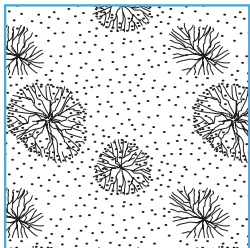
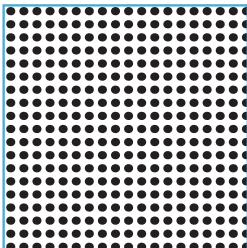
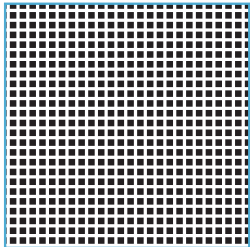
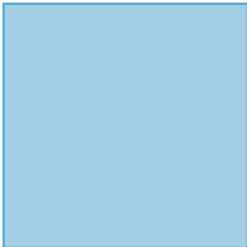
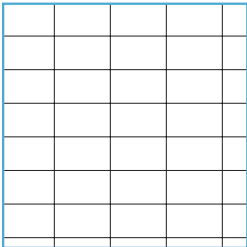
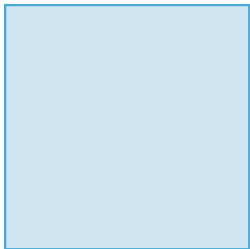
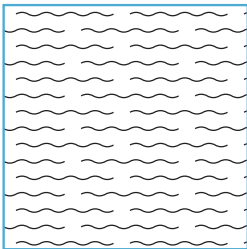
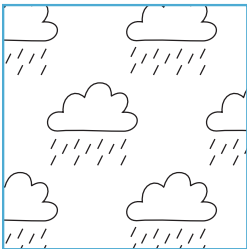


British Columbia Agri-Food Human Resource Action Plan



Mussio Associates Inc

August 2008

This project was funded by the Investment Agriculture Foundation of British Columbia through investments made by the Government of Canada and the Province of British Columbia.



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EXECUTIVE SUMMARY

The British Columbia agriculture and food processing industry competes in a global marketplace where now, more than ever, the production and processing of high quality food products depends on the knowledge, skills, and creativity of its workers. How to attract and retain a skilled workforce, particularly in a period of labour shortages, is a key challenge the industry must address to remain competitive.

The purpose of this project is to establish a human resource action plan that will assist the agri-food industry to develop and maintain a high quality workforce in a period of labour shortages.

THE CONTEXT

- Globally, the demand for food is escalating. Large-scale purchases by emerging economies such as China and India, changes in diet, and a rapidly growing biofuel sector have led to a very high demand for agriculture commodities. The United Nations reports that food production must increase by 50% by the year 2030 to meet rising demand.
- Skills and labour shortages are posing a significant threat to the B.C. economy and are having an impact on the agriculture and food processing sector.
- A key force responsible for many of the labour pressures is the aging of the Canadian population. As the B.C. population ages, large numbers of workers will retire and proportionately fewer younger men and women will be available to fill these positions. It is projected that skilled worker shortages, now evident across many industry sectors, will persist well into the next decade.
- Studies across Canada report that hiring and retaining workers in the agri-food industry has become a significant issue. Farmers, greenhouse owners, egg producers, dairy managers, bakery owners, meat and seafood product manufacturers, to name a few, report difficulties hiring and retaining workers.
- The demand for labour varies from sector to sector in Canada, but when examined across the agri-food industry, the demand appears to span the full range of the workforce: seasonal workers, technicians, trades people, managers, and supervisors.

WORKFORCE PROFILE

- There are 38,275 people who work on B.C. farms. These farms are mostly small establishments; more than half are owner operated with no employee payroll.
- The population of farm workers is substantially older than the B.C. workforce as a whole. For example, 14% of the farm workforce, compared with 3% of the B.C. workforce, is 65 years of age or older. The average age for farm operators is 54, up from 51 in 2001.
- Food and beverage processing establishments in B.C. employ 26,235 people. These firms

tend to be small as well; more than half of the businesses employ fewer than five people. The age profile of B.C. food and beverage workers is about the same as that of all workers in the province.

- Close to 60% of B.C. workers have attained some level of training beyond high school graduation; this includes a college diploma, a trade certificate, or a university degree. Proportionately fewer workers in the agri-food industry have attained this level of training. In the food and beverage sector, just over 40% have attained some postsecondary training, and among farm workers, 35% have attained this level.
- A high proportion of immigrants work in the agri-food industry. The 2006 Canadian census found that 46% of food processing workers and 39% of agriculture workers are immigrants, compared with 29% of the overall B.C. workforce.

DEMAND AND SUPPLY GAPS

- Between 2005 and 2015, it is estimated that of the more than 2 million jobs that existed in the province in 2005, more than 652,000 positions will become vacant, mainly as a result of retirements. In addition, an estimated 461,100 new jobs will be created across all B.C. industries over this period. The total number of projected vacancies through to 2015 represents 52% of the jobs that existed in 2005.
- Both the agriculture and the food and beverage industries are projected to experience slow job growth, between 4 and 5% over the 10-year period, but the percentage of vacancies due to attrition will be similar to that of the overall workforce, at 30%. Between 2005 and 2015, it is estimated that 14,000 jobs in agriculture and 7,800 in food and beverage processing will require filling.
- B.C.'s 13,850 farmers and farm managers represent the largest occupational group in the agriculture industry and have an older age profile. It is projected that 5,700, or 40% of this group, will leave the workforce between 2005 and 2015. Because this occupation is central to the agriculture industry, the projected high attrition rate should be a concern to industry and to government.
- In contrast to the agriculture industry, the food processing industry's need for replacement workers is more evenly distributed across a range of occupations. More than half of food and beverage workers are employed in generic occupations that are found across B.C. industries. In sales and service, for example, about 1,300 workers are expected to retire, and in management, about 1,100 will retire between 2005 and 2015. In a period of competition for skilled workers, it will be more of a challenge to attract and retain workers in these generic occupations.
- Analysis of BC Stats data suggests that, under a number of assumptions, the demand for labour will exceed supply beginning about 2012. The Conference Board of Canada reports that serious labour shortages will occur in Ontario beginning about 2015.
- There are concerns that a high retirement rate among farmers, coupled with the rising cost of farmland, will result in a rapid decline in the number of farmers and farms in the province. On the other hand, escalating food prices and a greater demand for locally produced food

will provide opportunities for new farmers to enter the industry. The provision of education and training programs is now particularly important to assist retiring farmers in transferring ownership and to enable new farm entrepreneurs to succeed in a rapidly changing global food industry.

- If competition for entry-level workers increases, particularly in the restaurant and tourism industry, and especially in relation to the 2010 Olympic Games, the agri-food industry will likely find it even more difficult to attract local residents to work as harvesting labourers, fish plant workers, and food-processing workers. Seasonal work, low wages, and challenging working conditions will continue to be obstacles for many local residents, fueling the demand for foreign seasonal workers.

ACTION PLAN —HIGHLIGHTS

1. Improve the industry's image

1.1. Adopt a vision for the industry

B.C. agriculture operations and food processing firms are industries of choice.

The B.C. agri-food industry has a reputation for producing high quality, safe food products that are valued by consumers in B.C. and throughout the world. The industry provides opportunities for growth, values cultural diversity, uses the most effective technologies, and contributes to a healthy environment. It provides training and career opportunities for business owners and their employees, and it offers flexible work arrangements, competitive wages, and family-friendly benefits.

1.2. Establish the agri-food sector as an industry of choice and link this branding process to all government and industry initiatives promoting the B.C. food industry (e.g., “Pick Me. Pick BC”)

1.3. Promote greater awareness of food issues and career opportunities among the next generation of B.C. citizens by continuing to support the B.C. Agriculture in the Classroom initiative. Expand services to support classroom teachers in integrating the study of food and agriculture into the provincial school curriculum.

2. Expand training and skills development

2.1. Improve the management and leadership skills of owners and operators. Build on existing industry programs and promote training sessions in high priority areas, including:

- small business management
- local and international marketing
- human resource management
- diversity in the workplace
- transition planning

2.2. Expand the number of apprenticeships and industry-approved training diplomas, in collaboration with the Industry Training Authority.

2.3. Collaborate with colleges and universities to define agri-food training priorities.

2.4. Establish programs to provide workplace-based English-language training to immigrant workers. Utilize existing ESL programs to focus on workplace functions and safety issues.

- 2.5. Establish a common web-based environment to enable agri-food sector organizations to provide peer-to-peer communications and access to sector-relevant information and education services.
- 2.6. Promote links between research, innovation, and training. Incorporate education and training into the mandate of the proposed Agri-Food and Bioproducts Innovation Centre. Link education and training to new innovations in the production and processing of food, including new automation strategies.

3. Reach out to new workers in Canada

- 3.1. Implement strategies to attract new entry-level and skilled workers from key groups in Canada, including unemployed youth, retired workers, First Nations communities, the disabled, and workers in other provinces. Analyze the values and aspirations of each of the target groups and, where possible, adapt employment practices.
- 3.2. Collaborate with the First Nations Agriculture Association to develop labour strategies with First Nation bands.

4. Seek new immigrants and continue to employ seasonal foreign workers.

- 4.1. Stabilize support for the Western Agriculture Labour Initiative, responsible for coordinating the B.C. Seasonal Agriculture Worker Program.
- 4.2. Establish an agri-food agency to coordinate immigration strategies and manage foreign worker programs.

5. Provide industry leadership in the province

- 5.1. Establish a common industry voice on human resource development by forming an industry-wide HR steering committee. Build on the work of the Agriculture Labour Partnership Committee and the BCFPA Human Resources Committee.
- 5.2. Establish an agri-food HR information system so that key HR indicators for the industry can be tracked. Collaborate with the Ministries of Labour, Economic Development, and Advanced Education to develop the system.
- 5.3. Participate in the development and implementation of government-wide labour initiatives and integrate the Agri-Food Action Plan into the Work BC initiative.

PROJECT PURPOSE AND OBJECTIVES

In 2006, the Investment Agriculture Foundation of British Columbia, the BC Agriculture Council, the BC Food Processors Association, and other organizations jointly commissioned an extensive review of the agri-food industry entitled *Focus on the Future*. The purpose of the initiative was to assess key issues of strategic importance to the overall long-term success of the B.C. agriculture and agri-food products industry, and to develop specific strategies that industry, government, and the Investment Agriculture Foundation of British Columbia could pursue to assist the industry to expand, diversify, and enhance its competitive position, and to build a stronger industry future.

An outcome of the report was the recommendation to develop a human resource action plan that would enable the agri-food sector to better meet its needs for management skills as well as for skilled, unskilled, and seasonal workers.

In February 2008, Mussio Associates was contracted to develop the human resource action plan. The agreed tasks for the project were to

1. Conduct an environment scan

Tasks included: identify local and international trends; contact key individuals and sector groups; develop a profile of the existing workforce; identify skills and supply requirements over the next five to ten years; identify strengths, weaknesses, opportunities, and threats.

2. Prepare a gap analysis

Tasks included: identify skills and supply gaps; review existing human resource development programs; prepare options for addressing gaps.

3. Develop an action plan

In February 2008, a human resource action plan committee, consisting of representatives from the agriculture and food processing sectors and from provincial and federal government agencies was established to provide guidance and advice to the project.

INTRODUCTION

The British Columbia agriculture and food processing industry now competes in a global marketplace where the production, processing, and timely delivery of high quality food products depends on the knowledge, skills, and creativity of its workers. How to attract and retain a skilled workforce, particularly in a period of labour shortages, is a key challenge the industry must address to remain competitive.

The purpose of this project is to develop a human resource action plan that will assist the agri-food industry to continue to develop and maintain a high quality workforce over the next five to ten years.

Part 1 of the report begins by identifying a number of trends that are impacting the agriculture and food processing industry in British Columbia. We then examine significant changes in the makeup of the B.C. population that are influencing labour demand and supply, and conclude by summarizing recent human resource studies carried out in the industry.

An important starting point in the development of a human resource strategy is to determine the characteristics of the agri-food workforce. This profile can then serve as a framework to monitor impacts of initiatives undertaken to improve skill levels or increase the supply of labour. In Part 2, we identify key characteristics of the B.C. agri-food workforce: number of workers and their average age; number of immigrants, size of firms, educational attainment, and occupations in the industry.

In Part 3, we examine the demand for workers in the agri-food industry and the demand for different types of occupations over the period 2005 to 2015. We then estimate the supply of workers over this same period and discuss the gap between demand and supply. We complete this part of the report by identifying sources of labour and skills for the industry.

Finally, in Part 4 of the report, we identify a number of challenges and opportunities, and conclude by recommending a human resource action plan.

Three key sources of information have been used in developing this report: a) documents and reports from other studies; b) statistical information from Statistics Canada and BC Stats; and c) communications and interviews with industry experts, whose contributions are much appreciated.

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1. THE CONTEXT

Part 1 of this report begins by identifying a number of trends that are impacting the agriculture and food processing industry in British Columbia. We then examine significant changes in the makeup of the B.C. population that are influencing labour demand and supply, and conclude by summarizing recent human resource studies carried out in the industry.

AGRI-FOOD TRENDS

Globally, the demand for food is escalating. Large-scale purchases by emerging economies such as China and India, changes in diet, and a rapidly growing biofuel sector have led to a very high demand for agriculture commodities. The United Nations reports that food production must increase by 50% by the year 2030 to meet rising demand.¹

The increased demand for food has been accompanied by a dramatic increase in food prices. During the first three months of 2008, international prices of all major food commodities reached their highest levels in nearly 30 years, provoking social unrest in a number of developing countries.²

Although the food market situation differs from country to country, and future developments remain highly uncertain, best projections suggest that food prices are likely to remain high for the next several years. On the positive side, higher prices are stimulating increased food production in those countries that have the capacity to increase output and the infrastructure to supply the market.

In British Columbia, food exports have increased over the past decade, but imports have increased at a faster rate: between 1992 and 2004, the B.C. agri-food trade deficit rose from \$400 million to over \$900 million. Technological advances and trade liberalization have opened up the B.C. market to low-priced international competitors, whose labour and land costs may be lower, but, at the same time, these developments are providing opportunities for B.C. agri-food companies to expand export markets by focusing on the development of value-added products. Statistics indicate that exports of value-added food products have risen more than four-fold since 1990 and now account for one-half of agri-food exports from Canada.³ The rising middle class in developing countries represents an important market for B.C. value-added food products, and our proximity to the largest market in the world, the United States, and location on the Pacific Rim provide a strong base for expanding export sales.⁴

1 Food and Agriculture Organization of the United Nations. (2008, June). *Soaring food prices: Facts, perspectives, impacts, and actions required*. High-Level Conference on World Food Security. Rome: Author.

