



How Labour Challenges Will Shape the Future of Agriculture:

Agriculture Forecast to 2029

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Executive Summary

An important part in Canada's economy since the country's founding, agricultural production has continued to expand over the years. Canada is now a major producer of many agricultural products, and its exports relative to production are among the highest in the world. Over the next decade, this vital sector is poised for growth, through increasing domestic demand and as the global market for Canadian agricultural products rapidly expands.

However, Canada's agriculture sector faces many unique labour challenges that could jeopardize its growth potential and its contribution to the national economy. In 2017, 16,500 jobs went unfilled in Canada's agriculture sector, which cost the sector \$2.9 billion in lost revenues, or 4.7% of product sales. Labour shortages don't just impact the sector today, they also limit its future growth by preventing or delaying expansion plans.

Chronic labour shortages have led agricultural employers to rely increasingly on foreign workers; this labour source now accounts for 17% of the sector's workforce. While foreign labour has helped to lessen the impact of chronic labour shortages, it is only a partial solution and one that could easily disappear due to policy changes or global events.

A Widening Labour Gap

While agricultural labour issues are significant today, they will intensify in the future.

The sector's labour requirements are expected to grow considerably over the next 10 years. By 2029, the agriculture sector will need significantly more workers to reach production targets. At the same time, the size of the domestic agricultural workforce will shrink, driven by a rising number of retirements. In fact, the sector is expected to see 112,200 workers retire between 2018 and 2029, which is the equivalent of 37% of its workforce. This is placing added pressure on a sector already challenged to find enough workers.

As a result, the sector's labour gap will nearly double over the next 10 years, reaching 123,000 people by 2029. This is equivalent to 32% of labour demand for that year, or roughly one in every three jobs in the sector. Ontario will account for the majority of Canada's agricultural labour gap in 2029, but Quebec, Alberta, British Columbia, and Saskatchewan will also have sizeable labour gaps. Among commodities, horticulture-based commodities will continue to experience significant labour gaps. However, 'grain and oilseed'¹ and 'beef' producers will experience the largest increases in their labour gaps, and account for much of the increase in the labour gap for the sector as a whole.

The growth in the sector's demand for labour is driven primarily by production and productivity trends for different commodities in the sector. In particular, a strong demand outlook for food products in emerging markets will drive above-average production for the export market. At the same time, the sector's productivity, which is the amount each worker can produce, will slow modestly compared to what occurred in the previous decade. Productivity growth in the sector is expected to slow over the next decade and demand for Canada's agricultural products will continue to increase. This is expected to drive up



¹ The Labour Market Information data classifies Canada's agriculture sector into 11 commodity areas: 1) 'apiculture'; 2) 'aquaculture'; 3) 'beef'; 4) 'dairy'; 5) 'field fruit and vegetable'; 6) 'grain and oilseed'; 7) 'greenhouse, nursery, and floriculture'; 8) 'poultry and egg'; 9) 'sheep and goat'; 10) 'swine'; and 11) 'tree fruit and vine'.





demand for new workers by 0.5% a year on average over the forecast. While this is below the average rate of growth projected for the Canadian economy as a whole, the agriculture sector will still require an additional 20,400 workers by 2029.

While the sector's labour demand is set to increase, the domestic agricultural labour pool is expected to contract. By 2029, we expect that 39,600 fewer Canadian residents will be available to work in the sector. One key factor driving this decline in labour supply is that the sector has an older-than-average workforce, which will lead to an above-average retirement rate. At the same time, a declining number of young people entering the agricultural workforce and the fact that the sector attracts a below-average share of immigrants mean that the number of new entrants into the sector's workforce will shrink.

When the weak outlook for supply and the strong outlook for demand are combined, the sector's labour gap will widen considerably.

Unique Labour Challenges

In addition to a growing labour gap, agricultural employers face a unique combination of hiring challenges. First, agriculture has some of the largest seasonal fluctuations in employment of any major sector, and one of the longest work weeks, particularly during seasonal peaks. Second, many agricultural operations are in rural areas where populations have shrunk. Third, many potential workers have negative perceptions about the sector, particularly around the physically demanding nature of the work and variable employment due to seasonal fluctuations. Finally, in a competitive commodity market, employers are largely unable to

raise wages to attract workers and pass the higher costs on to their customers.

While many other sectors face one or two of these labour challenges, no other sector faces all of them at once, and their cumulative effect on Canada's agriculture sector has added to the difficulties agricultural employers face.

Different Commodities, Different Challenges

Although many of the key labour issues are shared by producers across the sector, each commodity group also faces its own unique set of challenges.

For example, while supply-managed commodities such as 'dairy' and 'poultry and egg' must also grapple with issues related to the rural and physical nature of their operations, they also face a skills shortage in their regions. Producers found it more difficult than average to find qualified workers with the right skill sets near their location. For producers of horticultural products, maintaining access to foreign workers is critical, given that they now account for more than two-fifths of the segment's workforce.

Producers of red meat will be a key source of growth for the agricultural sector in coming years as they increase production to meet the rising foreign demand for their product. This will pose a challenge, given that over the past decade, a sizeable decline in the workforce for these producers has eroded the availability of the skilled workforce they need to help them reach their growth potential in the years to come. Unsurprisingly, red meat producers were much more likely than average to suggest that a lack of qualified workers in their area was a critical issue.

Finally, 'grain and oilseed' producers and 'aquaculture' producers are both poised to benefit from growing global demand. However, these industries will be challenged to find the workers they need because of the rural location of their operations and their limited access to agriculture-specific employment programs that provide access to foreign workers.



Creative Solutions

Many producers have found innovative solutions to the challenges that they face in attracting and retaining workers.

For example, some producers coordinate with other offsetting seasonal employers, either within or outside of Canada, to address seasonality in demand and provide more attractive, stable terms of employment. Other producers bank hours, which means that they pay their workers based on a standard 40-hour week and disburse wages for overtime hours during slack periods. This gives workers with highly variable hours greater wage stability. Still other producers target employees who are only interested in working part of the year, such as those who are semi-retired.

Other innovative solutions include increased flexibility regarding hours and work conditions. Emphasizing nonmonetary benefits such as free meals, working with machinery or animals, and working outdoors can also attract people to work in agriculture. Some producers even go so far as to offer ownership stakes in their business as an incentive for their best employees.

Recruiting from nontraditional pools of labour, expanding job recruitment and advertising strategies into nontraditional areas, and increasing the awareness of employment opportunities in the sector have also been suggested or used by some producers.

The Way Forward

While Canada's agricultural employers are actively trying new and creative ways to find and keep more of the workers they need to stay productive, these activities alone can't adequately address the sector's problems. At present, the sector is on an unsustainable path, with an ever-growing labour gap and a growing number of jobs going unfilled. To address the myriad challenges facing the agriculture and agri-food sector, government ministries, educational institutions, sector councils, and other stakeholders will need to work together on several key areas.

The issues identified by the Labour Market Information initiative through an analysis of sector data reinforce the findings of the Agricultural and Agri-Food Labour Task Force (LTF), which was established by the Agriculture and Agri-Food (AAFC) Value Chain Roundtables in 2012 to examine the sector's labour-management issues and labour shortages.





After conducting an extensive consultation over a 12-month period with industry stakeholders, including commodity value-chain roundtables, industry associations, educational institutions, and agriculture and agri-food businesses, the LTF published the Workforce Action Plan, a forward-looking road map for addressing the sector's critical labour shortages:

1. Increase the Supply of Workers

- **Improve access to foreign workers.** Foreign workers are a vital source of labour for the sector, accounting for as much as three-quarters of the labour force in some agricultural industries during peak seasons. Continued and expanded access to foreign workers will help to supplement the dwindling domestic workforce and enable employers to meet the labour needs of highly seasonal operations.
- **Attract more domestic workers.** Develop an integrated and collective approach for the agriculture and agri-food sectors to promote the vast number and types of jobs available across Canada, clarify the job requirements and career pathways available, and give job seekers, students, teachers, guidance counselors, and employees an organized entry point to this information.
- **Increase awareness of agriculture careers.** Many misconceptions about jobs in the sector exist, and there is a general lack of awareness

around the career possibilities. Developing a collective career-promotion tool for job seekers, teachers, guidance counselors, and employees can help to increase interest in the sector, enrolment in relevant training programs, and recruitment and retention efforts.

2. Improve the Skills of Workers

- **Enhance worker knowledge and skills.** Agricultural employers are challenged to find workers near their operations who have the right knowledge and skills and learning options for their workers that are easily accessed. Improving the availability and accessibility of learning options is also needed.
- **Align training resources with workplace needs.** The agriculture sector is evolving rapidly; to ensure today's students can meet tomorrow's needs, there needs to be closer alignment between training and educational program offerings and the current and future requirements of various agricultural industries to support on-the-job training requirements.
- **Improve human-resource management.** Making best-practice HR management tools and techniques available to agricultural employers, managers, and supervisors will give them the support, knowledge, and training they need to enhance their recruitment, employment, and retention efforts.

The implications are clear. There is broad agreement from every quarter that finding ways to increase both the domestic and foreign supply of labour, improve worker recruitment and retention, and build the skilled and knowledgeable workforce the sector needs will require a dedicated, coordinated effort.

However, if the sector is empowered to learn from the best practices of its own members and supported in collaborating with policy makers to implement solutions, it can strengthen its labour force, reach its growth potential, and continue to meet the rising need for food in Canada and the rest of the world.



Introduction

The agriculture and agri-food sector employs over two million Canadians and accounts for one in eight jobs in the Canadian economy, or 12% of total Canadian employment. The sector is diverse, encompassing primary agriculture, 'aquaculture,' food and beverage processing, input and service suppliers, food distribution, retail, wholesale, and foodservice industries. In every region, this sector is an important source of economic activity and contributes over \$122 billion, or 6.3%, of Canada's annual GDP.²

However, Canada's agriculture sector faces significant labour challenges that put its viability and growth potential at risk.

Agriculture has played an important part in Canada's economy since the country's founding, and primary agriculture production continues to expand to this day. In 2018, Canada's agriculture sector achieved its highest level of production on record. Today, Canada's agriculture sector plays a significant role in feeding both Canadians and the world; it is a major global producer of many agricultural products, and its exports relative to production are among the highest in the world.³

Every province in the country makes a unique contribution to the success of the country's agriculture sector. Horticultural products are most prominent in British Columbia, Southern Ontario, and Atlantic Canada, while red meat and grains dominate production in the Prairies and 'dairy' is the largest agricultural product in Quebec. Together, these regional characteristics are a critical ingredient in supporting the diversity and long-term growth of the sector.

During the sector's long history, it has undergone major changes, including significant operational consolidation over the past decade, resulting in far fewer but much larger farms. The product mix for the agriculture sector has also changed significantly as farm operators respond to changing market

conditions and leverage technology to maximize the value of Canada's arable land. Finally, the sector has experienced a rapid increase in productivity in recent years, with farm operators producing far more today with fewer workers and less land.

The people who work in agriculture are both critical to its success and part of the transformation that the sector is undergoing. For example, consolidation has increased the need for management skills among operators who must transition from being farmers to employers, and strong productivity gains have reduced the need for some types of workers while changing the required skills for many of the jobs that remain.

Against this backdrop of rapid change, Canada's agriculture sector faces a growing labour crisis. The sector's job-vacancy rate is the highest of any major sector in the Canadian economy and is typically two to three times as high as the average for all sectors.⁴

Already, labour shortages have led the sector to steadily increase its reliance on foreign workers, who now account for just under one in five people in the sector's workforce. While this still leaves domestic workers as the vast majority of the agricultural workforce (83%), it makes the sector increasingly vulnerable to policy changes or other unpredictable factors that could significantly reduce access to foreign labour.



² See CANSIM table 36-10-0434-01.

³ Kristelle Audet, *Liberalization's Last Frontier: Canada's Food Trade* (Ottawa 2013).

⁴ See CANSIM table 14-10-0326-01.





Despite increased reliance on foreign labour sources, Canada's agriculture sector was unable to fill 16,500 jobs, a shortfall that cost it \$2.9 billion in lost sales.

In the coming years, the gap between the sector's labour requirements and the available pool of domestic labour is expected to widen considerably, a trend that would place more agricultural businesses at risk and seriously impede the sector's growth potential. The research presented in this report is intended to identify the unique labour challenges affecting the agriculture sector today and in the future. It validates, but also builds on similar research conducted by the Canadian Agricultural Human Resource Council between 2015 and 2016,



which examined the labour market situation in Canada's agriculture sector at that time. The study was undertaken in response to the considerable evidence of labour shortages in the sector. The objectives of the research included assessing the current labour market, producing projections of labour supply and demand for the agriculture sector, and making recommendations for potential solutions to labour shortages.

To capture an accurate picture of the sector today and as it is likely to look in the future, we built an economic model that forecasts agricultural labour demand and supply by industry, by province, and by occupation. We also surveyed employers, workers, and stakeholders in the sector. The results of the research were also validated through a series of webinars covering different commodities within agriculture. In total, more than 1,900 sector stakeholders participated in the research activities that support these findings.

In addition to this national report, there are 21 others that present the findings for individual commodities and provinces. All these reports are available from the Canadian Agricultural Human Resource Council at www.AgrilMI.ca.

It is important to note that the results of this research focus on the primary agriculture sector only. As defined by Statistics Canada's industry definitions, we include all crop and animal producers (including 'aquaculture' and 'apiculture') and support services for agriculture.⁵ These industries include some nonfood commodities, such as sod and ornamentals among crops and horses and fur producers among animal producers. Although this study does not include food processing, there is a strong link between food processors and the primary agriculture sector. As such, agriculture's labour challenges have implications for the entire agriculture and agri-food supply chain.

⁵ As defined, the sector includes North American Industrial Classification System (NAICS) codes 111 (crop production), 112 (animal production), 1151 (support activities for crop production), and 1152 (support activities for animal production).



Factors Driving Labour Shortages

Labour shortages are a significant and long-standing problem in agriculture. For example, the Canadian Agricultural Human Resource Council found in previous research that the sector's vacancy rate was 9% in 2009⁶ and 10% in 2011.⁷ Data collected as part of this project from Statistics Canada indicates that there were 16,500 unfilled vacancies in Canada's agricultural sector in 2017, which was equivalent to 7% of labour demand at that time.

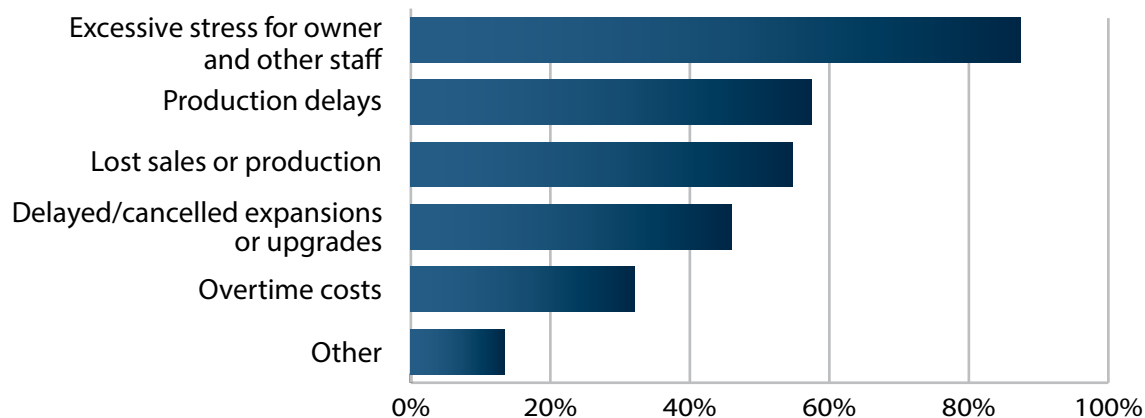
These vacancies have real consequences for the sector. Based on our most recent survey results, 87% of respondents cited excessive stress for owner and other staff as a key outcome of unfilled vacancies. (See Chart 1.) Other important outcomes include production delays, lost production and/or sales, and delays or cancellations of expansion plans. Thus, labour shortages have financial implications for the industry, and they will continue to do so in the future. We estimate that the sector's revenues were reduced by \$2.9 billion, or 4.7%, in 2018 because of labour shortages.



Moreover, unfilled vacancies tell only part of the story when it comes to the sector's labour gap, which is defined as the difference between how many workers employers would like to hire (labour demand), and how many domestic workers are available to work (labour supply). We estimate that in 2017, the labour gap in Canada's agriculture

Chart 1: Unfilled Vacancies Cost the Industry Now and in the Future

Share of respondents who indicated a labour shortage

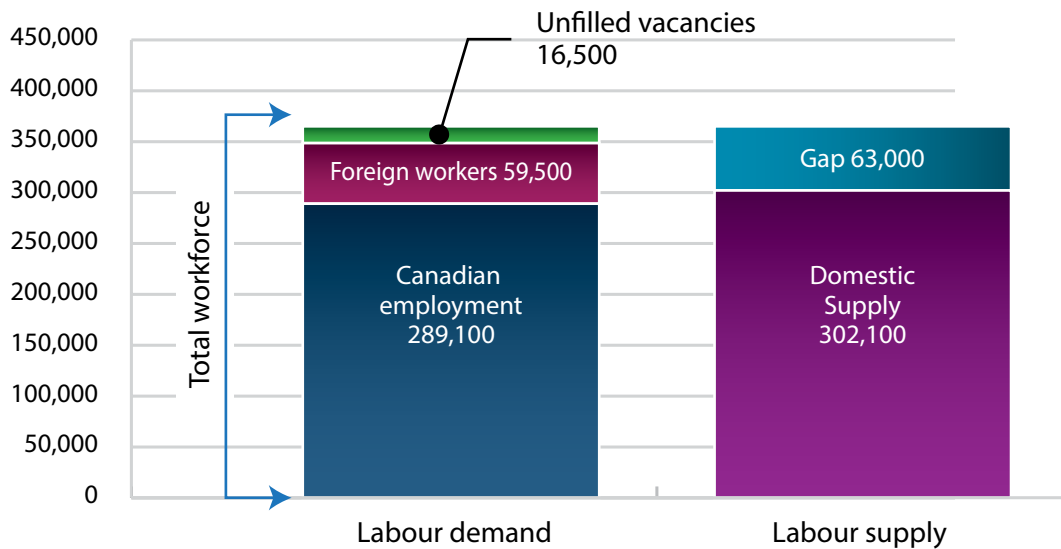


Based on a survey of 514 respondents
Source: Canadian Agricultural Human Resource Council Employer Survey.

⁶ Canadian Agricultural Human Resource Council, Labour Market Information on Recruitment and Retention in Primary Agriculture (Ottawa 2009).

⁷ Labour Market Information: Focus on Small Farms in Canada 2011 (Ottawa 2011).

Chart 2: Breakdown of Canada’s Agricultural Workforce
Agricultural workforce by category



Sources: Statistics Canada; Canadian Agricultural Human Resource Council.

sector was 63,000 workers, equivalent to 17% of the labour demand. (See Chart 2). Although agricultural employers prefer to hire Canadians first and have a stable Canadian workforce, foreign workers have helped to fill a portion of this gap in a number of agricultural industries. However, some agricultural industries have very limited access to this labour source. A reliance on foreign labour can also leave the sector vulnerable to policy changes and other factors beyond its control.

