Canada's Independent Agri-Food "Think-Tank"

Environmental Scan & Literature Search of Agricultural Human Resource Issues

Prepared for: Steering Committee for the Investigation of an Agriculture Sector Council for Human Resources Issues

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Date: February, 2005

EXECUTIVE SUMMARY

The purpose of this project is to complete an environmental scan of existing programs, resources, reports and studies already in existence pertaining to human resource (HR) needs in the agriculture sector, and to identify the current situation and scope of farm business management skills, programs and tools used by agricultural producers in Canada. The specific objectives of this project were:

- To conduct a literature review on agricultural human resource studies and initiatives that have been conducted in the past 10 years
- To provide a survey and outline of the existing agricultural farm business management programs available to the Canadian industry.
- To create a 'working' database of all existing agricultural human resource programs across Canada.
- To provide a survey of the existing agricultural farm business management programs available in the other jurisdictions that are different than those provided in Canada.
- To identify the scope of the existing programs, skills and tools used to aid the HR issues

To meet these objectives, the following approach was employed. First, a comprehensive review of existing studies and initiatives from across Canada was conducted to provide a background on the current needs of the Canadian agricultural industry with respect to human resource issues. Next, a review of existing HR initiatives in Canada to address the issues observed in research was conducted. Finally, a review of agricultural training programs and educational courses in Canada was conducted, along with a comparison between business management courses in Canada and a cross-section of those in other jurisdictions.

The results showed the following:

- A relatively narrow list of major human resource (HR) issues was observed from the literature on agricultural HR in Canada. These were the following:
    - Long-run tightening of a skilled workforce in agriculture, due to the demographics of an aging workforce
    - Difficulty recruiting and retaining quality people
    - Negative perceptions of careers in agriculture
    - Lack of a culture oriented toward training and continuous learning
    - Lack of availability of seasonal and harvest labour

- Studies have found almost universally that it is difficult to recruit and retain good people in agriculture. While apparently widespread, it appears this problem is most protracted in the horticultural segments.
- Part of the problem in attracting a workforce in agriculture lies in perceptions that agriculture pays relatively low wages. Other challenges result from social safety net policies that effectively discriminate against seasonal farm work, and from negative perceptions of careers in agriculture.
- There appear to be widespread gaps in the availability of trained workers in agriculture. There are several dimensions to this. First, there is a need for workers trained in basic technical skills. Second, there is a need for training to upgrade skills within the experienced workforce. Finally, there is a need for business management training that extends to both farm employees and employers. The preponderance of studies suggest that existing training programs are poorly targeted, with training focused on basic skills rather than skills upgrading, and training program delivery that is not well matched to the needs and lifestyles

of farm workers. However, there does not appear to be broad agreement as to how training programs could be better delivered.
    - The relationship between profitability in agriculture and its human resource status is under-researched. This is significant because of the circular relationship between industry profitability and its HR base. Industries that suffer from low profitability are less attractive to workers and have a smaller budget with which to fund training and education; however, an industry is more likely to suffer from low profitability if it is unable to attract good personnel and fund training to improve productivity.
- There appear to be other gaps in previous studies of agricultural HR in Canada. Little attention has been paid in research to the effect of unionization of the agricultural workforce and what the resulting advantages and disadvantages are likely to be. In addition, the impact of perceptions of agricultural working conditions and safety among the potential workforce has not received focus. Finally, there appears to be little recognition in previous studies of the evolution in agriculture toward aligned supply chains and the more advanced skills in marketing and managing alliances and collaborative relationships that will be required.

A variety of initiatives have been initiated by government and industry associations to address the issues identified in previous studies. These can be characterized as the following:
- Government and third-party services have been established to link agricultural employers with potential employees. However, these have been adopted unevenly across provinces, and appear to suffer from scarcity in funding.
- Programs are in existence that allow specific segments of Canadian agriculture to access offshore workers. The greatest use of these programs has occurred in horticulture. It is not evident that access to these programs is even across farm product types.
- Initiatives directing at the domestic workforce have not addressed the disincentives to work seasonally imposed by the employment insurance and social safety net system.

A total of 226 educational programs were observed in Canada. The basic breakdown of these is presented in Table A; it should be noted that the courses documented in Table A do not add up to 226, because some programs fall in multiple areas. The table shows that 121 programs were offered focusing on animal husbandry, with a further combined 114 programs in crop and horticultural production. 31 programs focused on farm management, and 7 on leadership.

Table A: Canadian Educational Programs Observed

Program Focus	Number of Programs
Animal Husbandry	121
Crop Production	56
Horticultural Production	58
Farm Business Management	31
Agricultural and Rural Leadership	7

Many of the educational programs offered in Canada cater to new farmers or new farm employees, from the perspective that they are taught at a relatively basic level. There are fewer programs that teach advanced material that challenges and upgrades the skills of the most experienced personnel. This is true on both the technical skills and in management/leadership. The comparison with the US and Australia suggested that these jurisdictions may have relatively more access of this sort, particularly in management and leadership, than currently exist in Canada.

The results also show that educational programs in Canada are largely fragmented at the provincial level in Canada. A relatively small number of programs operate at the national level. With regard to programs offered by government, this is not surprising given that education is primarily a provincial responsibility. For crops and horticulture, there are differences in regional climate and cropping patterns that may justify fragmentation by province. However, with regard to management education programs, there is an opportunity lost for farmers from different parts of the country to learn from one another in national level programs.

In evaluating the current status of human resources in Canadian agriculture, significant challenges are evident. These stem from the discussion above, notably:

- Difficulty accessing seasonal and harvest workers
- Lack of trained workers, and relative lack of training resources to train agricultural workers
- Difficulty establishing an appropriate means of delivering educational and training services for farmers and farm workers
- Constraints in attracting farm workers stemming from negative perceptions of careers in agriculture, and from limits imposed by EI and the social safety net system

This suggests there could be benefits associated with coordinating HR development in agriculture through a sector council. This is the case in a number of respects.

- First, to the extent that scale economies exist in the provision of employee-employer coordination services, it will be beneficial to centralize the planning and operation of such services. It was also noted that insufficient funding exists in some provinces to operate these services. Thus, provision or oversight of these services at a national level appears prudent.
- Secondly, efforts in training and education are fragmented to the provincial level. This is natural because education is a provincial matter. However, there are significant opportunities to coordinate provincial efforts and learn from the experience of others that could be facilitated by a national oversight and planning body.
- Some of the issues identified above are clearly national in scope, and are not easily addressed under anything other than national coordination. In particular, meaningful resolution to the constraints on seasonal work stemming from the EI and social safety net system, and in ensuring broad access to offshore workers.
- Finally, simply because Canadian agriculture is extremely diverse, a national coordination body could represent its collective interests in HR development more effectively than individual provinces or commodity groups. It would also allow industry groups to focus on their individual issues and allow the championing of broader HR issues to be taken up by a larger body.

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1.0 Introduction

1.1 Background and Overview

Increasingly, farmers operate complex and seasonal businesses that combine aspects of animal husbandry, crop husbandry, food processing, financial management, operations management, and employee management and development. This generates a need for improved access to personnel, and education and training for skilled workers. In particular, there is an increased need for a sustainable workforce in agriculture with requisite production and business skills for the demands of complex farm businesses. Whereas this workforce traditionally came from farm families, increasingly agriculture must compete for employees with other segments of the economy, and as such must be prepared to provide education, training and other monetary and non-monetary incentives.

In 2001, IPSOS-REID conducted a benchmark survey of farmers in Canada, the US and Australia to determine the relative levels of advanced management training and the extent to which farmers used a series of management practices in their businesses. The results suggested that Canada was lagging relative to the other two countries on all measures. The need for enhanced education and training of personnel in agriculture has also been recognized under the federal-provincial Agricultural Policy Framework (APF). Under the Renewal Pillar of the APF, it is noted that "…agriculture is knowledge intensive, and producers are increasingly engaging in continuous learning to keep pace with change. Renewal efforts include enhanced public and private business management and consulting services, management and marketing information to assist farmers to enhance their profitability, and networks to better link scientific advances to the creation of new economic opportunities"

In most other industries in Canada, sector development councils exist to assess needs in terms of labour availability, education and skills training within the workforce. Currently, a sector development council for agriculture is in the discussion stages. However, given the increasing sophistication of the industry and the need to compete for a workforce, the demand for education and training in agriculture is likely to grow.

The purpose of this project is to complete an environmental scan of existing programs, resources, reports and studies already in existence pertaining to human resource needs in the agriculture sector, and to identify the current situation and scope of farm business management skills, programs and tools used by agricultural producers in Canada. This assessment will aid in creating a focus for the 'Steering Committee for the Investigation of an Agriculture Sector Council for Human Resources Issues'. The specific objectives of this project are:

- To conduct a literature review on agricultural human resource studies and initiatives that have been conducted in the past 10 years
- To provide a survey and outline of the existing agricultural farm business management programs available to the Canadian industry.
- To create a 'working' database of all existing agricultural human resource programs across Canada.
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1.2 Methods and Approach

The following section provides an overview of the research and analysis that was conducted to complete this project. It outlines the methods, procedures and work that were completed.

The study was conducted in four phases:

Phase 1: Existing Canadian Agricultural Human Resources Studies and Initiatives

The purpose of Phase One was to develop an understanding of the scope of the human resources needs in the Canadian agricultural industry. A comprehensive review of existing studies and initiatives from across Canada was conducted to provide a background for an analysis of the current situation and the current needs of the Canadian agricultural industry with respect to human resource issues.

The specific tasks in Phase One were to:

- Conduct an environmental scan of existing agricultural human resource studies in Canada
- Conduct an environmental scan of existing human resources initiatives in Canadian agriculture
- Conduct interviews with authors of studies and administrators of programs
- Identify the current situation with respect to human resource needs in Canadian agriculture today

Phase 2: Canadian Agricultural Human Resources Programs

The purpose of Phase Two was to develop an understanding of the availability and basic content of human resource programs for Canadian agriculture. A comprehensive review of the existing programs across Canada was conducted to provide the groundwork for an analysis of the needs of the Canadian agricultural industry with respect to developing skills to manage employees, develop employees, and attract and retain employees to the sector.

The specific tasks in Phase Two were to:

- Conduct a review to determine whether inventories of existing Canadian programs have already been developed.
- Conduct an environmental scan (Literature review and web searches) of existing agricultural human resource programs in Canada.
- Determine which educational programs warrant further investigation through interviews
- Conduct interviews with the administrators and participants of selected programs
- Create a 'working' database of existing Canadian agricultural human resources programs in Microsoft Access.

Phase 3: Agricultural Human Resources Programs in Other Jurisdictions

The purpose of Phase Three was to develop an understanding of the availability of human resource programs in competing agricultural jurisdictions. A comprehensive review of existing programs across the United States, Europe and Australia was conducted. This provided the necessary information to determine whether the same array of skills and programs that are available to the Canadian industry are available to its competitors or whether there are any gaps in Canada's program offerings.

This environmental scan of US, European and Australian programs was conducted similarly to the review of Canadian agricultural human resources programs.

The specific tasks of Phase Three were to:

- Conduct an environmental scan (Literature review and web searches) of existing agricultural human resource programs in the US, Europe and Australia, that are unique from those offered in Canada.
- Conduct selected interviews with the administrators and/or participants of the programs.

Phase 4: Canadian Agricultural Human Resources Issues and Programs Evaluation and Conclusions

The purpose of Phase Four was to evaluate the diversity of agricultural human resource issues and programs offered in Canada and to determine whether there are gaps in the programs offered to the Canadian agriculture industry. This assessment was conducted based on the information obtained in Phases One and Two.

Phase Four began with a general characterization of the findings of Phases One, Two and Three. It provides a big picture overview of what is currently being provided in Canada to deal with the human resource issues defined in Phase One. This provided an assessment of programs currently offered, as well as a characterization of where future opportunities and risks may exist.

2.0 Agricultural Human Resources Issues and Initiatives in Canada

2.1 Introduction to Agricultural Human Resource Issues in Canada

In order to identify and understand the current situation with respect to human resources (HR) issues in the Canadian agriculture industry, a comprehensive review of existing HR studies and reports was conducted across Canada to provide a background and determine the scope of the situation. An identification of the current needs of the industry through a summary of studies already conducted will help to create a focus for the 'Steering Committee for the Investigation of an Agriculture Sector Council for Human Resources Issues'. To augment the information found in the studies, interviews with authors and other stakeholders in the industry were conducted.

There have been several needs assessment studies and reports involving human resource issues in agriculture in recent years; in fact studies and reports have been conducted on a national basis, provincial basis and commodity-specific basis for many years. These studies have been conducted both for the purposes of identifying HR needs of agriculture and to identify the requirements related to specific HR issues such as lack of skilled employees or labour force recruitment. Both of these have proved to be critical HR needs based on the studies reviewed and as discussed below.

In general, the human resources needs assessments and discussions previously completed fall into one of three streams; those studies conducted to look at all HR issues across Canadian agriculture, those studies conducted to focus specifically on skills needs of the industry and lastly, studies conducted to address issues faced in those sectors that rely heavily on harvest and seasonal labour, in particular the horticulture industry that has had a large part in promoting the need for these studies. Appendix 1 contains detailed reviews of these studies. The sections below provide an analysis along each of these streams. Section 2.2 discusses the findings from broad level HR studies. Section 2.3 describes the findings of studies of skill development. Section 2.4 discusses previous findings regarding seasonal and harvest labour.

Human resource needs in agriculture industry are well researched and documented. Table 2.1 provides an overview of these studies, and shows that they represent a diverse cross section of commodities and regions across Canada. Despite the varied cross section of commodities and regions, there are overlying common threads among the human resources challenges found. These appear to be the following:

- Aging workforce
- Recruiting and retaining people
- Awareness of industry careers
- Training culture
- Development of management and leadership personnel

It is hard to separate many of the issues from each other as they are created by the need for the other. For example, recruiting and retaining people to work in the industry falls out of the lack of awareness of industry careers and the apparent negative image that the general public may have of the industry.

The following sections discuss the prevalent human resource issues identified, and identify any initiatives or actions that have been implemented in an attempt to improve the situation.

Table 2.1: Existing Studies Conducted to look at Agricultural HR Issues in General

Reference	Geography	Findings
Ageco Consultants, 2002	Quebec	An economic analysis was conducted on the costs of the agriculture industry's inability to recruit and retain employees. • Low wages have caused scarcity of labour • Implementing a worker benefit package would improve labour recruitment and retainment issues • Monetary and non-monetary incentives are required to improve labour recruitment and retainment issues • Large financial implications are experienced due to recruitment and labour issues
Ageco Consultants, 2003	Quebec	Study evaluates link between working conditions and the sector's inability to recruit and retain employees. • Wages are too low • There is a scarcity of workers • Work is physically demanding • Employers will increase wages when employees threaten to quit • Employees not native to the agriculture industry are less satisfied with their working conditions.
Agrivantage Strategic Initiatives Committee, 2002	Alberta	The Agrivantage Report identified five specific human resources issues that need to be further addressed in Alberta: • Industry has an inability to attract workers • There is a shortage of management skills in the industry • There is a shortage of leadership skills in the industry • There is a need to improve skills training in the industry to keep up with the changing environment • There is strong competition in recruiting a young, skilled workforce
Ernst and Young Management Consultants, 1992	National	Human resource needs and issues: • Difficulty recruiting and retaining seasonal employees • Cut backs of Day Haul Program • Structure of UI, social assistance, pensions and taxation structure cause disincentives to work • Lack of skilled and knowledgeable workers • New technologies require new skills • Owner/managers require training in HR, marketing and technology • Most training available is for new entrants and not for upgrading skills of workers already in the industry • More organization between industry and government is required
Formation Pro FP. 2003	Quebec	The purpose of the study was to identify the human resources issues in the agricultural sector. Findings include: • Younger workforce is leaving rural areas, industry not appealing to younger workforce • Labour scarcity in the industry, especially seasonal labour • More specialized production requires labour with specialized skills, there is a scarcity of specialized labour and farmers will also have to start paying higher wages to specialized workers • Volatility of seasonal workers due to low wages, on-call work, physical labour • HR management skills are required • Government must recognize importance of seasonal labourers
GSGislason &	British	SWOT analysis of the fishery and aquaculture industry revealed the following HR issues:

Associates Ltd., 2004	Columbia	• A training culture does not exist in BC, most training is done on-the-job • BC's training focuses on traditional skills, not 'new' skills such as business management, technology and marketing • Recruitment is difficult because jobs are remote • BC aquaculture industry is recruiting from East Coast due to accreditation programs offered there • New technology is creating need for more full-time employment for skilled workers
Marchand and MacEwan, 2004	Ontario	A human resources survey of the Ontario swine industry to determine current issues: • There is an overall industry perception of low wages and hard work • Lack of compensation and flexibility encourages employees to leave the industry • HR skills are desperately needed in the industry • Compensation and wages are highest priorities of workers • Training opportunities should be fostered, encouraged and funded
National Beef Industry Development Fund, 2002	National	The primary HR issue that was identified was the need to have an available, skilled, educated and motivated workforce. Situations required to meet these goals include a greater awareness of industry careers, low job vacancy rates, competitive employment opportunities and a proactive education and training environment. • Create a long-term human resource vision through the development of public relations, marketing and communications programs and forming a task force to develop a strategic plan for the industry • Improve training programs and create innovative training that recognizes culture of agriculture industry • Ensure that colleges and other educational institutions are involved in the human resources strategy
OATI Learning Group, 2004	Ontario	A human resources survey in the Ontario Greenhouse industry to determine thoughts regarding emerging HR issues in the industry. • Labour turnover rate is high and demand for hourly labour is high • Cause of turnover not regulatory disincentives but rate of pay and availability of other jobs that are more appealing • Industry prefers to train from within • Students in horticulture programs generally pursue careers in landscaping and golf course management not horticulture production • Negative image of greenhouse sector as a viable career choice • Training programs available do not recognize culture and constraints of greenhouse sector • Industry participation in continuing training is low • Image of industry needs revamping and an appropriate training curriculum must be developed • Concern about union activity in the industry as a whole, but generally not concerned about union activity in their own operations
Peartree Solutions Inc., 2003	National	• Farmer's needs for knowledge and information management are increasing • Canada has an aging workforce • Farm succession planning and asset transfer is important • Labour shortages • Labour availability issues differ between commodities, especially in horticulture • Owners need more training in employee management

		• Life-long learning is important • Training must be offered in a variety of forms due to time and location constraints of many farmers
Prime Minister's Caucus Task Force on Future Opportunities in Farming, 2001	National	• Training, skills, good management and workplace health and safety all contribute to the competitiveness of an agricultural organization • Sustainable production skills are now required • Value-added opportunities must be identified • Skills are required to implement value-added opportunities • Succession needs are becoming increasingly important as workforce gets older
Rempel and Peers, 2002	Manitoba	Purpose: to identify adaptation, transition and succession needs of agriculture producers: • Training: Both formal and informal required. Training needs include computer skills, business management, human resources, leadership, specialized production techniques, resource training, succession planning, and traditional skills upgrading. • Personal counseling is available and needed • Specialist Services: needed areas include processing advice, marketing, financial analysis, HR, regulations, business planning and e-business. More awareness is needed of extension services that are available. • Employment Opportunities: Need for a matching service, better employment packages in the industry are required, rural communities need jobs for spouses. • Financial Services: More funding is required to assist with these issues. • Gaps in the services, training and programs available include affordability, awareness that they exist, access to them and appropriateness of the curriculum. • Overall, the project concluded that HR development should be a priority.
Toma and Bouma Management Consultants, 2004	Alberta	Purpose: to determine the human resource requirements for the Alberta agri-food sector as a result of the Agrivantage Report. Issues and needs determined through interviews : • Uptake of agriculture-based classes is variable, not because of gaps in offerings but because of method of delivery and schedules of farmers • Lack of skills is a large problem and classes are not being taken because of delivery methods of training • Training needs are in business and leadership management not basic production skills • Peer networks are innovative learning environments for farmers and should be developed further
Work Research Foundation, 2001	Ontario	Purpose: to update a similar study conducted in 1995 for the OAHRC and to identify the most significant HR issues facing the Ontario agriculture sector. Issues and needs determined through industry interviews: • Labour recruitment (by far the most important issue): wages and physicality and seasonal labour are a deterrent • Succession and intergenerational issues • Health and safety including machinery operation and nutrient management, livestock disease • Employee skills and training • Management training, including HR management and leadership

		• More promotion of the industry is required, it is currently lacking and highly lags promotion of other industries Lack of resolutions from the 1995 study, and this may be a result of fragmented industry and other more pressing issues such as price and marketing. Study also noted that agriculture producers were unaware of the amount of training that was available to them.

2.2 Aging Workforce

According to the 2001 Census of Agriculture the average age of a Canadian male farmer is 51.8 years and 50.0 years for a female farmer. The aging agricultural workforce has lead to labour shortages in the harvest and seasonal labour sectors, increased the need for succession and transfer planning, and increased the need to attract a younger workforce to the industry. The aging workforce may affect some provinces more negatively than others, where for example, on a relative scale, farmers in PEI, Quebec and Manitoba are younger than the average.

Table 2.2: Average Age of Farmers by Province, 2001

Province	Average Age of Farmers	
	Male	Female
Newfoundland and Labrador	53.5	50.6
Prince Edward Island	49.9	47.5
Nova Scotia	51.8	46.8
New Brunswick	52.2	50.6
Quebec	47.2	45.2
Ontario	52.7	50.4
Manitoba	50.7	49.8
Saskatchewan	53.1	52.9
Alberta	52.8	50.6
British Columbia	54.6	51.0

Source: Statistics Canada, 2004

In a CBC commentary Anne Forbes (2003) noted that "70% of farm assets will change hands in the next 12 years", therefore the demand for succession and transfer planning is crucial to ensure that these transactions meet the needs of both the retiring farmers and the younger farmers (Bourne, 2004; Peartree, 2003; Davis and Hulett, 1999; Rempel and Peers, 2002; Prime Minister's Caucus Task Force, 2001; Work Research Foundation, 2001). The Canadian Farm Business Management Council has acknowledged that there is a growing need to be aware of the issues that affect farm succession and transition and have created an information portal on their website that addresses the issue. The aging agricultural workforce has also created labour shortages in the more physical sectors such as horticulture during harvest due to the physical demands of the work and the increasing migration to urban areas (Gardner Pinfold, 2003).

The task of attracting a large younger workforce to the industry will be difficult, because, another human resource challenge in the industry, as discussed below, has been the lack of promotion of the industry and the younger workforce's lack of awareness of industry careers.

2.3 Recruiting and Retaining People

As Canada's younger workforce shrinks (McDonald and Harder, 2004), there is an increased competition among various sectors of the economy to obtain the labour that they require. It is clear that the agricultural sector's ability to recruit and retain labour is a major problem across the country and across commodity groups (Ageco Consultants, 2002, 2003; Agrivantage Strategic Initiatives Committee, 2002; Bourne, 2004; Formation Pro FP, 2003; National Beef Industry Development Fund, 2002, OATI Learning Group, 2004; Ernst and Young Management Consultants, GSGislason Associates Ltd. 2004; Peartree Solutions, 2003, Van Pelt, 2002). The Work Research Foundation (2001) suggests that this issue is the number one issue affecting agriculture producers in Ontario, by far.

Labour shortages have been perpetuated by both younger generations of farming families leaving the rural economy and migrating to urban areas, and the growing size of many operations that has required the help of more workers. Difficulties with recruiting and retaining labour have been associated with the industry's uncompetitive wages and non-monetary incentives that are offered to workers (Ageco Consultants, 2002, 2003; Agrivantage Strategic Initiatives Committee, 2002; Formation Pro FP, 2003; National Beef Industry Development Fund, 2002, OATI Learning Group, 2004, Rempel and Peers, 2002, Van Pelt, 2002; Work Research Foundation, 2001), the physicality of the industry, and the lack of awareness of what careers the industry offers, as discussed below in Section 2.2.3.

Historically the industry has not offered competitive wages in order to lure the workforce to the industry, although, wages are the clearest market signals that can be presented to a potential workforce, non-monetary incentives are becoming more important. However, farm employers have not yet recognized the true value of non-monetary worker benefit packages such as flexible hours, funded skills training, profit-sharing and social dynamics in the workplace that other sectors of the economy have begun to recognize and implement or foster (BCAC, 2004).

Van Pelt (2002) suggests that Frederick Herzberg's theory of motivation fits well with the agriculture sector. The theory suggests that industries must remove 'dissatisfiers' and provide employees with recognition and opportunity. For example, the agriculture industry must improve its low wages and other benefits as well as provide training or other incentives if it is to improve its recruitment of labour, especially with the strong competition from other sectors.

Sectors that continually hire employees on an annual basis for seasonal and harvest work, such as horticulture, are more largely affected by labour shortage problems than the livestock sectors, for example (Duffy and McEwan, 1999; Formation Pro FP, 2003; Gardiner Pinfold, 2003; Stevens Associates, 2003), as discussed below in Section 2.4.

2.4 Awareness of Industry Careers

Through the literature review and environmental scan, it appears that the awareness of career opportunities within the industry is lacking and the negative image that is portrayed is an important human resource issue across the country and across commodities (Agrivantage Strategic Initiatives Committee, 2002; Bourne, 2004; National Beef Industry Development Fund, 2002; OATI Learning Group, 2004, Van Pelt, 2002, Work Research Foundation, 2001). Perception, as well as lack of communication from the industry, has steered the entering workforce from choosing the agriculture industry as a career destination and this has created a lack of available workers with the skills required. Linington (2004) suggested that the 'disconnect' between career choices and the agriculture industry because agriculture has not been well represented at job fairs and within co-op placement programs.

Van Pelt (2002) also suggests that promoting the industry to give the public a better understanding and general awareness of what it involves will essentially aid in the recruitment and retention issues that the industry is facing as well. Van Pelt (2002) states that there are three phases to a promotion initiative: to promote the industry in general, to promote certain careers in the industry and then to promote specific jobs in the industry.

Career and Industry Promotion Initiatives

Some initiatives to market and promote the industry have been established in an attempt to address this issue. Agriculture in the Classroom is a national grade school education program.

The program mandate is to build an awareness of the agriculture industry in Canada through a school curriculum that includes agriculture. This is accomplished through research units and coordinated farm tours. Each province must find their own sources of funding to support this program and have various organizations developed to administer the programs. In PEI for example, the PEI Agricultural Human Resources Development Council administers the Agriculture Education program. The British Columbia Agriculture in the Classroom Foundation administers the program which includes agriculture curriculum, farm tours and a mobile dairy barn that is toured around the province. All provinces have an organization dedicated to the program except for Quebec which is currently looking for a representative.

A new initiative this year is the Horticulture Ontario Secondary Teachers Association that was formed to promote awareness of the industry within Ontario Secondary Schools and to further promote the college programs available to secondary students. However, this group does focus primarily on landscape, but will also provide awareness of the greenhouse sector simultaneously. Similarly, the Ontario Horticulture Education Council was recently formed. OHEC is the association of post-secondary horticulture educators that has also been developed to promote industry awareness and career options within the industry. The Council has developed a website, www.hortcareers.com , as an interfacing tool to provide information regarding the industry. Again, this council focuses primarily on landscape; however, the food processing side of the sector is represented on the council by the Ontario Agriculture Colleges.

To provide awareness to those thinking about careers and university educations, the Olds College Agricultural Leaders program mandate is to promote 'industry and public awareness of relevant agricultural issues' across Canada and to develop young agricultural leaders. Along with being a leadership opportunity for students from the college, the program also acts as a promotion tool for the industry, as well as for courses offered at the college. Advocates undergo training in media relations and promote Olds College and the agriculture industry at career and university conferences, workshops, seminars and the Royal Winter Fair. The concept of the program developed from the ambassador programs that many US colleges and universities have implemented to promote their institutions; however, this program is unique in that it engages a specific sector. Through promotion of the industry and the development of future agricultural leaders this program has addressed a number of human resource issues such as the negative image that the industry currently faces, the recruitment of a younger workforce into the industry and the development of leaders that have acquired skills in more than production management.

The Growing Alberta Program has developed into an inclusive public relations and communications program dedicated to the agriculture industry. The program was first established in 1995 under the Agriculture and Food Council; last year it formed as a non-profit company; to address consumer concerns regarding the agriculture industry. Through tools, messaging and programs Growing Alberta helps to increase awareness of the impact agriculture has on Alberta and its people. Two of the most significant tools used by Growing Alberta are its website that contains a wide-array of information regarding various aspects of the industry and the Food for Thought Magazine which is distributed to all major grocery stores in Alberta three times a year.

Growing Alberta conducted a very small initiative last year that focused on improving the image of the industry as one that offers viable and exciting careers. This initiative involved developing a series of bookmarks that contained information about careers in agriculture. These bookmarks were distributed in public libraries and institutional libraries with all books that were signed out. The program would like to move forward in the area of recruitment but it is recognized that more planning and resources are currently required as this is such as huge task.

Until recently, a similar program existed in British Columbia called AgAware that was funded by the BC Agriculture Council. However, a lack of funding has suspended the program.

A University of Idaho study found that the majority of college agriculture students had been involved in 4-H type programs and high school agriculture programs (Van Pelt, 2002). Therefore, Van Pelt (2002) suggests that if the industry takes an initiative to improve the youth participation rate in these programs across Canada, then interest in the industry as a viable career choice and entrance into university and college agriculture programs are likely to improve.

2.5 Training Culture

It is apparent that recruitment issues in the industry have led to a lack of skilled workers available. However, as the studies reviewed have demonstrated there are many other reasons for the lack of skilled workers even among those already employed in the industry including a lack of awareness of training programs that are available, programs that do not meet the industry's exact needs and the changing skills requirements of the industry.

Both Hodgins et al. (2003) and the Work Research Foundation (2001) found in their assessments of human resources skills requirements in Saskatchewan and Ontario respectively, that there was a disconnect between what skills training was available to the industry and the industry's awareness of what was available. Therefore, Hodgins et al's (2003) recommendation to improve the information transfer resulted in the development of the Centre for Agricultural Training and Education (CATE) that provides accessible information to the industry on the agricultural training available in Saskatchewan. Also, the PEI Agricultural Human Resources Council is in discussions about developing a similar website portal that would provide not only a connecting site for employees and employers, as Matheson Consulting (2003) recommended, but also information regarding the training that is available to the island and information regarding which training would be appropriate to take depending on the career paths being chosen (Weatherbie, 2004). Similarly, the need for an Alberta initiative came about from the AgSummit 2000 and the Agrivantage report that both indicated there is a large need for more human resources development in Alberta's agriculture industry and that an integrated HR development strategy is needed. Following the Agrivantage Report, Toma and Bouma Management Consultants conducted a study to determine what the next steps should be for the Agriculture and Food Council. Toma and Bouma (2004) recommended that a 'one-stop shop' for human resources information was required. This on-line portal would include career path information for workers in the industry or those wanting to get into the industry, connections to recruitment agencies for jobs in agriculture, information linked to Human Resources Development Canada, and information on the available training in agriculture in Canada (Fischbuch, 2004). Currently, this initiative is committed with funding through the Innovation in Agribusiness Management Fund in Alberta and has been through the development process, it will be called the Human Resources Information Exchange; however, ironically, there is a lack of human resources to administer it (Fischbuch, 2004).

2.5.1 Development of Management and Leadership personnel

> *"The agriculture industry is based on people, more so than almost any other industry. People are the engine which drive agriculture, and without proper management of the human resource aspect of the industry, it cannot possibly grow to fulfill its potential."*

(Agriculture Canada, Task Force Report: Agriculture a Growing Concern)

Compared to the last generation, today's farmers have generally been required to do more, and do it more cleverly than before; agricultural operations are more aligned with large companies than ever before and farm managers are beginning to act more and more like managers within a private company with a number of personnel below them. It's no secret that consolidation in the industry has been occurring and operations are getting larger and larger which has lead to larger staffs being required. Similarly, horticultural operations during the harvest season consist of very large staffs. Therefore, human resources management skills are becoming increasingly important (Agrivantage Strategic Initiatives Committee, 2002; Atyeo et al. 2004; Bourne, 2004; Formation Pro FP, 2003; Hodgins et al. 2003; Linnington, 2004; Lunden, 2001; National Beef Industry Development Fund, 2002; Peartree Solutions, 2003; Rempel and Peers, 2002; Toma and Bouma, 2004, Work Research Foundation, 2001). As discussed in Section 2.2.2 there is a real challenge in recruiting and retaining people to work in the industry and this is perpetuated by the industry's history of offering uncompetitive wages and non-monetary incentives. However, an improvement in human resources management skills throughout the industry may aid in this issue. Human resources management training may also help to work through the special issues of managing or running a business in which family members are either partners or employees and then living harmoniously together as a family outside of the work environment.

As a definition, human resources management 'centers on the flow of people in, through and out of the operation'. Therefore, farm managers would benefit from training and the abilities to recruit and select the right personnel to fit in the operation. Farm managers must also orient, train and develop employees so that they are fully aware of their position in the operation, what others are doing and through training and development are both focused and motivated in their positions. Other human resources skills include conducting performance evaluations, as well as, creating incentives and rewards both for continuously improving and for employees that meet the objectives of the performance evaluations. Lastly, farm managers must also have the ability to dismiss employees in a professional manner and know when to dismiss employees if they are unsuitable for the operation.

Skills in human resources management are important because they can lead to overall improvements and effectiveness in the operation and may also aid in some of the above-mentioned human resources issues such as recruitment and retention of employees. Improved human resources management can lead to commitment from employees, more competent staff and cost effectiveness, if the farm manager does not have to recruit, rehire and retrain employees as often. Also, if employees are motivated and focused, there may be added creativity within the operation in the ways that employees accomplish their tasks, especially if they know that they will be rewarded or acknowledged.

However, it is difficult to convince farms of the benefits of HR management because there is no immediate return to the farm as there would be in production and technology training (Lunden, 2003). This is further perpetuated by the fragile economic state of the industry.

To address this issue, a number of organizations and provincial agriculture ministries have published Employer Handbooks for the agriculture and horticulture industries. For example, the Agricultural Labour Committee in Quebec has published a Handbook titled, "A Modern Vision for Human Resources Management in Agriculture". This publication is a guide to provide producers with techniques and tools regarding human resources management in agriculture. This user-friendly management book has been written by the Comité sectoriel de main-d'œuvre de la

production agricole (Agricultural Labor Committee, Quebec) whose mission is to improve human resources issues in the Quebec agriculture industry. This guide was originally published in 1992, and was well-used by Quebec's producers. Due to its success, a second edition was published in 1998 and has since been updated with two new sections that were published in 2000 and 2004. The content is divided into ten chapters that include objective planning, hiring processes, work organization, enterprise management, motivation, communication, education, remuneration and laws related to agricultural labour.

