of world production. Similarly, while BC accounts for 81% of Canadian sweet cherry production, it accounts for only 2.2% of combined Canada and US production and less than 0.1% of world production.

3. Characteristics of Apple, Pear and Cherry Production in Other Competitive Regions

Apple Production

To gain further perspective regarding the tree fruit industry in BC, we reviewed the industries in Washington State, Oregon, California, Ontario, Quebec and New Zealand. The major characteristics of the apple industry in each of these provinces and states are summarized in the table below. We obtained the data from governments in each jurisdiction. The production data appears to be relatively reliable although the reader should note that the acreage data is more suspect. As an illustration, we believe that the acreage data for BC is overstated somewhat which negatively impacts on the average production per acre and average farm gate receipts per acre figures.

Washington State is, by a wide margin, the largest of the apple producers listed followed by New Zealand. As indicated in the chart, Washington State, New Zealand and Oregon each generated an increase in farm gate receipts over the past four years for which data is available while the other jurisdictions experienced a decline.

**COMPARISON OF BC TO CANADIAN, NORTH AMERICAN
AND WORLD WIDE PRODUCTION IN SELECTED TREE FRUITS
METRIC TONNES (2005)**

Commodity Group	BC Production	Canadian Production	BC % of Canadian Production	US Production	BC % of Canadian and US Production	World Production	BC % of World Production	Major Producers
Apples	117,756	394,115	29.9%	4,254,290	2.5%	63,488,907	0.19%	China (39%) US (7%) Turkey (4%)
Pears	5,302	6,883	77.0%	773,810	0.7%	18,643,387	0.03%	China (62%) Italy (5%) US (4%)
Sweet Cherries	4,011	6,772	59.2%	250,007	1.6%	1,237,240	0.32%	Turkey (21%) US (20%) Iran (18%)
Sour Cherries	756	1,617	46.8%	98,007	0.8%	2,822,223	0.03%	Russia (8%) Ukraine (6%) Turkey (5%)
Peaches/ Nectarines	3,657	22,478	16.3%	1,369,322	0.3%	15,671,847	0.02%	China (38%) Italy (11%) US (9%)
Apricots	484	10,714	4.5%	70,502	0.6%	1,955,379	0.02%	Turkey (19%) Iran (15%) Iran (12%)
Prunes/Plums	618	2,815	22.0%	300,003	0.2%	9,863,398	0.01%	China (47%) Serbia (6%) Germany (6%)
Total	132,583	445,394	29.8%	7,115,941	1.8%	113,264,512	0.12%	

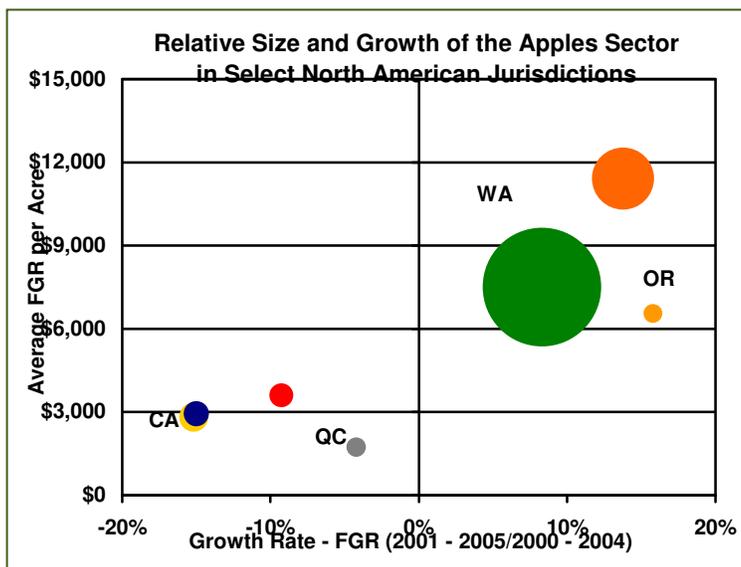
Source: Statistics Canada, United Nations

CHARACTERISTICS OF TREE FRUIT INDUSTRY IN EACH JURISDICTION (APPLES)

Apples							
Region/Country	Production Volume ('000 lb)	Total Farm Gate Receipts (FGR) (2005 \$ million)	Average Price (\$/lb)	Production Acreage (Acres)	Average Production/Acre (lb)	Average FGR/Acre (\$)	Apples as a % of Total FGR
BC	259,610	\$46.0	\$0.18	12,800	20,282	\$3,597	1.9%
WA	5,800,000	\$1,290.5	\$0.22	172,000	33,721	\$7,503	19.5%
OR	145,000	\$27.4	\$0.19	4,200	34,524	\$6,544	0.7%
CA	355,000	\$70.3	\$0.20	25,000	14,200	\$2,813	0.2%
NY	1,040,000	\$195.3	\$0.19	45,000	23,111	\$4,341	4.7%
MI	780,000	\$107.5	\$0.14	40,500	19,259	\$2,655	2.2%
ON	339,999	\$50.8	\$0.15	17,300	19,653	\$2,938	0.6%
QC	172,300	\$28.5	\$0.17	16,529	10,424	\$1,730	0.5%
NZ	1,203,722	\$342.5	\$0.28	30,011	40,109	\$11,415	2.9%

Note: US and New Zealand farm cash receipts figures are for 2004 and they have been converted to Canadian currency at the rate of US\$ 1 = CAD\$ 1.13 and NZD\$ 1 = CAD\$ 0.704. New Zealand production and acreage data, and Québec acreage data is for 2004. Sources: BC Ministry of Agriculture and Lands; Ontario Ministry of Agriculture, Food & Rural Affairs; Institut de la Statistique du Québec; Economic Research Service/USDA and New Zealand Ministry of Agriculture and Forestry

Average yields tend to be relatively high in Washington State. According to industry sources, average yields in Washington State range from 35 to 45 tonnes per hectare (31,200 pounds to 40,200 pounds per acre) annually with good growers achieving yields of 45 to 60 tonnes per hectare (41,000 pounds to 53,500 pounds per acre). The yields in Washington State benefit from the sunny, warm and dry climate, which results in less disease pressure; the moderating influence of the Pacific Ocean; the shift to high density planting; relatively low risk of hail; and the success achieved in reducing the impact of spring frosts through strategies such as wind machines. In Washington State, the growing season in the warmest districts is sufficiently long for late varieties such as Fuji and Pink Lady. In comparison, most other regions in North America achieve average yields of about 25 tonnes per hectare (22,000 pounds per acre) although this can vary significantly from year to year. As noted earlier, the average yields in BC are likely understated to the extent that the acreage in BC is overstated. At the time of the most recent Census of Agriculture, the average yields in BC were 24,398 pounds per acre.



Pear Production

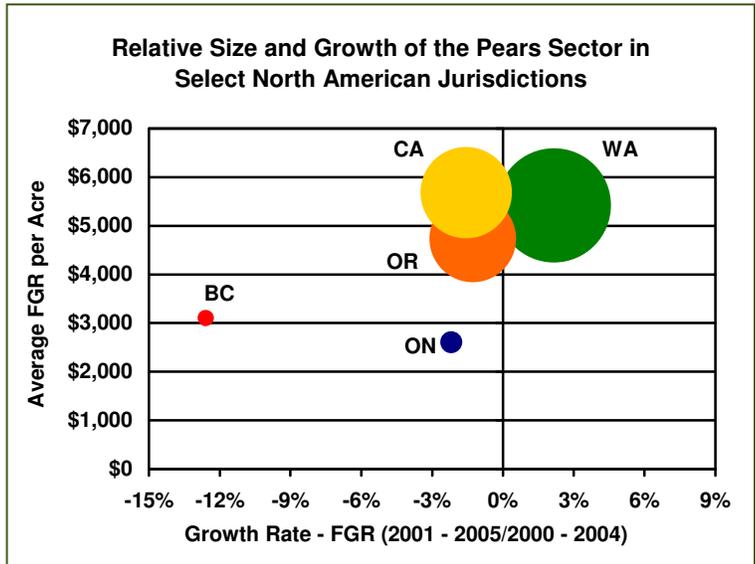
Similarly, for pear production, Washington State is the largest of the jurisdictions followed by Oregon and California.

CHARACTERISTICS OF TREE FRUIT INDUSTRY IN EACH JURISDICTION (PEARS)

Pears							
Region	Production Volume ('000 lb)	Total Farm Gate Receipts (FGR) (2005 \$ million)	Average Price (\$/lb)	Production Acreage (Acres)	Average Production/Acre (lb)	Average FGR/Acre (\$)	Pears as a % of Total FGR
BC	11,689	\$2.3	\$0.20	750	15,585	\$3,100	0.10%
WA	799,837	\$142.4	\$0.18	26,300	30,412	\$5,417	2.15%
OR	391,920	\$82.2	\$0.21	17,400	22,524	\$4,728	1.97%
CA	399,919	\$90.8	\$0.23	16,000	24,995	\$5,681	0.25%
ON	11,799	\$4.6	\$0.40	1,800	6,555	\$2,601	0.05%

Note: US farm cash receipts figures are for 2004 and they have been converted to Canadian currency at the rate of US\$ 1 = CAD\$ 1.13. California acreage data is for 2004. Sources: BC Ministry of Agriculture and Lands; Ontario Ministry of Agriculture, Food & Rural Affairs and Economic Research Service/USDA

While pear production has been increasing in Washington State, it has been decreasing in the other jurisdictions including California, Oregon, Ontario, and particularly BC. Pear production in the Pacific Northwest is dominated by winter fresh-market pear varieties (e.g. Anjou, Bosc and Comice) which have good storage characteristics. Taking advantage of these storage characteristics, large controlled atmosphere storage facilities have enabled Washington State suppliers to offer retailers consistent volumes over an extended season. California pear shippers are generally smaller volume suppliers than their Washington State counterparts, which makes it more difficult for them to meet the volume needs of increasingly large buyers. Average yields tend to be significantly higher in Washington State although again there are some concerns about the reliability of the production acreage data.



Cherry Production

Cherries are a highly sensitive, labor-intensive fruit, and only a few places in the world have the right combination of weather and soil conditions to grow them. In the Pacific Northwest, warm sunny days combine with cool nights and rich volcanic soil to produce some of the best cherries in the world. As a result of its large production acreage and high yields, Washington State is also the largest producer of sweet and sour cherries.

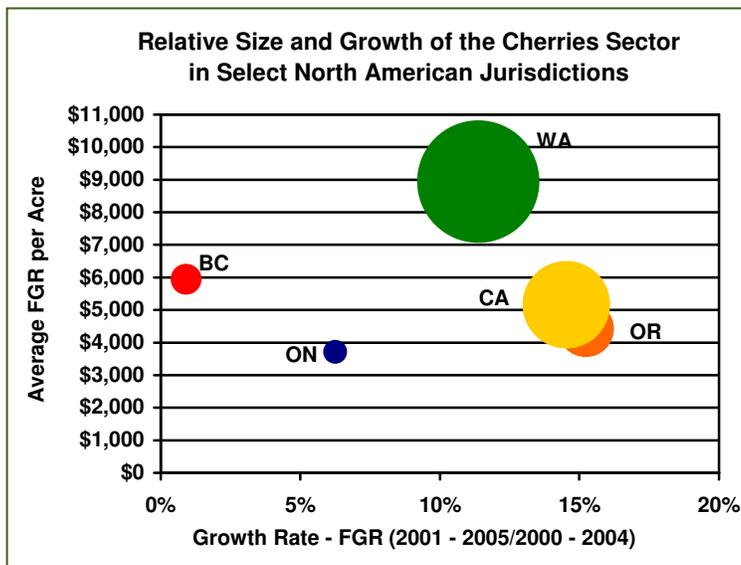
CHARACTERISTICS OF TREE FRUIT INDUSTRY IN EACH JURISDICTION (CHERRIES)

Sweet & Sour Cherries							
Region/Country	Production Volume ('000 lb)	Total Farm Gate Receipts (FGR) (2005 \$ million)	Average Price (\$/lb)	Production Acreage (Acres)	Average Production/Acre (lb)	Average FGR/Acre (\$)	Cherries as a % of Total FGR
BC	10,509	\$16.0	\$1.53	2,700	3,892	\$5,942	0.7%
WA	290,500	\$273.4	\$0.94	30,600	9,493	\$8,937	4.1%
OR	57,500	\$56.2	\$0.98	12,750	4,510	\$4,415	1.3%
CA	105,400	\$139.1	\$1.32	27,000	3,904	\$5,154	0.4%
NY	9,100	\$6.3	\$0.70	2,700	3,370	\$2,355	0.2%
MI	262,000	\$74.7	\$0.29	35,500	2,106	\$2,106	1.5%
ON	16,224	\$8.9	\$0.55	2,415	6,718	\$3,714	0.1%

Note: US farm cash receipts figures are for 2004 and they have been converted to Canadian currency at the rate of US\$ 1 = CAD\$ 1.13. California data do not include sour cherry.
 Source: BC Ministry of Agriculture and Lands; Ontario Ministry of Agriculture, Food & Rural Affairs and Economic Research Service/USDA

Sweet cherry production in Washington State averages about four to five tonnes per acre (9,000 to 11,000 pounds per acre) with well-managed orchards producing between seven and nine tonnes per acre (15,000 to 20,000 pounds). Production of nine to thirteen tonnes (20,000 to 29,000 pounds) is apparently possible in newer orchards. While its average yields are lower, BC has been able to generate higher average prices because of the success of its late season variety.

Each of the regions has experienced growth in farm gate receipts for cherries over the past few years. Recent data (August 2006) from the US Departments of Agriculture estimates that US production will increase by 7% in 2006 (including 9% in Washington State to well over 300 million pounds). Across North America, growth in the sales of rootstock has increased by about 30% over the past five years. The producing regions of California, Washington State and BC complement each other somewhat with the California cherry season coming first, followed by Washington State and then BC. As the first into the market, the California wholesale cherry price often sets a benchmark for the upcoming season.



4. Review of Major Producing Regions

The following paragraphs provide an overview of the tree fruit industry in New Zealand, Washington State, Chile and Ontario, with a particular focus on apples.

New Zealand

The New Zealand apple industry has enjoyed success in recent years due to its ability to produce new varieties and its emphasis on quality. It is also an area relatively free from many pests and diseases that afflict the rest of the world. The industry has been able to supply 5 to 9 distinct cultivars over a 4 to 6 month marketing period. Examples of new varieties, which make up 80% of the New Zealand apple crop, include Royal Gala, Fuji, Braeburn, Pacific Rose and Southern Snap. The World Apple Review (2004) reported that apple varieties bred and selected in New Zealand after the 1950s accounted for nearly 12% of the world's apple crop and this share is forecast to rise to almost 15% by 2010.

The country's main competitors (Argentina, Chile and South Africa) still rely on the traditional Red Delicious, Granny Smith and Golden Delicious varieties. However, all four countries are now producing increasing quantities of New Zealand's top two varieties, Royal Gala and Braeburn.

New Zealand has traditionally been successful in the export market, competing with other Southern Hemisphere producers. While New Zealand accounts for less than one percent of world apple production, the country accounts for five percent of world exports. In 2004, New Zealand exported 77% of its apple production of 464,000 tonnes. Exports go to 66 countries, with the primary destination being the EU (which accounted for 63% of New Zealand's exports).

However, global competition has caught up with the once unique quality of New Zealand apples. Like many other jurisdictions with high production costs (and, as an exporter, high transportation costs), New Zealand cannot compete as purely a commodity producer. The industry is pursuing innovation, consolidation and the promotion of quality to try and counteract increasing global competition. Packing and storage operations are increasingly controlled by large operators who believe integrated operations are needed to achieve economies of scale and ensure high quality production.

The 2005 marketing season saw most New Zealand producers lose money as prices fell dramatically. This was attributed to:

- Increases in the value of the New Zealand currency;
- Strong competition from other Southern Hemisphere producers in a variety of markets;
- The emergence of Poland as a major supplier in Europe; and
- Over supply created by new SmartFresh storage technology that prolongs the selling season for Northern Hemisphere fruit.

Two of the top varieties, Braeburn and Royal Gala, returned far less than the cost of production. However, not all New Zealand producers experienced significant losses. For example, one vertically integrated exporter owned by 5 large growers reported achieving returns of 30% higher than the industry average. The exporter attributes its success to developing close relationships with supermarkets, maintaining stringent control over fruit quality, and customizing distribution to the precise requirements of its customers.

Producers noted that some new varieties, such as Jazz and Pink Lady, are still providing excellent returns. However, they are a very small percentage of the industry and this will not be enough to help many producers survive the present crisis. Total production acreage in New Zealand is projected to decline.

Another strategy being pursued in New Zealand is the intellectual property protection of new varieties through a joint venture company. The company, Prevar, is owned by Pipfruit New Zealand (45%), its

Australian counterpart (33%), the International Nurserymen's Association (12%) and the private sector research company HortResearch (10%). The mandate of this joint venture is to:

- Identify market trends;
- Speed up the development of new varieties; and
- Develop global commercialization plans for new varieties developed by HortResearch scientists.

There are currently 30 varieties (apples and pears) under development. However, given the time lag between planning new varieties and eventual new production, some industry participants have voiced concerns that this strategy will not be a workable solution for addressing declining returns at least in the near-term.

Washington State

Apples are the primary agriculture crop in Washington State, accounting for 20% of farm gate receipts and 83% of the fruit crop by weight. While Washington State remains, by a wide margin, the largest apple producing region in North America, there has been some reduction in production acreage over the years due to oversupply and the low prices of the 1990s. For example, Washington State apple industry lost 21% of the growers and 20% of the acreage between 1997 and 2002.

However, new varieties and replanting programs have raised production volumes and are promising to result in slightly increased production over the next few years. Production increased by over 25% between 1999 and 2005 and production is projected to increase by a further 5% to 7% over the next five to ten years.

PROJECTIONS FOR WASHINGTON'S FRESH APPLE CROP, 2005 TO 2015

Variety	1994 Actual (carlots)	1999 Actual (carlots)	2004/2005 Actual (carlots)	2010 Projected (carlots)	2015 Projected (carlots)	Change 2005 to 2015
Red Delicious	61,408	41,563	39,178	34,680	28,334	-27.7%
Golden Delicious	14,750	13,841	13,778	13,127	12,093	-12.3%
Granny Smith	6,273	6,718	12,876	14,093	14,559	+13.1%
Gala	2,936	6,324	15,439	18,108	19,156	+24.0%
Fuji	3,435	8,091	13,595	16,708	16,852	+24.0%
Braeburn	570	1,833	3,455	4,511	5,027	+45.5%
Jonagold	434	929	1,083	1,557	1,639	+51.3%
Cripps Pink	*	260	2,074	2,645	3,493	+68.4%
Cameo	*	216	1,326	2,199	2,516	+89.7%
All Others	1,875	1,418	2,133	3,743	5,931	+178.1%
Total	91,681	81,193	104,947	111,373	109,601	+4.4%

* Included in "All Others"

Source: Dr. Desmond O'Rourke, Belrose Inc. and Yakima Valley Growers-Shippers Association

While various strains of Delicious still dominate Washington State apple production, the cultivars Gala, Fuji, and Braeburn have been planted more widely recently. Belrose Inc. projects that production of Red Delicious and Golden Delicious will decrease by 28% and 12% respectively over the next 10 years while varieties such as Gala, Fuji, Braeburn, Jonagold, Cripps Pink and Cameo will increase by 24% to 89%.

Fewer changes have taken place in pear and cherry growing due to the absence of suitable cultivars and size-controlling rootstocks. Bartlett, D'Anjou and Bosc have been the main pear cultivars in Washington State for decades. While the sweet cherry cultivar Bing remains the main cultivar in Washington State,

growers are increasingly planting cherries that are either early bearing or late bearing in comparison to Bings. In doing so, growers seek to extend the harvest of cherries in Washington State from late May through to early August.

Washington State growers have been aggressive in adopting new technologies and in marketing efforts. The Washington Apple Commission (until its demise was brought about by an antitrust action) also played a key role in developing and expanding markets. As a result of their efforts, Washington State apples are recognized around the world. That recognition is so significant that shippers in other parts of the world have been caught illegally using the Washington State logo or a very close facsimile.

The fresh market has always been the focus of Washington State apple growers. While the processing sector has grown over the past 30 years, it seldom absorbs more than 30% of the crop. Few companies have been able to establish distinct consumer-recognized brands in the fruit industry.

In response to the economic crisis that hit the industry in 1998, a new organization was established - the Washington Apple Growers Marketing Association (WAGMA). This organization is a cooperative. This is the critical feature as it gives its members the right to discuss price without fear of antitrust action such as that which removed much of the power of the Apple Commission. This new cooperative performs two valuable functions.

- WAGMA provides a forum within which prices are discussed and guidelines developed. Sales activities are monitored and sales made outside the guideline ranges are questioned. In the past, there was no mechanism for other shippers to verify the prices quoted by buyers for accuracy and quality. WAGMA can talk to individual shippers to determine details of the sale and share those details with the rest of the membership.
- WAGMA establishes price goals for the season based on knowledge of the crop in Washington State and the rest of the US. These goals are established as a price range by grade and by size, at least, for the most popular combinations. Both prices and movement are monitored weekly to ensure timely clean up of the crop.

The Washington State tree-fruit industry has significantly increased its dependence on international markets. As production, especially of apples, has grown, international markets have absorbed much or most of the increase. Up to a third of the apple crop is now exported annually. The leading export markets for Washington State include Mexico (accounting for 29% of apple export volumes), Canada (18%), Taiwan (7%), Indonesia (6%), Hong Kong (6%), Dubai (6%), the UK (4%), Saudi Arabia (3%), India (3%) and China (2%).

Like all high cost fruit growing areas, Washington State is experiencing the impact of a world glut in fruit, especially apples. After suffering significant losses from 1996 to 2001, estimated at \$1.7 billion by the US Department of Agriculture, the financial performance of the industry improved for several years before turning down again. Even with the advantage of higher subsidies from state and federal governments than many other jurisdictions, the industry continues to suffer losses. There are concerns that profitability will not increase in the near future unless production levels decrease such that pricing strengthens. However, the industry observers we contacted suggested that this is not likely to happen because the integrated structure of the Washington State industry (with packing houses owning farming operations) gives the companies an incentive to continue high production levels. The industry is highly concentrated with ten companies accounting for about two-thirds of apple production. Some operations are producing 15 million boxes annually. However, even at this size, these companies tend to have little market power.

Ontario

Ontario is the only area within Canada, other than BC, which is capable of large-scale commercial production of soft fruits. This is due to climate conditions created by the presence of the Great Lakes and soil types.