We estimated the labour gap by first determining labour demand. Labour demand includes the domestic workforce (including owner/operators, paid workers, and unpaid workers), foreign workers, and unfilled vacancies. In 2017, this stood at 365,100 people. We then subtracted domestic supply, which includes all Canadian residents willing to work in agriculture, from the total labour demand to determine the labour gap. Since the labour supply was 302,100 people in 2017, the labour gap was 63,000 people.

The labour gap in agriculture is unusually large because it is driven by a variety of challenging factors. These include seasonality, the rural locations of many operations, competition with other sectors, and the physicality of the work. Many other economic sectors may face one or even two of these challenges, but no other sector faces all of them combined.

The rest of this chapter discusses these challenges in more detail.

Seasonality

The surveys conducted as part of this research asked a number of questions about the factors that affect worker recruitment and retention in the agriculture sector. In the surveys, the number one factor that employers identified as being a retention challenge is working conditions. (See Chart 3). In particular, employers have two concerns when it comes to working conditions in the industry. The first is related



to seasonality, which 62% of employers identified as being a key challenge, and the second is related to the issue of a high number of working hours at peak times, identified by 37% of employers.

The severity of these challenges is apparent when we examine the sector's labour data. For example, if we add seasonal foreign workers to the reported employment data for agriculture, we find that the sector's employment at its seasonal peak is over 32% higher than the seasonal low. In comparison, the difference between the seasonal peaks and lows in employment across all sectors is only 5%.⁸

Education, with its summer breaks, and construction are the only two economic sectors that come close to agriculture in terms of the seasonal fluctuations in employment.

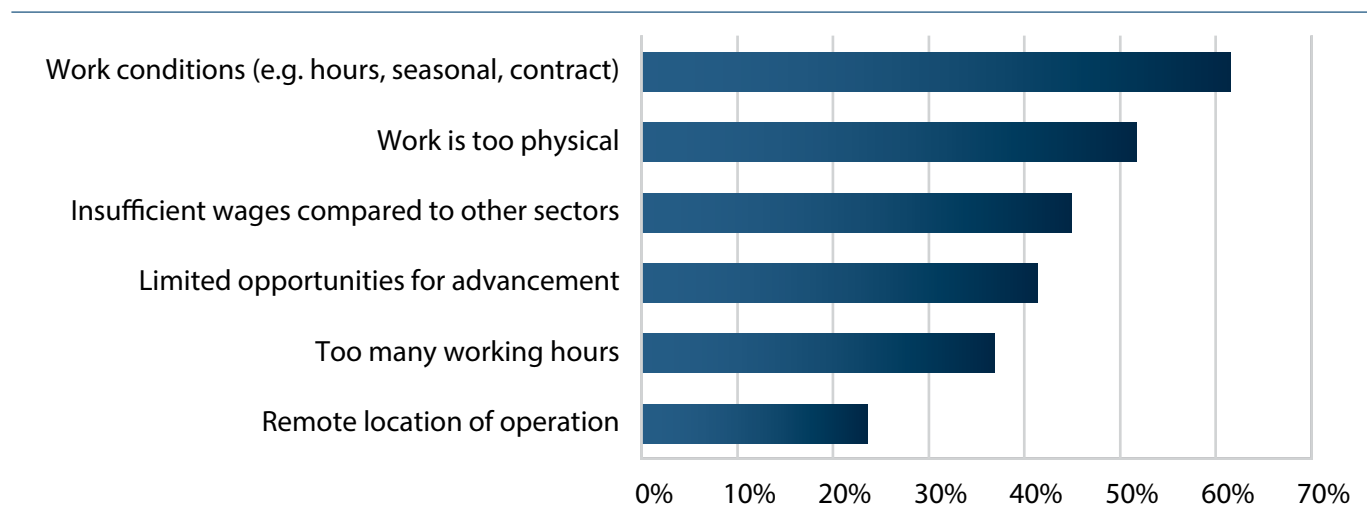
Agriculture also stands out from other sectors in terms of the number of hours worked. On average, people who were employed in the sector worked 43.5 hours per week in 2018.⁹ This was well above the average of 35.8 hours for all sectors and was the second highest among all the major sectors in the economy.

Furthermore, 36% of agricultural employees work more than 50 hours per week which was significantly more than the second highest industry (fishing, forestry, mining, and oil and gas) at 21%. The number of hours worked per week is highest in the spring planting and late summer harvesting seasons and it is much lower during the winter months. This emphasizes that the challenges of long hours and seasonal variations in workloads are interrelated.

However, it is important to note that not all commodities face these challenges in equal measure. For example, seasonality is most acute in the horticulture commodities, where seasonal peak employment can be more than four times as high as that of seasonal lows. Seasonality is less of an issue for employers raising animals. For example, 'dairy' producers experience very limited seasonality, but they are more likely than any other type of farm operator to report that long hours are a challenge. This is driven by the fact that caring for and milking the animals generally requires a presence on the farm 24 hours a day, 365 days a year, and particularly in smaller operations, providing this level of care can be a challenge.

Chart 3: Key Challenges to Retaining Workers

Share of respondents



Based on a survey of 1,257 respondents

Source: Canadian Agricultural Human Resource Council Employer Survey.

⁸ See CANSIM table 14-10-0022-01.

⁹ See CANSIM table 14-10-0035-01.

Rural Locations

While variability in hours and wages are two key factors affecting retention in the sector, there are also a number of key issues that impact the ability of the sector to recruit workers.

According to our employer survey, the top recruitment challenges include manual labour, seasonal nature of work, the perception of low wages, and the rural location of the sector's operations. (See Chart 4). Finding the right workers is another important challenge for recruiting at agricultural operations, however, this is not necessarily unique to the sector. Rural locations and the perception of manual labour for low pay, on the other hand, are more specific to agriculture.

Since 1991, Canada's population has risen by more than 9 million people. However, all of that growth has occurred in urban areas. Over the same period, the population of rural Canada has been essentially unchanged, at about 6.4 million.¹⁰ One reason for the lack of population growth in rural areas is that immigrants have been a major source of population growth in Canada for many years, and

few immigrants settle in rural areas. Another is that young adults tend to move to urban areas for school and work opportunities, and many do not return.

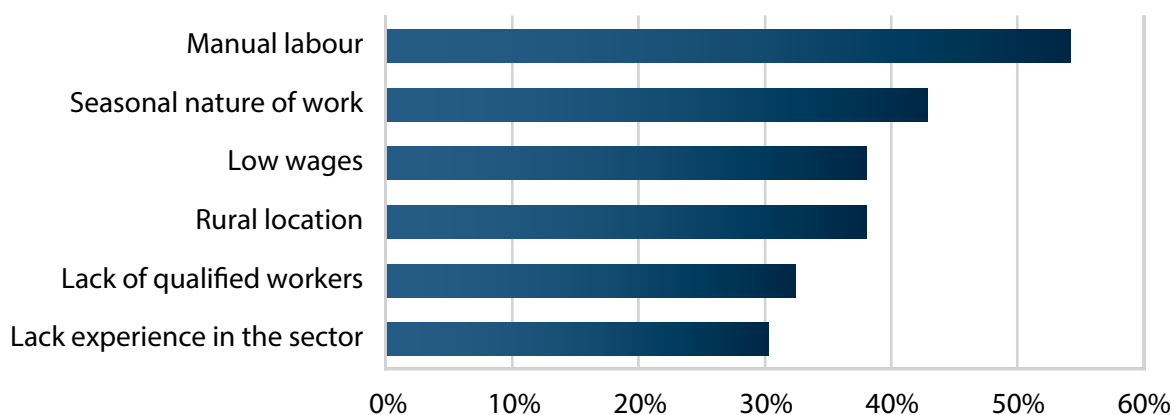
The result of these trends is apparent in the detailed survey results, where the rural location of many agricultural operations poses two key challenges when it comes to recruiting. First, people in urban areas are less familiar with agriculture and therefore don't consider a career in the sector. Second, respondents suggested that young people who have left rural areas lead to a shrinking number of workers available to work in agriculture. These two factors were identified as recruitment challenges by a respective 38% and 27% of respondents.

However, the rural nature of agriculture is less of a concern in some regions and commodities than in others. In particular, it was much more likely to be cited as a concern in the Prairies and in Atlantic Canada, while it was less of a concern in British Columbia, Ontario, or Quebec.

Another potential factor is the commodity mix in the different provinces. Some commodities, such as grain, are land intensive and are thus less able

Chart 4: Key Challenges to Recruiting Workers

Share of respondents



Based on a survey of 1,260 respondents
Source: Canadian Agricultural Human Resource Council Employer Survey.

¹⁰ Statistics Canada, Population, Urban and Rural, Statistics Canada, <http://www.statcan.gc.ca/tables-tableaux/sum-som/l01/cst01/demo62a-eng.htm>.



to operate close to cities. Conversely, many types of horticulture products are less land intensive and can be more easily located near areas with larger populations. As a result, regions that are grain intensive, such as the Prairies, are more likely to report challenges with recruiting that are related to the rural nature of agriculture.

Competition for Workers

Beyond variability in hours, competition for workers with other industries was another key retention challenge that employers identified in our survey. This competition has led to a wage gap that exists between agriculture and sectors such as oil and gas, and this makes it difficult for agricultural employers to retain their employees. It is true that the agriculture sector's wages are below the Canadian average, with weekly earnings in agriculture averaging \$774 in 2018, versus \$984 for all sectors.¹¹ However, the average wage in agriculture ranges widely, from minimum wage to well over \$20 an hour for an entry-level worker.

There are a few things to keep in mind when discussing wages in agriculture. First, the gap between agricultural wages and those in other sectors has gradually narrowed over time. In 2000, average weekly earnings in agriculture were only two-thirds of the average for all sectors. By 2018, that ratio had risen to over three-quarters (79%) of the average. Thus, agricultural wages have been experiencing above-average growth over this period and have become more attractive relative to many other sectors. This increase in the relative wage for the sector is true across provinces.



Second, the median wage has increased faster than the average wage in recent years, which suggests that the labour market is becoming more balanced between high-paying and low-paying jobs in agriculture. In other words, the growth in wages is more pronounced for lower-end farm jobs than for the higher end.

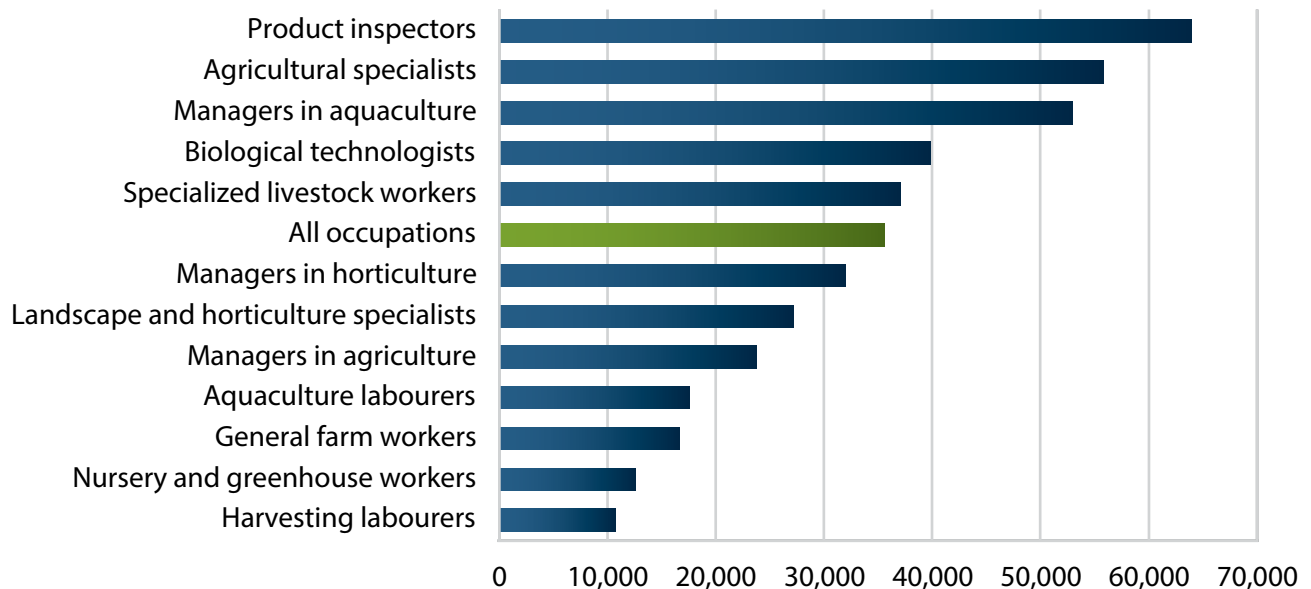
In addition, there are career paths within the sector that can lead to above-average rates of pay. For example, among occupations that are predominately found in agriculture, several, including agricultural inspectors and specialists, managers in aquaculture, biological technologists, and specialized livestock workers earn above-average wages. (See Chart 5). The industry also employs a significant number of people in other occupations with above-average pay, such as truck drivers and heavy-machinery mechanics.

¹¹ See CANSIM table 14-10-0064-01.



Chart 5: Not All Jobs in Agriculture Pay Below Average Wages

Median annual wages, salaries, and commissions for select occupations, 2016



Source: Statistics Canada, Census of Population, 2016.

Finally, the inability of farm operators to pass higher costs on to their customers limits the ability of the sector to raise wages. Many of the products grown by the sector are commodities, meaning that producers have only a limited ability to distinguish their products from others. As a result, prices for their products are generally set in regional or global markets. Moreover, producers are generally too small to exert much influence on market prices. As such, raising wages or expenses in an environment where prices cannot rise commensurately will erode operator profits, and may even put them out of business.

Work Environment

The perception that the work is too physical in nature is another major challenge, as 52% of employers in our survey suggested that it was a barrier to retention. However, only 15% of the employees we

surveyed suggested that the physical nature of work was a major factor limiting their interest in working in agriculture.

One other interesting result from the employee survey shed light on worker perceptions about the sector. Workers generally reported being happy to work in the sector, and 73% expected to work for five or more years in the sector. In addition, 79% of workers would recommend working in the sector to moderate or a great extent.

For comparison purposes, we can contrast this finding with the results from standard employee engagement surveys. For example, Aon Hewitt reported that only 64% of employees were engaged, or committed to their jobs, in North America in 2017.¹² This suggests that workers in agriculture are highly engaged and enjoy their work. Indeed, when asked what keeps them interested in working

¹² Aon Hewitt, 2018 Trends in Global Employee Engagement (Chicago 2018).



in the sector, 72% reported that they enjoy it, with other reasons including opportunities for career advancement (41%), good management practices (40%), job security (35%), and working with family (34%).

Yet the sector experiences a high voluntary turnover rate. For example, we estimate that the voluntary turnover rate¹³ was 10.3% for the sector in 2018, based on the employer survey results. In comparison, the average voluntary turnover rate for all sectors in Canada was 7.1%.¹⁴ Only the retail sector had a higher voluntary turnover rate than agriculture.

These results suggest that the agriculture sector has essentially two types of workers. The first is a core of engaged workers who enjoy what they do and tend to stay in the sector. The second comprises new workers who try working in agriculture but leave after a short period. Indeed, in our focus groups and interviews, farm operators mentioned many anecdotes about people lasting less than a week in some positions. It is the second group that drives the sector's high turnover rates. The key challenge for employers in this environment is to identify, hire, and develop workers who will stay in the first group.



¹³ Voluntary turnover is due to an employee-initiated departure, while involuntary turnover is initiated by the employer.

¹⁴ Heather McAteer, Compensation Planning Outlook 2018 (Ottawa 2017).



Agriculture's Widening Labour Gap

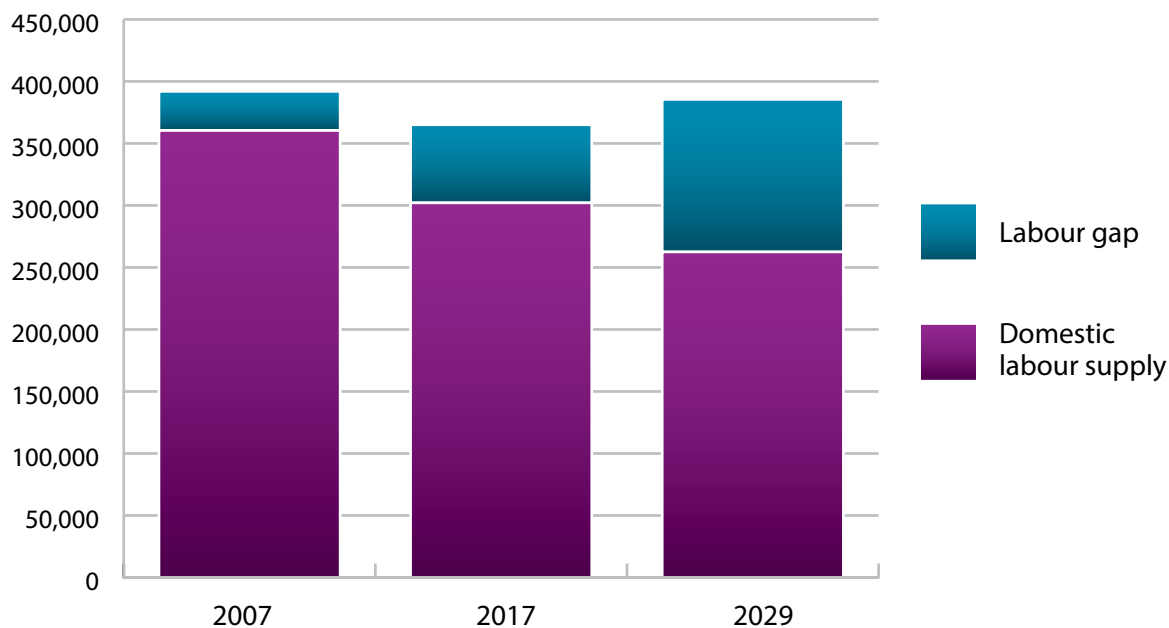
The previous chapter discussed the size of the current labour gap in the agriculture sector and some of the key factors that contribute to it. Another key issue is how the size of that gap has changed over time. Historically, the sector's labour gap has been steadily rising. In fact, between 2007 and 2017, we estimate that the labour gap has doubled in size, rising from 31,500 to 63,000 people.

That trend is expected to continue in the years to come. By 2029, the sector's labour gap is expected to nearly double again, reaching 123,000 people. (See Chart 6). This will be equivalent to 32% of the labour demand, or roughly one in every three jobs in the sector that year. To date, the sector has been able to fill over three-quarters of its vacancies with foreign workers, mostly through the Seasonal Agriculture

Worker Program (SAWP) of the Temporary Foreign Worker Program (TFWP). In fact, we estimate that 43,900 SAWP workers were employed in agriculture in 2017, equivalent to roughly three-quarters (74%) of all foreign workers employed within the sector that year. However, it is unclear whether employers can double or even triple the number of foreign workers coming into the sector in the years to come. As such, if the labour gap is left unfilled, it will hamper the sector's ability to thrive and continue growing.