The first chapter explains the different kinds of objectives that an enterprise should develop to achieve success over time. This is to define objectives that are consistent with the enterprise's goals. The chapter on hiring processes explains and analyzes the skills needed to conduct hiring on the operation. Writing job descriptions, interview processes and finding the appropriate worker for an operation are all explained in this chapter. As well, employee orientation and its importance are discussed. The chapter on work organization discusses how to organize work and delegate work in order to attain the farm's objectives and goals. The importance of communication is another aspect that producers must be skilled in, in order to control and attain their objectives. The handbook also contains a chapter that discusses the types of education that can be useful for farmers and their employees. The authors explain briefly the different kinds of programs that are available in agriculture and their requirements. A plan is also provided to help producers select and attain the appropriate programs to participate in. The last chapter of the handbook discusses the legislation that relates to employees, wages, equity, employment insurance, retirement and health insurance in order to inform producers of the many laws and policies that they should be aware of.

In general, this human resources handbook covers a broad array of topics and provides the key information that a producer should know in order to create a harmonious and efficient human resource environment in their operation.

Similarly, the Ontario Agricultural Human Resource Council, Alberta Agriculture, Food and Rural Development, and Saskatchewan Agriculture, Food and Rural Development have also published Employers' Handbooks for use in the industry.

Studies suggest that the need for leadership in agriculture has never been greater (Agrivantage, 2002; Hodgins et al. 2003; Rempel and Peers, 2002; Toma and Bouma, 2004). These skills are required in the industry to lead the increasingly complex businesses and sector of today's environment. Also, leadership in the industry is needed both to promote the industry as an exciting and viable industry to the younger workforce that may be choosing a career path, as well as to provide mentoring to the younger workforce that does join the industry.

2.5.2 Skill Requirements

A need for improvement in specific skills and training in agriculture is a repeated finding in previous studies. This can be seen from the results of the studies examined in Table 2.1; studies that were designed to examine human resources issues within the agriculture industry, it is apparent that training and education is at the top of the list. It is not surprising then, that a number of needs assessments conducted across the industry focused specifically on the training needs of the industry, summarized in Table 2.3.

Overall, the literature review revealed that there are three types of skills that require improvement in the industry; basic production skills, business management skills, and 'new' skills that will help farm managers to adapt to market opportunities and challenges in the industry.

Basic Production Skills and Continuing Education

There are a core curriculum of basic agricultural production skills that are required in the industry including soil preparation and nutrient management, planting, growing and harvesting techniques, pest management skills, animal husbandry skills and machinery and equipment operation and maintenance skills (Atyeo et al, 2003, 2004; Bourne, 2004; Brady, 2002; Davis and Hullet, 1999). But even beyond these basic agricultural production skills, many studies that were reviewed suggested a need for even more basic 'employment' skills such as interpersonal and communication skills (Bourne, 2004; Brady, 2002, Crawford, 2004). These skills are generally learned through college and university entrant programs (Davis and Hullet, 1999); however there is a need for more general labourers (workers that may remain labourers in the industry rather than acquiring secondary education to 'move up' in the industry) to acquire these skills to fill the need in the industry.

Also, as the industry has developed and grown there has been an increase in specialized production in all commodities. However, this production now requires specialized production skills and there is a scarcity of specialized labour (Formation Pro FP, 2003). In addition, as new technology and science associated with farming systems is adopted, an opportunity exists to take advantage of these opportunities. However, these technical advances require a new understanding and skill set in order to be utilized efficiently and properly, therefore increasingly more training is required in areas of technology. Both new entrants and experienced workers should be able to use these advancements to their advantage and acquire skills required to operate new or specialized machinery, control pests and administer new animal health products, vaccinations and new feed rations (Atyeo et al. 2003, 2004; Agrivantage Strategic Initiatives Committee, 2002; Bourne, 2004; Ernst and Young, 1992; ; GSGislason and Associates, 2004; Rempel and Peers, 2002).

Because of the ever-changing environment of this industry, lifelong learning within the industry for skills upgrading is also seen as important (Atyeo 2003, 2004; Bourne, 2004; Davis and Hulett, 1999; Peartree Solutions Inc. 2003; Prime Minister's Caucus Task Force on Future Opportunities in Farming, 2001; SIAST, 2003) but has not been fostered by the industry itself. Atyeo et al. (2003) suggest that farmers must recognize the value in upgrading skills not only for themselves but also for employees, however, this may again relate back to the issue of this industry being in a fragile economic state and the reluctance of farmers to invest in more at this time.

Table 2.3 Studies Conducted to Examine Training Needs and Issues in Agriculture

Reference	Geography	Findings
Assiniboine Community College, 2003	National	Overall, the study concluded that Colleges are 'successful' at ensuring they are connected with the Canadian agriculture industry. However, the study also identified challenges to the connectedness of the industry including the ever-increasing diversity of the sector, college funding cutbacks and the increasing load on faculty leaves them with less time to nurture industry connectedness.
Atyeo, M., S. Smith, and G. Hopkins of Neo Insight Inc., 2003	PEI	Purpose: to identify the skills required and the needs of PEI's agricultural community for training and education. • Needs center around labour and skills shortages and skills to keep up with technology • Farmers prefer to learn through mentors and coaches in a hands-on setting • Most training offered in PEI is general and not specialized • Farmers must recognize the benefit of training farm employees and themselves • Few distance education options available, therefore need to offer courses that are suited to farmer schedules • No clear definition of what skills are required, but PEI needs more of both basic and specialized training.
Atyeo, M., S. Smith, and G. Hopkins of Neo Insight Inc., 2004	PEI	Purpose: to determine a better understanding of the training and skills development needs of PEI farmers and assess thoughts on apprenticeships programs. • Training needs include business, mechanical, production (vaccinations, animal health, feed ratio evaluation, safety) and human resources skills. • The apprenticeship program is supported if it is developed appropriately. • Authors recommend to target training to three sets of employees; full-time, part-time and seasonal workers with training in upgrades and life-long learning, apprenticeship training and introductory courses or pre-apprenticeship training respectively.
Bourne, A. 2004	NL	Purpose: to assess the training needs of the agriculture industry in Newfoundland and Labrador. • Required areas of development include: basic skills, advanced and new skills, interpersonal skills, business management, farm business succession planning, computer skills, health and safety training, environmental sustainability and secondary processing or value-added skills. • Because Labrador has an emerging agriculture industry, it is recommended that a full-time training program that covers all the basic aspects of the industry be developed for the farmers there. • There is a need to promote the industry and provide programs to new farmers and others that will entice them to be a part of the industry The development of a number of training programs to meet the needs of the industry was recommended, including: an introductory class for beginners and to promote the industry, professional development course with a focus on marketing, selling and management; a meat-cutting course, a course to provide info on agri-tourism and a course that would relate current life science research to the agriculture industry.
Brady, B. 2002	Sask.	Purpose: to identify training and education needs of the Saskatchewan feedlot industry and identify any gaps in training opportunities that exist. • Very few courses in Saskatchewan that specifically address the feedlot industry, but many general agriculture courses • Skills required for workers include: traditional production skills and business skills • Feedlot owners acknowledge need for trained workers

		• Green Certificate program should be promoted as a training tool • Industry prefers seminars and workshops and hands-on learning, also recommends mentoring and job shadowing • Clearly there is gap between what is needed and what is offered in Saskatchewan for this industry • Enhance the Agriculture in the Classroom program to improve image of industry • Industry needs to be more closely involved in program and curriculum development
Davis and Hulett,1999	Atlantic Canada	• Increasing need for knowledge-based skills such as business management, environmental management • Aging labour force needs to update skills and prepare for succession or transferring farm assets • Sustainable management is a new issue that will require training • Courses offered by educational institutions and industry cover the needs of those entering the industry • Standardization of skills is a good idea
Formation Pro FP. 2001a	Quebec	The purpose of this study was to determine the benefits of education on farm profitability. The findings include: • Quebec producers lag in education compared to other provinces and US • Economic analysis showed correlations between education and farm revenue • Education leads to higher wages • Quebec developed a new support program for aspiring farmers • Education proved to be better for farm management which led to greater economic performance • Continuing education improves ability of producers to adapt their enterprise • Farm education also has a positive impact on community development
Formation Pro FP. 2001b	Quebec	The purpose of this study was to review the ways that continuing education can be accessed by farmers in other countries as well as in Canada. Some of the findings include: • The internet can be a way of providing information on training availability, where to find more information or contact people or for technical information • Distance education learning is widely used, although still with books and through the mail, the internet is not used very widely. • Providing information on the latest research developments is important • Skills certification or accreditation also provides continuing education
Goursky, N., 2004	National	The purpose of this report is to gather, analyze and distribute information on adult curriculum in colleges delivering agricultural curriculum. • Business Risk Management has the lowest number of course offerings; however, many of the tools that are applicable to it are generic and are already offered in a variety of settings across the country. Specific tools for farm management are also offered by non-college providers. • Topics of environment and renewal are well represented in course offerings across the country • Food Safety and Quality, and Science and Innovation are lacking in course offerings
Grier et al. 2003	National	Purpose: to identify innovative practices in agriculture learning • Colleges have trended toward delivering courses in non-traditional ways and non-traditional locations. Internet-based learning is growing in importance. More and more programs are being made accessible to remote students. • The most innovative learning methods are the most effective, including; hands-on training, learning from peers, and

		connecting the learning material to reality
Hodgins and Company Management Consultants Ltd. 2003	Sask.	Training needs that were deemed most important: • Farm management, Marketing, Human resources, Business operations, Communication and negotiation, Performance management, Strategic thinking, Critical analysis, Financial analysis, Risk management, Investment management, Corporate governance, Project management, Leadership training, Change management Authors noted that none of the agriculture programs in Sask. met all of the training needs. Therefore, the needs of the industry are not coordinated with the programs offered and most programs only offer pieces of what is required. Cost of the programs, lack of time and location of the courses offered also pose challenges. A Centre for Agriculture Training and Education (CATE) has been established as a result of this study.
Lunden, A. 2001.	National	This discussion paper summarizes the results of five studies that reviewed the issue of management skills and challenges in agriculture. Study found that two types of skills sets are required: • Those required to make informed business decisions: information management, entrepreneurship, planning, business development • Those required to implement informed business decisions: operations management, human resources management, marketing, production management Developing and acquiring networks is very important for farm managers.
Saskatchewan Institute of Applied Science and Technology, 2003	National	A national study aimed at gaining a better understanding of the trends within the learner population. • Majority of career entry programs offered at participant institutions tend to focus on production skills, there needs to be more emphasis on the business side. • There are a small number of continuing education offerings – with the exception of plant and soil sciences, and this needs to be improved.
Shea, A. 2003	Sask.	The purpose of this needs assessment was to determine the feasibility of an agricultural mentoring program in Saskatchewan. Over half of survey respondents suggested that there is a need for such a program in Saskatchewan because there is difficulty in accessing information on maximizing their business potential. The author notes that the timing would be right since Saskatchewan's workforce is aging and the younger workforce has not shown interest in this industry. It is hoped that a program like this will spark interest in the industry. However, only 20% of the respondents thought that they would participate as 'mentees' in the program but also, more than 80% of the farmers that responded considered themselves experienced. Other findings from the surveys included: • Respondents believe that mentoring plays a significant role in the agriculture sector • Majority of respondents say the program would help with their diversification • Respondents believe that it will be very useful for immigrants and young people

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Davis and Hulett (1999) noted that educational institutions supply the needs of those entering the industry through established programs that offer basic production and technical skills, however there is now a need for an emphasis to be placed on business management skills and upgrading the skills of those already established in the industry. Table 2.4 lists the needed skill sets that were most noted in the studies reviewed, beyond basic production skills. The table shows that business management and knowing the regulatory environment are seen as increasingly important.

Table 2.4 New Training Needs

Type of Skills Required	Reference
Business and Financial Management	Atyeo et al, 2004; Agrivantage Strategic Initiatives Committee, 2002; Bourne, 2004; Brady, 2002; Davis and Hulett, 1999; Ernst and Young, 1992; Goursky, 2004; GSGislason and Associates, 2004; Hodgins et al. 2003; Lunden, 2001; Rempel and Peers, 2002; SIAST, 2003; Toma and Bouma, 2004
Marketing	Atyeo et al, 2004; Agrivantage Strategic Initiatives Committee, 2002; Bourne, 2004; Brady, 2002; Davis and Hulett, 1999; Ernst and Young, 1992; Goursky, 2004; GSGislason and Associates, 2004; Hodgins et al. 2003; Lunden, 2001; Rempel and Peers, 2002; SIAST, 2003; Toma and Bouma, 2004
E-commerce and Computers	Agrivantage Strategic Initiatives Committee, 2002; Bourne, 2004; Rempel and Peers, 2002
Regulation and policy know-how (food-safety, environmental and sustainable management)	Agrivantage Strategic Initiatives Committee, 2002; Bourne, 2004; Davis and Hulett, 1999; Goursky, 2004; Prime Minister's Caucus, 2001; Rempel and Peers, 2002

As noted above, the agricultural industry across Canada is large and diverse and is also challenging itself constantly to remain competitive in the global marketplace. As this change has occurred, the skills required by farm owners, managers and workers is expanding to more than simply technical, production skills. Farm managers and owners in today's environment require the same set of management tools and skills as any other manager of an enterprise. Skills to manage market situations under uncertainties, changing exchange rates, increasingly global market competition and changing business conditions, regulatory issues and skills to be able to take advantage of opportunities for value added are all required in today's farming environment.

Managing the policy environment, including being aware of the increasingly complex regulatory environment such as food safety issues, environmental legislation, nutrient management, technical standards and international trade policies is also an important way to be ready to be able to take advantage of market opportunities that arise. The ability to take advantage of new opportunities also includes entrepreneurship such as utilizing strategic alliances and supply chain management (Bourne, 2004; Hodgins et al. 2003; Lunden, 2001).

2.5.3 Availability of Training

The Agrivantage Strategic Initiatives Committee (2002) noted the training available to the industry has not been efficient at adapting with the changing environment and no longer meets the exact needs of the industry. GSGislason and Associates (2004) also identified that British Columbia's training in aquaculture remained focused on 'traditional' production skills instead of

the new technological skills that are required of those in the industry. In order to improve this situation, the OATI Learning Group (2004) suggests that industry must work more closely with training providers to develop appropriate curriculum.

It is evident from the studies that a wide array of training is available across the country; however, the studies that concentrated on a particular region of the country found that not all of the needs of the regional industries were being met (Atyeo et al. 2003; Brady, 2002; Hodgins et al. 2003). Atyeo et al. (2003) and Brady (2002) stated that most of the offerings in PEI and Saskatchewan respectively, focused on general agricultural skills and not on the specialized needs of the industries in those regions. Hodgins et al. (2003) found that programs offered in Saskatchewan did not meet all of the needs of industry with regards to the newer skills that are now required to be competitive in the industry and only offered pieces of what is required. Advisory committees within Canadian colleges do exist to provide curriculum advice to colleges and to ensure that the programs are connected with the industry (Assiniboine Community College, 2003). However, their success at connecting the curriculum to the industry has been challenged by funding cutbacks in educational institutions and the fact that there is so much diversity in the industry that it is difficult to stay ahead (Assiniboine Community College, 2003). There is a common agreement that the industry needs to continue to work with education providers at developing curriculum and ensuring that it meets the needs of those that work in it.

In response to this need, the post secondary educators of Ontario recently formed OHEC, as mentioned earlier in the report. Currently, OHEC works to promote the industry, however, the Chair, Professor Ken Nentwig, did state that one of the long-term goals of OHEC is to ensure that the curriculum provided to the industry meets its needs and to ensure standard training across the province.

It has not always been easy to convince those in the industry of the importance of the training culture in agriculture. Training can be costly, depending on the types of training being taken, and when margins are tight or the industry is in crisis mode such as with BSE and the beef industry, it is hard for farmers to justify the cost and time away from the farm. However, it is at these times where training and skills development may be the most important.

With respect to basic production skills, it was found that while many college and university programs offer comprehensive training, many studies suggested that there is a need for more hands-on learning opportunities such as apprenticeships. For example, the PEI Agricultural Human Resources Council is currently in the middle of developing some apprenticeships with the Apprenticeship Board on this island as a direct result of the two studies conducted by Atyeo et al. (2003, 2004) that suggested that this type of training was lacking and that these types of programs would be supported by farm managers (Weatherbie, 2004). Similarly, the now disbanded Ontario Agricultural Human Resources Council helped to develop the swine and dairy apprenticeship programs that are offered at Ridgetown and Kemptville Colleges.

2.5.4 Training Methods of Delivery

It is clear from reviewing the many studies and talking with industry stakeholders that there needs to be more innovative methods of delivering agriculture training and education. Part of the Association of Canadian Community Colleges (ACCC) Agriculture Learners Survey was completed to review the industry's success in this regard. Not only does the curriculum offered to the industry need to be innovative, but so too does the way in which the training is offered. Despite the fact that there are courses available, the method of delivery does not always recognize the culture and constraints of the farming industry (Peartree Solutions Inc. 2003; Rempel and Peers, 2002; Toma and Bouma, 2004). The lack of uptake of available programs

has been identified as a result of the delivery of training because farmers prefer to learn in traditional, non-formal settings such as field days, seminars and workshops, and mentoring from experienced leaders in the industry and they don't participate in a 'nine to five' week.

An improved, innovative and accessible learning environment is required to motivate farmers and workers to participate in training activities. Grier et al. (2003) found that the delivery of training to meet the needs of the agriculture industry has improved with an increase in courses offered through distance education classes and the internet, as well as hands-on training. Although internet-based training opportunities have increased, Zeddcomm (2003) found that internet-based training has not yet been well received in Canada.

There has also been a lot of interest in formally providing a mentoring program in some provinces. The Agriculture Institute of Management in Saskatchewan (AIMS) conducted an assessment of the need and interest for a mentoring program for the province in 2003 (Shea, 2003). As Table 2.3 shows respondents were interested in such a program because they cited that they currently had difficulty in accessing information on maximizing their operations and would value experienced advice (Shea, 2003). However, developing the program has been put on the back burner at AIMS due to the logistics of putting such a program together, including questions surrounding the liability of the mentors and how to connect people from separate parts of the province (Magill, 2005). Despite the fact that the industry believes this is a great way to gain information and advice from experienced producers, there already exists an informal mentoring environment in the industry so a formal program may not be well received. In fact, a mentoring program did exist in Manitoba, through Manitoba Agriculture, Food and Rural Initiatives', however it was recently cancelled due to poor participation.

Instead of a formal mentoring program, it was shown throughout the studies that networking is also valued by farmers, both young and experienced, as a way to obtain advice and information. In the studies conducted by Toma and Bouma (2004) and Lunden (2001), the importance of networking as a tool for knowledge transmission is acknowledged, and it is recommended that institutions or organizations create more formal networking programs so that farmers can build on the networks they have already created (Toma and Bouma, 2004). Lunden (2003) stated that farmers at all levels depend on their personal networks to provide information and advice. Toma and Bouma (2004) suggest that learning through formal peer networks should be further explored in Canada, as these have shown success in the Master Marketer Program in the United States and the Farm Management 500 Program in Australia, and would be supported by farmers. Toma and Bouma (2004) recommended that fostering formal networks for farmers and farm managers is needed to improve business management and other management skills of those in the industry through discussion with people of the same mind. Currently, the Alberta Food Council's Innovation in Agribusiness Management Fund is developing both production forums and management forums. Toma and Bouma (2004) found that these types of groups were successful in other jurisdictions such as the Farm500 group in Australia, which is discussed below, and the forums will be structured around these successful programs. Participants in these forums will determine what topics need to be discussed, will be provided with literature prior to the forum and will be able to network with industry experts on these issues. Currently this initiative has been outlined as a two-year project.

2.6 Seasonal Labour Availability

It is apparent that the issue of labour availability within sectors that rely heavily on seasonal and harvest labour is an important one in which many studies and initiatives have attempted to address. Table 2.5 summarizes a number of studies that were conducted to identify the challenges of recruiting and retaining labour in these sectors, including the Final Report of the

Prime Minister's Task Force on Seasonal Work that was completed in November 2004. The studies show that the important HR issues affecting these sectors that rely heavily on this labour are quite different than the HR issues faced by the rest of the Canadian agriculture industry.

The horticulture industry is certainly the most highly affected with respect to seasonal labour and it is unique in that it requires a variety of workers; full-time, part-time, short-term and harvest workers. At times throughout the year there is a need for all of these employees at once which puts pressure on employers to find workers that can fill these positions. In order to fill these positions, Canadian operations have two sources: migrant labour and Canadian citizens.

2.6.1 Migrant Labour

The Mexican- Caribbean Seasonal Agricultural Workers Program (SAWP) was developed to meet labour shortfalls in the agriculture industry in Canada during peak production and harvesting periods. The program allows foreign workers to enter Canada on a short-term basis (8 months maximum) to work in agricultural labour positions. In Canada the program is administered by Human Resources and Skills Development Canada (HRSDC), and Citizenship and Immigration Canada (CIC). The non-profit organization Foreign Agricultural Resource Management Services (FARMS) (in Quebec called Fondation des Entreprises en Recrutement de Main d'ouvere Agricole Etrangere (FERME)) assists in processing requests for workers.

In order to qualify for the program, operations looking to hire foreign labour must first demonstrate that they have made an effort to recruit Canadian workers first and the industry must also acknowledge the need for the workers; this is known as the *Canadians First Policy*. Employers must also ensure that the off-shore workers will receive Canadian wages, paid airfare, accommodation that meets provincial standards, and health and medical benefits.

Currently this program operates in nine provinces; all but Newfoundland and Labrador. British Columbia was just added to the program in May 2004, which has pleased the BC Berry and Vegetable Council. In 2004, SAWP brought over 15,123 employees into Ontario alone (Prime Minister's Task Force, 2004). Ontario alone has brought in many workers through the program because of the number of larger operations that exist there; especially in the southern Niagara region. Bringing in the migrant labour is not cheap because of the transportation and housing requirements of the program, therefore it is only economical for operations, or a cluster of operations that will share the labour, that can produce and harvest a large enough crop to make it worthwhile. Quebec, Manitoba and Alberta have also had success using the program. However, due to the economical constraints of the program, this source of labour is not accessible to all operations and cannot solve all seasonal labour needs.

Table 2.5: Existing Studies Conducted to look at Seasonal and Harvest Labour Issues in Agriculture

Reference	Geography	Findings
Canadian Horticultural Council, 2004	National	Key Issues: • Recruit and retain sufficient numbers of trained employees at competitive wages • Raise the profile of seasonal workers on the agenda for urgent policy reform • Image makeover is required • Promote a culture of continuous learning and skills training
Duffy and McEwan, 1999	Ontario	Issues reviewed: • Majority of workers want to work year-round • Competition for labour is stiff • EI structure for seasonal labourers needs to be changed • Workers willing to work in different industries during the winter • Government must recognize seasonal work as important • This is a perennial problem that even with effort may never fully disappear
Gardiner Pinfold Consulting Economists Ltd., 2003	Atlantic Canada	Harvest labour force issues: • Lack of harvest labour • Increased competition for labour from other industries that offer more and better incentives and more stable work • People willing to work for harvest but EI, social assistance, taxation and pension structures create disincentives • Aging workforce causing labour shortages • Image of industry keeps young people out Study recommended development of a provincial sector council.
Matheson Consulting Ltd and Enterprise Management Consultants, 2003	Prince Edward Island	Worker Issues: • EI and seasonal work do not combine to make a viable living • Workers expressed that safety and working conditions need to be improved on farms • Workers with more specialized skills are in higher demand Owner/Manager Issues: • EI structure negatively affects labour recruitment and worker turnover • Competition for workforce with other sectors is strong The authors recommended that a recruitment organization be created to coordinate farm employment efforts. Lastly, based on the findings throughout their research, the authors recommend that the AHRDC develop and implement a comprehensive HR development strategy that deals with the issues.
Prime Minister's Task Force on Seasonal Work. 2004.	National	The following is a list of what the Task Force described as the main themes that were brought forward throughout the meetings across Canada: • Seasonal workers must be valued • Current EI system makes recruitment and retention difficult • Changing demographics of seasonal workforce is a concern for employers • Life-long learning should be fostered

		• Mobility and labour availability are issues • Connections between employees and employers must be made • Learning and training is encouraged in the off-season
Ringuette, P. 2004	National	This report cites that the primary issue with respect to seasonal labour is the current EI system and the disincentives it causes. Report notes that recommendations made in the Prime Minister's Task Force on Seasonal Work Final Report do not reflect the needs of what was heard across the country.
Stevens Associates, 2003	National	Issues reviewed: • Current labour force cannot fill seasonal horticulture positions • It is necessary to recruit offshore workers to fill positions • Key to continue SAWP because it works well for the horticulture industry

2.6.2 Canadian Seasonal Labour

The additional challenges to recruit and obtain Canadian seasonal and harvest labour lie in the following:

- Competition with other sectors that offer full-year employment
- Canadian social policy creates a disincentive to work in the industry
- Difficulty in connecting available workers and employers

One of the difficulties in obtaining seasonal and harvest labour in Canada is the competition for labour from other sectors of the economy that offer more stable, full-year employment. Duffy and McEwan (1999) concluded that workers want to work year round. In order to alleviate some of the problems within the agriculture sector, entrepreneurial operations have diversified by adding a processing or packaging facility to the operation to lengthen the employment period for workers. Similarly, workers with more specialized skills more often are in demand for longer periods of the year (Webster, 2004a). Although this increase in diversification and skills training has benefited the industry, it has also lead to more difficulty in fulfilling short-term and harvest labour requirements (Formation Pro FP, 2003; Webster, 2004a).

Short-term seasonal and harvest labour is extremely important as a part of the horticultural industries, since without it, the crop could not be harvested. However, the studies reviewed suggest that the Canadian government does not understand its importance. Currently the structure of Canadian social policy (i.e. Employment Insurance, pensions, and social assistance) creates disincentives for Canadians to work in seasonal and harvest labour. These disincentives have been augmented since the implementation of the new EI Act in 1997.

Disincentives to work in a seasonal industry due to the current EI system include:

- A move from the “weeks worked” system to the “hours worked” tracking system and insurable earnings on piecework
- EI claimants can only earn 25% of their weekly benefits or $50.00 per week before their benefits are clawed back dollar for dollar. However, this little amount is no incentive to encourage claimants to seek employment in the industry.
- Similarly, money earned by social assistance recipients is clawed back dollar for dollar once a certain threshold level is reached.
- Disability pension claimants are also affected in the same manner.
- Harvest workers who have no attachment to the labour force, such as retirees, stay at home moms or ‘vacationers’ who take their vacations during the harvest season to help out and enjoy the outdoors also have little incentive to join the horticulture sector during peak periods. These potential employees have little incentive to join because after six days of work for the same employer, an employer must begin deducting EI and must issue a T4 at year’s end. This can result in these employees paying higher taxes at the end of the year for the minimal amount of money that they earned which creates a disincentive to work in the industry at all and as a worst case scenario could bump them into the next tax bracket.

Due to the short (2-8 weeks) and weather-dependent work involved in harvest labour, the disincentives discussed above are simply exaggerated. Harvest work is also very localized and geographically-based since workers are not willing to relocate for such a short time period and therefore employers engaged in finding harvest workers must hire locally.

Although there is a seven-day exemption period on deductible earnings for agriculture, the disincentives discussed above have caused one of three situations to arise: employees are only

willing to work 'under the table', employees will work for the first seven days and then quit leaving the farmer with an inadequate labour supply in the middle of the harvest or has been increasingly experienced, farmers cannot find the supply of harvest labour that they require.

Canadian public policy has also been motivated towards encouraging workers to enter careers that offer full-time, year-round employment. This in turn depletes the seasonal and harvest labour force of experienced workers. The Canadian Horticulture Council (2004) recommends that the profile of seasonal workers must be improved and their importance must be fostered. This can be accomplished through providing training opportunities to upgrade the skills of seasonal workers in the off-season without having their EI benefits penalized. Training will create higher demand for these workers and can create a longer working season or more stable employment.

During the regional meetings of the Prime Minister's Task Force on Seasonal Work in 2004 recommendations regarding reforms to social policy to aid in the recruitment of short-term and harvest labour were made by a number of interest groups. The Task Force then released a final report discussing its findings and recommendations. However, the Final Report (Prime Minister's Task Force, 2004) as well as the Dissenting Report (Ringuette, 2004) that was released later focused on improvements to employment insurance and not the other social benefits programs or taxation structure that also have caused disincentives to recruiting harvest labour.

Finally, another challenge that has been widely cited with respect to seasonal and harvest labour availability is the ability to connect workers and employers. The above discussion shows that many seasonal and harvest labour workers are encouraged to leave the industry, therefore there is a need for employers to find large numbers of available workers each season. This has proven to be a laborious task for farm owners. In 1974, a national Farm Labour Pool Program operated in each province that was funded by the federal government (Dyson, 2003) which handled seasonal labour in those areas where it was required. In 1985 the Labour Pool's name was changed to the Agricultural Employment Services (AES), and in 1991, although the AES continued to manage seasonal harvest issues, it also became more focused on human resource management, training and agricultural careers (Dyson, 2003). However, in 1994-1995 the AES offices were closed. Some provinces have continued the service.

In British Columbia, the B.C. Agriculture Labour Pool (BCALP) was established through funding by the Human Resource Centre Canada (HRCC). The BC Agriculture Labour Pool is an employment seeking and recruitment service for both agricultural employees and employers. The service provides recruitment aid to Canadian and US employers and aids workers by helping to find a suitable agriculture career. The 'Labour Pool' consists of a database of workers from across Canada and the United States that have various skills and levels of education, plus a database of agriculture job opportunities across Canada and the United States.

Posting resumes on the website is free of charge but there is a fee for posting job opportunities. Additional services offered by the BCALP include resume, cover letter and recruitment letter writing, immediate notices of jobs or employees that match the needs of employees and employers, information on current wages being paid in the industry, current training opportunities in British Columbia and reference checks of agriculture workers.

The 'Labour Pool' also offers short workshops for both employers and employees on various aspects of employment and hiring, including employment standards, building a work team, dealing with personnel problems, communications, motivating employees, leadership skills and using computers on the farm. Although the BCALP connects all types of agricultural workers it

does not seek out workers for the harvest season and does focus on workers that are skilled or semi-skilled. Therefore in June 2000 a seasonal labour exchange project was funded through MAFF for the Fraser Valley in BC and has been successful at fulfilling this 'connecting' role.

In Quebec a similar service has been set up to connect seasonal labour workers to employers called Agrijob. Created in 2001 by the Committee of Agricultural Labour, with the collaboration of Emploi-Québec, Agrijob is a service designed to promote the jobs available in horticulture and to recruit part-time and seasonal workers in the Montreal area. Local people who are interested in harvesting fruit and vegetables sign up at Agrijob and the sign-up list is sent everyday to five agricultural employment centres in the Montreal area. Employers and workers are then matched up for jobs that are available from April to October. Agrijob also offers a shuttle for the workers. At one time Nova Scotia had funding for an ad hoc service of this type that was used strictly for harvest labour called Harvest Labour Services. It was then expanded to included seasonal labour, but has since been disbanded.

Another successful labour service in Quebec involves farmers who have formed a co-operative in order that they can share and pool their workers to provide them with full-time year-round employment. The program works by pooling the needs of approximately eight farmers to provide a one full-time job for a worker (Bourne, 2004). This co-operative also aided in the problems with recruiting and retaining employees because employees have been more motivated to stay with the full-time work that is available.

The program is based on the co-operative model called the Cooperative d'utilisation de main d'ouevre (CUMO) which is based on another co-operative model that was used to pool agricultural equipment, the Cooperative d'utilisation de materiel agricole (CUMA) that some Quebec producers had adopted from France. In 1995, the first co-op was developed in the Bas Saint-Laurent region of the province and in 2001 CUMO Cote-du-Sud was formed La Pocatiere region of the province. In order that the co-op can run sustainably, members are charged a $200 annual fee to have access to the pool of workers. The co-operative will then supply them with employees when they need them and farmers then receive a monthly invoice from the co-op for the services of the employees. This invoice also includes an eight percent administration fee to cover the co-operative's operating costs. Although the co-operative helps to alleviate labour recruitment problems for farmers it is still competing with other sectors for the younger workforce. Currently the membership at CUMO Cote-du-Sud is at 67 members, however, until the co-operative creates a larger employee pool, the co-operative will be cautious about allowing more employers to join so that it can ensure that it can meet each employer's needs.

The Matheson Consulting Report (2003) prepared for the PEI Agricultural Human Resource Development Council on the seasonal labour needs of the province also recommended that a connection service be created. As such, PEI AHRDC has begun development on such a service that will also provide career path advice and training opportunities. These connection services are needed in all areas of the country that rely heavily on seasonal and harvest labour and the importance of these services were expressed to the Prime Minister's Task Force on Seasonal Work. The Task Force recognized this need and recommended the creation of a national registry specific to seasonal labour workers and employers.

2.7 Summary and Conclusions

The above sections provide some clear insights regarding the current state of human resources in Canadian agriculture. First, virtually all of the studies reviewed that addressed broad human resource challenges found that it is difficult to access and maintain employees in agriculture. A

consistent finding is that the problem is worse in horticulture than in other segments of agriculture. Some studies have suggested that the difficulty in attracting people results from the wages paid in agriculture relative to other forms of employment. Others have focused on the role of employment insurance and the social safety net system in discriminating against agriculture as a source of employment and toward full-time and year-round employment. Finally, several of the studies reviewed found that agriculture was simply not a sought-after career as perceived among potential employees.

Interestingly, few of the studies reviewed investigated the extent to which members of farm families remained in agriculture. This highlights an aspect of competition for a workforce that has been largely ignored. Disappointing profitability and growth in agriculture is very likely to have had a negative impact on agriculture's ability to attract employees from other segments of the economy. Profitable and growing industries tend to have an improved capability to pay competitive wages, and offer the excitement and opportunity for advancement that results in people choosing it as a career choice. Conversely, improved human resources should improve the profitability status of the industry. Thus, there is some circularity in terms of profitability and human resource status. The literature did not focus on profitability or perception thereof as a factor in attracting a workforce.