Orchards over 10 acres are required to be licensed with the Ontario Apple Growers, which organizes the marketing of apples in Ontario. Prices for apples produced in Ontario are reflective of the landed prices of similar varieties and of similar package and size characteristics. Three major retailers dominate the Ontario and Canadian markets so suppliers must be price and quality competitive or risk losing market share. Ontario has more than 900 tender fruit producers. While some growers manage orchards larger than 100 acres, the average size is about 20 acres. However, approximately 20% of the growers produce 80% of the total value of production.

Using modern technology, Ontario growers have become increasingly efficient. They have been behind BC in replantings, but are now gradually converting older orchards to higher density orchards. This change to a higher number of trees per acre is increasing orchard efficiency. The trend is to pedestrian orchards where practices can be carried out with minimum use of ladders.

About half of Ontario's apples are marketed as fresh apples. The other half is used for processing. Of the fresh-market portion, three-quarters are marketed through apple packers who distribute the product to grocery stores. Pick-your-own operations, farmers' markets and roadside stands mostly use their own production. 90% of the processing apples are used to make juice. Other uses include applesauce, slices and pie fillings. Most packers distribute apples under the "Orchard Crisp" brand name. All "Orchard Crisp" apples are grown in Ontario and must meet strict standards for quality control.

The Ontario apple crop had a farm gate value of about \$50 million in 2005. Ontario generally exports about 10% of its apples. Importing countries include the US (which receives the largest percentage of exports at 65%) and the UK, which receives about 30% of total exports.

Ontario producers are facing the same market conditions that other high cost production areas are experiencing. They too are seeing growers exiting the industry, and consolidation of growing and packing operations. The Ontario apple industry has gone from 700 growers in the 1970s to about 350 today. The industry is experimenting with new varieties and with new production technology in an attempt to maintain their markets.

Chile

Chile has a diversified fruit industry with apples being the number one product after grapes. The country uses technology to increase productivity and has its own quality control protocol (ChileGAP) and multi-fruit promotional programs. Marketing activities focus on generic promotion of Chilean fruit in major international markets, using a common brand which is designed to improve the image of Chile abroad. The country has been among the first to convert to new varieties. However, there is no domestic breeding program which may negatively impact the country as more and more new varieties are protected by patents.

Chile strongly benefits from the naturally isolating effects of the country's landscape - the Atacama Desert in the north, the Andes Mountains to the east, the Pacific Ocean to the west and the ice fields to the south. These extraordinary natural conditions create a "phytosanitary island" which has enabled Chile to develop a fruit industry almost immune to plagues and viruses, problems that have limited other countries in their efforts to develop fruit export trade. The recognition by the international market of "fruit fly free"

areas in Chile has been an important step in the export sector's drive to consolidate and increase the presence of Chilean fruit in diverse markets around the world. This has led to the elimination of some phytosanitary restrictions, thus reducing export costs and increasing competitive market opportunities. This, in turn, allows for an even more diverse basket of fruit and vegetable exports.

The Southern Hemisphere is becoming an increasingly important supplier of apples. The volume exported from the Southern Hemisphere increased by 14% in 2004. Exports from Brazil and Chile increased by 50% and 21% respectively, which more than offset a decline of 53% in Australian exports. The World Apple Report (Belrose, 2004) states, "the price impact of these increased exports was magnified by the fact that they tended to be concentrated in a few Northern Hemisphere markets." Chile is now the second largest exporter of apples after China. In 2004, Chile produced 1.3 million tonnes of apples, of which 57% were exported. The main markets are Latin America, Europe, the Far and Middle East, the US and Canada. In 2005, 39% of Chilean fresh fruit exports went to the US.

Common Trends and Issues Facing the Industry

Key trends and issues that are common to many of the jurisdictions include:

- **All countries are struggling to deal with the impact of increased world production.**

All apple producing areas, except Eastern Europe, showed rapid growth in the 1990s. The rise in China's apple production has been remarkable, with the country achieving six times the production levels of 15 years ago. In this same period, Poland increased production threefold, Brazil doubled its apple production, and Chilean production grew by 90%.

- **Demand is stagnant or declining in some regions.**

This is especially true in North America. The per capita consumption of fresh apples in North America fell from 8.13 in 1991 to 6.84 in 2005. Demand is stable in the Southern Hemisphere and down in Europe. There has been a significant rise in demand only in China, driven largely by the ready availability of apples.

- **The European market is becoming more difficult to access.**

One reason for this is that Poland (the world's third largest apple producer) has recently joined the EU and is now able to freely access the 25 member union. In addition, Poland is able to access capital, through EU transitional funds and private investors, needed to modernize the Polish industry. Another factor is the impact of modern storage technology, which extends the seasonal availability of domestic production.

- **Production increases, which outpace increases in demand, have resulted in declining grower returns and suggest the need for a further shakeout in the world's apple production areas.**

High cost producers are finding it increasingly difficult to compete on a commodity basis and need other strategies to maintain market share.

- **Crop management is intensifying, with a trend towards higher planting densities and cultural practices such as irrigation.**

Irrigation can be an essential element in controlling such factors as field heat removal, fruit growth rates, severity of frost events, and distribution of essential nutrients through fertigation.

- **Competition for scarce resources is an issue in many developed countries.**

Land, water and labour are in short supply in many jurisdictions. Urbanization is raising land prices beyond the benefit to be obtained from a commercial orchard and putting pressure on water supplies needed for human use.

In particular, there is a shortage of agricultural labour in North America. The fruit industry requires seasonal workers to prune and pick the fruit. Traditionally this work had been undertaken by recently immigrated ethnic minorities. This source has been greatly reduced by low levels of immigration and the reluctance of the second generation immigrants to enter this field of employment. Growers are increasingly turning to temporary foreign workers to fill their requirements.

- **A major trend in developed countries is consolidation among growers.**

This is especially true in the US and New Zealand, where small older marginal orchards are withdrawing from the industry and production is increasingly controlled by large integrated operators with high density orchards. Producers hope to reach a size that will help them realize economies of scale. However, this development has not strengthened prices but instead has contributed to increased worldwide production and weakened prices.

- **Other levels of the value chain are also seeing significant consolidation.**

The processing, distribution and retailing sector systems have seen significant consolidation and are now dominated by large corporations. Consolidation is 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 as well as other industries.

It has been projected that the top twelve retailers in the US 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.

Growth in retailer consolidation was expected to lead to new aggregations of producers. However, there is some evidence of producer resistance to competing on this basis. For example, a planned marketing cooperative in Washington State has not got off the ground and the seemingly successful New Zealand centralized selling agency is coming under considerable criticism and there is a process underway to possibly disassemble this centralized export selling system.

- **There is an increasing emphasis on the protection of cultivars through plant patents and trade marking products.**

This has contributed to the emergence of "club varieties", which seek to generate and maintain

premium prices by promoting demand through specialized marketing programs and by limiting production (by limiting the amount that any grower can produce). Examples of club varieties include Cripps Pink and Cameo in the US as well as Jazz and Pacific Rose which are licensed by ENZA in New Zealand and Washington State.

- **New Zealand is pursuing international partnerships.**

Due to reduced government support, the industry has been forced to obtain funding from partnerships to continue development of new cultivars. Such alliances provide resources but will make it difficult to maintain regional exclusivity to new cultivars.

- **Quality assurance, product traceability and food safety programs such as HACCP have become increasingly important.**

Buyers are increasingly requiring various types of documentation in order to certify or safeguard a production and marketing process. Consumers are increasingly demanding food that is pure and safe and that has not harmed the environment through its production. Food needs to be safe and appear to be safe to appeal to the modern health and environmentally conscious customer. This consciousness is resulting in increasing pressure by activists to have the industry become even more environmentally sensitive.

- **Within each region, there are growers and organizations that are successful.**

For example, there are individual operators who continue to supply a niche market profitably. Their strategy may focus on new varieties, quality, service, customer relations or customizing distribution to retailers' precise requirements.

B. RETURNS EARNED BY GROWERS

In order to better understand some of the factors that affect the profitability of tree fruit operations, we obtained a sample of cost of production model analyses for apples, pears and cherries from three jurisdictions - BC, Ontario and Washington State. In this section, we use apples as an example since it is the largest segment of the tree fruit industry in all three jurisdictions.

Examples of cost of production data drawn from analyses completed from 1989 to 2002 is provided in the table on the following page. For each analysis, we identify the region, variety (where relevant), year completed, and assumptions regarding prices, grading and yields. We also show the cost data including direct costs and establishment costs presented on a per acre basis. Examples of direct costs include labour, chemicals, equipment operating expenses, R&M, and other supplies. Establishment costs include costs related to trees, soil preparation, trellis materials and support systems, initial labour, and other materials incurred in the first year of replanting. We have also shown the direct costs on a per pound basis.

**EXAMPLES OF APPLES COST OF PRODUCTION ANALYSIS
FROM BC, ONTARIO AND WASHINGTON STATE OVER TIME
(1989 - 2002)**

Location	Variety	Year	Organic	Fancy Grade+ ²	Per Pound		Per Acre				
					Direct Costs	Average Price	Yields ³	Revenues	Direct Costs	Contribution Margin	Establishment Costs
BC											
S. Interior	Not Specified	2002	Yes	85%	\$0.19	\$.40	32,000 ⁶	\$10,880	\$6,200	\$4,680	
Okanagan V.	R. Delicious	2001	No	90%	\$0.15	\$.12	20,000	\$2,160	\$2,975	- \$815	
Okanagan V.	Not Specified	2001	No	85%	\$0.10	\$.25	36,000 ⁶	\$7,650	\$3,592	\$4,058	\$22,008
Okanagan V.	Not Specified	2001	Yes	85%	\$0.17	\$.25	32,000 ⁷	\$6,800	\$5,365	\$1,435	\$18,077
Okanagan V.	Gala	1999	No	91%	\$0.08	\$.293	32,000 ⁷	\$8,105	\$2,637	\$5,468	\$19,263
Okanagan V.	Not Specified	1996	No	85%	\$0.06	\$.20	35,000 ⁷	\$5,882	\$2,226	\$3,656	
Okanagan V.	Not Specified	1996	No		\$0.05	\$.12	40,000 ⁶	\$4,800	\$2,055	\$2,745	
Fraser V.	Elstar	1994	No	50% - 60%	\$0.22	\$.45 - \$.75	25,580 ⁶	\$7,443	\$5,502	\$1,941	\$14,848
Fraser V.	Jonagold	1994	No	50% - 60%	\$0.17	\$.45 - \$.75	40,000 ⁶	\$11,137	\$6,893	\$4,244	\$14,848
Okanagan V.	Not Specified	1991	No		\$0.05	\$.12	40,000 ⁸	\$4,800	\$2,160	\$2,640	\$8,190
Okanagan V.	McIntosh	1990	No	70%	\$0.06	\$.12	28,000	\$3,360	\$1,750	\$1,610	
Okanagan V.	Not Specified	1989	No		\$0.05	\$.12	45,000 ⁶	\$5,400	\$2,468	\$2,994	\$9,653
Okanagan V.	Not Specified	1989	No		\$0.06	\$.12	32,000 ⁸	\$3,840	\$2,011	\$1,829	\$4,567
Okanagan V.	Not Specified	1989	No		\$0.06	\$.12	35,000 ⁸	\$4,200	\$2,126	\$2,074	\$5,986
Okanagan V.	McIntosh	1989	No	70%	\$0.06	\$.12	30,000	\$3,600	\$1,898	\$1,702	
ON											
Not Specified	Not Specified	1999	No	100%	\$0.18	\$.227	18,919	\$4,295	\$3,497	\$798	
WA											
Yakima V.	G. Delicious	2002	No		\$0.08	\$.17	58,055 ⁶	\$9,953	\$4,934	\$5,019	\$8,259
Yakima V.	G. Delicious	2002	No ⁴		\$0.08	\$.17	56,484 ⁶	\$9,797	\$4,673	\$5,125	\$9,615
Yakima V.	G. Delicious	2002	Yes		\$0.10	\$.27	41,185 ⁶	\$11,221	\$3,967	\$7,253	\$9,532
E. Washington	Fuji	1998	No		\$0.11	\$.27	37,215 ⁶	\$10,170	\$3,928	\$6,242	\$9,487
C. Washington	Fuji	1992	No		\$0.09	\$.32	37,215 ⁵	\$12,051	\$3,501	\$8,551	\$18,011
C. Washington	R. Delicious	1992	No		\$0.08	\$.17	33,080	\$5,650	\$2,627	\$3,023	

1 Exchange Rate for WA Figures: US\$ 1 = CAD\$ 1.13, 2 Percent Fancy Grade or Higher, 3 In Pounds, 4 Integrated Production, 5 Data based on Year 5, 6 Data based on Year 6, 7 Data based on Year 7, 8 Data based on Year 8

Some of the findings of this analysis include:

- The different jurisdictions use different approaches to estimating production, which makes it problematic to directly compare the results. In some cases, approaches have also varied within jurisdictions over time. For example, there are differences with respect to the extent to which owner or manager labour is included in the data. In addition, there are differences with respect to the treatment of land costs, equipment costs, interest, insurance and depreciation. To achieve greater standardization, we have backed out capital costs including land and equipment wherever possible.
- Revenues are a function of prices, yields, and grades. Of the three variables, price is most subject to variation and is beyond the control of the individual grower.
- Within the cost of production models, yield is impacted by tree age (trees are most productive between 4 and 15 years), rootstock (precocious rootstocks lead to earlier fruit bearing), variety/rootstock combination (results in different yield levels) and management practices (e.g. timely thinning, adequate pollination etc.) among other factors.
- The models in Washington State have reflected a relatively strong increase in average yields over the years. As a result, average direct costs per pound have remained relatively consistent even though unit costs for labour and other inputs have increased over time.
- Fancy and higher grades, and/or larger size of apples draw price premiums. Grade can also be influenced by climate (e.g. optimal climate to achieve bright red colour in apples). Lower grade or damaged apples go to the processing market at a loss. Most BC models specify the percent of fancy grade and higher apples in calculating revenues whereas the Washington State models do not make such distinctions.
- Labour costs followed by chemical input costs (e.g. fertilizer, insecticides, fungicides, herbicides) are the major line item costs. There have been significant increases in both labour rates and chemical costs over time. Apple prices for varieties such as Red Delicious and Golden Delicious have not kept pace with these increases in production costs. Some BC models also include data on replacement costs of land, building, machinery and equipment, which have also increased over the years.
- High density orchards increase labour productivity (reducing labour costs per pound) because of smaller trees and/or shallow and uniform canopies which do not require ladders. High density orchards also require less pesticide and they usually use low volume irrigation systems. Establishment costs rose sharply in both jurisdictions reflecting the shift to high density orchards.
- The costs of production models have not assessed economies of scale that could be achieved by having larger operations. However, it should be noted that the Washington State models are generally based on larger scale operations than are the BC models, which may account for some differences in production costs. Larger operations may achieve some economies of scale to the extent that they can spread certain fixed costs (e.g. equipment or management costs) over a larger production volume.
- Prices and costs vary by variety. Some varieties cost less per acre but cost more per pound due to lower yields. Specific direct costs vary from variety to variety (e.g. some strains of Delicious are

highly resistant to mildew resulting in less supply costs whereas Golden Delicious is partially self-fruitful which lowers pollination costs).

- A higher price is associated with organic production. However, the higher prices for organic production are partially offset by increases in production costs, particularly related to labour costs. Organic production requires more labour overall (e.g. manual thinning replaces chemical thinning) although labour requirements may decrease in certain areas (e.g. pruning requires less labour because of reduced tree vigour). Chemical costs are lower whereas fertilizer costs are higher under the organic system. Organic systems also tend to result in more equipment/tree repair and maintenance due to increased frequency of spraying. In addition, crop insurance costs may increase and there will be organic certification fees. Switching from a traditional to an organic orchard requires several years in transition which may affect profitability depending on how the transition is planned and carried out.

Under a BC model, the incremental costs of organic production were estimated to be about \$0.07 per pound in 2001. Under a Washington State model, the incremental costs of organic production were estimated to be about \$0.02 per pound in 2002.

- Costs vary somewhat by region within the province or state. For example, drier, warmer and sunnier orchard locations reduce the likelihood of tree diseases, thus lowering supply costs. In contrast, drier location may increase irrigation requirements (e.g. BC growers require more irrigation than growers in Eastern Canada). Orchard proximity to water naturally reduces frost damage to early buds lowering equipment costs (e.g. eliminating the need for overhead sprinklers, wind machines or holding pond for frost control). Orchard proximity to urban centres increase opportunity and/or lease costs of the land due to potential alternate land use (e.g. residential or industrial development).

In general, direct and establishment costs are lower in recent Washington State models compared to recent BC models. Appreciation of the Canadian dollar has impacted the cost of production in BC relative to other countries. We have converted Washington State financial data into Canadian dollars using the current exchange rate rather than the rate which prevailed at the time when the cost of production model was developed.

C. STRENGTHS, WEAKNESSES, OPPORTUNITIES AND THREATS

In order to identify key strengths, weaknesses, opportunities and threats facing the industry in BC, we first conducted a detailed review of past reports, strategies, and industry profile. We then conducted interviews with a cross-section of industry stakeholders in BC and in other jurisdictions. A summary of the SWOT analysis is provided in the chart on the following page while the major findings are highlighted in the following paragraphs.

1. Strengths

Key strengths that were commonly identified by the various sources included:

- **Extensive participation in replanting programs**

BC producers have replanted about 9,000 acres of tree fruits to high density and new varieties since the inception of the Orchard Renovation Program in 1991.

STRENGTHS, WEAKNESSES, OPPORTUNITIES AND THREATS

Opportunities

- Differentiate BC products
- Strong supplier relationships
- Increase the quality and safety of fruit
- Product certification
- Increase local and regional demand
- Capture institutional markets
- Develop value-added products
- Expand agri-tourism
- Increase the rate of innovation
- Develop partnerships and alliances
- Develop export markets
- Lever consumer emphasis on environmental and safety issues
- More workforce and manager training and education
- New varieties
- Organics

Strengths

- Extensive participation in replanting programs
- Proximity to major markets
- Long established research infrastructure
- Growing demand for fresh, healthy products
- Climate well suited for tree fruit production
- Acceptance of change
- Strong stakeholder commitment to the industry
- Well developed support infrastructure
- Strong food safety and quality control systems
- Broad range of government support programs and initiatives

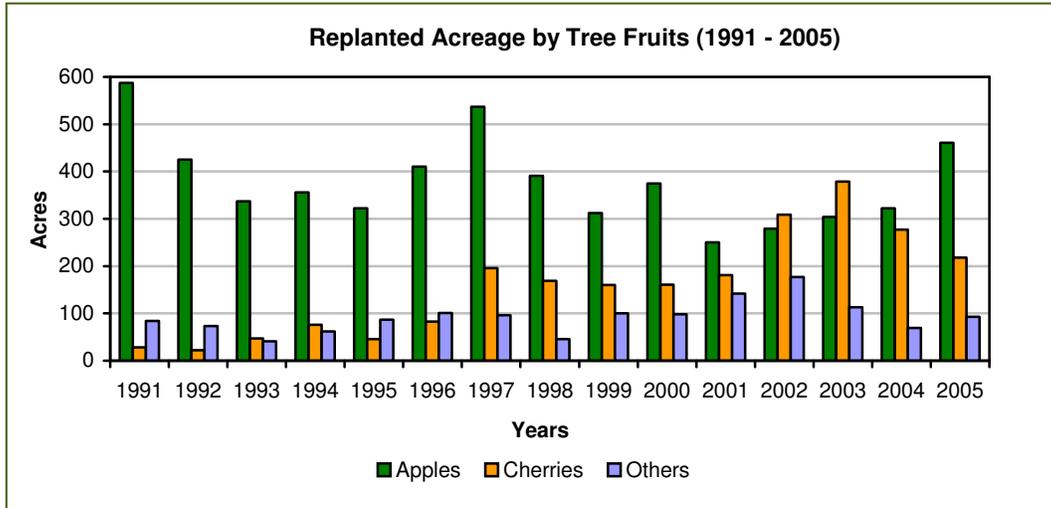
Weaknesses

- Declining financial health
- Production disadvantages vis-à-vis Washington State
- Labour shortages
- Rising costs
- Limited marketing resources
- Government regulatory environment
- Level of industry cooperation and coordination

SWOT ANALYSIS

Threats

- Rising value of Canadian currency
- Increasing urbanization
- Declining apple consumption
- Rising global competition
- Increasing competition from other foods
- Consolidation of the value chain
- Impact of diseases and pest control
- Trade restrictions



Since 1991, a total of 5,669 acres have been planted to apples, 2,352 acres to cherries and 1,381 acres to other soft fruits. With the expiry of the program in 2006, it will cost approximately one-third more to replant.

- **Proximity to major markets**

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

- **Long established research infrastructure**

Agricultural research centres, particularly PARC, provide significant support to the industry. For example, the cherry industry has been revived due mainly to niche marketing of high quality late season varieties developed at the PARC. These large size, late season varieties (Lapins, Sweetheart, Skeena and Staccato) enable BC producers to be “late” on the international market with fresh cherries and thus command a premium price. These late season varieties are also resistant to rain splitting, which has been a problem with traditional varieties such as Bing and Van.

- **Growing demand for fresh, healthy products**

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

Even before the recent scares of mad cow and avian flu, the rise in demand for safe and healthy food products was impressive. The trend is to products that can be traced from source and proven to promote the health of the consumer. 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. This trend not only impacts the domestic market but also influences export trade (especially to Europe).

- **Climate well suited for tree fruit production**

The climate in the Thompson-Okanagan region is moderate with hot, sunny, dry summers. The winters are much less severe than most of Canada. Fruit trees are well suited to the hot, dry climate of the valleys in the Okanagan-Similkameen regions.

- **Acceptance of change**

Growers in BC have a long history in successfully adapting their operations to meet new challenges. One of the major changes over the past decade has been the shift to newer varieties and higher densities, which provide for higher yields and easier picking. In 1990, 5% of marketed fruit were considered new varieties. New varieties now account for over 40% of sales. The industry has also shown a propensity to adopt and embrace new technologies and innovation.

- **Strong stakeholder commitment to the industry**

The tree fruit industry has a long tradition in the interior with many orchards passing through the hands of multiple generations. It is a way of life for the people in the industry and the majority of them are committed to taking the industry to a higher level of viability and maintaining this long-standing feature of the interior’s culture and economy.

- **Well developed support infrastructure**

The industry has a well-developed infrastructure in terms of packing facilities, storage capabilities, and marketing systems. Belrose Inc. rates the relative competitive position of a wide variety of countries using a set of criteria including production efficiency (defined as percent change in production, relative variability of production, percent of acreage non-bearing, percent of production in new varieties, planting density and average yield per hectare), industry infrastructure and inputs (comprises adequacy of storage, modern packing facilities, marketing system, land availability, water availability, labour availability, and input costs), and financial and market factors (includes interest rates, inflation rates, capital availability, security of property rights, product quality control, percent of production exported, average export price and average distance to market). As indicated below, Canada ranked fourth in terms of industry infrastructure and inputs, and tenth overall in 2006.