The sector's labour gap is not evenly distributed across provinces or commodities today, and that will continue to be the case in the years to come. Ontario will account for just under half of the total of Canada's agricultural labour gap in 2029. (See

Chart 6: The Sector's Labour Gap is Expected to Double Over the Forecast Horizon
Number of workers



Source: Canadian Agricultural Human Resource Council.



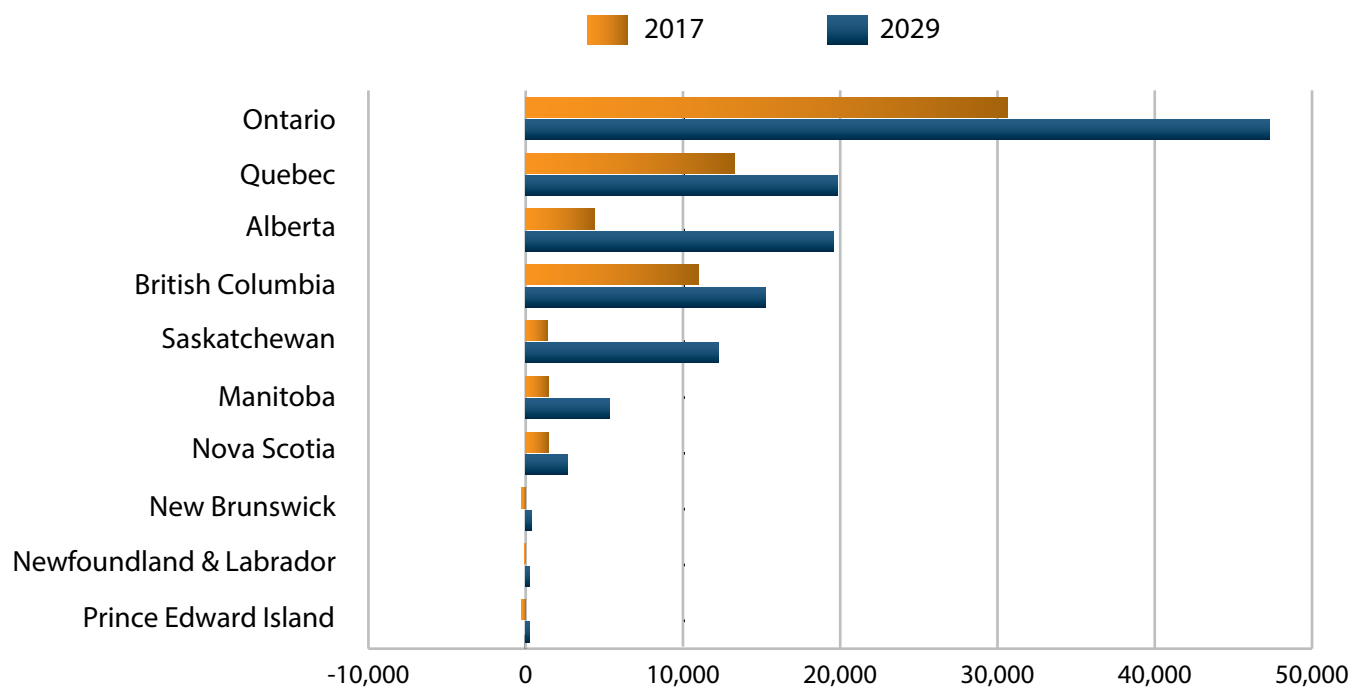
Chart 7). Other provinces with sizeable labour gaps will include Quebec, Alberta, British Columbia, and Saskatchewan. Relative to the size of the labour demand, the labour gap will be significant in all of the provinces, with the exception of P.E.I., New Brunswick, and Newfoundland and Labrador.

Among commodities, the 'greenhouse, nursery, and floriculture' industry will continue to have the largest labour gap. With an expected gap of 29,900 workers in 2029, this commodity group will account for one-quarter of the sector's labour gap. (See Chart 8). However, 'grain and oilseed' producers and 'beef' producers will experience the largest increases in their labour gaps and account for much of the increase in the labour gap for the sector as a

whole. The other commodity groups will generally experience much smaller labour gaps, although these gaps are still sizeable relative to labour demand. The 'dairy' industry and the 'aquaculture' industry will have the most balanced labour markets over the forecast period.

There are two key factors that will drive the size of the sector's labour gap in the coming years. The first is the growth in labour demand, which is driven primarily by the production and productivity growth for different commodities in the sector. The second is the supply of Canadian workers willing to work in the agriculture sector. The rest of this chapter discusses the key trends driving the changes in labour demand and supply.

Chart 7: Ontario Will Account for the Majority of Canada's Agricultural Labour Gap
Labour gap by province

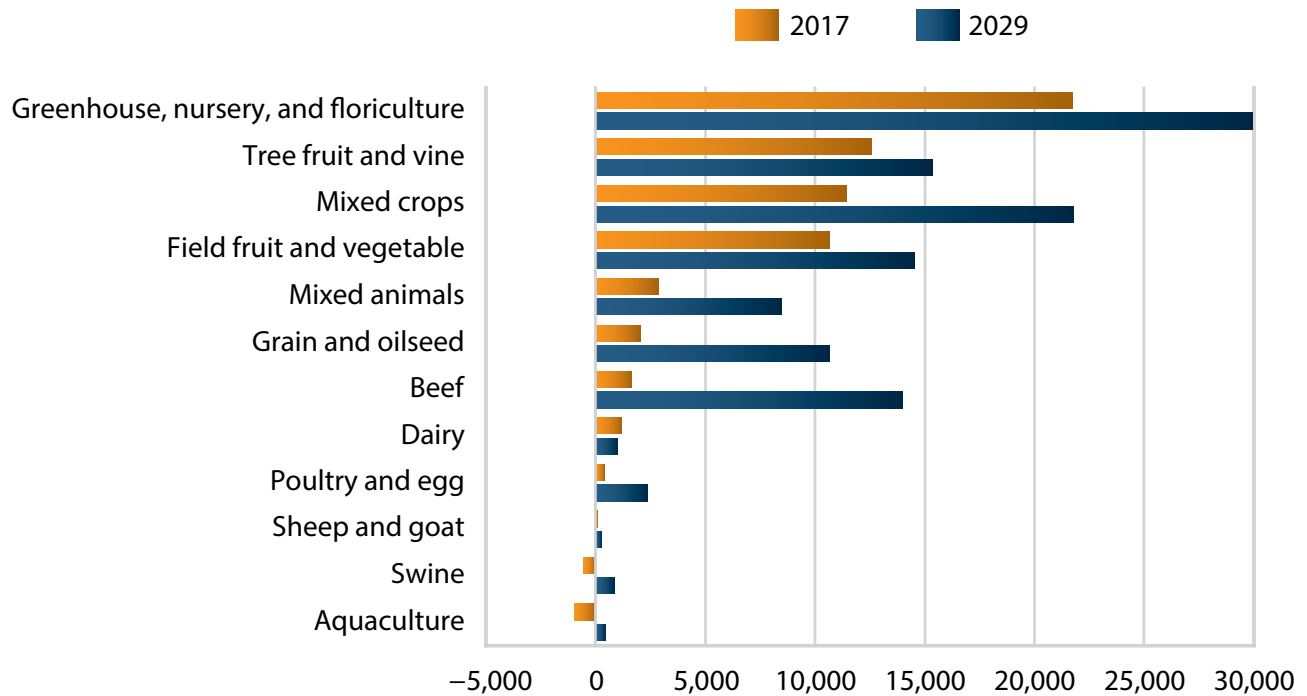


Source: Canadian Agricultural Human Resource Council.



Chart 8: The 'Greenhouse, Nursery, and Floriculture' Industry Will Continue to Have the Largest Labour Gap

Labour gap by commodity



Source: Canadian Agricultural Human Resource Council.

Trends Impacting Labour Demand

Labour demand in the agriculture sector has declined over the past 10 years, but we expect a moderate increase in demand over the forecast. The rising demand for workers is driven by the potential of the sector to increase production in response to rising market demand for its products. Notably, rising global demand for food, especially for animal protein, will be a key driver in the forecast. In addition, the sector's productivity, which has enjoyed strong growth historically, is expected to see more moderate growth in the future. (See Chart 9). Overall, the demand for workers within Canada's agriculture sector is expected to grow by an average of 0.5% per year, from 365,100 in 2017 to 385,500 in 2029.

Export-Oriented Commodities Will See Strong Growth

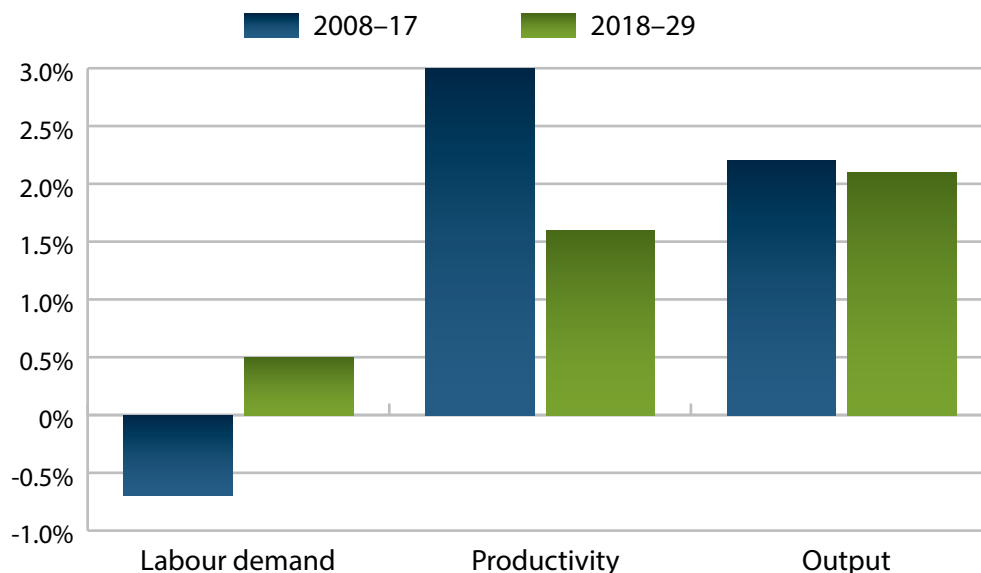
The demand outlook for agricultural products is an important factor in determining the sector's future production levels. Within North America, markets are already mature and well served. As a result, consumption growth is largely limited to population increases, which are very modest. The other major factor that influences the pace of growth in domestic consumption is changes in consumer tastes. For example, Canadians have been eating less red meat, but consuming more fish and chicken in recent years.

In contrast, developing economies generally have stronger population growth as well as populations that are becoming richer and better able to purchase food in greater quantities and varieties. Accordingly,



Chart 9: Positive Production Outlook and Slowing Productivity Growth to Drive Gains in Labour Demand

Average annual growth



Source: The Conference Board of Canada; Canadian Agricultural Human Resource Council.

industries that export a significant share of their production are expected to experience above-average production growth. Agri-food products with significant exports from Canada include 'grain and oilseed', 'greenhouse, nursery, and floriculture', and 'aquaculture' products. As a result, these commodities are expected to experience the strongest production growth over the forecast period. (See Chart 10). In contrast, the growth potential for industries that are heavily dependent on the domestic market, such as the 'dairy' industry, will be closely tied to population growth.

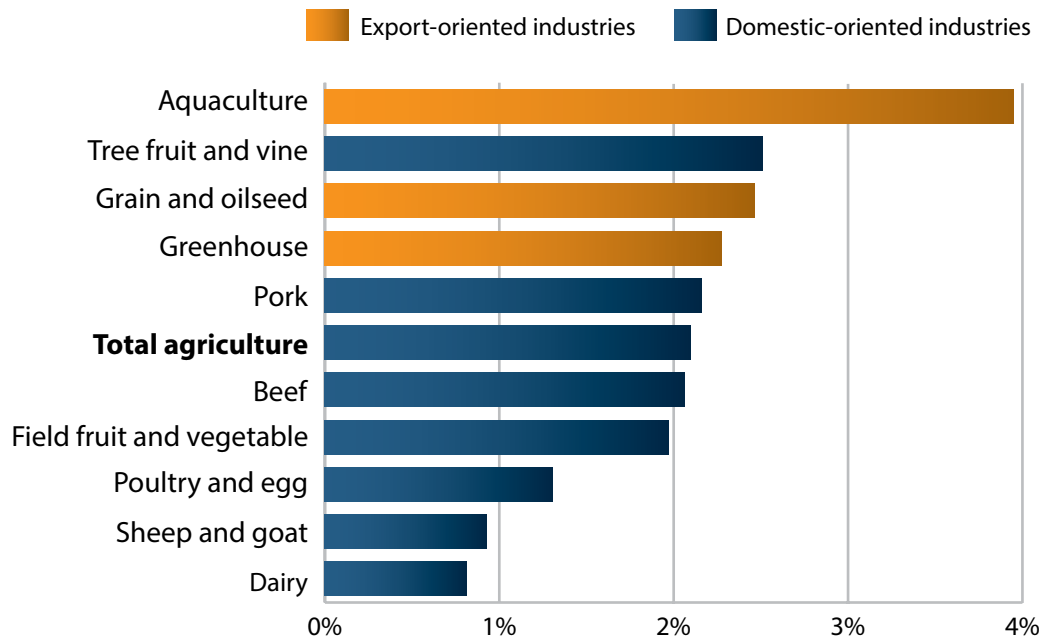
Two key factors will support Canadian exports of food products in the years to come. The first is a weaker Canadian dollar. The new normal for many commodity prices, including the key mineral and energy products that Canada exports, is at a level much lower than it was a few years ago. After spending a prolonged period near parity with the

U.S. dollar, the Canadian dollar will be consistently weaker over the forecast period, averaging USD \$0.83 in the medium-to-long term. The lower Canadian exchange rate makes Canadian exporters more cost-competitive, which should support exports and limit import competition at home. In addition, a weaker Canadian dollar leads to higher effective prices for many products whose benchmarks are set in U.S. dollars, supporting revenues and profitability for Canadian producers.

The other major factor supporting exports is the recent signing of several free trade agreements, which should increase market access for Canadian agri-food operations in foreign markets. For example, under the Canada-European Union Comprehensive Economic and Trade Agreement (CETA), over 94% of the EU agricultural tariff lines are now duty free. While Canada's agricultural trade with the European Union is currently limited, this free trade agreement



Chart 10: Export Oriented Industries Will Experience the Strongest Production Growth
Average annual growth in price-adjusted production, 2018–2029



*We categorize export-oriented industries as ones that export more than half of what they sell
Source: The Conference Board of Canada; Canadian Agricultural Human Resource Council.

will support a competitive advantage over producers from other countries that do not have a free trade agreement with the EU. The Trans-Pacific Partnership is another recently signed free trade agreement that should support access to markets, particularly those of Japan, Vietnam, and Malaysia.

Productivity Growth Will Slow in the Future

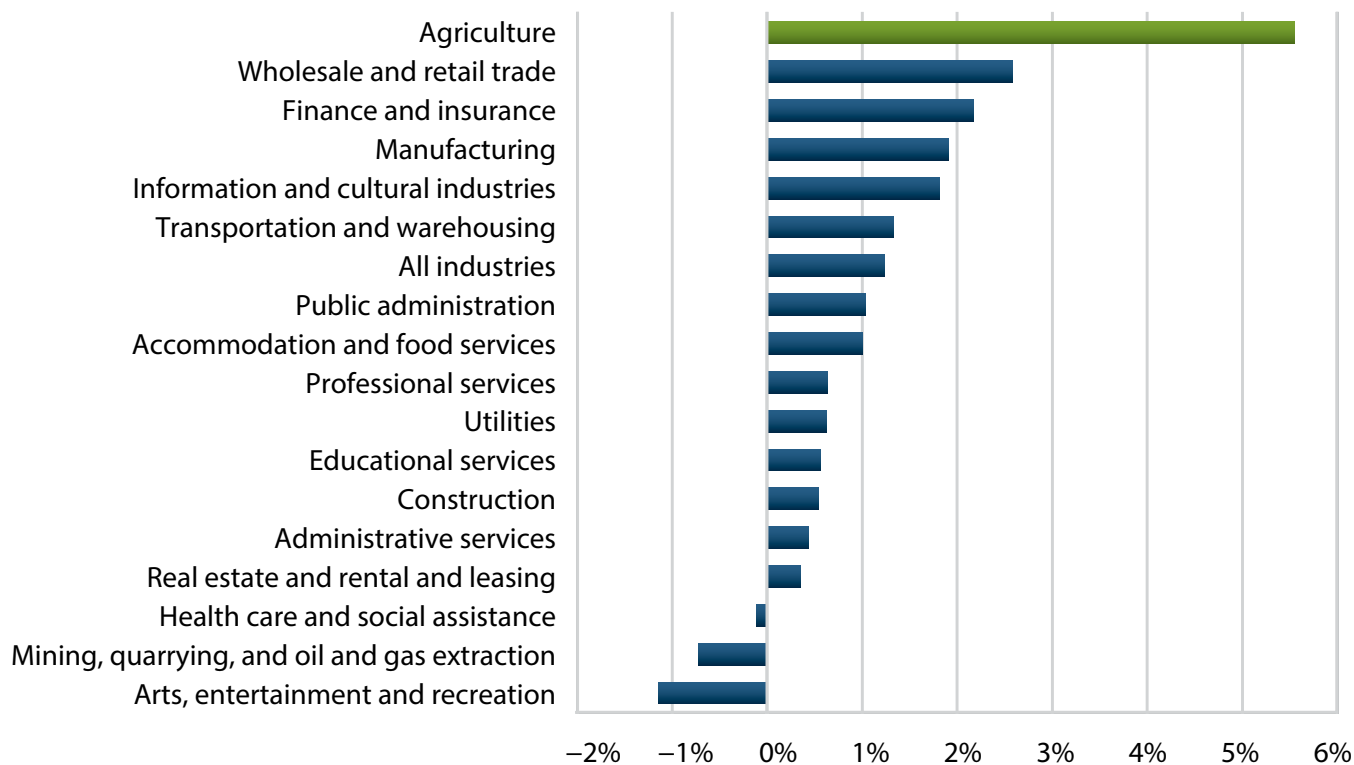
Strong productivity gains (measured by how much output each worker is able to produce) have been a key part of Canadian agriculture for many years. Thanks to mechanization, better seeds, improved fertilizers, and new farming techniques, farms have been able to produce more products with fewer workers. For example, in 1997, there were about

420,000 agriculture workers in Canada. In 2017, the workforce had shrunk to about 350,000 people, including foreign workers, which is a 17% decline. Over the same period, agricultural production grew by over 80%. In fact, agriculture had the strongest productivity gains among all the major sectors in Canada over the past two decades. (See Chart 11).

While we continue to expect strong improvements in agricultural productivity over the forecast period, the rate of production mechanization will decrease compared to previous years. This is because today's farms are already much more capital intensive than they were 20 years ago. As a result, the potential gains from increasing mechanization have become increasingly more marginal.



Chart 11: Agriculture Enjoyed Exceptional Productivity Gains over the Last 20 Years
Average annual change in output per hour worked, 1998-2017



Sources: Statistics Canada; The Conference Board of Canada.