2 The forces driving the global food crisis (2008, April 12). *The Globe and Mail*, p. 1.

3 Ference Weicker & Company Ltd. (2006, March). *Focus on the future: Developing the agri-food industry in British Columbia*. Vancouver, BC: Author.

4 BC Progress Board. (2007, July). *Strategic considerations for BC's future: Issues and trends 2007 report*. Vancouver, BC: Author.

While B.C. is a net importer of food products, the “eat local” trend is gaining momentum in the province. This trend is based on a desire to support the local economy and the perception that local food products are safer, more nutritious, and more environmentally sensitive. Organic foods, the traceability and authenticity of food products, and related efforts to tighten labeling requirements are becoming important to many consumers. These provincial trends, coupled with rising household incomes and higher than average food expenditures per household, are creating new opportunities for the B.C. agri-food industry.

These developments are also placing new demands on farmers and food processors. Keeping pace with shifting markets, new regulations, and changing technologies requires a continuous approach to learning and the ability to establish new partnerships.

Climate change and the environment have become important national and provincial issues, and the B.C. agriculture and food processing industry will be expected to play an important role in meeting rising public expectations. Major challenges include reducing carbon emissions, finding innovative ways to handle the by-products of agriculture production in an environmentally sustainable manner, and reducing impacts on air and water. Debates over the impacts of aquaculture on wild fish stocks have not been resolved and are gaining in significance.

The Agriculture Land Reserve represents only about 5% of the land area of the province, with the most fertile soils located in the Fraser Valley, the Okanagan, and South Vancouver Island. Urban expansion and other land use activities have put pressure on this limited land base, raising concerns about the long-term security of the province’s food supply and the growing reliance on food imports.

Finally, skills and labour shortages are posing a significant threat to the B.C. economy and are having an impact on the agriculture and food processing sector. A key force responsible for many of the labour pressures is the aging of the B.C. population.

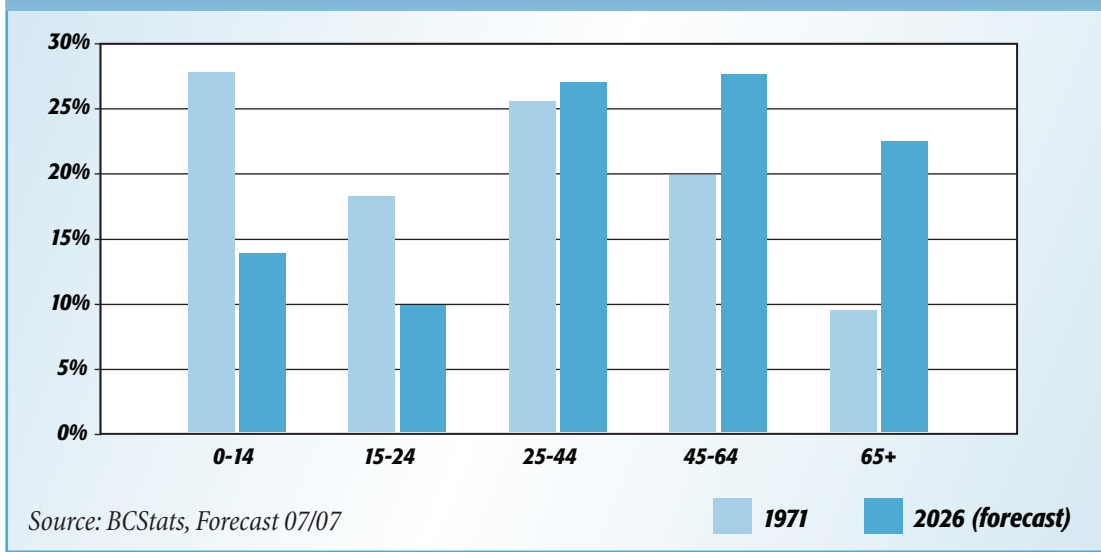
POPULATION TRENDS

B.C.’s population has grown by 11% in the last ten years and is projected to increase by an additional 30% over the next 25 years, from 4.3 million in 2006 to about 5.6 million by 2031. But B.C. residents, like those in other developed societies, are getting older. The median age in B.C. was 30 in 1980 and is projected to reach 46 by 2031. This trend is being driven in large measure by the aging of the baby-boom generation—the population bulge that occurred after World War II, from 1946 to 1964—and by below replacement birth rates since 1970.

To illustrate the demographic shift underway, Figure 1.1 displays changes in various age groupings over a 55-year period. By 2026, Statistics Canada forecasts a significant decline in the proportion of younger people in B.C. and a major increase in the proportion of older people. The agency reports that in 1971, 28% of the population was younger than 15, but by 2026 this proportion is projected to drop to 14%. More significantly, the proportion of people aged 65 and older is forecast to increase from 9% in 1971 to 22% in 2026.

As the population ages, large numbers of workers will retire and proportionately fewer younger men and women will be available to fill these positions. It is projected that skilled worker shortages, now evident across many economic sectors, will persist well into the next decade.

Figure 1.1: Percentage of B.C. Population by Age Group



A series of recent reports by various industry groups in B.C. and across Canada have expressed serious concern over labour shortages being experienced by employers and called for government action to increase labour supply. Electricians, construction workers, nurses, cooks, managers, truck drivers, doctors, mine workers, to name a few, are reported to be in short supply. Preparation for the 2010 Olympic Games has created a bump in the demand for workers in construction and tourism-related occupations that will moderate after 2010, but the aging of the B.C. population will continue to require increasing numbers of replacement workers across all occupational groups, including those employed in the agri-food sector.

Since birth rates across Canada have dropped to levels that cannot sustain current population numbers, immigration will continue to be critical to B.C.'s population growth and economic development. New immigrants to the province increasingly are from Asia and will continue to contribute to B.C.'s labour market growth over the next decade.

Birth rates are low for Canada's overall population, but it is important to note that birth rates in the Aboriginal population are relatively high and this population will experience significant growth over the next ten years. The increase will be most pronounced in young people and the under-30 work force.

LABOUR STUDIES

Studies across Canada report that the ability to hire and retain workers in the agri-food industry has become a significant issue. Farmers, greenhouse owners, egg producers, dairy managers, bakeries, meat and seafood product manufacturers, among others, report difficulties hiring and retaining workers.

The demand for labour varies from sector to sector, but when combined across the agri-food industry, it appears that the demand spans the full range of the workforce: seasonal workers, technicians, trades people, managers, and supervisors.

B.C. temporary workers

A 2003 report prepared for the British Columbia Ministry of Agriculture stated that the B.C. berry, tree fruit, and cole crop sectors were experiencing a 50% deficit in the supply of seasonal labour, resulting in an estimated annual revenue loss of \$16.4 million.⁵ The report indicated that the inability to complete plant cultural operations and harvest crops in a timely and efficient manner was expected to reach crisis proportions.

The report recommended that the province join the federal Seasonal Agriculture Program (SAWP), recognized internationally as one of the better temporary migration programs.⁶ The objective of this program, which began in 1966 and has been operational in most provinces for many years, is to offset unfulfilled demand for domestic seasonal agriculture workers in Canada. British Columbia joined the program in 2004. The B.C. program is coordinated by the Western Agriculture Labour Initiative (WALI) and is funded by industry and the Investment Agriculture Foundation.

The SAWP program is based on a bilateral agreement between Canada and the governments of Mexico and the Commonwealth Caribbean. B.C. representatives collaborate annually with federal labour officials to negotiate policies and procedures with Mexico and the Commonwealth Caribbean. These agreements ensure that foreign governments select qualified workers on the one hand, and that B.C. farms provide fair wages, benefits, and suitable housing on the other.

In 2004, the first year of the program, 47 Mexican workers were brought into B.C. Now in its fifth year, SAWP expects to provide between 2,800 and 3,000 workers, mainly from Mexico, in 2008, evidence that the program has been responding to demand. Anecdotal comments from a variety of interviews suggest that farm operators in general are very pleased with the quality of Mexican workers.

In the Okanagan, the fruit industry today employs about 3,000 seasonal workers. About one-third of the seasonal workforce is drawn from the local community, including many students earning summer income; another third consists of students from Quebec, who often use this income to support their schooling and extended travel; and the other third is made up of SAWP workers. Industry experts report that the introduction of the SAWP workers, who are permitted to work up to eight months in Canada, has added a higher degree of predictability related to seasonal harvesting requirements, particularly with the apple harvest in September when local students and Quebec students return to school.

A recent study published by the Canadian Centre for Policy Alternatives⁷ examined the employment conditions of temporary farm workers in the Fraser Valley and recommended that inspections of farm sites for safety and employment standards be strengthened. The report also recommended that the SAWP program provide workers greater freedom to move from one employer to another and that workers employed in the program for three seasons be able to apply for permanent resident status.

5 Wallis, Michael. (2003). *Seasonal agriculture labour dynamics and options for British Columbia*. Victoria, BC: Ministry of Agriculture.

6 Basok, Tanya. (2007, November). Canada's temporary migration program: a model despite flaws. *Migration Information Source*. Retrieved June, 2008, from <http://www.migrationinformation.org/Feature/display.cfm?id=650>

7 Fairey, David, et al. (2008, June). *Cultivating farmworker rights: Ending the exploitation of immigrant and migrant farmworkers in BC*. Vancouver, BC: Canadian Centre for Policy Alternatives.

B.C. regional strategies

Farm owners and food processors often compete with other local businesses in attracting workers. The South Okanagan Labour Project⁸ was initiated by a cross-section of business and community leaders to develop a plan that could address shortages of skilled and semi-skilled workers being reported across virtually all local industries, including agriculture, hospitality and tourism, and manufacturing.

The aim of this project was the development of effective actions that could address common needs across a range of local businesses. Project participants wanted to establish a local action plan that could be carried out quickly, at low cost, and by the businesses themselves.

Farm operators identified a need for workers who could work from March through to November and who had access to affordable accommodation and transportation. They also expressed a need to offer common benefit packages for workers, along with training and certification, and access to on-site toilets and washing facilities. For themselves, employers wanted better knowledge of WCB provisions and employment standards, and streamlined payroll administration.

The study notes that an increasing number of owners and operators in the local fruit industry are recent immigrants. Many are unaware of B.C. labour standards, WCB regulations and health protocols and have expressed interest in an education and training program in the following areas: labour law; sexual harassment laws; employment standards; health and safety standards and procedures; business planning; farming techniques; and community marketing strategies.

Many of the same needs were identified by the hospitality industry, where seasonal workers in housekeeping are a key concern. Employers identified a need for hospitality workers to complete training and certification that is accepted by the industry as a whole. This would enhance the quality of the workforce, improve the image of the occupation, and enable workers to work for different businesses and be employed for most of the year.

The report states that many owner/operators are unaware of how to be good employers, and, as a result, they tend to have high turnover rates. Two initiatives are suggested: develop a simple cost template for business owners that displays the cost of each turnover versus being able to retain a trained worker; and organize workshops and training materials to teach good management practices.

According to the report, there is a population of young adults in the Okanagan First Nations community who are eager to work but face numerous barriers to employment, such as incomplete education, low self-esteem, lack of life skills and work experience, and poor communication skills. The report notes that any strategy to reach these workers must incorporate four elements:

- a) a front-end skills program, coupled with counselling and mentoring;
- b) employers who are familiar with First Nations culture and who are willing to work with First Nations workers to enable them to gain necessary life and work skills;
- c) a program that acts as a mentor and intermediary between the employer and the employee; and
- d) transportation to the work site and provisions for daycare.

⁸ Baxter, James. (2007). *South Okanagan labour market project*. Community Futures.

Projects were to be launched in three areas: agriculture seasonal workers; hospitality industry; and First Nations. Recent interviews with project participants indicate that it will be difficult, given the range of businesses involved, to follow through on many of the report's recommendations without consistent three- to five-year funding to support ongoing project management.

B.C. future planning

In 2006, a strategic planning study identified key issues that are strategically important to the long-term success of the B.C. agri-food industry and recommended actions that industry and government should pursue to build a stronger future.⁹ The *Focus on the Future* report was commissioned by the Investment Agriculture Foundation, the BC Food Processors Association, and the BC Agriculture Council.

The planning study included a series of seven workshops, held throughout the province, involving 300 people, including representatives of industry associations, product and commodity groups, and leading processors and processor groups. The report identifies three key issues that address human resource challenges in the B.C. agri-food industry:

- First, as the agri-food industry grows and diversifies, the need for a broader range of management skills has also increased. The unemployment rate in B.C. is very low, and competition from other industries for managers and skilled workers is very high. The report states that industry's limited access to skilled workers and managers constrains productivity and reduces the industry's ability to identify opportunities for improvement, implement change, and increase profitability.
- Second, marketing is the issue most commonly identified as a weakness of the industry in B.C. The development of marketing skills becomes even more important as suppliers continue to move away from a commodity focus and introduce new value-added products and services. The report states that industry needs to recognize the importance of marketing, undertake market research and collect market intelligence, and have the resources, capabilities, and focus needed to implement strong marketing and branding programs.
- Third, industry representatives complain about the lack of training and education targeted to the various needs of agriculture. At the same time, there is low participation by the existing workforce in current training and education offerings. According to the report, this may be due to lack of interest because current education and training offerings do not align with industry needs. Low participation may be also be linked to the inability of employers to finance training because of narrow margins, or because their operation is too busy with existing workloads to release workers for training. Industry members in the Interior were particularly concerned about the lack of agriculture programs at their community colleges.

The report recommended a number of high priority actions for the short term, including the development of an action plan that will enable the agri-food sector to better meet its needs for management skills as well as for skilled, unskilled, and seasonal workers. This recommendation led to the current project.

⁹ Ference Weicker & Co, *Focus on the future*.

Canadian studies

The Canadian Federation of Agriculture completed two studies in 2005 that led to the establishment of the Canadian Agriculture Human Resource Council (CAHRC).^{10, 11} The first study was a review of the literature on human resources in Canadian agriculture, and the second consisted of a series of focus groups to identify human resource issues across Canada.