**COMPETITIVENESS RANKINGS OF MAJOR
WORLD APPLE SUPPLIERS, 2006**

Rank	Overall	Production Efficiency	Infrastructure & Inputs	Financial & Markets
1	Chile	Netherlands	Chile	France
2	New Zealand	New Zealand	US	Belgium
3	France	South Africa	New Zealand	Italy
4	Italy	Chile	Argentina	Japan
5	Netherlands	Italy	CANADA	New Zealand
6	US	France	France	Chile
7	Japan	Austria	Brazil	Austria
8	Austria	Brazil	Italy	UK
9	Belgium	Belgium	South Africa	Netherlands
10	CANADA	Japan	Japan	CANADA
11	South Africa	Germany	Turkey	Australia
12	Australia	Poland	Australia	Germany

Rank	Overall	Production Efficiency	Infrastructure & Inputs	Financial & Markets
13	Germany	Australia	Belgium	Spain
14	Spain	Spain	Germany	US
15	UK	US	Germany	Portugal
16	Brazil	CANADA	Netherlands	Greece

Source: Belrose Inc.

It should be noted that the rankings consider Canada overall. BC is considered to have competitive advantages over other regions within Canada and, therefore, would be ranked higher on its own.

- **Strong food safety and quality control systems**

These systems help to maintain the reputation of BC as a jurisdiction with a clean, healthy and safe environment for food production and processing. Food safety and quality will continue to be issues with buyers and consumers. Certification of fruit production and packing will be increasingly important.

- **Broad range of government support programs and initiatives**

The government supports the industry through a number of initiatives. These include:

- The Sterile Insect Release Program which has been successful in reducing the amount of organophosphate insecticides used to control codling moth;
- Tree fruit replant program and transitional payments;
- Tree Fruit Industry Development Fund;
- National Water Supply Expansion Program;
- School Fruit and Vegetable Snack Program to encourage the consumption of locally grown produce;
- Canadian Agriculture Income Stabilization (CAIS) Program; and
- Production (crop) Insurance that provides financial protection for a portion of crop losses.

2. Weaknesses

Key weaknesses that were commonly identified by the various sources included:

- **Declining financial returns**

The industry has experienced a number of years with low average prices and many producers are not able to generate an adequate return. This reduces the funding available for reinvestment. This decline may force more growers out of the industry and make the area less attractive to potential new entrants and those in line to take over the family farm.

It should be noted that there is wide variation in the rates of return experienced by growers. While overall industry profitability has declined in recent years, some operators have remained very profitable taking advantage of strong market returns for certain varieties which are in demand while operating their businesses efficiently and effectively.

- **Production disadvantages vis-à-vis Washington State**

Many operators in Washington State have amalgamated to achieve economies of scale. In general,

Washington State orchards are much larger than the ones in BC. Washington State has some climatic advantages as well with a generally longer growing season. These factors give Washington State higher yields than BC. Our retailer survey also indicated that the Washington State products might have a quality advantage. The small size of the overall industry in BC means that provincial growers have very little market powers.

- **Labour shortages**

The industry is fairly labour intensive, especially in the picking season. In recent years, there has been a growing shortage of this type of seasonal labour. The labour shortage has resulted in higher wage costs at both the grower and the packinghouse level. This is mainly due to the record low unemployment in BC and the opportunities in Alberta.

There are seasonal worker shortages, particularly for picking. This is particularly acute in the cherry sector as newly planted acreages mature. The latest commercial cherry variety, Staccato, is picked at the end of August in late areas. It is uncertain if there will be sufficient labour to pick and pack at this time of year. For cherries there are possibilities of mechanization. There is an initiative in the US using mechanical picking to reduce labour requirements and associated problems. Trees must have a particular growth structure to use this method. The cherries are loosened from the stems chemically before mechanical harvest. Cherries are sold stemless. Initial efforts with mechanical picking and marketing of stemless cherries have shown some success and modifications to the system are ongoing.

A lack of temporary accommodation for pickers is an issue in some areas. Accommodation is expensive to construct and the cost may be prohibitive for small operators. Also, municipal regulations regarding size and codes for temporary buildings are sometimes a barrier.

- **Rising costs**

This issue has become critical with the recent rise in fuel costs (and energy costs in general). Producers located outside of the Lower Mainland are facing significantly higher charges to ship their produce to their main markets. 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. Also, offshore exports use air transportation. Since the 9/11 terrorist attack, airfreight costs have gone up while availability of freight space has decreased.

Low unemployment has resulted in higher wages in all parts of the industry as operators struggle to maintain their work forces. Urbanization is encroaching on many traditional farm areas and raising the value of the land due to its suitability for residential and other development. In the Okanagan, there is a high demand for hobby size farms or country estate type properties that is also driving up land prices.

- **Limited marketing resources**

The small BC tree fruit industry has very little market power and is further hampered by a lack of resources to undertake promotional and marketing campaigns. There is a lack of funding for these activities as well as related market research.

Soft fruit is sold through a variety of agencies, so there is limited coordination of promotional activities and quality standards. Fruit quality and harvest maturity standards need reinforcing, particularly during large production years.

Many stakeholders 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.

- **Government regulatory environment**

There is a reduced level of government support for 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 agriculture industry overall has not 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.

There is some sense 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 usually not encumbered with such regulations.

- **Level of industry cooperation and coordination**

The fruit industry has traditionally been fragmented with a series of packinghouses competing for the patronage of the growers. This is changing as the packinghouses are making efforts to cooperate. Many feel that a further level of integration will be necessary for the economies of the industry to improve.

3. Opportunities

Major opportunities that were commonly identified by the various sources included:

- **Differentiate BC products**

Consumer demands include nutritional content, food safety, traceability, convenience, new products, larger volumes and new types of packaging. Some US pear packer-shippers are conditioning pears to trigger the ripening process before shipping. The goal is to have pears for the consumer that will ripen more quickly without losing moisture. In general there could be more customization of product preparation to meet specific buyer preferences. Other areas have had good success with developing regional varieties.

- **Strong supplier relationships**

As retailers consolidate purchasing, they find it increasingly difficult to fine-tune their merchandizing. In the past, the store produce manager had a good sense of what sold well and the special interests of the store's customers. Today, the corporate produce buyer is not directly connected to each individual store, and is not as sensitive to demand issues, and changes in new products. It is becoming a supplier's task to provide the retailer with factual data on consumer demand. This value-added component will become a key to winning over retail loyalty in the future.

- **Increase the quality and safety of fruit**

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 organic sector could be a large part of this development. It may also be possible to further improve quality control and grading systems.

- **Product certification**

Product differentiation, promotion, and niche marketing will be important for BC producers. Growers will need to produce high quality apples in the varieties demanded. Certification may be a way to differentiate products. Some European retailers have demanded EUREPGAP certification. EUREPGAP specifies protocol and compliance criteria for good agricultural practices on the farm and in the packing facility.

- **Increase local and regional demand**

One area seen as having potential is to increase sales of BC tree fruit in the domestic market through import replacement and increasing total consumption. This could be done through expanding the school snack program, promotions of healthy eating, "Buy Local" campaigns and developing more effective local distribution systems.

- **Capture institutional markets**

The institutional market is significant in BC. There are thousands of meals prepared every day in the province's schools, hospitals, prisons and other public facilities. Increasing market share in this area will mean that purchasers in institutions and food service companies will need to be convinced of the advantage of local products.

- **Develop value-added products**

It is becoming increasingly difficult to compete in the world fruit market given that the produce, especially many apple varieties, has achieved commodity status. Given that BC is a high cost producer and unable to compete on price, an alternative is to develop value-added products. The experience with this area has been mixed for BC producers but there are market areas that have been successfully exploited. Our survey of retailers indicated a significant level of demand for this type of product.

- **Promote organic production**

The demand for organic produce continues to grow and retailers are responding. 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 formerly the domain of small niche marketers.

- **Expand agri-tourism**

Agri-tourism can allow farmers to capture more of the consumer's dollar and supplement farm income from other sources. Farmers have used the farm operation itself as well other attractions to enhance this area of potential revenue.

- **Increase the rate of innovation**

Further advances in both growing and processing technologies will facilitate cost reductions and the development of products for niche markets. An increase in the use of technology by producers is necessary to keep pace with the technological changes in other businesses. The application of new technology and innovative methods could have the potential to lower costs and raise margins. Areas of potential include:

- Improved packing technology to increase shelf life;
- New cultivars to fill in late season gaps;
- Machine harvesting;
- New production technologies;
- Pest management;
- Sprayer technology;
- Orchard mapping; and
- Orchard covers.

- **Develop partnerships and alliances**

There are opportunities for mutually beneficial partnerships with producers in the Southern Hemisphere to ensure year round supply of fresh produce. There may also be advantages to have partners in the process of developing new cultivars.

- **Develop export markets**

Export markets have contracted recently but there are still niche producers who export fruit. BC producers still export 10% of the apple crop and 85% of the cherry crop. Export products will need to be of high quality and marketed especially in order to differentiate them from other products to avoid commodity pricing.

- **Lever consumer emphasis on environmental and safety issues**

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 costs of production considerably.

- **More workforce and manager training and education**

The education levels in the agriculture sector are lower than other industries and there are few opportunities to enhance skills through training programs. New entrants to the industry require skill upgrades. There will be increasing need for worker training as the industry becomes more automated and sophisticated. A skilled labour force will contribute to enhanced productivity and quality.

- **Develop new varieties**

This could be a strategy that would improve the net return to growers. The method would be to identify varieties that have market potential and grow enough volume to test harvest, pack and market them. The varieties should be tested with consumers and retailers to determine demand. Not all markets are the same so each one would have to be treated differently. Coordination will be the key

and this may require a restructured industry with a leader who has the mandate to make it happen.

4. Threats

Potential threats that were commonly identified by various sources included:

- **Rising value of the Canadian currency**

As in other exporting industries, the increasing value of the Canadian dollar reduces previous export price advantages. It also increases the costs of materials sourced in the US. The rising Canadian dollar decreases returns to growers for exported fruits and makes US fruits more competitive.

- **Increasing urbanization**

Urban and suburban developments are a major competitor for orchard land in non-ALR land. Pressure on non-ALR land for housing is reducing the area available for production. Also, more land is being withdrawn from the ALR under new regulations that give municipalities more control over the system. Growing fruit on the rural-urban interface will continue to present challenges as the urban population questions conventional orchard practices such as the air-blast spraying of fertilizers and pesticides and bird control methods. 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.

- **Declining apple consumption**

Research indicates that worldwide per capita demand for apples is declining except in China. Decreased per capita demand for apples, coupled with increased supply in the North American market creates oversupply. The main reasons for a reduction in apple consumption are: the decline in the numbers of large family households, the steady trend towards eating more food away from home, and consumers' tendency to spend income increases more on non-food items than on food items. The Canadian demand is relatively stable but it is less so in our main apple trading partners, the US and Mexico. Mexico's demand fluctuates as economic conditions change. Per capita fresh apple consumption in the US is now 17% lower than it was in the 1994-96 period. The table below illustrates consumption trends in North America.

**NORTH AMERICAN PER CAPITA CONSUMPTION
OF FRESH APPLES 1991-2005
(KILOGRAMS PER CAPITA)**

Country	91/93	94/96	97/99	00/02	03/05	2003	2004	2005
Canada	12.03	12.23	12.18	11.56	11.89	11.67	11.79	12.20
Mexico	5.40	4.95	5.48	5.22	5.61	5.33	6.24	5.25
US	8.62	8.75	8.59	7.35	7.27	7.45	7.53	6.83
North America	8.13	8.25	8.10	7.15	7.20	7.25	7.53	6.84

Source: World Apple Review

- **Rising global competition**

The trade in agricultural products has been globalization 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 also compete on quality and volume. Many competing jurisdictions also enjoy the benefit of larger subsidies and less environmental restrictions. The increase in North American and worldwide production has led to the general decline in wholesale prices. BC apple producers are striving to meet the challenge of a general decline in prices resulting from an increase in North American and world production over the past decade. Competition from Chinese fresh apples in Asian markets is expected to increase in coming years and will exert downward pressure on prices. Increased production by cherry competitors in Washington State and Europe will likely mean softening prices. Belrose Inc., publishers of the World Apple Report, projects that world apple production will increase by 25% between 2005 and 2015.

- **Increasing competition from other foods**

Apples and other tree fruits face competition from fruit substitutes, exotics, fruits that are available year-round such as bananas and oranges, and seasonal fruits such as peaches. Within the apple category, different varieties and production systems act as substitutes. For example, Gala competes with McIntosh in the California market and organic apples can substitute for IFP apples. In reality, fruit competes with all other snack foods. These snack alternatives are normally produced by large corporations with significant marketing and promotions budgets.

- **Consolidation of the value chain**

The industry has recently undergone considerable restructuring due to mergers, acquisitions, divestitures, internal growth and new competitors. Consolidation in the retail food sector (driven by expected efficiency gains from economies of size) and the increased popularity of large warehouse superstores are forcing producers, packers and distributors to reassess their marketing strategies. Other effects of the restructuring include the following:

- Retailers have more power to set product specifications and packaging;
- Four food retailers now dominate Western Canada;
- Major North American buyers have been reduced to 8 from 20 in the last decade;
- Retailers are able to offer exclusive procurement agreements, including partnering, long-term agreements, and other strategic alliances
- Higher volumes from individual suppliers and distributors can mean lower wholesale prices and, in turn, improve retailer margins; and
- The importance of wholesale markets as a distribution channel has been reduced.

- **Impact of diseases and pest control**

Controlling outbreaks such as codling moth, leaf roller, cherry fruit fly, little cherry disease, peach twig borer, thrips and aphids can be devastating. In addition environmental regulations often restrict or ban the use of control medium that have traditionally been sufficient to control a pest or disease. Deregistration of commonly used insecticides and fungicides, combined with slow regulatory processes for new pesticide registrations can be problematic. 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 replaced by a product not yet approved in Canada.

This issue also affects the growth of the organic cherry sector. Organic production is limited by the occurrence of the cherry fruit fly for which there is no reliable organic control. Much of the organic production consists of immature fruit that is picked before the fruit fly larvae show up in the fruit. There is a promising organic cherry fruit fly control program currently being tested in the US.

- **Trade restrictions**

Differences in allowable pesticides and residue limits across export markets can make pest control problematic. Also restrictive are phytosanitary regulations and US Homeland Security requirements for exports to the US. 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.

D. PRIORITIES FOR ACTION

One of the objectives of the project was to identify key issues that may represent opportunities and/or challenges for the industry in BC going forward. To determine what these were we reviewed the results of past reports conducted interviews with a sample of industry representatives and staged two workshops with industry stakeholders.

1. Survey of Growers

One useful source of information on the perceptions of growers is a survey which was commissioned by the BC Fruit Growers Association and conducted by Synovate in 2005. The survey asked growers to identify up to three priorities which they feel the BC tree fruit industry should focus on for its long-term strategy. As indicated below, growers identified the top priorities to be: obtaining higher prices for the produce and raising percentage of the selling price going to growers; addressing issues related to imports from Washington State; enhancing government support for the industry; improving marketing; and extending replanting programs.

WHAT THREE PRIORITIES SHOULD THE BC TREE FRUIT INDUSTRY FOCUS ON FOR ITS LONG-TERM STRATEGY?

Priority	Respondents	Percent
Total number of respondents	176	100%
Obtaining a higher price for our fruit/raise the percentage going to growers	70	40%
Eliminate US imports/dumping/control volume of imports	51	29%
Government subsidies/stabilize prices	51	29%
Marketing/promotions/new markets	35	20%
Replanting new varieties	28	16%
Lower pesticide prices/improve sprays	17	10%
Improve the packinghouses/reduce packing costs	11	6%
Reduce labour costs/increase availability of labour	10	6%
Improve the CAIS program	10	6%
Improve fruit quality	8	5%
Attract young people to the industry	5	3%
Ease the Agricultural Reserve regulations/allow land sales	4	2%
Other	34	19%
Don't know/refused to answer	15	9%
Nothing in particular	3	2%

Source: Synovate

2. Survey of Industry Stakeholders

We followed up this research with an interview program of our own involving a broader cross-section of industry participants including packers, marketers, buyers, industry associations, processors, government representatives, and research institutions in addition to growers. To obtain input on potential strategies, we provided each representative with a list of potential issues and asked them to rate the priority that should be placed on each on a scale of 1 to 4, where 1 is no priority at all and 4 is a high priority.

As indicated below, the issues which were, on average, considered to be the highest priority included improving the quality of the tree fruit currently produced, revising the structure of the industry at the packinghouse and marketing levels, increasing access to labour, extending programs to support replanting efforts, improving access to market information regarding local and global demand, production and pricing, improving worker housing (worker housing program/bylaws), increasing the productivity of orchard operations, providing advertising or marketing programs to differentiate BC tree fruits from those of other producers, promoting further development of organic production, and supporting the development and commercialization of new varieties.

STAKEHOLDER RANKINGS OF PRIORITY AREAS

Question: How much of a priority do you think should be placed on the following issues on a scale of 1 to 4, where 1 is no priority at all, 2 is a low priority, 3 is a medium priority and 4 is a high priority?

Issues	Average Ratings
Quality of the tree fruit currently produced	3.7
The structure of the industry at the packinghouse and marketing levels	3.5
Access to labour	3.5
Programs to support replanting efforts	3.3
Access to market information regarding local and global demand, production and pricing	3.3
Worker housing (worker housing program/bylaws)	3.2
The productivity of orchard operations	3.2
Advertising or marketing programs to differentiate BC tree fruits from those of other producers	3.2
Further development of organic production	3.1
The development and commercialization of new varieties	3.0
Local sales and direct marketing systems	2.9
Development of new value added products or markets	2.9
Government regulations or programs	2.8
Development of export markets for tree fruits	2.8
Development of markets such as institutional markets for lower grade products	2.8
Packing house charges	2.5
Research in other areas	2.5
Anti-dumping trade actions	2.3
Access to capital	2.3
Restrictions associated with long-term leases	1.7

3. Workshop Sessions

Two workshops were held with industry representatives involving a total of 56 people. The workshops (one in Penticton and one in Kelowna) identified similar issues to the previous sources. The list of issues raised by the workshop attendees appears below.

ISSUES MOST COMMONLY IDENTIFIED AT THE WORKSHOPS

Opportunity, Challenge, or Issue	Number of Attendees
Fruit quality	24
Marketing issues: various aspects	20
Access to labour	20
Structure of the industry	19
New variety development	16
Productivity/cost reduction	14
Food safety	11
Government regulations and programs	7
Information access: various areas	5
Antidumping actions	5
Value-added potential	5
Technology/R&D	5
Organic promotion	3
Continue replanting program	2

Through the industry workshops, the public meetings and discussions with the Steering Committee, we were able to establish priorities for the above issues and obtain agreement on the five main goals for an industry development strategy that addressed the highest priorities of the industry. These are presented in the next chapter that outlines the industry strategy.

IV. DEVELOPMENT STRATEGY FOR THE TREE FRUIT INDUSTRY

This chapter outlines the development strategy for the tree fruit industry in British Columbia, including:

- A **vision statement**, which defines what the industry is seeking to become;
- A set of specific **goals**, which reflect five key pillars that will provide the foundation for future development of the industry;
- A clear set of **objectives** for the strategy, which are actionable, time-bound, and measurable; and
- The key **strategies and actions** that are required to realize the vision and objectives. The strategies and actions will represent commitments of time and resources.

A listing of the vision, goals and objectives is provided in the table on the following page.

A. VISION

The vision statement defines what the industry is seeking to become. In our experience, an effective vision statement should incorporate one or more of the following characteristics:

- Imaginable: conveys a picture of what the future will look like
- Pointed: clarifies the direction we need to move toward
- Consistent: with our competencies and position
- Motivating: provides a sense of purpose
- Distinct: should set BC apart from others
- Desirable: appeals to the long-term interests of industry, government, academia and other stakeholders
- Feasible: comprises realistic, attainable goals
- Focused: is clear enough to provide guidance in decision-making
- Flexible: is general enough to allow the industry to react to changing conditions
- Communicable: is easy to communicate - can be successfully explained within five minutes

The vision statement that has been established by the tree fruit industry is as follows:

“The tree fruit industry in BC is widely recognized as a vibrant, economically healthy and sustainable industry that enjoys a strong market position based on products that are clearly differentiated and of consistently high quality.”

The vision statement incorporates four key themes, including:

- A high profile for the industry that extends outside of the province (“BC is widely recognized”);
- A strong industry (“vibrant, economically healthy”);
- A sustainable industry (both economically and environmentally); and
- Competitively strong (based on clearly differentiated and consistently high quality products).