The lack of availability of a suitably trained workforce is also a consistent finding. This has several dimensions. First, there is a need for both technical skills and management/leadership skills. Technical skills are likely to be largely an employee issue, while management and leadership skills are both an employer and employee matter. Several studies have found that existing skills training is poorly targeted. On one hand, the nature of training programs is targeted to new employees, and is too basic for experienced employees that need to improve their existing skill base. On the other, studies have found that training programs are not always delivered in a format consistent with the needs of the industry. For example, the in-class/lecture format may not be consistent with the time commitments or seasonality in agriculture. Related to this, some studies suggest a need or opportunity for skills training to be delivered through mentoring or coaching programs. However, at the same time, there does not appear to be broad agreement as to what the alternative delivery of courses should be. For example, the findings regarding the value of web-based delivery of training resources is conflicting.

Much of the literature mentions challenges associated with an aging workforce as an HR issue in agriculture. Indeed, it brackets the labour availability and training challenges. Based on demographics alone, the domestic workforce is likely to shrink, so the difficulty accessing domestic and especially seasonal domestic labour, are likely to worsen. Furthermore, some studies suggest that older workers are generally less likely to seek training than younger workers, so the availability of skilled people may tighten in future.

Finally, there was a surprising lack of focus on some related human resource issues. First, little attention has been paid to unionization of the workforce. The tradition in agriculture has been to actively prevent unionization, on the basis that it drives up costs and limits flexibility. However, given that the literature describes seasonal labour shortages, it is surprising that little attention has been paid to the potential for unions to be engaged as agents in securing a reliable workforce. At a minimum, one would expect the advantages of a union in providing a supply of labour could be compared against the disadvantages from potential cost increases and work stoppages. Secondly, little focus was paid to working conditions in attracting a workforce. In particular, if agriculture is viewed by some as a dirty, uncomfortable, or unsafe industry to work in, it must surely affect the willingness of workers to be employed in agriculture. Third, existing studies do not appear to have focused on the movement toward aligned supply chains and differentiated products in agriculture, and on any differences in skills or training that are

generated as a result. The evolution toward supply chains would suggest that greater needs will exist for personnel with skills in establishing business alliances, managing relationships, and structuring incentives and motivating employees.

3.0 Agricultural Human Resources Initiatives and Training Programs

The industry, government, associations and educational institutions have developed and/or offer a number of programs and initiatives in an attempt to alleviate the most significant issues outline above: training, labour availability and the image of the industry. Some of these initiatives and programs have been discussed above Section 2, however, there are many other initiatives and programs that have been put in place and are tabled and discussed briefly below. They are discussed to demonstrate the importance of these issues to the sectors and to provide insight on the innovative ways in which these issues are being addressed by provinces, organizations or commodity groups.

It should also be noted that there is a large overlap between the initiatives that have been developed and the Canadian agricultural instructional programs that have been developed to provide the skills necessary to profit in the agri-food chain.

3.1 Initiatives[1] that address HR needs

Table 3.1 below lists initiatives, the regions that they are provided in, and the HR issues that they address. A discussion of some of the initiatives follows, as many initiatives were touched upon in Section 2.

Table 3.1: Initiatives developed to address HR Issues in Canadian Agriculture

Initiative	Administered by	Jurisdiction Available in	HR issues addressed
Promotion of the Industry			
Agricultural School Curriculum	Northern Ontario Agri-Food Education and Marketing Inc.	Ontario	Promotion of industry to youth
The Rural Youth Education Program	Ontario Agriculture Value-added Innovation Network, 4-H Ontario and Junior Achievement Grand Erie	Ontario	Value-added and entrepreneurial training; Promotion of industry to youth
British Columbia Agriculture in the Classroom	British Columbia Agriculture in the Classroom Foundation	British Columbia	Promotion of industry to youth
Alberta Agriculture in the Classroom Program	Alberta Agriculture Food and Rural Development	Alberta	Promotion of industry to youth
Saskatchewan Agriculture in the Classroom	Agriculture in the Classroom (Sask.) Inc.	Saskatchewan	Promotion of industry to youth
Manitoba Agriculture in the Classroom	Agriculture in the Classroom Manitoba Inc.	Manitoba	Promotion of industry to youth
Ontario Agriculture in the Classroom	Ontario Agri-Food Education	Ontario	Promotion of industry to youth
Nova Scotia Agricultural Awareness	Nova Scotia Agriculture and Fisheries	Nova Scotia	Promotion of industry to youth
Agriculture Education Prince Edward Island	PEI Agricultural Human Resources Development Council	Prince Edward Island	Promotion of industry to youth
Ontario Horticultural	Ontario Horticultural	Ontario	Promotion of industry to

[1] An initiative is defined as an action that has been taken by a party that attempts to address and alleviate any of the above-mentioned human resources issues that affect agriculture.

Education Council	Education Council		youth
Horticulture Ontario Secondary Teachers Association	Horticulture Ontario Secondary Teachers Association	Ontario	Promotion of industry to youth
Young Speakers for Agriculture Competition	Young Speakers for Agriculture	National	Promotion of industry to youth; Develops ag leaders
Agriculture Advocates	Olds College	Alberta	Promotion of industry to youth; Develops ag leaders
Growing Alberta	Growing Alberta	Alberta	Promotes the industry
Provides Incentive to Join the Industry			
New Entrants to Agriculture	Nova Scotia Agriculture and Fisheries	Nova Scotia	Provides incentive for young workforce to enter the industry
Beginning Farmer Initiative	New Brunswick Department of Agriculture, Fisheries and Aquaculture	New Brunswick	Provides incentive for young workforce to enter the industry
PEI Future Farmer Program	PEI Department of Agriculture, Fisheries, Aquaculture and Forestry	PEI	Provides incentive for young workforce to enter the industry
Manitoba Young Farmer Rebate	Manitoba Agricultural Credit Corporation	Manitoba	Provides incentive for young workforce to enter the industry
Support Program for Aspiring Farmers	La Financiere agricole Quebec	Quebec	Provides incentive for young workforce to enter the industry
Developing Business Management and Leadership Skills			
Canadian Rural Partnership – Networking Initiative	Agriculture and Agri-food Canada	National	Provides opportunity for learning and networking
CanAdvance Program	Agriculture Adaptation Council	National	Provide learning opportunities to be able to capture market opportunities
Canadian Farm Business Advisory Services	Agriculture and Agri-Food Canada	National	Provide farmers with the opportunity to develop their farm business management skills
Planning and Assessment for Value-added Enterprises (PAVE) Program	Agriculture and Agri-Food Canada	National	Provide farmers with the opportunity to develop their farm business management skills
Canadian Agricultural Skills Services (in development)	Agriculture and Agri-Food Canada	National	Provide farmers with the opportunity to develop their farm business management skills
Business Planning Award	Farm Credit Canada	National	Provide farmers with the opportunity to develop their farm business management skills
Agriwebinars	Canadian Farm Business Management Council	National	Provides farmers with innovative environment for learning and developing farm business management skills

Best Practices of Farm Managers	Best Practice Group	National	Provides farmers with innovative environment for developing farm business management skills and networking.
Agricultural Safety Audit Program	Ontario Human Resources Council and the Workplace Safety and Insurance Board	Ontario	Improve working conditions on the farm and provide opportunity for learning
Advanced Leadership and Management Development Program	Agriculture and Food Council's Innovation in Agribusiness Management Fund	Alberta	Provides funding for farmers to take training that will help with business and financial management, leadership and human resources management
Building Peer Networks (In development)	Agriculture and Food Council's Innovation in Agribusiness Management Fund	Alberta	Will provide a formal setting for Albertan farmers to network and discuss business management and leadership issues.
AIMS Speaker Sponsorship Program	Agriculture Institute of Management in Saskatchewan	Saskatchewan	Provides funding to hire industry experts to give talks on industry topics and therefore provides information and a learning opportunity for the industry.
Speaker Sponsorship Program	Canadian Farm Business Management Council	National	Provides funding to hire industry experts to give talks on industry topics and therefore provides information and a learning opportunity for the industry.
Labour Availability (Connecting Employees and Employers)			
Agricultural Labour Pool	Agricultural Labour Pool	British Columbia	Connect farm employers with farm employees
Seasonal farm labour exchange service for *Youth in Agriculture* for the Fraser Valley	BC Agriculture Council Seasonal Labour Project Steering Committee	British Columbia	Connect farm employers with seasonal farm employees
Agrijob	Committee of Agricultural Labour and Emploi-Quebec	Quebec	Connect farm employers with seasonal farm employees
Cooperative d'utilisation de main d'ouevre (CUMO)	Cooperative d'utilisation de main d'ouevre (CUMO)	Quebec	Connect farm employers with farm employees
Potato Harvest Labour Recruitment	Potatoes New Brunswick	New Brunswick	Connect farm employers with harvest farm employees
Seasonal Agriculture Workers Program	HRSDC, Citizenship and Immigration Canada, Foreign Agricultural Resource Management Services	National (except Newfoundland and Labrador and the	Provide Canadian farmers with migrant labourers to meet labour requirements.

		Territories)	
PM's Task Force on Seasonal Labour	Prime Ministers Office	National	To help to provide some answers to seasonal labour availability shortages in Canada
Developing Basic Production Skills			
Nova Scotia Pesticide Certificate	Nova Scotia Environment and Labour	Nova Scotia	Provides skills certification
Pesticide Applicator's Certification	Nova Scotia Agriculture College	Nova Scotia	Provides skills certification
Pesticide Certificate Homestudy Course	Olds College	Alberta	Provides skills certification
Lakeland College Pesticide Applicator Homestudy Course	Lakeland College and Alberta Environment	Alberta	Provides skills certification
British Columbia Pesticide Certification	British Columbia Ministry of Water, Land and Air Protection	British Columbia	Provides skills certification
Pesticide Certification Course	Assiniboine Community College	Manitoba	Provides skills certification
New Brunswick Pesticide Certification	Department of Environment and Local Government	New Brunswick	Provides skills certification
Newfoundland and Labrador Pesticide Certification	Department of Environment and Conservation	Newfoundland and Labrador	Provides skills certification
Ontario Pesticide Education Program	Ridgetown College, University of Guelph	Ontario	Provides skills certification
Quebec Pesticide Certification	Ministry of the Environment	Quebec	Provides skills certification
Pesticide Applicator Course	Saskatchewan Institute of Applied Science and Technology	Saskatchewan	Provides skills certification
Certified Horticultural Technician Certification Program	Canadian Nursery Landscape Association	National	Provides skills certification
Other			
Centre for Agribusiness Training and Education	Canadian Adaptation and Rural Development in Saskatchewan (CARDS) program and Saskatchewan Learning	Saskatchewan	Provides information about where to find training in Saskatchewan
Human Resources Information Exchange (In development)	Agriculture and Food Council's Innovation in Agribusiness Management Fund	Alberta	Will provide information on where to find training in Alberta, jobs in the industry, and career path information.
BC Labour Market and Skills Development Initiative	Agriculture Labour Partnership Committee	British Columbia	Provides funding for programs that will aid in labour and skills shortages to be developed

Many initiatives have been developed across the country in an attempt to deal with a number of the human resource issues that face the Canadian agriculture industry. Of course, the aging workforce is a reality and initiatives cannot be developed to address this issue, however,

initiatives that promote the industry to the younger workforce will help to aid in recruiting labour to replace the older workforce. Table 3.1 shows that many initiatives have been put in place to address HR issues such as labour availability, promoting the industry at the elementary school level and to develop basic, business management and leadership skills in the industry.

With respect to promoting the industry, most provinces are a part of a program called Agriculture in the Classroom. The provincial bodies that administer the Ag in the Classroon programs are generally non-profit organizations that are supported by the provincial industry. However, PEI's Ag in the Classroom program is administered by the PEI Agricultural Human Resources Council. Wendy Weatherbie, Executive Director of PEI AHRC, stated that each province's program differs due to the various funding schemes in each province and therefore some programs may be more advanced than others. Currently, Quebec and New Brunswick are looking for representatives to run the program in these provinces. The Ontario horticulture industry has also recently put together two groups, the Ontario Horticulture Education Council and the Horticulture Ontario Secondary Teachers Association with the purpose of the promoting the industry as a viable career as well as to ensure that the horticultural curriculum in the schools provides what the industry needs.

Also, due to the issue of the aging workforce and the shrinking younger workforce, as well as the strong competition for labour with other sectors and the trend in rural residents migrating to urban areas, some provinces have created programs to provide incentive for entrants to join the industry through specialized funding schemes. In Nova Scotia and Manitoba, new farmers can receive special loan terms when borrowing money to start up a new operation. PEI and New Brunswick's new farmer programs go further and require that the new farmer participate in some business management training and planning at a reduced rate and the participant will receive assistance with their CAIS deposit. For example the New Brunswick New Farmer Initiative was announced in November 2004 and involves funded planning and risk management education for new entrants. Entrants must participate in CFBAS and then will be assisted with putting together a business plan. They then must participate in the Canadian Agricultural Skills Services program and will then develop a skills assessment and learning plan. All of this planning and education can be covered up to 50%. If entrants complete the training and the plans then the program will assist them with the first third of a CAIS deposit (up to $15,000). Participants in the program must have at least grade 12 or GED, experience of at least two production cycles in the type of farming operation that they are choosing to begin, can not have filed income tax as a farmer for at least three years, and project that at the end of three years once the operation is up and running that they will earn $50,000.

Most initiatives put in place to develop business management and leadership skills will fall into our assessment of programs offered across Canada (see Section 3.2). However, there are other types of initiatives that are helping in this regard. Under the Renewal pillar of the Agricultural Policy Framework, a number of initiatives are aiding in developing management skills across the industry. The Canadian Agricultural Skills Services program provides funding to develop skills in such areas as business management, accounting, finance, and human resources management. Also, the Canadian Farm Business Advisory Service offers financial assistance for farmers to hire expertise to help with preparing business plans. These may include diversification, marketing human resources planning, expansion, risk management and/or succession planning. Similarly, the PAVE program is also under the same pillar and provides financial assistance to retain the services of business consultants to develop plans for value-added projects. The CanAdvance program administered by the Agriculture Adaptation Council also provides an opportunity for learning about value-added market opportunities. Alberta's Agriculture and Food Council, through the Innovation in Agribusiness Management Fund provides a certain amount of funding to farmers in Alberta that are interested in training opportunities that will develop their

business management, human resources management or risk management skills. The Advanced Leadership and Management Development Program supports producers and agribusiness managers in pursuing continuing education in the areas of leadership and management. The project involves a reimbursement to the participant of up to $7,500 for courses that are attended during the year, including 100% of tuition fees, and 50% of travel and accommodation. Courses that are attended must fit with the three key objectives of the fund: human resource management, risk management tools and assessment and succession and transition initiatives. In 2003, the program provided funding for seven students to attend courses and in 2004 nine students were funded.

Other initiatives include innovative ways in which business management information is being provided including the Canadian Farm Business Management Council's agri-webinars and speaker sponsorship program. AIMS also has created a speaker sponsorship program for groups in Saskatchewan which allows organizations or groups of farmers to afford to bring in top industry experts to discuss management issues.

Similarly, most initiatives developed to address the need to develop basic production skills will fall out of the program review in Section 3.2 below. However, for certain skills, such as pesticide application, Canada has moved to requiring a certification which encourages farmers to participate in some continuing education and pass an examination. Each province requires that farmers pass a certification prior to using pesticides and most provinces also have courses that can be taken prior to the examination, for example Assiniboine College, Lakeland College, Ridgetown College and the Nova Scotia Agriculture College all offer courses in pesticide certification. Simiarly, the Canadian Nursery Landscape Association (CNLA) has recently developed a certification program for horticultural technicians. The CNLA created the program to award a professional designation to individuals in horticulture who have demonstrated a high level of competence in the profession, to raise the standard of professionalism in the industry and to improve the performance of the industry.

Many of the initiatives that have been developed to address labour availability were already discussed in Section 2.6.2. However, it is worth noting that these initiatives are very fragmented either by province, region, or type of commodity and it may be more efficient to have an over lying umbrella organization that can lead these programs so that they do not fail due to funding issues such as the Harvest Labour Services in Nova Scotia.

Other initiatives include those that may not fit under one human resource issue, including the British Columbia Agriculture Labour Market and Skills Development Initiative (ALMSDI). Key challenges of BC's agriculture industry include a lack of production skills along with a knowledge of the global marketplace, technological skills, and business management and human resource skills. The development of an initiative to address BC's labour market and skills development was identified as a priority under the Agri-Food Futures Fund (AFFF) in 2001. This on-going skills development challenge prompted representatives from across the agriculture industry to come together in 2002 at the first Agriculture Labour Partnership Committee (ALPC) meeting. The purpose of the meeting was to discuss and decipher the key labour issues in agriculture and determine some solutions.

Through the meetings and focus groups, five key action areas were identified, in which the Initiative will focus over the next three years:

1. Industry must have an adequate labour supply
2. Industry must have appropriately skilled labour supply
3. Industry must promote more than high wages to attract labour supply
4. Industry must ensure that there is a healthy demand for labour

5. Industry must ensure that employers and employees can be easily matched

Over the next three years, BCAC will be responsible for the initiative and will be supported through assistance from many other groups including ALPC and BC MAFF to ensure that the initiative progresses. Initiatives that are developed to address any of the five key action areas will be considered for funding through the Agri-Food Futures Fund.

Lastly, as mentioned earlier in the report, the development of the Center for Agricultural Training and Education (CATE) was a result of the needs assessment conducted in 2003 by the Saskatchewan Council of Community Development titled 'Human Resource Skills Needs Assessment for Primary Agriculture Production Sector', and similarly Alberta's Agriculture and Food Council, through the Innovation in Agribusiness Management Fund is also currently in the process of developing a Human Resources Information Exchange which will follow along similar lines as CATE.

3.2 Canadian Agricultural Training Programs

Agricultural human resources programs are offered in Canada through many institutions and structures. To keep the task reasonable we divided the human resources courses into two streams:

- Business Management and Leadership Courses
- Production Management Courses

The business management and leadership courses include those that focus on helping farmers and agribusiness personnel become leaders in their fields. These courses do not focus on the technical production aspects of the participants industry; instead they focus on improving business and human resource management skills and involve networking in the Canadian industry.

The category of production management includes programs provided for those interested in entering the industry and acquiring the basic skills and knowledge required for employment in these industries, as well as programs provided to the industry in order that they may improve upon certain skills that directly relate to their operation.

A set of criteria was devised to determine which courses and programs to include in the database. The following are the criteria that were used:

- Mandate of the organization offering the program
- Teaching of concepts vs. technical information or 'recipes'
- Programs that are generally available to the industry
- Human resource skills vs. technical skills
- Programs with curriculum vs. conferences
- No degree, master' s or doctoral programs were included

First, programs were chosen only from those organizations whose mandate is to educate and/or inform the industry. Therefore, this does not include private companies who may hold workshops or programs so that producers can learn to use their products. For example, GENCOR in Ontario offers its customers workshops and training to be educated in the latest trends and techniques so that they can better use GENCOR's products. The workshops that GENCOR holds are also available only to its members/customers therefore these workshops are not generally available to anyone, which is another criterion for program selection.

Courses that teach concepts in production management and business management were included in the database, whereas courses that focused on technical aspects and 'recipes' such as pesticide application or nutrient management planning were not included. This ensured that the programs included in the database reflect those that will improve the overall profitability and management of the industry.

Lastly, industry, government, associations and learning institutions all hold conferences in a variety of issues within the agricultural stream. Conference agendas change from year to year depending on the topic of the day and usually include more than one issue. Although conferences are a means of education and discussion, they were not included in the database of human resource programs as they do not usually include a curriculum in which participants must follow. Curriculum-based workshops and programs ensure that participants are provided with certain skills and knowledge.

Table 3.2 lists the business management and leadership courses (or series of courses) that fit the criteria available to the industry, by the institution that provides the course. A more complete description of each course, including topics covered in the curriculum and contact information can be found in the database (Microsoft Access).

Table 3.2: Business Management and Leadership Courses Offered across Canada

Administering Institution	Program Title	Farm Business Management	Agriculture and Rural Leadership
Government Administered Programs			
Atlantic Agricultural Leadership Program	Atlantic Agricultural Leadership Program		•
Manitoba Agriculture, Food and Rural Initiatives	Farm Succession Seminars	•	
University/College Administered Programs			
Cegep de Victoriaville	Certificate in Farm Business Management	•	
Cegep de Lanaudiere	Certificate in Farm Business Management	•	
McGill University	Continuing Professional Development Program	•	
Ridgetown College	'Excellence In' Series of Continuing Education Programs	•	
University of Saskatchewan	Canadian Agriculture Lifetime Leadership Program		•
Lakeland College	'Farm Toolbox Series' of Continuing Education Classes	•	
	Agribusiness Diploma – Agricultural Finance Concentration	•	
Olds College, Alberta	Competitive Advantage Program for Agriculture	•	
	Agriculture Business Diploma	•	
	Agricultural Finance Certificate	•	
	Agricultural Lenders Workshop	•	
	Agricultural Advocates Program		•
Private/Non-profit Administered Programs			
Agriculture Institute of Management in Saskatchewan (AIMS)	On-line E-Commerce Training	•	
	Agribusiness Entrepreneurship Program	•	
The Canadian Securities Institute	Agricultural Markets Risk Management	•	
Centre for Rural Leadership	Ontario Advanced Agricultural Leadership Program		•

DNL Farms Consulting Services	Effective Instruction	●	
	Effective Delegation	●	
Farm Credit Canada	Farm Financial Management -Know where you stand	●	
	Farm Financial Management - Develop your management accounting system	●	
	HR Management – Get the best is a course	●	
	HR Management – Keep the best	●	
	The Hog Price Risk Management Workshop	●	
	Advanced Farm Manager	●	
George Morris Centre	Introduction to Commodity Risk Management	●	
	Canadian Total Excellence in Agricultural Management	●	●
	Executive Development Program	●	●
The Mansis Development Corporation	Mansis Farm Management System	●	
	Employee Coaching workshop for Farm Leaders	●	
The OATI Learning Group	Farm Business Management Seminars	●	
Paul Martin Communications	CEO Training for Farmers	●	
The Pike Management Group	AgProfit business management courses	●	
Saskatchewan Council of Community Development	Leadership Saskatchewan Program		●
Collectifs Regionaux en Formation Agricole (in various regions around Quebec)	Farm and Human Resource Management	●	

Table 3.3 lists the production management courses (or series of courses) that fit the criteria available to the industry, by the institution that provides the course. A more complete description of each course, including topics covered in the curriculum and target audience can be found in the database (Microsoft Access).

Table 3.3: Agricultural Production Management Courses Offered across Canada

Administering Institution	Program Title	Animal Husbandry	Crop Production	Horticulture Production
Government Administered Programs				
PEI Agriculture Human Resources Council	High School Agriculture Certificate	●	●	
Government of Ontario: Niagara Parks Commission	Niagara Parks Commission School of Horticulture			●
Landscape Ontario Horticultural Trades Association	Various Professional Development Courses			●
Manitoba Agriculture, Food and Rural Initiatives	Cattle Production for Women	●		
Saskatchewan Agriculture, Food and Rural Revitalization	Green Certificate Farm Training Program	●	●	●
Alberta Agriculture, Food and Rural Development	Green Certificate Program	●	●	●
	Independent Study Courses	●	●	
University/College/Cegep Administered Programs				
Memorial University	Aquaculture Diploma	●		
	General Aquaculture Technical Certificate	●		
	Finfish Production Technical Certificate	●		
	Cod Production Technical Certificate	●		

	Shellfish Production Technical Certificate	●		
Nova Scotia Agriculture College	Animal Science Technician Diploma	●		
	Agricultural Business Technician Diploma	●	●	●
	Diploma of Technology: Farming	●	●	
	Diploma of Technology: Environmental Horticulture			●
	Diploma of Technology: Agriculture	●	●	●
	Diploma of Technology: Plant Science		●	●
	Certificate of Specialization in Organic Agriculture	●	●	●
Nova Scotia Community College	Practical Horticulture Certificate			●
	Horticulture – Grower Diploma			●
	Aquaculture Certificate	●		
New Brunswick Community College	Agri-Business Program	●	●	
	Aquaculture Technician	●		
Cegep de Victoriaville	Management and operation of a farm business	●	●	
Cegep de Lanaudière	Management and operation of a farm business	●	●	
Centre de formation agricole de Mirabel	Professional diploma in horticulture			●
	Professional diploma in dairy production	●		
	Professional diploma in beef production	●		
	Professional diploma in field crops		●	
	Professional diploma in maple syrup production		●	
Centre de formation agricole de Mirabel en association avec le Collège Lionel Groulx	Technical diploma in horticulture			●
	Management and operation of a farm business (beef, pork and milk production)	●		
Centre de formation en Acériculture du Fleuve-et-des-Lacs	Professional diploma in maple syrup production			●
Institut de Technologies Agroalimentaires	Management and operation of a farm business	●	●	
	Animal production technology	●		
	Horticulture and environmental technology			●
C.F.P. des Moissons	Professional diploma in field crops		●	
	Professional diploma in dairy production			
École d'agriculture de Nicolet	Professional diploma in field crops		●	
	Beef Production	●		
	Professional diploma in pork production	●		
Centre de F. P. du Granit	Professional diploma in maple syrup production		●	
M.F.R. du Granit	Professional diploma in maple syrup production		●	
	Beef Production	●		
	Professional diploma in dairy production	●		
C.F.P. Mont-Joli-Mitis	Beef Production	●		
	Professional diploma in horticulture			●
	Professional diploma in dairy production	●		
C.F.P. d'Alma	Professional diploma in beef production	●		
	Professional diploma in dairy production	●		
Centre de F.P. de Coaticook	Professional diploma in beef production	●		
	Professional diploma in dairy production	●		
	Professional diploma in pork production	●		
Centre de formation professionnelle Relais de la Lièvre-Seigneurie	Professional diploma in beef production	●		
	Professional diploma in dairy production	●		
Centre Frère-Moffette F.P.	Professional diploma in beef production	●		
	Professional diploma in dairy production	●		
	Professional diploma in pork production	●		
Centre l'Envol	Professional diploma in beef production	●		
	Professional diploma in dairy production	●		
Centre de formation agricole	Professional diploma in beef production	●		
	Professional diploma in dairy production	●		

	Professional diploma in pork production	●		
	Professional diploma in horticulture			●
Pavillon de l'Argile	Professional diploma in beef production	●		
	Professional diploma in pork production	●		
C.F.P. Fierbourg	Professional diploma in horticulture			●
C.F.P. du Fleuve-et-des-Lacs	Professional diploma in dairy production	●		
	Professional diploma in pork production	●		
C.F.P. Mont-Joli-Mitis	Professional diploma in beef production	●		
	Professional diploma in horticulture			●
C.F.P. du Fleuve-et-des-Lacs (Trois-Pistoles)	Professional diploma in dairy production	●		
	Professional diploma in pork production	●		
École professionnelle de Saint-Hyacinthe	Professional diploma in dairy production	●		
	Professional diploma in pork production	●		
C.F.P. Châteauguay Valley	Professional diploma in dairy production	●		
Laval University - Continuing Education	Certificate in dairy and beef production	●		
	Certificate in horticulture			●
	Certificate in organic agriculture	●	●	●
McGill University – MacDonald College	Farm Management and Technology Diploma	●	●	
	Continuing Professional Development Program	●	●	●
University of Guelph - Office of Open Learning	Various independent study courses	●	●	●
	New Farmer Certificate	●	●	
	Animal Care Certificate	●		
	Grape and Wine Certificate		●	
	Ontario Horticulture Diploma			●
Kemptville College	Dairy Herdsperson Apprenticeship Program	●		
	Associate Diploma in Agriculture	●	●	
	Associate Diploma in Horticulture			●
Ridgetown College	Swine Apprenticeship Program	●		
	2-year Agriculture Diploma	●	●	
	2-year Horticulture Diploma			●
	"Excellence In' series of Continuing Education Workshops	●	●	●
Alfred College	Certificate in Landscape Architecture or Horticultural Production			●
	Diploma in Agriculture	●	●	
Fanshawe College	Co-operative Horticulture Technician Diploma			●
Niagara College	Winery and Viticulture Technician Diploma		●	
	Greenhouse Technician Diploma (Co-op)			●
	Horticultural Technician Diploma (Co-op)			●
Brock University	Grape and Wine Technology Certificate		●	
Algonquin College	Horticulture Technician Diploma			●
Humber College	Horticulture Technician Apprentice			●
	Horticultural Science Certificate			●
Fleming College	Horticulture Technician Apprentice			●
Mohawk College of Applied Arts and Technology	Horticulture Plant Identification			●
Lambton College	Ontario Horticultural Apprentice			●
	Horticultural Technician			●
University of Manitoba	2-year Diploma in Agriculture	●	●	
	Organic Production on the Prairies	●		
Assiniboine Community College	Pork Production Manager – Certificate	●		
	Pork Production Technician - Apprenticeship	●		
	Organic Agriculture Certificate	●	●	
	2-year diploma in Agribusiness	●	●	
	Agriculture Studies -Certificate	●	●	

	Land and Water Management Diploma	●	●	
University of Saskatchewan	Diploma in Agriculture – Animal Science Major	●		
	Certificate in Agriculture Program (CAP)	●		
	Diploma in Agriculture – Agribusiness Major	●	●	
	Diploma in Agriculture – Agronomy Major		●	
	This Land: Soils and Fertilizer Workshop		●	
Southeast Regional College	Calving Management	●		
Saskatchewan Institute of Applied Science and Technology	Beef Cattle Production Certificate	●		
	Beekeeping	●		
	Custom Harvester Apprenticeship		●	
	Pork Production Technician Apprenticeship	●		
Lakeland College	Beef Nutrition and Ration Balancing Workshops	●		
	Diploma in Agribusiness – Crop Concentration		●	
	Diploma in Agribusiness – Livestock Concentration	●		
	Livestock Production Diploma	●		
	Animal Science Technology Diploma	●		
	Dairy Production Certificate of Achievement	●		
	Crop Technology Diploma		●	
	Certificate of General Agriculture	●	●	
	Agro-Environmental Technology	●	●	
	Ranch and Stockhorse Rider Certificate	●		
	Animal Husbandry Continuing Education Courses	●		
Lethbridge Community College	Two-year Diploma in Agriculture Technology	●	●	
Olds College, Alberta	A.I. and Herd Improvement	●		
	Cattle Nutrition and Cowbytes Ration Balancing	●		
	Cow/Calf School	●		
	Agricultural Production and Management Diploma	●	●	
	Production Horticulture Diploma			●
	Ornamental Horticulture Diploma			●
	Greenhouse School Program			●
	Soil Properties and Vegetation Management		●	
University of Manitoba, Assiniboine Community College, University of Saskatchewan and Old College	Prairie Horticulture Certificate			●
Medicine Hat College	Horticultural Technician Certificate Program			●
The Northern Alberta Institute of Technology - Fairview Campus	Horticultural Technician Certificate Program			●
Okanagan University College	Viticulture Certificate		●	
	Horticulture Certificate			●
	Horticulture Pre-Apprenticeship Program			●
University College of the Fraser Valley	1-year Livestock Production or Horticulture Production Certificate	●		●
	Agricultural Technology Diploma	●		●
	Milker Training Certificate	●		
	Dairy Production Technician Apprenticeship	●		
	Swine Production	●		
	Vegetable Production		●	●
	Agroforestry Workshop		●	
Kwantlen College	Production Horticulture Technician Certificate			●
	Greenhouse and Nursery Technology Diploma			●
	Horticulture Apprenticeship Program			●
University College of the Cariboo	Horticulture Certificate			●
	Horticulture/Management Diploma			●
Camosun College	Horticulture Technician Certificate			●
Malaspina University College	Horticulture Certificate			●

	Sustainable Greenhouse management			●
	Fisheries and Aquaculture Technician Diploma	●		
	Fish Health Technician Certificate Program	●		
Northern Island College	Salmon Farm Technician	●		
	Greenhouse Management			●
Private/Non-Profit Administered Programs				
Alberta Farm Animal Care	Cattle Handling and Hauling	●		
	Hog Handling and Hauling	●		
	Livestock Emergency Response	●		
	Livestock Handling	●		
	Livestock Handling for Youth	●		
Christmas Tree Farmers of Ontario	New Grower Correspondence Course		●	
DNL Farms Consulting Services	Effective Pig Handling Course	●		
	Pig Production Training	●		
Collectifs Regionaux en Formation Agricole (in various regions around Quebec)	Maple syrup production and processing		●	
	Organic farming	●	●	
	Sheep Husbandry	●		
	Blueberry and Cereal Production		●	
	Agro-Tourism			
	Dairy Production	●		
	Beekeeping	●		
	Goat Health	●		
	Pork and Poultry Production	●		
	Crop Production		●	
	Beef Production	●		
	On-farm Food Processing	●	●	

3.2.1 Evaluation of the Human Resources Situation in Canadian Agriculture and the Array of Programs Offered in Canada

This section provides a summary and assessment of the human resource development programs observed above.

Summary of Canadian Programs According to Focus

A total of 226 programs that met the program criteria were observed across Canada. Table 3.4 shows the number of courses (or series of courses) that focus on both production management and business management. The table shows that the majority of course offerings focus on production techniques, management and skills rather than business management and leadership.

Table 3.4: Training Programs Focused in Alternative Areas of Agriculture[2]

Program Focus	Number of Programs
Animal Husbandry	121
Crop Production	56
Horticultural Production	58
Farm Business Management	31
Agricultural and Rural Leadership	7

[2] Note that the number of programs does not add up to 223 because some programs have more than one focus.

In discussion with a number of program coordinators from various colleges and universities it was determined that the number of agriculture-related courses in each of the above areas have been experiencing a decrease in enrolment and a number of programs have been cut across the country. This lack of or decrease in demand may stem from a younger generation witnessing the economic hardships of their family members and others in the industry, and it may play in the decision not to enter the industry. Alternatively, this may in fact suggest that there is an increased need for the business management and leadership courses.

Target Audience for Canadian Programs

The courses offered to the agriculture industry are targeted to two primary audiences; those entering the industry as new farmers/farm employees, and those already working in agriculture. Some courses are specific to younger farmers with less than 10 years experience, and others are designed for those entering agriculture that lack a farm background.

Table 3.5 presents a characterization of the target audience for programs across Canada. The contents of Table 3.5 are tabulated from the data in Appendix 2. Table 3.5 shows that most programs are geared towards those entering the industry. Although there are 80 programs that experienced farmers can take to update their skills, it appears that relatively few programs are targeted specifically to upgrading skills of already-experienced individuals. The majority of the courses that might appeal to experienced industry personnel to update their skills are courses that beginners may also be taking at a university or college for the first time.