Key issues identified in the two reports include the following:

- There is a long-term tightening of a skilled workforce in agriculture, due to the demographics of an aging workforce.
- Farm operators are experiencing difficulty recruiting and retaining quality people; low pay and work schedule are commonly cited as barriers to recruitment and retention.
- There is a lack of resources to train agricultural workers and an absence of a culture oriented toward training and continuous learning.
- Negative perceptions of careers in agriculture are widespread across Canada.
- There is a shortage of seasonal and harvest labour.
- How to deliver educational and training services for farmers and farm workers is a significant challenge.
- Employment insurance and the social safety net system impose restrictions on people who wish to access temporary work opportunities in the industry.

CAHRC was established in 2007 and is in the process of carrying out three projects, to be completed in 2009.¹²

The council is preparing an analytical report that assesses the “gaps and needs” of labour requirements on both a regional and a commodity basis. This report will illustrate the nature and scope of human resource issues in the agriculture sector, supplemented by a projection of these issues over five years so decision-makers can focus solutions on a long-term basis.

The council plans to establish a repository of information on all the training programs currently available across Canada. To establish this “one-stop-shop,” the council plans to gather information on available learning programs and best practice recognition methods in the agriculture sector to create an inventory database. This information is intended to help the council and the agriculture sector to identify the gaps in current programs and address skills needs. According to CAHRC, this will also help to facilitate industry access to appropriate training resources and improve the ability of learning institutions to develop new training programs.

Working with the Canadian Nursery Landscape Association, the council is also developing a set of skills standards for the ornamental sector and course materials to enhance the image and skills of workers in the sector and enable their movement across Canada. This project is expected to form a model on which CAHRC can build future standards in other sectors.

10 Stiefelmeyer, K., & Mussell, A. (2005, March). *Environmental scan & literature search of agricultural human resource issues*. Guelph, Ontario: George Morris Centre.

11 R. A. Malatest & Associates Ltd. (2005, June). *Human resources issues and needs in the agriculture sector focus groups: Final report*. Author.

12 Canadian Agriculture Human Resource Council. Retrieved June, 2008 from <http://www.cahrc-ccrha.ca/projects.html>

In the food processing industry, the National Seafood Sector Council (NSSC) prepared a report in 2007 that identified human resource challenges across the food processing industry.¹³ This organization is advocating the formation of a national food processing human resource council, similar to what has been established for agriculture producers. Key issues identified in the report include the following:

- Overall employment in the food processing industry has declined, and this decline can be expected to continue as food processors continue to adopt new technologies.
- Technology adoption varies markedly by industry. The dairy industry leads the way in automation and new processes, while the bakery industry is lagging behind.
- The adoption of new technologies will result in an increased demand for highly skilled workers. This will be offset by a continued decline in employment demand overall as jobs replaced by automation limit demand for less skilled workers.
- Skills development programs must be flexible to meet changing needs, given the diverse range of skill requirements resulting from technological innovation.
- Food safety and food security are issues that will continue to have an impact on skills requirements and regulations.
- New immigrants are now the single most important labour pool for the food processing industry in some parts of Canada.
- To meet increasing line staff requirements, alternate workforces within the food processing sector must be explored, and their special training needs addressed (e.g., Aboriginal people, seniors, immigrant women).

The Alliance of Ontario Food Processors (AOFPP) identified many of the same human resource issues and prepared a plan in early 2008 for solving the skills shortage in the province's food and beverage industry^{14, 15}. The report recommended

- that the AOFPP develop a comprehensive marketing plan with the objective of favourably changing the perception of the food processing sector to one that will enable students to embrace the industry as a "career of choice;"
- that colleges continue to work with local industry to customize existing programs at both the skilled trades and supervisory level to meet the unique needs of the food processing sector;
- that public policy, such as taxation policy, be aligned, with the objective of obtaining more skilled workers for the sector through cooperation between industry, government, and educational institutions;
- that government commit the financial resources required to build a state of the art institute of food technology at Conestoga College.

13 Corporate Research Associates Inc. (2007, June). *Diagnostic assessment and definition of the food industry in Canada: draft report*. Ottawa, ON: National Seafood Sector Council.

14 e-Conomics Consulting and Jayeff Partners. (2005, February). *Workforce ahead: A labour study of Ontario's food processing industry*. Ontario: Alliance of Ontario Food Processors.

15 Laughlin Consulting and Jayeff Partners. (2008). *Together we're better: A blueprint for solving the critical skills shortage in Ontario's agri-food industry*. Ontario: Ontario Alliance of Food Processors.

Other studies

Quebec and Prince Edward Island have carried out labour studies in agriculture, reporting similar results.^{16,17} Among other industrialized countries experiencing labour shortages in the food industry, Australia is useful to consider, as the industry there is dealing with a unique set of circumstances.¹⁸

The current drought in Australia, and the severe impacts on farm production, has led to a widespread decline in employment in agriculture, with an estimated 100,000 job losses recorded between 2002 and 2007. Employment in the sector was about 400,000 in 2002; it has now dropped to close to 300,000.

Although the drought still persists, the National Farmers Federation (NFF) of Australia expects that when the drought gives way to increased rainfall and farm production picks up, farmers will be facing a serious labour shortage.

The NFF's 2008 *Labour Shortage Action Plan* places a heavy emphasis on education and training, and improving the poor image of farming held by the teaching profession and career advisors in schools. The NFF states that education and training in the agriculture sector must be wider ranging than simply focusing on employees. It must encompass all those who work on a farm, including owners of family farm businesses. The NFF notes that an adjustment in farmers' attitudes to learning is seen as a crucial step towards improving the sustainability of farming.

16 Commission sur l'avenir de l'agriculture et de l'agroalimentaire québécois. (2007). *Agriculture et agroalimentaire: choisir l'avenir*. Longueuil, Québec: Author.

17 MacDonald, Wendy (Atlantic Evaluation Group). (2007). *Study of labour supply and demand within the PEI agriculture sector: Literature review and analysis*. PEI Agriculture Council.

18 National Farmers' Federation. (2008). *2008 labour shortage action plan*. Barton, Australia: Author.

2. WORKFORCE PROFILE

An important starting point in the development of a human resource strategy is to determine the characteristics of the agri-food workforce. This profile can then serve as a framework to monitor impacts of initiatives undertaken to improve skill levels or increase the supply of labour. In Part 2, we identify key characteristics of the B.C. agri-food workforce, including: number of workers and their average age, size of firms, educational attainment, number of immigrants, and occupations in the industry.¹⁹

STANDARD CLASSIFICATION SYSTEMS

For purposes of establishing common definitions of the wide range of occupations in industry, the National Occupational Classification (NOC) system is the nationally accepted reference on occupations in Canada. It is used to compile, analyze, and communicate information about the various jobs found throughout Canada's labour market. The following represents the overall NOC structure. Each broad category is divided into subcategories, with each assigned a unique definition and code. Statistics Canada collects and reports workforce data using this common set of definitions.

BOX 2.1: National Occupational Classification (NOC) system

- A Management Occupations
- B Business, Finance, and Administrative Occupations
- C Natural and Applied Sciences and Related Occupations
- D Health Occupations
- E Occupations in Social Science, Education, Government Service, and Religion
- F Occupations in Art, Culture, Recreation, and Sport
- G Sales and Service Occupations
- H Trades, Transport and Equipment Operators and Related Occupations
- I Occupations Unique to Primary Industry

¹⁹ Data has been drawn from custom tables prepared by Statistics Canada using the 2006 census. Data has also been taken from Canadian Business Patterns, December 2007, and the Census of Agriculture, 2006.

A second classification system, the North American Industry Classification system (NAIC), is used to classify the wide range of industries in Canada. It was developed by the statistical agencies of Canada, Mexico, and the United States.

BOX 2.2: B.C. Agri-food Industries –North American Industry Classification (NAIC) system

NAIC Code	Description
11	Agriculture, Forestry, Fishing, and Hunting
111	Crop Production
1111	Oilseed and Grain Farming
1112	Vegetable and Melon Farming
1113	Fruit and Tree Nut Farming
1114	Greenhouse, Nursery, and Floriculture Production
1119	Other Crop Farming
112	Animal Production
1121	Cattle Ranching and Farming
11211	Beef Cattle Ranching and Farming, including Feedlots
11212	Dairy Cattle and Milk Production
1122	Hog and Pig Farming
1123	Poultry and Egg Production
1124	Sheep and Goat Farming
1125	Aquaculture
1129	Other Animal Production
31	Manufacturing
311	Food Manufacturing
3111	Animal Food Manufacturing
3112	Grain and Oilseed Milling
3113	Sugar and Confectionery Product Manufacturing
3114	Fruit and Vegetable Preserving and Specialty Food Manufacturing
3115	Dairy Product Manufacturing
3116	Meat Product Manufacturing
3117	Seafood Product Preparation and Packaging
3118	Bakeries and Tortilla Manufacturing
3119	Other Food Manufacturing
312	Beverage and Tobacco Product Manufacturing
3121	Beverage Manufacturing
31211	Soft Drink and Ice Manufacturing
31212	Breweries
31213	Wineries
31214	Distilleries

Created against the background of the North American Free Trade Agreement, the North American Industry Classification system is designed to provide common definitions of the industrial structure of the three countries and a common statistical framework to facilitate the

analysis of the three economies.²⁰ Box 2.2 displays NAIC industries relevant to the B.C. agri-food industry; each code is linked to a specific description for that industry.

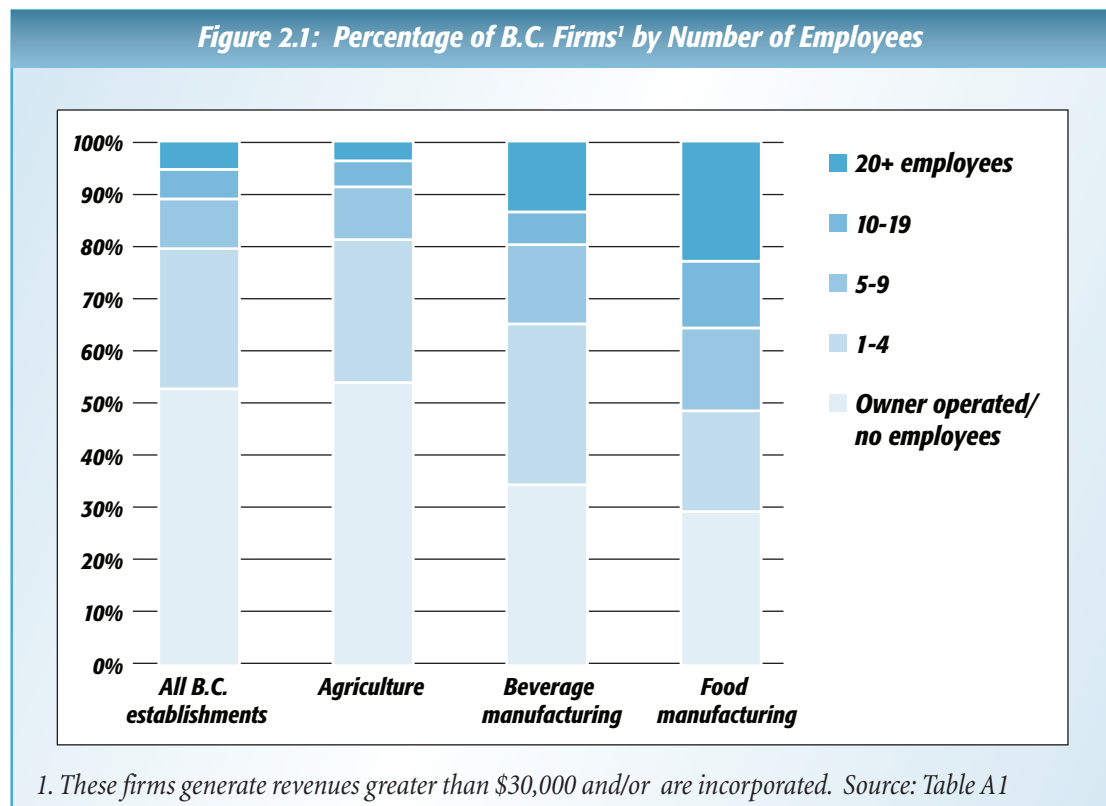
ESTABLISHMENT SIZE

There are 38,275 people working on 20,000 British Columbia farms. Statistics Canada defines a farm as an agriculture operation that produces at least one agricultural product intended for sale, so the vast majority of these B.C. farms are very small operations, typically owner operated.

Figure 2.1 displays BC establishments, including farms, that generate revenues greater than \$30,000 and/or are incorporated. These more established farms (about 7,300 in number) have an employee profile that is similar to BC industry as a whole: over half are owner operated with no employee payroll.

The food and beverage industry employs 26,235 workers in the province. Figure 2.1 shows that the 1,500 firms in this industry tend to be somewhat larger than other B.C. establishments, but still, most are small businesses. About 65% of beverage firms and 50% of food processors have fewer than five employees.

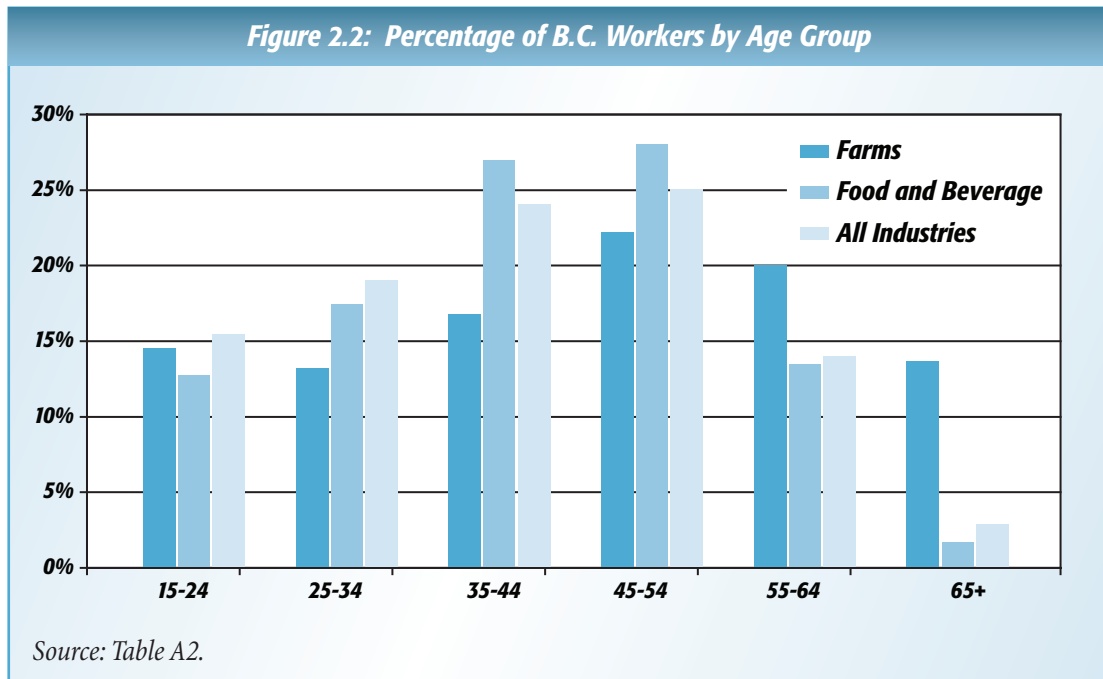
B.C. agri-food workers consist of 55% men and 45% women. This ratio is about the same in farming and in the food and manufacturing industries.