OVERVIEW OF THE VISION, GOALS AND OBJECTIVES OF THE TREE FRUIT INDUSTRY DEVELOPMENT STRATEGY

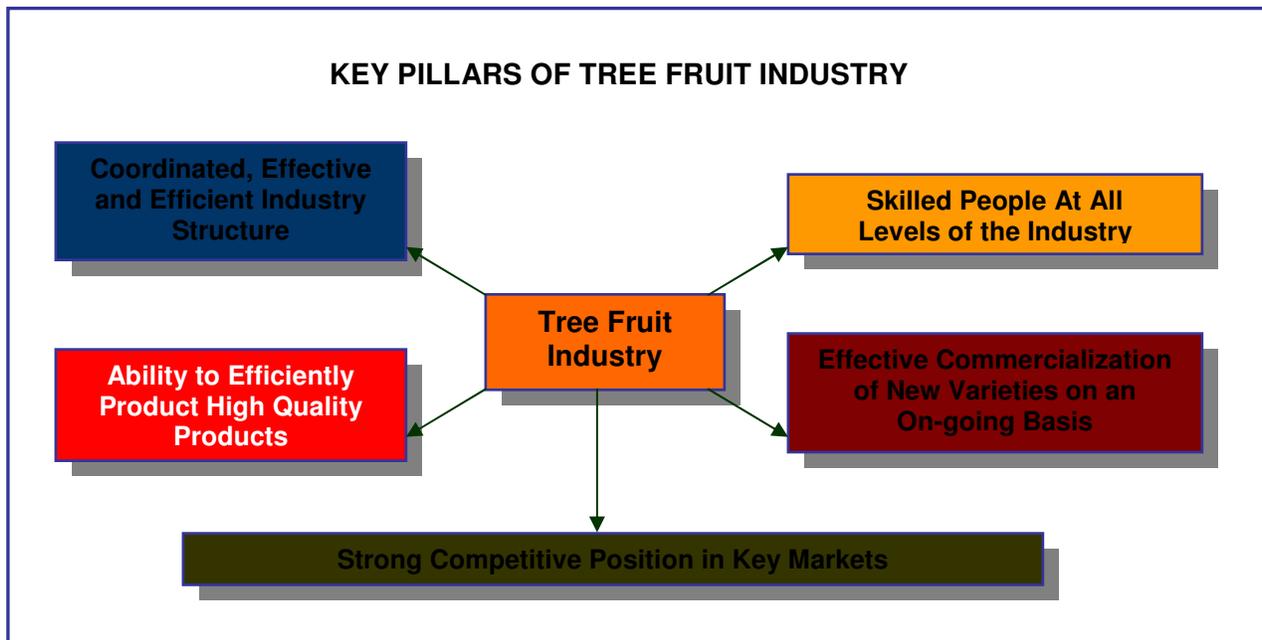
Vision	The tree fruit industry in BC is widely recognized as a vibrant, economically healthy and sustainable industry that enjoys a strong market position based on products that are clearly differentiated and of consistently high quality				
Primary Focus	INDUSTRY GROWTH To ensure that the industry strengthens its critical mass by achieving sales increases in domestic and export markets			PROFITABILITY To ensure that grower profitability is sufficient to maintain operations and attract new entrants into the industry on an on-going basis	
Pillars and Goals	STRUCTURE <i>We will have an industry structure that provides leadership and promotes development and profitability</i>	QUALITY PRODUCTION <i>We will produce consistently high quality products that fully meet the expectations of our customers</i>	MARKETS <i>We will strengthen the position of our products in the markets we serve</i>	PEOPLE <i>We will attract, develop and retain the human resources that we need at all levels of the industry</i>	NEW VARIETIES <i>We will successfully develop and commercialize new varieties on an on-going basis</i>
Objectives	<ul style="list-style-type: none"> • Farm gate receipts and grower net income will grow faster than the rate of inflation, providing a return on investment sufficient to maintain operations and attract new entrants into the industry on an on-going basis • The industry will be highly integrated, with the cooperative packinghouses and coming together to form a single integrated entity whose activities are closely integrated with those of PICO and BCFG • By 2012, the quality of tree fruit production will improve such that 75% of industry production will be in the highest grade categories, quality will not vary by more than 5% year to year, and claims will be under 1.75% for apples and 6.0% for cherries by volume. Retailers and wholesalers will rate the BC products at least equal in quality to those produced in competing regions • Average prices for British Columbia tree fruits will increase at greater than the rate of inflation and the price of 80% of varieties by volume will equal or exceed those generated in Washington State by 2008. To help achieve these higher average prices, British Columbia will move away from commodity markets and focus more on niche markets by generating at least 20% of our revenues from specialty varieties, specialty packs, and organics by 2012 • By 2009, no fruit picking or packing will be delayed through lack of labour, 80% of workers will be returning experienced workers, and sufficient, suitable housing will be available to meet the needs of guest workers • By 2015, at least 10% of sales revenues will be generated from varieties commercialized within the previous 10 years. To help drive the commercialization of new varieties, at least 3 new varieties will be under market development at any given time involving 50 or more acres in test production 				

B. PRIMARY FOCUS

To achieve this vision, the tree fruit industry must be economically strong. As a result, the primary focus of the strategy is to facilitate development of a tree fruit industry that is growing (to ensure that we have a strong critical mass) and profitable so that we can maintain operations and attract new entrants into the industry on an on-going basis. The goals, strategies and actions have been designed with these two key considerations in mind.

C. PILLARS AND GOALS

Reflecting the key issues affecting the industry, the results of the analysis, and the input provided by the industry, five key pillars have been defined that will provide the foundation for future development of the industry. A specific goal has been established with respect to each of these pillars. The five key pillars are Structure, Quality Production, Markets, People, and New Varieties.



Some of the issues related to these pillars are highlighted below.

1. Structure

The tree fruit industry in BC has traditionally been fragmented, with numerous packinghouses competing with each other for the business of the growers. Recent efforts have seen the integration of a number of packinghouses but many feel that more integration is necessary for the efficient operation of the industry. Other jurisdictions have more integrated models. In Washington State, many fruit companies grow, pack and market. A number of these companies handle a larger volume of tree fruit than the whole of the BC industry. Over time, both New Zealand and Washington State have been consolidating smaller operations into larger, more integrated operations to achieve economies of scale and increase market power.

The separation of the production and marketing arms of the industry can give rise to conflicting priorities that take away from the effectiveness and efficiency of operations. An amalgamation of the two parts of the industry will facilitate greater communication and help create a single business model for the operation of the industry.

The efforts of PICO need to be much better coordinated with the other parts of the industry to ensure a strategic approach to the development of new cultivars. Integration with the new industry structure will greatly facilitate the development of a strategic approach.

The BCFGGA is currently involved in many services to growers that overlap with the packinghouse extension services. In addition, the BCFGGA membership consists of packinghouse patrons. In effect BCFGGA is already somewhat integrated with the packinghouses. Further integration would provide a more strategic approach to supply these services and ensure efficiencies in their delivery.

The goal that has been established with respect to the structure of the industry is as follows:

Goal #1: To have an industry structure that provides leadership, promotes development, and is both effective and efficient.

2. Quality Production

Quality is a primary factor on which producers can differentiate their products. Wholesalers, retailers and consumers are increasingly demanding higher quality and more consistent quality in their purchases. Market access is much more limited for suppliers who have difficulties in demonstrating their commitment to quality and consistently meeting these standards. Growers unable to produce a high quality product will not receive premium prices for their products and may soon have trouble marketing them at all.

The quality standards of the packinghouses have been rising. This is due, in part, to the integration of some packinghouses and increasing cooperation between the two remaining packinghouses. However, there are still concerns about the quality of BC fruit. Many of the wholesalers and retailers interviewed during this project indicated that the quality of fruit imported from Washington State is superior to that available from BC suppliers. At the very least, there is a perception issue regarding the quality of BC product.

The quality of production in British Columbia can be impacted by access to technical services and the use of technology. Since the elimination of the Provincial Government extension services, there is no comprehensive industry service in this area. Some packinghouse staff perform this function to a degree but many feel they do not have the necessary resources to make a major impact or ensure the quality improvements required to maintain competitiveness. Publications normally used for grower technical information are becoming dated and no one is responsible for their revision. Some private consultants offer similar services but are too costly for many small operators. In addition, there are few resources available to assist growers in improving their business skills.

Producing quality products can require significant investments, which can be prohibitive for smaller processors. Many smaller operations have few resources available to upgrade their quality control systems.

Research and development efforts are necessary for the development of innovative technologies, techniques and practices that will improve quality. There is also a need for technical information and mechanisms for technology transfer. The agri-food industry in general 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, many producers and processors have not taken advantage of these resources, in part because they have not placed a high priority on innovation to date.

Examples of potential actions that were suggested to improve quality included increased use of technology, reestablishment of extension services; establishing an OUC chair in tree fruit; increased funding for PARC projects; more funding for IPM research; and more web based information.

Other jurisdictions are increasing their investment in tree fruit research. Nova Scotia, with a quarter of BC's apple production, has obtained funding for a Tree Fruit Bio-products research chair to research nutraceuticals and other bio-products. This province also has a Tree Fruit Research Foundation and an Apple Industry Development Fund that supports research, technology transfer, marketing and human resource development.

A number of jurisdictions have programs that subsidize agriculture 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, coordinating and promoting strategic agricultural initiatives 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 leverages 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.

There are many new inexperienced entrants to the industry who require assistance with quality assurance. For many of the new growers, English is not their first language which further complicates their ability to learn the nuances of orchard productivity. There are reports that many orchards are not being managed to their full potential. In some areas, the emphasis has shifted more towards volume than quality.

The goal that has been established with respect to quality production is as follows:

Goal #2: To produce consistently high quality products that fully meet the expectations of our customers.

3. Markets

BC tree fruit producers need to establish a strong position for their products in the marketplace. 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.

Increasing market position will require up-to-date information on industry and competitive trends. Growers require accurate and timely information on market demand changes, trends, pricing and plantings in competing jurisdictions. Producers need to have forecasts of competing regions regarding patterns of production and varieties to be grown. Often producers do not have good information on current consumer preferences for size, colour, firmness and other key attributes. This is in contrast to large food manufacturers who are able to invest to understand consumer preferences and then control the supply of product in the market.

Worldwide consumption of whole apples has been declining. This trend could be countered locally by promoting the health benefits of the fruit. The perception is that manufacturing snacks have contributed to obesity and other health problems. Snack food producers are beginning to react to the pressure from activist groups and are producing more fruit based products. Partly as a result of this, cut fruit and vegetables have been gaining in popularity the last decade. This is also due to advances in preservation such as the development of NatureSeal, a natural anti-browning agent that makes sliced apples attractive. McDonalds has added sliced apples to their menu in the UK and the US.

The goal that has been established with respect to markets is as follows:

Goal #3: We will strengthen the position of our products in the markets we serve.

4. People

The tree fruit industry requires people at all levels, including seasonal workers, farmers and permanent farm staff, packinghouse staff, sales and marketers, small business operators and managers. At the present time, there is a particular need to increase the supply of seasonal workers.

As a labour intensive industry, access to sufficient and suitable labour is key to success. Accessing labour to prune and harvest the fruit quickly and at the right maturity level is critical to ensuring quality and maintaining that quality through the storage phase. There is a significant demand for seasonal labour. However, as a result of the low unemployment rate combined with competing employment opportunities in BC and Alberta, there is a shortage of labour for the tree fruit industry. An added factor is that the second generation of the ethnic groups who previously filled many positions in the industry are less inclined to undertake similar work and, given low unemployment rates, have many other options.

Seasonal workers expect to be housed on farm. Building of such accommodation is a financial burden for small operators. In BC, accommodation support is not in place as it is in Washington State where labour housing is subsidized. Also, some local government regulations regarding building codes add cost and complexity to temporary housing construction.

Small operators also have trouble accessing workers as they only require them for one or two days a week during the growing season. Workers prefer to work full-time and are reluctant to commit to work that is only secure for part of the week.

The Seasonal Agriculture Worker Program (SAWP) has been providing some seasonal labour. Mexican labour is estimated to cost about \$15 per hour including living and transportation costs. It is likely that a

program will be put in place with Caribbean Commonwealth Nations for next year. SAWP is a “premium program”, which means that workers under this program will be more costly to growers than a local employee. In 2004, 4 Mexican workers were hired. This figure rose to 66 in 2005 and, as of July 2006, there were 274 workers approved for hire.

The goal that has been established with respect to markets is as follows:

Goal #4: We will attract, develop and retain the workers that we need at all levels of the industry.

5. New Varieties

The development and commercialization of new varieties provide the industry with opportunities to differentiate our products, stake out a strong market position and generate premium prices. BC growers that have adopted new varieties such as Gala or Ambrosia have enjoyed premium prices in recent years, resulting in more profitable operations.

While the development of new varieties is a critical component of building a strong industry, variety development is a complex process, which requires significant investment in research and testing infrastructure. There are many inherent risks. The industry could better manage these risks by becoming much more systematic with respect to the development and commercialization process. For example, the current method sees growers taking the initiative and planting new varieties, with little input from marketers and packers regarding market opportunities and strategies, horticultural methods, grading standards and storage practices. Typically, marketing programs and storage practices are developed only after the new variety has attained significant volumes. Such delays can contribute to poor decisions and constrain the development of markets for new varieties.

The goal that has been established with respect to new varieties is as follows:

Goal #5: We will successfully develop and commercialize new varieties on an ongoing basis.

D. OBJECTIVES

Reflecting the pillars and priorities, the following objectives have been established under the tree fruit industry strategy:

- Farm gate receipts and grower net income will grow faster than the rate of inflation, providing a return on investment sufficient to maintain operations and attract new entrants into the industry on an on-going basis.
- The industry will be highly integrated, with the cooperative packinghouses and coming together to form a single integrated entity whose activities are closely integrated with those of PICO and BCFGA.

- By 2012, the quality of tree fruit production will improve such that 75% of industry production will be in the highest grade categories, quality will not vary by more than 5% year to year, and claims will be under 1.75% for apples and 6.0% for cherries by volume. Retailers and wholesalers will rate the BC products at least equal in quality to those produced in competing regions
- Average prices for British Columbia tree fruits will increase at greater than the rate of inflation and the price of 80% of varieties by volume will equal or exceed those generated in Washington State by 2008. To help achieve these higher average prices, British Columbia will move away from commodity markets and focus more on niche markets by generating at least 20% of our revenues from specialty varieties, specialty packs, and organics by 2012.
- By 2009, no fruit picking or packing will be delayed through lack of labour, 80% of workers will be returning experienced workers, and sufficient, suitable housing will be available to meet the needs of guest workers.
- By 2015, at least 10% of sales revenues will be generated from varieties commercialized within the previous 10 years. To help drive the commercialization of new varieties, at least 3 new varieties will be under market development at any given time involving 50 or more acres in test production.

E. STRATEGIES, ACTIONS, AND STEPS

The specific strategies and actions that have been defined under each of the pillars are summarized in the table on the following page and further described below.

1. Structure

The two strategies that have been established with respect to the structure of the industry are as follows:

- Facilitate further integration of industry operations; and
- Monitor the progress made in implementing the strategy.

Strategy 1.1: Facilitate further integration of industry operations

Industry amalgamation has begun but operations need to be further integrated to achieve efficiencies and facilitate a business like approach to the future. The resolution of the organizational structure issue should be a very high priority in the implementation of the industry strategy. All the other parts of the strategy will be greatly facilitated by the existence of a unified organization with a single board and CEO.

OVERVIEW OF STRATEGIES AND ACTIONS DEFINED UNDER THE TREE FRUIT INDUSTRY DEVELOPMENT STRATEGY

Goals	STRUCTURE	QUALITY PRODUCTION	MARKETS	PEOPLE	NEW VARIETIES
Strategies	<ul style="list-style-type: none"> Facilitate further integration of industry operations Monitor the progress made in implementing the strategy 	<ul style="list-style-type: none"> Upgrade packing and grading technologies and processes within the packinghouses Upgrade the quality, efficiency, and effectiveness of production at the farm level 	<ul style="list-style-type: none"> Increase demand for BC tree fruits in BC and increase access to markets outside of British Columbia Respond to the rising demand for organic products and safety assurance 	<ul style="list-style-type: none"> Increase access to seasonal workers Identify and address other key human resource gaps and shortages facing the industry 	<ul style="list-style-type: none"> Implement a coordinated and collaborative approach to the commercialization of new varieties
Actions	<ul style="list-style-type: none"> Develop and obtain stakeholder agreement on an integration plan Implement the integration plan Establish an on-going structure to monitor the progress made in implementing the development strategy, track the impact on the industry, and adjust and update the development strategy as needed 	<ul style="list-style-type: none"> Form a Tree Fruit Innovation Council Establish a strategic innovation fund Introduce a revised grading system Adopt pooling practices that reward picking at optimal maturity Upgrade equipment and technology used by the packinghouses Increase the use of automation in labour intensive on-farm operations Extend the replanting program for five years Strengthen and coordinate the extension services Encourage the development of research projects focused on tree fruit issues 	<ul style="list-style-type: none"> Increase the demand for BC tree fruits and increase access to markets outside of BC Form a Tree Fruit Marketing Council to research, develop and implement an industry-wide marketing program for tree fruits Implement an industry-wide marketing program Support the implementation of food safety programs on-farm and within the packinghouses Provide information to growers regarding the opportunities and constraints associated with organic production Research the feasibility of establishing an organic/SIR quarantine area 	<ul style="list-style-type: none"> Work with municipalities regarding related housing bylaws Initiate a worker-housing program Allow workers from one farm to work temporarily on another Increase awareness of seasonal opportunities amongst local residents Work with the Federal Government to introduce a vacationers as pickers program Undertake a labour market analysis Develop education and training programs, workshops and other initiatives needed to address critical skill gaps and shortages 	<ul style="list-style-type: none"> Establish a coordinating body consisting of representatives from PARC, PICO, packinghouses, marketers, growers and other stakeholders Develop and implement a strategy and action plan Develop partnerships with others to develop new cultivars and access other varieties Designate expanded test acreage for new variety trials

Action 1.1.1: Develop and obtain stakeholder agreement on an integration plan

The integration plan should incorporate an organizational study designed to coordinate and amalgamate operations of the packinghouses, the BCTF, PICO and BCFGGA, a business plan and budget that describes the operation of a fully integrated unit, and a transition plan to ensure efficiencies are achieved through rationalization of assets and operations. There should be single board and CEO to balance the variety of interests that currently contributes to fragmented directions and actions. A single manager responsible for the overall health of the industry could balance the variety of interests that now contribute to fragmented action. The integration plan should address whether the business model for the new organization should be coop, private company or public company.

Part of the project of developing an integration plan involves undertaking negotiations with all parties. The focus for the industry must be on the health of the industry and not on the viability of any single operating unit. Improved coordination between all parts of the industry is a necessary part of improving profitability.

Steps:

The major steps that will be taken to develop an integration plan are as follows:

- Establish a Steering Committee to oversee development of the integration plan and the strategy. The Steering Committee should include representatives from all the organizations concerned including BCTF, OTFC, BCFGGA, PICO and the packinghouses. The Committee should be responsible for negotiating the terms of the integration. The first task of the group will be to develop the Terms of Reference for the integration plan.
- Commission an organizational study. The study should identify and review potential models, identify best practices, assess the potential benefits in terms of efficiencies, better coordination between industry areas, and enhanced lobbying facility, review the constraints to amalgamation, and develop recommendations regarding the potential structure of the organization.
- Obtain agreement on the structure. Direct talks between all the organizations involved will be necessary to resolve any outstanding issues. The plan will then need to be ratified by the organizations.
- Develop the business plan. This business plan will include a budget, outline operations, and detail how to optimize asset utilization in the new entity.
- Develop the transition plan. The transition plan will indicate a scheduled phased approach to merging the various units that have agreed to the merger. This will entail a rationalization of operations and organizational structure. OSC continues to be reticent to join the amalgamated industry structure. As OSC represents only 15% of the growers its participation is not critical to the success of the new organization. However the attempt needs to be made to present a business case for being part of the new structure. If OSC continues to resist, the amalgamation should proceed in spite of this. This plan should include a 5 year plan for optimizing asset utilization.

An organizational study is underway and should be completed by February 2007 (\$50,000 from Tree Fruit Industry Development Fund (TFIDF) has been dedicated to completing this component). Negotiations should be completed and final plans in place by December 2007. Performance monitoring should begin after the first 3 months of implementation.

The OTFC will take the lead in the project. Other organizations will need to participate in the process and take the eventual plans to their boards for ratification. They will also need to contribute organizational information necessary to complete the plan.

Action 1.1.2: Implement the integration plan

Implementation will require overcoming political and historical barriers to creating a fully integrated industry structure. Further amalgamation of the packing function has the potential to realize the types of benefits already seen from previous mergers. These include efficiencies, reduced duplication, elimination of packinghouses competing with each other, and economies of scale. Efficiencies gained will continue to facilitate quality enhancement and cost reduction.

Steps:

The major steps to be undertaken will be defined in the integration plan. The target completion date for integration is March 2008. It is anticipated that the cost of implementation will be supported from identified cost savings augmented by possible monetization of asset.

Strategy 1.2 Monitor the progress made in implementing the development strategy

Implementation of the industry strategy needs to be monitored on an on-going basis to track the progress made towards the achievement of the objectives as well as to ensure that actions are carried out and those responsible have taken the necessary steps to meet the strategy goals.

Action 1.2.1: Establish an on-going structure to monitor the progress made

An industry Steering Committee will meet quarterly to review the progress made in implementation, track the impact on the industry, and adjust and update the development strategy as needed. The Committee will also produce an annual status report.

Steps:

- Establish a Steering Committee to oversee implementation. This may be the same Steering Committee that is established to oversee development and implementation of the integration plan.
- Meet quarterly. The Steering Committee overseeing the integration and other parts of the strategy will meet quarterly to review progress on the plans.
- Produce an annual status report. The Committee will produce an annual report that will evaluate and report on the state of the industry and progress on the strategy. The report will measure progress against the benchmarks set out in the strategy framework.

A budget of \$75,000 has been proposed annually for the purposes of tracking, evaluating, and updating plans and strategies on an on-going basis. Some of the data that will be required to track the performance of the industry are summarized below.

SOURCES OF DATA FOR TRACKING THE PERFORMANCE OF THE INDUSTRY

<p>BCMAL Annual Production Data</p>	<ul style="list-style-type: none"> • Farm gate receipts • Volume and value of sales by tree fruit and type of sale (fresh wholesale, roadside, and processed) • Average prices • Revenues generated from new varieties
<p>Annual Survey of Growers and workers</p>	<ul style="list-style-type: none"> • Grower net income • Ratings regarding access to picking labour • Percent of workers returning experienced workers • Access to suitable housing for guest workers
<p>Statistics Canada</p>	<ul style="list-style-type: none"> • Grower net income and Return on Investment • Data on the rate of inflation
<p>Marketing and packing records of Industry Organization</p>	<ul style="list-style-type: none"> • Progress made towards industry integration • Number of varieties under development • Acreage in test production • Industry production by tree fruit by grade • Claims data • Percent of revenues generated from specialty varieties, specialty packs, and organics
<p>Other</p>	<ul style="list-style-type: none"> • Average prices by tree fruit in other jurisdictions (from other jurisdictions) • Retailer and wholesaler ratings re: quality (from periodic market research)

2. Quality Production

The two strategies that have been established with respect to quality production are as follows:

- Upgrade packing and grading technologies and processes within the packinghouses
- Upgrade the quality, efficiency, and effectiveness of production at the farm level

Strategy 2.1: Upgrade packing and grading technologies and processes within the packinghouses

Integration of packinghouse operations can help facilitate the adoption of innovative packing technologies and processes. In the past, the primary focus has understandably been on cost control. However, an increased emphasis on quality is necessary to better meet consumer demands.

Action 2.1.1: Form a Tree Fruit Innovation Council

The Tree Fruit Innovation Council will help to strengthen the relationship between industry, universities and PARC through increased communication and shared research projects as well as other initiatives. The Council will also work to raise funding for research and innovation, in part through developing

proposals for research funding and a strategic innovation fund for the tree fruit industry. The strategic innovation fund could be used to support technology and knowledge transfer activities, an OUC chair in tree fruit, and research projects including PARC projects and IPM research. The focus of the research and development efforts activities will go beyond innovative packing and grading technologies, techniques and practices to include other objectives including the development and introduction of new varieties.

Steps:

The major steps in forming such a Council are outlined below:

- Select members for the Council. Council members should include members from all stakeholders that would benefit from enhanced technology and research coordination. These stakeholder groups would include growers, packers, PICO, PARC, and UBC.
- Determine research priorities. The Council needs to clearly define priority needs for further research and technology transfer that are consistent with the goals of the industry strategy. A formal research and consultation process will help to determine priorities.
- Lobby for the establishment of an innovation fund. Both the Provincial Government and Federal Governments should be approached to contribute to a fund that would be used to enhance the efforts of researchers to develop new technologies and increase industry access to best practices. The innovation fund could have wider applications than grading and packing technologies.