Consolidation Has Changed the Labour Mix

Over the last two decades, the agriculture sector has been consolidating rapidly, as a large number of small farms have merged into larger entities. Consolidation of farms has been an important factor driving productivity gains and limiting the growth of demand for agricultural workers over the last 20 years, as larger farms tend to produce more products per worker. In addition, consolidation has influenced the type of work done in the sector: for example, it has resulted in a shift toward fewer owner/operators and more paid workers.

With farm consolidation expected to continue over the forecast period, albeit at a more modest pace, owner/operators will account for a steadily shrinking share of employment in the sector. This is apparent when we examine the share of the sector's employment that is in the manager in agriculture occupation, which includes owner/operators. The share of labour demand represented by managers in agriculture declined from over half of the total labour demand (52%) in 1997 to just 35% of the total labour demand in 2017. That share is expected to decline a further 3% between now and 2029. In addition, we expect that the contribution of unpaid workers (typically family members) will become less significant and that a larger share of the workforce will be paid workers.



Trends Affecting the Labour Supply

The supply of domestic workers available to the agriculture sector is determined by estimating how many people will exit and enter the sector's workforce each year. Demographic factors, including retirement, rates of interprovincial and international migration, and the number of young people entering the workforce from school are all key determinants. In addition, some people choose to enter or leave the agricultural workforce each year from or to other sectors of the economy. Personal preferences for work, relative wages, and broader economic conditions can all influence these movements.

Overall, the domestic labour supply available to work in agriculture is expected to shrink over the forecast period, falling from 302,100 workers in 2017 to 262,500 in 2029. Furthermore, all provinces are expected to see declines in the available agricultural labour force.

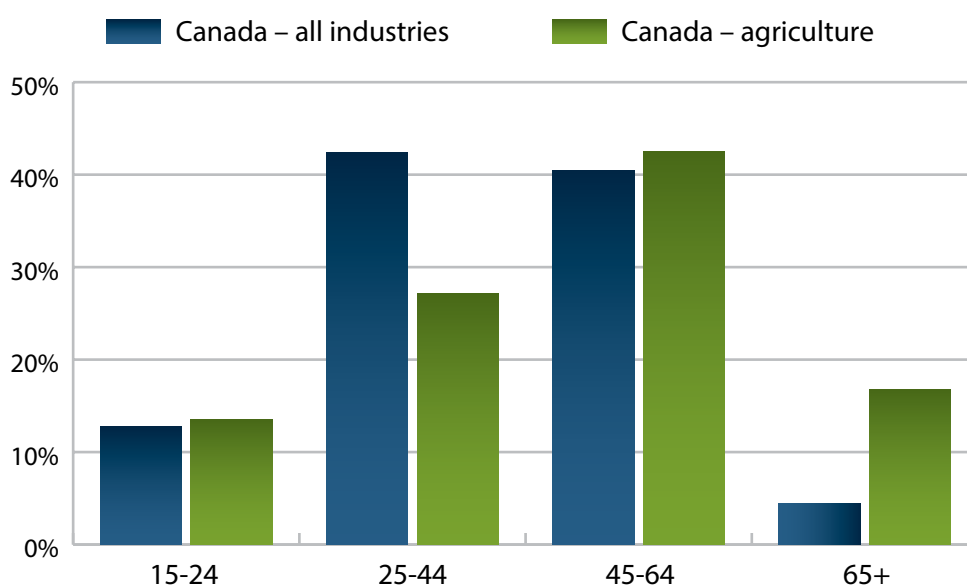
Retirements Will Shrink the Labour Supply

A rising number of retirements will be a key factor driving the decline in the sector's labour supply in the years to come. All sectors will be impacted by the aging workforce, but agriculture is unique in that the average age of its labour force is considerably older than the average age in all sectors. In fact, over 17% of agriculture workers are over the age of 65, versus 4% for the overall labour force. (See Chart 12). Even accounting for the fact that workers in the agriculture sector tend to retire later than in other industries, the sector is still expected to see 112,200 workers retire between 2018 and 2029. This is equivalent to 37% of the current agricultural workforce, or more than one in three workers.

Retirement Trends By Occupation

Because the average age of occupations can vary, and the occupational mix also varies industry to industry and by province, the impact of retirements does differ across the agricultural sector. Our

Chart 12: Older-than-Average Workforce Will Result in a Large Number of Retirements
Share of workers by age group, 2016



Sources: Statistics Canada; Canadian Agricultural Human Resource Council.



forecast also considers the average retirement ages within the different provinces individually, which can influence the number of retirements that are expected in the future. For example, in Newfoundland and Labrador, roughly 25% of the existing agricultural workforce is estimated to be 55 years or older in 2017, which is only slightly above the Canadian average of 23%. However, workers in the province tend to retire far earlier than elsewhere in the country. In 2017, just 47% of workers aged 60 to 64 in the province participated in the labour force, and that share drops sharply to just 16% for the 65 to 69 cohort and again to just 4% for workers aged 70 and over.

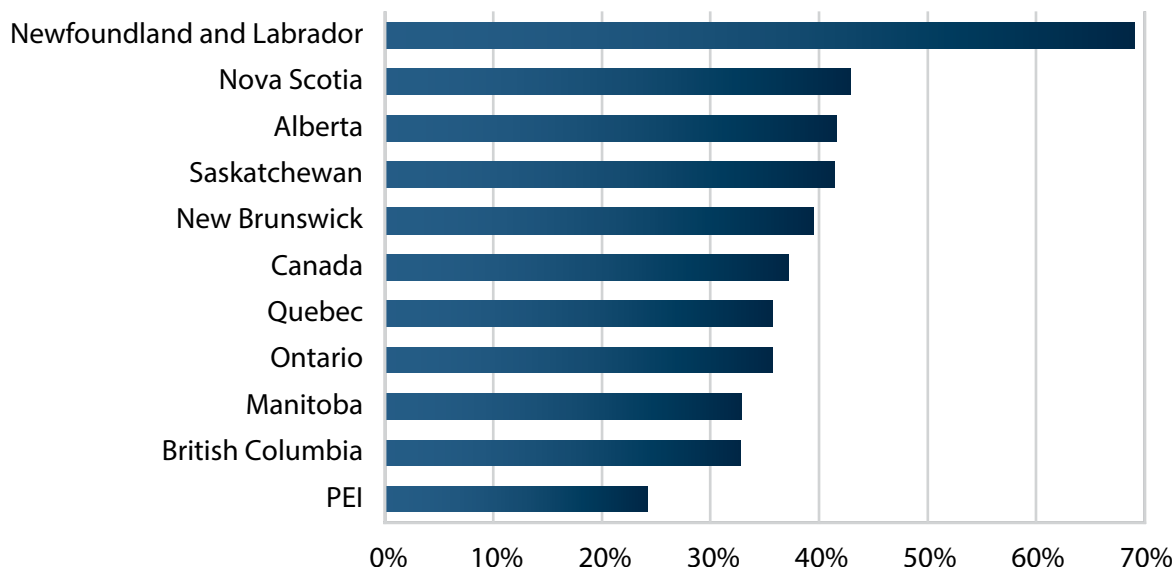
Declines in participation rates by age are an indication of when people are retiring, and the rate of labour force participation is easily lowest, and the rate of decline easily steepest, in Newfoundland and Labrador than anywhere in the country. Because of these factors, the province will see a much higher

share of its existing agricultural workforce retire over the forecast. (See Chart 13.)

Differences in the occupational makeup and provincial composition of the workforce also imply that retirements will impact some industries more than others. (See Chart 14). For example, the 'grain and oilseed' and 'beef' commodities have much higher shares of agricultural managers in their workforce than other industries and nearly one-quarter of all farm managers are already 65 years or older. Even after accounting for provincial variations in participation rates, these industries would still be expected to see an above-average share of retirements due to their occupational makeup.

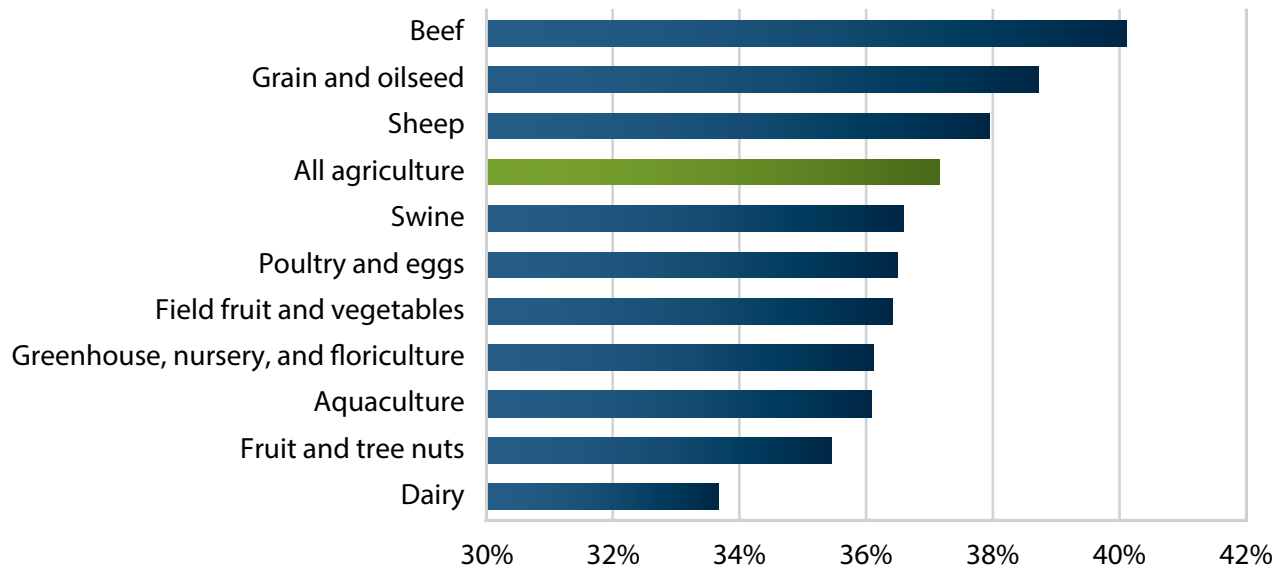
In some cases, the average age of workers varied by commodity. For example, 'aquaculture' workers were younger, on average, than workers in other commodities. This is partially because this industry is relatively new compared to some of Canada's more established commodity areas.

Chart 13: Retirements Will Impact Some Provinces More Severely
Share of 2017 workforce expected to retire by 2029



Sources: The Conference Board of Canada; Statistics Canada.

Chart 14: 'Beef' Industry to Experience Largest Relative Retirements over the Forecast
Share of 2017 workforce expected to retire by 2029



Based on a survey of 729 respondents

Source: Canadian Agricultural Human Resource Council Employer Survey.

Shrinking Number of Young Workers

A shrinking number of young workers leaving school will be another key factor limiting the sector's labour supply in the years to come. The number of Canadians aged between 15 and 24 years is expected to decline noticeably in the next half-decade, falling from a high of 4.5 million people in 2018 to about 4.3 million in 2024 before a slight rebound in the remaining years of the forecast. The share of the young population relative to total in Canada will fall from 12.3% in 2018 to just 10.8% by 2029. Moreover, this trend will be widespread, with nearly all provinces expected to record a decline in population in that cohort over this period. Alberta and Saskatchewan will be the only exceptions. Even there, it is likely that the greater number of younger workers in those provinces will be located in urban areas and not close to agricultural operations.

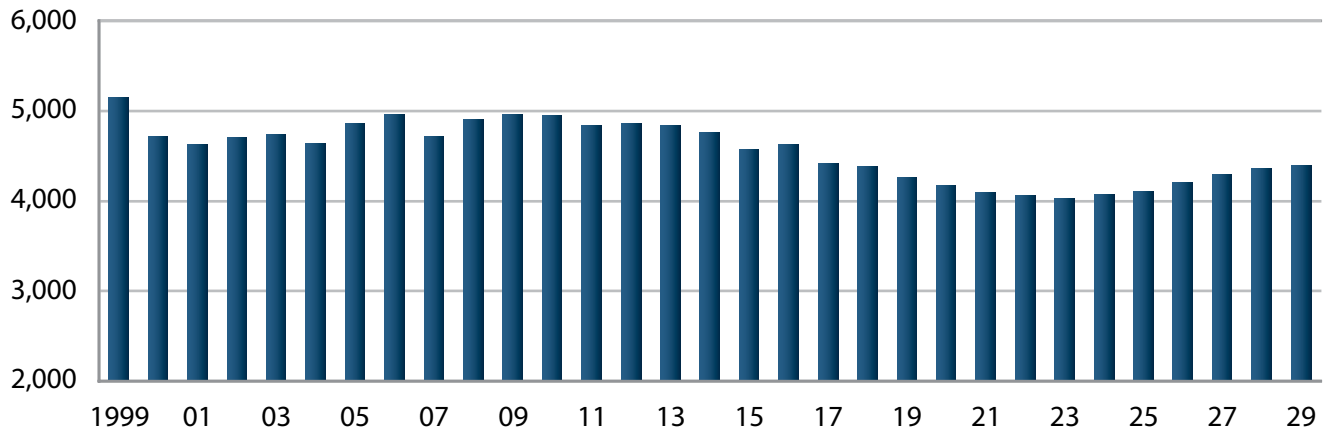
The end result will be fewer people leaving school and looking for work than we have become accustomed to.

This is a demographic fact that will impact all sectors of the economy. However, agriculture faces an additional challenge in that the share of young people entering the sector's workforce has been steadily declining independently of any reduction in the size of this cohort. Overall, we expect roughly 50,500 young workers to join the agricultural workforce between 2018 and 2029. That is approximately 600 fewer young workers per year than the sector saw between 2008 and 2017. However, the number of young workers entering the industry will be particularly low over the next five years as the size of this cohort in Canada shrinks quickly before rebounding later in the forecast. (See Chart 15).



Chart 15: Number of Young Workers Entering the Agriculture Will Fall Steadily in Next 5 Years

Number of 15 to 24-year-old workers entering agricultural employment



Sources: The Conference Board of Canada; Statistics Canada.

Young workers are the most important source of new workers for every sector. However, for various reasons, including changes in preferences regarding seasonal or physical work, a desire for higher salaries, a preference for work in urban centres, and other factors, young workers are proving less likely to choose agriculture as a career. Using the current generation of workers aged between 25 and 34 years as a benchmark, we measured their employment preferences to project how many of them will choose to enter each of the selected occupations. In other words, the workers in this age group are considered to be representative of the preferences that the following generation of workers will have regarding their choice of occupations.

On an annual basis, the number of young workers entering each occupation is fairly stable at approximately 1.5% of labour supply each year. However, the impact of young workers will be more important in some parts of the country than others, reflecting the differences in provincial demographics, and will range from 577 new young workers entering the agricultural labour force in Prince Edward Island to more than 13,300 in Ontario. In relative terms, the province of Newfoundland and Labrador is expected to see the most young workers enter its agricultural workforce. About 3.6% of annual labour supply will be due to this cohort – well above the national average of 1.5% – and this elevated level reflects the concerted efforts of the provincial government to attract more people into the industry as part of its Agriculture Sector Work Plan.¹⁵ It is also worth noting that the province’s elevated retirement rates will provide more job opportunities for young workers in the industry as they leave school.

¹⁵ The Way Forward on Agriculture – Sector Work Plan. Government of Newfoundland and Labrador (2017). https://www.flr.gov.nl.ca/agriculturesummit/pdf/Agriculture%20Sector-Workplan_Final.pdf

On the other end of the spectrum will be provinces like Saskatchewan and Prince Edward Island, where only 1.3% of annual labour supply is credited to the entrance of young workers. Existing trends in those provinces show that relatively few school graduates and young workers are taking up jobs in agricultural occupations and extending these forward suggests that gains from this important cohort will be less than elsewhere in the country over the next 10 years.

Immigrants Will Add to the Agricultural Workforce

With immigration expected to be a large source of growth for the Canadian population, immigrants represent a potential pool of workers available for work in the agriculture sector. Annual immigration to Canada has averaged just above 270,000 for the last decade, and assuming future changes to immigration policy are enacted, this number is expected to rise over the forecast period to 350,000 immigrants per year in 2029. Recent federal policies have made it difficult for those with skills considered to be 'low' to immigrate to Canada on a permanent basis. However, the federal government has recently announced a new three-year Agri-Food Immigration Pilot which will begin to offer a pathway to permanent residency for migrant farmers starting in 2020. The impact of this program relative to the size of labour shortages currently experienced by the agricultural sector is relatively small however, as it caps the number of applicants to 2,750 per year (with that target shared with meat processing activities) and will only apply to year-round work for harvesting labourers, general farm workers, and farm supervisors and specialized livestock workers. It also only applies to year-round mushroom production, greenhouse crop production, and livestock raising.

Provincial Nominee Programs, which are immigration programs that each province controls, offer some hope with limited access for agricultural workers, but for the most part, these provincial programs have a 'high-skill' focus that includes prioritizing immigrants with university education. It is also important to note that, in recent years, immigrants arriving in Canada

have been less likely to choose a career in agriculture than in other sectors. It is projected that immigrants will account for only 17,000 new entrants into the sector's workforce over the next decade.

Immigration trends are expected to be of more benefit to some provinces than to others. For example, Ontario and British Columbia are expected to experience the largest net inflow of migrants (both international and interprovincial) into their respective agriculture sectors between 2017 and 2029. (See Chart 16). This will support a below-average decline in the labour supply available within each province's agriculture sector over the forecast period.

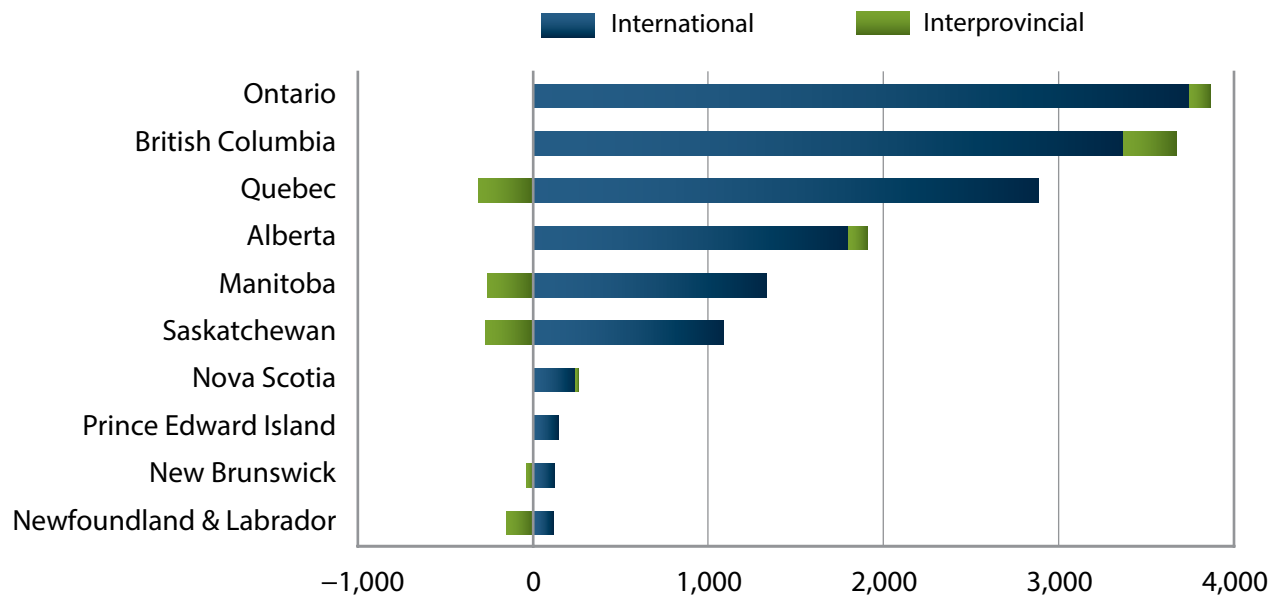
International immigration is expected to be a large source of growth for the Canadian population going forward, and as a result, they could represent a potential pool of workers for the agriculture sector. However, the integration of immigrants into the agricultural workforce has been limited in key occupations. Using the current percentage of immigrants represented in each occupation, we can use the total number of new immigrants entering the workforce between 2017 and 2029 to project the share of the labour supply that the new influx of immigrants would have accounted for in 2017. Based on these projections, we can assume that even with the growth in the immigrant population, immigrants will make up a small fraction of the labour supply for many agricultural occupations. We estimate that inward international migrants amounted to just 0.6% of labour supply in the industry in 2017.