20 Statistics Canada. *North American industry classification system (NICS) 1997 - Canada*. Retrieved May, 2008, from <http://www.statcan.ca/english/Subjects/Standard/naics/1997/naics97-menu.htm>

AGE OF THE WORKFORCE

When compared to other B.C. workers, the B.C. farm workforce is older. For example, 14% of the farm workforce, compared to 3% of the B.C. workforce, is 65 years of age or older. The average age for farm operators is 54, up from 51 in 2001.²¹



Given the disproportionate number of older farm workers, forecasts of a shrinking B.C. labour pool to replace retiring workers will present serious challenges to the agriculture industry. We discuss this later in the report.

The age profile of B.C. food and beverage workers is about the same as that of all workers in the province, although there are moderately greater percentages of workers in the mid-age range (35-54) and fewer in the younger and older ranges.

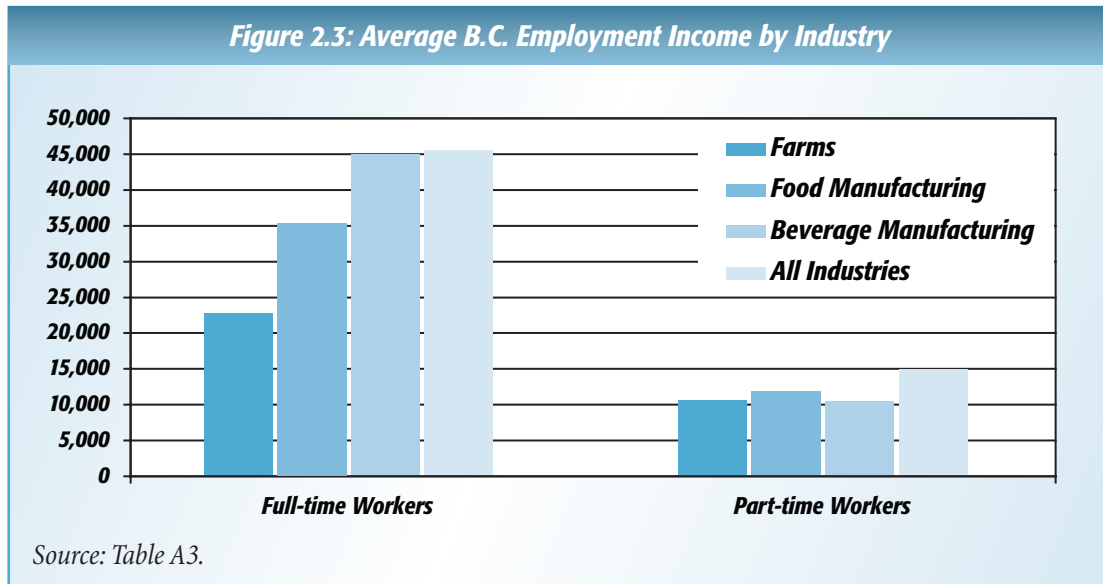
INCOME

The average income for full-time workers in the B.C. beverage industry, which includes soft drink manufacturers, breweries and wineries, is \$45,000, about the same as the B.C. industry average. Average income for the food manufacturing sector is \$35,000.

Average farm income for the farm workforce, at \$22,600, is about half the B.C. industry average. It is not unusual, however, to have one or both spouses holding full- or part-time jobs off the farm, while operating the farm with the support of other family members, full-time employees, or seasonal workers. Moreover, more than half of B.C. unincorporated farms are life-style farms or owned by pensioners, who rely on outside income to sustain themselves. In 2005, the average

²¹ Statistics Canada, 2006 Census of Agriculture, *Farm Data and Farm Operator Data*, catalogue no. 95-629-XWE.

off-farm income for B.C. farm families was \$76,466, while the average net operating income from farms was \$10,740, for an average total family income of \$87,206.²²



Part-time workers across B.C., defined as those working fewer than 30 hours per week, earn an average income of \$15,000 per year. For part-time workers in the agri-food industry, the average income is \$10,000 to \$12,000.

There is a substantial difference between income levels for male and female workers across the province. This is also true in the agri-food industries. In the beverage industry, average income is \$45,000 and \$31,000 for males and females, respectively. In farming, the respective average incomes are \$23,000 and \$15,000.

EDUCATIONAL ATTAINMENT

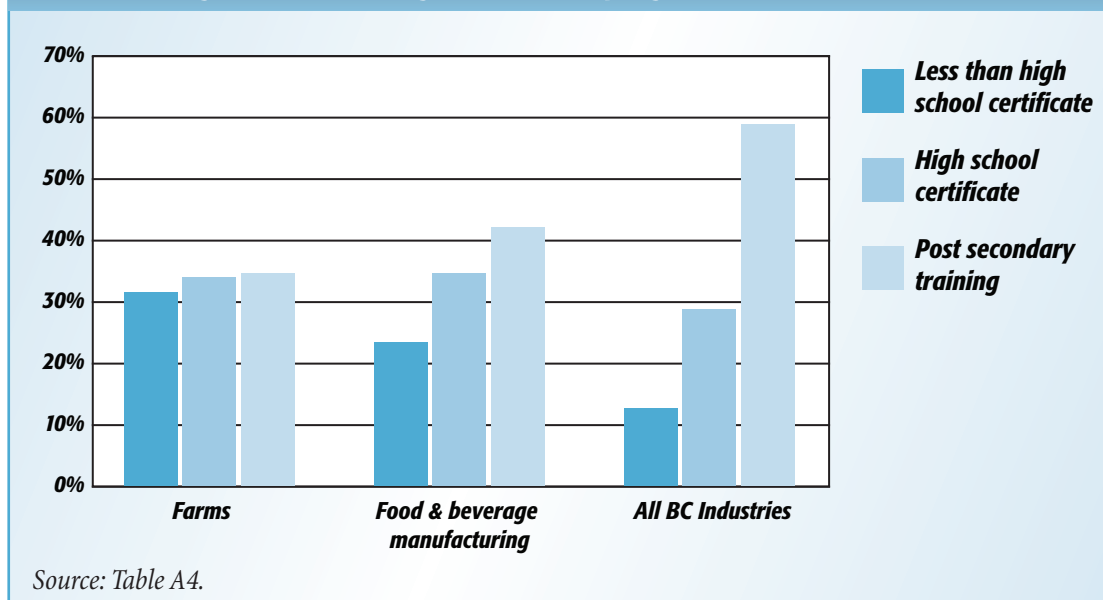
Close to 60% of B.C. workers have attained some level of training beyond high school graduation; this includes a college diploma, a trade certificate, or a university degree.

Proportionately fewer workers in the agri-food industry have attained postsecondary training. For the food and beverage sector, 42% have attained some postsecondary training, and for farm workers, 35% have attained this level of training.

About 32% of workers in the farm industry and 23% of workers in the food and beverage industry have less than high school graduation, compared with 13% of the B.C. workforce.

²² Statistics Canada. (2008). *Statistics on income of farm families, 2005*. Catalogue no. 21-207-X. Ottawa: Minister of Industry.

Figure 2.4: Percentage of Workers by Highest Level of Education



IMMIGRANTS

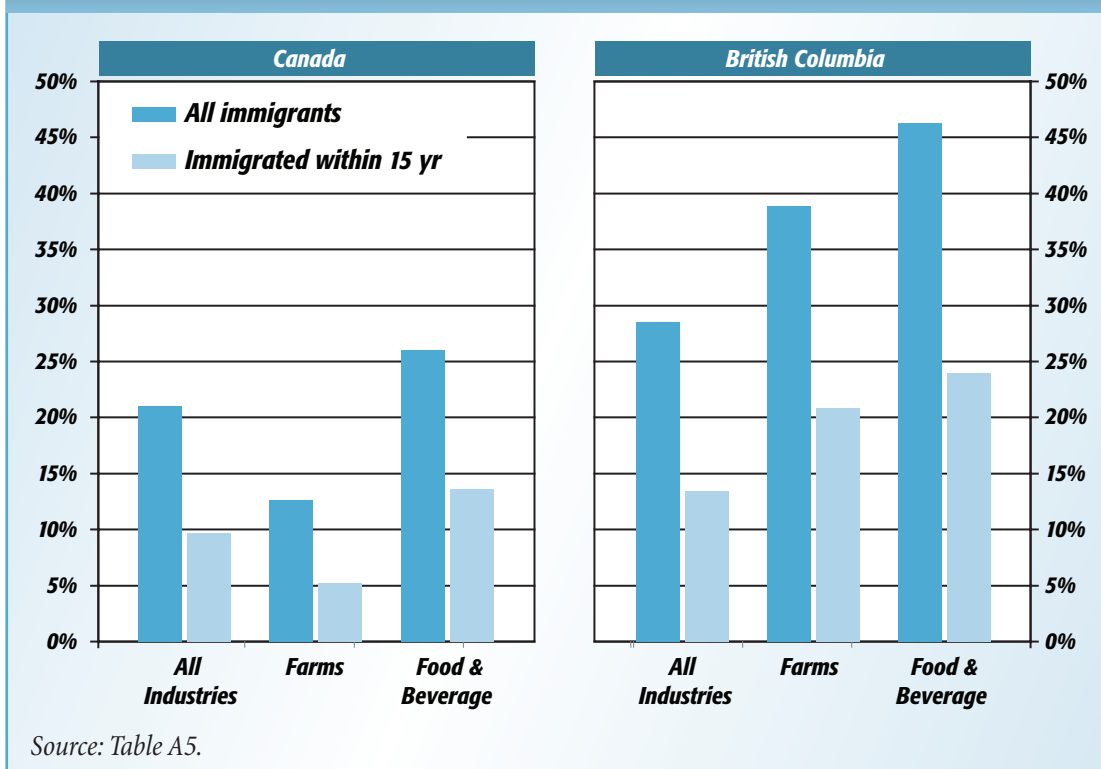
For a country that depends on immigration for economic growth, it is not surprising that a substantial proportion of Canadian workers were born in other countries. The 2006 Canadian census shows that 21% of Canada's labour force now consists of immigrants, with the proportion in B.C. at 29%.

For the B.C. food and beverage industry, 46% of the workforce consists of immigrants, compared with 26% in this industry across Canada. For B.C. farms, 39% of the workforce consists of immigrants, compared with 13% for farms across Canada.

Recent immigrants—defined here as individuals who immigrated to Canada within the previous 15 years—represent a greater proportion of the B.C. agri-food workforce than of the overall B.C. workforce. The 2006 census reports that more than 20% of workers in the B.C. agri-food industries are recent immigrants. Again, these numbers are substantially higher than in the Canadian agri-food workforce as a whole, where 5% of farm workers and 14% of food and beverage workers are recent immigrants.

These data highlight the importance of immigrant workers to the future of all B.C. industries, but, in particular, to the operation of farms and to the food and beverage manufacturing industries.

Figure 2.5: Percentage of Immigrants by Industry Workforce



OCCUPATIONS BY INDUSTRY

Occupations in the Agriculture Industry

Table 2.1 displays the distribution of workers in B.C. agriculture classified by occupation. Those occupations unique to agriculture, representing 84% of workers, are grouped under NOC Category I, while those not unique to farming, the other 16%, are grouped together under NOC Categories A-H and J.

In agriculture, 38,275 workers were employed in 2005. Of this total, 6,015 were employed in a number of occupations, such as business and finance, sales and service, and trades and transport, which are found across many B.C. industries. Because these job functions are transferable, many of these workers can move easily from one industry to another. Top categories in terms of employment are the following broad groups:

- **Business, Finance and Administrative Occupations—1,445 workers:** Occupations in this broad occupational category are primarily concerned with providing financial and business services, administrative and regulatory services, and clerical support services.
- **Sales and Service—1,315 workers:** Occupations in this broad occupational category are primarily concerned with selling goods and services and providing personal, protective, household, tourism, and hospitality services.
- **Trades, Transport, and Equipment Operators and Related Occupations—1,290 workers:** Occupations in this broad occupational category are primarily concerned with contracting,

supervising, and doing trades work; and supervising and operating transportation equipment and heavy equipment.

Table 2.1: Number of workers by occupation: BC Agriculture	
NOC Occupations	Number of workers 2005
All occupations on farms	38,275
NOC categories A-H, J —Occupations not unique to agriculture	6,015
A Management occupations	510
B Business, finance and administrative occupations	1,445
C Natural and applied sciences and related occupations	825
D Health occupations	35
E Occupations in social science, education, government service and religion	50
F Occupations in art, culture, recreation and sport	110
G Sales and service occupations	1,315
H Trades, transport and equipment operators and related occupations	1,290
J Occupations unique to processing, manufacturing and utilities	435
NOC Category I —Occupations found mainly in agriculture	32,260
I011 Farmers and farm managers	13,850
I012 Agricultural and related service contractors and managers	30
I013 Farm supervisors and specialized livestock workers	630
I014 Nursery and greenhouse operators and managers	585
I015 Landscaping and grounds maintenance contractors and managers	10
I016 Supervisors, landscape and horticulture	185
I017 Aquaculture operators and managers	290
I021 General farm workers	9,425
I022 Nursery and greenhouse workers	3,770
I211 Harvesting labourers	2,865
I212 Landscaping and grounds maintenance labourers	195
I213 Aquaculture and marine harvest labourers	280
Other	145

Source: Census 2006, Statistics Canada, Custom Tabulations, June 2008

The vast majority of agriculture workers work in occupations that are found mainly in the agriculture industry. The following are the top occupational categories in terms of employment:

- **Farmers and farm managers—13,850 workers:** This is the largest occupational grouping. These workers manage the operations and functions of a farm. They are responsible for growing crops, raising and breeding livestock, poultry, and other animals, and marketing farm products.
- **General farm workers—9,425:** These workers plant, cultivate, and harvest crops, raise livestock and poultry, and maintain and repair farm equipment and buildings. This group includes operators of farm machinery. General farm workers are employed on crop, livestock, fruit, vegetable, and specialty farms.