The objective is to establish the Tree Fruit Innovation Council by March 2007 and to prepare a proposal for funding by the end of the year.

Action 2.1.2: Establish a strategic innovation fund

The Tree Fruit Research Council will seek funding to establish a strategic innovation fund. The strategic innovation fund could be used to support technology and knowledge transfer activities, an OUC chair in tree fruit, and research projects including PARC projects and IPM research. The focus of the research and development efforts activities will go beyond innovative packing and grading technologies, techniques and practices to include other objectives including the development and introduction of new varieties.

Steps:

The major step is to prepare a formal proposal and seek funding from various sources including the BC Ministry of Agriculture and Lands and the Investment Agriculture Foundation. A budget of \$6.5 million has been recommended by the industry.

Action 2.1.3: Introduce a revised grading system at the packinghouses that focuses more specifically on maturity

A major component of quality assurance programs is the grading system used in the packinghouses. This system must be geared to ensuring that the fruit is of high quality and has good storage characteristics.

The system should promote strict adherence to maturity standards to facilitate long-term storage and provide incentives for growers who comply with field service harvest recommendations. The BC Fruit Packers field services assign a maturity index to every grower lot and then assign start dates based on the maturity index to ensure picking started at an optimal time for fruit quality.

A system needs to be developed that pays growers to pick fruit before waiting for colour changes. At the present time, payment is based on fruit colour. However, when left longer on the tree to achieve this colour, the fruit doesn't store as well as fruit picked earlier. The adoption of internal quality testing equipment can aid in the implementation of this type of system. The fruit should be traceable back to the grower such that any problems with quality which are discovered later could impact on the grower's revenues.

Steps:

The major steps involved in upgrading the packing and grading technology, processes and system are as follows:

- Benchmark current system standards and performance against that of the competition.
- Conduct an internal assessment of the related practices and recommend necessary changes to improve performance.
- Implement required changes to grading system. This will require an implementation plan and the acquisition of new technology

The benchmarking and independent assessment should be completed by December 2007. Implementation should begin in January 2008. The OTFC will be responsible for this action. The TFIDF will be asked to contribute \$25,000 to the project.

Action 2.1.4: Adopt pooling practices that reward picking at optimal maturity

Under the existing system, growers producing differing levels of quality can be compensated equally. Packinghouses are also under pressure to take all the produce from all of its members. An alternate system that more fairly compensates for producing higher grades would increase the motivation of growers to produce quality fruit. An increased focus on quality may also require packinghouses to reject low-grade produce. This may have the effect of eliminating growers not committed to quality from the system. Often, these operators are on the verge of retirement or merely operating an orchard as a hobby or for its tax advantages.

Steps:

The major steps involved in changing pooling practices are as follows:

- Benchmark the current system against other models and other regions.
- Conduct an internal assessment of pooling practices and recommend necessary changes to improve performance.
- Implement the required changes to the pooling system.

The benchmarking and independent assessment should be completed by December 2007. Implementation should begin in January 2008. The OTFC will be responsible for this action. The TFIDF will be asked to contribute \$25,000 to the project.

Action 2.1.5: Upgrade the equipment and technology used by the packinghouses

Enhanced technology in the packinghouses is needed both to support improvements in quality and to ensure that productivity reaches its optimum levels. Research indicates that internal attributes like taste, texture and flavour should also be standards in the grading system so that consumer “eating quality” expectations can be fulfilled while paying an appropriate price to meet those expectations. A number of large fruit shippers (including BC’s competitors in Washington State) are incorporating non-destructive internal quality testing equipment on their packing lines in an effort to assure high fruit quality.

Steps:

The major steps with respect to upgrading equipment and technology used by the packinghouses are as follows:

- Design a technology roadmap. The technology roadmap will outline best practices in packing house operations with an emphasis on innovations that have had an impact on quality. This technology roadmap should provide sufficient detail to enable packinghouse management to make decisions resulting in optimal use of technology to ensure and improve quality.
- Develop budget priorities for technology acquisition and application. The technology roadmap should be reviewed to determine the applicability and financial feasibility of available best practices. New technologies will need to be costed and sources of funding identified
- Develop a business plan and implementation schedule. After the decisions have been made regarding which technologies to purchase and apply, a business plan with an implementation schedule should be developed. This plan will detail the steps necessary to successfully integrate new technologies and practices into the packing process.

The Technology Roadmap should be completed by July 2007. A budget for changes to packinghouse technology should be completed by December with an implementation schedule in place by January 2008. The TFIDF will be asked to contribute \$50,000 to the project.

Strategy 2.2: Upgrade the quality, efficiency and effectiveness of production at the farm level

There are opportunities to improve quality, efficiency and effectiveness of production at the farm level by increasing the use of automation, extending the replanting program, and strengthening extension services.

Action 2.2.1: Increase the use of automation in labour intensive operations

There are opportunities to mechanize some farm operations to improve efficiency. For example, the use of platform picking machines reduces harvesting times. In the cherry industry, researchers are studying the potential for a mechanical cherry harvester. This option could help reduce harvest costs for cherry producers by 80 to 90 percent compared to standard hand harvest.

Steps:

The major steps involved in increasing the use of automation are as follows:

- Research best practices in the area of automation. Improved quality often requires innovation. There is a need to research best practices in this area to determine the optimal techniques for farm operations. There are a number of automated farm systems currently available or in development process that could improve quality as well as productivity of farm operations.
- Provide information to growers. Growers should be made aware of best practices through seminars, web sites, newsletters and industry conferences. The information should include site specific information that may affect the efficacy of technology applications.
- Conduct demonstration projects. The positive benefits of applying best practices can be illustrated with on-farm demonstration projects. Growers willing to adapt automated systems could be assisted with implementation with a view to demonstrating their utility.

Both OTFC and BCFGAs should be involved in researching best practices and developing demonstration projects over the next year. A budget of \$25,000 to \$50,000 could be established.

Action 2.2.2: Extend the replanting program for five years

The replant program has been highly successful and is seen as being a major reason the industry has been able to survive the current crisis. The extension of the program would allow more growers to take advantage of the opportunity to plant new varieties and more productive high density plants.

Having orchards that can be established and cropped significantly in the first two to three years contributes to the business case for high-density systems. Because of the early production and higher returns, many higher density orchards are breaking even in 6 to 7 years compared to 10 to 12 years for traditional systems. Efficient use of labour to harvest and prune from the ground or from a short stool is another advantage of using a high-density system. The replant program will also be used to promote new varieties and grafting activities.

Steps:

The major steps involved in extending the replanting program are as follows:

- Develop a proposal for extending the program. The proposal should state the economic case for government investment. Emphasis should be placed on the benefits achieved to date by the program. The request should be for a five-year program to recognize the time required to introduce new plantings. The proposal should include a grafting component.
- Submit the proposal to the Provincial Government and Federal Government. The submissions should be timed to coincide with the budget cycles of the two levels of government.

The industry has proposed annual funding of \$5 million per year, which would represent a budget of \$25 million over 5 years. Lobbying for an enhanced replanting program should begin as soon as possible given government budget cycles.

Action 2.2.3: Strengthen and coordinate the extension services

At present, there is no system in place to provide comprehensive market, business and technical information to growers in the tree fruit industry. Growers have indicated that a lack of information is a hindrance to their ability to make appropriate business and production decisions.

The BCFGFA and the field services need to better coordinate their efforts in this area. Integration will facilitate a more strategic approach to service delivery and achieve operating efficiencies. There is a need to make training courses and enhanced information available to both established and new entry growers (some training materials should be in Punjabi as many new entrants do not speak English as their first language). Information should focus on both business issues as well as production techniques (e.g. newer techniques such as reflective blankets, particle films that protect plants from pests and disease while increasing increase photosynthesis, and hail netting). The information delivery could be delivered through conferences, seminars and online information sources.

Steps:

The major steps involved in strengthening the extension services are as follows:

- Identify needs and priorities with respect to extension services. The packinghouse fieldmen have a good sense of what is needed in extension services. However, some further research and consultation should be undertaken to ensure that the needs and priorities of the majority of growers are identified.
- Redesign extension services as part of the integration plan. At present, growers receive extension services from the packinghouses and the BCGFA in an uncoordinated manner. Amalgamation offers the opportunity to merge the services and use a strategic approach to the delivery of such services. After the needs and priorities are identified, an innovation program should be designed, resources sourced and a business plan completed for the new operation.
- Secure the funding needed for implementation. An enhanced extension service will require some additional resources. These may be financial or in-kind through direct assistance provided by government experts. The industry should negotiate with the government on the optimal way to enhance the current service levels.

Action 2.2.4: Encourage the development of research projects focused on tree fruit issues

Measures should be taken to increase communication and collaboration between the industry and academic researchers, with a particular focus on encouraging research related to horticulture, crop protection and post harvest issues. Increased communication can be facilitated through the use of industry advisory committees, workshops designed to identify research priorities, and greater use of student coop and internship programs. An Ontario report has recommended the formation of an agriculture “think tank” comprised of agriculture stakeholders to set research priorities in that province.

Steps:

The major steps involved encourage the development of research projects focused on tree fruit issues are as follows:

- Support the preparation of a tree fruit research roadmap. This roadmap should outline the research requirements associated with post-harvest issues, crop protection, horticulture and new varieties. It should form part of the industry participation in the National Apple Research Needs Conference sponsored by the Canadian Horticultural Council.
- Identify specific research priorities for BC. The research priorities should be identified through the work of the Tree Fruit Innovation Council.
- Obtain funding for up to 7 short-term priority projects.

A budget of \$20,000 could be obtained from the TFIDF for the research roadmap. Funding of perhaps \$150,000 could be obtained for the pilot projects from a variety of sources such as IRAP, Western Diversification, the Minor Use and Pesticide Risk Reduction Programs, the Investment Agriculture Foundation, and Agri-Food Futures Funds.

3. Markets

The two strategies that have been established with respect to markets are as follows:

- Increase demand for BC tree fruits in BC and increase access to markets outside of British Columbia
- Respond to the rising demand for organic products and safety assurance

Strategy 3.1: Increase the demand for BC tree fruits and increase access to markets outside of BC

Local markets are the easiest to access and can provide an excellent source of sales growth. Due to high costs and competition from expanding lower cost producers, many former export markets are no longer available to BC fruits. However, there may still be niche opportunities for exporting high quality BC fruits. Strong standards relating to environmental, quality and safety issues are an important element of developing high quality consumer products and they can help strengthen the competitive position of our products in these markets.

Action 3.1.1: Form a Tree Fruit Marketing Council

The Tree Fruit Marketing Council should be modelled on the successful Blueberry Council that recently engaged in a number of marketing initiatives with the help of the Provincial Government. One of the first functions of the Council will be to lobby the Provincial Government and other organizations for sufficient funding to develop and implement an extensive marketing program.

Steps:

The major steps involved in forming a Tree Fruit Marketing Council are as follows:

- Select the members. The membership of the Tree Fruit Marketing Council should include all stakeholder groups with an interest in increasing the market share of tree fruit. At a minimum, there should be representatives from BCTF and OTC.

- Work to secure funding for the marketing initiatives outlined in following actions, such as generic promotional programs targeted at BC consumers, the development of varied packaging, work to develop institutional markets, and implement export market development programs. The most likely source is the Provincial Government which provided similar funding for the blueberry industry.

The objective is for the Tree Fruit Marketing Council to be in place and operating by March 2007. The industry is proposing a budget of \$100,000 for the design of the promotional program (funded by ACT NOW, TFIDF, and the Ministry of Agriculture and Lands), supported by a 10 year \$25 million endowment to support implementation over the next decade. It is proposed that industry, the Ministry of Agriculture and Lands, and Agriculture and Agri-food Canada each contribute one-third. Work on this action should begin in the spring of 2007 with a proposal to government completed by the summer. The promotion program should be in place by January 2008.

Action 3.1.2: Support generic promotional programs targeted at BC consumers, leveraging the activities of the School Health Snack Program

A major focus of the marketing activities should be to strengthen our position within the BC market. One potential method of health promotion is to take full advantage of Provincial Government's school snack program. The K-12 system serves approximately 570,910 public school FTEs (full-time equivalents), including 55,189 Aboriginal students, approximately 63,709 independent school student FTEs and more than 2,700 home-schooled children. The potential number of school children at public schools is therefore almost 450,000. The proposed program is to reach 1,200 Elementary and Middle Schools, estimated population 360,000, by 2009. Discussions are being held with three Ministries (Education, Health, Agriculture) to discuss funding levels and possible expansion of the program.

Steps:

The major steps involved are as follows:

- Design a 2 year promotional program. A generic promotion program needs to be designed that includes a media campaign and coordination with current government initiatives supporting healthy eating. A proposal for government needs to be developed that incorporates the program and details coordination with ACT NOW and the School Snack program.
- Submit a proposal to government to fund domestic marketing activities. The proposal will either go directly to government or, if a marketing fund has been established, directly to the administrators of that fund.
- Implement the promotional program. Program implementation will consist of determining priority actions given the level of funding available and contracting with suitable agencies to conduct the campaign.
- Submit a proposal to expand the healthy snack school program. The proposal should request an expansion of the school program from its current levels in order to introduce more students to BC Tree Fruits. The proposal will document the affect of the program to date on sales of BC tree fruit.

Action 3.1.3: Explore varied packaging

One way to identify and promote BC produce is to introduce alternative packaging. For example, a retailer cannot buy a 10 lb or 20 lb box of apples; only 40 lb boxes which the consumer never sees. These decorated and attractively packed boxes are usually only seen by the stock boy. Another option would be to pack a 10 lb box; with a number of different varieties to make it more attractive.

Steps:

The major steps involved are as follows:

- Research packaging options. There are currently very limited options available to consumers for purchasing packaged BC fruit. Usually the fruit is either available in single variety large boxes or loose on the counter. Other fresh produce products use a variety of packaging that appeals to the desire for convenience and safety.
- Test market the packaging. Once packaging options are researched and options chosen, the varied packaging will need to be test marketed in retail outlets. Retailers that show a preference for locally produced fruit should be targeted for this exercise.

Action 3.1.4: Develop an export opportunities program

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.

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.

The export markets available to BC will be niche markets that will respond to a differentiated product. A BC brand should be developed and marketed in a creative campaign that creates a desirable identify in the minds of key decision-makers.

Steps:

The major steps involved are as follows:

- Identify potential markets. Market research will be required to determine where opportunities exist and for what products. The research could probably be accomplished as a “desk top” project given the extent of literature describing world market conditions and developments.
- Identify priorities. Reflecting the results of the research, the industry must define priority markets to pursue and priority products to sell to those markets. A small number of markets and a small number of products should be chosen to limit the need for new resources and to allow the marketers to concentrate their efforts.

- Write and submit a business plan, which outlines a strategic marketing plan. This plan will be submitted to the relevant federal agencies that promote export development.

Action 3.1.5: Develop institutional markets

Public and private sector institutional buyers, including educational institutions, hospitals and care homes, correctional facilities, transportation companies and others, represent a significant potential market. Accessing this market will require research into institutional purchasing practices and possibly a proposal to government to achieve the required policy changes for public sector institutions.

Steps:

The major steps involved in developing institutional markets are as follows:

- Research the purchasing procedures of institutional buyers. Public sector institutions and, where appropriate, their food service contractors will need to be approached to determine their purchasing criteria and how BC Tree Fruit might meet those criteria. The industry should work with the Sustainability Purchasing Network. This organization is persuading institutional buyers that they should consider environmental concerns, such as limiting transportation requirements, in their purchasing criteria.
- Submit a proposal to government for policy modifications. The Provincial Government could be encouraged to use BC Tree Fruit products where they have direct control over purchasing and to encourage other public sector institutions to consider this source for fruit products. At the very least, the institutions could be presented with a plan to introduce fruit vending machines at their facilities. This can be part of the overall proposal seeking better access to public sector purchasing departments.

Action 3.1.6: Encourage the development of value-added enterprises

The objective of this action is to 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. 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.

Steps:

The major steps involved in encouraging the development of value-added enterprises are as follows:

- Assess the market potential for value-added products by conducting market research as well as research into potential product development.
- Assess specific opportunities. Once overall market potential is determined, further research should be conducted into specific opportunities to determine the required product characteristics and develop appropriate marketing strategies. Facilities made surplus by consolidation within the industry may be candidates for conversion into value-added production facilities.

- Promote awareness of the opportunities. The potential opportunities should be presented to the industry as well as to a wider range of entrepreneurs. Awareness can be created through seminars, conferences, websites, newsletters and other methods.

Strategy 3.2: Respond to the rising demand for organics and safety assurance

The demand for organic produce and other assurances of health and safety for food is rising significantly. 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% share of the retail market they held in 1999 to 4.4% 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). US organic food retail sales reached an estimated \$10.3 billion in 2003, up from \$3.5 billion in 1997 (retail sales estimated by the Nutrition Business Journal). WalMart and Safeway in the US, Aldi in Germany and Tesco in the UK are all looking for more organic produce. It is still unclear what price points will be established by these retail chains which have built their markets through low prices. 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.

Food products need to be safe and seen as safe. Consumer confidence in the safety of products needs to be high. This is achieved through food safety programs and traceability. Thought should also be given to increasing the level of coordination with the safety standards of other jurisdictions such as the EUREPGAP system. There is also a need to increase access to food safety information for producers and processors. 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 food safety; maintained or enhanced market access; increased consumer confidence, and decreased liability through demonstrated due diligence.

Action 3.2.1: Support the implementation of food safety programs on farms

Some of the potential options are to provide training, make information on food safety programs widely available, and promote adoption of traceability programs. The USDA operates a web site (www.foodsafety.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.

Traceability could be increased through bar coding. At least one innovative grower in Summerland is using bar coding with fruit. Bar coding fruit would also allow any defects to be traced to an individual grower.

Steps:

The major steps that should be undertaken are to:

- Undertake consultation and conduct research in order to determine priorities with respect to the implementation of food safety programs on farms.

- Develop an implementation plan and schedule that reflects these priorities and identify the resource requirement.
- Develop proposals and obtain funding for implementation.
- Implement the plan.

Industry has established a target of obtaining \$1.3 million in funding for farm training and \$5 million for compliance from the Agri-Food Futures Fund and National On Farm Food Safety Program.

Action 3.2.2: Support the implementation of food safety programs within the packinghouses

The packinghouses need to examine their food safety systems, determine priorities for improvement and implement enhanced food safety systems. There is potential to fund such safety programs through monetization of packinghouse assets and the Agri-Food Futures Fund (AFFF).

Steps:

The major steps that should be undertaken are to:

- Undertake consultation and conduct research in order to determine priorities with respect to the implementation of food safety programs within the packinghouses.
- Develop an implementation plan and schedule that reflects these priorities and identify the resource requirement.
- Develop proposals and obtain funding for implementation.
- Implement the plan

Industry has established a target of obtaining \$3.25 million in funding from the sale of assets and other funding sources including AFFF and the National On-Farm Food Safety Program.

Action 3.2.3: Provide information to growers regarding the opportunities and constraints associated with organic production

Information should be provided on issues such as suitable locations, transition costs and time, production issues including pests and diseases, market potential, retail trends, premium possibilities, and government support programs. Growers contemplating organic production should have a good understanding of the complexities of this alternative growing method and the areas of the province that are most suitable for this method. Some of the risk factors to be considered include the three-year transition period and restrictions on spray thinning.

Growers should also be made aware of the likely future of price premiums. Higher prices for organic products can encourage farmers to increase production and attract others to convert to organic production. At the same time, as the price differential between organically and conventionally grown products diminishes, more consumers are likely to purchase organic food. Relative changes of supply and demand will determine the magnitude of future price premiums for organic farmers and businesses. If supply begins to grow faster than demand, price premiums will decline.

Organic products do not always attract a price premium when sold directly to the public. Several factors that may contribute to this including:

- Product quality considerations may force organic producers to reduce their prices below those of the non-organic producer to remain competitive;
- Consumers may prefer freshness and product quality which organic farmers may not always be able to deliver; and
- Consumers value fresh produce from a producer they trust and respect as much as they value a product with an organic label.

There is already some government support for the organic industry. The AFFF is a joint federal/provincial (60% federal, 40% provincial) initiative developed to stimulate BC agriculture, particularly in niche and emerging markets. The BC Organic Sector Development Program is a three-year (2002/03-2004/05) Strategic Plan and accompanying project fund. One million dollars will be allocated to projects that address priorities identified in the Organic Sector Initiative Strategic (OSDP) Plan. The priorities are:

- 45-65% of the fund allocated to projects addressing production capacity for organic agriculture;
- 30-40% towards marketplace development and promotion; and
- 5-10% towards organic environmental stewardship.

Growers need to provide 50% of project funding. The fund cannot be used for capital costs (i.e. major equipment or asset purchases) or to fund business start-up costs. This information needs to be widely distributed as well.

Steps:

Demand for organic products continues to rise and many growers are considering this option. A realistic business case for conversion to organic production should be developed and presented to growers. The business case should not be a promotional document but rather a realistic assessment of the potential for premiums and the risk factors. The major steps are to compile existing information and conduct additional research as needed to provide information to growers regarding the opportunities and constraints associated with organic production. The deadline for applications to the Organic Sector Development Program is March 2007.

Action 3.2.4: Research the feasibility of establishing an organic/SIR quarantine area

There may be an opportunity to enhance the reputation of Okanagan tree fruit through certifying the area as free of certain pests. A quarantine of the area could also restrict the import of tree fruit from areas not equally certified.

Steps:

The steps are first to research the feasibility of establishing a quarantine area and then, if the results are positive, conduct an assessment of the potential impact that could be generated from certification. If the potential impacts are substantial, a plan should be developed, implemented and the results promoted.

Leadership on the project should be provided by SIR and BC Tree Fruits with funding from the TFIDF.

4. People

The two strategies that have been established with respect to attracting, developing and retaining human resources are as follows:

- Increase access to seasonal workers; and
- Identify and address other key human resource gaps and shortages facing the industry.

Strategy 4.1: Increase access to seasonal workers

In order to increase access to seasonal workers, efforts should be made to work with local governments to address issues related to housing bylaws, establish a worker housing program, ease restrictions that constrain the ability for guest workers to work on more than one farm, promote opportunities to local groups, and enable vacationers to work as pickers.

Action 4.1.1: Work with local governments regarding related housing bylaws

The industry needs to work with municipalities regarding housing bylaws to encourage:

- Less restrictive farm worker housing by-laws. For example, Vernon has an 800 square foot size limit on worker housing.
- Reasonable septic requirements. Various local governments have restrictive septic requirements that do not recognize the fact that the housing is only occupied during the dry summer season.
- A coordinated approach to housing inspection. Bylaws could be enforced consistently throughout the valley by a common housing inspection service.