Two occupations – managers in agriculture and general farm workers – combine to account for nearly two-thirds of all domestic agricultural employment around the country. Therefore, trends in these occupations have an outsized impact on the future balance between labour supply and demand in agriculture. Yet, relative to the size of their occupational workforce, these two occupations attract the fewest international immigrants. In fact, cumulative international immigrants between 2017 and 2029 will amount to just 6.7% and 7.1% of 2017 labour supply respectively. (See Chart 17). At the other end are occupations that have done



Chart 16: Migration Trends To Benefit Some Provinces More Than Others

Cumulative net new entrants into the agricultural workforce from migrants, 2017–29



Source: The Conference Board of Canada; Statistics Canada.

well in attracting international immigrants into their ranks, specifically those in aquaculture, horticulture, greenhouse, and landscaping occupations.

Occupation-Specific Trends

While agriculture’s widening labour gap will affect a wide range of occupations, some will be more heavily impacted than others.

For example, because of the trend towards consolidation of smaller farms into fewer large farms, the share of managers required in the workforce is expected to shrink over the forecast period. In essence, fewer farms translates into a reduced need for managers. In 2029, managers in agriculture are expected to account for 32% of labour demand in the agriculture sector, down from 35% in 2017.

In contrast, all other occupational groups will see their share of labour demand in the sector increase.

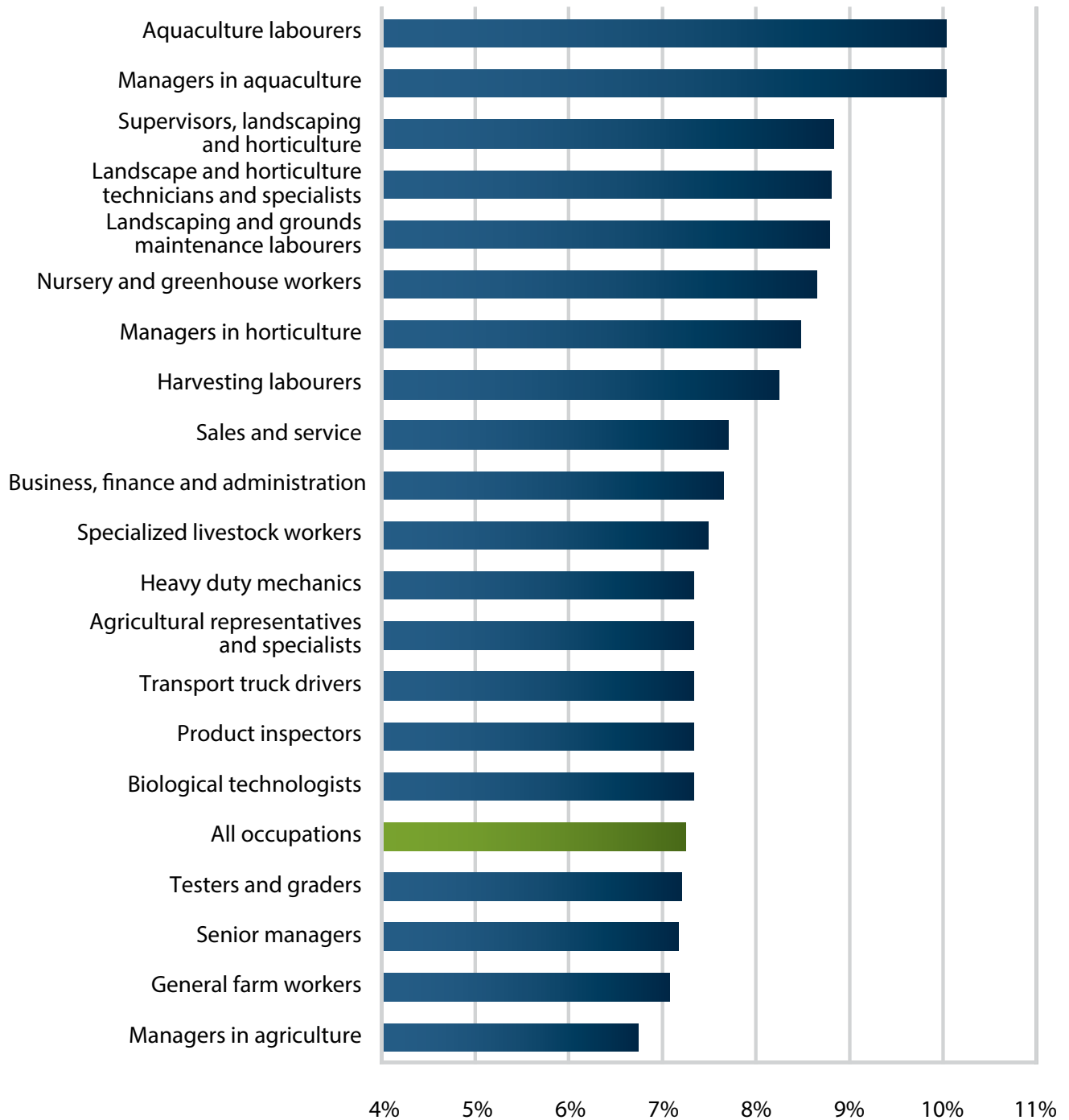
General farm workers, nursery and greenhouse workers, harvesting labourers, and business, finance and administration occupations will all see their share of the workforce increase significantly. This trend is also related to consolidation, reflecting the sector’s ongoing shift away from traditional, small family farms towards larger business-oriented farms with non-family managers and employees.

Not all occupations will be under the same pressure in terms of labour shortages going forward. While some occupations are at risk of facing more retirements, others seem able to attract more young workers. The gap is the final result of the changes in demand for each occupation (driven by the market conditions) and the supply changes (driven by the various demographic factors). By evaluating each occupation independently and generating gap measurements that take into account both labour demand and supply growth, we can determine which occupations will be most affected by labour shortages. (See Chart 18).



Chart 17: Two Largest Agricultural Occupations Attract Relatively Few International Immigrants

Cumulative international migration between 2017-2029 as a share of 2017 supply

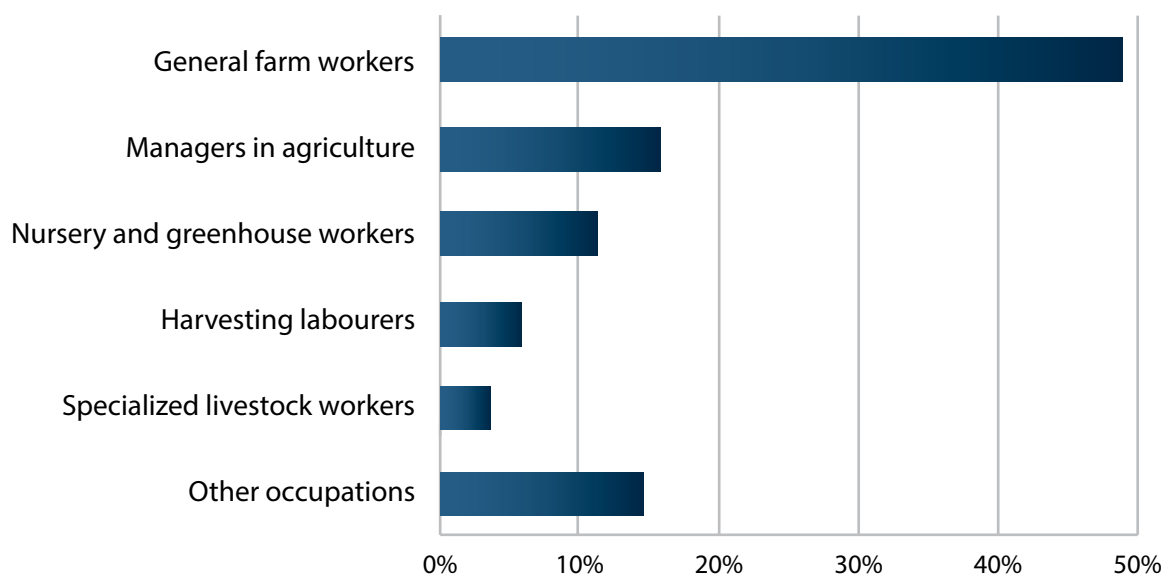


Sources: The Conference Board of Canada; Statistics Canada.



Chart 18: General Farm Workers Account for Half of the Labour Gap

Total share of the labour gap for select occupations in 2029



Source: The Conference Board of Canada; Statistics Canada.

Between 2017 and 2029, the gap in the agricultural workforce is expected to widen from 63,000 workers to 123,000 workers. Most of the gap will be felt in the general farm workers and managers in agriculture occupational groups. In fact, those two occupations will account for roughly two-thirds of the gap in 2029. This is no surprise, as they also account for over 60% of the workforce.

Another way to analyze the pressure from labour shortages in each occupation is by looking at the gap relative to labour demand, as well as how it is changing over time. This ratio highlights where the gap represents a large proportion of the demand, regardless of the size of the workforce for a particular occupation. For example, the labour gap-to-demand ratio for nursery and greenhouse workers is highest over the forecast period, rising from 45% in 2017 to 55% in 2029.

In other words, more than half of the jobs in this occupation are at risk of going unfilled due to a lack of available domestic workers.

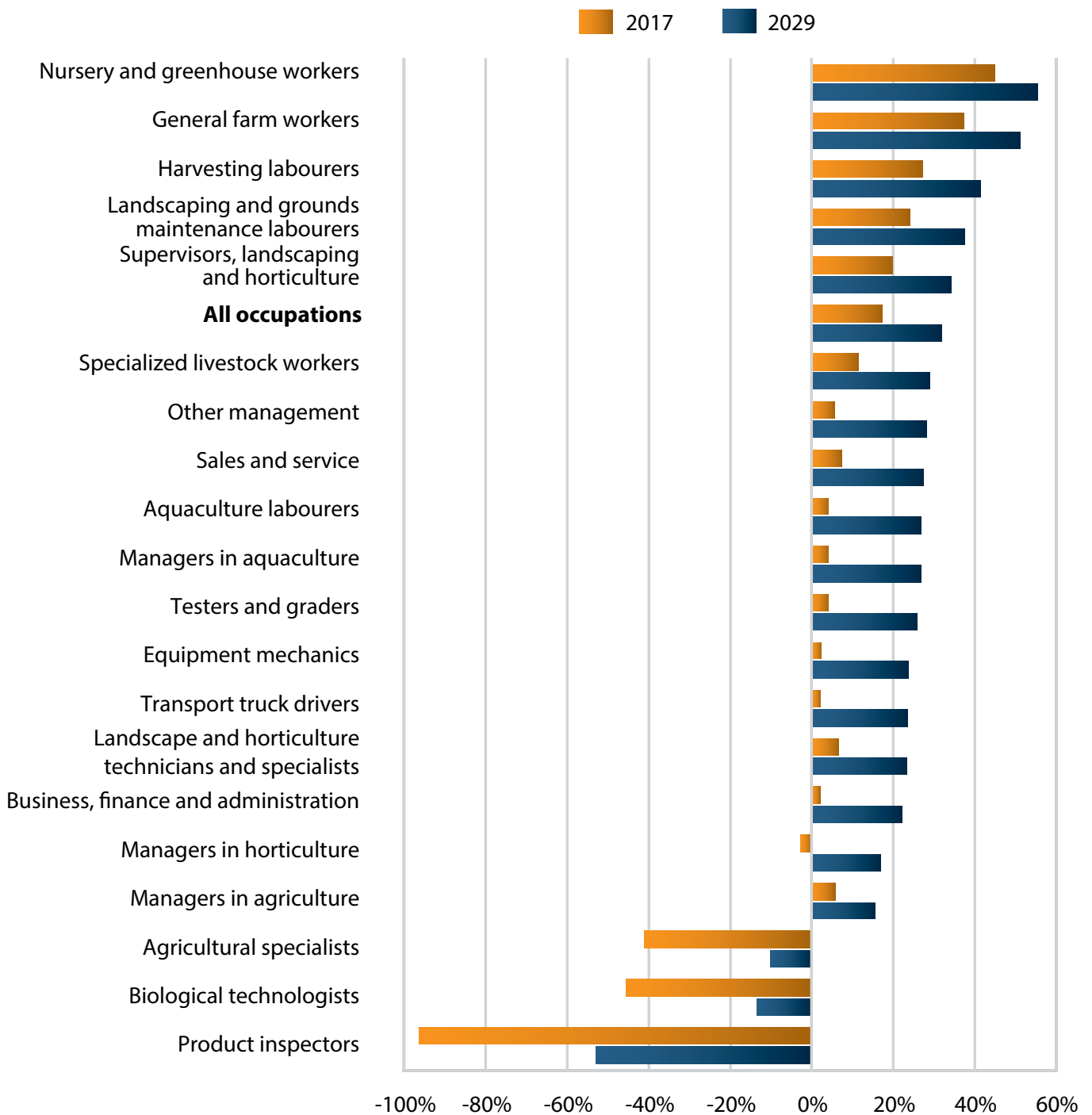
In general, most agriculture-specific occupations already have significant labour gaps relative to demand, and their size is expected to grow in the coming years. (See Chart 19). For example, managers in agriculture is the single largest occupational group, and its labour gap-to-demand ratio is expected to rise from 6% to 16%. General farm workers, who already have a high gap-to-demand ratio, will see it climb further, from 37% to 51%. In summary, the current labour shortages that the sector is experiencing are only expected to get worse in the coming years.

It is also worth noting that several occupations are expected to have labour surpluses over the forecast period, although the surpluses are expected to get gradually smaller. Occupations that fall into this category include agricultural and fish product inspectors, biological technologists and technicians, and agricultural consultants and specialists. It is important to note that although a surplus may exist nationally for these occupations, it is still possible that local shortages may exist in some regions. In other words, the people with the right skills may not be located where they are needed.



Chart 19: Labour Shortage Pressures Vary by Occupations

Labour gap as a share of demand for select occupations



Sources: The Conference Board of Canada; Statistics Canada.



Unique Commodity Challenges

We have seen that Canada's agriculture sector has a significant labour gap caused by an unprecedented convergence of different factors, including seasonal patterns in production and the rural location of many farms. Many farms have addressed at least some of these challenges by hiring foreign workers to sustain operations.

The sector's labour gap is expected to nearly double over the forecast due to a combination of healthy growth prospects for the sector and a shrinking domestic supply of people available to work in the sector. Although many of these concerns are common across the sector, producers of each of the various agricultural commodities face a unique combination of challenges. This chapter examines the unique challenges within agriculture's different commodity groups.

Supply-Managed Commodities

Two commodity groups within the agriculture sector are covered by Canada's supply-management systems. These systems control production so that industry output aligns with the expected market demand. This type of controlled system reduces costly shortages and surpluses.

The first and larger of Canada's two supply-managed commodities is the 'dairy' industry, which includes farm operations that primarily engage in milking dairy cattle. The other is the 'poultry and egg' industry, which includes farm operations that primarily engage in breeding, hatching, and raising poultry for meat or egg production. Animals grown include chickens and turkeys, which are supply managed and account for the vast majority of production, but they also include all other types of game birds, such as ducks, geese, pheasants, partridges, and pigeons.

'Dairy' Producers and 'Poultry and Egg' Producers Face Fewer Recruitment Challenges

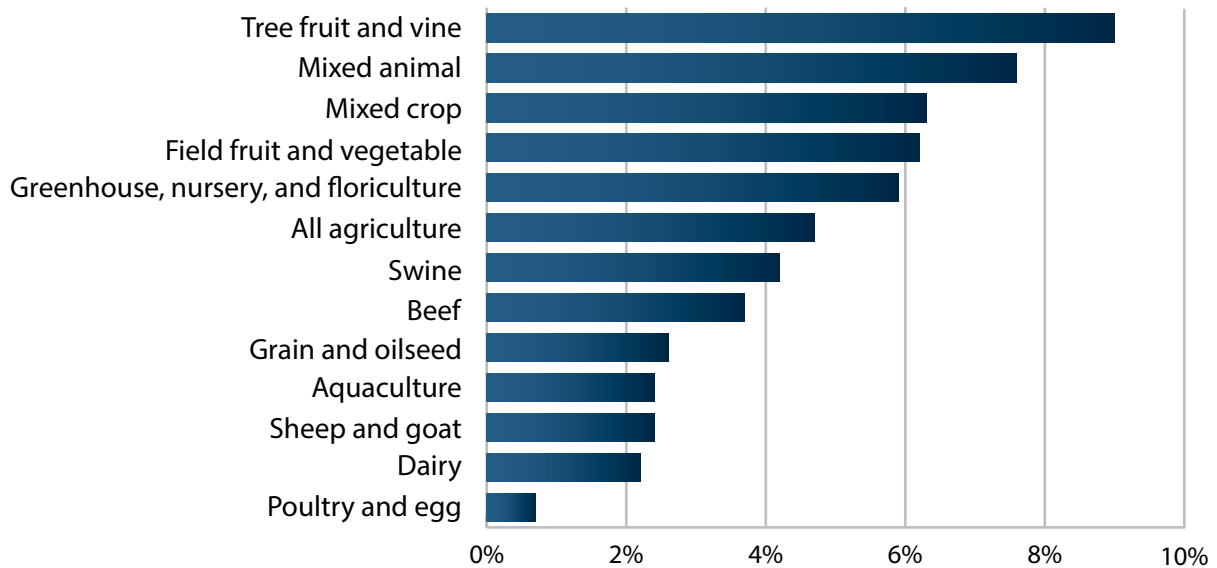
Labour shortages have a smaller impact on supply-managed industries, compared to most other commodities. For example, lost sales due to labour shortages in 2018 for both industries were the smallest within the agriculture sector. (See Chart 20). A key reason behind this is that farm operations in supply-managed industries face somewhat fewer difficulties in recruiting workers. According to our employer survey, 47% of farm operators were unable to find all the workers they needed in 2018. In contrast, 42% of 'dairy' producers and 36% of 'poultry and egg' producers were unable to find all their needed workers. Moreover, 'poultry and egg' producers were almost twice as likely than the average Canadian farmer to report not facing any barriers to recruitment, at 11% versus 6% of respondents for all of agriculture.