Table 3.5: Target Audience of Agriculture Programs Offered[3]

Target Audience	Number of Programs
Beginner / Entering the industry	198
Young / New	81
Experienced	77
Women Specific	1
Producers Only	11

Reach

"Reach" attempts to characterize the magnitude of depth (or capacity) of the programs observed. However, attaining historic enrolment numbers was difficult, and therefore not all current enrolment numbers for each of the programs have been received. This characterization serves as a first approximation, and should thus be interpreted with caution. Appendix 3 shows the number of participants that have enrolled in each program this year. Despite the fact that the numbers are incomplete, 18,131 spots were filled in the programs (in which the data was presented) this year. It must also be noted that the 18,131 spots filled in these programs do not account for specific individuals receiving training, since a person could have participated in more than one course or program throughout the course of the year. However, these spots represent a rough estimation of the reach of these programs.

Table 3.6 provides a regional breakdown of training program participation/attendance. Some programs are available in all provinces and those are represented separately in the table below. Table 3.7 shows the number of participants in classes that covered production management skills and techniques and business management and leadership courses. It shows that relatively

[3] Note that the number of programs does not add up to 223 because some programs will be targeted to more than one audience.

more production management courses have been offered compared with management and leadership programs.

Table 3.6: Program Participants by Region

Jurisdiction	Number of Participants in Programs
British Columbia	551
Alberta	1,528
Saskatchewan	269
Manitoba	669
Ontario	2,985[4]
Quebec	9,704
Atlantic Provinces	185
National Level	135

Table 3.7: Participants by Program Type

	Number of Participants in Programs
Technical Skills (animal husbandry, crop production, horticulture, aquaculture)	13,429
Business Management and Leadership	4,702

Table 3.8: Number of Participants by Program Type and Province

Jurisdiction	Number of Participants	
	Production Management Courses	Business Management and Leadership Courses
British Columbia	551	0
Alberta	1,196	332
Saskatchewan	215	54
Manitoba	399	270
Ontario	1,185	1,800
Quebec	7,643	2,061
Atlantic Provinces	165	20
National Level	0	135

3.3 Observations and Implications

Initiatives have been launched to address these human resource issues. With regard to labour availability, government third-party services have been developed to link potential employees with employers. However, it appears that only some provinces have been successful in maintaining these services, and that these types of initiatives suffer from lack of funding. Programs to bring in offshore workers have also been implemented across the country

[4] This number does not include those participating in the Ontario Horticulture Certificate through the Office of Open Learning at the University of Guelph because the number quoted reflects the current number of participants, some of those that have been taking the course for years.

(particularly in horticulture), but they are not necessarily available for all segments of agriculture. At this point, it appears that the initiatives in labour availability have not addressed the findings in research relating to disincentives to work part-time or seasonally in the context of EI and other social safety net programs.
With regard to training, several initiatives, largely at the provincial level, were observed. To be placed fully in context, they should be considered in the context of general course and educational program offerings discussed in the next section. There is no precise method to measure whether the training initiatives observed are sufficient to meet the apparent need observed in HR studies. However, given the consistent finding of insufficient training and access to a skilled workforce, it would be somewhat surprising if existing capacity were meeting the need. The next section provides a more precise enumeration of education and training programs currently available for Canadian agriculture.

In describing and enumerating existing human resource programs for farmers in Canada, while there is a significant level of diversity, the preponderance of programs deal with technical skills. As described above, these are based around animal husbandry, crop production, and horticultural production. In many cases these courses contain elements of business or management training in addition to technical skills. Most of the programs observed deal with technical skills, with fewer courses focusing on management, and fewer still on leadership.

Many of the educational programs offered in Canada cater to new farmers or new farm employees, from the perspective that they are taught at a relatively basic level. These courses may also hold appeal for more experienced personnel, but primarily from the perspective of building on or refreshing existing knowledge. There is less incidence of programs that teach advanced material that challenges and upgrades the skills of the most experienced personnel. This is true on both the technical skills and in management/leadership.

The results also show that educational programs in Canada are largely fragmented at the provincial level in Canada. A relatively small number of programs operate at the national level. With regard to programs offered by government, this is not surprising given that education is primarily a provincial responsibility. For crops and horticulture, there are differences in regional climate and cropping patterns that may justify fragmentation by province. However, with regard to management education programs, there is an opportunity lost for farmers from different parts of the country to learn from one another in national level programs.

Based on the imperfect data available in this study, the reach of Canadian farm management and leadership courses appears to lag well behind that of technical programs. This trend is consistent with the relative frequency of programs in management and leadership compared with technical programs, but on an actual attendance basis (as tabulated here) management and leadership training lags technical skill even further. If the relative disparity between programs dealing with technical skills and management/leadership is perceived as a problem, it may most readily be addressed by increasing the capacity/attendance of existing programs, and by establishing new ones.

In evaluating the current status of human resource training programs in Canada, unequivocal conclusions are difficult to make. This is because a precise indicator of demand or need for management programs is lacking. Instead, inferences must be drawn relative to courses focusing on technical skill, and based on observations across regions of the country. Thus, the following conclusions are evident:

- There are fewer, and not as well attended management and leadership programs for farmers compared with technical training programs in Canada. Thus, farm management and leadership education could be improved by increasing the capacity of existing programs

- Currently, most educational programs are fragmented at the provincial level, and are relatively uncoordinated. As a consequence, it appears that it is difficult or confusing for farmers to develop a plan of incremental education in which one course is logically followed by another in human resource development.
- An opportunity is being lost for diversity in management and leadership programs. By offering national-level programs, it would encourage participants to learn from others in different regions, rather than maintaining regionally-separated educational programs.

4.0 Agricultural Human Resources Programs in Other Jurisdictions

This section provides an overview of educational programs in farm management and leadership from other jurisdictions. Section 4.1 provides a cross section of educational programs offered by selected US Land Grant universities in farm management and leadership targeted to farmers. Section 4.2 provides an overview of farm management and leadership education targeted to farmers in Australia. Section 4.3 evaluates the offerings in other jurisdictions compared to training offered in Canada.

4.1 United States

The United States offers numerous agricultural business and production management courses to the agricultural industry through its many land grant universities. An exhaustive search of all programs offered through the extension service of every US land grant institution was beyond the scope of this review. In order to characterize what is available in the US, a cross section of programs presented through land grant universities was analyzed, in consultation with Dr. Danny Klinefelter at Texas A & M University, a noted farm management educator in the United States. Table 4.1 summarizes courses offered from a number of these land grant universities where courses that were unique or notable in the search. Many of these institutions offer half-day or day long seminars on various production management techniques such as manure management, integrated pest management, pesticide application etc… these courses were not included in the literature review as they are not unique to the United States. More detailed descriptions of these courses can be found in Appendix Six.

Table 4.1: Farm Management and Leadership Courses offered in the United States

Program	Target Audience	Targeted Skills	Delivery
Texas A and M University			
Master Marketer for Producers	• Producers • Lenders	• Risk management • Marketing • Networking development	• Seminars • Clubs
Advanced Topic Series	• Producers	• Marketing • Management	• Seminars
Executive Program for Agriculture Producers	• Top 5% of agriculture producers	• Business and risk management • Human resources • Entrepreneurship	• Seminars
Tomorrow's Top Agriculture Producers	• Young, new producers	• Business and risk management • Human resources • Mentoring	• Seminars
Texas Agriculture Lifetime Leadership Program	• Proactive agriculture stakeholders	• Leadership skills • Agriculture policy • International trade	• Seminars
Purdue			
Leadership 20/20	• Producers	• Leadership • Communication • Teamwork	• Seminar
Strategic Business Planning for Commercial Producers	• Producers	• Strategic business planning • Entrepreneurship	• Seminar
Farm Management in	• Producers	• Business and financial	• On-line

the 21st Century		mgmt • Risk mgmt • Bus. Relationships • Human resources	
Farming Together Workshop	• Potential retirees • Young generations	• Succession and transfer planning • Human resources	• Seminar
Purdue Top Farmer Crop Workshop	• Producers	• Networking sessions on all areas of agriculture and management	• Seminar
Kansas State University			
Kansas Agriculture and Rural Leadership	• Future agriculture leaders	• Leadership • Communication • Regulatory and environment	• Seminars
Employee Management for Production Agriculture Conference	• Farm owners and managers	• Human resources management on farm	• Conference
University of Nebraska Lincoln			
Returning to the Farm	• Young farmers and parents	• Succession planning • Human resources • Business mgmt	• Workshop
Iowa State University			
Agricultural Management E-School	• Producers	• Business and human resources management • marketing	• On-line
Annie's Project: Education for Women	• Women in agriculture	• Human resources management • Networking • Business management	• Conference
Cornell University Co-operative Education			
Employee management	• Producers	• Recruiting and hiring • Managing people	• Course work
Communication and Leadership	• Producers	• Communication style • Leadership skills • Motivating employees	• Course work
Business Organization	• Producers	• Farm organizational issues, joint ventures, strategic alliances	• Course work
Financial Management	• Producers	• Benchmark and analyze farm finances • Business planning	• Course work

4.2 Australia

Australia offers numerous agricultural business and leadership management courses to its agricultural industry and based on a study conducted by Ipsos-Reid (2001) the industry has been very receptive. The George Morris Centre research team was aided in the literature search of Australian courses and programs by GMC Associate Jerry Bouma, of Toma & Bouma Management Consultants. Bouma had previously searched for similar such programs in Australia and pointed the research team in the right direction.

The following list of courses offered in Australia includes courses that were unique or remarkable from the search. Many of these institutions offer half-day or day seminars on various production management techniques such as manure management, integrated pest management, pesticide application etc… these courses were not included in the literature review as they are not unique to Australia and do not fit the program criteria. Summaries and descriptions of these courses can be found in Appendix Seven.

Table 4.2: Farm Management and Leadership Courses offered in the United States

Program	Target Audience	Targeted Skills	Delivery
Farm Management 500	• Producers	• Networking • Guest Lectures • Management and Leadership topics	• Workshops and conferences, discussion groups
Rabobank Executive Development Program for Primary Producers	• Producers • Lenders • innovators	• Business management • Marketing • Planning and strategic thinking • Human resources mgmt • Leadership • Networking	• Seminars and workshops
Australia Rural Leadership Program	• Rural community leaders	• Leadership • Promotion of industry • Communication • Rural policies and regulations • International markets	• Seminars and workshops • Industry tours
Graduate Certificate in Agribusiness – Curtin University of Technology	• Input suppliers • Farmers • Food processors	• Marketing • Management • Finance • Technology • Production • Resource management	• Seminars and workshops • Industry tours
Rural Leadership Program – Marcus Oldham College	• Young rural leaders	• Networking • Leadership and communication • negotiation	• Workshop/seminar
Graduate Certificate in Agribusiness – University of Melbourne	• Anyone working in agriculture industry	• Leadership • Financial management • Marketing • economics	• On-line course • One-week seminar
Certificate in Rural Business – University of Melbourne	• Farmers • Agri-business	• Business management	• Distance education • Workshops • Industry tours
Diploma of Agriculture Specializing in Dairy/Beef/Sheep Production	• Dairy, beef, or sheep operators	• Farm management • Planning • Benchmarking • Human resource skills	• Distance education • Workshops • Industry tours

4.3 Comparison Relative to Programs offered in other jurisdictions

With regard to the availability of programs in other jurisdictions, the following observations can be made. First, the sample of educational programs observed in the US suggests a relatively broad availability of management training programs. All of the state land grant universities surveyed were offering at least one management training program for farmers, and in some cases (Texas A&M and Purdue in particular) several courses were offered that appealed to different target audiences. In some cases, such as the Texas A&M TEPAP program, it is clear that the audience for the program extends beyond the state. Secondly, most of the US state land grant institutions surveyed were offering leadership programs either as part of a management course or as a stand-alone course offering. It would appear that the US has a greater relative frequency of farm leadership program offerings than Canada. In addition, the program offered by Iowa State University presents management education for farmers in an e-learning platform, which is consistent with some of the Canadian farm management programs.

The survey of Australian programs appears to shows that networking and learning from peers is being used as a tool in farm management and leadership education. This is clearly evident in the FM500 program. The survey of program offerings in Australia also suggest that, compared with Canada, Australia has a heavier focus on farm management courses relative to technical production courses.

Finally, no obvious gaps were evident from the standpoint that programs were not offered in Canada that were offered in other jurisdictions. Thus, if there is a gap between programs in Canada and elsewhere, it lies in the capacity for participation rather than in simply being unavailable.

5.0 Summary and Conclusions

The purpose of this project was to enumerate and assess the current status of resources for education and training in Canadian agriculture. The objectives were to provide an overview of the key human resource issues facing Canadian agriculture, to outline the initiatives and educational programs that have been developed to address these issues, and to assess Canadian programs relative to those in other selected jurisdictions. To meet these objectives, a comprehensive review of studies of human resource needs and challenges was conducted, along with interviews of industry experts. A search was conducted for examples of initiatives and educational programs in Canadian agriculture that had been undertaken to address the challenges outlined in the previous research. Finally, farm management and leadership programs in selected jurisdictions outside of Canada were reviewed to provide a comparison with Canadian programs.

The results showed the following:

- A relatively narrow list of major human resource (HR) issues were observed from the literature on agricultural HR in Canada. These were the following:
    - Long-run tightening of a skilled workforce in agriculture, due to the demographics of an aging workforce
    - Difficulty recruiting and retaining quality people
    - Negative perceptions of careers in agriculture
    - Lack of a culture oriented toward training and continuous learning
    - Lack of availability of seasonal and harvest labour

- Studies have found almost universally that it is difficult to recruit and retain good people in agriculture. While apparently widespread, it appears this problem is most protracted in the horticultural segments.
- Part of the problem in attracting a workforce in agriculture lies in perceptions that agriculture pays relatively low wages. Other challenges result from social safety net policies that effectively discriminate against seasonal farm work, and from negative perceptions of careers in agriculture.
- There appear to be widespread gaps in the availability of trained workers in agriculture. There are several dimensions to this. First, there is a need for workers trained in basic technical skills. Second, there is a need for training to upgrade skills within the experienced workforce. Finally, there is a need for business management training that extends to both farm employees and employers. The preponderance of studies suggest that existing training programs are poorly targeted, with training focused on basic skills rather than skills upgrading, and training program delivery that is not well matched to the needs and lifestyles of farm workers. However, there does not appear to be broad agreement as to how training programs could be better delivered.
- The relationship between profitability in agriculture and its human resource status is under-researched. This is significant because of the circular relationship between industry profitability and its HR base. Industries that suffer from low profitability are less attractive to workers and have a smaller budget with which to fund training and education; however, an industry is more likely to suffer from low profitability if it is unable to attract good personnel and fund training to improve productivity.
- There appear to be other gaps in previous studies of agricultural HR in Canada. Little attention has been paid in research to the effect of unionization of the agricultural workforce and what the resulting advantages and disadvantages are likely to be. In addition, the impact of perceptions of agricultural working conditions and safety among the potential workforce has not received focus. Finally, there appears to be little recognition in previous

studies of the evolution in agriculture toward aligned supply chains and the more advanced skills in marketing and managing alliances and collaborative relationships that will be required.

A variety of initiatives have been initiated by government and industry associations to address the issues identified in previous studies. These can be characterized as the following:

- Government and third-party services have been established to link agricultural employers with potential employees. However, these have been adopted unevenly across provinces, and appear to suffer from scarcity in funding.
- Programs are in existence that allow specific segments of Canadian agriculture to access offshore workers. The greatest use of these programs has occurred in horticulture. It is not evident that access to these programs is even across farm product types.
- Initiatives directing at the domestic workforce have not addressed the disincentives to work seasonally imposed by the employment insurance and social safety net system.

It was difficult to separate initiatives from training programs offered to farmers and farm workers. In describing and enumerating existing human resource programs for farmers in Canada, while there is a significant level of diversity, the preponderance of programs deal with technical skills. These are based around animal husbandry, crop production, and horticultural production. In many cases these courses contain elements of business or management training in addition to technical skills. Most of the programs observed deal with technical skills, with fewer courses focusing on management, and fewer still on leadership.

A total of 223 educational programs were observed in Canada. The basic breakdown of these is presented in Table 5.1; it should be noted that the courses documented in Table 5.1 do not add up to 223, because some programs fall in multiple areas. The table shows that 120 programs were offered focusing on animal husbandry, with a further combined 109 programs in crop and horticultural production. 31 programs focused on farm management, and 7 on leadership.

Table 5.1 Canadian Educational Programs Observed

Program Focus	Number of Programs
Animal Husbandry	121
Crop Production	56
Horticultural Production	54
Farm Business Management	31
Agricultural and Rural Leadership	7

Many of the educational programs offered in Canada cater to new farmers or new farm employees, from the perspective that they are taught at a relatively basic level. There are fewer programs that teach advanced material that challenges and upgrades the skills of the most experienced personnel. This is true on both the technical skills and in management/leadership. The comparison with the US and Australia suggested that these jurisdictions may have relatively more access of this sort, particularly in management and leadership, than currently exist in Canada.

The results also show that educational programs in Canada are largely fragmented at the provincial level in Canada. A relatively small number of programs operate at the national level. With regard to programs offered by government, this is not surprising given that education is primarily a provincial responsibility. For crops and horticulture, there are differences in regional climate and cropping patterns that may justify fragmentation by province. However, with regard

to management education programs, there is an opportunity lost for farmers from different parts of the country to learn from one another in national level programs.

In evaluating the current status of human resources in Canadian agriculture, significant challenges are evident. These stem from the discussion above, notably:

- Difficulty accessing seasonal and harvest workers
- Lack of trained workers, and relative lack of training resources to train agricultural workers
- Difficulty establishing an appropriate means of delivering educational and training services for farmers and farm workers
- Constraints in attracting farm workers stemming from negative perceptions of careers in agriculture, and from limits imposed by EI and the social safety net system

Thus, it appears effort coordinating development of human resources in agriculture is warranted.

5.1 Potential Role for a Sector Council

The above suggests there could be benefits associated with coordinating HR development in agriculture. This is the case in a number of respects.

- First, to the extent that scale economies exist in the provision of employee-employer coordination services, it will be beneficial to centralize the planning and operation of such services. It was also noted that insufficient funding exists in some provinces to operate these services. Thus, provision or oversight of these services at a national level appears prudent.
- Secondly, efforts in training and education are fragmented to the provincial level. This is natural because education is a provincial matter. However, there are significant opportunities to coordinate provincial efforts and learn from the experience of others that could be facilitated by a national oversight and planning body.
- Some of the issues identified above are clearly national in scope, and are not easily addressed under anything other than national coordination. In particular, meaningful resolution to the constraints on seasonal work stemming from the EI and social safety net system, and in ensuring broad access to offshore workers.
- Finally, simply because Canadian agriculture is extremely diverse, a national coordination body could represent its collective interests in HR development more effectively than individual provinces or commodity groups. It would also allow industry groups to focus on their individual issues and allow the championing of broader HR issues to be taken up by a larger body.

Thus, it appears there could be positive and multi-faceted contributions from a sector council that facilitated the above.

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Appendix One: Summaries of Agricultural Human Resource Studies Conducted in Canada

Studies Conducted to Examine Human Resources Issues in Canadian Agriculture (Referenced in Table 2.1)

Ageco Consultants. 2002. Labor Scarcity in Agriculture: An economics analysis. Prepared for the Comité sectoriel de main-d'œuvre de la production agricole, Québec.

The problem of labour scarcity is an important one that affects the agriculture industry in Québec. Many reports have been written on the subject but this one focuses on the economics aspect of this problem.

The labor market situation has been improved during the last decade but an important number of people are still without jobs. The reason why there is labor scarcity, when the market labor market is doing well, can be explained by the low wage levels in agriculture. The comparison of labor wage between agriculture and other industries, with comparable qualifications, reveal an important spread.

To better understand the reasons explaining this spread, some employees of the dairy, pork and greenhouse sectors have been met with a focus group approach. The workers comments have been analyzed to understand the deficient working conditions that they have compare to others industries. In the dairy sector it appears important to reduce the number of working hours per week by hiring more workers. The normal working week is not generally applied to agriculture. The implementation of a 40 hour week appears an important step to attain. A recommended solution is to develop working cooperatives to share the labor.

The implementation of a worker benefits program is encouraged in order to improve the working conditions. These benefits are common in many SMEs of others sectors. These programs are an advantage to retaining employees. A common system is recommended; one that could be developed and managed by the Union des Producteurs Agricoles (UPA). The development of such a system has already been started by the UPA and this initiative should continue. Another solution could be to develop a wage grid that considers experience, formation and seniority when determining wages.

The inability to recruit and retain employees has financial implications for the farm. The economic simulation conducted in the study shows that it could cost $14,000 per dairy worker, $8,000 per worker in a hog operation and $7,800 per worker in a greenhouse.

Improving working conditions will solve the problem and lessen the financial expense. Producers must provide better working conditions, both monetary and non-monetary.

Ageco Consultants. 2003. Condition and Capacity to Recruit and Retain Labor in Agriculture. Prepared for the Comité sectoriel de main-d'œuvre de la production agricole, Québec.

The agricultural sector is affected by labour recruitment and retention problems. The working conditions appear to be one of the main factors of this problem. The problems related to labor are some that the producers can have control of. This study evaluates the link between the working conditions and the capacities of producers to recruit and retain employees.

This project was conducted through two phone surveys. The first survey was conducted to evaluate the working conditions that producers offer to their employees and to evaluate the level of difficulty in recruiting and retaining employees. The second survey was designed to evaluate the satisfaction of the workers vis-à-vis working conditions. Both producers and employees surveyed were from the dairy, pork and greenhouse sectors.

The following results come from the first phase of the study:

- The main three reasons that explain the difficulty to recruit workers appear to be the fact that wages are low, the scarcity of workers and the fact that the work is physically demanding.
- The employees from the greenhouse sectors appear less satisfied by their working conditions than employees from the two others sectors.
- Most employers (2/3) encourage their employees to stay when they mention that they want to quit, and this is done by increasing their wage.

The following results come from the second phase of the study:

- In general employees appear to be very satisfied with their working conditions
- Employees that are native to the agricultural sector seem to be more satisfied by their working conditions than those who are not
- Employees become dissatisfied with working after their work week extends past 50 hours

The last section evaluated the cost of labor turnover. It was found that it is almost impossible for an enterprise to evaluate the cost of certain factors that could influence an employee to quit their job. Each situation appears to be different. Nevertheless, the fact that an employee quits a job can have a negative impact on the production and on development of the enterprise.

Agriculture and Food Council Ag Summit 2000 and Agrivantage Strategic Initiatives Committee. 2002. Agrivantage Report: Building Tomorrow Together.

In 2000 Alberta's Agriculture and Food Council collaborated with Alberta Agriculture, Food and Rural Development (AAFRD) to lead a consultative and inclusive process of mapping out the industry's goals and agenda for the next millennium. The first development was the Ag Summit 2000. After the Summit's success a Memorandum of Understanding was signed in January 2001 to discuss issues raised at the Summit that needed to be further discussed in order to achieve the agriculture and food industry's growth goals. The result was the creation of the Agrivantage team that combined government, industry and association personnel. This team was then further broken down into 'Action Teams' that addressed specific issues such as Sustainable Rural Communities or Fostering Entrepreneurial Culture for example. The teams then put their findings into the Agrivantage Report: Building Tomorrow Together that contains recommendations that will enable new policy development and support integrated and collaborative approaches.

The following is a discussion that focuses on the recommendations that include human resource topics and issues within the industry. It should be noted that both the Ag Summit 2000 and the Agrivantage Report touch on more issues within the industry other than simply human resources.

One of the goals under the issue of Sustainable Rural Communities is to improve education through the development of Centres of Excellence for agriculture. More specifically, the report suggests the increased use of distance education for agriculture and to remove education tax

from property tax. Current supporting action for this initiative includes the Agricultural Policy Framework (APF) renewal component.

Another issue discussed in detail was the 'Building an Innovative, Entrepreneurial Culture'. The Summit and the Action Team created to address this issue recognized the need to foster both technical and leadership skills in the industry. The Alberta Centre of Entrepreneurial Excellence Action Team (ACE) recognized the need to connect those who need information to those who have it and have recommended the creation of improved referral services through a clearinghouse or established network. The ACE Team recognizes the need to encourage entrepreneurial ventures and ideas with improved human resource services for entrepreneurial leaders.

Another action team called the 'Long-term Farm Profitability and Sustainability Action Team' was created to tackle the issue of 'Building an Innovative and Entrepreneurial Culture'. This team recommended three initiatives to improve upon the issue. The first recommendation was to establish a strategy to promote agricultural education opportunities and determine accessibility, specific tasks would include creating a database of agricultural training opportunities in Alberta, identifying duplication of programs in the province or gaps in course content offered and to create a 'clearinghouse' that could act as the 'voice' of Alberta with respect to learning. Secondly, the Team recommended increasing the leadership capacity in rural Alberta. Specific tasks within the recommendation included to re-establish a leadership network, showcase agricultural leaders and provide their experiences to others and support organizations that develop tools to improve leadership and business management skills of Albertans. Lastly, the Team recommended that the province of Alberta develop a human resource strategy for agriculture, and do this by promoting agriculture as an exciting and viable career through career fairs and promotions, and supporting the development of an Agricultural Workforce Policy Board designed to provide the strategy with direction. The Team also suggested further developing the Green Certificate Program to help meet the needs of the industry (this program is described in Section 3.0). The key observation regarding this issue of entrepreneurial culture is that the province must improve the coordination of existing education and training efforts to ensure that all needs are addressed appropriately. Current efforts already directed at this issue include the recent restructuring of AAFRD's Industry Development Sector to better support entrepreneurs, the Renewal and Science Innovation elements of the APF to provide support and Olds College Centre of Innovation (CCOI) to aid agri-businesses via human resource development and business management training.

Once each action team had deliberation and drawn up recommendations, three overarching issues and challenges were identified, one of which was human resources, management and leadership. The following paragraph is taken directly from the Agrivantage Report: Building Tomorrow Together.

> *"People are the foundation of the agri-food industry. The availability of people to work in the industry, at all levels and with the right skills, combined with skilled and dedicated management and strong industry leadership is absolutely essential to ensuring industry stability, growth, and sustainability. People will make the difference between an industry that slips into decline and one that is able to renew itself, is vibrant and flexible, and is ready and able to take advantage of the opportunities and challenges presented by a knowledge-based, global economy."*

The Agrivantage Report identified four specific human resources issues:

1. the industry's ability to attract workers

2. the shortage of management skills in the industry
3. the shortage of leadership skills in the industry
4. a need to improve skills training in the industry

There are labour shortages in Alberta in all sectors, it is not unique to agriculture and agri-food but it does make competition that much more intense. The Toma and Bouma study 'The $20 Billion Goal: A Review of Alberta's Progress in the Agri-Food Sector indicates that there is a shortage of skilled labour particularly in the meat processing sectors and the pork, vegetable and greenhouse production sectors.

Due to the competition in recruiting a young, skilled workforce, the agriculture industry must be competitive in wages, benefits, and health and safety standards compared to other industries. The report recommends that to be competitive does not only or need to included higher wages and renumeration but more innovation incentives including paid leaves, flexible hours, employee recognition, training opportunities and benefit plans. The Report also suggests that the industry must improve its promotion as an innovative and exciting career choice to young people making decisions about their future careers.

The problems facing the industry with respect to attracting and maintaining skilled labour are replicated with respect to managerial labour. Other problems with respect to managerial labour include that there are no organizations or associations that would bring the managers together to network and offer information for them to continuously improve their skills as managers. These organizations exist in many other professions and tend to encourage continuing education and improvement among their members. An agricultural-type of organization such as this could benefit Alberta's industry as well. Similarly, leadership skills also need to be fostered and encouraged. The report recommends mentorship and agricultural leaders willing to pass on skills and insight so that a leadership pool is created.

Lastly, there is a need to improve the training and skills of the industry to combat the current skill shortage. The industry is ever-changing and is becoming more and more market-driven and technology-based. Personnel in the production sector must also be skilled in business management, risk management and change management. The report specifically recommends that improved skills in the areas of business and knowledge management and technology information are paramount to maintaining a competitive industry.

The Agrivantage Report suggests the development of an integrated human resource, management and leadership development strategy that is jointly sponsored and administered by industry and government. The Report suggests that the strategy include:

- a recruitment and retention plan
- a plan for training and developing existing human resources
- a management and leadership development plan

Since the Agrivantage Report was released in 2002, the Ag Summit and Agrivantage Strategic Initiatives Committees prepared a report called *Agri-Food Industry Response and Reaction to the Agrivantage Report* in March 2004. The report summarizes the industry's responses to the recommendations and strategies laid out in the Agrivantage report. In June 2003, after the Agrivantage report was released, the Agriculture and Food Council formed a committee, the Ag Summit and Agrivantage Strategic Initiatives to manage the follow-up of the report. The committee invited all agriculture organizations to comment on the Report and its recommendations. The responses were then summarized and noted in the 2004 Report and the

responses were overwhelmingly positive. The following discussion lists the issues that the industry commented on with respect to human resources in the industry.

Agricultural Policy Framework: the industry is highly supportive of the APF and its intent. Many organizations in the industry have pursued activities and directions that are related to the five areas of APF including renewal.

Growth Planning: the response of the industry suggests that it views collaborative networks as an important part of the growth of the industry. 96% of the respondents agree or strongly agree with this recommendation. The industry has begun to participate and facilitate networking events including holding focus groups, round tables or participating in workshops. However, respondents also noted that funds to promote events are limited and bringing a large number of commodities together is difficult because farmers like to focus only on their own commodities. Also, respondents suggested that an improvement in available managers and employees will help to upstart this recommendation as these are the people that will encourage this recommendation. The report cites four significant points with respect to the recommendation:

- a regional approach would be appropriate, achievable and sustainable
- small and medium sized businesses have the potential to contribute greatly to industry growth through focused value-added product development, manufacturing and marketing
- growth is yet to be realized from existing products, methods and technologies and new markets must be found
- growth must be responsive to market opportunities regionally, provincially and internationally

Human Resources, Management and Leadership: The industry believes that the creation and implementation of an integrated human resource, management and leadership development strategy is paramount to its growth and vitality. 89% of respondents agreed with this recommendation. The industry's responses showed that issues such as shortages of labour, managers and leaders is an issue in every sector. The industry also realizes that there are many training and skills courses specific to agriculture being offered across the province but a more coordinated effort between the organizations that conduct them would be beneficial.

Respondents cited finances and human resources as the top barriers to implementation because both are needed significantly to get the strategy running. Respondents also noted that the lack of training is severe with respect to management and leadership courses and that there is a lack of expertise in food safety and environmental stewardship and therefore no one to train farmers in these areas. Other valuable responses to the barriers to implementation included:

- decreased viability of the industry and perception of the industry
- post-secondary institutions may be focusing on skills that are not valued by the industry
- agriculture's compensation packages are not as competitive as other industries
- Canadian immigration policies do not allow entry level production workers
- Agricultural web-based learning lags other industries

The respondents had a number of ideas of how to overcome these barriers including:

- A need for specialized resource personnel to address these issues
- A need for on-going financial investment by both industry and government
- A need for a human resource, management and leadership needs assessment for both the primary agriculture and processing industries
- A gap analysis of existing programs and resources
- Better coordination of existing programs and resources

- A need for cross-commodity programs and initiatives in management and leadership
- A need to increase the profile of agriculture in school curriculums

Overall, industry support of the Agrivantage Report and all of its recommendations was very positive, and the Agrivantage Strategic Initiatives Committee is in place to ensure that the industry moves to the next step and implements the recommendations made.

Ernst and Young Management Consultants. 1992. Horticulture Industry: Organizing for the Future. Human Resource Issues and Opportunities: National Report.

In the early 1990's a National Steering Committee for the Human Resource Study of the Canadian Horticulture Industry was created to oversee a human resources needs assessment in the industry. The need for the study came about as the horticulture industry was having difficulty meeting its human resources needs while responding to a changing environment. Due to this need the Canadian Horticulture Council created a steering committee to oversee a study to look into the problems in production horticulture and to recommend some solutions. CHC asked that Employment and Immigration Canada sponsor the study. Ernst and Young's analysis included:

- An assessment of the industry's business environment
- Identification of new technologies and analysis of their impact on skills
- An assessment of the nature and structure of employment in the industry
- A determination of how the industry's labour needs can be met
- An evaluation of horticulture's present and future training needs

The results of the study showed that of the 100,000 people that work in the industry, only 30% are full-time employees and a large part of the labour force in this industry is very young with approximately 38% below the age of 24. At the time of writing, some Atlantic school boards, which had staggered the school year in order that students could work the harvest, had announced that they were returning to a traditional school year. This announcement was expected to worsen the labour availability issues in the sector. Several other labour issues were identified in the study including difficulty recruiting and retaining seasonal employees, the cut-backs of the Day Haul program[5], the structure of Unemployment Insurance (now called Employment Insurance), social welfare that hinders claimants from working harvest, and the lack of skilled and knowledgeable growers. The study found that the industry looks to Europe to fill the gap of skilled and knowledgeable growers.

New technology developments in the industry have added to the need for skilled and knowledgeable growers, but the study also suggests that the improvements in technology will not diminish the need for seasonal labour in the fresh sectors. The study indicates that due to improved technologies, food safety and environmental regulations and increased globalization, that training and skills development will become ever more important. The study suggests that owner/manager training in human resources, technology and marketing are among the most important training needs.

The study results showed that most training offered in horticulture by institutions such as colleges focus more on the needs of those entering the industry not as growers but as industry support personnel such as in the government for example. There are little training opportunities for growers because apprenticeship programs offer little standardized training and there is a poor form of organization within the industry. The authors note that British Columbia has shown

[5] The Day Haul program was a transportation program that helped to get workers to their worksite.

success with its government and industry working together to address HR issues. The study suggests that Canada take a lesson form Europe and the Netherlands in particular because the Netherlands has a strong link between government, industry and educational institutions that has led to a successful industry.

The study found that government funding for the industry's HR issues has focused on the mature fruit and vegetable sectors and the majority (84%) of funding that has been allocated to farming occupations through the Canadian Jobs Strategy (CJS) is used to train the unemployed while the other 16% is used to upgrade the skills of those already in the industry. The authors suggest that there is a larger need for the training of those already in the industry to improve the competitiveness of the industry.

Overall, the study recommends a reorganization of the Canadian horticulture industry so that it can properly address the issues of competitiveness and human resources. An organization on both national and regional levels is required and should be the foremost priority of the industry so that all key horticulture sub-sectors are heard. The authors suggest that a shift in focus from lobbying government to a more proactive strategy to competitiveness, marketing, regulations, environmental, labour and human resource issues is required.