Steps:

Discussions must be held with municipalities and regional districts to identify key issues and determine strategies to ease regulatory impediments to temporary summer housing facilities on farm sites. These include both zoning and building code issues. The Ministry of Agriculture and Lands and the AFFF Labour Fund may be approached to complement funding provided by the industry.

Action 4.1.2: Initiate a worker-housing program that will provide suitable accommodation for seasonal workers through assistance to growers' infrastructure costs

Reports indicate that one of the main irritants for workers is inadequate or non-existent housing close to the orchards. When asked about major concerns, workers mention this area even more often than wage rates. A worker-housing program would give BC operators the same advantage that Washington State growers enjoy under their farm worker-housing subsidy. In 2005, the Washington State program provided \$8 million for housing and \$2.5 million for infrastructure. Next year, the \$8 million fund will be increased to \$16 million. A worker-housing program should ensure that the housing is used seasonally and does not convert to rental accommodation. This can be ensured by requiring the accommodation to

have only two of the following three facilities: living area, kitchen and bathroom.

Steps:

This should be an agriculture industry-wide initiative. The housing issue needs to be researched and a proposal should be developed that outlines the optimal solution. Two options are to subsidize farm-based accommodation or to create alternative housing in central locations. Work should begin on this action in the spring of 2007 and be largely completed by the spring of 2008. BCAC along with FARMS BC should take the lead on the worker housing program.

Action 4.1.3: Allow worker gangs from one farm to work temporarily on another

Small farms commonly cannot afford to build housing nor do they need workers for extended periods. Allowing laborers from one farm, where there is adequate housing, to work temporarily on another farm would help to ease some of the supply constraints regarding the seasonal workers while providing the workers with full-time employment. However, regulatory changes will be required before this can occur.

Steps:

The industry needs to work with Federal Government to increase the flexibility of the foreign worker program regarding the sharing of workers between farms as well as the Provincial Government with respect to labour contracting regulations. BCAC along with FARMS BC should take the lead on the issue of sharing workers between farms.

Action 4.1.4: Promote employment opportunities to available labour pool

Some local groups such as students, First Nations residents and retirees represent potential labour sources for the industry. A promotional effort to engage these workers has the potential to help mitigate some of seasonal labour shortages.

Steps:

The steps to be undertaken to promote employment opportunities include:

- Conducting an assessment of the potential labour supply by liaising with key groups including local employment centres.
- Working to increase awareness of seasonal opportunities amongst local residents by undertaking promotional programs, developing an employment website and working through local agencies.

BCFGA, FARMS BC, BCAC and local employment centres should all be involved in the process.

Action 4.1.5: Use vacationers as pickers

Young travelers often seek seasonal work to help with expenses. If they are from outside of the country, the Government of Canada requires that they obtain a working visa. The process to obtain these visas can be very time consuming. New Zealand has developed a worker permit system that provides visitors with permission to work in 48 hours.

Steps:

The steps to be undertaken to enable vacations to work as pickers include:

- Research existing regulations and identify approaches that have worked effectively in other regions.
- Based on the results, a proposal should be prepared and submitted to the Federal Government.

BCAC and FARMS BC should take the lead in dealing with the Federal Government on the visa issue.

Strategy 4.2: Identify and address other key human resource gaps and shortages facing the industry

Human resource issues in the tree fruit industry are not limited to seasonal workers. Steps should be taken to undertake a labour market analysis and, based on the results, develop training and education to address key skill gaps.

Action 4.2.1: Undertake a labour market analysis to determine labour market needs, skill requirements, and skill gaps

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;
- A career ladder developed to bridge careers from farm to processing plant; and
- Customized training that recognizes time, location, cost, and content needs of employers.

The labour market analysis should focus on all levels of the industry including seasonal workers, farmers and permanent farm staff, packinghouse workers, sales & marketing staff, small business operators and managers.

Steps:

This analysis 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 from each these agencies. Participation of the industry will be essential in all phases.

Action 4.2.2: Develop education and training programs

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 specific technical 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, particularly for new entrants into the industry. They can become highly effective learning networks through which 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. Summer (or other period) job subsidies can also attract new entrants by facilitating work experience in the industry.

Steps:

The results of the labour market analysis should be used to identify the key skills requirement and gaps and then encourage educators and trainers to design and implement programs to address those gaps.

5. New Varieties

The strategy that has been established with respect to developing and commercializing new varieties is as follows:

Strategy 5.1: Implement a coordinated and collaborative approach to the commercialization of new varieties

Give the importance of new variety development to the economic strength of the industry, implementing a coordinated and collaborative approach to the commercialization of new varieties is a high priority. To improve the effectiveness of development activities, a coordinating body should be formed which will develop and implement a strategic plan, work to develop partnerships and facilitate testing.

Action 5.1.1: Form a coordinating body of PARC, PICO, Packers, Marketers and Growers

Currently the process of developing and commercializing new cultivars is generally not well planned or coordinated. A more strategic and coordinated approach would help to reduce the risk factors associated with development and commercialization.

Steps:

A coordinating body should be established including representatives from PARC, PICO, packinghouses, marketers, growers and other stakeholders with a mandate to oversee the commercialization of new varieties. OTFC and PICO should take a leadership role in developing the coordinating body, which should be formed in the near future (possibly by the spring of 2007).

Action 5.1.2: Develop and implement a strategy and action plan

The coordinating body needs to approach new variety development in a very strategic manner, guided by a formal strategy and action plan. The plan should outline the entire process from initial research to full-scale commercialization, covering issues related to research focus, initial testing, field testing, licensing, market assessment and market development.

Steps:

The primary steps are to develop and implement a strategy and action plan to ensure a strategic approach to new variety development and commercialization. Both the development and implementation of the strategy could be funded under the Market Development Fund, which was proposed earlier.

Action 5.1.3: Develop more partnerships with others to develop new cultivars

International partnerships are an increasingly important component of strategies for commercializing new cultivars. New Zealand is experimenting with a variation of the club system with a private sector international consortium (Prevar Limited) which is working to exploit New Zealand breeding programs. Prevar introduced its first new cultivar in 2005. International partnerships help to spread reduce the cost of development and commercialization activities. Furthermore, when the clubs involve producers in both hemispheres, the partnerships help to ensure year-round supply of the product.

Steps:

The major steps that should be undertaken towards the development of partnerships include:

- Research the business case for specific partnerships or joint venture.
- Where warranted, negotiate with potential partners and formalize partnership agreements with others to develop new cultivars and access other varieties.

PICO should take the lead in the development of partnerships and finance the partnership development.

Action 5.1.4: Designate expanded test acreage

Sufficient test areas need to be dedicated to ensure that proper testing of new cultivars is carried out. Growers with sufficient acreage for these tests should be provided with the trees required to provide a large enough sample to conduct reliable tests of new cultivars.

Steps:

At least 50 acres should be testing new varieties at any given time. PICO will provide trees at no cost to growers in designated test acreage to ensure sufficient testing of new varieties and reduce the risk factor for individual growers. Funding under the TFIDF can be accessed to conduct technical and market research to assist in planning commercialization activities.

F. ACTION PLAN

The table on the following pages presents the action plan for the strategy, summarizing the key steps to be undertaken, establishing target dates, assigning responsibility for those steps, estimating resource requirements and identifying potential sources of funding.

ACTION PLAN FOR THE TREE FRUIT INDUSTRY DEVELOPMENT STRATEGY

Actions	Steps	Target Dates	Responsible Organizations	Resources
STRUCTURE: To have an industry structure that provides leadership and promotes development and profitability				
Develop and obtain stakeholder agreement on an integration plan	Establish an Industry Steering Committee	February 2007	OTFC, BCFGA, PICO	Cost of the development plan will be funded under the TFIDF (approximately \$50,000)
	Commission an organizational study to address issues related to governance and operations	February 2007		
	Develop a Business Plan and Transition Plan	February 2007		
	Undertake negotiations with all parties to ensure that historical and political issues are dealt with and obtain stakeholder agreement	December 2007		
Implement the integration plan	Implement the integration plan as outlined in the transition plan and agreed to by the stakeholders	March 2008	OTFC, BCFGA, PICO	Implementation of key elements will be funded by asset sales
Monitor the progress made	Annual Evaluation and Report on State of the Industry and Strategy Progress	Steering Committee meets quarterly; status report prepared annually	Industry Steering Committee	\$75,000 annually Industry Innovation Fund
QUALITY: To produce consistently high quality products that fully meet the expectations of our customers				
Form a Tree Fruit Innovation Council	Select members	March 2007	OTFC	---
	Determine priorities	July 2007		
	Identify key sources of funding	December 2007		
Establish a strategic innovation fund	Develop proposal and seek approval for an innovation fund	December 2007	OTFC	Target \$6.5 million in funding from BCIAF and BCMAL
Introduce a revised grading system that focuses on maturity	Benchmark against competitor standards	December 2007	OTFC	
	Conduct an internal assessment	December 2007		

Actions	Steps	Target Dates	Responsible Organizations	Resources
	Implement the revised system	January 2008		TFIDF will fund planning (\$150,000).
Adopt pooling practices that reward picking at optimal maturity	Benchmark against competitor standards	December 2007	OTFC	
	Conduct an internal assessment	December 2007		
	Implement the revised system	January 2008		
Upgrade equipment and technology used by the packinghouses	Develop a technology roadmap	July 2007	OTFC	The Strategic Innovation Fund will fund implementation
	Develop budget priorities	December 2007		
	Develop business plan and schedule	January 2008		
Increase the use of automation in labour intensive on-farm operations	Research best practices	Summer 2007	OTFC and BCFGA	
	Provide Information to growers	October 2007		
	Demonstration projects	October 2007		
Extend the replanting program for five years	Draft and submit proposal	January 2007	BCFGA	
	Federal decision on 5 year program	July 2007		
	Provincial decision on 5 year program	January 2008		
Strengthen and coordinate the extension services	Identify needs and priorities	January 2007	OTFC, BCFGA, Fieldmen, and BCMAL Industry Specialist	TFIDF and MAL \$50,000
	Redesign extension services as part of the industry integration plan	February 2007		
	Lobby for resource requirements	April 2007		
Increase the level of interaction between industry and educational & research institutions	Prepare a research roadmap and participate in national apple research needs conference hosted by the Canadian Horticulture Council	January 2007	OTFC and BCFGA	\$20,000 from TFIDF for roadmap Projects: \$150,000 from IRAP/WD/Minor Use and Pesticide Risk Reduction Programs/BCIAF/AFFF
	Identify research priorities for BC, design and assign projects for short-term funding	July 2007		
	Obtain funding for up to 7 short-term, priority projects	September 2007		
MARKETS: To strengthen the position of our products in the markets we serve				
Form a Tree Fruit Marketing Council	Select members	February 2007	BCTF	
	Lobby for a Market Development Fund	March 2007		

Actions	Steps	Target Dates	Responsible Organizations	Resources
Support generic promotional programs targeted at BC consumers, leveraging the activities of the School Health Snack Program	Design 2 year promotion program	April 2007	OTFC and BCFGa	ACT NOW/ TFIDF/ MAL\$100,000 for design; 10 yr \$2.6 million annual Market Development Fund; \$25 million endowment; BCMAL/ AAFC/ Industry 1/3 each
	Proposal to government	July 2007		
	Deliver program	September 2007		
	Submit proposal to expand school program	July 2008		
Explore varied packaging	Research packaging options	March 2007	OTFC and BCTF	ACAAf \$50,000 Inter-provincial collaboration and Market Development Fund
	Test market packaging	October 2007		
Develop institutional markets	Research purchasing procedures	March 2007	OTFC, BCTF, BCFGa, and BCAC	TFIDF \$10,000 and Market Development Fund
	Proposal to government for policy modifications	September 2007		
Encourage the development of value-added enterprises to meet market demand through market research and education	Determine market potential	June 2007	OTFC and BCFGa	MAL/IRAP/WD \$20,000 Surplus buildings from integration and Market Development Fund
	Obtain funding for studies	February 2007		
	Present opportunities and identify possible new ventures	September 2007		
Develop an export opportunities program	Identify potential markets	July 2007	OTFC and BCTF	Canadian Agri-food export program \$50,000 And Market Development Fund
	Identify priorities	September 2007		
	Write and submit business plan	March 2008		
Support the implementation of food safety programs on-farm	Determine priorities	March 2007	IAF, AFFF and Canadian Hort Council	Target: \$1.3 million for farm training and \$5 million for compliance from the Agri-Food Futures Fund and National On Farm Food Safety Program
	Determine implementation plan and schedule	July 2007		
	Obtain funding	Sept 2008		
	Implement	Within 3 years		

Actions	Steps	Target Dates	Responsible Organizations	Resources
Support the implementation of food safety programs within the packinghouses	Determine priorities	March 2007	IAF, AFFF and Canadian Hort Council	Target \$3.25 million from packing house asset re-allocation, AFFF and National On-Farm Food Safety Program
	Determine implementation plan and schedule	July 2007		
	Obtain funding	September 2008		
	Implement	Within 3 years		
Provide information to growers regarding the opportunities and constraints associated with organic production	Determine market potential	June 2007	OTFC and BCFGa	MAL/IRAP/WD \$20,000 Surplus buildings from integration and Market Development Fund
	Obtain funding for studies	February 2007		
	Present opportunities and identify possible new ventures	September 2007		
Research the feasibility of establishing an organic/SIR quarantine area	Research feasibility	November 2007	SIR and BCTF	TFIDF\$50,000
	Research market impact	November 2007		
	Design implementation plan	December 2007		
	Implement	February 2008		
	Promote the benefits	July 2008		
PEOPLE: To attract, develop and retain the human resources that we need at all levels of the industry				
Work with municipalities regarding related housing bylaws	Prepare proposal	March 2007	BCFGa and Regional Districts	MAL assistance \$20,000 AFFF Labour Fund BCFGa matching 1/3
	Submit Proposal to Municipalities & RDs	May 2007		
Initiate a worker-housing program	Prepare proposal	April 2007	BCAC and FARMS BC	MAL \$20,000 AFFF Labour Fund FARMS BC matching 1/3
	Submit proposal	March 2007		
	Launch program	May 2007		
Allow workers from one farm to work temporarily on another	Propose regulatory changes on labour contractors	May 2007	BCAC and FARMS BC	MAL assistance \$5,000
	Propose regulatory changes for transfers under SAWP	March 2007		

Actions	Steps	Target Dates	Responsible Organizations	Resources
Increase awareness of seasonal opportunities amongst local residents by undertaking promotional programs	Liase with employment centres	March 2007	BCFGA, Canada Employment Centres, BCAC, and FARMS BC	\$15,000 annually for 5 years from First Citizens Fund and HRSDC
	Implement promotional campaign	April 2007		
Introduce a vacationers as pickers program	Research regulations	April 2007	BCAC and FARMS BC	\$5,000 National Sector Council of Agriculture Labour
	Prepare proposal	May 2007		
	Submit proposal	June 2007		
Undertake a labour market analysis to determine labour market needs, skill requirements, and skill gaps	Develop methodology and produce working model updated annually	March 2007	BCFGA and FARMS BC	\$20,000 annually for 5 years AFFF Labour Fund BCFGA matching 1/3
Develop education and training programs, workshops and other initiatives	Identify priority skills	June 2007	BCFGA, Universities, Colleges and Training Organizations	Existing funding programs
	Identify skill gaps	Sept 2007		
	Design programs	December 2007		
	Secure funding	December 2007		
NEW VARIETIES: <i>To be continuously developing and commercializing new varieties</i>				
Establish a coordinating body consisting of representatives from PARC, PICO, packinghouses, marketers, growers and other stakeholders	Select members	March 2007	OTFC and PICO	Market Development Fund
Develop and implement a strategy and action plan	Develop a strategy and action plan	July 2007		
	Implement	October 2007		
Develop more partnerships with others to develop new cultivars and access other varieties	Develop business case	October 2007		
	Contact potential partners	February 2008		
	Partnership agreement	September 2008		
Designate expanded test acreage for new variety trials	Determine current acreage testing cultivars	May 2007		
	Secure additional acreage for testing	September 2007		
	Provide trees to growers for sufficient test areas	December 2007		

**APPENDIX I: MEMBERS OF THE PROJECT
STEERING COMMITTEE**

The members of the Tree Fruit Industry Strategy Steering Committee are:

- Joe Sardinha, Chair, BCFGA
- Glenn Cross, Okanagan Tree Fruit Company
- Rob Dawson, Okanagan Similkameen Cooperative
- Russell Husch, Okanagan Plant Improvement Company
- Rob Simon, BC Ministry of Agriculture and Lands
- Glen Lucas, BC Fruit Growers Association
- Jim Campbell, BC Ministry of Agriculture and Lands
- Jim Elliot, President, Okanagan Tree Fruit Company.
- Joe Lucich, Board, Sun Fresh Co-op

APPENDIX II: PARTIAL LISTING OF THE REPORTS REVIEWED

A. STRATEGIC PLANS

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- The Okanagan Partnership: OKANAGAN Sustainable Prosperity Strategy, ICF Consulting, San Francisco, 2004.
- The Proposed Strategic Plan for the New York Apple Industry, The New York Apple Industry Strategic Planning Task Force, Syracuse, New York, 2001
- Tree Fruit Industry Revitalization Strategy, Okanagan Valley Tree Fruit Authority, 1995

B. INDUSTRY PROFILES

- An Overview of British Columbia's PEACH, NECTARINE, APRICOTS, PLUM AND PRUNE Industries, December 2004.
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- Profile of Tree Fruit Industry, Jim Campbell, Ministry of Agriculture and Lands, 2006

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- 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.
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- Summary Report on Agricultural Issues in British Columbia: Public Opinion and Perceptions: A Report for the Investment Agriculture Foundation.
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E. OTHER

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APPENDIX III: LIST OF INTERVIEW CONTACTS

Name	Role	Affiliation
Allen, Jim	President	NY Apple Association
Athens, Peggy	Executive Director	BC Wine Institute
Bagry, Sam	Grower	
Berry, John	Regional Director(BC)	Agriculture and Agri-Food Canada
Bergon, Philip	Policy Analyst	Agriculture and Agri-Food Canada
Britton, Ann	Coordinator	BC School Fruit and Vegetable Snack Program
Richard Bullock	Board	New Variety Development Council
Calissi, James	General Manager	PICO
Campbell, Jim	Industry Specialist - Tree Fruits and Grapes	BC Ministry of Agriculture and Lands
Cross, Glenn	President	BC Tree Fruits Limited
Currie, Bruce	Board	New Variety Development Council
Daviduk, Kathy	Resource Agent	Ministry of Agriculture, Saskatchewan
Dawson, Rob	Chair	Okanagan Similkameen Coop Growers Association
Demelo, Luis	Grower	Lual Orchards
Dela Erith	Executive Director	Nova Scotia Fruit Growers Association
Evans, Trevor	Owner	Direct Organics Plus
Gardner, John	Apple specialist	Ministry of Agriculture, Ontario
Gauthier, Greg	CEO	BC Tree Fruits
Geen, David	Grower	
Hardman, Bryan	Grower	
Herbison, Yvonne	Regional Pesticide Officer	Ag Canada Pest Management Regulatory Agency
Husch, Russell	President	PICO
Kappel, Dr. Frank	Fruit Breeder	PARC
Krehbial, Yogi	Manager	ProFresh Marketing
LaBlanc, Paul	Director	Apple Growers of New Brunswick
Lamont, George	Retired professor	Cornell University
Leaming, Charlotte	Fieldperson	New Variety Development Council
Low, Don	Industry Specialist/Economist	Ministry of Agriculture and Lands
Lucas, Glen	General Manager	BCFGA
Maycheck, Paul	Manager	Morrison Food Services
Markevicius, Felix	Data Dissemination Officer	Statistics Canada
McSeveny, Bill	Manager	Compass Food Services Company
Melnychuck, Mike	Grower	
Moody, Don	Director	Provincial food services
Munroe, Laura	Senior Economist/Statistician	B.C. Ministry of Agriculture and Lands
O'Rourke, Desmond	Consultant	World Apple Report - Belrose Inc
Potash, Billy	Owner	Cawston Cold Storage
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APPENDIX IV. REVIEW OF OPPORTUNITIES AND CHALLENGES FACING THE INDUSTRY

One of the objectives of Phase I of the report was to identify key issues that may represent opportunities and/or challenges for the industry in BC going forward. These are the issues that were the focus of further research in Phases II and III of this project. Based on the results our interviews as well as a review of past research, we identified fourteen issues for preliminary review including:

- Improve fruit quality
- Modify the structure of the industry at the packing house and marketing levels
- Increase access to labour
- Increase access to market, business and technical information
- Increase productivity and lower costs at all levels of the industry
- Promote organic production
- Develop and commercialize new varieties
- Increase the consumption of BC tree fruits in BC
- Increase fruit safety
- Long-term lease restrictions
- Pursue partnerships with other jurisdictions
- Develop value-added products
- Develop export markets
- Pursue anti-dumping trade actions

This appendix provides a brief overview of each issue including a review of the current situation and possible strategies or actions that could be taken to address them. The preliminary reviews were designed to focus discussion and research in the next phases of the project.

A. IMPROVE FRUIT QUALITY

1. Introduction

Wholesalers, retailers and consumers are increasingly demanding higher quality and more consistent quality in their purchases. Market access is much more limited for suppliers who have difficulties in demonstrating their commitment to quality and consistently meeting these standards.

2. Situation Analysis

- **There are still concerns about the quality of BC fruit.**

Most of the wholesalers and retailers we interviewed indicated that the quality of fruit exported from Washington State could be superior to that available from BC suppliers. At the very least, there is a perception issue regarding the quality of BC product.

- **The grading of fruit has improved.**

It appears that the packing house grading standards have been rising. This is due, in part, to the integration of some packing houses and increasing cooperation between the two remaining packing houses.

- **Investments in innovation are necessary to continue to improve quality.**

Research and development efforts are necessary for the development of innovative technologies, techniques and practices that will improve quality. There is also a need for technical information and mechanisms for technology transfer.

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

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

3. Potential Strategies for Development

Some of the potential strategies that have been suggested to improve product quality include:

- **Provide incentives to growers to pick in a timely fashion.**

A system may need to be developed that pays growers to pick fruit before waiting for colour changes. Currently payment is based on fruit colour. However, if left longer on the tree to achieve this colour, the fruit doesn't store as well as fruit picked earlier.

- **Introduce grading technology to measure internal qualities.**

Researchers argue that internal attributes like taste, texture and flavour should also be standards in the grading system so that consumer "eating quality" expectations can be fulfilled while paying an appropriate price to meet those expectations. A number of large fruit shippers are incorporating non-destructive internal quality testing equipment on their packing lines in an effort to assure high fruit quality.