- **Nursery and greenhouse workers—3,770:** Nursery and greenhouse workers plant, cultivate, and harvest trees, shrubs, flowers, and plants, and serve nursery and greenhouse customers. They are employed in indoor and outdoor nurseries and greenhouses.
- **Harvesting labourers—2,865:** These workers assist other farm workers to harvest, sort and pack crops.

Occupations in the food and beverage industry

Table 2.2 displays the distribution of workers in B.C. food and beverage processing, classified by occupation.

More than half of food and beverage workers, 14,670, are in occupations that are not unique to the food and beverage industry. With increased competition for workers, a greater proportion of workers, such as those in management occupations and in trades, will have a growing number of job opportunities across other industries. Top categories in terms of employment are the following broad groups:

- **Management Occupations—2,795 workers:** Occupations in this broad occupational category are primarily concerned with carrying out the functions of management by planning, organizing, coordinating, directing, controlling, staffing, and formulating, implementing, or enforcing policy, either directly or through other levels of management.
- **Business, Finance and Administrative Occupations—2,240:** Occupations in this broad occupational category are primarily concerned with providing financial and business services, administrative and regulatory services, and clerical support services.
- **Sales and Service—5,230:** Occupations in this broad occupational category are primarily concerned with selling goods and services and providing personal, protective, household, tourism, and hospitality services.
- **Trades, transport and equipment operators—2,790:** Occupations in this broad occupational category are primarily concerned with contracting, supervising, and doing trades work, and supervising and operating transportation equipment and heavy equipment.

Just under half of the employees in this sector work in occupations that are found mainly in the food and beverage processing industry. The following are the top occupational categories in terms of employment:

- **Process control and machine operators, food and beverage processing—2,130:** Process control and machine operators in this unit group operate multi-function process control machinery or single-function machines to process and package food and beverage products. They are employed in fruit and vegetable processing plants, dairies, flour mills, bakeries, sugar refineries, meat plants, breweries, and other food and beverage processing establishments.
- **Industrial butchers and meat cutters, poultry preparers—1,185:** Workers in this unit group prepare meat and poultry for further processing, for packaging, or for marketing. They are employed in meat and poultry slaughtering, processing, and packing establishments.
- **Fish plant workers—1,805:** This unit group includes fish plant machine operators, who set up and operate machinery to process and package fish products, and fish plant cutters

and cleaners, who cut, trim, and clean fish by hand. Fish plant workers are employed in fish processing plants.

- **Labourers in food, beverage and tobacco processing—4,105:** Labourers in this unit group perform material handling, clean-up, packaging, and other elemental activities related to food, beverage, and tobacco processing. They are employed in fruit and vegetable processing plants, dairies, flour mills, bakeries, sugar refineries, meat plants, breweries, and other food, beverage, and tobacco processing plants.

Table 2.2: Number of workers by occupation, BC food and beverage processors	
NOC Occupations	Number of workers 2005
All occupations BC food and beverage processors— NOC categories A-J	26,235
NOC categories A-I —Occupations not unique to food processing	14,670
A Management occupations	2,795
B Business, finance and administrative occupations	2,420
C Natural and applied sciences and related occupations	600
D Health occupations	40
E Occupations in social science, education, government service and religion	115
F Occupations in art, culture, recreation and sport	90
G Sales and service occupations	5,230
H Trades, transport and equipment operators and related occupations	2,790
I Occupations unique to primary industry	590
NOC category J —Occupations found mainly in food processing	11,565
J013 Supervisors, food, beverage and tobacco processing	710
J134 Water and waste plant operators	10
J144 Other wood processing machine operators	10
J161 Sewing machine operators	50
J171 Process control and machine operators, food and beverage processing	2,130
J172 Industrial butchers and meat cutters, poultry preparers and related workers	1,185
J173 Fish plant workers	1,805
J175 Testers and graders, food and beverage processing	455
J181 Printing machine operators	10
J228 Other assemblers and inspectors	10
J313 Labourers in chemical products processing and utilities	15
J316 Labourers in textile processing	10
J317 Labourers in food, beverage and tobacco processing	4,105
J318 Labourers in fish processing	950
J319 Other labourers in processing, manufacturing and utilities	85
Other	25

Source: Census 2006, Statistics Canada, Custom Tabulations, June 2008

3. DEMAND AND SUPPLY GAPS

In Part 3, we examine the demand for workers in the agri-food industry and the demand for different types of occupations over the period 2005 to 2015. We then estimate the supply of workers over this same period and discuss the gap between demand and supply. We conclude this part of the report by identifying potential sources of new workers.

DEMAND FOR LABOUR

B.C. industry

Demand for workers over the period 2005 to 2015 has been estimated by the B.C. Ministry of Advanced Education and Service Canada.²³ These projections are developed using the Canadian Occupational Projection System (COPS) and are based on a number of factors, including historical employment and labour force participation trends, macro-economic and employment forecasts from the B.C. Ministry of Finance, and market intelligence from industry experts.

Table 3.1: Projected Labour Force Demand: 2005–2015

	Employed 2005	Attrition 2005–2015	New jobs 2005–2015	Total openings 2005–2015
Agriculture	38,275	12,305 (31%)	1,760 (5%)	14,065
Food & beverage	26,235	6821 (26%)	1049 (4%)	7,871
All B.C. industries	2,130,550	652,600 (31%)	461,100 (22%)	1,113,700

Source: BC Stats, 2007

Between 2005 and 2015 it is estimated that over 461,000 new jobs will be created across all B.C. industries, a 22% increase over the 2005 employment base. Of the more than 2 million jobs that existed in 2005, it is projected that 652,600 positions will become vacant over the period 2005 to 2015, mainly a result of the large number of retirements.

Both the agriculture and the food and beverage industries are projected to experience slow job growth²⁴, between 4 and 5% over the 10-year period, but the percentage of vacancies due to attrition will be similar to that of the overall workforce. Between 2005 and 2015, it is estimated that more than 14,000 jobs in agriculture and 7,800 in food and beverage processing will require filling.

23 BC Stats. (2007, February). *Employment outlook for British Columbia : COPS BC unique scenario for 2005 to 2015*. Author

24 Modest projected job growth, particularly in the food processing industries, is related in part to improved productivity resulting from the adoption of new technologies.

Two observations are noteworthy for the agri-food industry. First, the vast majority of job vacancies in these industries are expected to be the result of attrition; and second, the large number of vacancies projected across B.C. industry means there will be significant competition for workers if the supply of new workers does not keep pace with demand.

BC Stats' projections show that all broad occupational groups and skill levels—from professional and managerial occupations requiring a university degree to labouring occupations that do not require high school graduation—will experience job growth over the period 2005 to 2015. About three-quarters of expected employment openings will require some form of postsecondary training.

Agriculture

B.C. agriculture employed 38,275 workers in 2005. It is projected that about 30% of these workers will retire from the workforce over the period 2005 to 2015.

Table 3.2: Agriculture Industry –Projected Number of Job Openings in Selected Occupations, 2005-2015			
NOC Occupations	Number of workers 2005 base year	Projections¹	
		Attrition 2005-2015	New Jobs 2005-2015
All occupations in agriculture industry (NOC A-J)	38,275	12,300	1,800
Selected occupations (NOC)			
Business, finance and administrative occupations (A)	1,445	500	100
Sales and service occupations (G)	1,315	300	100
Trades, transport and equipment operators (H)	1,290	400	100
Farmers and farm managers (I011)	13,850	5,700	1,000
General farm workers (I021)	9,425	1,400	100
Nursery and greenhouse workers (I022)	3,770	600	200
Harvesting labourers (I211)	2,865	400	100
1. Projections greater than 500 workers are displayed. Estimates rounded to 100. Source: BC Stats (COPS)			

The vast majority of agriculture workers are employed in occupations that are found almost exclusively in the agriculture industry. Farmers and farm managers, at 13,850, represent the largest occupational group in the industry and, as discussed earlier, have an older age profile. It is projected that 5,700, or 40% of this group, will leave the workforce through attrition over the 10-year forecast period. Because this occupation is so central to the agriculture industry, the projected high attrition rate should be a concern to industry and to government.

Of the 9,425 general farm workers employed in 2005, about 1,400 will leave the workforce through attrition over the forecast period. Of the 3,770 nursery and greenhouse workers, about 600 will leave through attrition, and of harvesting labourers, about 400 will leave through attrition. Relatively few new jobs will be created in these three occupational categories.

The industry also employs 6,015 workers in a number of generic occupations, such as business and finance, sales and service, and trades and transport. About 30% of these jobs will also become open due to attrition over the period 2005 to 2015.

Food and beverage processing

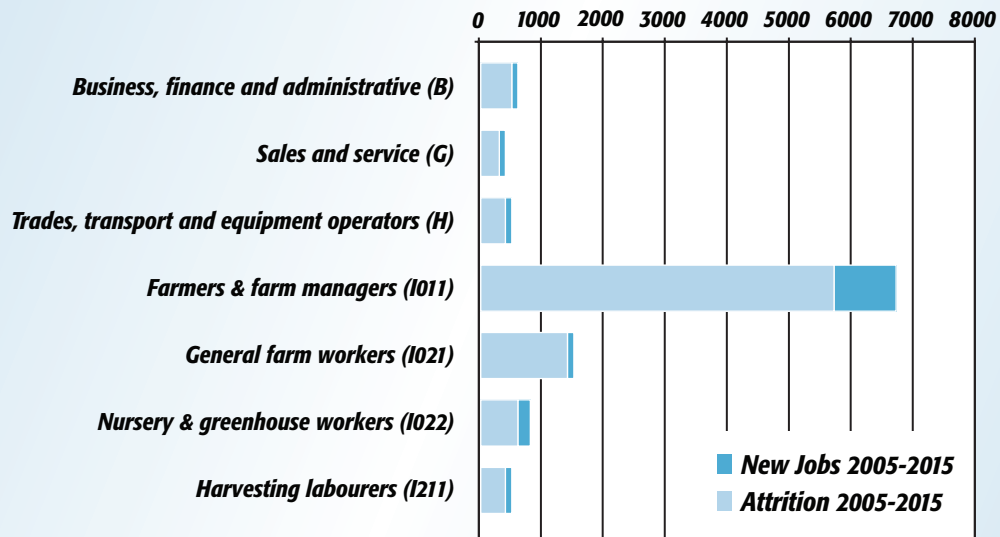
About one quarter of the 26,235 workers in the food and beverage industry are expected to retire over the period 2005 to 2015. Projections suggest that relatively few new jobs will be created during this period, as the industry continues to introduce new technologies to improve productivity.

Table 3.3: Food and Beverage Processing –Projected Number of Job Openings in Selected Occupations, 2005-2015			
NOC Occupations	Number of workers 2005 base year	Projections¹	
		Attrition 2005-2015	New Jobs 2005-2015
All occupations in the food and beverage processing industry (NOC A-J)	26,235	6,800	1,000
Selected occupations (NOC)			
Management occupations (A)	2,795	1,100	100
Business, finance & administrative occupations (B)	2,420	900	100
Sales and service occupations (G)	5,230	1,300	200
Trades, transport and equipment operators (H)	2,790	900	100
Process control and machine operators (J171)	2,130	400	100
Industrial butchers and meat cutters, poultry preparers (J172)	1,185	200	100
Fish plant workers (J173)	1,805	400	100
Labourers in food, beverage processing (J317)	4,105	1,000	200
1. Projections greater than 500 workers are displayed. Estimates rounded to 100. Source: BC Stats (COPS)			

In contrast to agriculture, the need for replacement workers is more evenly distributed across a range of occupations. More than half of the food and beverage workers are employed in generic occupations that are found across B.C. industries. In sales and service, about 1,300 workers are expected to retire, and in management about 1,100 will retire over the period 2005 to 2015.

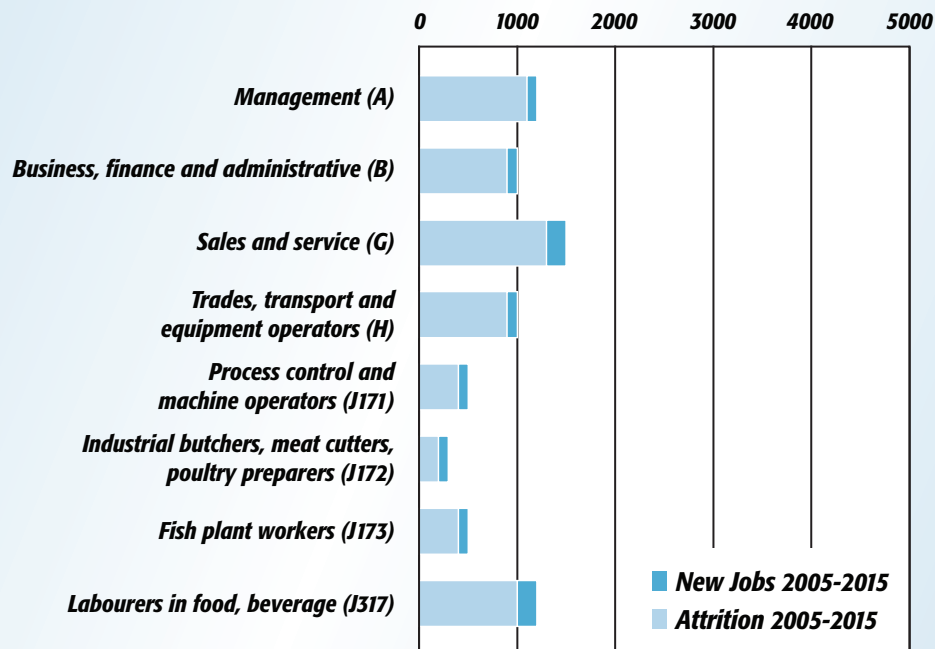
The 4,105 labourers in food and beverage processing account for 16% of the overall workforce; about 1,000 of these workers are projected to retire over the projection period.