Other recommendations and conclusions made in the report include:

- An increase in promoting the industry and its career and entrepreneurial prospects. Actions taken to implement this recommendation should include more presence at high school and college career days, development of high school horticulture awards and exchange programs.
- Improving the image of the industry so that workers will want to join it, including providing group benefits for owners, managers and staff
- Defining and determining the scope and method of training and upgrading skills of owner/managers in the industry. The study revealed that training required includes domestic and global marketing, competition, marketing information systems and financial management
- Human resources training is key to addressing labour issues such as recruiting, retaining and motivating labour
- The industry needs to identify skills-upgrading priorities to improve skills of owners, managers, and workers and how they will be upgraded
- Funding for upgrading skills of those already in the industry needs to increase
- Industry should develop non-traditional and informal training materials to satisfy the learning preferences of the industry including short courses, study groups, independent study, video-based instruction
- Industry needs to improve the availability of training in technical areas such as integrated pest management, crop technologies within each sector, equipment maintenance and grading of products
- Industry should consider the development of s standard certification in which skills would be tested and the certification recognized
- Apprenticeship and exchange programs should be developed
- Attracting unskilled and semi-skilled labour needs to be addressed
- A joint industry-government committee should be established to review applications by growers to recruit off-shore labour
- Skilled horticulture jobs should be identified and added to the designated occupations qualifying for points under the Immigration Act

- Incentives for horticulture workers need to be developed by both industry and government. Incentives could include a horticultural tax credit and modifying the UI system (now the EI system).
- UI modifications should include an exemption of income earned in horticulture sot aht reduction of weekly benefits do not occur, less punitive tax-back provisions in UI legislation, weekly insured earnings be based on 10 weeks of employment for those in horticulture.
- The Caribbean-Mexican Seasonal Workers Program should not be curtailed where it is needed
- The Day-Haul program should be supported
- Seasonal labour pools should be created so that sharing of seasonal employees can be facilitated with other industries
- Research funding should be allocated to those subsectors that are growing
- Research and technology transfer needs to be improved to improve the performance of the industry
- Research, knowledge and technology transfer need to be reviewed by industry to determine effectiveness

Formation Pro FP. 2003. Diagnostic Study of Agricultural Human Resources. Prepared for Comité sectoriel de main-d'œuvre de la production agricole, Québec.

This study was designed to identify the main causes of the human resources issues in agriculture and the possibilities of enhancing the situation. This analysis also recommends the initiatives that the Agricultural Labour Committee (Québec) should prioritize in their human resources development plan.

The study was undertaken through an analysis of the literature regarding the numerous human resources issues in agriculture. The study investigates several factors that could affect the human resources problem such as the rural economy, environment, technology, free trade, education, ethics, agricultural model (industrial versus familial operations) and the diversity of labour skills.

The agricultural sector is growing but consolidating, there are less farms but more is being produced. In the rural economy, there is a trend to have less children than generations ago, this, along with the trend in farm children migrating to other industries, has led to a decrease in potential employees on the farm and the need to search elsewhere including nearby towns and urban centers for the labour that is required. The industry is dealing with the issue of an inefficient labour supply and a need to promote the industry as a viable career.

The increase in agriculture production has also occurred due to the specialization of particular types of production and technology that has allowed economies of scale to take place. The emergence of technology in agriculture has led to a need for labour that is specialized in a particular production. The need of specialized employees is another factor that increases the scarcity of labour in agriculture. According to the study, there are more than 70 job specialties related to agriculture. These specialties require that those in the industry have a certain level of skills, education and sometimes a specific degree in a particular production type. There are two issues that arise from this, firstly, this means that the producers will have to pay more for a worker that has acquired a specific degree or specifics skills, and secondly, there is a scarcity of this qualified labour.

On the other hand, there is a scarcity of seasonal workers; workers that require less qualifications but are an important and large part of the agricultural workforce. In general,

workers are less interested in these jobs due to the low wages received, work of call (when the worker waits at home to be called everyday), and the physical working conditions of the jobs. These factors have led to the volatile numbers of seasonal workers from year to year.

Finally, to increase the number of potential workers, farmers will have to increase the wage of their employees and make the working conditions interesting for the workers through improved human resources management. The government must also recognize the importance of these workers to the agriculture industry and may be required to assist technically and financially in order that the number of workers required is available.

GSGislason and Associates Ltd. 2004. BC Seafood Sector and Tidal Water Recreational Fishing: A SWOT Assessment.

The province of BC commissioned a SWOT analysis to be completed on the BC seafood and tidal water recreational fishing sectors. The seafood sector consists of three subsectors: the capture fishery, aquaculture and the processing sector. Within the SWOT analysis GSGilason and Associates discuss the human resources needs and factor supply conditions, including labour and training, for each of the sectors. The discussion that follows focuses on the aquaculture industry.

The major difference between the salmon farming industry and the commercial fishing industry is that fish farming occurs all year and therefore most of the jobs in the industry are full-time rather than seasonal which makes recruitment easier. On the other hand, shellfish farming is more part-time seasonal than salmon farming, however, this is changing, as technology becomes more advanced, opportunities for full-time employment are occurring.

In aquaculture there is a need for various workers of all skill levels from general labourers to biologists and veterinarians, however this industry to also moving to value the higher skilled labour more because it is an industry that requires marketing and business management skills to compete in the global marketplace. The BC aquaculture industry is currently in a labour shortage and having difficulty recruiting employees at all levels due for example, to the remoteness of the facilities.

There is a misconception that the aquaculture industry would be a logical step for a commercial fishing worker, but in fact, they are different and the knowledge skills are more highly valued in aquaculture. Due to labour recruitment issues the industry has been recruiting from outside the province, especially from the east coast, where the study suggests that the training is more satisfactory. Instead, in BC most training occurs on the job. Therefore, there is a need for more education and training in BC to attract the younger workforce to the industry through a positive profile that shows the industry offers viable and exciting careers. There is also a need for industry training standards. The training that is offered through colleges and universities in BC has not been well attended. The report suggests that East Coast training is more desirable because it offers accreditation agreements with partner universities.

Other studies that have addressed the training needs of the aquaculture industry (Praxis, 2002; CAIA 2003) note that the range of skills required may expand in the future due to commercialization of new fish species, technology advances, the complex regulatory environment and the increasing sophistication of farms. Therefore, the training that currently exists in BC, that is predominantly fish production related, will need to adapt to include marketing, business management, and regulatory management skills.

Overall, the SWOT analysis concluded that a human resource training culture doesn't exist in the BC seafood industry. The training that is available in BC focuses on traditional skills and does not focus on the needed 'new' skills. The BC workforce is aging and soon there will be demands for labour but young people do not see this industry as a viable career choice.

Marchand, L. and K. MacEwan. 2004. The Impact of Labour Variability on Ontario Swine Farms. Prepared for Ontario Pork.

The purpose of this study was to develop insight into the human resources management issues on Ontario swine farms. This concern has been raised as a result of the need for more non-family labour and the difficulty in finding people to work in the Ontario swine industry. Therefore, this study tries to determine what it would take to attract, motivate and keep employees on swine farms in Ontario. To determine current human resource issues on Ontario swine farms, surveys were developed and distributed to managers/owners and labourers.

Statistics and Findings regarding Ontario Swine Farms:
- Farm workers receive lower wages than jobs in other industries and lower wages than US counterparts
- Farm workers work longer weeks than other industries (51.3 hrs/wk)
- Employees noted that compensation needs to be improved
- Lack of compensation and flexibility encourages employees to leave the industry
- Most farm workers are male
- Important job attributes include: compensation, appreciation for work ethic, interesting and satisfying position

Recommendations made to reflect employee wants in the industry include:
- Provide description of hours or work, be flexible
- Provide a compensation package: fair wages, overtime pay, benefits, bonuses
- Monitor employee interaction, to know which employees work well together and to provide evaluation
- Establish a schedule ahead of time regarding statutory holidays and vacation time
- Encourage and foster training opportunities
- Promote work well done
- Farm owners and managers need HR management skills
- There is an overall general industry perception of low wages and hard long labour
- Farm owners and managers must use more than wages as incentives to work in the business. It is the total compensation package that attracts employees.
- Industry needs to show how much they value employees more than they currently do
- Replacement costs of employees are expensive

National Beef Industry Development Fund. 2002. Investment in Knowledge and Education, Symposium Proceedings.

The National Beef Industry Development Fund (NBIDF) was created in 2002 for the purpose of promoting and enhancing the competitiveness of the beef industry in Canada so that the beef industry could also take advantage of new opportunities. The fund held a consultation meeting in September 2002 with the purpose of identifying its strategic direction. At the outset, the meeting identified a number of industry development priorities. The Fund Committee later reviewed the recommendations and they identified four development areas for the fund's direction, including investing in knowledge and education through innovation and adaptation. The Fund recognized that an increase in HR skills with a focus on education and available

resources would be the key to this investment. At the onset of developing a plan, the Committee conducted a symposium addressing HR needs in the beef industry with the purpose of identifying actions required to address their needs.

The primary HR issue that was identified was also the need to have an available, skilled, educated and motivated workforce (NBIDF, 2002). Situations required to meet these goals include a greater awareness of industry careers, low job vacancy rates, competitive employment opportunities and a proactive education and training environment.

Conference attendees identified the hindrances to the improvement of the current human resources situation including the demand on primary agricultural labour, the lack of a definition of what type of people and skills are required, a negative image of the industry and lack of awareness regarding available careers, low incomes and non-competitive wages and the competition with other sectors for labour (NBIDF, 2002). Most importantly however, participants stated that there has been no effort to address HR needs in agriculture.

The symposium's goal was to identify and offer recommendations that would improve the human resources situation in the beef industry; these recommendations included to develop a long-term human resource vision through the development of public relations, marketing and communications programs and forming a task force to develop a strategic plan for the industry to improve training programs and create innovative training, ensure that colleges and other educational institutions get involved in the process and have industry leaders promoting training to the younger workforce.

OATI Learning Group. 2004. The Ontario Greenhouse Alliance Human Resources Survey.

The OATI Learning Group (OLG) conducted the HR survey through mail-in surveys sent to greenhouses across Ontario and interviews with 50 TOGA members. The surveys and interviews probed the same emerging HR issues such as labour turnover, supply and demand of workers, and the role of growers within the industry, training needs, post-secondary horticulture education and unionization. The results of the report reflect interviewee (in this case interviewees and survey respondents) responses to the issues.

Interviewees noted that turnover rates are high and the demand for hourly labour is high due to this and the expansion of the industry. Operators who require a large amount of labour have two options: the Seasonal Agricultural Workers Program administered by FARMS to bring in off-shore workers or labour contractors to source employees. The majority of interviewees did not see the EI program as a cause of the turnover, instead they stated that it was due from the availability of other jobs and the rate of pay in the industry.

Expansion in the industry has also increased the demand for specialized technical staff such as growers and supervisors. Currently the industry prefers to train these personnel from within, however with the lack of supply for hourly workers finding employees within an operation to train may become more difficult. Other growers in the industry are recruiting experienced technical staff from regions such as Europe, which has become quite expensive. The report states that students in horticulture programs in Canada generally pursue careers in nursery or golf course management or landscaping; Canadian students told the authors that what they know of the industry is negative, but that they know little.

Interviewees had mixed views regarding the role of growers in the industry; however the majority of responses agreed that growers must possess both technical and supervisory skills in order to be effective in the industry.

The interviewees also identified training needs and preferred methods of training. Traditional training such as seminars and hands-on instruction on the job are the preferred methods of training. Growers and owners stated that the current cooperative programs available in horticulture and school schedules do not take into account the cropping cycles within the industry. Growers and owners also suggested that there is little need for skills other than technical production skills and the authors note that this may be why students in the industry have a negative view of it. Interviewees responded that growers, supervisors, assistant growers and sales personnel should have some type of formal training; however labourers do not require it. The training that the interviewees suggested was needed included courses in growing aspects and climate control, employee relations, fertilizer basics and greenhouse maintenance. However, the responses from the interviews suggested that only approximately 7% of the workforce had recently taken any continuing education or training.

Owners did support apprenticeship programs, but with reservations with respect to the number of suitable placements and the training curriculum because the apprenticeship programs are currently oriented towards the landscaping industry. Growers stated that the post-secondary education in Ontario has not been a major benefit to the industry and that the industry should look to the US and Europe as models. To alleviate this challenge the Ontario industry has begun the development of horticulture education councils at both the high school level and post-secondary level (HOSTA – Horticulture Ontario School Teachers Association, and OHEC – Ontario Horticulture Education Council, respectively).

To alleviate some of these issues reviewed, interviewees suggested that TOGA work with the industry to improve its image as a viable career choice for those in horticulture programs, as well as to lobby for labour market policies that would aid with the hourly workforce needs.

Peartree Solutions Inc. 2003. An Assessment of Agriculture for A Sectoral Approach on Human Resource Issues. Prepared for Human Resources Development Canada.

Peartree Solutions Inc. were commissioned by HRDC to assess whether a sectoral council would be appropriate and of interest to the agricultural community in Canada, therefore within this study the HR issues in agriculture are identified, the response of organizations to these issues are identified, an overview of current HR activities in agriculture is given and any gaps are analyzed.

A number of HR issues were identified through the report's literature review and interviews. The following discussion identifies each issue.

Firstly, knowledge and information management needs have increased as the farming industry must now deal with a plethora of food safety and environmental regulatory requirements, and can no longer only concentrate on their production management skills to be sufficient.

Canada's farming community is getting older and therefore there is an increased concern in attracting a younger generation into the workforce, dealing with farm succession and transition issues, and providing these older farmers with continuing education. The report also notes that the health and safety of the older workforce is a concern, as health matters can be difficult to manage financially, however there is not a lot of work done in this area.

Dependence on hired labour is increasing while fewer farm families can count on farm labour from their children as more often they leave farm-life for urban careers. Also, there are specific commodities that have a higher reliance on labour during specific times of the year such as the

horticulture industry during the harvest season. There is strong competition for labour with other sectors of the economy. The 2001 Report of the Ontario Agriculture Human Resource Council identified recruitment as a primary issue of concern. Recruitment is difficult in the agriculture industry due to its negative or unexciting image to the younger workforce. Offshore labour is often sought to help with seasonal work. However, more and more full-time jobs are becoming available due to children leaving the farm and the needs they create.

Many farms are getting larger and therefore farmers are becoming managers of hired-help, often more than one. However, many farmers are unfamiliar or inexperienced in hiring, managing and maintaining employees and HR management training in the industry is needed. Also, due to the constant advances in technology and the rigors of the global marketplace, farmers not only require production and HR skills but also knowledge-based and technological skills, therefore there is a need for improved training and knowledge systems so farmers can continuously update their skills. Extension services in Canada have been downsized and private businesses have undertaken the task of training with respect to their particular products.

The rural and distant setting of many agricultural operations leaves the majority of training and courses inaccessible to many farmers. Other impediments to participation in training courses include the lack of recognition of the need for the training, literacy issues, lack of high-speed internet and dislike of classroom settings. Farm Clubs have been developed to overcome these barriers, these clubs offer guest speakers and expert-led discussions on farm issues.

Interviewees suggested to the authors that more progress has not been made in addressing human resources issues in agriculture because it tends to take the backseat when more pressing issues arise, such as BSE or trade policies that are of immediate concern.

The report states that agricultural organizations and the ministries of agriculture identified in the last two Censuses of Agriculture that knowledge, skills and training issues are of key importance if the industry is to improve incomes and profitability, especially with the growth of technology and hired labour in the industry.

The authors also acknowledge that HR issues in agriculture will vary in importance among the commodities, but they are all common across the country and across commodities.

Prime Minister's Caucus Task Force on Future Opportunities in Farming, 2001

In March 2001, the Prime Minister (Jean Chrétien at the time) created the *Task Force on Future Opportunities in Farming* with the purpose of determining agricultural long-term challenges and opportunities so that the *Task Force* could build upon the government's record and ensure sustainability in the Canadian agriculture and agri-food sectors. The *Task Force* was asked to consider the effectiveness and future direction of safety net programs, farm products that can attract a premium price and rural economic opportunities, particularly for value-added agri-food activities. The *Task Force* consulted with many stakeholders in the industry including farmers and processors. As well, stakeholders were invited to comment on the issues raised on the *Task Force's* website.

All of the issues addressed in the report, and the recommendations made, revolve around human resources. Without training, skills, good management and work place health and safety, farm products would not demand a premium price and it would be difficult to invest in environmental and value-added opportunities and difficult to understand the complex regulatory environment that the industry faces. With respect to a number of *Task Force* recommendations, farmers will have to possess the skills to adapt in the new environment. For example, farmers

will have to adapt in order to sustainably produce in Canada or invest in opportunities such as bio-fuel production.

In order for agriculture to prosper, so too must the rural community because the two are dependent on each other. Therefore the committee noted that a key human resource issue with was the sustainability of communities and initiatives designed to attract and retain businesses, and improve the quality of life in these rural communities. The contribution of farmers to rural communities could be enhanced if there were initiatives put in place for farmers to also be involved in the marketing, retailing and processing of their products – value-added opportunities. The Task Force recommended that Finance Canada review and eliminate any legislation or other impediments to farmer-owned enterprises in Canada.

Another recommendation of the Task Force was to identify and develop domestic and international market opportunities. Many of these opportunities would be based on consumer preferences such as food safety and would require the industry to implement food safety and traceability schemes. In order to take advantage of these opportunities, assistance would be needed in production, processing and marketing; and skills training would be required.

Other recommendations from the Task Force that related to human resources were that the government needed to consider new programming to meet the needs of both new farmers and retiring farmers that address issues of succession and transfer planning, and to invest in improving basic infrastructure in rural Canada. For example, Broadband Internet should be available to all rural Canadians. There is an increasing advantage to farmers of having access to the internet because it is a great source of information such as manuals and on-line courses The government must provide farmers and farm employees with the opportunity to improve and upgrade skills so that they can adapt to the ever-changing environment and take advantage of new opportunities.

Rempel, K. and B. Peers. 2002. Rural Adaptation Needs Assessment Final Report. A Publication of the Rural Development Institute of Brandon University.

The Rural Adaptation Needs Assessment (RANA) project was conducted to evaluate the needs of agricultural producers as they addressed issues such as adaptation, succession and transition. The project also identified gaps in existing programs and examined the success of past programs in helping farmers to transition out of agriculture. The methodology used for this research was to conducted an environmental scan of existing literature, and conduct stakeholder interviews and focus groups.

Interviewees and focus group participants were asked to discuss issues such as training, counseling, specialist services, employment opportunities, financial resources, succession and gaps in programs. The following information was gleaned from the discussions and interviews.

Training:

- Both formal and informal training is required to meet demand of more highly skilled workers
- Training needs identified included computer skills, business management skills such as marketing, accounting, human resources and financial analysis, leadership skills such as communication, specialized production techniques, resources training, and traditional skills upgrading.
- Not enough awareness about training programs that are available
- Certification of skills would improve self-esteem
- Apprenticeships and training need to be transferable between provinces

- Programs need to be appropriately delivered and accessible

Personal Counseling:

- Identified as needed and is available

Specialist Services:

- More awareness that these services exist is needed
- Identified needs of these services include: processing advice, marketing, financial analysis, HR management, taxation, regulations, computers and e-business, and business planning

Employment Opportunities:

- Need to have a matching service
- Better employment packages in the industry are required (health benefits etc…)
- Rural communities need job opportunities for spouses that do not work on-farm

Financial Resources:

- More funding resources required to assist with issues such as transition, succession and adaptation

Succession:

- More services and awareness of succession programs is required

Study participants also identified the gaps in services, training and programs that are available as affordability, awareness of programs, accessibility such as timing and location, and the appropriateness of the programs.

The authors concluded that healthy rural communities are needed to mitigate income pressures in agriculture, the needs with respect to succession, adaptation and transition change from farmer to farmer, and the availability, accessibility and awareness of programs available to assist with these issues need to be improved. Overall, the authors conclude that rural human resources development should become a priority for federal-provincial rural development programs and policies.

Toma and Bouma Management Consultants. 2004. Human Resource Requirements for the Alberta Agri-Food Sector : A Strategy for the Agriculture and Food Council and Peer Networks as an Effective Learning Mechanism for Agriculture. Prepared for the Agriculture and Food Council.

In response to the recommendations and conclusions of the Agrivantage report, the Agriculture and Food Council required help to determine its priorities for human resources development in Alberta and some focus on what is considered most important and where to begin. Therefore, Toma and Bouma Management Consultants were hired by the Agriculture and Food Council to conduct a study to determine the human resource requirements for the Alberta agri-food sector. The specific objectives of the study were to :

- Conduct an inventory of current activities in HR development within agriculture in Alberta
- Identify opportunities, needs and gaps in human resources offerings in Alberta agriculture
- Develop a HR strategy with a specific focus, direction and scope

The research was conducted in two phases ; an inventory of courses offered in agricultural training was conducted and industry interviews were conducted to determine the industry's view of human resource development in Alberta and what is needed.

The inventory of courses showed that there are many programs available in Alberta that cover most of the basic skills and are offered in a variety of ways and in a variety of locations. The overview showed that programs constantly change due to funding changes and the changing

needs of the industries. The uptake of the classes is variable and promoting the classes has been challenging in Alberta.

The interviews conducted in the second phase of the research showed that the industry believes the HR development in Alberta and the lack of skills in the industry to be a large problem. This lack of skills is creating shortages in all types of workers, including labourers, skilled help and managers. The results from the interviews suggest that the HR problems stem from the image of the industry as unattractive and poor to the younger, educated workforce, agriculture is not seen as a business, the competition with the energy sector, manufacturing and other trades to attract a workforce and the poor monetary and non-monetary incentives provided in the sector. The interviews also showed that the top information challenges are not basic production skills but are information and data management, financial management, marketing, production management and human resources management. The courses offered in Alberta provide no real gaps in what is required, however due to the time constraints of farm managers the courses are not being taken. Instead, farmers obtain their information from others in the industry, veterinarians, nutritionists, consultants, the internet, conferences and trade shows, and it is evident that the human resource challenges facing the agriculture and food sector are large and complex. Furthermore, a large number of institutions and organizations are active in developing initiatives and the provision of programs.

Toma and Bouma recommend that more peer networks be formed and advertised as great learning resources because they are safe, confidential, and put farmers in touch with other like-minded business persons. These networks provide a pool of contacts that farmers can draw upon for advice and brainstorming sessions. Networks can be informa land simply include interaction with others in the industry, focus group sessions, or courses that bring people together and that allow time for interaction such as the George Morris Centre CTEAM program ; or more formally established networks such as the Texas A & M Master Marketer Program or the Farm Management 500 network in Australia (all of these courses are described further in the document). Whatever form, interviewees suggested that their networks were the most innovative sources of information for them.

Overall, the study showed that there are no difficulties with obtaining basic information and skills in the Alberta agriculture industry, however, the major challenge with respect to training is providing farm operators with the information to manage the business in a proactive and strategic manner.

Toma and Bouma recommend that AFC move beyond identifying the needs of the Alberta agriculture industry because these needs have been clearly addressed in the Agrivantage report and address the clearly identified issue of the coordination of the available resources in Alberta. The authors recommend that AFC act as a portal in which human resources development courses and initiatives are coordinated and information is exchanged in order to improve the efficiency and communication of what is available. Secondly, the authors recommend that AFC act to facilitate the use of peer networks as a part of learning within the agriculture industry since this type of learning form was deemed important by the interviewees. The next step for the AFC is to committ to these initiatives and start the development process.

Work Research Foundation. 2001. Profile of Human Resource Management 2001 Report. Prepared for the Ontario Agriculture Human Resource Council.

The purpose of the study conducted by the Work Research Foundation was to update a similar study conducted in 1995 and to identify the most significant HR issues facing the Ontario agriculture sector. The study concluded that the most significant HR issues by far is the ability to

recruit agriculture workers, followed by the need for tools and skills in HR management and to promote good management practices. The study notes that while there is a decline in the number of farms and farm employees, there is a demand for new and more skilled employees.

Since 1995, the study recognizes that there has been an emphasis put on human resource skills in the Ontario agriculture sector by the OAHRC.

A survey of industry leaders revealed that recruitment of agriculture workers, especially seasonal workers, was the top HR issue among the industry. HR management ranked second and health and safety, and training followed. Similarly, in 1995, these issues also ranked as the most important to farm managers. The authors concluded that the lack of any resolutions created to address recruitment issues is a result of the fragmented nature of industry, other more urgent issues that arise for commodities such as marketing, production or pricing issues, and the failure of the sector to create promotional programs that are at the same caliber as other sectors' promotions. The report concluded that the trouble with recruiting employees to the industry may stem from a broader industry-image issue. Lastly, the study recommends that leadership training be a large part of HR training.

The following is the list of survey responses to what HR issues are most important and affect all commodities:

- Employment patterns
- Recruitment:; especially for seasonal labour, wages are a deterrent and the physicality of the work is a deterrent
- Succession and intergenerational issues
- Health and Safety: this is only a moderate issue and only receives attention after a high profile incident has occurred.
- Employee skill levels and training
- Management training: including how to hire employees and communication training

It was also noted that during the surveys it became obvious that agriculture producers in Ontario were unaware of the amount of training that is available to them.

Studies Conducted to Examine Training Needs in Canadian Agriculture (Referenced in Table 2.2)

Assiniboine Community College. 2003. Connecting with Agriculture: A Profile of Advisory Groups and Processes in Canadian Colleges and Institutes, Final Report. Prepared for ACCC Agriculture Learners Study Project.

The Association of Canadian Community Colleges (ACCC) initiated the Agriculture Learners Study Project that consisted of four studies that focused on the agricultural learning environment and the promotion of agricultural learning. The four studies were funded by Agriculture and Agri-Food Canada under the Agri-Food Assistance Program.

As part of the Agriculture Learners Study Project, Assiniboine Community College conducted a study with the purpose of creating a compendium of Advisory Committees used by Canadian colleges in order to keep connected and informed of what is needed from the Canadian agriculture industry in terms of skills training and to assess the 'connectedness' of the Colleges to the industry.

The research team conducted the study by sending surveys to eight Colleges (six of which responded) to seek out information on issues such as:

- Number of agriculture programs represented by committees
- Scope of the committees
- Profile of committee members

The study showed that the primary function of the advisory committees is to provide program advice (94% of the committees did this). Other functions include marketing and student recruitment (55%), identifying new program needs (45%), developing new programs (48%), developing curriculum (67%) and recruiting faculty (9%).

The research and surveys also show that many colleges have funding relationships or other special relationships and initiatives with a variety of industry stakeholders and are therefore gaining knowledge of what is required by the industry through these relationships. Other ways Canadian colleges remain connected to the industry is through attending or hosting of industry conferences, memberships with associations, staying in touch with alumni, community consultations and inviting industry experts as visiting lecturers. Canadian Colleges also show their connectedness to the industry by providing skills renewal and lifelong learning courses in response to industry needs, developing and maintaining programs for new entrants through industry input and continuously incorporating changes into all programs as required.

Overall, the study concluded that Colleges are 'successful' at ensuring they are connected with the Canadian agriculture industry. However, the study also identified challenges to the connectedness of the industry including the ever-increasing diversity of the sector, college funding cutbacks and the increasing load on faculty that leaves them with less time to nurture industry connectedness.

Atyeo et al. 2003. Agricultural Learning/Skills Development Opportunities for PEI. A Neo Insight Publication. Prepared for PEI Agricultural Human Resources Development Council.

It is widely recognized that one of the key challenges across Canada within the agriculture sector and in PEI in particular is that in order to be successful farmers and farm workers must be skilled to ensure that the industry remains viable. Factors that have affected and/or created these training needs include increasing farm sizes, globalization and marketing, increased competition, business management, technology changes and legislation changes. Therefore, PEI's Agricultural Human Resources Development Council (AHRDC) hired Neo Insight Inc. to conduct a study to identify the skills required and the needs of PEI's agricultural community for training and education. The study also includes an inventory of the training opportunities available on the island and assessed the gaps in and barriers to training that exist. This study is the first of two studies conducted by Neo Insight for the PEI AHRDC.

The results of the needs assessment show that the needs of farmers center on labour and skills shortages, and the need to continually change as technology, demographics and management changes. Since a high percentage of farm assets will be transferred in the upcoming years, the younger generation must ensure it has the proper mix of skills to keep the industry viable. Farm workers will also require skills development and practical farm training. It was determined through the study that farm workers prefer to learn through farm mentors and coaches therefore farmers will need to develop into the roles of mentor and coach to effectively transfer their knowledge. Farm workers also noted that they prefer learning in practical settings such as

workshops and networks, rather than academic institutions, where not a lot of time is required off-farm and much of what is learned can be used immediately.

The inventory of courses that was collected as the second part of the study revealed that most courses and learning opportunities provided in PEI were non-commodity specific and general in nature because there was a lot of overlap for example, in the animal husbandry classes offered. The study also showed that there are few distance education opportunities that would allow students to continue working while taking a training course. There were also no classes that combined in-class instruction with distance education that would suit a farm worker's time commitments. Therefore, the authors recommend that more training opportunities be offered through distance education, on the job training and courses with more flexible schedules to satisfy the needs of farmers and farm workers.

Lastly, the study analyzed the training needs in PEI against the opportunities available to identify any gaps in or barriers to training. The study revealed that farmers need to be better informed of the benefits of being trained and having a well-trained workforce. The direct effects of training in other industries is more widely recognized and needs to be recognized is the agriculture industry as an investment. The authors suggest that there are two key barriers to justifying an investment in skills development; firstly, there is no clear definition of what farmers need from the labour force and secondly, the core skills and special skills required are not yet completely known and need to be more clearly identified. However, this study did identify that two streams of training will be required; basic training for workers and more specialized and investment-oriented training that combines classroom and hands-on training.

Atyeo et al. 2004. Prince Edward Island Learning Study and Designation Survey Final Report. A Neo Insight Publication. Prepared for PEI Agricultural Human Resources Development Council.

This study is part two of Neo Insight's work on the human resource needs of the agriculture industry in PEI conducted for PEI's Agricultural Human Resources Development Council (AHRDC). This study is essentially broken into two parts; the Farm Learning, of which the objective was to determine a better understanding of the training and skills development needs of PEI farmers and is essentially the second part of the first study conducted by Neo Insight Inc., and a Designation Survey that gathered input from over 100 farmers for application by the Department of Education's Apprenticeship Board to have the job of 'farm worker' achieve designation as a trade.

The purpose of both studies was to address a number of labour issues of concern to PEI's farmers, especially shortages of skilled labour and the need to promote agriculture as a viable career.

The Learning Study involved interviewing farmers or groups of farmers to determine what they thought the most pressing training needs in the industry are and how to deliver the training. The skills that they thought were needed include:

- Business skills
- Mechanical skills
- Production skills (vaccinations, animal health, feed ratio evaluation, safety)
- Human resources skills

Farmers indicated that their employees needed training in basic but essential skills such as worker attitude and interpersonal skills. Farmers indicated that the preferential learning method

would be a combination of classroom lectures and hands-on training, and would prefer to have their employees with them so that the farmers aren't training them but so that discussions can occur back at the farm. The essential reason for wanting to train employees is so that the farm can run more efficiently with less supervision, risk will be prevented and the farmers will also be protecting their investments by having trained employees.

The authors determined that the province would be able to target its training to three sets of employees; full-time, part-time and seasonal workers with training in upgrades and life-long learning, apprenticeship training and introductory courses or pre-apprenticeship training respectively.

The Designation Survey research was conducted to determine the degree of support for apprenticeships in the EI farming community. 88% of farmers interviewed supported the idea of an apprenticeship program and would be willing to enroll workers. However, farmers had concerns about the program including (Neo Insight Inc., 2004):

- Funding and incentives to send employees, and the effect of wages and EI
- Training content and practicality of it
- Who is involved
- Effect on labour pool costs and availability of workers
- Program organization

Based on the discussions with farmers the authors make the following recommendations regarding an apprenticeship program (Neo Insight Inc., 2004):

- Apprenticeship should be modular, and targeted at labour market groups' needs
- Apprenticeship might provide a route for the next generation of farmers
- Paths after apprenticeship should be clear up front
- Design program content to meet farmers' most pressing skill needs
- Manage the first cohort to promote the best image of farm worker occupation
- Recognize the training that is presently done – don't reinvent it
- Encourage and reward farmers who train apprentices and enhance the labour market
- Farmers will need to compare outcomes with the current situation
- Teach emerging and sustainable ways to farm - new farmers are more open about data
- Provide a labour pool or relief workers - for farmers who need to cooperate over labour
- Match learning styles and education to the strengths of farming

Bourne, A. 2004. A Training Needs Assessment of Newfoundland and Labrador's Agriculture Industry: A Plan for Human Resource Development. Prepared for the College of the North Atlantic, Government of Newfoundland and Labrador, and the Newfoundland and Labrador Federation of Agriculture.

The training needs assessment was conducted as there was a recognition in the province to 'explore new options for developing a new economic base', other than the fisheries industry, and helping to restore rural communities. Agriculture was seen as an industry that has potential to address this and training was identified as playing a key role in realizing its opportunities.

The following list shows the areas of development that have been identified as important needs of agriculture workers:

- Basic skills development
- Advanced skills development (NEW skills to meet changes in the industry)
- Interpersonal skills development

- Business management skills development
- Farm business succession planning
- Computer skills
- Health and safety training
- Environmental sustainability
- Secondary processing, value-added skills

Bourne (2004) conducted interviews with various commodity producers and groups and also determined the specific training needs of the various commodities in Newfoundland and Labrador. She examined: blueberries, beef, bees, chicken, dairy, egg, fur, horticulture, pork and sheep. Bourne also suggests that due to the fairly new agriculture industry in Labrador compared to the island that a full-time training program that covers most areas of agriculture be made available to Labrador farmers. After reviewing the individual needs of the commodities in Newfoundland and Labrador, Bourne recommended the types of training programs that should be focused on, including:

- An introductory agriculture course for new entrants and to entice others into the industry, promoting the industry as a viable career
- A professional development course with a focus on selling and marketing, organizational behaviour and management skills
- A course that would encourage or provide farmers with the skills to adapt their businesses and develop on-farm value-added initiatives
- A meat cutting and processing course
- A course to provide information and ideas on agri-tourism
- A course that would provide information to farmers and industry stakeholders on current issues in life science research and development and how these issues relate to the agriculture sector

Some recommendations that have come from the study include:

- Appoint a human resource planner to the industry
- Develop education and training programs to meet industry's needs
- Need to attract and retain labour therefore industry promotion efforts need to continue and be stepped up, design a training program for new entrants that will provide insight into the many careers that are available in the industry, need to build professionalism in the industry so that the young workforce sees that and lastly, currently there is no educational institute in the province that provides an agricultural degree program and this should be developed.