- **Enhance grading standards at the packing houses.**

Further increasing the grading standards is a controversial issue. Currently, under the cooperative system, it is possible that growers with different quality fruit will be compensated equally. The packinghouse is also under pressure to take all the produce from all of its members. An alternate system that accurately compensates higher grades differently than lower ones would be difficult to design and implement. However, it may be possible through new quality detection technology. A higher standard required by the packing house would increase the motivation of growers to produce quality fruit. It may also be necessary to reject some produce from low-grade producers. This may have the affect of eliminating growers not committed to quality. These operators may be on the verge of retirement or merely operating an orchard as a hobby or for tax advantages.

B. MODIFY THE STRUCTURE OF THE INDUSTRY AT THE PACKING HOUSE AND MARKETING LEVELS

1. Introduction

The tree fruit industry in BC has traditionally been fragmented, with numerous packing houses competing with each other. Recent efforts have seen the integration of a number of the packing houses but many feel that more integration is necessary for the efficient operation of the industry.

2. Situation Analysis

- **Other jurisdictions have more integrated models.**

In Washington State, many fruit companies grow, pack and market. A number of these companies handle larger volume of tree fruits than the whole of the BC industry. Over time, both New Zealand and Washington State have been consolidating smaller operations into larger more integrated operations to achieve economies of scale.

- **There has already been significant consolidation of the industry in BC.**

Three cooperatives have recently formed a single entity, the Okanagan Tree Fruit Company. This effectively leaves only two large cooperative packers in the area. However, the arrangement is termed an “integration”, not an amalgamation.

- **The coop model has some inefficiencies.**

The focus of a coop is not profit but rather the benefits achieved for its members. It has been suggested that, without a profit motive, the management of an enterprise is not entrepreneurial and may lack sufficient motivation or experience political impediments to achieving efficient and effective operations.

3. Potential Strategies for Development

Some of the potential strategies that have been suggested to modify the industry structure include:

- **Further amalgamate the cooperative packing houses.**

Further amalgamation of the packing function has the potential to realize the benefits already seen from previous mergers. These include efficiencies, reduced duplication, elimination of packing houses competing with each other, and economies of scale.

- **Amalgamate BCTF and the packing houses.**

The separation of the production and marketing arms of the industry can give rise to conflicting priorities. An amalgamation of the two parts of the industry could facilitate greater communication and help create a single business model for the operation of the industry.

- **Appoint a single CEO and board.**

Many believe that, for the industry to achieve peak efficiency and effectiveness, it must be managed by a single administrative structure. A single manager responsible for the total health of the industry could balance the variety of interests that now contribute to fragmented action.

- **Modify the cooperative model.**

The cooperative model could be modified to encourage growers and management to focus on improved quality control and production efficiencies. Cooperatives are often designed to benefit all members, which can be an impediment to efficiency and quality. A more business-based model may mean that growers would only be able to market their produce if it achieved a high standard of quality.

C. INCREASE ACCESS TO LABOUR

1. Introduction

Sufficient and suitable labour is a central component of the tree fruit industry system. Accessing labour to prune and harvest the fruit quickly and at the right maturity level is critical to ensuring quality and maintaining that quality through the storage phase. There is a significant demand for seasonal labour.

2. Situation Analysis

- **The unemployment rate in BC is very low.**

Due to a strong economy and the opportunities in the Alberta oil industry, the unemployment levels in BC are their lowest level in years. Also, the second generation of the ethnic groups who previously filled many positions in the industry are less inclined to undertake similar work and, given low unemployment rates, have many other options to such labour intensive work.

- **Itinerant workers require housing.**

Seasonal workers expect to be housed on farm. Building of such accommodation is a financial burden for small operators. Government support for accommodation is not in place in BC, as it is in Washington State where labour housing is subsidized. In addition, some local government regulations regarding building codes add cost and complexity to temporary housing construction.

- **Small operators cannot hire workers full time.**

Small operators also have trouble accessing workers as they only require them for one or two days a week during the growing season. Workers may prefer to work full time and are reluctant to commit to work that is only secure for part of a week.

- **A Seasonal Agriculture Worker Program (SAWP) is in place with Mexico.**

Mexican labour is estimated to cost about \$15 per hour including living and transportation costs. It is likely that a program will be put in place with the Caribbean Commonwealth nations for next year. SAWP is a “premium program”, which means that workers under this program will be more costly to growers than a local employee. The Okanagan tree fruit growers are taking greater advantage of the SAWP program over time. In 2004, four Mexican workers were hired. The number rose to 66 in 2005 and, as of July, there were 274 workers approved for hire in 2006.

3. Potential Strategies for Development

Some of the potential strategies that have been suggested to increase access to labour include:

- **Initiate a worker housing program.**

This program would give BC operators the same advantage that Washington State growers enjoy under their farm worker housing subsidy. In 2005, this subsidy totalled \$8 million for housing and \$2.5 million for infrastructure. Next year, the \$8 million fund will be increased to \$16 million.

- **Form worker gangs to move from farm to farm.**

Organized groups of workers could move from small farm to small farm to ensure the crop is harvested and provide the workers with full time employment. There are already areas where this practice is being employed.

- **Work with municipalities regarding related housing by laws.**

Some municipalities have regulations that affect the building of worker housing. For example, Vernon has an 800 square foot size limit on such facilities. In addition, there are restrictive septic requirements that do not recognize the fact that the housing is only occupied during the dry summer season.

A worker housing program should ensure that the housing is used seasonally and does not convert to rental accommodation. This is possible by ensuring that the accommodation has only two of the following three facilities: living area, kitchen and bathroom.

Municipalities could design less restrictive farm worker housing by-laws and seasonal septic requirements. These could be enforced consistently throughout the valley by a housing inspection service.

- **Use vacationers as pickers.**

International visitors could be presented with opportunities to earn money during their stay. New Zealand has a worker permit system that provides visitors with permission to work in 48 hours.

D. INCREASE ACCESS TO MARKET, BUSINESS AND TECHNICAL INFORMATION

1. Introduction

There is currently no systematic provision for market, business and technical information to growers in the tree fruit industry. Many growers interviewed during the project mentioned a lack of information as a hindrance to their ability to make decisions affecting productivity and profitability.

2. Situation Analysis

- **Growers need to have current information on their competitors' plans and actions.**

Growers require accurate and timely information on market demand changes, trends, pricing and plantings in competing jurisdictions. Producers need to have forecasts of competing regions regarding patterns of production and varieties to be grown. Often producers do not have good information on current consumer preferences for size, colour, firmness and other key attributes. This is in contrast to large food manufacturers who spend freely to understand consumer preferences and then control the supply of product on the market.

- **Many operators lack accurate cost analysis.**

Growers need a cost of production model that is comprehensive and realistic. There needs to be more sophistication in the analysis of return on equity using realistic assumptions. This is necessary

in an industry with small margins to determine a realistic harvesting strategy. A more business-like approach is required with the ability to determine if a crop is worth harvesting at all.

- **There are many new inexperienced entrants to the industry.**

For many of the new growers, English is not the first language further complicating their ability to learn the nuances of orchard productivity. There are reports that many orchards are not being managed properly. In some areas, the emphasis has shifted more towards volume than quality.

- **There are limited extension services available to growers.**

Since the removal of the Provincial Government extension services, there is no comprehensive industry service in this area. Some packing house staff perform this function to a degree but many feel they do not have the necessary resources to make a major impact or ensure the quality improvements required to maintain competitiveness. Publications normally used for grower technical information are becoming out of date and no one is responsible for their revision. Some private consultants offer similar services but are too costly for many small operators. Also, there appears to be few opportunities for growers to improve their business skills.

- **Other jurisdictions provide extensive extension services.**

In Canada, Saskatchewan, Manitoba and Ontario governments maintain a network of extension staff to service the agriculture industry. Saskatchewan has an Agricultural Knowledge Centre for phone information requests (as does Alberta) and nine Agriculture Business Centres around the province to assist growers. These Centres offer services in:

- Business Development;
- Referral and Path Finding;
- Specialist Advice;
- Business Relationships;
- Analysis of Needs; and
- Human Capacity.

In the US, many universities with agriculture programs offer extension services to the industry. The Washington State University is one of the US institutions providing such services. The University has offices in 40 counties that provide educational opportunities to agriculture and natural resource dependent communities.

3. Potential Strategies for Development

Some of the potential strategies that have been suggested to increase access to market, business and technical information include:

- **Re-establish a form of extension services.**

The British Columbia Government formerly 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. There is strong support for such a service in the industry.

- **Establish Peer Networks.**

Peer networks can be a valuable method of information sharing. 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.

- **Offer new entrant training courses.**

These courses could be offered through regional colleges, related associations or private companies. There may be a need to offer these courses in Punjabi as for many new entrants, English is not the first language.

- **Other methods.**

Numerous other methods are used to increase information flows regarding things such as best practices and marketing opportunities. These include conferences, seminars and online information sources.

E. INCREASE PRODUCTIVITY AND LOWER COSTS AT ALL LEVELS OF THE INDUSTRY

1. Introduction

To remain competitive given the current conditions and trends, there will need to be a culture of continually seeking out cost reductions and productivity increments in all parts of the industry. One method is to increase the use of technology. Being a relatively high cost production area, BC 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 could greatly enhance the competitive nature of the industry

2. Situation Analysis

- **Energy costs are rising.**

Traditionally a cheap energy jurisdiction, BC is experiencing energy cost rises for such things as fuel

and natural gas. On farm energy production could 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 truckloads and other affects.

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

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

- **Access to low cost water is being reduced.**

Water availability and price of water are becoming a significant issue. It is anticipated that this issue will intensify as urban pressures increase.

- **A variety of programs provide assistance related to research and innovation that can improve productivity.**

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 and Beverage Processing Industry Initiative. Both the BC and Federal governments provide tax credits for R&D activities

- **Academic cooperation with the tree fruit industry appears to be increasing.**

In April, 2005, the University of BC and the BC Fruit Growers' Association signed a cooperation agreement, which provides direction for the industry and the university to work together on projects of mutual concern. Topics to be pursued include:

- Environment,
- Sustainability,
- Bioproducts and Biotechnology,
- Renewable Resources and Conservation,
- Integrated Pest Management,
- Business Management,
- Agricultural curriculum, and
- Advanced horticultural practices.

The implementation of plans under this agreement has been temporarily postponed.

- **A lack of chemical regulations harmonization with the US creates extra costs and reduces export potential.**

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 or longer. Also, the US deregisters 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.

3. Potential Strategies for Development

Some of the potential strategies that have been suggested to increase productivity and lower costs include:

- **Continue replanting with high density trees.**

Having orchards that can be established and cropped significantly in the first two to three years contributes to the business case for high density systems. Because of the early production and higher returns, many higher density orchards are breaking even in 6-7 years compared to 10-12 years for traditional systems. Efficient use of labour to harvest and prune from the ground or from a short stool is another advantage of using a high density system.

- **Increase labour efficiency.**

Labour efficiency is an important competitive factor. Development of new and best management practices for spray thinning and pruning are important in controlling fruit size and quality. Also the use of platform machines reduces harvesting times. In the cherry industry, researchers are studying the potential for a mechanical cherry harvester. This option could help reduce harvest costs for cherry producers by 80 to 90 percent compared to standard hand harvest.

- **Increase the utilization of Technology and R&D.**

Suggestions for the increased use of technology and R&D include reestablishment of extension services; establishing an OUC chair in tree fruit; increased funding for PARC projects; more funding for IPM research; and more web based information.

Other jurisdictions are increasing research in tree fruit. Nova Scotia, with a quarter of BC's apple production, has obtained funding for a Tree Fruit bio-products research chair to research nutraceuticals and other bioproducts. This province also has a Tree Fruit Research Foundation and an Apple Industry Development Fund that supports research, technology transfer, marketing and human resource development.

Newer production technologies include reflective blankets, particle films (that protect plants from pests and disease and increase photosynthesis), and hail netting.

- **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 worldwide 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 agriculture 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 initiatives 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 leverages 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.

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

Measures could be taken to increase the communication and collaboration between the industry 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.

- **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 US 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 that 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. As of July 1, 2006, Washington State growers can buy machinery parts free of state sales tax.

- **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.

F. PROMOTE ORGANIC PRODUCTION

1. Introduction

Demand for safe food is rising and organic production is seen as a way of ensuring that food does not contain harmful elements. However, the premiums for organic produce are falling as more and more production comes on line.

2. Situation Analysis

- **Organic production is good for the environment.**

The reduction of chemicals in the production of food will limit environmental damage and retain the growing ability of land now in food production. Organic production reduces problems with farm product runoff and ground water contamination. Its use enhances the reputation of producers with a public increasingly concerned about environmental affects of the industry. Environmental degradation caused by agricultural practices has resulted in support for organic principles and practices among consumers and environmental groups.

- **The organic sector continues to grow.**

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). 39% of Americans use organic products (Natural Marketing Institute). US organic food retail sales reached an estimated \$10.3 billion in 2003, up from \$3.5 billion in 1997 (retail sales estimated by the Nutrition Business Journal).

- **Major retailers are planning increased organic offerings.**

WalMart and Safeway in the US, Aldi in Germany and Tesco in the UK are all looking for more organic produce. It is still unclear what price points will be established by these retail chains that have built their markets through low prices. 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.

- **Converting to organic production does entail significant risks.**

Risk factors include the three-year transition period, restrictions on spray thinning, and declining premiums. Producers who moved into organics originally achieved significant premium prices for their organic fruit. However, premiums are now declining due to increased production and will no doubt continue to decline, as organics become a standard instead of a niche market area. A significant conversion to organics may continue to erode the price differentials. However the growing demand may be sufficient counteract this affect.

- **Support for organics is growing for a number of reasons.**

Americans are buying organic products for a variety of reasons, with more than half of respondents saying they believe organic foods are better for the environment (58%) and better for their health (54%). Additionally, 57% believe buying and using organic products are better for supporting small and local farmers. Almost one-in-three Americans (32%) believe organic products taste better, and 42% believe organic foods are better quality

- **Organic products do not always attract a price premium when sold directly to the public.**

Several factors may contribute to this including;

- Product quality considerations may force organic producers to reduce their prices below those of the non-organic producer to remain competitive;
- Consumers may prefer freshness and product quality which organic farmers may not always be able to deliver; and
- Consumers value fresh produce from a producer they trust and respect as much as they value a product with an organic label.

- **There is an organic packing facility already operating in the Okanagan.**

Direct Organics Plus is an organic grower cooperative in the Similkameen Valley. The cooperative represents 150 acres of farmland in organic production and owns and operates a packing facility and warehouse.

- **There is some government support for the organic industry.**

The Agri-Food Futures Fund (AFFF) is a joint federal/provincial (60% federal, 40% provincial) initiative developed to stimulate BC agriculture, particularly in niche and emerging markets. The BC Organic Sector Development Program is a three-year (2002/03-2004/05) Strategic Plan and accompanying project fund. One million dollars will be allocated to projects that address priorities identified in the Organic Sector Initiative Strategic (OSDP) Plan. The priorities are:

- 45-65% of the fund allocated to projects addressing production capacity for organic agriculture;
- 30-40% towards marketplace development and promotion; and
- 5-10% towards organic environmental stewardship

Growers need to provide 50% of project costs. The fund cannot be used for capital costs (i.e. major equipment or asset purchases) or to fund business start-up costs.

- **Washington State Organic production is significant and growing.**

The chart below illustrates the acreage in organic production in Washington State, BC’s major competitor in the tree fruit industry.

**WASHINGTON STATE ORGANIC
FRUIT PRODUCTION ACREAGE 2005**

Tree Fruit	Certified Acres	Transitional Acres	Total
Apples	6,721	1,112	7,833
Pears	1,196	234	1,430
Apricots	95	12	107
Cherry	624	234	858
Nectarines	67	8	75
Peach	179	9	188
Plum/Prune	51	3	54
Other or NS Stone	22	5	27
Total	8,955	1,617	10,572

Source: Washington State University

Like in conventional areas of production BC is a small player compared to Washington State. The table below illustrates the amount of BC land in organic production which is just over 9% of that in Washington State.

BC ORGANIC FRUIT PRODUCTION, 2004

Tree Fruit	Organic Acres	Total Acres	Percentage
Apples	719	15,750	4.5%
Peaches	66	1195	5.5%
Pears	60	825	7.2%
Total	845	17,770	4.7%

3. Potential Strategies for Development

Some of the potential strategies that have been suggested to promote organic production include:

- **Provide information to growers about organic production.**

Growers contemplating organic production should have a good understanding of the complexities of this alternative growing method and the areas of the province that are suitable for his method. Also some pests and diseases are very difficult to control with organic methods. For example, organic cherry production is limited by the occurrence of the cherry fruit fly for which there is no reliable organic control. They should also be made aware of the retailer trends to increase organic purchases.

- **Growers should be made aware of the likely future of price premiums.**

As farmers receive higher prices for their organic products, they increase production, and attract other farmers to the organic sector. At the same time, as the price differential between organically and conventionally grown products diminishes, more consumers are likely to purchase organic food.

Relative changes of supply and demand will determine whether price premiums continue for organic farmers and businesses. If supply begins to grow faster than demand, price premiums will decline.

- **Provide government assistance for conversion to organic production.**

The province could institute a conversion program similar to the replant program that resulted in the conversion of many properties to smaller high-density trees.

- **Use tax incentives to reward agricultural operators who use organic 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 result in more environmentally sustainable methods growing food.

G. DEVELOP AND COMMERCIALIZE NEW VARIETIES

1. Introduction

BC growers that have adopted new varieties such as Gala or Ambrosia have enjoyed premium prices in recent years. Many believe that new varieties are essential for continued profitability, while others are less enthusiastic given the costs, complexities and the inherent risks of this strategy.

2. Situation Analysis

- **New varieties enjoy a price premium but only for limited time.**

Consumers are willing to pay up to 24 cents more a pound for “elite” Gala apples, according to researchers at Washington State University. In 2005, the fresh wholesale price of Ambrosia was 56 cents per pound compared to an older variety like McIntosh which was priced at 23 cents. However, in Washington State, premiums have been smaller and have fallen faster for each new variety introduced. This may be an indication that the market place already contains a sufficient variety of apples. Premiums depend on market acceptance and putting in place quality assurance systems.

- **New varieties require a significant lead time.**

Trees take three years to become productive, enough time for the market preferences to change, especially if there is oversupply of the variety being grown. Consequently, growers are planting varieties up to four years before they can begin marketing a new variety.

- **The Okanagan already produces a large number of apple varieties.**

There are 26 varieties grown in the valley that are never graded but sold locally through the packing house store system. It may be that these varieties are not in demand at the consumer level but it is also possible that they have not enjoyed a level of marketing effort required to sell the variety in quantity.

- **There is conflicting information about retailer preferences.**

There is some disagreement amongst stakeholders regarding whether retailers are demanding new varieties. This could simply be attributed to the fact that different retailers have different preferences.

Some claim that the retailers still prefer the main proven varieties. Others insist that with the right marketing retailers, can become enthusiastic about a new variety. Our survey of BC wholesalers and retailers indicated that there is still a significant demand for new varieties.

- **The trend is to varieties with protected intellectual property and limited release.**

The trend is to “manage” varieties to protect the price premiums for longer than they would remain without control of volumes. New varieties can be protected through plant breeder rights or through non-propagation agreements. Costs are estimated to be about \$2 million to launch a new variety quickly.

- **BC is well positioned to pursue new variety development.**

The research facility at PARC is a significant competitive advantage in this area. The researchers there work closely with the industry as well as local private companies to develop, commercialize and manage new varieties.

3. Potential Strategies for Development

Some of the potential strategies that have been suggested to promote new varieties include:

- **Control intellectual property rights and levels of production for new cultivars.**

This is intended to maintain price premiums by restricting supply. New Zealand and Australia have been protecting intellectual property rights in a number of apple varieties. This has been referred to as the “club” system. In this club system the sponsor-owner of the variety rights would:

- Control the number of plantings;
- Control release of production to market;
- Restrict the number of packing houses and marketers involved;
- Set quality standards to ensure a distinct brand;
- Employ unique packaging, trademarks and promotion; and
- Collect fees from producers, packinghouses and marketers to finance system management.

However, the clubs could focus the members on the club to the detriment of other regional producers. This can create a disincentive to participate in regionally based industry-wide promotions. It is also not certain that the mere existence of such a club will guarantee sufficient sales of the new variety. Before adopting a club variety there are many questions that need to be answered. Desmond O’Rourke of Belrose Inc. (www.e-belrose.com) indicates that the following questions need to be put to any variety sponsor.

- What market niche is being targeted by the new variety?
- What is the present and future competition?
- How big is the market niche?
- What Buzz Can the Variety Create?
- How will the Club be Financed?
- What Price Target does the Club Have?
- How Will the Club Deal with Variations in Supply and Demand?
- How Big a Learning Curve will the Variety Require?
- What Are the Distribution Strategies?

- What Promotion is Planned to Woo Consumers?
- **Develop partnerships with others developing new cultivars.**

New Zealand is experimenting with a variation of the club system with a private sector international consortia (Prevar Limited) to exploit New Zealand breeding programs. Prevar introduced its first new cultivar in 2005. The clubs appear to believe that they will need producers in both hemispheres to ensure year round supply and marketers in both to exploit international opportunities.

- **Develop a strategy which involves marketers and packinghouses in the development and commercialization of new varieties.**

The current method sees growers taking the initiative and planting new varieties, with minimal input from marketers and packers into the horticultural methods, grading standards and storage practices, until after the new variety has attained significant volume. At this time, marketing plans and storage practices are developed, and this delay could lead to the failure of an otherwise desirable new variety.

H. INCREASE THE CONSUMPTION OF BC TREE FRUITS IN BC

1. Introduction

Due to the rising Canadian dollar, world overproduction and transportation costs, the potential for expanding export markets has been somewhat limited. One area seen as having potential is to increase consumption of BC tree fruit in the domestic market through import replacement and increasing total consumption of fruit.

2. Situation Analysis

- **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 Canada wide study recently indicated that one in ten Canadians prefer to buy Canadian food products.

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

In BC, there are few formally organized regional organizations in place to facilitate the movement of local 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.

- **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. Washington State has Agriculture Marketing Assistance Grants. This state also operates a Small Farm and Direct Marketing Assistance Program to facilitate the effective operations of farmers markets. The USDA provides agricultural marketing program grants. This agency also administers the Market Access Program (MAP). This program helps US producers, exporters, private companies, and other trade organizations finance promotional

activities for U.S. agricultural products. Activities financed include consumer promotions, market research, technical assistance, and trade servicing

- **The US has a significant and growing healthy snack program to promote fruit.**

The Federal Fruit and Vegetable Snack Program has now been expanded to include all 50 states. Next year the USDA will buy 78 million pounds of apples and donate this to schools and other domestic food assistance programs.