Figure 3.1: Agriculture Industry: Projected Number of Job Openings by Occupation, 2005-2015



NOC classification in brackets. Source: BC Stats (COPS)

Figure 3.2: Food and Beverage Processing: Projected Number of Job Openings by Occupation, 2005-2015

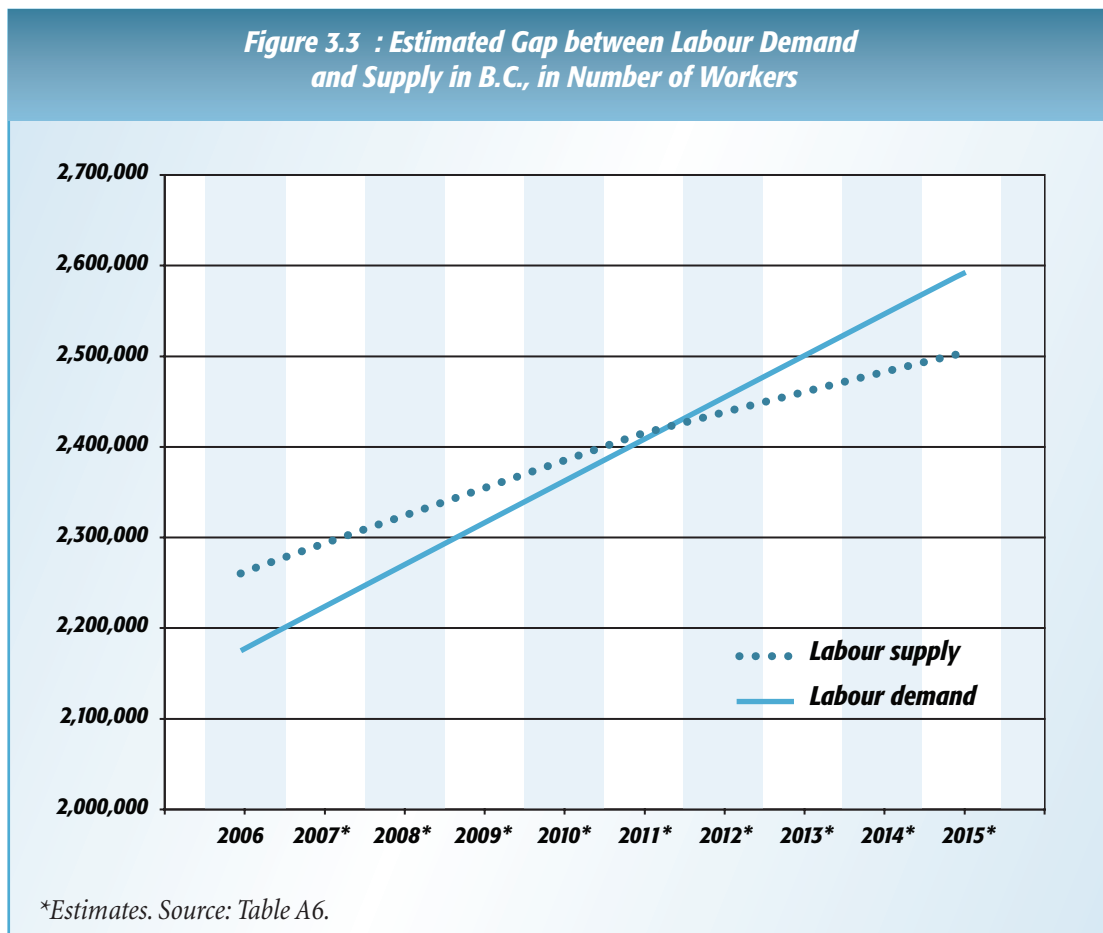


NOC classification in brackets. Source: BC Stats (COPS)

DEMAND AND SUPPLY GAPS

BC Stats has developed projections for the supply of workers to 2031.²⁵ The labour force participation rate—that is, the proportion of the B.C. population active in the workforce—rose from 62% in 1976 to a peak of 67% in 1997. Since then, the participation rate has been slowly dropping and is projected to fall to 59% by 2031. The report points out that, despite higher participation rates of females in the workforce, the projected drop in the overall rate is the result of lower participation rates for males and, more significantly, the aging of the workforce.

By combining this labour supply study and the COPS labour demand study, discussed earlier, we can get a rough estimate of the gaps between demand and supply.



We can see in this scenario that, assuming a 5% unemployment rate, worker shortfalls will occur beginning about 2012. By 2015, there will be a projected shortfall of about 90,000 workers. A recent Ontario study carried out by the Conference Board of Canada reports that serious labour shortages will begin to appear in that province around 2015.²⁶ The Conference Board reports that

25 BC Stats & Ministry of Advanced Education. (2007, June). *British Columbia labour force participation rate projections to 2031*. Victoria: BC Stats.

26 Conference Board of Canada. (2007, September). *Ontario's looming labour shortage challenges*. Ottawa, ON: Author.

labour shortages in Ontario are estimated to be 190,000 in 2020, and will rise to 364,000 and 564,000 by 2025 and 2030, respectively²⁷.

The Conference Board notes that large labour gaps are not sustainable over time and markets will adjust to bring supply and demand into balance. One of the main adjustments would be a rapid increase in wages, which in turn would drive investments in technology to substitute for labour—and therefore produce higher rates of productivity.

In this scenario, large B.C. companies, because of economies of scale, are in a better position to invest in new physical capital to improve productivity. However, 80% of B.C. agriculture operations and about half of the food processing industry employ fewer than five employees and will have fewer resources to invest in new technologies. Higher wage rates, to the extent they are not matched by higher productivity, would continue to reduce the competitiveness of these small operations in the global marketplace. Many small agri-food businesses are turning their attention to niche markets where specialty value-added products command higher pricing.

In a period of competition for skilled workers, it will be more of a challenge to attract and retain workers employed in occupations such as finance, sales, and the trades, workers who can easily move from one industry to the next. Over half of the food and beverage workforce consists of workers in these generic occupations; to remain competitive, the industry will have to ensure that their human resource policies attract and retain qualified workers in these occupations.

Farmers and farm managers make up one-third of the farm workforce and, with an average age of 54, will be retiring from the industry in increasing numbers. These people are obviously critical to the survival of the B.C. agriculture industry. There are concerns that high retirement rates coupled with the rising cost of farmland will result in a rapid decline in the number of farmers and farms in the province. On the other hand, escalating food prices and a greater demand for locally produced food will provide opportunities for new farmers to enter the industry. The provision of education and training programs is now particularly important to assist retiring farmers in transferring ownership and to enable new farm entrepreneurs to succeed in a rapidly changing global food industry.

Finally, if competition for entry-level workers increases, particularly in the restaurant and tourism industry, and especially in relation to the 2010 Olympic Games, the agri-food industry will likely find it even more difficult to attract local residents to work as harvesting labourers, fish plant workers, and labourers in food processing. Seasonal work, low wages, and challenging work conditions will continue to be an obstacle for many local residents, fueling the demand for foreign seasonal workers.

SOURCES OF LABOUR

A number of immediate actions can be taken by the agri-food sector to attract new workers to the industry. An important first step is to identify key groups that can be targeted as sources for new workers.

²⁷ It is important to note that labour demand and supply estimates are based on a series of assumptions about future developments, such as economic growth rates and employment levels. Any variation from these assumptions will impact the estimates.

Unemployed youth

The unemployment rate among 15 to 25 year-olds is typically more than double the rate of people older than 25. In January 2007, for example, the B.C. unemployment rate for this age group was 8.7%, compared with 3.5% for those over 25.

Young men and women who have not graduated from high school have even higher unemployment rates and provide a significant untapped human resource. The B.C. high school graduation rate has improved significantly over the past ten years, but has levelled off in recent years to about 80%.²⁸ This means that each year about 10,000 young men and women leave school without obtaining a secondary school diploma.

Young men and women leave the formal school system for a number of reasons. Some students find that traditional secondary schools are not relevant to their interests or learning styles, but most are aware of the importance of education. For many of these students, on-the-job training, through apprenticeship programs or other employer-led training, can provide a better match to their interests and learning preferences, and provide better opportunities for learning and personal development.

By understanding the characteristics of this younger population and developing well-structured agri-food training programs, ones that are linked to further postsecondary training, the agri-food industry will be in a better position to attract B.C. youth to the industry.

Retired population

As discussed throughout this paper, the age structure of B.C.'s population is aging, and increasing numbers of workers are retiring each year. Developing strategies to attract new workers from this expanding pool of retirees, many of whom wish to work on a seasonal basis, represents an opportunity for the agri-food industry. Understanding the needs and aspirations of this population is an important starting point.

First Nations

Throughout much of their history, agriculture has been an important part of the way of life of First Nations people in British Columbia. Although still small in relation to the overall industry, native-run farms exist in every farming region of the province. Working for the most part on reserve lands, First Nation farmers as a group participate in a wide range of sectors, from cattle ranching in the Interior to grape growing in the Okanagan and Vancouver Island, to organic market gardening in the Fraser Valley and on the Coast.

Compared with the total Canadian population, the Aboriginal population has been growing: the average annual increase of the First Nations population is projected to be more than double that of the Canadian population as a whole. This represents an important source of workers for B.C. industry overall.²⁹

28 B.C. Ministry of Education. *Summary of key information, 2006/07*. Retrieved June, 2008, from http://www.bced.gov.bc.ca/keyinfo/pdfs/ski_plusglossary.pdf

29 Statistics Canada. (2005). *Projections of the Aboriginal populations, Canada, provinces and territories*. Retrieved June, 2008, from <http://www.statcan.ca/english/freepub/91-547-XIE/2005001/bfront1.htm>

The First Nations Agriculture Association has been instrumental in supporting First Nations agriculture producers and is a key group that can provide leadership in the development of labour strategies with First Nations communities.

Other provinces

The south Okanagan experienced a large influx of workers from Quebec from 1977 to 1981; during that time, Quebecois workers became the largest component of the workforce on Okanagan farms. Many of these workers took up residence in the Okanagan Valley.³⁰

Today, about 1,000 Quebec migrant workers, mainly well-educated young people, continue this annual trek to the Okanagan, moving from orchard to orchard, following the different crops. At season's end, they typically return to school in Quebec or continue their travels, often to other countries.

Targeting populations of potential workers in Quebec and other provinces for seasonal and skilled workers should be an important part of the strategy to address labour shortages.

Workers with disabilities

According to a survey conducted by Statistics Canada in 2001, there were 600,000 disabled individuals in British Columbia, representing 16% of B.C.'s population.³¹ Many of these people have skills that are in demand across a range of occupations in the agri-food industry, including management, business and finance, and sales and service. Examining the needs and aspirations of this community provides another opportunity to attract new workers to the industry.

Colleges and universities

B.C. colleges and universities offer a range of programs related to agriculture and food processing and are a key source of skilled workers (see Box 3.1).

It is not clear, however, how many students are enrolled in, and graduating from, these programs. It is important for the agri-food industry to clarify its needs and to work closely with the postsecondary system to ensure that colleges and universities are meeting industry needs. An important starting point is the production of annual statistics on the number of students enrolled in, and graduating from, the various agri-food programs.

30 Royal British Columbia Museum. *Living landscapes : Thompson-Okanagan*. Retrieved June, 2008, from <http://www.livinglandscapes.bc.ca/thomp-ok/ethnic-agri/conclusion.html>

31 Statistics Canada. (2008, February). *Disability rates by sex and age groups, British Columbia, 2006*. Retrieved June, 2008, from <http://www.statcan.ca/english/freepub/89-628-XIE/2007003/tables/tab3-10-06-en.htm>

Box 3.1: Programs of Study related to Agriculture and Food Processing, BC Colleges and Universities

Agriculture, Natural Resources and Science : Agriculture Related	
Agriculture Technology Diploma	UCFV
Bachelor of Science in Agroecology Degree	UBC
Bachelor of Science in Global Resource Systems Degree	UBC
Integrated Pest Management (IPM) Certificate	UCFV
Animal Studies/ Management	
Advanced Farrier Training Certificate	Kwantlen
Animal Health Technology Diploma	TRU
Animal Health Technology Diploma	Douglas
Animal Health Technology Distance Education Program	TRU
Animal Welfare Certificate	TRU
Associate of Science Degree (Several Concentrations)	TRU
Livestock Production Certificate	UCFV
Pre-Veterinary Medicine Program	TRU
Agriculture, Natural Resources and Science : Aquaculture/Fisheries	
Bachelor of Science (Natural Resources Management) Programs	UNBC
Bachelor of Science in Fisheries and Aquaculture Degree	Malaspina
Bachelor of Science in Global Resource Systems Degree	UBC
Fish, Wildlife and Recreation Diploma	BCIT
Fisheries and Aquaculture Technology Diploma	Malaspina
Agriculture, Natural Resources and Science: Food Sciences/ Technology	
Food Technology Diploma	BCIT
Agriculture, Natural Resources and Science : Horticulture/Floral Related	
Agriculture Technology Diploma	UCFV
Bachelor of Science in Food, Nutrition and Health	UBC
Bachelor of Science in Global Resource Systems Degree	UBC
Bachelor of Science in Integrated Pest Management	Kwantlen
Commercial Floristry Certificate	Kwantlen
Greenhouse Management Certificate	NIC
Horticultural Technician Certificate	Malaspina
Horticulture Certificate	TRU
Horticulture Crop Production Certificate	UCFV

Continued on next page

Box 3.1 continued

Horticulture Pre-Apprenticeship Certificate	OC
Horticulture Technician Certificate	Camosun
Horticulture Technology Diploma	Kwantlen
Horticulture Therapy Diploma	Malaspina
Horticulture and Management Diploma	TRU
Landscape Horticulture Certificate	Capilano
Agriculture, Natural Resources & Science : Wildlife & Wildlands Management	
Fish, Wildlife and Recreation Diploma	BCIT
Recreation, Fish and Wildlife Technology Diploma	Selkirk
Renewable Resource Management Advanced Diploma	BCIT
Renewable Resources Technical Assistant Certificate	NLC
Health Related : Animal Health/Science	
Animal Care Aide Certificate	NIC
Animal Health Technology Diploma	TRU
Pre-Veterinary Medicine Program	TRU
Pre-Veterinary Medicine Program	UBC
Legal and Social Services : Human/Social Service Work	
Horticulture Therapy Diploma	Malaspina
Recreation, Tourism, Hospitality and Service : Baking/Cooking/ Chef Training	
Advanced Culinary Arts Diploma	OC
Asian Culinary Arts (Cook Training - Chinese Cuisine)	VCC
Baking and Pastry Arts (ESL) Certificate	VCC
Baking and Pastry Arts - Advanced Baking Certificate	VCC
Baking and Pastry Arts - Patisserie Certificate	VCC
Baking and Pastry Arts - Upgrading Program	VCC
Baking-Professional Certificate	Malaspina
Cook's Assistant Program	CNC
Cooking (ESL) Certificate	VCC
Culinary Arts (Levels 1-2-3) Program	COTR
Culinary Arts Advanced ELTT II and III Program	NLC
Culinary Arts Basic (ELTT Level I) Certificate	NLC
Culinary Arts Certificate	CNC
Culinary Arts Certificate	NWCC

Continued on next page

Box 3.1 continued

Culinary Arts Certificate	OC
Culinary Arts Certificate	TRU
Culinary Arts Certificate	VCC
Culinary Arts Certificate/Diploma	Malaspina
Culinary Arts Diploma	NWCC
Culinary Arts Foundation Certificate	Camosun
Culinary Arts Program	NIC
Culinary Arts Upgrading Program	TRU
Professional Cook Certificate	UCFV
Professional Cook Training Level I, II and III Programs	Selkirk
Recreation, Tourism, Hospitality and Service : Food/Beverage Services	
Food Service Careers (ASE) Certificate	VCC
Food and Beverage Management Certificate	NIC
Retail Food and Supermarket Careers (ASE) Certificate	VCC
Recreation, Tourism, Hospitality and Service : Meat Cutting	
Retail Meat Processing Certificate	TRU

Source: BC Council on Admissions and Transfer, May, 2008. <http://www.educationplanner.bc.ca>

Industry training programs

The Industry Training Authority (ITA) is a provincial government agency with legislated responsibility to govern and develop the industry training system in B.C. The ITA works with industry and employers, trainees and apprentices, and training providers in an effort to meet industry's training needs.