A number of factors mitigate the buildup of labour shortages in supply-managed commodities. To begin with, they have low levels of seasonality in their business operations. In fact, the 'dairy' industry has the lowest level of seasonal workforce fluctuations in the entire agriculture sector. As a result, these industries generally offer stable, year-round employment that is more attractive to potential workers. In addition, 'dairy' has below-average



Chart 20: Labour Shortages Are Less Costly for Supply Managed Products

Estimated share of sales lost due to labour shortages by commodity, 2018



Sources: Statistics Canada; Canadian Agricultural Human Resource Council Employer Survey.

voluntary turnover rates. In other words, fewer employees leave their jobs, meaning that employers have fewer jobs to fill. A lower turnover rate will also allow an operation to be more productive by limiting the time and resources spent filling positions and training new employees.

Labour Quality over Quantity Is the Key Issue

While employers in supply-managed industries may be better able to find a sufficient number of workers, they face more difficulties in hiring people who are well suited to their operations. In other words, 'dairy' farms, and to a lesser extent 'poultry and egg' farms, are challenged with skills shortages more frequently than labour shortages. For instance, according to our employer survey, 'dairy' operators were the most likely to cite a lack of qualified workers in their area as a key barrier to recruitment, at 50% versus 32% of respondents for all of agriculture. At the same time, 45% of 'dairy' operators highlighted an applicant's

lack of experience working in the sector as an obstacle to recruitment, compared to 30% for all of agriculture.

Finally, both 'dairy' and 'poultry and egg' operators were more likely to report an applicant's lack of essential skills as a key barrier to recruitment, a further indication that there is a mismatch between the skills a given position requires and the skill set an employee brings to the table.

Various solutions can help supply-managed industries tackle the skills shortcomings of new and existing workers. For example, supply-managed operations could increase their willingness to provide formal training to ensure that their workers have essential skills, such as reading, problem solving, and numeracy. In addition, finding ways to retain qualified workers will be key. For the 'dairy' industry, this could involve improving work conditions and finding ways to reduce the number of hours worked, which are the industry's two largest retention challenges. One way that dairy producers



could address these challenges is by increasing the flexibility regarding working hours. For 'poultry and egg' farmers, finding career paths for workers that will generate more opportunities for advancement will be important in encouraging workers to stay.

Stable Production Outlooks Will Keep Labour Markets Balanced

Going forward, stable production outlooks and modest productivity growth are expected to moderate labour demand growth in supply-managed commodities. Indeed, one outcome of the supply management system is that 'dairy' producers and 'poultry and egg' producers are largely confined to the domestic market. The outlook for production growth in the 'poultry and egg' industry is somewhat stronger than in the 'dairy' industry, since the per capita consumption of poultry meat is rising in Canada while the per capita demand for 'dairy' products is falling. However, the 'dairy' industry and the 'poultry and egg' industry will see the most stable production outlooks within the agriculture sector.

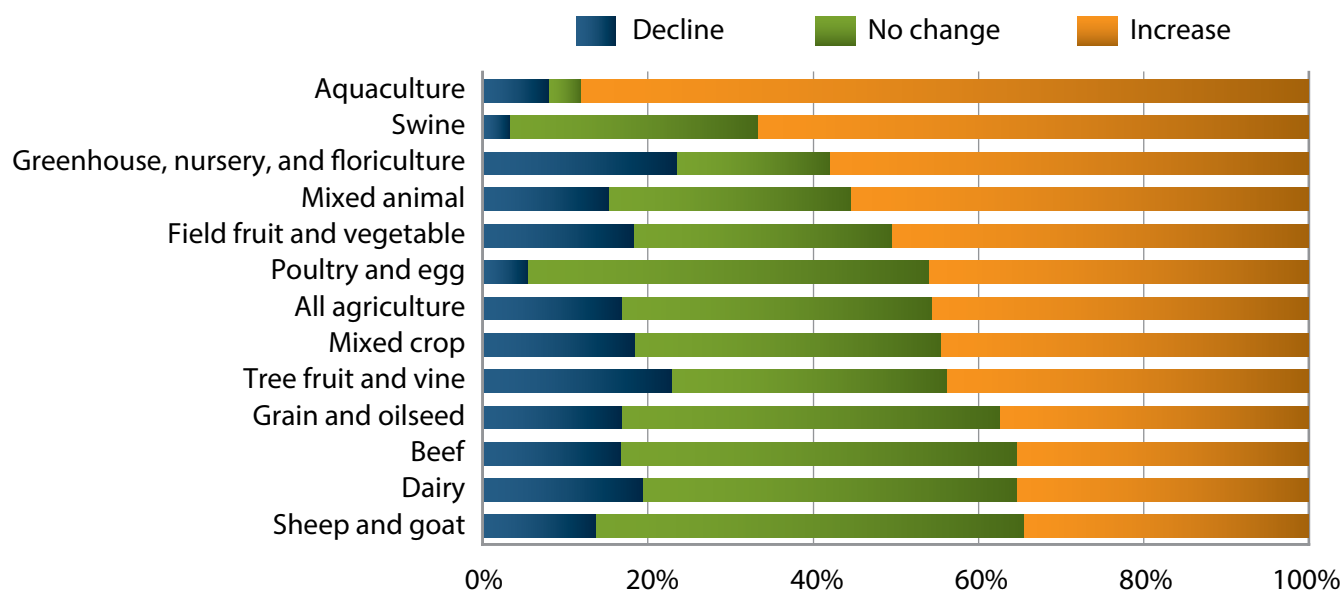
Healthy productivity growth is expected to match or almost match production gains in both industries, such that outlook for labour demand remains weak. On the one hand, 'poultry and egg' is expected to see labour demand grow at a pace of 0.2% per year over the forecast. 'Dairy', on the other hand, is forecast to see labour demand decline by 0.8% per year. The latter result coincides with the findings of our employer survey, in which only 35% of 'dairy' farmers expect employment at their farms to increase over the next five years, compared to 46% for all of agriculture. (See Chart 21). Softer prospects for labour demand growth will be a key factor limiting the size of the labour gap in supply-managed industries over the forecast period, and this will keep labour markets more balanced for these industries.

Horticulture

Horticulture growers include three agricultural commodity groups: 'tree fruit and vine'; 'field fruit and vegetable'; and 'greenhouse, nursery, and floriculture'. All three commodity groups share

Chart 21: 'Dairy' Operators Less Expectant of Job Growth at Their Operations

Share of respondents who expect their employment to rise over the next five years



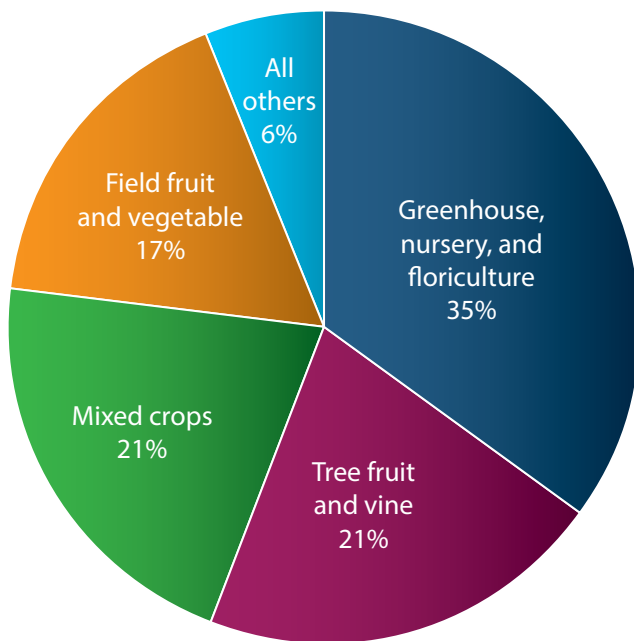
Based on a survey of 1,138 respondents

Source: Canadian Agricultural Human Resource Council Employer Survey.



Chart 22: Horticulture Accounts for Most of the Foreign Workers Employed in Agriculture

Share of foreign workers in agriculture by commodity, 2017



Sources: Statistics Canada; The Canadian Agricultural Human Resource Council.

common characteristics, including the fact that their production is highly seasonal, very labour intensive, and highly dependent on foreign workers. All three of these factors are interrelated. Because they need a high volume of workers, often for shorter periods at peak times, it is difficult to recruit Canadians to work in these jobs. Employers often turn to foreign workers to fill their labour needs when Canadians are not available.

Continued Access to TFW Programs Is Critical

No other commodities within agriculture depend more heavily on foreign workers to fill labour shortages than those involved in horticulture. In fact, these three industries account for nearly three-quarters of foreign workers in the agriculture sector. (See Chart 22). Additionally, many of the remaining one-quarter of foreign workers are found at 'mixed crop' farms, which often produce fruits and vegetables in addition to other products. Horticulture producers are so dependent on foreign workers that they account for more than two-fifths of each commodity's workforce, compared with less than 6% for the rest of agriculture.



Their reliance on foreign workers to fill labour gaps stems largely from their high seasonal fluctuations in labour demand. Indeed, the most pronounced seasonal pattern within agriculture is found among the horticulture industries. For example, the workforce of the 'tree fruit and vine' industry at its seasonal peak is nearly 5 times the size of its workforce at its seasonal low. With many products within these industries needing to be hand-picked and/or packaged, and when Canadians are not available to do this work, these industries rely heavily on foreign workers to perform these labour-intensive activities during their seasonal peaks. Because of their high reliance on foreign workers, which are counted as part of the labour gap along with unfilled jobs, producers in these commodity groups tend to face the largest labour gaps in the agriculture sector.

While horticultural producers have been successful in filling much of their labour gap with foreign workers, this solution does open them to policy risk. Changes in temporary foreign worker policies can result in an unstable supply of foreign workers and uncertainty for business owners.

Work Conditions Impede Recruitment and Challenge Retention

Horticultural producers were more likely than average to report that their key recruitment challenges related specifically to the nature of work in the industry. For example, in our employer survey, 72% of respondents indicated that too much manual labour is a barrier to their recruitment efforts which was significantly above the agricultural average of 54%. The second biggest challenge for horticultural employers was the seasonal nature of the work (66%) followed by low wages (49%) and unwillingness to work outdoor (29%) – and each of these was noticeably above the agricultural average.

However, manual labour, working outdoors, and seasonality are inherent to horticultural work and options to mitigate these characteristics is limited. Canadians have tended not to apply for these jobs and this is why employers have turned increasingly



to foreign labour to fill jobs – since our previous forecast was conducted in 2015, the number of foreign workers employed in horticultural industries has increased from 39,300 to 43,500 today. Maintaining access to this source of labour will be more critical for these industries than all others if the industry is to reach its production potential.

Red Meat

Red-meat producers include 'beef' producers, operations that raise and finish cattle, and 'swine' producers. Feedlots and producers that raise cattle for 'dairy' herd replacement are also included in the 'beef' industry. The 'beef' and 'swine' industries share common characteristics. Both commodity groups experienced a decline in production and labour in recent years, and both are expected to experience robust growth between now and 2029.

Export Markets Key to Future Growth

Both commodity groups have experienced a significant decline in production and labour demand in recent years, as low prices led to a substantial decline in the number of 'beef' farms and 'swine' farms. Many of these farms switched to producing 'grain and oilseed' products. However, the production outlook for red-meat producers is expected to improve in the years to come.



While growth in the domestic demand for red meat is expected to remain weak - per capita demand has been gradually trending down for years as consumers switch to poultry, fish, and meat alternatives — foreign demand will drive the expansion in production. Growing personal disposable income in emerging countries is expected to support strong growth in the global demand for animal protein. As a result, both industries are expected to see an increase in labour demand over the forecast period. Moreover, many domestic red meat producers sell their products to food processors which are, in turn, export oriented. This allows even small producers which are themselves largely confined to the domestic market to take advantage of the global trends towards greater animal protein intake globally.

This healthy production outlook is supported by the results from the employer survey. Just under one half of 'beef' operators and three-quarters of 'swine' operators expect production at their operations to increase over the next five years. A robust production outlook, in turn, will increase the sector's need for workers. For example, 35% of 'beef' operators expect employment increases at their operations over the next five years, while only 17% expect declines. Even more striking, two-thirds (67%) of 'swine' operators anticipate employment increases at their operations, compared to only 3% that expect declines. Rising labour demand will be a contributor to a widening labour gap within red meat industries, a declining labour supply will be its main driver.

Impact of an Aging Workforce Is Particularly Acute

Over the forecast period, red-meat industries (particularly the 'beef' industry) are expected to experience above-average declines in domestic labour supply when compared to the rest of agriculture. A high rate of retirement will be the key factor driving this. As the 'beef' workforce continues to age, the industry will experience a rising number of retirements. By 2029, two-fifths of the segment's current domestic workforce is expected to retire, which is highest for all of agriculture. In combination

with weak inflows of new workers, this will result in 'beef' producers experiencing the second largest decline in their labour supply within agriculture over the forecast period, with supply in 2029 expected to be 17% below where it stood in 2017. (See Chart 23). While the 'swine' industry will see a smaller share of its workforce retire compared with the 'beef' industry, it too will experience a significant decline in its labour supply over the next decade.

A significant decline in the labour supply is expected to drive an increase in each industry's respective labour gap. In fact, the labour gap for 'beef' will experience the largest increase over the next 10 years, with 'grain and oilseed' producers ranked second. 'Swine' producers will see their current labour surplus become a deficit as early as 2023. Widening labour gaps will severely hamper the ability of 'beef' and 'swine' producers to take advantage of growing foreign demand and expand production. Moreover, confronting sizeable future labour shortages will be even more challenging for the red meat industries because large declines in the labour demand over the past decade have limited the pool of experienced candidates from which these industries can draw.

Finding the Right Workers Is the Challenge

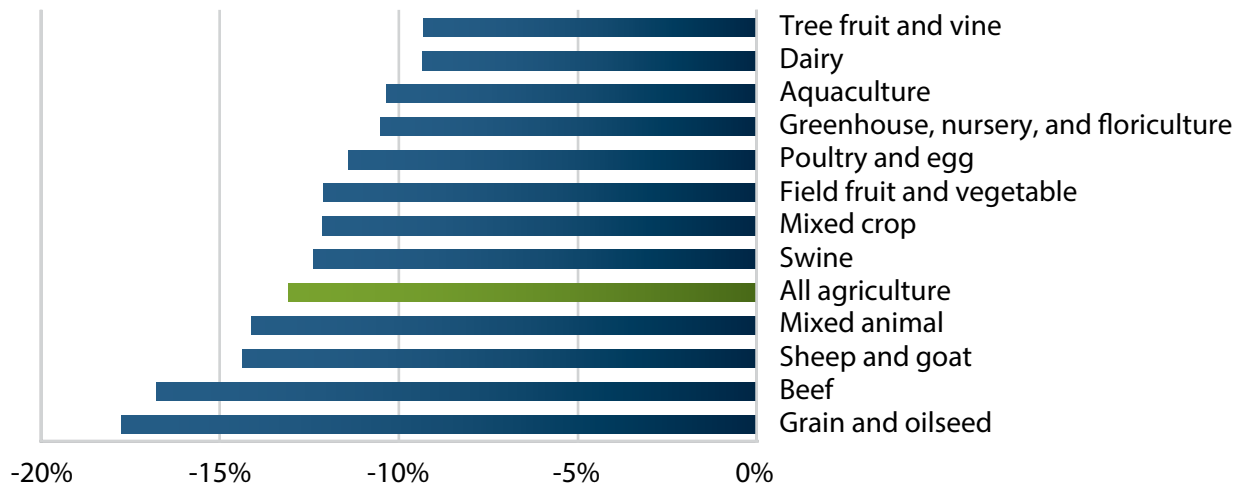
Beyond a rising labour gap, red-meat operations also face significant difficulties with skills shortages. In our survey, red-meat producers were much more likely to report a current shortage of qualified/skilled workers. Nearly 40% of 'beef' producers and 50% of 'swine' producers said that there was a lack of qualified workers in their area compared to just 32% for all of agriculture. Each was also more likely than average to report that a shortage of workers with the appropriate experience and lacking essential skills was a key challenge to their recruitment efforts.

The good news for red meat producers, however, is that challenges are less severe once the right worker is hired. The key challenges to retention across most other agricultural industries such as working conditions, too many hours, and physical



Chart 23: 'Beef' Producers Will Experience Above-Average Decline in Labour Supply in the Coming Years

Change in labour supply, 2029 versus 2017



Source: The Canadian Agricultural Human Resource Council.

labour were all cited at below-average rates by red meat producers in our survey. The industry boasts a below-average voluntary turnover rate, which suggests that workers do stay longer than average once they are hired.

Grain and Oilseed

The 'grain and oilseed' industry produces a wide variety of field crops, with key products such as wheat, canola, soybeans, and feed corn. The industry also includes pulses (e.g., lentils, dry peas), barley, oats, and forage crops. Producers of 'grain and oilseed' products are the fourth-largest employers within agriculture: their workforce totaled 38,800 people in 2017. In addition, this commodity group has experienced some of the strongest growth within agriculture over the past decade in terms of production and productivity (output per worker). As such, much of the success in Canada's agriculture sector in recent years can be tied to 'grain and oilseed' production.

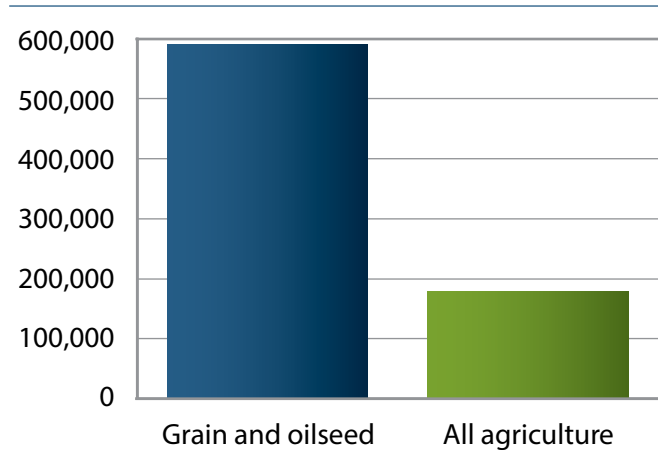
High Sales per Employee Means Labour Shortage Are More Costly

Labour shortages are very costly for 'grain and oilseed' producers. In fact, labour shortages are estimated to have cost these producers \$594 million, or 2.6% of sales, in 2018. In dollar terms, this was the largest loss of sales as a result of labour shortages within the agriculture sector. The high relative cost of labour shortages can be attributed to the amount of sales per worker among 'grain and oilseed' producers — thanks to strong productivity over the past decade, sales per worker within the industry is more than three times the average for all of agriculture. (See Chart 24). Thus, even though 'grain and oilseed' operations were less likely to report a shortage of workers in 2018 relative to other industries, each unfilled vacancy is likely to have a larger impact on operator revenues because 'grain and oilseed' operators produced more per worker.



Chart 24: 'Grain and Oilseed' Sales Per Worker Are Well Above Average

Dollar amount of sales per employee, 2017



Sources: Statistics Canada; Canadian Agricultural Human Resource Council.