Brady, B. 2002. Human Resource, Education and Training Needs Assessment for the Saskatchewan Beef Cattle Feedlot Industry. Prepared for the Saskatchewan Beef Cattle Feedlot Industry in care of the Saskatchewan Cattle Feeders Association.

In response to change and expansion within the feedlot industry, the Saskatchewan Cattle Feeders Association obtained Brady Marketing Services to address the training and education needs of the industry in order that it may remain competitive in the changing environment. The project also included an environmental scan of training opportunities offered to the cattle industry across the Prairie Provinces. The human resources and training needs were identified through feedlot surveys and interviews and two focus group discussions. Following the identification of the needs of the industry a gap analysis of the HR needs was conducted.

The interviews, surveys and discussion groups suggested that most training in the industry occurs on-farm by experienced feedlot staff because very few courses are available in Saskatchewan to sufficiently train feedlot workers. Feedlot work requires many skills such as

cattle handling, animal health, nutrition, equipment operation and maintenance and office administration. The report states that there is an interest from Saskatchewan educational institutes to develop courses tailored to the feedlot industry because of the expansion that was expected to occur. Owners and managers recognize that untrained employees can incur preventable costs that could be decreased in training in machinery repair or livestock handling. The report recommends that the general programs available at SIAST and the University of Saskatchewan be complemented by programs that focus on feedlot management such as the programs offered at Olds College, Lakeland and Lethbridge. As well, the Green Certificate Program should be promoted more as a training tool. The report clearly shows that there is a gap between the training opportunities offered in Saskatchewan and the future training needs of both employees and managers in the industry. The industry suggested that organizations with ties to the industry need to coordinate the development of courses and curriculum so that they are developed to address relevant issues. Courses must also be delivered in methods that allow participation of the industry, for example seminars and workshops rather than weekly courses and where hands-on learning is provided. The industry suggested to the authors that mentoring and job shadowing are also innovative and enjoyable ways of learning. It was also recognized that a greater emphasis needs to be put on the Agriculture in the Classroom program that would enhance the image of the industry in the school system.

The report recommended that further development and implementation of training initiatives should continue as the report clearly shows there are gaps in the opportunities currently available.

Davis and Hulett. 1999. Skills Needs in the Resource-Based Sectors in Atlantic Canada.

There is a common misconception that the resource-based sectors require only low or medium-knowledge labourers and skills. However, with the increasing innovations and technologies that are being used to remain on the cutting edge, there is an increasing demand for higher skilled workers. In Atlantic Canada the resource-based industries make up a large portion of the economy. There are plenty of workers to fill demand and a variety of programs have been developed at the colleges and universities that provide training in these sectors, these programs have also been upgraded in the past to provide students with the most up-to-date skills required. However, the problem in the resource-based economies is the large portion of the workforce that is older and is less skilled than is now desired. There is a need for this part of the labour force to update its skills. Davis and Hulett (1999) conducted a study that reviewed examined the specific needs of the agriculture, fisheries (including aquaculture), forestry, mining, oil and gas, and environmental industries in the Atlantic region. However, the discussion below focuses only on agriculture and aquaculture.

Davis and Hulett (1999) state that there is an increasing need for knowledge-based skills in the agriculture industry due to new regulations and concerns of food safety, the environment, and business management. Few farmers have training in business management despite the fact that they are managing small businesses that are growing. It is noted that there has been an effort to provide training in business management to farmers, but not food safety which is also becoming more of an issue with the increased requirements for safe handling. Land and waste management practices are also becoming issues as there has been an increase in environmental regulations and the issue of sustaining the land (David and Hulett, 1999).

Due to the close interaction between educational institutions and the industry, programs that are offered are relevant with respect to the needs of the agriculture industry and they cover a wide-range of skills that would be required to be employed in both primary agriculture and food processing. Davis and Hulett (1999) suggest that the combination of post-secondary and

industry association courses is meeting the needs of the sector to create a new labour pool with the required skills and to update the skills of those currently employed in the industry.

With respect to aquaculture, the report suggests that at the time of writing there was a balance between supply of labour and demand for labour, as well; colleges and universities in the region were offering courses with the necessary skills to work in the industry. The demand in this industry is for managers with experience, which is difficult because the industry is so new; as well marketing skills that can meet consumer demands and develop successful products is also required. The skill level within the aquaculture industry is expected to be high as the industry competes with countries such as Chile, keeps up with the latest technological advances and understands the global marketplace. These needs are currently being met by students graduating from the many universities that offer courses that focus on the skills required in this industry, as well, lower-skilled employees are also being recruited and are in plentiful supply. The issue for all resource-based industries is to update the skills and knowledge of the large portion of low-skilled workers.

The report acknowledged that the skills required to attain sustainable development in each of the industries will be required for the future of the industry. This concept is new and when it is put into practice it will be hard to measure any value from it. Davis and Hulett (1999) suggest that the amount of training required to meet the specifications of sustainable development will be large and that one of the goals of Atlantic Canada should be to determine how training in this area should be conducted and distributed.

Formation Pro FP. 2001a. The Advantage of Agricultural Education and its Impact on Farm Profitability. Prepared for Comité sectoriel de main-d'œuvre de la production agricole, Québec.

It is highly recognized that education is key to succeeding in the business environment, including the agricultural environment, and there are more agricultural education programs than ever. However, Quebec producers still lack the level in education compared to producers in other provinces and the United States.

This study reviews the literature that has been written on the benefits of education on the management of a farm. Also, the study has presented some recommendations on promoting and providing education to the agriculture sector. The study includes the results of an analysis of the relationship of a producer's education to some other economic variables, such as the revenue. This analysis shows that there is a clear positive correlation between the education and the revenue. This is consistent with the fact that education should increase the wage of a worker.

The three main advantages of education in the agriculture industry include:

- Education increases the potential to have higher personal income

The result of an analysis of the active population of Quebec shows that the higher the level of education, the higher the wage. The worker with a university degree earns around two times the amount of a worker who did not finish high school. Workers with college diplomas and high school diplomas will gain 30 % and 20 % more, respectively, than a worker that did not finish high school.

- Education helps to provide financial advantages to farmers

There is a program in Quebec that provides those who have earned an agriculture degree with a sum of money when they return back to the farm or start up their own operation.

- Education improves the performance of the farm through improved decision making

The report suggests that the higher the producer's level of education, the better the performance of the agricultural operation is which leads to a better economic performance. This relationship results from better decision making, farm management and improved agricultural production techniques due to the education. Therefore, agricultural education improves the chances of success for new agricultural producers and reduces the possibility that new producers will leave the industry.

- Continuous education improves the ability of producers to adapt their enterprise.

The continuous education is considered as a factor to improve farm performance. Also the higher the level of education the producer has, the higher the interest in taking continuous education courses.

The purpose of the study was to show the positive impact of education on farm management. The literature review also revealed that the education has a positive impact on the development of the community.

Formation Pro FP. 2001b. Farmers' Accessibility to Continuing Education. Prepared for the Comité sectoriel de main-d'œuvre de la production agricole, Québec.

The acquisition of education and knowledge is now very important for farmers. Relevant knowledge and know-how about agriculture is an important asset for producers in order that they are able to face the increasing worldwide demand for food and the pressure from the processing sector. This study is a review of how Australia, France, US and UK have provided their agricultural producers with education and how to transfer knowledge to producers.

The results of this study show ways to provide accessible education to producers. Some of these ways are new alternatives that are not generally used in Canada, others are used in Canada but some appear better utilized in other countries. The main results of this study have been summarized below.

- Internet: The internet appears to be a potentially good system to help producers to network between each other and also to have access to information. The internet can provide three primary functions: as an educational portal to determine where to obtain training, as an information tool that provides technical information or as a network that provides producers with lists of where to obtain information or who to contact to provide specific information. British Columbia as the 'BC Agricultural Training Pages" that provides producers with information about all of the courses available in British Columbia. The University of Saskatchewan, for example, has fairly complete website with respect technical information.

- Distance Learning: Distance learning is in expansion in all the countries, the distance education programs for farmers are available in high schools and mainly in colleges and universities. However, even with the development of the information technology most courses are still offered by mail or phone with the use of books or course notes, instead of over the internet.

- Programs that provide information on what is being researched and developed in the industry. There is a gap between research and knowledge diffusion in the industry and there

needs to be a good way to accelerate the transfer of knowledge from the research institutes to the industry and into educational programs. In the United States there is program that helps to reduce the diffusion time of research results to the industry. The government offers incentives for researchers, teachers, professors or other industry professionals to accelerate the knowledge transfer. Basically there are three types of subsidies: to develop knowledge, to develop a channel to diffuse it and diffusing the knowledge. These subsidies seem to encourage the creation and acceleration of multiple knowledge networks.

- Skills recognition/accreditation: It is becoming important to give recognition to the skills and knowledge that producers currently have. All countries reviewed in this study are developing standards and alternative accreditation methods for producers to more highly value their skills.

Goursky, N. 2004. Coordinated Agricultural Curriculum. Prepared for ACCC Agriculture Learners Study Project.

The Association of Canadian Community Colleges (ACCC) initiated the Agriculture Learners Study Project that consisted of four studies that focused on the agricultural learning environment and the promotion of agricultural learning. The four studies were funded by Agriculture and Agri-Food Canada under the Agri-Food Assistance Program.

The report, *Coordinated Agricultural Curriculum*, is one of four projects in the Agricultural Learners Study proposed by the Association of Canadian Community Colleges (ACCC). This particular study is Phase 1 of a two phase report that provides the results of a survey of adult education (non-degree and non-diploma) programming – including certificates – offered by Canadian colleges. The data that was accumulated from this report has been compiled into a searchable database.

The purpose of this two-phase report is to gather, analyse and distribute information on adult curriculum in colleges delivering agricultural curriculum components and to foster a networking culture among these colleges. The ultimate aim of this project to foster collaboratively-produced adult-oriented curriculum components addressing such key issues as food safety and food quality, environmental issues, technological transfer, access to capital, succession planning and risk management for use in training delivery across Canada.

To attain the objectives, a methodology and production grid were developed to identify and analyze various curriculum components by college, subject area and delivery mode. When possible, gaps in the existing curricula were identified. A survey was conducted and was extended to a minimum of eight or nine colleges by surveying all 17-ACCC-member colleges delivering agriculture-related curriculum. A databank was also created which contains an inventory of the curricula.

As mentioned above, this study identified gaps in the agricultural curriculum inventory. Based on these observed gaps, a course of action for phase 2 was recommended based on an analysis of the data that was accumulated in phase 1.

Analysis showed that, based on the priorities of the Agricultural Policy Framework (APF), the area of Business Risk Management has the lowest number of course offerings, however, many of the tools that are applicable to it are generic and are already offered in a variety of settings across the country. Specific tools for farm management are also offered by non-college providers.

Environment is already well represented in terms of course offerings and environmental regulation falls primarily under provincial jurisdiction, making it a less likely candidate for federally-supported collaboration.

Of all the APF categories, Renewal is the best represented, and based on the evidence, it is the least in need of a collaborative approach to curriculum development.

The study recommends that Food Safety and Quality, and Science and Innovation are the strongest candidates for developing new offers of national interest. Analysis of the survey results shows that these areas are under-represented in terms of the number of training opportunities available in these fields. In the case of Food Safety, national standards are already in place, and national organizations are already mandated to deliver services to stakeholders across Canada. The existence of these networks will facilitate both collaboration across borders and eventual program delivery.

Grier et al. 2003. Innovative Practices in Agricultural Learning. Prepared for the ACCC Agriculture Learners Study Project.

The Association of Canadian Community Colleges (ACCC) initiated the Agriculture Learners Study Project that consisted of four studies that focused on the agricultural learning environment and the promotion of agricultural learning. The four studies were funded by Agriculture and Agri-Food Canada under the Agri-Food Assistance Program.

This study was prepared for the Agriculture Learners Study Project by a team of researchers from the Saskatchewan Research Council and Olds College Centre for Innovation, with the purpose of identifying innovative practices in agriculture learning in the area of food safety and quality, environmental management, business risk management, research and innovation and farming technologies. The study was conducted by adapting methodology used by the World Association of Industrial Technological Research Organizations used to identify best practices for managing research organizations. The methodology involved conducting a literature search and developing a conceptual model used to create a survey tool. Surveys were distributed to Canadian educational institutions, as well as a few international educational institutions, that offer college level agriculture programs. The survey consisted of questions regarding the promotional activities of the institution, the funding of the agriculture programs, teaching methods, and innovative learning methods and how programs have been changed to meet the changing needs of the industry.

Key findings of the literature review and survey were:

- Colleges have implemented a number of practices for promoting the agriculture programs because students will be attracted in a number of different ways. There appears to be no best way to attract students
- Program funding is a challenge for most institutions
- Colleges have trended toward delivering courses in non-traditional ways and non-traditional locations. Internet-based learning is growing in importance. More and more programs are being made accessible to remote students.
- The most innovative learning methods are the most effective, including; hands-on training, learning from peers, and connecting the learning material to reality
- Institutions noted that practices are in place to ensure that the programs offered meet the needs of the industry

The authors suggest that the next step would be to inform the educational institutions on the results of the survey and develop a criterion function for ranking the effectiveness of the various practices.

Hodgins and Company Management Consultants Ltd. 2003. Human Resource Skills Needs Assessment for Primary Agricultural Production Sector.

The needs of the agriculture industry in Saskatchewan have changed over the last few years due to the transition that the industry has experienced in the last few decades. The fundamental change within the sector came when the Crow Rate Subsidy was eliminated creating an incentive to produce higher valued crops rather than the traditional bulk grains. As the industry changes, farm managers must also update their skills in order to adapt with the changes. The need of farm managers to update skills and the continuous transition of the industry prompted this study to be conducted.

This report was initiated by an interdepartmental committee consisting of representatives from the provincial departments of Learning, Industry and Resources and Saskatchewan Agriculture, Food and Rural Revitalization. The purpose of their meeting was to discuss the need for information on skills requirements associated with primary agriculture in Saskatchewan and to assess whether there is a need for a human resource development plan. Post Secondary Education had funds to sponsor the program and it was recommended that an industry group oversee the process. The Saskatchewan Agricultural Commodity Training Advisory Committee (SACTAC) of the Saskatchewan Council for Community Development was chosen to oversee the project. SACTAC was chosen because its mission; to empower and strengthen Saskatchewan agriculture and its communities by developing and promoting training strategies through the collaboration and coordination of the activities of agriculture labour market partners; fit well with the intent of the project.

The overall objectives of the project were to:

- Identify inconsistencies between the current inventory and level of skills within the agricultural labour force and the current and future requirements of the sector
- Develop recommendations and an action plan to address the gaps that are identified

The authors conducted the research through a literature review and industry interviews that discussed Hr studies conducted in the past and the needs that the interviewees feel are most important to be addressed today. The following list shows the training needs that were deemed most important:

- Farm management
- Marketing
- Human resource management
- Business operations
- Communication and negotiation
- Performance management
- Strategic thinking
- Critical analysis
- Financial analysis
- Risk management
- Investment management
- Corporate governance
- Project management
- Leadership training

- Change management

The authors then compared the training needs identified against the curriculum of agricultural programs already existing in Saskatchewan to determine if the programs meet the needs of the industry. None of the programs met all of the needs. Therefore, the needs of the industry are not coordinated with the programs offered and most programs only offer pieces of what is now required of farm managers in the ever-changing and increasingly global marketplace, and a large gap exists. Other challenges with respect to farm managers participating in training were identified as the cost of the programs, lack of time and location of the courses offered.

The report recommends the following to overcome the training challenges:

- A Centre for Agriculture Training and Education. CATE has been established and is up and running and is discussed further in the Initiatives section of the report.
- Financial institutions and equity funds should be approached for participation in the model
- The target audience for this training is the agribusiness manager whether new, expanding, young or old.
- The training of managers should focus on business management, development and human resources
- Needs of the aboriginal or Métis agribusiness manager need to be addressed
- Needs of at-risk farmers need to be addressed
- Managers need to be aware of the training programs available to them

Lunden, A. 2001. Discussion Paper on Management Skills for the Future. Prepared for the Federal-Provincial Working Group Meeting.

This report was created as a background document for discussions on the Business Skills for the Future component of the proposed federal-provincial initiative on rural renewal. The discussion paper summarizes the results of five studies that reviewed the issue of management skills and challenges in agriculture. The five studies referenced include:

- Bradshaw, G. and P.E. Gervais. 1998. Management Challenges for Alberta's Farming Industry to the Year 2005
- Alberta Agriculture Food and Rural Development. 2000. Needs Assessment Profile – What Successful Managers Do
- Alberta Agriculture Food and Rural Development. 2001. Needs Assessment Profile – Financial Management
- Howard and Brinkman. 1998 Identifying Management Differences between Farmers in Canada.
- Garven and Associates. 1997. Effective Farm Business Management Practices and Performance Measures Study.

Based on the comparisons and conclusions of the five studies, Linden (2001) concluded that two types of skills are most needed by Canadian farm managers for the future:

- Skills required to acquire and assess information and make good business management decisions
- Skills required to implement business management decisions

The skills required to assess information and make decisions include:

- Information management
- Entrepreneurship
- Strategic thinking

- Planning
- Business development

The skills required to implement decisions include:

- Operations management
- Human resources management
- Marketing skills
- Production management skills

Lunden concludes that along with these required skills, it is important for farm business managers to acquire and develop networks. The five reviewed studies show that farmers value receiving information and advice from their network of peers.

Saskatchewan Institute of Applied Science and Technology. 2003.Profiling the Learner Market in Agriculture and Agri-Food Canada. Prepared for ACCC Agriculture Learners Study Project.

The Association of Canadian Community Colleges (ACCC) initiated the Agriculture Learners Study Project that consisted of four studies that focused on the agricultural learning environment and the promotion of agricultural learning. The four studies were funded by Agriculture and Agri-Food Canada under the Agri-Food Assistance Program.

Agriculture and Agri-Food Canada commissioned the Saskatchewan Institute of Applied Science and Technology to conduct a national study aimed at gaining a better understanding of the trends within the learner population. A secondary objective of this research was to assess the impact of these changes on opportunities for career entry and continuing education learners.

The project was conducted in two phases, and included the participation of 13 colleges and universities from all regions of Canada. Findings of this study are based on the examination of enrolment trends in over 200 academic offerings, the conduct of student focus group sessions, meetings with faculty and interviews with selected agricultural and aboriginal organizations. As well, a learner survey was distributed, which received 799 responses.

The differences between career entry and continuing education were profiled based on the survey results and labour analysis. It was found that career entry students tend to be younger (under 20 years of age), and relatively homogeneous in terms of their education interests and expectations for learning. The group is predominately from farm and rural areas and evenly distributed among male and female students. In contrast, continuing education learners tend to be far more diverse in terms of age, interest, and expectation. As well, the group was predominately male.

Analysis of the trends of the primary production, upstream (businesses that feed primarily into primary production) and downstream (handle and further process farm products) economies were also performed. This analysis reinforced the need for educational institutions and government to develop new and accessible learning opportunities, including certification, for people entering or currently in these businesses.

The vast majority of career entry programs offered at participant institutions tend to focus on animal and crop production and the principal motivation for students enrolled in these programs is to get good employment and business education.

The authors were surprised to find that there were a small number of continuing education offerings – with the exception of plant and soil sciences. They found this result very troubling, especially at a time when lifelong learning appears to be the key to success.

Results from the surveys suggest that career entry and continuing education learners are looking for learning opportunities that encompass both the science and the business of agriculture.

From their research, the authors present three important opportunities for colleges, universities and government in meeting the emerging employment needs of the industry and its labour force. They are:

1. There needs to be a concerted investment in developing "new economy" programming, with a focus on enterprise development. This would begin to address the need for increased profitability.
2. To better serve the overall sector, a genuine commitment to continuing education, not only in terms of creating more learning opportunities, but also in improving research, marketing and student tracking systems are required.
3. Educational partners and government have a unique opportunity to join forces through a greater commitment to curriculum diversity and developing the full potential of learning opportunities by combining the technical expertise, new knowledge and research capacity in their respective institutions.

Shea, A. Needs Assessment: Agriculture Mentorship Program in Saskatchewan (AMPS). Developed for the Agriculture Institute of Management in Saskatchewan and the Saskatchewan Council for Community Development.

In the summer of 2003, AIMS set out to determine the need for an agriculture mentorship program in Saskatchewan with the cooperation of Human Resources Development Canada and the Saskatchewan Council for Community Development. The assessment was conducted through surveys sent to agriculture producers, the agribusiness sector and immigrant farmers in Saskatchewan. Overall, over half of the survey respondents felt that there is a need for a mentoring program in Canada because producers can't access the information required to maximize their business potential.

The report recommends that based on the survey responses, a formal mentoring program be developed in Saskatchewan by a third party organization; it was thought that this program would be very useful with knowledge transfer. However, only 20% of the respondents thought that they would participate as 'mentees' in the program but also, more than 80% of the farmers that responded considered themselves experienced.

The author notes that the timing is right as the agricultural population in Saskatchewan is aging and the younger workforce is more interested in moving to the city, therefore interest in this industry needs to be sparked. Other findings from the surveys included:

- Respondents believe that mentoring plays a significant role in the agriculture sector
- Majority of respondents say the program would help with their diversification
- Respondents believe that it will be very useful for immigrants and young people

The author also recommends that mentors be provided with a training manual and reference guide to provide them with information on what would be required of than as mentors.

The author suggests that the mentoring program be aimed to be available for all producers in the province and will be designed to:

- encourage new farming ventures,
- promote youth involvement in the industry
- help immigrants become established in the industry
- focus on diversification on the farm

The report also shows that many mentoring programs in the United States are being utilized as a way of transferring knowledge to young producers or producers trying new ventures on the farm.

Studies Conducted to Review Needs of Sectors Utilizing Seasonal and Harvest Labour (Referenced in Table 2.3)

Canadian Horticultural Council. 2004. Horticulture Works - A Call to Action to Develop the Workforce for the Future of Horticulture in Canada.

In April 2004, the Canadian Horticulture Council prepared a study called "*Horticulture Works – A Call to Action to Develop the Workforce of the Future of Horticulture in Canada"*. Because of the labour intensiveness of the horticulture sector, in comparison to other parts of agriculture, its future success relies particularly on its workforce. The general labour force situation in Canada – there are fewer workers entering the labour force relative to those leaving – requires that ensuring that there are sufficient numbers of workers for the future should be the highest priority for the continued growth and success of the Canadian horticulture sector. Thus, the purpose of this report is a call to action to mobilize all stakeholders into an effective, coordinated plan to proactively address the future needs of the sector. The report says that it is presently necessary to increase the pace of efforts, and to strengthen coordination across Canada, as well as across subsectors, to nip an emerging crisis in the bud.

Public policy in Canada has shifted from a historical focus on the problems of labour supply to a more encompassing view of human resources management and skills training as a form of investment in the long-term competitiveness of the industry. Recommendations provided by this report adhere to this public policy orientation and seek to provide a comprehensive approach.

Through the consultations exercised in this initiative, key issues were identified and possible solutions developed. As a result of this work, the Canadian Horticultural Council is persuaded that the availability of human resources and training needs of stakeholders is critical to the long-term growth and prosperity of the industry in Canada. For this reason, the CHC has asked Human Resources and Skills Development Canada (HRSDC) to participate and provide resources for a process chosen for further discussions on the development of an action plan for human resources for Canadian horticulture. The first step would be to form a National Sectoral Council for Human Resources in Horticulture, to address the urgent needs of the horticultural sector.

A brief description of the key issues that were outlined in this report is given below.

Recruit and retain sufficient numbers of trained employees at competitive wages:
It is recommended that this be achieved by undertaking market research to determine what factors will provide effective messages for attracting and retaining skilled horticultural employees. Reliable information regarding key performance indicators should be steadily retained and best practices for recruiting and retaining workers should be documented and

communicated. As well, an effective system for identifying other areas of horticulture or other industries with counter-seasonal needs should be developed to facilitate sharing and pooling of seasonal labour.

Raise the profile of seasonal workers on the agenda for urgent policy reform:
Raising the profile of seasonal workers can be achieved by making the appropriate ministries aware of the value and importance of seasonal labour. It needs to be determined which regulations should be changed to recognize the value of seasonal work, and to prioritize which reforms are the most urgent. As well, commodity groups should work with all levels of government to provide and examine incentives and/or recognize and remove disincentives (such as CPP, OAS and disability) for horticultural workers.

Undertake a campaign to reshape and effectively market the image of Canada's horticultural sector as a desirable place to work:
The horticultural industry needs to develop and distribute materials to promote and highlight the numerous career options which can be pursued in the various subsectors of horticulture. These include more effective participation at school career days, high school co-operative education programs, awards for excellence to top growers for outstanding contributions in worker development and management and national and international exchange programs for students.

Promote a culture of continuous learning and skills training:
The horticultural sector needs to develop the ability to deliver training in short cycle times. A comprehensive assessment of the industry's current training materials needs to be undertaken, and existing material needs to be made readily accessible and available to producers. As well, gaps in the current training material need to be identified and attended to.

To implement these recommendations, a series of strategic actions were outlined:
- Establish a National Sectoral Council for Human Resources, as mentioned above, to focus on implementing the priority recommendations of this report
- Establish effective mechanisms to promptly identify regional issues and ensure that they are addressed by a horticultural sector council
- Conduct baseline demographic research to identify how changes in the age structure and ethnicity of the Canadian workforce will impact the availability of workers for horticulture
- Lobby federal ministries to undertake reforms to address the urgent need for workers in the horticultural sector
- Develop employee programs to recognize training received, such as apprenticeship programs based on the European model, which take into account existing Canadian programs
- Promote case studies demonstrating the contributions of foreign workers to the Canadian economy

Improve ongoing monitoring of key performance indicators of worker trends in Canadian horticulture.

Duffy and McEwan. 1999. A Study of Labour Seasonality in the Landscape/Horticulture Industry

The study on labour seasonality in the landscape/horticulture industry by Randy Duffy and Ken McEwan examined the impact of winter and the seasonal nature of Canadian weather in the landscape/horticulture industry. Employees cannot work outside in the winter when the ground is frozen, and consequently, they are laid off. While some are able to find part-time winter employment, many rely solely on Employment Insurance (EI) for a source of income. This situation not only represents an unproductive labour force from January to April, but it also

perpetuates many of the labour problems associated with working in a seasonal industry, such as high turnover rates, low recruit numbers and low worker self-esteem.

Thus, the purpose of this study was to research the seasonality issue and look for potential solutions to this labour problem. Three objectives fell out of this purpose. They were to:

- Benchmark or profile the landscaping/horticulture industry in terms of general labour statistics
- Review other industries for comparative studies and creative solutions
- Examine the importance of Employment Insurance in the landscaping/horticulture industry and determine what segments are benefiting from the program.

To achieve this, the authors performed an industry background through a brief literature review. Data collection was achieved through survey questionnaires developed for both employers and employees and EI claimants within the Peel, Dufferin and Halton regions. As well, a series of commodity focus meetings were facilitated to gather specific business and employment data. To develop seasonal labour solutions, various employer/employee/government relationship models were investigated and developed.

Results from the study show that the majority of employees want to work year round and many have a dislike for filing an EI claim mainly because of the two week waiting period in which they receive money and the need to look for temporary work. Some employees also indicated that they are part of the underground economy.

In the survey of employers of the landscaping/horticulture industry, it was revealed that most businesses face stiff competition for employees and key employees are usually kept fully employed year round.

The relationship between EI and the landscape/horticulture industry was also reviewed. Statistics show that the industry receives $57,254,678 in benefits and is only marginally a net benefactor of the EI program. The months of January, February and March are peak pay out months and it was felt that the formula for this seasonal industry should be reviewed so that it becomes more of an incentive for workers to work during the winter down time.

Overall, it was determined through various surveys and focus group discussions that workers generally feel that it is the employer's responsibility to find them alternate winter employment. Workers are not mobile and will not relocate for seasonal winter work. However, they are willing to work in different industries over the winter and to participate in continuing education and training to better their skills in the off-season. As well, industry groups are frustrated with EI and expressed concern over the view held by some that the landscape/horticulture industry does not represent a viable career option.

Many alternatives were suggested and reviewed by the authors, but there were none that appeared to be good solutions. While the perennial problem may be alleviated through a combination of efforts, it is unlikely that it will be totally eliminated.

The authors made the following suggestions pertaining to how the labour problem could be alleviated:

- There is a need for some education of both EI personnel and industry employers and employees to recognize that the landscape/horticulture industry is viable
- Training is on going and should be permitted for EI recipients during the winter months
- An industry agency could be immediately set up to assist the landscape industry and also to provide talent to other industries requiring help in the winter months

- Employers should be encouraged to offer employees steady incomes similar to salary jobs.
    - This could be accomplished by setting up a policy stating what hours are going to be banked and maintaining hourly records so that minimum wage requirements are met
- Industry committees should be set up to liaison with EI and other government agencies to explore complementary industries that need personnel in the winter months.
- Employers should continue to explore and develop new business activities that might enhance profitability

The authors also made recommendations about actions that could be taken in the future. They suggested that a separate EI program, industry and seasonal specific, should be developed to provide a real incentive for laid off workers to find secondary jobs during the winter months. As well, a customized EI program that would allow either six weeks or twelve weeks of benefits should be reviewed.

They also suggest that a program which both penalizes frequent EI users and rewards employers and employees who provide or locate jobs should be considered. Finally, it was suggested that a review of the industry to determine if licensing of the trade is an advantage to both employees and employers is necessary.

Gardiner Pinfold Consulting Economists Ltd. 2003. Harvest Labour Force Analysis, 2002.

The study prepared by Gardiner Pinfold Consulting Economists Ltd, in April 2003, is a harvest labour analysis of the horticulture and fruit sectors of the Nova Scotia agriculture industry. The Nova Scotia horticulture and fruit sectors have been facing chronic harvest problems for the past 10-20 years, with the challenges faced each harvest season being compounded by several years of drought-like growing seasons. Labour market forecasts expect that labour will supply will constrict over the next few years as the workface ages and the supply of younger workers declines. Most of the jobs supported by this sector are in rural communities, and this makes the industry the corner stone of the economy. This study looks particularly at two sub-sectors of the industry: horticulture small fruits and vegetables; and, tree fruit. Each of these sectors has a unique workforce requirement and face peak harvest demands at different times.

The purpose of this report is to prepare a comprehensive study of human resource needs in the horticulture industry from both an employee and employer perspective to help them address the issues the industry is currently facing and to prepare for the future. This was accomplished through the use of surveys sent out to both employers and employees. As well, a literature review was conducted to support the primary research and, as part of the research, an assessment of Harvest Labour Services was conducted with recommendations developed for its future operation. In addition, a review was completed of the potential to establish a Horticulture Sector Council that could address a wide range of human resource issues related to harvest labour and other horticulture industry human resource needs.

The results of the study indicate that Nova Scotian fruit and vegetable producers are having a hard time meeting their hand harvest labour requirements and some of the problems associated with this include a very high employee turnover rate, crop losses and/or restricted expansion of operations due to uncertain labour supply and difficulty in recruiting hand harvest labour. This problem is not unique to Nova Scotia, and while many other agricultural crops can make use of increased mechanization, this is not possible in the horticulture crops industry.

As well, producers are facing ever-increasing competition for harvest labour workers. There is direct competition from other industries who are able to offer better wages and longer-term

employment and also indirect competition between other industries and producers seeking hand harvest labour.

The study also points out that, there are many people in the economy who would be willing to participate in harvest work, but do not because of variety of government regulatory disincentives. These disincentives include employment insurance regulations, marginal tax rates, employment support and income assistance rules, and rules associated with pensions. At the time of the writing of this report, the Nova Scotia Federation of Agriculture was considering adopting a *Harvest Labour Pilot Project* to determine how decoupling the income earned through harvest labour from social benefits and providing a tax credit on income earned through harvest labour could impact the availability of harvest labour.

Changing demographics, specifically an aging workforce, and fewer younger people available to participate in this type of work have contributed to labour issues. A low attachment to the farm industry has also intensified labour supply shortages. Despite the fact that nearly all harvesters indicated that they are satisfied with their working conditions, they would quit their farm job to get a non-farm job at the same rate of pay.

Of those producers surveyed, most agree that if the local labour market does not improve, they will have to consider immigrant labour. And, while this will provide a reliable supply of workers willing to do harvest work, it will also result in increased costs, due to travel, accommodation, administration, recruiting and hiring, and as well, there will be no opportunity to screen workers before hand. Previously, Nova Scotia producers have faced barriers to recruiting immigrant labour because of the short harvest season and the cost of accommodation.

In the literature review that was conducted by the authors of this study, they found that at least two previous reviews had been completed since 1990 which address human resource issues for the agricultural sector in Nova Scotia or Atlantic Canada and that some of the recommendations made by these reviews have been implemented. These recommendations include providing end of season bonuses to implement loyalty and coordination between producer organizations and social agencies to ensure that clients are aware of harvest labour job opportunities.

This study promotes the continued implementation of these recommendations and also believes that the industry should reconsider the following recommendations:

- Encouragement and facilitation by producers and producer groups of the cross over of harvest workers within the agricultural sector and other sectors requiring seasonal labour.
- Lobbying against disincentives to harvest labour should be continued by the commodity groups.

This study made many recommendations regarding the recruitment and retention of harvest hand labour in Nova Scotia. Some of these key recommendations include:

- Producers design and promote harvest jobs that are more attractive to employees, including the continued use of bonus incentives
- Producers should change the demographics to which their promotion and recruitment efforts are aimed
- General human resource management skills should be improved
- Offshore migrant labour should be considered as part of a recruitment strategy
- Human resource management workshops should be organized by the industry for producers

In their review of the Harvest Labour Services, the authors recommend that they do the following:

- Continue to provide human resource support services

- Expand their scope, including increasing the extent of their networking
- Place a high priority on achieving producer and employee satisfaction

Matheson Consulting Ltd and Enterprise Management Consultants. 2003. Seasonal Agricultural Labour Issues in Prince Edward Island. Prepared for PEI Agricultural Human Resources Development Council.

PEI Agricultural Human Resources Development Council commissioned Matheson Consulting Ltd., in association with Enterprise Management Consultants, to conduct a study regarding the issues surrounding recruitment and retention of seasonal labour. The authors were asked to identify the relevant issues, the extent of the problems, generate statistical commodity profiles and make viable recommendations to address the issues. The authors conducted the research through farm owner and worker surveys, interviews and focus groups across the province.