In B.C. there are currently more than 100 apprentice trade programs offering career opportunities. Only eight trade programs are currently listed in the agri-food area:

- Agricultural Equipment Technician "Red Seal"
- Arboriculturist
- Baker "Red Seal"
- Cook "Red Seal"
- Dairy Production Technician
- Florist
- Meatcutter
- Production Horticulturist
- Utility Arborist

In an effort to address emerging skills shortages, ITA intends to increase the number of people participating in industry training by improving current apprenticeship completion rates and by creating greater flexibility within the industry training system. This initiative provides an

opportunity for the agri-food industry to introduce a new series of trade programs that could attract increased numbers of workers to the industry.

K-12 school system

The British Columbia Agriculture in the Classroom initiative is intended to provide educators and students with quality educational resources that highlight agriculture as an important part of our economy and way of life, and to promote careers in agriculture as viable and desirable career choices.

Agriculture programs and teacher resources have been developed to assist teachers to integrate agriculture themes in the teaching of the provincial science and social studies curriculum, from kindergarten through to grade 12, but reaching teachers in different parts of the province has been difficult. Agriculture in the Classroom is instrumental in implementing government programs such as the School, Fruit and Vegetable Snack Program, which provides a new opportunity to communicate the importance of agriculture in schools throughout the province and to discuss emerging careers in the industry.

At the secondary level, ACE IT is an industry training program for B.C. high school students. Through an ACE IT program, a student can take courses that will grant both high school graduation credits and a head start towards completion of an apprenticeship program.

Collaborating with the Agriculture in the Classroom Initiative provides an opportunity to develop in the next generation of students an awareness of B.C. agriculture and of emerging careers in the industry.

Foreign workers and immigrants

As noted earlier, the Seasonal Agriculture Worker Program (SAWP) expects to hire between 2,800 and 3,000 foreign workers for B.C. agriculture producers in 2008. This program, which limits workers to a maximum eight-month work period, has become an important source of seasonal workers for the farm industry.

A number of food processors have used the Canada Foreign Worker Program to hire temporary workers, mainly from the Philippines, for a two-year period. As with workers hired through the SAWP program, these workers must return to their home countries once the work period is complete. A number of employers want these workers to remain on staff and are asking that they be included in the British Columbia Provincial Nominee Program (PNP) so that the workers can stay in Canada and be eligible for citizenship.

The Provincial Nominee Program was established to attract skilled workers and experienced entrepreneurs who wish to settle in British Columbia and become citizens of Canada. Recently, the list of eligible occupations has included some from the tourism/hospitality industries, partially as a result of labour demands for the 2010 Olympic Games. In February 2008, a two-year Entry Level and Semi-Skilled Pilot Project was launched under the Strategic Occupations category of the BC PNP. This pilot project applies to certain occupations in the tourism/hospitality and long-haul trucking industries. This pilot provides an opportunity for the agri-food industry to explore the possibility of adding certain agri-food occupations to the PNP qualified list.

There are emerging opportunities for the agri-food industry to capitalize on the availability of foreign workers in a number of developing countries who wish to work in B.C. on a short-

term basis, or who wish to move to B.C., work full time and become Canadian citizens. It is also becoming clear, however, that as fertility rates drop and economies expand in these countries, fewer people will wish to work in B.C. as seasonal workers, or to immigrate to the province. Mexico's fertility rate, for example, is expected to fall over the next 20 to 30 years,³² meaning that, over time, fewer Mexican workers will wish to work in B.C. In the meantime, however, it is important that the industry continue to maximize the potential of current immigration policies, but also to reach out to a broader range of Canadian workers, especially those groups that are currently under-represented in the agri-food industry.

BOX 3.2: Overview of Foreign Worker Programs

Canada Foreign Worker Program

Assists Canadian employers in hiring foreign workers. Each year, over 90,000 foreign workers enter Canada to work temporarily in jobs that help Canadian employers address skill shortages. HRSCD has developed Regional Lists of Occupations under Pressure. For occupations found on these lists, employers will not be required to undertake comprehensive advertising efforts before being eligible to apply to hire a foreign worker. Special criteria apply for the following sectors:

- Seasonal Agriculture
- Academics
- Film and Entertainment
- Information Technology
- Live-in Caregivers
- Pilot project for occupations requiring a high school diploma or job-specific training (includes food processing)

B.C. Seasonal Agriculture Worker Program (SAWP)

Assists B.C. farmers in contracting foreign seasonal workers.

- SAWP available only to farm employers
- SAWP is a unique agreement between Canada, Mexico, and Commonwealth Caribbean
- Foreign ministry of labour selects and recruits workers
- Contract employment period a minimum of 240 hrs. to a maximum 8 months, over an 11-month period
- Contract wages and benefits are negotiated annually between three partner countries
- About 2,800–3,000 foreign seasonal workers projected for B.C. in 2008

B.C. Provincial Nominee Program (PNP)

Assists qualified skilled workers and experienced entrepreneurs who wish to settle in British Columbia and become permanent residents of Canada.

- The BC PNP selects and nominates potential immigrants for permanent residence who have the ability to become economically established, and who will provide significant economic benefits to the province.
- In February 2008, a 2-year Entry Level and Semi-Skilled Pilot Project was launched under the Strategic Occupations category of the BC PNP. This pilot project applies to select occupations in the tourism/hospitality and long-haul trucking industries.

32 UNU/Global Virtual University. (n.d.). *Mexico: Total fertility rate*. Retrieved May 11, 2008, from http://globalis.gvu.unu.edu/indicator_detail.cfm?IndicatorID=138&Country=MX

4. ACTION PLAN

In this final part of the paper, we identify a number of challenges and opportunities, and conclude by recommending a human resource action plan.

CHALLENGES AND OPPORTUNITIES

- While B.C. residents cite the importance of buying local food products, work in agriculture and food processing is often associated with low wages, low skills, and poor working conditions. This negative image discourages young students and workers from considering the agri-food industry as a career choice.
- British Columbia has a reputation for producing high quality, safe foods. This provides an opportunity to use this positive image as a key part of the marketing strategy to compete for new workers.
- The B.C. agriculture and food processing industry now competes in a global marketplace where the production, processing, and timely delivery of high quality food products depends on the knowledge, skills, and creativity of its workers. The ability to attract and retain a skilled workforce, particularly in a period of labour shortages, is a key challenge the industry must address to remain competitive. However, the industry does not have a human resource strategy in place.
- Larger agri-food firms usually have a person responsible for human resources and have developed strategies for the hiring and retention of workers in a tight labour market, but even here there is an expressed need for management training in human resource development. Smaller firms, which represent much of the B.C. industry, find it more difficult to allocate time and resources to manage the hiring and retention of workers, and to provide leadership in training and staff development.
- Education levels and wages in the agriculture sector are generally lower than in other industries. Attracting skilled workers will require higher wages and more training, but labour costs are cited as a major issue that greatly reduces margins in the industry. The ability to access seasonal labour is a continuing issue for some producers.
- The large number of retirements expected over the next ten years provides a unique opportunity for the industry to recruit new workers, including workers with the skill sets required to identify new consumer trends, develop new products, and expand markets. It provides the opportunity for the industry to reach out to non-traditional workers in Canada, including retirees who wish to remain part of the workforce. It also provides the opportunity to reach out to new immigrants, who have long been an important part of the industry.
- Successful employers in Canada have changed their hiring and retention strategies by reaching out to a broader range of workers. These companies attempt to align the nature of their workplace to the needs and aspirations of the target group of potential employees.

There is an opportunity to learn from companies that have been successful in managing their human resources in a tight labour market.

- The B.C. Seasonal Agriculture Workers Program (SAWP) provides B.C. agriculture producers with seasonal workers at reasonable costs, while ensuring that foreign workers are provided with fair wages and adequate housing. This program can be used as a model to provide temporary foreign workers to a broader range of firms across the agri-food industry.
- Global demand for high-quality and safe food is escalating, creating new opportunities for the marketing of B.C. agri-food products. At the same time, new low-cost suppliers have emerged to compete for market share (e.g., Argentina, Brazil, China, India).
- B.C. is well positioned geographically in relation to the U.S. and the Pacific Rim, but marketing is the issue most commonly identified as a weakness of the agri-food industry. Some members of the industry report that they are dissatisfied with their own knowledge and skill levels in regards to establishing new markets.
- There are relatively few apprenticeship programs available in agriculture and food processing, making the industry less attractive to young workers in a tight labour market. Industry associations, government agencies, and postsecondary institutions are promoting the expansion of apprenticeship and other training programs. However, there is no coordinated industry strategy to prioritize and guide the development of new agri-food training programs.
- The Ministry of Advanced Education does not report data summarizing the number of students enrolled in, and graduating from, specific agri-food programs at each college. This deficiency makes it difficult for the industry to monitor labour supply and to determine if regional colleges are meeting industry needs.
- A number of studies point out that further advances in both growing and processing technologies will improve productivity and enable the development of niche/value-added products that are in high demand. These technologies typically reduce the need for low skilled labour, provide opportunities to expand the knowledge base of existing employees, and create demands for a higher proportion of skilled employees.
- The recently proposed B.C. agri-food and bioproducts innovation centre represents an opportunity to incorporate a strong education and training component into the mandate of the new centre. The new centre can serve to stimulate knowledge and skill development across the workforce.
- The agri-food industry, with many small firms across diverse sectors, has a history of independence and entrepreneurship. This also reflects a weakness in the industry: the difficulty of organizing and sustaining industry-wide actions.
- Most industry sectors do not currently have the capacity to provide services in human resource development. However, there are some agri-food sectors with well-organized and well-functioning associations that are in a good position to provide leadership.

RECOMMENDED ACTION PLAN

P = planning; I = Implementation

1. Improve the industry's image

1.1 Adopt a vision for the industry

2008	2009	2010-13
I		

B.C. agriculture operations and food processing firms are industries of choice.

The B.C. agri-food industry has a reputation for producing high quality, safe food products that are valued by consumers in B.C. and throughout the world. The industry provides opportunities for growth, values cultural diversity, uses the most effective technologies, and contributes to a healthy environment. It provides training and career opportunities for business owners and their employees, and it offers flexible work arrangements, competitive wages, and family-friendly benefits.

1.2 Establish the agri-food employment brand

2008	2009	2010-13
P	I	I

Establish the agri-food sector as an industry of choice—communicate key attributes of the vision statement. Target key audiences. Link this branding process to all government and industry initiatives promoting the B.C. food industry (e.g., “Pick Me. Pick BC”).

1.3 Promote greater awareness of food issues and career opportunities among the next generation of B.C. citizens.

2008	2009	2010-13
P	I	I

Enhance the BC Agriculture in the Classroom program by increasing the number of teachers that provide province-wide leadership in the integration of agriculture and food concepts in the K-12 science and social studies curriculum.

2. Expand training and skills development

2.1 Improve industry management and leadership skills

2008	2009	2010-13
P	I	I

Establish a human resource development fund to stimulate improvements in agri-food management and leadership. Build on existing industry HR initiatives, including the BCFPA Human Resources Committee and the Agriculture Labour Market and Skills Development Initiative (ALMSDI).

Implement training sessions in high priority areas targeted at owners and operators:

- small business management
- local and international marketing
- human resource management
- diversity in the workplace
- transition planning

Make use of existing industry training programs as well as provincial government Work BC initiatives and postsecondary agriculture business programs (e.g., University of Saskatchewan).

2.2 Expand the number of apprenticeships and industry-approved training diplomas in collaboration with the Industry Training Authority.	2008	2009	2010-13
	P	I	I

Begin by identifying high priority apprenticeship/diploma programs and complete program design for two pilot programs. Promote the use of distributed learning strategies targeted at workers on the job or at home. Explore opportunities to collaborate with other agencies, including HortEducation BC, the Canadian Agriculture Human Resource Council, and the newly formed National Food Processing Sector Council.

2.3 Collaborate with colleges and universities to define agri-food training priorities.	2008	2009	2010-13
	P	I	I

Publish enrolments and graduation rates for agri-food programs across all postsecondary institutions.

2.4 Establish programs to provide English language training to immigrant workers, preferably in the workplace.	2008	2009	2010-13
	P	I	I

Focus initial training on language concepts related to workplace functions and safety issues. Adapt existing ESL programs

2.5 Establish a common web-based environment for industry sector organizations.	2008	2009	2010-13
	P	P/I	I

Provide web-based tools to enable peer-to-peer communications and access to sector-relevant information and education services. Build on the experiences of well-established sector groups.