Above-Average Seasonality Creates Labour Challenges

The vast majority of labour demand for 'grain and oilseed' producers is met by domestic workers. In fact, foreign workers amounted to only 0.4% of the industry's workforce in 2017, the lowest reliance on foreign workers among major agricultural commodity groups. This is partly the result of 'grain and oilseed' commodities not being on the National Commodities List. As a result, the industry does not have access to the Seasonal Agricultural Worker Program (SAWP) and the Agricultural Stream of the Temporary Foreign Worker Program (TFWP), limiting its ability to make use of foreign workers compared with other agriculture industries.

The inability to access the two main agriculture streams of the Temporary Foreign Worker Program will pose challenges to 'grain and oilseed' producers for a number of reasons. To begin with, this industry's employment experiences an above-average degree of seasonality (although not as high as horticultural producers), and employing foreign workers is a common way for producers to manage seasonal



fluctuations in labour demand. Seasonality as a barrier to recruitment for farmers in the 'grain and oilseed' sector also stands as a significant problem because seasonal jobs in the sector tend to require more skill and thus pay higher wages. Whereas seasonal jobs in other agricultural sectors are usually general farm workers or harvesting labourers, which are very manual labour intensive and have lower-than-average wages, in 'grain and oilseed' seasonal workers will often drive technologically advanced combines and tractors with multiple screen tracking sensors, or semi-trailer grain trucks.

In addition, the 'grain and oilseed' industry is expected to experience one of the largest increases in its labour gap over the forecast period. Although strong productivity growth is expected to offset some of the need for more workers created by its robust production outlook, labour demand is still expected to increase through 2029. And the industry also has one of the highest retirement rates within agriculture, with 39% of its workforce forecast to retire between 2018 and 2029. This will lead to a significant decline in its labour supply. Limited access to the various streams of the Temporary Foreign Worker Program will impede the ability of 'grain and oilseed' producers to fill the labour gap and hamper the industry's ability to grow.



Insufficient Skills and Shrinking Rural Populations Impedes Recruitment Efforts

Based on our survey results, the number one barrier to recruitment for 'grain and oilseed' producers related to the seasonal nature of work which was cited in 41% of responses. However, this was not significantly different than attitudes expressed elsewhere in the agricultural sector. In fact, the area where 'grain and oilseed' producers stood out was around skills requirements– 36% of employers in our survey said that applicants lack the appropriate experience for their operations, compared to 30% overall.

Producers also reported the declining population in rural communities as a key impediment to recruiting – 31% of employers in our survey said this was an issue compared to 27% as the agricultural average. Prior research conducted by the Canadian Agricultural Human Resource Council has found that only one in five 'grain and oilseed' producers reported being close to a population centre of more than 10,000 people, which likely results from the fact that 'grain and oilseed' farms require more land making them less able to locate close to urban centres. The rural nature of many 'grain and oilseed' farms presents accessibility issues and



lessens the appeal of this type of work for many potential workers in urban areas. This will continue to challenge 'grain and oilseed' producers in finding sufficient workers in the future.

Aquaculture

The 'aquaculture' industry is defined using Statistics Canada's definition (NAICS code 1125), which includes operations primarily engaged in farm-raising finfish, shellfish, or other aquatic animals. It is important to note that this definition excludes any processing activity that is undertaken by 'aquaculture' producers, which would instead be listed under the seafood processing industry (NAICS 3117). It is expected that significant production growth in the sector will lead to an increasing need for workers.

Shifting Into High Gear

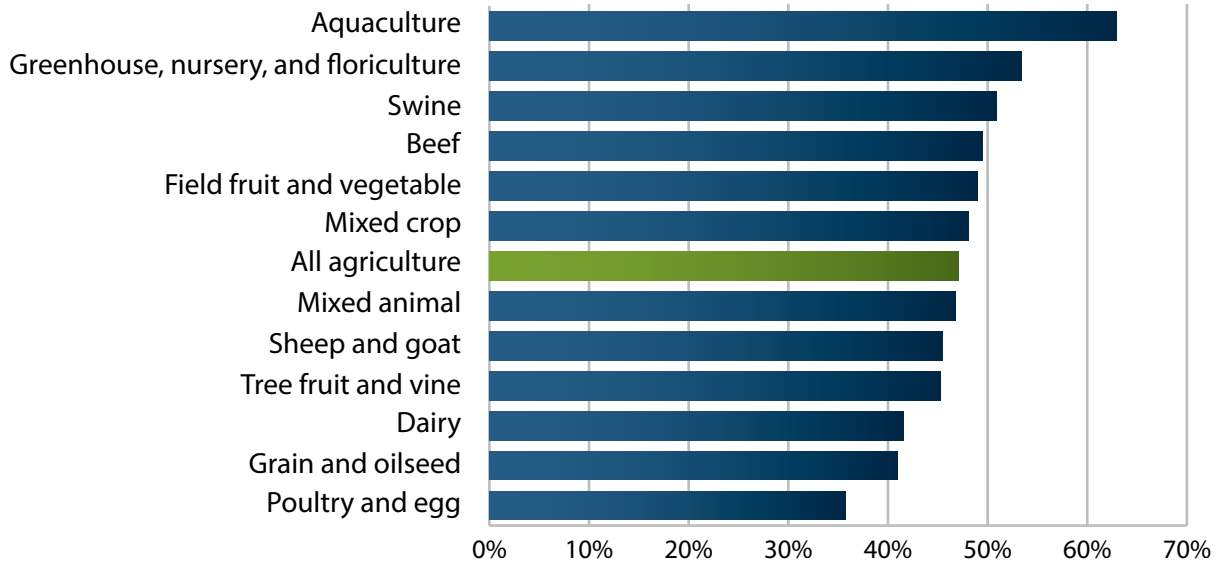
The 'aquaculture' industry is expected to see significant growth in the labour demand over the forecast period, supported by a healthy outlook for production. Indeed, the industry is expected to see the strongest production growth within agriculture in the coming years. Strong global market conditions for fish protein will be a key driver behind the acceleration in production growth and will benefit the 'aquaculture' industry, which relies on exports for a significant share of its sales. With the increase in production expected to be sufficiently strong, labour demand in the industry will expand at an above-average pace, despite healthy productivity growth. According to our employer survey, roughly nine in ten 'aquaculture' farmers expect employment at their farm to rise over the next five years, which is highest for all of agriculture.

Strong growth in labour demand has various implications for the 'aquaculture' industry, which already faces challenges in finding workers. To begin with, strong growth in labour demand will widen the industry's labour gap. Labour shortages are already a problem for 'aquaculture', given that 63% of 'aquaculture' operators reported not finding all the workers they needed in 2018, which is the highest share of any agriculture industry. (See Chart 25).



Chart 25: 'Aquaculture' More Likely to Report Labour Shortages than any Other Commodity

Share of respondents who were unable to find a sufficient workers



Based on a survey of 1,009 respondents

Source: Canadian Agricultural Human Resource Council Employer Survey.

Based on their responses, unfilled vacancies resulted in the industry losing 2% of its sales in 2018.

One bright spot for the industry is that it has a younger-than-average workforce. This is expected to result in one of the lowest retirement rates in the agriculture sector over the forecast period, which will moderate declines in labour supply, thereby reducing the size of the labour gap.

Rural Location and Remote Work Sites a Key Challenge for 'Aquaculture' Producers

The rural nature of 'aquaculture' poses significant challenges to worker recruitment and retention. For one, 'aquaculture' farmers have greater difficulty sourcing labour, a concern made more pressing by declining populations in rural areas. In fact, 38% of 'aquaculture' producers in our survey said that the

declining population in rural areas was a key barrier to recruitment, well above the 27% across the entire agricultural sector. They were also significantly more likely (65% versus 38%) to say that the rural location of their business did not interest potential applicants.

These challenges persist for 'aquaculture' employers even after employees are hired. Limited worker mobility which prevented access to the operation was cited in 27% as a key challenge to retention compared to just 19% for the agricultural average. And, 69% of employers said that the rural location of their operation eventually caused them retention issues which is more than twice the share (24%) who responded similarly across all of agriculture. As a result, worker mobility and ensuring access for 'aquaculture' farmers will be a key challenge going forward.



The Road Ahead: Finding Solutions

The major changes that have occurred in agriculture over the past decade are expected to persist over the forecast period. For example, the shift to fewer and larger farms is expected to continue. This in turn will drive further increases in mechanization and productivity growth within the sector. This is part of a general shift in the sector away from the traditional business model of small family farms toward larger farm businesses, although a large majority of these are still family owned and operated.

All of these trends are apparent when we look at the profile for younger farm operators, who represent the future of the sector. In a survey carried out by the Canadian Agricultural Human Resource Council in 2014, younger operators were much more likely to have larger farms, on average, than older operators. Nearly half (45%) of farm operators under the age 55 had sales in excess of \$1 million per year, while only 31% of those aged 55 and above reported sales at that level.

In addition to having larger farms, younger farm operators are less likely to make use of family workers. According to our employer survey, family accounted for only 8.5% of workers at farms where the owner/operator was under the age of 55. In comparison, this share was 14% for farms where the owner/operator was over the age of 55. This means that younger farm operators are more likely to be competing with other employers for hired labour, which may be why they are more likely to cite an inability to pay higher wages as a key retention barrier than employers in other sectors, such as oil and gas. A survey of 695 respondents indicated that approximately 45% of operators under 35 years of age reported that wages are a barrier to retention, compared to just 35% of operators aged 65 or older.

Another thing that stands out among young farm operators is their optimism about the outlook for the agriculture sector. Among farm operators under the age of 55, 61% reported that they expect

their employment to rise over the next five years, versus 48% for those over aged 55 and over. If this optimism is to be realized, the sector will need to find ways to address the labour challenges we have identified in this report. As discussed above, different types of producers face different types of challenges. Thus, a solution for one type of operation may not be universally applicable or even advisable across all organizations. However, the rest of this chapter discusses how some of the labour challenges identified in this report can potentially be addressed.

Addressing Seasonality

The influence of significant seasonal fluctuations on the sector's labour demand will not change any time soon. Canada's climate precludes year-round production for many types of agricultural products. Mechanization can reduce seasonal fluctuations in employment, but many jobs still require personal judgment or fine motor skills that cannot, or at least cannot yet, be replicated by a machine. As such, the sector must continue to find creative solutions to address its need for large numbers of workers for limited periods of time.

In 2014, the Canadian Agricultural Human Resource Council conducted a series of interviews across the country with agricultural producers who indicated that they have tapped into a pool of workers who may only be interested in working part of the year. Many producers indicated that recently retired farmers, or retirees with farm backgrounds, constituted an increasing share of the labour pool. Similar attitudes were expressed during this research project in teleconference calls with industry stakeholders and webinars with stakeholders from across the country. These individuals typically work for a short period of one to four months during the summer and rely on pensions and savings rather than the pay they receive from agricultural work to support their cost of living. Producers felt that this demographic is motivated more by lifestyle considerations than



compensation and driven by a desire to keep active, be closer to food production, enjoy workplace camaraderie, and use heavy machinery. Some producers indicated that this had become one of their principal sources for new recruits.

Internationally, work may be coordinated with regions that have different growing seasons. In some cases, this is already occurring in an informal way. For example, some producers who employ foreign workers report that those workers have their own farm operations in their home country that they tend to when they're not in Canada. More broadly, an organized effort to coordinate seasonal labour moving from Canada to Southern Hemisphere countries, such as Australia or New Zealand, could help seasonal farm workers find year-round employment.

Another potential technique is the banking of hours for seasonal workers. This involves an employer paying their workers based on a standard 40-hour week and then 'banking,' or saving, any additional hours for subsequent payout at a later date. Since seasonal work often involves working overtime hours, this practice allows an employee's wages to be paid out over a longer period and stabilizes the income of seasonal workers.

Finally, many farm operators suggest that the current Employment Insurance (EI) program in Canada dissuades potential workers from taking job opportunities in the agriculture sector. Although EI can supplement the income of seasonal agriculture workers, many producers thought that the program dissuaded others from working in the sector, particularly in Atlantic Canada. For example, in 2014, 27% of respondents thought that altering EI eligibility was one of the top two factors that would help address the labour challenges that the sector faces.

Attracting Workers to Rural Locations

The necessity of many farms being located in rural areas will not change in the years to come; the land required for many types of farm operations cannot

be moved. At the same time, the demographic trends that show a growing share of the population living in urban areas and an older-than-average population in rural areas are irrefutable and difficult to surmount. That said, there are ways to manage the issues that come with their location.

For example, a key barrier to enticing people to work in a rural location is a perceived lack of amenities in the area (such as entertainment, public services, consumer goods, infrastructure). But there are ways to address these challenges such as by encouraging local governments to promote employment opportunities, schools, and recreational programs they have to offer can help to alleviate concerns for those who are considering moving to rural areas for agricultural employment. Also, arranging transportation can allow people to enjoy the amenities offered in an urban environment when they work in a rural environment. This can be an effective increase in real wages since workers can forgo the monetary and time cost of commuting by personal vehicle.

However, transportation may not always be possible, particularly for more remote locations. In this circumstance, many producers promote quality of life and other nonmonetary benefits (such as health and dental coverage) as a way to attract and retain workers. Providing meals to employees at work and other fringe benefits like the use of a personal vehicle,



on-site housing, free or discounted produce, and training courses at local post-secondary institutions.

Effective training programs can also solve another problem that is more acute for rural operations: many occupations servicing the agricultural sector are spread increasingly thin. Specialists such as mechanics, veterinarians, pesticide applicators, and agricultural financial service professionals are becoming more difficult to find and are located further away from farms. Training new or existing employees in these skills can serve to improve retention and address the challenge of shrinking access to many specialty skills.

Finding and Keeping the Right People

Given the size of the current labour gap in agriculture and its expected growth in the years to come, a key part of any future action will involve increasing the supply of labour available to the sector. These efforts fall into two broad categories: finding more new entrants and keeping more of the people who already work in the sector.

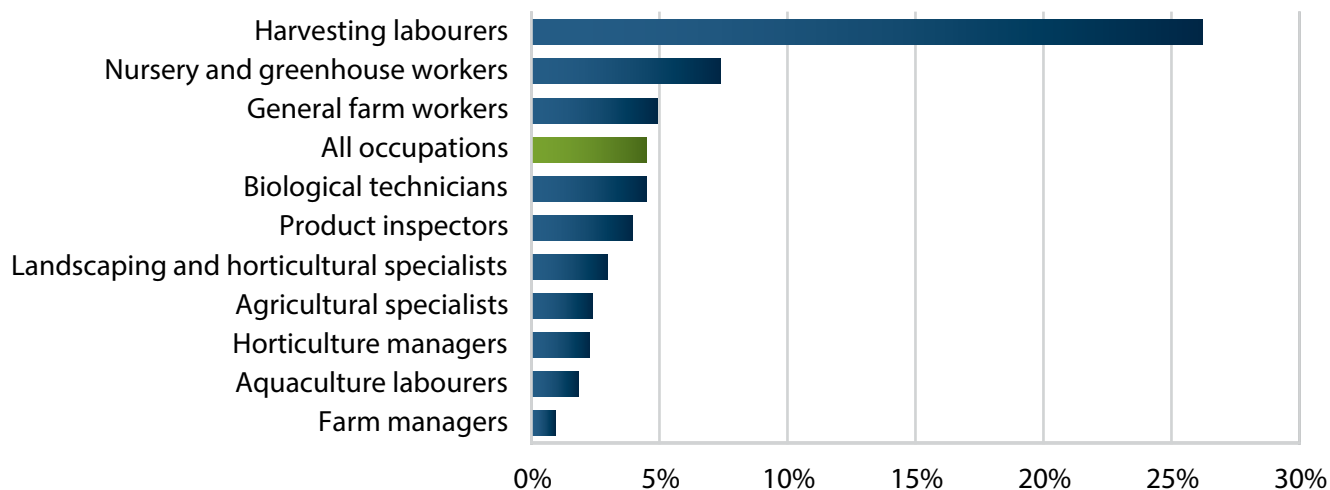
Immigrants

Immigrants are an important source of workforce growth in Canada. With more than 270,000 people moving to Canada each year, immigrants account for the majority of the country's population growth. Foreign workers are a very important part of the agriculture sector, accounting for 17% of the sector's workforce in 2017. However, they are in Canada on a temporary basis rather than a permanent basis. As such, foreign workers are not classified as immigrants. In fact, for many of the major occupations within agriculture, recent immigrants account for a below-average share of employment. (See Chart 26).

Agricultural employers suggested that there is a need to encourage recent immigrants to locate to rural communities. This could involve promoting employment, education, social, and recreational opportunities, not only for potential workers, but also for spouses and children. As such, it will be important to develop strong relationships with immigrant settlement agencies so that their staff understands the employment opportunities and services that are available in rural communities.

Chart 26: Immigrants Are Underrepresented in Most Agricultural Occupations

International immigrants between 2012 and 2016 as a share of 2017 employment



Sources: Statistics Canada; Canadian Agricultural Human Resource Council.



Temporary Foreign Workers

A series of interviews carried out by the Canadian Agricultural Human Resource Council with agricultural employers across the country in 2014 suggested that producers place a very high value on their existing access to foreign workers, including through the Seasonal Agriculture Worker Program (SAWP) and the Agricultural Stream of the Temporary Foreign Worker Program (TFWP) and those attitudes were again readily apparent in webinar sessions and other industry consultation carried out in 2018 as part of this project. Many producers, particularly those in horticultural industries, noted that while hiring Canadians is the sector's first option and priority, foreign workers are essential to the industry's success. One key concern is that, while access to SAWP is highly valued, it is not accessible by all agricultural producers and the commodity list upon which it depends is too limited. The importance of SAWP is such that several horticultural producers felt that without it, there would be no horticultural production in Canada.

While other industries, such as manufacturing, have been able to relocate operations to international regions where appropriate sources of labour are available, this option is not available to agriculture industries. The land and water required for production are in Canada, not elsewhere. As a result,

rather than relocate production as is the case in other industries, agricultural producers have sought to relocate labour by bringing in workers from other regions in order to maximize production potential. In short, the growing reliance on foreign workers in agriculture represents its own unique method of coping with globalization.

Despite the success of SAWP and other foreign worker programs, our prior research has found that producer do not feel that existing permanent immigration programs, with their focus on university graduates, are well suited to the needs of agriculture. As such, they may find more success in turning to recruiting recent refugees to Canada which have noticeably increased in recent years. The ability for producers to help foreign workers transition to become permanent residents or Canadian citizens could also be helpful. However, this option is not always readily accessible as the ability to sponsor foreign workers for permanent residency varies widely province-to-province.

Underrepresented Groups

In addition to immigrants, a variety of other underrepresented groups in the Canadian workforce could potentially be a source of labour. The two groups that stand out the most in this regard are



disabled workers and Aboriginal workers. For example, in the Canadian Agricultural Human Resource Council's 2014 survey which posed questions to employers about which labour market cohorts they employed only 14.6% of respondents indicated that they employed disabled workers and this share was just 10.6% for the employment of Aboriginal people.