During the worker focus groups and interviews, the following issues were regarded as the most crucial to the workers:

- Employment insurance (EI) and seasonal work do not combine to make a viable living, therefore many workers seek other work
- Workers are frustrated with waiting times for EI cheques
- Workers are frustrated with the low rate percentage for EI
- Need for EI formula that creates an incentive to work further into the season and a higher percentage claim
- Concerns regarding inequities of the benefits of the EI system between the fishery and agriculture sectors
- Workers expressed that safety and working conditions need to be improved on farms
- It was obvious through the discussions that those workers with more specialized skills were able to work longer than unskilled workers (higher demand for them)
- Workers not favourable to migrant workers when farm owners could pay PEI workers more to work, but PEI workers did recognize the migrant labour reliability

The following issues were deemed as most important to the farm managers and owners from the information gleaned from the surveys, interviews and focus groups (in order of importance):

- Labour recruitment
- Employment Insurance effects on labour recruitment
- Worker turnover
- Paying employees in cash
- Worker attitude
- Absenteeism
- Worker skills/training
- Worker safety
- Workers Compensation
- HRDC job bank
- Too much drinking/drugs
- Child care availability
- Water and washroom facilities

The common response to how to best rectify the situation of the shortage of seasonal labour was to modify the EI program. In contrast to the workers, the majority of the farm owners are in favour of hiring migrant labour due to the certainty that they will stay until the harvest is

complete and their reliability and work ethic. Other common suggestions included increasing wages and creating a recruitment agency for seasonal agriculture labour.

The issues with not having a large enough seasonal labour force is the risk of not being able to harvest the whole crop and the financial losses that occur. Also, buyer relations can be negatively impacted if their supply is disrupted and buyers will look for other sources if producers cannot deliver.

The producer surveys ranked EI as a high level of concern and impediment to hiring seasonal workers. Major changes were made to the EI system in 1997, some of which benefited seasonal and workers and some of which did not. One change that benefited seasonal workers was the move to count hours rather than weeks since seasonal labourers work an intensive amount of hours during a short period. Every hour worked is used in the calculation of weeks of entitlement to benefits. However, a change that has caused some disincentive to work is that the formula used to calculate the amount of the weekly benefit is based on total earnings and a divisor (minimum of 14) depending on the employment rate. Therefore, workers aim to work at least 14 weeks, but working beyond 14 weeks causes a disincentive to continue. Therefore, farm owners complain that the new changes to the EI program make it even harder to recruit labour.

Other major issues with respect to labour raised by farm owners are listed below:

Concerns surrounding competition for labour and wage rates include the fact that higher wages are generally found in other sectors, other sectors also offer more permanent work and non-monetary incentives to remain in that sector. As well, physical jobs such as seasonal labour are always less popular than other job opportunities. Employers also stated that there is a demand among employees to be paid in cash so that they can supplement their EI; however, there was no evidence that this is a large problem on the island. Lastly, it was suggested that training and education need to top the priority list as well. AHRDC along with the PEI Department of Labour offer training programs to develop skills for seasonal workers such as truck driving licenses and pesticide applicator certification.

There were major concerns of workers over the interest of owners in brining migrant labour to the island. Concerns included jobs that would be taken away from PEI workers and the wages that would not be spent in PEI, as well; workers suggested that if they are paid higher wages there wouldn't be a labour shortage. However, the Canadian Seasonal Agricultural Worker Program requires a needs assessment be conducted and that PEI workers are first offered the available jobs before migrant workers are brought in, this is the *Canadians First* Policy. The report concluded that higher wages are not the only issues with regards to the labour shortages; farm owners also discussed unreliability of seasonal workers and the dependability of migrant workers. The report suggests that when farmers know with certainty the number of reliable seasonal workers that will be available to them; they may even expand their acreage which would offset the negative impact of their wages not being spent in PEI.

The authors recommended that a recruitment organization be created to coordinate farm employment efforts. The BC Agriculture Labour Pool is a good example of a fee-for-service organization that fills labour requirements and attempts to develop a stable, trained workforce. Lastly, based on the findings throughout their research, the authors recommend that the AHRDC develop and implement a comprehensive HR development strategy that includes examining the following issues:

- Improve industry image and recruitment
- Develop incentives to retain agricultural workers

- Improve worker skills and promote life-long learning
- Conduct wage and benefits surveys to improve understanding of compensation issues
- Improve understanding of EI program and its impact
- Assist owners and managers to improve HR skills
- Expand in-school education programs
- Work with social services and employment agencies to coordinate labour opportunities

Lastly, the report concludes that with a well-planned communications strategy these issues could be better addressed.

Prime Minister's Task Force on Seasonal Work, 2004. Liberal Task Force Report: The Seasonal Economy: Responding with Care.

The following discussion of the Liberal Task Force Report also includes a summary of a number of the presentations made to the Task Force and the dissenting study produced by Pierrette Ringuette (2004) following the release of the Final Report.

The Prime Minister's Task Force was established in October 2003 to assess and gain an understanding of the challenges and needs of seasonal work in Canada. Seasonal work is found in a number of industries including fishing, agriculture, tourism and film industries.

The specific mandate of the Task force was to examine the following:

- the specific needs of seasonal industries and workers in the areas of skills development, life-long learning, and literacy;
- ways to promote greater economic diversity and stronger local economies, particularly in rural and remote communities across Canada
- the support required to help seasonal work dependent communities to adapt to, and seize opportunities provided by, the new knowledge-based global economy
- ways of lowering barriers to regional and inter-provincial labour mobility

Many agricultural and fishing sectors made presentations to the Task Force when they visited the various provinces over the last year. Below is a summary of a couple of those presentations:

a. Presentation to the Task Force on Seasonal Work by the Canadian Nursery Landscape Association (CNLA) and Landscape Ontario Horticulture Trades Association (LOHTA)

CNLA and LOHTA addressed the Task Force to recommend human resource policies that, instead of being disincentives, will promote the recruitment, retention and professional development of employees in the horticulture industry. Current government policies such as the EI program are currently encouraging important seasonal labourers to leave the industry. The current schemes perpetuate high turnover rates, low recruitment numbers and low worker self-esteem in seasonal industries. The issue for owners and managers is the difficulty in recruiting workers and the time and cost of retraining new employees.

CNLA and LOHTA suggest a number of actions that both government and industry can take to solve these issues, including:

- Employees should enhance professional skills or take part in an apprenticeship program to become more valuable to employers and lengthen their work season
- EI staff need to be aware of the importance of seasonal workers and retract from counseling them to find year-round employment

- EI program should be modified to increase the number of hours (or % rate) that claimants can work before they receive reductions in their benefits
- For those operations that can employ workers for over 2000 hours per year, contracts should be written that average out their hours and income over the year
- The formation of alliances between industries to share employees should be created
- A Foreign Agriculture Workers Program should be developed specifically for the horticulture industry
- The development of an employment agency specifically for seasonal workers
- A customized EI program tat is industry or seasonal specific should be created so there is no disincentives for working in the horticulture industry
- Customize the EI program to allow either 6 weeks or 12 weeks of benefits

b. Presentation to the Task Force on Seasonal Work by the Fish, Food and Allied Workers

The Fish, Food and Allied Workers made a presentation to the Task Force on Seasonal Work in April 2004 in St. John's Newfoundland and Labrador. One of the biggest concerns to the FFAW is that 31% of Newfoundland and Labrador's labour force participants are seasonal labourers. Not only is seasonal work important to the economy but so are the spin-ff jobs that result from it. Also, the demographics of Newfoundland and Labrador's labour forces are slightly different than the average of all of Canada. Newfoundland and Labrador's workforce is on average older than the Canadian workforce and approximately 45% of the workforce is rural labour. The problem in Newfoundland and Labrador is not a lack of workers but a lack of work due to the downsizing of the fishery industry and advanced technologies on the processing side and, more especially, a lack of long term work. The problem is that without work and good, consistent work; the younger workforce will not be attracted to this industry.

The presentation to the Task Force suggested that to alleviate the labour problems in Newfoundland and Labrador's fishery industry to following are required:

- Early retirement program
- Improved E.I. system that does not penalize seasonal workers
- Foster education and training

The Atlantic Groundfish Strategy (TAGS) of the early 1990's ended before a significant impact was made. FFAW believes that an early retirement program would help the industry in the new technology-based economy by both strengthening and lengthening current jobs and making room for new workers. FFAW suggests a retirement program that takes into account both age and years of experience which TAGS did not do.

FFAW also suggested modernizing the Employment Insurance program to better reflect the realities of today's labour market. The FFAW supports the Canadian Labour Congress's broad-based and comprehensive reforms to modernize EI. A few of the concerns of the FFAW regarding the EI program include that the hours-based system discriminates against both seasonal workers and women. Women generally work fewer hours in a week, especially if they have children, therefore women must work longer before they are eligible for EI. Also, most seasonal workers, which is a large portion of the fishing industry, will not work enough hours to satisfy the requirements of the program. FFAW suggests that the calculation system be simplified, because as it is, it assumes that seasonal workers have a say in the number of weeks that they work and it penalizes those that are only able to work the minimum amount of weeks.

The FFAW also suggests that the current 55% benefit rate should be increased to 66% of average earnings. These issues are important to the FFAW because as the fishery industry has overcome the crash of the industry in the 1990's and has remained on the cutting edge with new technology, jobs have been cut. New technologies in the fish processing plants have improved total production but have also reduced the number of required labour hours. Therefore, these seasonal workers are working even fewer hours than previously, and cannot meet the needs of the EI program. Therefore FFAW is asking that the EI program be revamped to reflect the experiences of those who have been forced to work less due to advances in technology.

The trend of improved technology replacing workers is likely to continue, and those workers that will remain will require the skills necessary to operate the technology. This will be especially true in the fishery sector and the FFAW suggests that Canada needs to foster training and education so that workers will have the skills required. One recommendation is to have a training insurance entitlement under the EI program that would allow seasonal workers to participate in courses but collect EI simultaneously.

c. Presentation to the Task Force on Seasonal Work by the Canadian Horticulture Council

The CHC made a presentation to the Work Force on November 15, 2004 to express the concerns and needs of the council and the horticulture industry regarding seasonal work. The primary issues and concerns expressed by CHC included the negative effect that the EI program, social assistance and pensions are having on the industry's ability to find and retain seasonal labour. Those individuals that received these benefits have little incentive to take on part-time horticulture work even if they are willing to do so, because after workers have earned a certain percentage (25% for EI) of their benefits, a reduction of $1 for every $1 will be taken from their benefits.

The presenter also noted that Canadian social assistance programs encourage claimants to seek out more stable, full-time work and this therefore has an effect on the number of seasonal workers available, and the experience of workers as many experienced workers leave for other sectors. Instead, the government needs to recognize the value of these workers to the Canadian horticulture industry and needs to modify the EI programs and enhance training available in the off-season that would allow these workers to work longer through the season.

The presentation listed specific issues for the Task Force to consider, including;

- Seasonal workers and EI claimants should receive equal access to training programs that would make workers more valuable to employers
- Currently there is a patchwork of rules and regulations that discourage innovation and entrepreneurship in the agriculture industry
- Government must recognize seasonal work as being valuable and not try to discourage individuals from careers in it because its policies
- With improvement to government policies, an improvement will be made in interprovincial labour mobility
- Improvements need to be made to EI program so that it does not discourage workers from participating in the horticulture season
- The SAWP is valuable to Canada and working well, however it should be expanded to individuals with trades and equipment skills
- Community development and the importance of seasonal labour should be fostered
- An inadequate seasonal labour force will erode the efforts of stewardship in the natural resource sectors because there will be an inadequate labour force to care

Recommendations to alleviate these concerns were made to the Task Force:

- Modify the EI program to be industry and seasonal specific
- Modify EI program and social assistance to allow claimants to work in the harvest season without having a reduction in benefits
- Create an awareness of the importance of seasonal horticulture work
- Employees that return to horticulture every year should not be required to take training courses for other sectors
- Encourage training and apprenticehip in the horticulture industry so that workers become more valuable to employees
- Develop a system that efficiently allows for the sharing of seasonal employees to lengthen their working season
- Expand the SAWP program to all stakeholders
- Reduce CPP and EI premiums paid by seasonal workers
- Create a joint industry-government horticulture human resources committee

d. Presentation to the Task Force on Seasonal Work by Greg Webster for Horticulture Nova Scotia and the Nova Scotia Federation of Agriculture

Greg Webster, President of Webster Farms Ltd., President of Horticulture Nova Scotia and Beery Crops Representative on the Council of Leaders, Nova Scotia Federation of Agriculture made a presentation to the Task Force in Yarmouth in April 2004. Webster's presentation addressed the challenges that the horticulture industry faces with respect to seasonal labour. Seasonal workers allow the horticulture industry to remain sustainable during the busiest seasons. Webster noted that although many horticulture operations have adapted and provide full-time employment to a number of workers, the need for seasonal labourers will always remain strong. Webster acknowledged the success of the off-shore worker program in Canada, however, this program is not the answer for everyone, especially for those who require seasonal labourers but do not harvest the amount of land needed to make it economical to bring the workers in. Therefore, it is important to focus on the Canadian workers that could work in the horticulture industry; however, the changes to the EI Act in 1997 have caused disincentives for workers to pick up short-term employment due to the change from tracking earnings under the old weeks-based system to the hours-based system.

There are a number disincentives created by Canadian social policy that affect claimants on EI, receiving social assistance and pensions. As mentioned above in the CHC presentation to the Task Force, EI claimants can only earn 25% of their benefits before their EI benefit is reduced dollar for dollar above that 25%. The extra 25% earnings per week is sometimes not enough for claimants to want to work. Social assistance in many provinces is also clawed back dollar for dollar after a certain threshold and many disability pensions do the same. Also, individuals that hold full-time jobs but want to help out with the harvest often take vacation during that time but unfortunately the extra income is taxed at the highest marginal rate if they work more than 7 days for the same employers and could potentially more them to the next tax bracket. These examples have hindered individual's willingness to work during the harvest in horticulture. Webster reiterated that these workers are the heart of the industry and these impediments need to be improved so the horticulture industry can remain sustainable.

e. Liberal Task Force Report: The Seasonal Economy: Responding with Care. 2004.

After taking a break during the 2004 election the Prime Minister's Task Force resumed its research and discussions with industries affected by seasonal labour and finished a final report

in December 2004. The following is a list of what the report describes as the main themes that were brought forward throughout the meetings across Canada:

- Seasonal workers must be valued
- EI system makes recruitment and retention difficult
- Changing demographics of seasonal workforce worries employers
- Life-long learning should be fostered
- Mobility and labour availability are issues
- Connections between employees and employers must be made
- Learning and training is encouraged in the off-season

The Final Report made many recommendations on the themes mentioned above, including:

- A national registry to match worker availability to employers should be created
- Provide incentives to assist seasonal workers with relocation costs
- Inter-provincial trade barriers be considered a priority by Canadian leaders
- Incentives for construction of housing for offshore workers
- HRSDC must establish pay rates for foreign workers 1-2 months earlier
- A review of the Foreign Worker Program to establish BMPs for sectors across Canada that can demonstrate need for foreign workers
- All levels of government use their tools to assist seasonal industries e.g. Labour Market Development Agreements
- Permits for harvesting of natural resources should be structured to allow employment in the industries to be maxed
- Regional agencies must focus on community economic development efforts that support seasonal industries
- The Canada Infrastructure Program should have a 'seasonal industry' round which would aid seasonal industries with infrastructure required to expand
- Government must not implement policies which aggressively 'push' seasonal workers out of the industry
- Continue efforts to provide internet services in rural communities
- Encourage training in seasonal work skills
- Expand Red Seal program to include more seasonal trades so that workers can become certified

A number of recommendations were made regarding modifications to the EI program and the authors note that some of the recommendations may require changes to the EI Act. The authors suggest that these actions be taken promptly. Some of the recommendations made regarding EI are:

- Elimination of the divisor to calculate the benefit rate
- Lower entrance requirements to 720 hours from 910 hours in regions with greater than 10% unemployment
- Increase EI exemption to the higher of 50% of weekly benefits or $100
- More flexibility in EI to take advantage of local training opportunities

The authors hope that their recommendations to the Prime Minister are implemented quickly so that the seasonal workforce will remain an important part of economy.

<u>f. Dissent and Distress: A Dissenting Report on the 2004 Prime Minister's Task Force on Seasonal Work (Honourable Pierrette Ringuette)</u>

Following the release of the Final Report of the Prime Minister's Task Force on Seasonal Labour, the Honourable Pierrette Ringuette submitted a report to the Right Honourable Paul Martin called 'Dissent and Distress: A Dissenting Report on the 2004 Prime Minister's Task Force on Seasonal Work'. Ringuette's paper focuses on the Employment Insurance program and suggests that the actions of the past and recommended in the Final Report have fallen short of improvement. Ringuette (2004) believes that the Task Force did not make recommendations that accurately reflect the opinions of the public and offers 25 recommendations that would help to improve the issues faced by the seasonal labour force.

During the Task Force meetings Ringuette (2004) heard that it is difficult for employers in seasonal activities to retain employees because many would rather work in an industry that provides fulltime employment. EI does allow some employees to remain in the industry and employers to retain a part of their experienced staff. However, the new (since 1997) EI structure also produces a disincentive to work in the industry and promotes the underground economy. Ringuette (2004) suggests that the changes to the EI system made in 1997 were too restrictive and the restrictions to admissibility should be reviewed and relaxed.

Ringuette's recommendations are the following:

- Reduce the minimum qualification requirements to 400 hours for regular claimants, 600 hours for re-entrants and 700 hours for new entrants, which is much more relaxed than recommended by the Seasonal Work Task Force.
- Reduce wait times for regular EI benefits, some recipients must wait up to two months
- Eliminate two-week wait times for sick or compassionate care claimants
- Calculate benefits based on the best 12 weeks of earnings in the last 52
- Increase the maximum EI benefit from 55% to 60%
- Extend the benefits period by 5 weeks for claimants that reside in regions of greater than 10% unemployment; in addition to reducing the number of hours worked required as suggested by the Task Force
- Reduce reductions on income earned to the higher of $100 or 50% of weekly benefits; this recommendation is in agreement with the Task Force
- Freeze premium rates
- Include apprenticeships for seasonal industries as initiatives eligible for support under Labour Market Development Agreements (LMDAs)
- Encourage training of seasonal workers
- Ensure that the LMDAs are consistent across the country
- Ensure that all regions of Canada have access to training
- Allow tax deductions on job-related travel
- Create an employment agency that ensures that Canadian employees are offered employment prior to the need to bring in offshore workers
- Provide more support to communities with a high prevalence of seasonal labourers
- Continue the Red Seal program of HRSDC and expand the trades within the program
- Ensure that Canada's citizenship and immigration policies attract skilled labour to Canada
- Direct the Canada Foundation for Innovation to use 10% of its budget on research in seasonal labour innovation
- Revive the Rural Development Program to provide Seasonal-industry specific marketing campaigns
- Consistency in regulations across Canada with respect to seasonal industries
- Insist that the Government of Canada take a lead in providing all of its staff with at least 4 months continuous employment

- Review the Employment Insurance Act to ensure that all policies that are detrimental to the seasonal labour force are identified and removed
- The Government of Canada must enforce and monitor the participation of First Nations and Métis persons in projects where their inclusion is cited as justification to gain access to resources
- The Government of Canada should finance a HRSDC program that would match older workers with non-profit organizations that need additional human resources and that the older workers would qualify as regular claimants.
- The Federal Department of Natural Resources engage Provincial and Territorial counterparts to identify and adopt BMPs in forestry management

Stevens Associates. 2003. The Quest for a Reliable Workforce in the Horticulture Industry

In 2003, a report was prepared by Stevens Associates entitled "*The Quest for a Reliable Workforce in the Horticulture Industry".* This study provides an overview of the labour force situation in the Canadian horticulture industry. It outlines the contribution of the Ontario horticulture industry to direct employment and how the current Canadian labour force is inadequate to fill all of these positions. The report estimates that the current labour force in Canada, as it currently stands, can fill approximately 82% of these jobs. For the other 18%, reliable Canadian workers cannot be found, according to the experience of the horticulture industry and Human Resources and Development Canada (HRDC). Thus, it is necessary to recruit seasonal workers from the Caribbean Commonwealth and Mexico to fill these jobs.

Currently, the industry is not working at 100 percent of its capacity and this in turn results in some crops not harvested completely, new investments are curtailed and employment of Canadians is restricted.

The report estimates the economic impact on the Ontario industry of every farm worker in the horticulture industry as $160,640 and for every farm worker in Ontario horticulture supports 2.2 jobs throughout the supply chain. Thus, the message to be taken from this result is that the horticulture industry creates jobs and careers for skilled Canadians, and Canadian entrepreneurs must have a supply of reliable labour for continued investments in the Canadian horticulture industry.

Farmers have relied on the Seasonal Agriculture Worker Program to supplement Canadian labour supplies. This service creates a reliable and qualified source of seasonal workers. This program is important to Ontario, and this report maintains that if Ontario lost the foreign worker programs, the economic loss could reach a minimum of $440 million. Free trade through NAFTA and the WTO has broadened consumer's choices. Canadian consumers have the choice of purchasing and consuming products that are grown in the United States and harvested by Caribbean/Mexican workers, or products that are grown in Mexico and harvested by Mexican workers, or products that are grown in Canada and harvested by Caribbean/Mexican workers. Clearly, it is more desirable for the economy to consume crops grown in Canada and harvested by Mexican/Caribbean workers because they create jobs for Canadians.

Appendix Two: Target Audience of Canadian Programs

Table 4A: Business Management and Leadership Courses Offered across Canada

Administering Institution	Program Title	Beginning/ Entering	Young/New	Experienced	Women Specific	Farmers Only	Agribusiness Only
Atlantic Agricultural Leadership Program	Atlantic Agricultural Leadership Program		●	●			
Manitoba Agriculture, Food and Rural Initiatives	Farm Succession Seminars	●		●		●	
Cegep de Victoriaville	Certificate in Farm Business Management	●					
Cegep de Lanaudiere	Certificate in Farm Business Management	●					
McGill University	Continuing Professional Development Program		●	●			
Ridgetown College	"Excellence In" Series of Continuing Education Programs		●	●			
University of Saskatchewan	Canadian Agriculture Lifetime Leadership Program		●	●			
Lakeland College	'Farm Toolbox Series' of Continuing Education Courses	●	●	●			
	Agribusiness Diploma-Agricultural Finance Concentration	●					
Olds College, Alberta	Competitive Advantage Program for Agriculture		●	●			
	Agriculture Business Diploma	●					
	Agricultural Finance Certificate	●					
	Agricultural Lenders Workshop		●	●			
	Agricultural Advocates Program	●					
Agriculture Institute of Management in Saskatchewan (AIMS)	On-line E-Commerce Training	●	●	●			
	Agribusiness Entrepreneurship Program	●	●	●			
The Canadian Securities Institute	Agricultural Markets Risk Management		●	●			
Centre for Rural Leadership	Ontario Advanced Agricultural Leadership Program		●	●			
DNL Farms Consulting Services	Effective Instruction		●	●		●	
	Effective Delegation		●	●		●	
Farm Credit Canada	Farm Financial Management - Know where you stand		●	●		●	
	Farm Financial Management - Develop your management accounting system		●	●		●	
	HR Management – Get the best is a course		●	●		●	
	HR Management – Keep the best		●	●		●	
	The Hog Price Risk Management Workshop		●	●		●	
	Advanced Farm Manager		●	●		●	
George Morris Centre	Introduction to Commodity Risk Management		●	●			
	Canadian Total Excellence in Agricultural Management		●	●			

	Executive Development Program		•	•			
The Mansis Development Corporation	Mansis Farm Management System		•	•			
	Employee Coaching workshop for Farm Leaders		•	•			
The OATI Learning Group	Farm Business Management Seminars	•	•	•			
Paul Martin Communications	CEO Training for Farmers		•	•		•	
The Pike Management Group	AgProfit business management courses		•	•			
Saskatchewan Council of Community Development	Leadership Saskatchewan Program		•	•			
Collectifs Regionaux en Formation Agricole (in various regions around Quebec)	Farm and Human Resource Management		•	•		•	

Table 4B: Agricultural Production Management Courses Offered across Canada

Administering Institution	Program Title	Beginning/ Entering	Young/New	Experienced	Women Specific	Farmers Only	Agribusiness Only
PEI Agriculture Human Resources Council	High School Agriculture Certificate	•					
Government of Ontario: Niagara Parks Commission	Niagara Parks Commission School of Horticulture	•					
Landscape Ontario Horticultural Trades Association	Various Professional Development Courses		•	•			
Manitoba Agriculture, Food and Rural Initiatives	Cattle Production for Women	•	•	•	•		
Saskatchewan Agriculture, Food and Rural Revitalization	Green Certificate Farm Training Program	•	•				
Alberta Agriculture, Food and Rural Development	Green Certificate Program	•	•				
	Independent Study Courses		•	•			
Memorial University	Aquaculture Diploma	•					
	General Aquaculture Technical Certificate	•	•	•			
	Finfish Production Technical Certificate	•	•	•			
	Cod Production Technical Certificate	•	•	•			
	Shellfish Production Technical Certificate	•	•	•			
Nova Scotia Agriculture College	Animal Science Technician Diploma	•					
	Agricultural Business Technician Diploma	•					
	Diploma of Technology: Farming	•					
	Diploma of Technology: Environmental Horticulture	•					
	Diploma of Technology: Environmental Horticulture	•					
	Diploma of Technology: Agriculture	•					

	Diploma of Technology: Plant Science	•					
	Certificate of Specialization in Organic Agriculture	•	•	•			
Nova Scotia Community College	Practical Horticulture Certificate	•					
	Horticulture Grower Diploma	•					
	Aquaculture Certificate	•					
New Brunswick Community College	Agri-Business Program	•					
	Aquaculture Technician	•					
Cegep of Victoriaville	Management and operation of a farm business	•					
Cegep of Lanaudière	Management and operation of a farm business	•					
Centre de formation agricole de Mirabel	Professional diploma in horticulture	•					
	Professional diploma in dairy production	•					
	Professional diploma in beef production	•					
	Professional diploma in field crops	•					
	Professional diploma in maple syrup production	•					
Centre de formation agricole de Mirabel en association avec le Collège Lionel Groulx	Technical diploma in horticulture	•					
	Management and operation of a farm business (beef, pork and milk production)	•					
Centre de formation en Acériculture du Fleuve-et-des-Lacs	Professional diploma in maple syrup production	•					
Institut de Technologies Agroalimentaires	Management and operation of a farm business	•					
	Animal production technologies	•					
	Horticulture and environmental technologies	•					
C.F.P. des Moissons	Professional diploma in field crops	•					
	Professional diploma in dairy production	•					
École d'agriculture de Nicolet	Professional diploma in field crops	•					
	Beef Production	•					
	Professional diploma in pork production	•					
Centre de F. P. du Granit	Professional diploma in maple syrup production	•					
M.F.R. du Granit	Professional diploma in maple syrup production	•					
	Beef Production	•					
	Professional diploma in dairy production	•					
C.F.P. Mont-Joli-Mitis	Beef Production	•					
	Professional diploma in horticulture	•					
	Professional diploma in dairy production	•					
C.F.P. d'Alma	Professional diploma in beef production	•					
	Professional diploma in dairy production	•					
Centre de F.P. de Coaticook	Professional diploma in beef production	•					

	Professional diploma in dairy production	•					
	Professional diploma in pork production	•					
Centre de formation professionnelle Relais de la Lièvre-Seigneurie	Professional diploma in beef production	•					
	Professional diploma in dairy production	•					
Centre Frère-Moffette F.P.	Professional diploma in beef production	•					
	Professional diploma in dairy production	•					
	Professional diploma in pork production	•					
Centre l'Envol	Professional diploma in beef production	•					
	Professional diploma in dairy production	•					
Centre de formation agricole	Professional diploma in beef production	•					
	Professional diploma in dairy production	•					
	Professional diploma in pork production	•					
	Professional diploma in horticulture	•					
Pavillon de l'Argile	Professional diploma in beef production	•					
	Professional diploma in pork production	•					
C.F.P. Fierbourg	Professional diploma in horticulture	•					
C.F.P. du Fleuve-et-des-Lacs	Professional diploma in dairy production	•					
	Professional diploma in pork production	•					
C.F.P. Mont-Joli-Mitis	Professional diploma in beef production	•					
	Professional diploma in horticulture	•					
C.F.P. du Fleuve-et-des-Lacs (Trois-Pistoles)	Professional diploma in dairy production	•					
	Professional diploma in pork production	•					
École professionnelle de Saint-Hyacinthe	Professional diploma in dairy production	•					
	Professional diploma in pork production	•					
C.F.P. Châteauguay Valley	Professional diploma in dairy production	•					
Laval University - Continuing Education	Certificate in dairy and beef production	•					
	Certificate in horticulture	•					
	Certificate in organic agriculture	•	•	•			
McGill University	Farm Management and Technology Diploma	•					
	Continuing Professional Development Program		•	•			
University of Guelph - Office of Open Learning	Various independent study courses	•	•	•			

	New Farmer Certificate	●					
	Animal Care Certificate	●	●	●			
	Grape and Wine Certificate	●	●	●			
	Ontario Horticulture Diploma	●					
Kemptville College	Dairy Herdsperson Apprenticeship Program	●					
	Associate Diploma in Agriculture	●					
	Associate Diploma in Horticulture	●					
Ridgetown College	Swine Apprenticeship Program	●					
	2-year Agriculture Diploma	●					
	2-year Horticulture Diploma	●					
	"Excellence In" Continuing Education Series		●	●			
Alfred College	Certificate in Landscape Architecture or Horticultural Production	●					
	Diploma in Agriculture	●					
Fanshawe College	Co-operative Horticulture Technician Diploma	●					
Niagara College	Winery and Viticulture Technician Diploma	●	●	●			
	Greenhouse Technician Diploma (Co-op)	●					
	Horticultural Technician Diploma (Co-op)	●					
Brock University	Grape and Wine Technology Certificate	●	●	●			
Algonquin College	Horticulture Technician Diploma	●					
Fleming College	Horticulture Technician Apprentice	●					
Humber College	Horticultural Technician Apprenticeship	●					
	Horticulture Science Certificate	●					
Mohawk College of Applied Arts and Technology	Horticulture Plant Identification	●	●	●			
Lambton College	Horticultural Apprenticeship	●					
	Horticultural Technician	●	●	●			
University of Manitoba	2-year Diploma in Agriculture	●					
	Organic Production on the Prairies	●	●	●			
Assiniboine Community College	Pork Production Manager – Certificate	●	●				
	Pork Production Technician - Apprenticeship	●					
	Organic Agriculture Certificate	●					
	2-year diploma in Agribusiness	●					
	Agriculture Studies -Certificate	●					
	Land and Water Management Diploma	●					
University of Saskatchewan	Diploma in Agriculture – Animal Science Major	●					
	Certificate in Agriculture Program (CAP)	●					
	Diploma in Agriculture – Agribusiness Major	●					
	Diploma in Agriculture – Agronomy Major	●					
	This Land: Soils and Fertilizer Workshop	●					
Southeast Regional	Calving Management	●	●	●			

College							
Saskatchewan Institute of Applied Science and Technology	Beef Cattle Production Certificate	●					
	Beekeeping	●	●	●			
	Custom Harvester Apprenticeship	●					
	Pork Production Technician Apprenticeship	●					
Lakeland College	Beef Nutrition and Ration Balancing Workshops	●	●	●			
	2-Year Diploma in Agribusiness	●					
	Livestock Production Diploma	●					
	Animal Science Technology Diploma	●					
	Dairy Production Certificate of Achievement	●					
	Crop Technology Diploma	●					
	Certificate of General Agriculture	●					
	Agro-Environmental Technology	●					
	Ranch and Stockhorse Rider Certificate	●					
	Animal Husbandry Continuing Education Courses	●					
Lethbridge Community College	Two-year Diploma in Agriculture Technology	●					
Olds College, Alberta	A.I. and Herd Improvement	●	●	●			
	Cattle Nutrition and Cowbytes Ration Balancing	●	●	●			
	Cow/Calf School	●	●				
	Agricultural Production and Management Diploma	●					
	Production Horticulture Diploma	●					
	Ornamental Horitculture Diploma	●					
	Greenhouse School Program	●	●	●			
	Soil Properties and Vegetation Management	●	●	●			
University of Manitoba, Assiniboine Community College, University of Saskatchewan and Old College	Prairie Horticulture Certificate	●					
Medicine Hat College	Horticultural Technician Certificate Program	●					
The Northern Alberta Institute of Technology - Fairview Campus	Horticultural Technician Certificate Program	●					
Okanagan University College	Viticulture Certificate	●	●	●			
	Horticulture Certificate	●	●	●			
	Horticulture Pre-Apprenticeship Program	●					
University College of the Fraser Valley	1-year Livestock Production or Horticulture Production Certificate	●					
	Agricultural Technology Diploma	●					
	Milker Training Certificate	●					
	Dairy Production Technician Apprenticeship	●					
	Swine Production	●					
	Vegetable Production	●					
	Agroforestry Workshop	●	●	●			

Kwantlen College	Production Horticulture Technician Certificate	●					
	Greenhouse and Nursery Technology Diploma	●					
	Horticulture Apprenticeship Program	●					
University College of the Cariboo	Horticulture Certificate	●					
	Horticulture/Management Diploma	●					
Camosun College	Horticulture Technician Certificate	●					
Malaspina University College	Horticulture Certificate	●					
	Sustainable Greenhouse management	●	●				
	Fisheries and Aquaculture Technician Diploma	●					
	Fish Health Technician Certificate Program	●					
Northern Island College	Salmon Farm Technician	●					
	Greenhouse Management	●					
Alberta Farm Animal Care	Cattle Handling and Hauling	●	●	●			
	Hog Handling and Hauling	●	●	●			
	Livestock Emergency Response	●	●	●			
	Livestock Handling	●	●	●			
	Livestock Handling for Youth	●					
Christmas Tree Farmers of Ontario	New Grower Correspondence Course	●					
DNL Farms Consulting Services	Effective Pig Handling Course	●	●	●			
	Pig Production Training	●	●	●			
Collectifs Regionaux en Formation Agricole (in various regions around Quebec)	Maple syrup production and processing	●	●	●			
	Organic farming	●	●	●			
	Sheep Husbandry	●	●	●			
	Blueberry and Cereal Production	●	●	●			
	Agro-Tourism	●	●	●			
	Dairy Production	●	●	●			
	Beekeeping	●	●	●			
	Goat Health	●	●	●			
	Pork and Poultry Production	●	●	●			
	Crop Production	●	●	●			
	Beef Production	●	●	●			
	On-farm Food Processing	●	●	●			

Appendix Three: Number of Participants in the Programs

Table 3A: Business Management and Leadership Courses Offered across Canada

Administering Institution	Program Title	Participants[6]
Atlantic Agricultural Leadership Program	Atlantic Agricultural Leadership Program	20
Manitoba Agriculture, Food and Rural Initiatives	Farm Succession Seminars	200
Cegep	Certificate in Farm Business Management	241
McGill University	Continuing Professional Development Program	
Ridgetown College	"Excellence In" Series of Continuing Education Programs	
University of Saskatchewan	Canadian Agriculture Lifetime Leadership Program	0
Lakeland College	'Farm Toolbox Series' of Continuing Education Courses	
	Agribusiness Diploma-Agricultural Finance Concentration	19
Olds College, Alberta	Competitive Advantage Program for Agriculture	30
	Agriculture Business Diploma	47
	Agricultural Finance Certificate	12
	Agricultural Lenders Workshop	42
	Agricultural Advocates Program	12
Agriculture Institute of Management in Saskatchewan (AIMS)	On-line E-Commerce Training	N/A
	Agribusiness Entrepreneurship Program	30
The Canadian Securities Institute	Agricultural Markets Risk Management	Will not disclose
Centre for Rural Leadership	Ontario Advanced Agricultural Leadership Program	30
DNL Farms Consulting Services	Effective Instruction	35
	Effective Delegation	40
Farm Credit Canada	Farm Financial Management -Know where you stand	
	Farm Financial Management - Develop your management accounting system	
	HR Management – Get the best is a course	
	HR Management – Keep the best	
	The Hog Price Risk Management Workshop	
	Advanced Farm Manager	
George Morris Centre	Introduction to Commodity Risk Management	18
	Canadian Total Excellence in Agricultural Management	17
	Executive Development Program	25
The Mansis Development Corporation	Mansis Farm Management System	10
	Employee Coaching workshop for Farm Leaders	60
The OATI Learning Group	Farm Business Management Seminars	1,800[7]
Paul Martin Communications	CEO Training for Farmers	24
The Pike Management Group	AgProfit business management courses	170
Saskatchewan Council of Community	Leadership Saskatchewan Program	

[6] Participant numbers are either the number of people that have taken the class in the last year or in terms of college and university classes the number of students currently enrolled.