2.6 Promote links between research, innovation, and training	2008	2009	2010-13
	P	I	I

Incorporate education and training into the mandate of the proposed Agri-Food and Bioproducts Innovation Centre. Link education and training to new innovations in the production and processing of food, including new automation strategies.

3. Reach out to new workers in Canada

3.1 Implement strategies to attract entry-level and skilled workers from key target groups in Canada.	2008	2009	2010-13
	P	I	I

Analyze the values and aspirations of each of the following target groups and, where possible, adapt hiring strategies and workplace policies and practices to attract new workers:

- Unemployed youth

- First Nations workers
- Workers with disabilities
- Retired workers
- Workers in other provinces

Work with postsecondary institutions, including UBC's Department of Land and Food Systems, to encourage graduating students, including foreign students, to remain in B.C.

Initiate regional cross-industry strategies to address local worker shortages. Make use of provincial government regional initiatives (e.g., Work BC).

Continue to encourage the streamlining of social assistance and employment insurance regulations to attract greater numbers of seasonal workers and to encourage transition to longer-term employment.

3.2 Collaborate with the First Nations Agriculture Association to develop labour strategies with First Nation bands.	2008	2009	2010-13
	I	I	I

Establish two to three pilot projects in select regions.

4. Seek new immigrants and continue to use seasonal foreign worker programs

4.1 Stabilize funding support for the Western Agriculture Labour Initiative (WALI), responsible for coordinating the BC Seasonal Agriculture Worker Program (SAWP).	2008	2009	2010-13
	I		

4.2 Establish a provincial agri-food agency to coordinate immigration strategies and manage foreign worker programs.	2008	2009	2010-13
	P	I	I

Tasks to include:

- represent the agriculture and food processing industries in policy negotiations with the provincial and federal government (e.g., Provincial Nominee Program)
- coordinate the process of identifying and assisting foreign residents wishing to work in the industry and attain Canadian citizenship
- coordinate the selection and transport of temporary foreign workers on behalf of industry members
- monitor working and living conditions of migrant workers

5. Provide industry leadership in the province.

5.1 Establish a common industry voice on HR development and create an industry-wide HR steering committee.	2008	2009	2010-13
	P/I	I	I

Tasks to include:

- monitor implementation of the HR Action Plan
- advise on allocation of project funding
- monitor demand and supply of agri-food workers

- advise on migrant worker policies
- advise on HR policies and future planning

Build on the work of the Agriculture Labour Market and Skills Development Initiative (ALMSDI), the Food Processors Human Resource Committee, the BCFGAL Labour Committee, and WALI.

5.2 Establish a provincial HR information system

2008	2009	2010-13
P	I	I

Establish an agri-food HR information system for the province

- define key HR indicators for the industry
- track the number of workers, including temporary workers; track the number of students in education and training programs (agriculture and food processing)
- integrate key government data into a single database (e.g., workforce profile, postsecondary agri-food enrolments, apprenticeships, training programs, foreign workers, immigrants)
- publish key data on website
- collaborate with the Ministry of Labour and Ministry of Economic Development, Agriculture Canada, Statistics Canada, and BC Stats in the development of the information system

5.3 Link the Agri-Food Action Plan to broader government labour strategies

2008	2009	2010-13
I		

Provide leadership in the development and implementation of government-wide labour initiatives. Integrate the Agri-Food Action Plan into the Work BC initiative.

EPILOGUE

The Project Advisory Committee reviewed the recommendations of this report and set three distinct priorities:

- Establish a team, committee, or group of some kind to provide pan-agricultural leadership to advance the recommendations in the report and develop specific objectives and detailed action plans complete with “who-does-what” and a budget for each strategy (Recommendation 5).
- Immediately address current labour shortages (Recommendations 3 & 4).
- Begin work on longer-term needs for management and worker skill development (Recommendation 2).

The committee emphasized that, while these priorities should take precedence, all recommendations are important to improving industry competitiveness and growth, and need to be pursued. Next steps:

1. Submit the report to the Investment Agriculture Foundation Board of Directors for acceptance and direction.
2. Request an early September meeting with the Agriculture Labour Partnership Committee to share the report and receive input.

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APPENDIX – DATA TABLES

Table A1: Establishment counts by employee size ranges

Table A2: Number of workers by age group, British Columbia, 2005

Table A3: Annual B.C. employment income, 2005.

Table A4: Number of B.C. workers by highest level of education

Table A5: Percent immigrants by industry workforce, 2006

Table A6: Estimated gaps between B.C. labour demand and supply, 2005–2015

Table A1: Establishment Counts by Employee Size Ranges¹

Canada										
Sub-sectors	employee size range									
	Total	Indeterminate²	1-4	5-9	10-19	20-49	50-99	100-199	200-499	500 +
Total	2,342,029	1,264,982	588,909	219,111	131,101	85,217	29,260	13,584	6,961	2,904
111 - Crop Production	54,348	38,934	9,707	2,817	1,683	895	227	70	13	2
112 - Animal Production	79,943	61,319	14,566	2,748	886	336	56	15	16	1
311 - Food Manufacturing	9,049	3,019	1,677	1,190	1,068	967	495	341	226	66
312 - Beverage and Tobacco Product Manufacturing	1,181	472	303	145	78	86	35	35	14	13
British Columbia										
Sub-sectors	employee size range									
	Total	Indeterminate	1-4	5-9	10-19	20-49	50-99	100-199	200-499	500 +
Total	357,038	188,565	95,239	34,009	19,965	12,267	4,083	1,707	848	355
111 - Crop Production	3,327	1,499	935	430	251	145	47	17	3	0
112 - Animal Production	3,950	2,430	1,044	308	107	48	7	3	3	0
311 - Food Manufacturing	1,174	345	225	186	149	137	66	35	25	6
312 - Beverage and Tobacco Product Manufacturing	304	105	93	46	19	21	8	8	2	2

1. Included in the Business Register are all Canadian Businesses which meet at least one of the following criteria: a) have an employee workforce for which they submit payroll remittances; b) have a minimum of \$30,000 in annual revenue; or c) are incorporated and have filed a federal income tax form.

2. Indeterminate: Do not maintain employee payroll, but may have workforce which consists of contracted workers, family members or business owners. This also includes employers who did not have employees in the past 12 months. In preparing Figure 2.1, percentage of farms estimated by calculating weighed average of 112 and 311.

Source: Canadian Business Patterns 2007, Statistics Canada

Table A2: Number of Workers by Age Group – British Columbia, 2005

Industry-NAICS	Age Group						
	All Ages ¹	15-24 years	25-34 years	35-44 years	45-54 years	55-64 years	65 years and over
All Industries - Total	2,193,115	337,090	415,925	526,195	547,480	304,920	61,510
11 Agriculture, forestry, fishing and hunting	76,485	9,875	11,295	15,455	19,540	13,735	6,585
111-112 Farms	40,110	5,800	5,285	6,695	8,865	8,005	5,455
115 Support activities for agriculture and forestry	9,705	1,640	2,070	2,210	2,260	1,295	230
1150 Support activities for farms (1151 to 1152)	2,265	360	295	380	620	485	120
31-33 Manufacturing	189,120	21,795	34,095	49,785	54,100	25,975	3,365
311 Food Manufacturing	22,930	2,860	3,705	6,265	6,560	3,175	360
3111 Animal food manufacturing	605	80	120	205	115	70	20
3112 Grain and oilseed milling	365	20	50	130	95	65	0
3113 Sugar and confectionery product manufacturing	1,250	140	160	315	450	160	25
3114 Fruit & vegetable preserving and specialty food manufacturing	1,950	155	250	565	620	340	10
3115 Dairy product manufacturing	1,200	115	165	280	415	215	10
3116 Meat product manufacturing	4,205	355	665	1,320	1,250	555	65
3117 Seafood product preparation and packaging	5,070	735	755	1,065	1,605	790	120
3118 Bakeries and tortilla manufacturing	5,870	1,020	1,055	1,725	1,355	645	65
3119 Other food manufacturing	2,405	245	475	665	650	335	35
312 Beverage and tobacco product manufacturing	4,400	595	1,050	1,090	1,080	505	85
3121 Beverage manufacturing	4,270	585	1,020	1,050	1,050	475	85

1. Totals also include those who were unemployed in 2005

Source: Census 2006, Statistics Canada. Custom Tabulations, June 2008.

Table A3: Annual B.C. Employment Income 2005

Industry –NAICS	Total - Work Activity in 2005			Worked Full Time			Worked Part Time			
	Total ¹	Average employ. income \$	Std error	Total	Average employ. income \$	Std error	Total	With employ. income in 2005	Average employ. income \$	Std error
Total - Industry - NAICS 2002	2,226,385	38,028	84	1,628,345	45,392	103	492,375	454,900	14,741	109
Industry - Not applicable	33,265	9,597	375	0	0	0	0	0	0	0
All Industries - Total	2,193,115	38,103	85	1,628,340	45,392	103	492,380	454,900	14,741	109
11 Agriculture, forestry, fishing and hunting	76,485	30,563	336	59,520	34,892	400	14,310	12,370	12,972	423
111-112 Farms	40,105	19,449	368	28,810	22,577	460	9,460	8,035	10,478	484
115 Support activities for agriculture and forestry	9,705	31,427	545	7,875	34,949	617	1,530	1,420	14,379	762
1150 Support activities for farms (1151 to 1152)	2,265	20,824	958	1,735	23,815	1,129	420	380	9,999	1,389
31-33 Manufacturing	189,120	44,902	302	166,295	48,276	271	18,140	16,570	16,431	1,848
311 Food Manufacturing	22,935	31,244	597	18,575	35,229	699	3,475	3,190	11,720	547
3111 Animal food manufacturing	610	42,568	3,109	530	46,005	3,314	65	55	11,236	2,582
3112 Grain and oilseed milling	365	53,247	4,922	320	49,565	4,064	40	35	88,727	32,398
3113 Sugar and confectionery product manufacturing	1,250	32,117	1,809	955	37,990	2,121	265	245	11,398	1,217
3114 Fruit & vegetable preserving and specialty foods	1,955	34,693	1,473	1,640	38,388	1,611	265	250	12,431	1,668
3115 Dairy product manufacturing	1,200	44,081	1,571	1,070	47,350	1,557	105	85	12,516	1,687
3116 Meat product manufacturing	4,205	36,388	809	3,850	38,061	839	235	215	14,539	1,564
3117 Seafood product preparation and packaging	5,070	23,724	583	3,760	27,647	719	1,090	990	10,908	480
3118 Bakeries and tortilla manufacturing	5,870	23,558	589	4,405	27,826	693	1,140	1,055	8,748	420
3119 Other food manufacturing	2,405	39,983	4,817	2,035	44,307	5,556	270	260	13,796	1,320
312 Beverage and tobacco product manufacturing	4,405	40,532	1,245	3,710	45,584	1,397	600	555	10,624	645
3121 Beverage manufacturing	4,270	39,859	1,248	3,595	44,822	1,402	585	545	10,326	626

1. Total number of workers includes those not employed in 2005

Source: Census 2006, Statistics Canada. Custom Tabulations, June 2008.

Table A4: Number of B.C. Workers by Highest Level of Education

Industry-NAICS	Total	No certificate, diploma or degree	High school certificate or equivalent	Apprenticeship or trades certificate or diploma	College, CEGEP or other non-university certificate or diploma	University certificate or diploma below bachelor level	University certificate, diploma or degree
All Industries - Total	2,193,115	277,070	628,215	250,675	414,300	126,765	496,085
111-112 Farms	40,110	12,645	13,615	3,725	4,905	1,705	3,510
311 Food Manufacturing	22,935	5,850	7,850	2,195	3,065	1,135	2,835
3121 Beverage manufacturing	4,265	510	1,550	465	805	250	680

Total number of workers includes those not employed in 2005
Source: Census 2006, Statistics Canada. Custom Tabulations, June 2008.

Table A5: Percent Immigrants by Industry Workforce, 2006

Industry-NAICS	Total - Immigrant Status	Non-immigrants	Immigrants	Immigrated 2001 to 2006	Immigrated 1991 to 2000	Non-permanent residents
Canada						
All Industries - Total	16,861,185	13,194,625	3,547,050	565,095	1,059,675	119,505
111-112 Farms	384,810	331,505	48,745	7,495	12,495	4,565
311 Food Manufacturing	250,685	180,640	67,730	14,285	21,425	2,315
3121 Beverage manufacturing	28,120	23,105	4,835	755	1,340	180
British Columbia						
All Industries - Total	2,193,115	1,548,335	625,065	90,905	202,735	19,710
111-112 Farms	40,105	24,255	15,585	3,350	5,010	265
311 Food Manufacturing	22,930	11,145	11,645	1,905	4,200	140
3121 Beverage manufacturing	4,270	3,285	945	145	260	35

Source: Census 2006, Statistics Canada. Custom Tabulations, June 2008.

Table A6: Estimated Gaps between B.C. Labour Demand and Supply, 2005–2015

Year	Population (over 15 years of age)	Participation rate %	Employment rate %	Unemployment rate %	Persons employed	Total jobs available COPS	Labour gaps Excess (shortfall)
2005	3,562,000	66	62	5.8	2,130,550		
2006	3,620,100	66	63	4.9	2,262,563	2,176,660	85,903
2007*	3,680,700	66	62	5	2,291,714	2,222,770	68,944
2008*	3,738,500	65	62	5	2,322,020	2,268,880	53,140
2009*	3,795,700	65	62	5	2,351,778	2,314,990	36,788
2010*	3,854,500	65	62	5	2,382,351	2,361,100	21,251
2011*	3,912,000	65	62	5	2,411,944	2,407,210	4,734
2012*	3,968,400	65	61	5	2,436,915	2,453,320	(16,405)
2013*	4,022,400	64	61	5	2,460,140	2,499,430	(39,290)
2014*	4,074,300	64	61	5	2,481,819	2,545,540	(63,721)
2015*	4,124,300	64	61	5	2,502,089	2,591,650	(89,561)

*Actual data for 2005, 2006. Data for 2007-2015 are estimates

The participation rate is the number of labour force participants expressed as a percentage of the population 15 years of age and over.

The unemployment rate is the number of unemployed persons expressed as a percentage of the labour force.

The employment rate is the number of persons employed expressed as a percentage of the population 15 years of age and over.

This table was prepared using data from two reports:

BC Stats (2007). Employment Outlook for British Columbia, COPS BC Unique Scenario for 2005-2015

BC Stats (2007). British Columbia Labour Force Participation, Rate Projections to 2031.