3. Potential Strategies for Development

Some of the potential strategies that have been suggested to increase local consumption include:

- **Promote the health aspects of tree fruits.**

The worldwide consumption of whole apples is declining. However this trend could be countered locally by promoting the health benefits of the fruit. The perception is that manufacturing snacks have contributed to obesity and other health problems. The snack producers are beginning to react to the pressure from activist groups and are producing more fruit based products. Partly as a result of this, cut fruit and vegetables have been gaining in popularity the last decade. This is also due to advances in preservation such as the development of NatureSeal, a natural anti-browning agent makes sliced apples attractive. McDonalds has added sliced apples to their menu in the UK and the US.

- **Fund a healthy school snack program.**

One method of health promotion is through the provincial school snack program. The K-12 system serves approximately 570,910 public school FTEs (full-time equivalents), including 55,189 Aboriginal students, approximately 63,709 independent school student FTEs and more than 2,700 home-schooled children. The potential number of school children at public schools is therefore 449,311. The proposed program is to reach 1,200 Elementary and Middle Schools, estimated population 360,000, by 2009. Discussions are being held with three Ministries (Education, Health, Agriculture) to discuss funding level and slow expansion program for the Program.

- **Increase domestic consumption of fruit through promotional campaigns.**

There is debate around how fruit consumption should be promoted and how these types of promotions should be funded. In the World Apple Review, Desmond O'Rourke states that such efforts will not be successful without three key elements. These are:

- A sound analysis of the market opportunities and challenges;
- Appeals that trigger positive attitudes and behaviour; and
- Sufficient funds to compete with other food promotion campaigns.

- **Explore varied packaging as an opportunity.**

One way to identify and promote BC produce is by alternative packaging. For example a customer cannot buy a 10 lb or 20 lb box of apples, only 40 lb boxes which they never see. These decorated and attractively packed boxes are usually only seen by the stock boy. Another option would be to pack a 10 lb box with a number of different varieties to make it more attractive.

- **Develop institutional markets for second grade products.**

A strategy for marketing to institutional markets, particularly for commercial grade product could be developed. This would include hospitals, prisons and other public facilities in addition to the school system described earlier. The adult prison system feeds 2,500 inmates. There are over 30,000 acute care and extended care beds in the BC health system. Sales will probably still need to be based on price and quality like any other market due to the tightness of public sector budgets. Also, many institutions utilize food services companies that are not BC companies. The largest one is Compass used by a large hospital district and the adult prison system. Compass is a multinational company with headquarters based in London, England. BC Ferries is often mentioned as a potential target both for the revenue potential and as an opportunity to promote BC produce to tourists.

- **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 cooperative 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 statewide "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. Ontario (Foodlink) and California (Community Alliance with Family Farmers) also have significant buy local campaigns focussed on food.

- **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 agri-tourism, on-farm retail, farmers' markets, pick your own, consumer-supported agriculture, and direct delivery which has links to the BC industry.

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.

I. INCREASE FRUIT SAFETY

1. Introduction

Consumers are demanding higher and higher standards of safety from their food products. Growers unable to produce product that has met rigorous safety standards will not receive premium prices for their products and may soon have trouble marketing them at all.

2. Situation Analysis

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

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

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

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 food safety; maintained or enhanced market access; increased consumer confidence, and decreased liability through demonstrated due diligence.

3. Potential Strategies for Development

Some of the potential strategies that have been suggested to increase fruit safety include:

- **Increase Food Safety.**

Food products need to be safe and to be seen to be safe. Consumer confidence in the safety of products needs to be high. This is achieved through food safety programs and traceability. There should also be thought given to coordination with the safety standards of other jurisdictions such as the EUREPGAP system.

- **Introduce techniques such as bar coding to enhance traceability.**

At least one innovative grower in Summerland is using bar coding with fruit. The industry could also make use of bar coded bins.

- **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.foodsafety.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.

J. RELAX LONG-TERM LEASE RESTRICTIONS

1. Introduction

As more growers retire or decide to leave the industry, there will be opportunities for those still in the industry to lease growing areas to increase holdings and achieve economies of scale.

2. Situation Analysis

- **Many growers are reaching retirement age.**

Farm operators are aging. 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.

- **Some farms are being sold to retirees uninterested in fruit growing.**

Many holdings, usually smaller ones, are being sold to affluent retirees who wish to live in a rural setting but are not interested in being growers. They are often agreeable to leasing the land to another grower to maintain the rural atmosphere and generate revenue.

- **Current legislation only allows leasing of full titles.**

Many landowners are willing to lease part of their land or even the majority of it but remain unwilling to tie up their total property. Others want to retain control over the house but are willing to lease the remainder of the property. The situation can be resolved by leasing the whole property and renting the house back to the owner. However, it is reported that many owners are not comfortable with this arrangement

Under current legislation, only the full title can be registered as a long-term lease. Therefore a long-term lease is not legal unless all of the title is leased including the house. Most growers facing capital investment on leased land required such a long-term lease.

- **There is another method of securing a lease on part of a title called a *profit à prendre*.**

The following is a description of *profit à prendre* from a paper written by the West Coast Environmental Law Research Foundation.

- A *profit à prendre* is a common law instrument. It is similar to a common law easement in that both give someone who is not the owner the right to enter the owner's land. The difference is that a *profit à prendre* gives the holder the right to enter the land and take something, whereas an easement is a right just to enter the land.
- A landowner can create a *profit à prendre* which permits someone else to share a resource of the land. When the *profit à prendre* is shared between the landowner and the *profit à prendre* holder, it is called a *profit in common*. Or, the landowner can grant a profit exclusively to someone else, which the landowner can then no longer use.
- If the landowner grants a *profit à prendre* exclusively to one other person, it is called a *sole profit*. If the land owner grants a *profit à prendre* to several other people, it is called a *several profit*. The landowner cannot share in a *sole profit* or a *several profit*.
- A *profit à prendre* is created by the owner granting the *profit à prendre* to the *profit à prendre* holder in writing. The landowner specifies exactly what the *profit à prendre* holder is allowed to enter the land to take. For example, a landowner might specify that the *profit à prendre* holder can harvest all of the cedar which grows on the land, and that the *profit à prendre* holder is entitled to build and maintain a road for the purpose of accessing and harvesting the timber.

- A *profit à prendre* document describes how the resources of the land are going to be shared between the owner and the *profit à prendre* holder. It is designed to outlive the landowner, and perhaps even the *profit à prendre* holder. So in creating a *profit à prendre* it is essential to think through the potential conflicts between a landowner and a *profit à prendre* holder and write down exactly what the parties intend.
- In order to protect the *profit à prendre* holder if the land is subsequently sold, the *profit à prendre* should be registered in the land title office.
- The *profit* holder can sell, lease, give away, or bequeath the *profit à prendre* to someone else.
- Once the owner has granted a *profit à prendre*, he or she must respect the terms of the *profit à prendre*. The *profit à prendre* holder can sue if the owner deals with the land in a way which takes away from the *profit à prendre* holder's rights. The *profit à prendre* holder can also sue anyone else who interferes with the *profit à prendre*.
- Conversely, the *profit à prendre* holder must respect the rights of the owner. The owner can sue the *profit à prendre* holder if the *profit à prendre* holder interferes with the landowner's rights.
- A *profit à prendre* may be terminated by the *profit à prendre* holder giving a written release to the landowner, which would be registered in the land title office.

3. Potential Strategies for Development

A potential strategy that have been suggested to address the lease issues includes:

- **Growers should be aware of the two methods of securing long-term leases.**

A grower wishing to lease part of a title can either lease back the balance of the land to the owner or enter into a *profit à prendre* agreement. This information needs to be widely circulated.

K. PURSUE PARTNERSHIPS WITH OTHER JURISDICTIONS

1. Introduction

Consolidation and international alliances are the current trend in the food industry. Producers and processors are becoming bigger and increasing their market power through alliances with complementary companies in other jurisdictions.

2. Situation Analysis

- **Economies of scale are increasingly required for profitability.**

Retailers are getting larger and demand more volume, lower prices and more service. Small operations may not be able to meet the needs of such retailers in the near future.

- **Companies are forming alliances in other hemispheres.**

Having partners with opposite growing seasons allows for the marketing of fresh fruit year round. It also enables the more efficient utilization of facilities that may previously have been idled during some of the year.

- **BC has not developed significant international agreements.**

There has been some international cooperation in variety management. The BC growers of Ambrosia are working with ambrosia growers in Washington State and the variety management company PICO has some international arrangements. However, no efforts have been made to find a Southern Hemisphere partner to make alliances in the marketing area. There is some feeling that BC is such a small producer that it will be difficult to attract partners. New Zealand is working with the high production jurisdiction of Washington State.

3. Potential Strategies for Development

Some of the potential strategies that have been suggested with respect to partnerships include:

- **Create a Pacific North West alliance to raise consumption.**

Many feel that the difficulties the industry is experiencing are related more to under consumption than overproduction. That is, there may be significant room to increase the consumption of fruit in North America. BC could ally itself with the significant resources available in the Washington State industry to raise fruit consumption to mutual advantage.

- **Ally the BC industry with a southern hemisphere partner.**

The 1990 Lustig report recommended that the BC tree fruit industry pursue an alliance with New Zealand. Some believe that today that the southern partner to pursue should probably be Chile. With such a partner the BC industry could market six months of BC fruit and six months of the partner's fruit. It would also facilitate the use of grading lines all year round making more efficient use of the packing house infrastructure.

L. DEVELOP VALUE-ADDED PRODUCTS

1. Introduction

It is becoming increasingly difficult to compete in the world fruit market given that the produce, especially many apple varieties, has achieved commodity status. Given that BC is a high cost producer which is not well positioned to compete on price, an alternative is to develop alternative value added products.

2. Situation 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. 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.

- **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 US nutraceutical market will reach a value of \$35.4 billion by 2006 driven by an ageing population.

- **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.

- **Producers interested in developing establishing or expanding value-added capabilities or pursuing 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 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.
 - 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.
- **The experience of the industry in value added products has had mixed results.**

Many growers have experimented with fruit based value added products that have not proved successful. Also, fruit used for processing is not returning revenue sufficient to meet the processing costs. However there are some successes such as fruit leather and a number of small processors are manufacturing a range of value added products.

- **There may be potential for fruit based nutraceuticals.**

Scientific evidence has begun to accumulate showing that a group of phytochemicals known as flavonoids (these belong to the family of polyphenolics) has the potential to act as new therapeutic agents that may play important roles in alleviating chronic health-related dysfunctions in mammalian species, including humans. Tree fruits such as apples are highly concentrated with flavonoids, and the potential exists to explore the ability of apple-derived specific phytochemicals to play a significant role in human health

3. Potential Strategies for Development

Some of the potential strategies that have been suggested to develop value-added products include:

- **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.

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.

M. DEVELOP EXPORT MARKETS

1. Introduction

Due to high costs and competition from expanding lower cost producers, many former export markets are no longer available to BC fruit. However, there may still be niche opportunities for exporting high quality BC fruit.

2. Situation Analysis

- **Specialty products are particularly suited to exploiting export market opportunities.**

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.

- **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 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.

- **Despite the barriers, some producers are still finding export marketing opportunities.**

BC producers still export 10% of the apple crop and 85% of the cherry crop.

3. Potential Strategies for Development

Some of the potential strategies that have been suggested to develop export markets include:

- **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.

- **Focus on a 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

- **Utilize a market strategy that differentiates and brands BC apples.**

The export markets available to BC will be niche markets that will respond to a differentiated product. A BC brand should be developed and marketed in a creative campaign that creates a desirable identify in the minds of consumers.

N. CONTINUE ANTI-DUMPING TRADE ACTIONS

1. Introduction

The sales of Canadian apple varieties Red Delicious, Golden Delicious, Gala, Granny Smith and Fuji are being adversely affected by US imports. It is believed that these imports are being subsidized by the US government and dumped into the Canadian market at depressed prices.

2. Situation Analysis

- **An anti- dumping trade action is underway.**

The Apple Committee of the Canadian Horticultural Council has undertaken some of the groundwork towards filing a complaint.

- **Washington State is the major importer of apples into Canada.**

In 2004/2005, the US accounted for 82% of apple imports into Canada and Washington State accounted for 82% of that figure. The state is the largest producer and price leader in the North American Market.

- **Washington State continues to increase production.**

One reason for low prices in the Pacific Northwest and the consequent dumping of apples into Canada is the global over supply in general and the overproduction in Washington State in particular. However, Washington State continues to produce record crops and shows no sign of reducing supply.

3. Potential Strategies for Development

The potential strategy is to proceed with an anti-dumping action.

APPENDIX V: RESULTS OF WORKSHOPS

KELOWNA

Attendance: 32
Date: October 23

1. Identification of Key Issues

After a general discussion of the issues, the attendees were asked to identify their top two or three opportunities, challenges or issues that should be addressed by the strategy, write them down, and submit them. The results are detailed in the table below.

ISSUES MOST COMMONLY IDENTIFIED AT THE KELOWNA WORKSHOP

Opportunity, Challenge, or Issue	Number of Attendees
Improve fruit quality	18
Improve access to labour	13
Address industry structural changes	12
Develop new varieties	11
Address marketing issues (e.g. increasing local consumption)	10
Improve productivity/lower costs	8
Improve food safety	6
Implement antidumping measures	3
Promote organic fruits	3
Promote value-added products	3
Reform government regulations and policies	3
Continue replanting	2
Utilize technology/R&D	2

2. Suggested Strategies And Actions

After the general discussion and identification of issues, the attendees were divided into groups, and given an issue area to discuss, and asked to 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.

- **Improve fruit quality/consistency**

The group saw this as necessary to facilitate a renewed industry response to market demands. The objective of this strategy would be to catch up with the leading competitors. The industry should be benchmarked against its competitors and strive to lead, not follow.

Elements of the strategy would include standards in packing and storage areas as well as in growing practices. There should be quality considerations for spray programs, pruning, and thinning to promote orchard quality. Key to this is an active field extension service, especially

given the number of new entrants who need instruction in these areas.

There should be strict adherence to maturity standards to facilitate long-term storage with incentives for growers who comply with field service harvest recommendations. There must also be consistent packing (integration is helping) with focus on bin sanitation and post harvest research on new varieties.

The industry will benefit if these practices are followed by improved image, brand recognition, market retention, buyer allegiance, increased consumption, and premium pricing. Packing costs should also be reduced through adherence to production and harvest standards.

To achieve these results, the industry needs the following:

- Key production information transmitted by field service;
- Help for new entrants;
- New packing technology;
- Enhanced promotion and marketing; and
- Capital investment.

All parts of the industry from growers to packers to marketers need to be involved in the strategy to promote quality.

- **Improve access to labour**

The objective of this strategy would be to increase labour availability from a number of sources. Access to labour could be increased through:

- Modifying the foreign worker program to make it more flexible;
- Building proper housing; and
- Tapping domestic sources such as students, natives, and retirees.

The foreign worker program needs to be more flexible in terms of:

- Housing requirements;
- Length of stay; and
- Sharing of workers between farms.

Housing requirements are also regulated by municipal governments and these need to be more flexible to accommodate temporary accommodation.

Another possibility is the use of short-term visas, similar to the 48-hour transient worker visa offered by New Zealand.

Another strategy would be to enhance the job and employee matching capability possibly using municipal offices or packinghouses as matching service centers.

The group thought that the BC Fruit Growers' Association (BCFGA) should lead this initiative and lobby governments for the required changes and necessary funding. The problem is not unique to tree fruit industry and there might be advantages to joining other sectors in these efforts.

- **Address industry structural changes**

The group recommended further consolidation of production and marketing under a single management structure. This arrangement would result in the following:

- Cost savings;
- Enhanced marketing opportunities;
- More uniform quality control standards across the industry;
- Reduction of redundant assets;
- Facilitation of the introduction of new varieties; and
- Elimination of regional mistrust.

The process seen as necessary to achieve consolidation includes the following steps:

- Investigate the business model for a new organization (coop, private, or public);
- Conduct basic due diligence of tax and legal implications;
- Facilitate discussion of the issues with the stakeholders; and
- Achieve stakeholder approval.

The group saw the new entity as being market driven, and better able to achieve cost savings and quality control.

What is required is the political will to make it happen among the packinghouse boards.

- **Develop new varieties**

This was seen as a strategy that would improve the net return to growers. The method would be to identify varieties that have market potential and grow enough volume to test harvest, pack, and market them. It is thought that 5 to 10 acres would be required for testing.

The varieties should be tested with consumers and retailers to determine demand. Not all markets are the same so each one would have to be treated differently.

To maximize return, there should be a consideration for licensing retailers to ensure exclusivity. Limiting production acreage would also keep returns high; however, this is difficult with varieties developed at the Pacific Agri-Food Research Centre (PARC) as they are the property of all Canadians.

The process of development is expensive and those involved in the testing may have to be guaranteed returns for the risk taken. Testing is expensive and there is a long process between testing and commercialization. Expanded R&D funding is required for the PARC breeding program. Also seen as necessary was better coordination between the breeders (Okanagan Plant Improvement Co. Ltd. - PICO), the marketers, and the growers.

Coordination will be the key and this may require a restructured industry with a leader who has the mandate to make it happen.

- **Address marketing issues**

There were a number of strategies suggested by the group under the marketing heading. These

are outlined below.

- **Launch/support a health promotion program.** This initiative would be consumer focused rather than retail-based. It would focus on increasing tree fruit consumption in BC and perhaps Western Canada through emphasizing its healthy nature. One method would be to participate in the BC Government ACT NOW program. Also, the industry could support a rejuvenated BUY BC program with funding and other efforts such as bus advertising, point of sale material, and media.
- **Target institutional markets.** The proposal is to approach the government to encourage public institutions to buy BC products thereby using BC tax dollars to buy BC products. The institutions could include prisons, schools, hospitals, universities, airports, and BC Ferries. The group thought the BC Agriculture Council and the BCFGA should lead the initiative and seek support from other commodity groups.
- **Encourage fruit refrigeration.** Refrigeration at the retail outlets and in vending machines would ensure that a higher quality fruit piece is delivered to the consumer. Financing should be sought from the Investment Agriculture Foundation (IAF) for promotional efforts and development of an apple vending machine.
- **Adopt new consumer packaging.** Specialized packaging was seen as a way to increase consumer interest and help guarantee food safety. Future rules for food safety may require new packaging for apples and the industry should be ready. Also, a new consumer variety pack should increase demand.

PENTICTON

Attendance: 24
Date: October 24

1. Identification of Key Issues

After a general discussion of the issues, the attendees were asked to identify their top two or three opportunities, challenges or issues that should be addressed by the strategy, write them down, and submit them. The results are detailed in the table below.

ISSUES MOST COMMONLY IDENTIFIED AT THE PENTICTON WORKSHOP

Opportunity, Challenge, or Issue	Number of Attendees
Marketing issues: various aspects	10
Access to labour	7
Structure of the industry	7
Fruit quality	6
Productivity/cost reduction	6
Food safety	5
Information access: various areas	5
New variety development	5
Government regulations and programs	4
Technology/R&D	3
Antidumping actions	2
Value-added potential	2

2. Suggested Strategies and Actions

After the general discussion and identification of issues, 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.

- **Fruit quality**

The strategy objective is to create new products, methods, and structures to produce high quality product that will achieve a premium and reach niche markets.

The group felt this could be accomplished by diverting low quality product into different channels. It may also be necessary to restructure the coop to ensure there is motivation for consistently high quality products. Specialty packaging could help new quality products reach niche markets.

There needs to be proper incentive to packers and marketers as well as growers to attempt innovative ways to preserve and promote quality once it is achieved in the orchard. Internal quality testing equipment would assist in this but it is expensive.

The packinghouse and BC Tree Fruits boards need to explore this area carefully.

- **Food safety**

The strategy objective would be to gradually implement food safety programs that will no doubt become required in the near future. It would be a voluntary program with built-in incentives to volunteer for food safety requirements.

The initiative would move food safety implementation forward at a practical pace and avoid the rushed regulatory deadline approach. This would probably result in lower resource expenditures. Improvement of worker sanitation facilities should be included.

There is a need for funding for program incentives perhaps following the Environmental Heartland model which provides 30% funding for improvements.

The provincial and federal agriculture departments are the lead agencies for such an initiative.

- **Structure of the industry**

A restructuring of the industry should have as its goal the improvement of governance and leadership. Action is required to complete the amalgamation process that has already begun. However, participants believed the industry should not complete the intermediate step of amalgamating in the North but move immediately to a complete unification instead.

The group opined what is needed is a new production company with corporate board and external directors.

The organization would have the following departments:

- Marketing;
- Production North;
- Production South;
- Finance and Admin; and
- Horticulture/Extension.

The new entity would be better able to

- Profit from niche opportunities;
- Reduce costs;
- Provide incentives for quality; and
- Improve marketing, sales, and production.

The Board should undergo training for the job, have a maximum term set, and represent the growers on another basis rather than the “one grower one vote” basis.

This proposal, which incorporates a regional model with two plant managers, would help to overcome the degree of distrust between the North and the South, and facilitate its acceptance.

- **Access to labour**

This strategy is intended to ensure an adequate supply of labour throughout the season. There is a need to match supply and demand through the season as demand fluctuates. There need to be resources in place to support recruitment so that a grower does not have to spend an inordinate amount of time concerned with this.

A major consideration is the need for good housing facilities to keep workers returning every year.

Growers need to undertake planning for labour requirements well in advance of the season. This is especially important for the imported worker program. The grower can also use local matching services. Other facilities such as municipal offices, provincial offices, packinghouses, or a cooperative office could function as a focal point for farm labour matching.

Local stakeholders could coordinate housing/camping based on the model of camps for oil workers. Growers may consider incentives to get and keep labour such as organizing pizza and beer nights, and providing Internet access.

Consideration should also be given to:

- Utilizing coop work gangs/sharing workers;
- Targeting retirees and natives;
- Using college dorms for accommodation;
- Using seasonal work permits; and
- Promoting tree fruit summer jobs to BC students.

- **Marketing issues**

The group was in favour of a generic marketing initiative to enhance the image of BC tree fruits and increase local consumption.

The effort would be consumer targeted emphasizing health, food safety, and traceability. Actions would include media placements, trade show participation, specialty magazines, and promotion to food editors.

The proposal suggested undertaking a joint initiative with government and industry with an industry council in charge of administration.

- **New variety development**

The objective is to emphasize the value of and need for funding for breeding programs. There should be several new varieties available at any one time as old varieties lose market share.

Industry should follow the lead of New Variety Development Council and organize similar bodies to develop new varieties, and market and promote them.

There should be a grower-based council to generate breeding programs. Government support for the programs will be necessary. The council should implement programs with consumer/retail participation.