[7] OATI disclosed the number of participants that it has had since its inception, therefore the 1,800 participants listed is the total number of participants it has had (27,000) divided by the number of years it has been conducting these courses, since 1989.

Development		
Collectifs Regionaux en Formation Agricole (in various regions around Quebec)	Farm and Human Resource Management	1,820

Table 3B: Agricultural Production Management Courses Offered across Canada

Administering Institution	Program Title	Participants
PEI Agriculture Human Resources Council	High School Agriculture Certificate	
Government of Ontario: Niagara Parks Commission	Niagara Parks Commission School of Horticulture	26
Landscape Ontario Horticultural Trades Association	Various Professional Development Courses	
Manitoba Agriculture, Food and Rural Initiatives	Cattle Production for Women	NEW
Saskatchewan Agriculture, Food and Rural Revitalization	Green Certificate Farm Training Program	70
Alberta Agriculture, Food and Rural Development	Green Certificate Program	858
	Independent Study Courses	
Memorial University	Aquaculture Diploma	16
	General Aquaculture Technical Certificate	0
	Finfish Production Technical Certificate	0
	Cod Production Technical Certificate	0
	Shellfish Production Technical Certificate	0
Nova Scotia Agriculture College	Animal Science Technician Diploma	27
	Agricultural Business Technician Diploma	29
	Diploma of Technology: Farming	0
	Diploma of Technology: Environmental Horticulture	31
	Diploma of Technology: Agriculture	2
	Diploma of Technology: Plant Science	21
	Certificate of Specialization in Organic Agriculture	
Nova Scotia Community College	Practical Horticulture Certificate	20
	Horticulture Grower Diploma	
	Aquaculture Certificate	
New Brunswick Community College	Agri-Business Program	4
	Aquaculture Technician	15
CEGEP	Livestock Production	71
	Horticulture and Environmental Production	80
	Animal Health Technology	373
Various Professional Education Centers in Quebec	Professional Diploma in Milk Production	377
	Professional Diploma in Beef Production	68
	Professional Diploma in Pork Production	64
	Professional Diploma in Horticulture	194
	Professional Diploma in Field Crops	28
	Professional Diploma in Maple Syrup Production	15
Institut de Technologies Agroalimentaires	Management and operation of a farm business	30
	Animal production technologies	30
	Horticulture and environmental technologies	20
Laval University - Continuing Education	Certificate in dairy and beef production	245

	Certificate in horticulture	28
	Certificate in organic agriculture	
McGill University	Farm Management and Technology Diploma	80
	Continuing Professional Development Program	
University of Guelph - Office of Open Learning	Various independent study courses	
	New Farmer Certificate	0
	Animal Care Certificate	154
	Grape and Wine Certificate	24
	Ontario Horticulture Diploma	2000[8]
Kemptville College	Dairy Herdsperson Apprenticeship Program	15
	Associate Diploma in Agriculture	82
	Associate Diploma in Horticulture	6
Ridgetown College	Swine Apprenticeship Program	0
	2-year Agriculture Diploma	190
	2-year Horticulture Diploma	50
	"Excellence In" Continuing Education Series	
Alfred College	Certificate in Landscape Architecture or Horticultural Production	
	Diploma in Agriculture	45
Fanshawe College	Co-operative Horticulture Technician Diploma	67
Niagara College	Winery and Viticulture Technician Diploma	25
	Greenhouse Technician Diploma (Co-op)	20
	Horticultural Technician Diploma (Co-op)	50
Brock University	Grape and Wine Technology Certificate	11
Algonquin College	Horticulture Technician Diploma	89
Fleming College	Horticulture Technician Apprentice	25
Humber College	Horticultural Technician Apprenticeship	127
	Horticulture Science Certificate	N/A[9]
Mohawk College of Applied Arts and Technology	Horticulture Plant Identification	120
Lambton College	Horticultural Apprenticeship	25
	Horticultural Technician	34
University of Manitoba	2-year Diploma in Agriculture	108
	Organic Production on the Prairies	
Assiniboine Community College	Pork Production Manager – Certificate	131
	Pork Production Technician - Apprenticeship	49
	Organic Agriculture Certificate	N/A[10]
	2-year diploma in Agribusiness	81
	Agriculture Studies -Certificate	30
	Land and Water Management Diploma	
University of Saskatchewan	Diploma in Agriculture – Animal Science Major	9
	Certificate in Agriculture Program (CAP)	78
	Diploma in Agriculture – Agribusiness Major	6
	Diploma in Agriculture – Agronomy Major	16
	This Land: Soils and Fertilizer Workshop	
Southeast Regional College	Calving Management	18

[8] These students have likely been pursuing this certification for a few years and this number does not reflect those that have begun this year.

[9] Tracking the number of students in the certificate is almost impossible, as students take individual courses and when they have completed 4 courses they then apply for the certificate. Therefore administration does not know before hand how many students are actually thinking of completing the certificate.

[10] Tracking the number of students in the certificate is almost impossible, as students take individual courses and when they have completed the required number of courses they then apply for the certificate. Therefore administration does not know before hand how many students are actually thinking of completing the certificate.

Saskatchewan Institute of Applied Science and Technology	Beef Cattle Production Certificate	18
	Beekeeping	0
	Custom Harvester Apprenticeship	
	Pork Production Technician Apprenticeship	
Lakeland College	Beef Nutrition and Ration Balancing Workshops	
	2-Year Diploma in Agribusiness	19
	Livestock Production Diploma	29
	Animal Science Technology Diploma	32
	Dairy Production Certificate of Achievement	3
	Crop Technology Diploma	21
	Certificate of General Agriculture	2
	Agro-Environmental Technology	
	Ranch and Stockhorse Rider Certificate	
	Animal Husbandry Continuing Education Courses	
Lethbridge Community College	Two-year Diploma in Agriculture Technology	27
Olds College, Alberta	A.I. and Herd Improvement	7
	Cattle Nutrition and Cowbytes Ration Balancing	6
	Cow/Calf School	12
	Agricultural Production and Management Diploma	101
	Production Horticulture Diploma	
	Ornamental Horticulture Diploma	
	Greenhouse School Program	58
	Soil Properties and Vegetation Management	
University of Manitoba, Assiniboine Community College, University of Saskatchewan and Old College	Prairie Horticulture Certificate	
Medicine Hat College	Horticultural Technician Certificate Program	15
The Northern Alberta Institute of Technology - Fairview Campus	Horticultural Technician Certificate Program	6
Okanagan University College	Viticulture Certificate	22
	Horticulture Certificate	20
	Horticulture Pre-Apprenticeship Program	18
University College of the Fraser Valley	1-year Livestock Production or Horticulture Production Certificate	20
	Agricultural Technology Diploma	5
	Milker Training Certificate	0
	Dairy Production Technician Apprenticeship	6
	Swine Production	
	Vegetable Production	
	Agroforestry Workshop	
Kwantlen College	Horticulture Technician Certificate	12
	Horticulture Technology Diploma	161
	Horticulture Apprenticeship Program	120
University College of the Cariboo	Horticulture Certificate	24
	Horticulture/Management Diploma	5
Camosun College	Horticulture Technician Certificate	18
Malaspina University College	Horticulture Certificate	24
	Sustainable Greenhouse management	NEW
	Fisheries and Aquaculture Technician Diploma	50
	Fish Health Technician Certificate Program	33
Northern Island College	Salmon Farm Technician	
	Greenhouse Management	13
Alberta Farm Animal Care	Cattle Handling and Hauling	0
	Hog Handling and Hauling	0
	Livestock Emergency Response	0
	Livestock Handling	0

	Livestock Handling for Youth	N/A
Christmas Tree Farmers of Ontario	New Grower Correspondence Course	
DNL Farms Consulting Services	Effective Pig Handling Course	35
	Pig Production Training	40
Collectifs Regionaux en Formation Agricole (in various regions around Quebec)	Maple syrup production and processing	816
	Organic farming	415
	Sheep Husbandry	334
	Horticulture-themed classes	421
	Agro-Tourism	
	Dairy Production	948
	Goat Health	51
	General Livestock and Agriculture Production	745
	Crop Production	1,506
	Beef Production	97
	On-farm Food Processing	607

Appendix Four: Courses Offered in the United States

Texas A & M University

1. Master Marketer for Producers

The **Master Marketer for Producers** program is a collection of educational programs where agricultural producers, lenders, and others involved in agriculture are trained in advanced risk management and marketing techniques. This course is offered through the extension service of TAMU and is also sponsored by the Agricultural Economics Department at TAMU, the State of Texas, Texas Corn Producers. The program is targeted to producers with a little knowledge of futures and options. The topics covered during the course include:

- Risk management
- Marketing commodities
- Lending
- Developing marketing plans
- Implementing marketing plans
- Marketing strategies
- Financial analysis
- Weather impact on prices
- Profit and risk

The course is offered in four, 2-day seminars across two months that include 64 hours of lectures. There are also 'leveling' workshops available for those participants who would like to brush up on a subject or set of skills before it is covered during the course. Along with participating in the above-mentioned course producers also take their knowledge back to their community and create marketing clubs with 10-15 other farmers. The purpose of these clubs is to have producers get together on a regular basis and discuss marketing issues, play marketing games, work over their marketing plans with each other and be sounding boards for other members (Klinefelter, 2004).

The cost to participants is $250 US, the rest of the costs are covered by the sponsorship of the Texas Corn Producers Board, Texas Wheat Producers Association, Texas Farm Bureau and the Cotton State Support Committee. Dr. Mark Waller, TAMU Cooperative Extension, directs the program and teaches as well as other faculty members from Cooperative Extension.

This course is part of the **Master Marketing Program** which has been awarded the USDA Outstanding Extension Award.

Contact: Dr. Mark Waller (979) 845-8011

2. The Advanced Topics Series

The **Advanced Topic Series** consists of one and two-day courses held across Texas designed to sharpen the knowledge and know-how of producers with respect to marketing and management issues. This series is part of the **Master Marketer Program** and offered to producers that have already taken the Master Marketer for Producers course or have an advanced knowledge of marketing and risk because these topics are in-depth and advanced. Topics covered in this series include:

- Cash, basis and contracts
- Futures and options, hedging
- Cattle marketing
- Cotton marketing
- Cotton options

- Feedgrains marketing
- Wheat marketing
- Crop insurance

These sessions include lectures, working groups and simulation exercises that are led by industry leaders and experts.

The cost for participants is $75US for a one day session and $125US for a two day session. The remaining cost is funded by the Southern Region Risk Management Education Center, Master Marketer Educational System of the Department of Agricultural Economics at Texas A & M, Texas Co-operative Extension, Texas A&M Agriculture Program, Texas Corn Producers Board, Texas Wheat Producers Board, Texas Farm Bureau, and the Texas State Cotton Support Committee.

Contact: Dr. Steve Amosson (806) 677-5600 or Dr. Mark Waller (979) 845-8011

3. The Executive Program for Agricultural Producers (TEPAP)

TEPAP is designed for the top 5% of North American agricultural producers, multiple managers, those with over $1,000,000US in annual sales, CEOs and senior managers. This program teaches advanced agribusiness skills such as international business development, niche market evaluation, analyzing and forecasting financial position, as well as personnel management and negotiation. The program builds on the experiences of its participants and creates real-life learning. This program has been established for 14 years and has brought participants from around the world including Canada, Argentina, Australia, Brazil and Mexico.

The course is offered as two 1-week intensive seminars over a two-year period. Each unit (week) costs $3,250US and includes course materials, lodging, food and transport to tours during the week.

Topics covered over the duration of the course include:

- Family business management
- Strategic management and planning
- Mega-trends
- Commodity technical analysis
- International business development
- Differentiated product marketing
- Financial management
- Human resource management
- Selling yourself and your ideas
- Management transition
- Mergers and acquisitions
- Profitable negotiation
- Globalization
- Business transfers

Professors for the program include TAMU faculty, faculty from other universities and other industry leaders. Danny Klinefelter of TAMU is the Executive Director of the program.

Contact: Professor Danny Klinefelter (979) 845-7171.

4. Tomorrow's Top Agricultural Producers Program (TTAPP)

This course is designed to provide producers with the knowledge and training required to survive and prosper in the current and future agriculture environment. This course combines intensive education, strategic planning and highly trained volunteers and is targeted at new producers (less than 10 years experience), young producers and partners in the farming business such as husbands and wives or brothers. The objective of this course is that when the young farmers have completed the course they will have created a business plan developed for the farming operation. As part of the Extension Agricultural Economics unit of TAMU, it was designed after the Master Marketer Program. Topics covered in this course include:

- Business plans
- Mentoring
- Business management skills
- Financial analysis
- Budgeting
- Strategic planning
- Futures and options
- Risk management
- Legal contracts
- Agricultural policy
- Personnel management

This course also appoints a three member mentoring team to each participant or farm team made up of two very successful farm managers or agribusiness managers and one agricultural lender. These mentors serve as an ongoing contact and help to implement the business plan developed in the course.

TTAPP is offered in four 4-day sessions over a 15 month period and is taught by TAMU faculty, faculty from other universities and other industry experts. The cost of the program is $1,000US.

Contact: Stan Bevers (940) 552-9941

5. Texas Agricultural Lifetime Leadership Program

This 2-year program is a competitive leadership development program that provides agriculture leaders with information and knowledge to help encourage positive action on key issues, policies and economics that will affect the agriculture industry. The purpose of this program is to create leaders in the industry so that the industry will remain dynamic. This program is targeted to men and women in the early stages of leadership in their careers in any aspect of agriculture. The participants meet eight times across Texas over the course of two years for weekend-long seminars, industry tours and meetings with government and business leaders. At the end of the first year a tour of Washington D.C. is conducted, and the end of the second year, an international study tour is taken. Topics covered in this program include:

- Agricultural economics
- Agricultural politics
- Social agriculture systems
- Organizational decision making
- Leadership skills
- International trade
- Agricultural policy
- Agriculture institutions and agencies
- Urban/rural relations
- Environmental issues

The cost to the participant is $2,000US and this includes all room and board, meals and travel including the tours to Washington and abroad.

Contact: Dr. Jim Mazurkiewicz (979) 845-1554, or email: j-mazurkiewicz@tamu.edu

Purdue University

1. Leadership 20/20
Leadership 20/20 is a 4-day program designed to provide information, knowledge and networks to leaders in the rural landscape so that they can address current issues facing agriculture. This program is a joint collaboration between Purdue Extension, Indiana Farm Bureau Inc., Indiana Soil and Water Conservation Districts and the Indiana League of Resource Conservation and Development, and is offered across a number of counties in the States. Topics covered in the program include:

- Personality differences (Myers Briggs)
- Leadership and personality
- Interpersonal communication
- Working with the media
- Public speaking skills
- Teamwork
- Serving on boards and committees
- Consensus building
- Community leadership

All of the professors in the program are trained facilitators in leadership development. The cost to participants is $150US, which covers all lodging, food and materials.

Contact: Janet Ayres, Professor, Leadership Development, Department of Agricultural Economics, Purdue University. Phone: (765) 494-4215 or Email: ayres@purdue.edu

2. Strategic Business Planning for Commercial Producers
This 4-day workshop was designed to provide commercial farmers with information regarding current trends in the industry and decision making tools to take advantage of the opportunities these trends provide. The objective of the workshops is to emphasize strategy development and understanding the financial implications of alternative strategies. Topics covered in the workshops include:

- General business climate
- Challenges and opportunities facing agriculture
- Creating value
- Financial benchmarking
- Strategic decision making
- Business growth
- Debt servicing
- Risk management
- Assessing profitability
- Capital investments

The cost is $100 per farm.

Contact: Craig Dobbins. Phone: (765) 494-9041 or Email: cdobbins@purdue.edu

3. Farm Management in the 21st Century
This is an on-line self study course for agricultural producers that covers a variety of management topics including:

- Current agriculture issues
- Strategy development
- Financial analysis
- Benchmarking
- Technology choices
- Business relationships
- Land values
- Leasing alternatives
- Decision making
- Farm and family connection
- Coping with stress
- Risk management

The course can be found at http://www.agecon.purdue.edu/extension/programs/fbm21/ and there is no time limit for students since it is all available free of charge on the web.

4. Farming Together Workshop
This program is designed for agricultural producers who are looking to the future of their businesses and considering bringing in a partner, such as a son or daughter. The workshop is designed to provide information to answer all of the questions involved with bringing someone into the operation. Topics covered in the workshop include:

- Effective communication
- Personal relations
- Future farm vision
- Developing a management succession plan
- Assessing management resources
- Working with family
- Organizational structure
- Legal issues in succession

The cost is $80 per family/business for the 2-day workshop.

Contact: Allan Miller. Phone: (765) 494-4203 or Email: millerwa@purdue.edu

8. Purdue Top Farmer Crop Workshop
This workshop is one of the longest running extension efforts in the US. The purpose of the workshop is to answer the question, 'What is Purdue doing to help farmers gain a competitive advantage?' Top Farmer brings together university, private sector and farm industry professionals to network with agricultural producers. The workshop also provides:

- Information on crop technology and innovation
- Decision making tools
- A debating forum with industry experts
- Business management and HR management issues
- Computer technologies
- Regulatory issues
- Production management

This workshop is a 2-day annual conference that costs participants $250US.

Top Farmer members also have secured access to agricultural information not available to non-members on the Top Farmer Website.

Purdue University offers a number of other 1-3 day workshops under the Agricultural Economics Extension program that offer producers information on a number of agriculture issues. A number of the workshops include:

- Strategic business planning for commercial producers
- Business communication
- Estate planning
- Marketing

As well, the Center for Food and Agricultural Business also offers a number of one-day programs, including:

- Sales management Executive Forum
- Agribusiness Sales Management Forum
- Key Account Manager
- Strategic decision making under uncertainty
- Strategic agri-marketing
- Strategic customer relationship management

Contact: Jess Lowenberg-DeBoer. Phone: (765) 494-4230 or Email: lowenbej@purdue.edu

Kansas State University

1. Kansas Agriculture and Rural Leadership (KARL)

KARL is a two-year intensive program of study, training and travel, designed for future leaders of Kansas' agriculture and rural communities and those that currently have a leadership role in the community. At the end of the first year a tour of Washington D.C. is conducted, and the end of the second year, an international study tour is taken. Topics covered in this program include:

- Leadership skills and ethics
- Community management
- Value-added agriculture products
- Personal development
- Agricultural economics
- Regulation in agriculture
- Natural directions of agriculture
- Rural economic development
- Environmental issues
- Trade and globalization

The cost to the participant is $1,250US per year and this includes all room and board, meals and travel including the tours to Washington and abroad. The other $9,000US that it costs per participant is covered by sponsorship.

Contact Information: Phone: (785) 532-6300 or Email: karl@ksu.edu

2. Employee Management for Production Agriculture Conference

This 2-day conference has been running for four years and has been designed to help farm owners and managers deal with managing human resources on their operations and the issues that they will face being managers of people. Cost per participant is $200US. Topics covered at the summer 2004 conference included:

- Cultivating culture

- Accountability and responsibility
- Developing a vision
- Learning how to give feedback
- Paying outside the box
- Managing a family-based workforce
- Motivating and challenging employees
- Leadership styles
- Risk management
- Worker compensation
- Discipline and termination

Although this program is a conference and does not fit with the program criteria that were discussed earlier, it is included because of its unique focus. Employee management is becoming more important in agriculture as the industry grows and farmers are becoming more like business managers who have a group of employees that must be managed. However, farmers are not trained in employee management and therefore this conference is addressing an issue that is probably of great demand.

Contact: Sarah Fogelman, Conference Coordinator. Phone: (620) 431-1530 or Email: sfogelma@ksu.edu

University of Nebraska Lincoln

1. Women in Agriculture

This 2-day program has been running for twenty years through the University of Nebraska-Lincoln. The purpose of the Women in Agriculture program is to bring women together to improve their business management and financial management skills while enhancing the well-being of their families. The program consists of a number of keynote speakers, workshops and informal group sessions led by specialists in extension of farm business including agricultural lenders, lawyers and professors. The cost to attend the program is $75US per participant. Topics covered during the program include:

- Agriculture and water laws
- Farm accounting
- Income taxes
- Introduction to hedging
- Use of GIS/GPS
- Farm succession
- Landscaping on the farm

Although this program is a conference and therefore does not fit with the program criteria that were discussed earlier, it is included because of the target audience.

Contact: Karrie Blake. Phone: (402) 472-0548 or Email: kblake2@unl.edu

2. Returning to the Farm Program

This program is designed for individuals considering becoming farmers and who are planning on a return to the home farm and their parents. The purpose of this program is to assist families in successfully working as a team and financially planning the future of the farm together. The program has three components; learning to work with family and varying personalities, a financial analysis of the family operation, and goal setting for the future. Specific topics covered during the two weekend seminar program include:

- Business plan development alongside family goals

- Assess preferences of members of the operation
- Alternate business arrangements
- Working with strengths and weaknesses
- Financial analysis
- Operating alternatives

The program is offered in during the course of 2 weekends about a month apart, totaling approximately 26 hours of workshop time in total. The cost per family is $200 plus $10 per person attending. Professors of the course include faculty from University of Nebraska-Lincoln and other managerial professionals.

Contact: Dave Goeller. Phone: (402) 472-1771 or Email: dgoeller@unl.edu

Iowa State University

1. Agricultural Management E-School (AMES)
AMES is a website that provides agricultural producers, educators, and service providers with on-line home study programs that address a number of important management issues. Participants can start the classes at their own convenience and have 90 days to complete each class. Each course costs $60-$100US. The following is a list of the courses currently being offered, a few of the topics covered.

Advanced Grain Marketing: Learn concepts and tools to develop your own marketing plan, price trends, storage costs, cash marketing, futures and options.

Financial Decision Making: Understand the principles of leverage, cash management and asset investment, develop accurate financial statements, financial analysis.

Farmland Ownership: determinants of land values, analyze farmland investments, appraisal techniques.

Farm Leasing Arrangements: lease types, lease negotiations, owner and operator relations, legal and tax considerations. This course is targeted to landowners, tenants and farm operators.

Farm Machinery Economics: evaluate machinery acquisition and use options, control of machinery costs, strategies for machinery replacement, joint ownership of machinery.

Human Resource Management: This course is currently under development. The topics to be covered will include effective human resource use, backup management, controlling stress, recruiting and training, maintaining employees.

Livestock Marketing: This course is currently under development. The topics to be covered will include controlling price risk, market contracts and gaining access to markets.

Strategic Management for Farm Families: This course is currently under development. The topics to be covered include strategic management on farm, goal setting, internal and external scanning, risk preferences and market niches.

Contact: Tim Eggers at (712) 542-5171, teggers@iastate.edu or William Edwards at (515) 294-6161 wedwards@iastate.edu

2. Annie's Project: Education for Farm Women
The purpose of Annie's project is to bring farm women together so that they can learn about topics that will allow them to become better business partners and network with other farm women. The program targets women new to the farming business and women that have been in the business for a while but would like to keep up with the latest information and trends. The program is funded by Iowa State University Extension, University of Missouri Extension, University of Illinois Extension, University of Wisconsin Extension, AMES, farm.doc, North Central Risk Management Education Centre and RMA. The program runs weekly for six 3-hour sessions. Topics covered in the program include:

- HR and time management
- Women and money
- Business plans
- Property titles
- Cash, crop share and flexible leases
- Financial management
- Retirement and estate planning
- Risk management
- Farm policy
- Insurance

Participants are tested on their knowledge of subjects prior to the workshops and then 180 days post-workshop. The workshops are run by industry professionals and specialists.

Contact: Bob Wells. Phone: (641) 673-5841 or Email: wellsjb@iastate.edu

Cornell University
Cornell Cooperative Extension (CCE) offers a number of human resource programs for farmers. These are described below.

1. Employee Management
CCE presents two course programs ranging in duration from one-half day to one day dealing with employee management. The first deals with successfully recruiting and hiring farm employees. The second addresses management of a multi-cultural workforce. The cost for each of the courses is $59.

2. Communications and Leadership
CCE offers three courses relevant to communications and leadership in a farm business. These courses deal with communication styles that optimize performance, using communication and feedback to optimize employee performance, and developing skills for situational leadership. The programs are open to farmers, agribusiness personnel, and operators of small businesses. The fees for participation range from $30 to $80.

3. Intergenerational Issues
CCE presents programs for farmers and agribusiness personnel in which they learn about issues related to management over multiple generations of farm families. These include an educational program focused on intergenerational transfer of farm businesses, and a course aimed at agribusiness to help them better serve farm customers operating businesses with multiple generations.

4. Business Organization
CCE offers two educational programs on alternative forms of business organization. The participants are taught concepts related to business organization, reinforced with case studies.

The courses are taught from both a business/economic and a legal perspective. One of the programs deals with farm organizational issues related to partnerships, joint ventures, and strategic alliances. The audience for the course is farmers. A second course deals organizational options for startup businesses such as cooperatives, networks, and alliances. The audience for this course is small businesses.

5. Financial Management

Several courses are offered by CCE in financial management. The target audience for the courses is farmers and agribusiness operators. In the basic and advanced financial management courses, participants learn to understand, analyze, and manage using financial statements, and improve business planning skills. The cost of these programs range between $50 and $125. A course in cash flow planning for dairy farm business is also offered. It teaches participants techniques of cash flow projection and analysis. In addition, CCE presents Dairy Farm Business Summary meetings in which academic faculty and CCE staff makes presentations on cash flow concepts and techniques, which is followed by open discussion with the program participants.

Contact the Cornell Cooperative Extension at: Phone: (607) 255-2291 or Email: mph3@cornell.edu

Appendix Five: Courses Offered in Australia

1. Farm Management 500

Farm Management 500 (FM500) is an Australian network of ongoing farm management discussion groups facilitated by private consultants. With approximately 40 groups extending from South Australia, Victoria and southern New South Wales, FM500 aims to improve the adoption of best practices in farm management through open and interactive farmer group meetings. FM500 groups meets 4-6 times during the year to discuss issues of local interest, and take part in district workshops and regional conferences. These meetings provide farmers with the opportunity to hear knowledgeable speakers address issues of common interest across regional and industry boundaries.

FM500 conducts group activities based on the needs of the group. Topics have included production and marketing, business development, profitability, business benchmarking, use of technology and computers, networking, communication with family and staff, and personal or professional change.

Farm Management 500 is a project funded by sponsorships from numerous agribusiness corporations, contributions from the Rural Industries Research and Development Corporation, and by the producers themselves. The goal of the FM500 project is to facilitate discussion among group members and to encourage the sharing of ideas and experiences. This private extension model has been successful in improving the skills and lives of members, as well as the profitability of their family farms. FM500 members claim that their participation has removed both social and decision making isolation, and has enabled them to improve their networks and their ability to manage change. The current annual subscription is $500AUS per farm.

FM500 is forging strategic alliances with farm management groups in Canada, the United States, New Zealand and the United Kingdom. By creating a Global network, FM500 groups are expanding their knowledge on technical, financial, marketing and social issues. The FM500 Global Network will also speed up the adoption of Internet services and E-Business opportunities, and facilitate communication among the world's best farmers. Continued cooperation with international farm management groups may also lead to the creation of International Benchmarks for farmers, the adoption of world best practice and expanded travel opportunities for all members of the family.

Contact: Matt McCarthy: Phone: 03 5441 6176 or Email: fm500@netcom.net.au

2. The Rabobank Executive Development Program for Primary Producers (EDPPP)

The Rabobank EDPPP is a joint program between Rabobank Australia and the University of Queensland designed for commercial leaders and innovators in the Australian and New Zealand agriculture industries. This program is conducted over 2, one week sessions that include lectures, case studies, individual study, team work and discussions led by industry executives and academic experts. Topics covered during the course of the two weeks include:

- Business management
- Strategic planning
- Financial analysis
- Marketing
- Leadership
- Value chain management
- Human resource management
- Investment analysis

- Succession planning
- Innovation
- Environment and agriculture
- Industry trends

After the first week is completed, participants must complete a management project that applies the principles learned during the session and present it during the second session. The projects are evaluated by the participants and a business development prize of $5,000AUS is awarded to the winning project. The cost of program is $10,000AUS per participant.

Contact: sydney.edppp@rabobank.com

3. The Australian Rural Leadership Program (ARLP)
The purpose of the Australian Rural Leadership Program is to develop individuals who are currently active as leaders in the rural community to help guide the Australian agriculture industry and rural community to a sustainable future. The program seeks participants who have a commitment to the Australian rural landscape and who are strategic thinkers and leaders. During the course of the program, participants gain knowledge, create networks and interact with leaders in government, industry and the community. The two-year program is conducted over 5 one-week sessions and 1 two-week session across Australia plus a two week international study tour. Topics covered during the program include:

- Leadership theory
- Developing vision
- Team building
- Ethics
- Conflict resolution
- Networking
- Media
- Lobbying
- Production and marketing
- Workplace relations
- Rural policies and development
- Indigenous issues and multiculturalism
- Foreign trade and market access
- Global markets
- International competitiveness

The program is administered by the Australian Rural Leadership Foundation and funded by sponsors in rural and related industries; R & D organizations, industry bodies, and state and federal government agencies. Participants are required to pay $3,000 of the total $46,000 that the program costs per participant.

Once participants graduate from the program they can continue to remain involved with other participants and graduates through the Australian Rural Leadership Network.

Contact: Dr. Steven Clark, Executive Director. Phone: (02) 6281 0680 or Email: info@arlp.net.au

4. Curtin University of Technology – Muresk Institute of Agriculture

Graduate Certificate in Agribusiness
The graduate certificate is targeted to those in the farm input supply, farming or food processing and distribution industries wishing to extend their current skill set. This program is one semester in length for full time study or can be taken part time to accommodate those continuing to work during the course. Areas of study in this program include:

- Marketing
- Management
- Finance
- Technology
- Production
- Resource management

In order to complete the course, students must earn 100 credits (approximately 4 courses). Tuition for this program is $5,500AUS.

5. Marcus Oldham College (MOC)

The mission of this college is 'to advance agriculture through innovative educational programs in farm, agribusiness and equine management.' This college has a 'holistic approach' that combines animal and crop production education with business and human resource management so that rural managers can succeed in all aspects of their operation.

5a. Rural Leadership Program
This program was established in 1992 and designed to develop the leadership skills of Australia's young rural community. Men and women from all areas of the rural community participate including farmers, politicians, co-ops, industry organizations, and other agribusinesses. This program is a 5-day intensive workshop that focuses on developing participant's leadership skills through seminars, workshops, guest lectures and networking. Seminar and workshop topics include leadership skills, working with teams, communication skills, public speaking and negotiation skills. The program is coordinated and led by leading industry experts and professionals in the areas of rural development and leadership.

The cost to participate is $1,000 AUS which covers course materials, accommodation and meals during the 5 days. This program is also registered with FarmBi$ Training Support and participants can apply to receive up to 75% of the training costs. MOC along with the Foundation for Australian Agricultural Women also offer two $1,000 travel awards each year to women participating in the Rural Leadership Program.

Contact: Jennifer Jones, Phone: (03) 5243 3533 or Email: jones@marcusoldham.vic.edu.au

6. University of Melbourne, Land and Food Resources

6a. Graduate Certificate in Agribusiness
This certificate program has been designed for working students so that they can complete the program on a part-time basis in one year. To complete the certificate, students must take three on-line courses and attend a one-week intensive leadership course. The three on-line courses include Financial Management for Agribusiness, Agribusiness Management Economics, and Managing Markets.

Contact: Phone: 03 8344 6883, Email: MasterAgBus@landfood.unimelb.edu.au

6b. Technical and Further Education Courses (TAFE)
The Department of Land and Food Resources offers a number of technical and further education courses in the agriculture and agribusiness fields:

- **Certificate IV in Rural Business/Diploma of Rural Business Management**: This course has been developed for those already involved in the agriculture industry; farmers and agribusiness personnel who wish to expand their knowledge of business management while continuing to work. The course is delivered through distance education as well as regional workshops with expert guest lecturers and industry tours. To complete the Certificate students must complete 12 units of competency courses and to complete the Diploma students must complete 10 units.

- **Diploma of Agriculture Specializing in Dairy Production:** This program is designed for those currently in the dairy industry who wish to improve their skills and knowledge in dairy farm management. The course is delivered through distance education and is normally completed in two years. The diploma contains programs that will target planning, performing and supervisory skills in farming operations, it also offers regular workshops, farm tours to enhance the learning of the study courses. A specialization of Beef and Sheep Production can also be taken with this diploma.