According to the most recent information contained in the 2016 Census of Population, just 2.5% of employees in agriculture identify as Aboriginal compared to 3.9% for all industries. However, few employers believe that this group would prove to be a solution to their labour challenges. Employers were asked to rank on a scale of 1 to 5 the best way to fill labour shortages in the sector and hiring Aboriginal people received an average score of just 1.3. (See Chart 27).

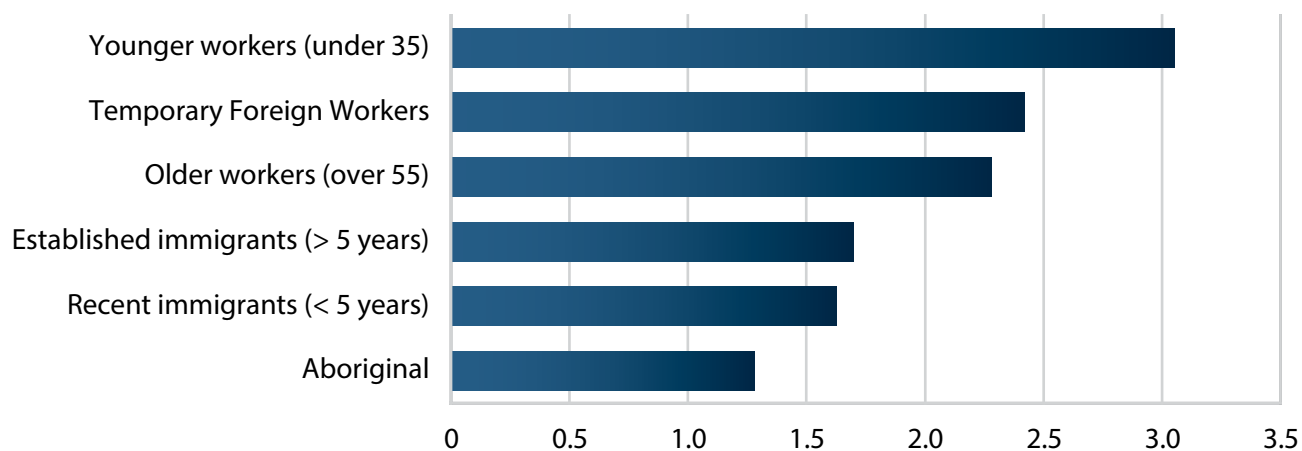
Employers who have successfully employed Aboriginal people noted that several things were required, including good communication to overcome cultural differences regarding attitudes about work and flexibility in work schedules to accommodate cultural requirements.

When it comes to people with disabilities, many employers felt that the physical nature of agricultural work would prevent them from working in the sector. However, this opinion was based on a misunderstanding of how disability was defined. Interviewees often associated disability with total blindness or severe mobility impairments. However, many forms of disability do not preclude agricultural employment. Once disabilities were properly defined, many employers realized that they already employ workers with some form of disability. As such, a better understanding of the physical or mental limitations of certain types of disabilities among employers may lead to better outcomes.

The Canadian Agricultural Human Resource Council's 2014 survey of employers also asked employers what would be required to increase their use of underrepresented groups, and the number-one response was 'more support for agriculture programs and training'. (See Chart 28). Thus, developing educational resources, improving worker knowledge and skills, and aligning training with industry needs are top priorities. Fewer government regulations, more government incentives, and increased flexibility from employers on work arrangements were other major factors.

Chart 27: Employers' Perceptions of the Best Groups to Fill Labour Shortages

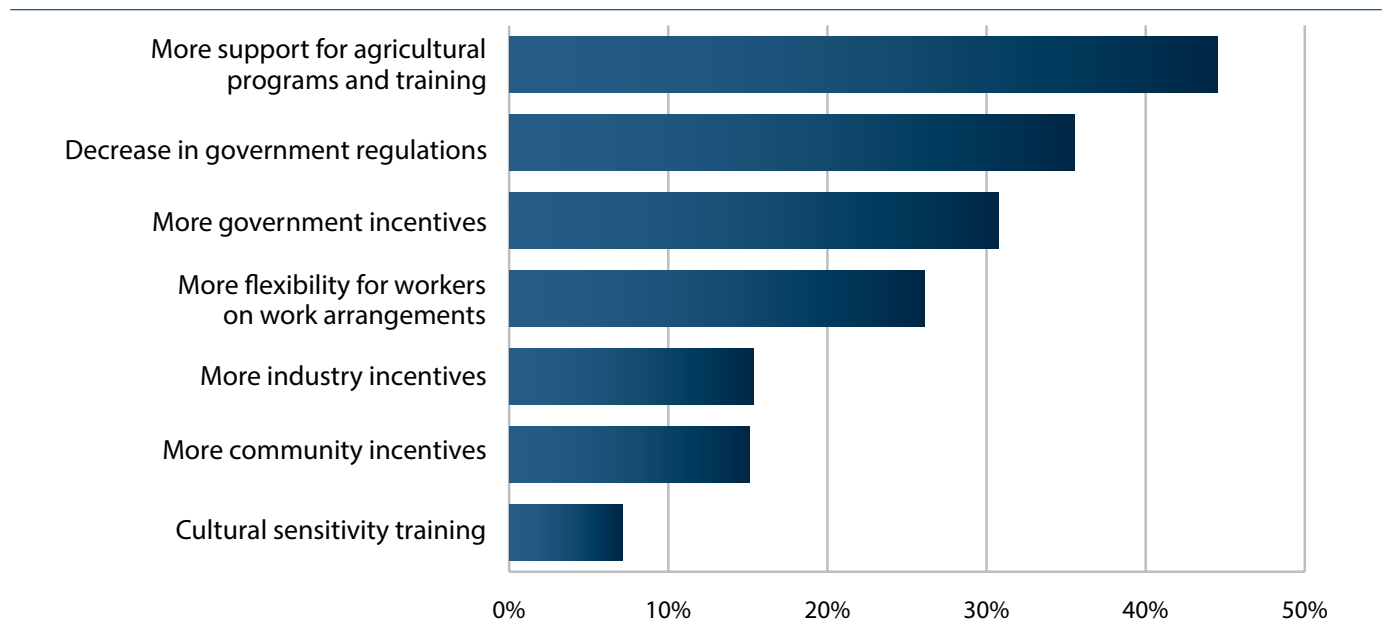
Best way to fill labour shortages, scale of 1 to 5



Based on a survey of 812 respondents.

Source: Canadian Agricultural Human Resource Council employer survey, 2014.

Chart 28: What Would Encourage Involvement Among Underrepresented Groups?
Share of respondents, per cent



Based on a survey of 813 respondents.

Sources: Canadian Agricultural Human Resource Council employer survey, 2014.

Marketing Agriculture to Potential Employees

Another top issue for agricultural employers is the limited knowledge of the sector that potential hires exhibit. Indeed, 20% of employers in our 2018 survey indicated that limited knowledge about agriculture was a key barrier to their recruitment efforts which is higher than candidates lacking essential or specialized skills. Better marketing of the sector to Canadians of all ages to improve understanding of the nature of work in agriculture and the opportunities that it provides are thus a natural way to help alleviate labour shortages.

Related to this was another 19% of employers who indicated that young people have little exposure to career opportunities in food production.

Unsurprisingly, as the lack of knowledge of the sector grows it makes it a less plausible career choice for younger generations and further increases the separation between producers and potential employees.

Outreach programs, such as Agriculture in the Classroom and 4-H Canada seek to educate school-aged children about where their food comes from are common tools that different groups use in an effort to combat this problem. Another objective of these programs is to inform children and adults about the variety of career opportunities, show them that many of these jobs require higher levels of skill, and dispel the misconception that jobs in agriculture are limited to manual labour and are all low-paying. These outreach programs take a variety of forms and are organized by different groups.



Improving Recruitment Practices

Many producers report that they rely on a variety of recruitment methods. The most common method is word of mouth, with over two-thirds of employers using it to recruit workers in 2018. By comparison, employers were less likely to recruit workers through the internet (46%), the Temporary Foreign Worker Program (33%), social media (30%), and local employment centers (30%).

Beyond being the most used recruitment method, word of mouth was also found to be one of the most successful. Over 31% of employers highlighted it as the most successful recruitment method, putting it slightly behind the Temporary Foreign Worker Program (35%), but well ahead of the internet (16%), social media (8%), and local employment centers (2%).

Word-of-mouth recruitment is common among small businesses (a description that applies to much of the agriculture sector) but restricting a business's recruiting to word of mouth carries advantages and disadvantages.

Advantages associated with word-of-mouth recruitment include the following:

- The employer may already be familiar with the job candidate, or someone they know can vouch for the candidate, which helps the employer to make a more informed decision.
- It takes less effort than most other recruiting tools.
- It reduces both time and financial cost for employers.

Disadvantages associated with word-of-mouth recruitment include the following:

- It limits the number of potential applicants.
- It discriminates against those who are not aware of the vacancy.
- An employer's potential labour pool is limited by the extent of their personal and professional networks.

Employers who do rely on word-of-mouth advertising need to ensure that they work hard to expand their networks to reach the widest possible pool of candidates.

Producers also use other recruitment techniques, including advertising in traditional and online newspapers, placement agencies, and job boards to recruit workers. However, even these expanded efforts often do not result in the recruitment of enough domestic workers to meet producers' needs, and they will need to develop more innovative recruitment strategies if they wish to attract more Canadians to the sector.

For example, employers could increase the size of the potential pool of candidates by using web-enabled job-search tools dedicated to the agriculture sector. The development of these types of job-resource centres were identified as a clear priority in the Workforce Action Plan. Another possible recruitment strategy would be to encourage more apprenticeships and other forms of experiential learning. Such strategies seem underrepresented in the agriculture sector when compared to other sectors. Other suggestions include combining classroom education and farm experience and developing short-term (2-to 4-week) basic farm orientation programs for those interested in a career in agriculture.

In summary, while the agriculture sector has begun to improve and expand its practices for recruiting and selecting domestic labour, a coordinated effort among educators, employers, associations, and government is required to support the ongoing efforts of agricultural employers and address their unique hiring challenges.

Education and Training

Another potential way for sector employers to find the skilled workers they need is to train them, rather than relying on others to provide that training. It is interesting to note that lack of qualified workers and appropriate skills sets was reflected as one of the major challenges for producers when it came to recruiting, but our previous work has found that only



48% of agricultural employers had offered training to their workers in the previous 12 months. This dynamic was consistent across commodity groups and provinces.

Producers place a high value on experience in the sector, which was confirmed by our survey results in 2014. Employees were asked to rank on a scale of 1 to 5 how much employers recognized different types of qualifications. On average, “experience” was given a score of 4.4 – well above any other consideration. (See Chart 29.)

Producers naturally express a considerable degree of hesitation around having untrained or inexperienced workers. Sometimes this is related to safety concerns, such as people being unfamiliar with potentially dangerous equipment or people who are not accustomed to working with large animals. Sometimes these concerns relate to having untrained people working with very expensive equipment. While these concerns are certainly valid, everyone needs to gain their experience and training somewhere. Employers who are willing and able to provide this training are likely to find it easier to hire and keep their workers. They are also likely to benefit from a more productive workforce as a result.

Improving Retention

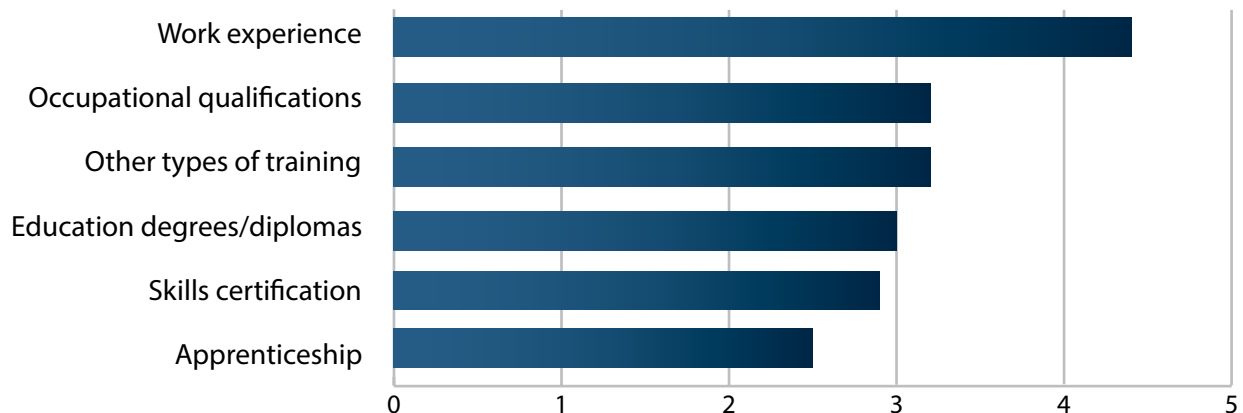
A key aspect of improving retention in any job is to determine what motivates your employees and work to satisfy those motivations. The Canadian Agricultural Human Resource Council promotes a ‘best practice approach’ to human resource management, including training for farm managers and supervisors on topics such as motivation and communication to assist in worker retention.

Addressing Compensation Constraints

The last major challenge that agricultural employers face is wages. It is worth noting that in 2018, 26% of those who are considering leaving the sector within the next five years stated that they would do so because of low compensation and benefits. In fact, this is the number one reason for departure from agriculture. Wages are not just an issue when competing with other sectors; they can also be a factor when workers are considering where to work within the sector.

Chart 29: Which Qualifications Does Your Employer Recognize?

Rank on a scale of 1 to 5



Based on a survey of 31 agricultural employees

Source: Canadian Agricultural Human Resource Council worker survey, 2014.



As noted above in this report, the ability of individual farm operators to increase the pay that they offer is typically limited because they have little-to-no control over how their products are priced in the market. As a result, employers need to find nonmonetary means to motivate workers to choose to work in agriculture and to stay in the sector once they are there. Many techniques are already in place, including options such as providing benefits (such as meals and transportation) and emphasizing the quality of life that working in the sector offers, however, they are not always well communicated. Being more flexible with work arrangements can also improve an employer's relative attractiveness.

Producers have also reported that presenting workers with an opportunity to develop an ownership stake in the farm improved retention dramatically. While many producers hope to be succeeded by family members, this may not always be an option as many in the next generation opt to pursue a career elsewhere in the economy. Offering employees the option to 'buy in' gives producers an avenue for retirement and succession while simultaneously providing workers with much-desired career advancement prospects.



Conclusion

Canada's agriculture sector faces unique labour market challenges. Most critically, the sector has a labour gap of 63,000 workers, which is equivalent to about one in six available positions within the sector. Moreover, the size of this labour gap has doubled over the past decade and is expected to nearly double again by 2029, putting 123,000 jobs at risk. This is equivalent to 32% of the total labour demand, or roughly one in every three jobs in the sector that year.

In addition to a shrinking domestic workforce and a growing need for labour, the sector faces an unprecedented combination of hiring and retention challenges, including a high degree of seasonal fluctuation in employment, rural depopulation, limited access to foreign labour in some agricultural industries.



The labour gap has implications for the sector today and in the future. The current costs include lost sales of \$2.9 billion per year, as well as higher overtime costs and increased turnover, as the long hours and hard work put in by an overburdened workforce creates burnout. Unfilled vacancies also reduce the sector's growth potential, as producers have to delay or cancel expansion plans due to a lack of labour.

Input collected from producers during this research project and others undertaken by the Canadian Agricultural Human Resource Council has found that employers are finding creative solutions to these challenges. For example, some are addressing seasonality in labour demand by coordinating with other complementary seasonal employers or with agricultural employers with different seasonal patterns outside of Canada. Others bank hours or target employees who are only interested in working part of the year, such as those who are semi-retired. Some producers are also offering increased flexibility regarding working hours or conditions and emphasizing nonmonetary benefits such as free meals, working with machinery or animals, working outdoors, feeding people, or offering ownership stakes in their business as incentives for their best employees. Still others have seen success by recruiting from nontraditional pools of labour.

Foreign workers have also played a role in addressing the sector's labour needs. To date, the sector has been able to fill just over three-quarters of its labour gap with foreign workers, with much of the work done by these workers filling the need for seasonal work on farms. However, given the expected rise in the sector's labour gap, it is unclear whether producers will be able to rely on foreign workers to the same extent in the years to come.

Doing so would require the sector to more than double the number of foreign workers it employs over the next 10 years. Even if this were possible, much of the increase in the labour gap



will occur in the 'grain and oilseed' and the 'beef' commodity groups, which are not currently on the National Commodity List which means they do not have access to the Primary Agriculture or Seasonal Agriculture Worker Program streams of the Temporary Foreign Worker Program. Foreign workers will likely continue to be a major source of labour for the sector, but improvements to the sector's access to foreign workers and supportive programs to allow foreign workers to transition to Canadians citizenship must be made if the sector is to realize its growth potential in the years to come.

Ultimately, foreign workers are only one element in a multi-faceted solution that must come together to address the sector's considerable labour challenges robustly and sustainably. In addition to improved access to foreign workers and pathways to permanency, the industry recognizes the need to make further improvements in attracting more domestic workers by creating learning resources that promote agricultural careers, outlining potential career pathways, and dispelling misconceptions. We

also need to enhance worker knowledge and skills through improved access to job training, find ways to align learning resources more closely with evolving workplace needs, and support best practices in human-resource management for all employers and managers across the sector.

Based on extensive sector research and consultation, the implications are clear: the solutions to these challenges involve finding and keeping more of the right people. At present, the sector is on an unsustainable path, with a steadily growing labour gap and an increasing dependence on foreign workers to fill that gap. By combining the insight and resources of government ministries, educational institutions, associations, and stakeholders, and by supporting the sector in learning from the best practices of its own members, we can ensure that Canada's agriculture sector will have a greater chance of achieving its potential and continuing to meet the rising need for food and agricultural products domestically and around the world.



Appendix: Definitions and Classifications

Methodology

- An economic model for forecasting labour demand and supply in the agriculture sector was developed to quantify and forecast the labour shortage issue. The forecast was produced for each province, for 14 different commodity groups, and for 25 occupational groups.
- A number of industry consultation activities were performed in order to validate results and assumptions in the labour supply and demand model:
 - A large-scale **survey of employers, workers, and other stakeholders** was conducted with 1,704 respondents across Canada, including 1,316 employers, 278 workers, and 110 stakeholders.
 - **Eight webinars** focused on specific commodity groups gathered over 160 participants overall.
 - Advisory Group presentation to gauge feedback on preliminary results.
- The analysis focused on primary production only. Food processing and other aspects of the value chain were not included in the numbers.

Definitions

- **Workforce:** Every person who contributes to the operation of a farm, including owner-operators, paid workers, unpaid workers, and foreign workers.
- **Potential demand:** This refers to the number of workers the industry needs in order to reach its full production potential. The demand for workers is driven by market conditions, the demand for agricultural products, and productivity growth. Historically, it is the sum of the workforce and unfilled vacancies.
- **Domestic supply:** This refers to the number of domestic workers available, including Canadians and permanent residents. Supply includes owner-operators, paid workers, and unpaid workers. It is driven by demographic factors such as retirement, young workers joining the labour force, immigration, migrants from other provinces, and workers shifting to and from other sectors.
- **Gap:** This refers to potential demand less domestic supply.
 - There is a gap when domestic supply is not sufficient to meet the demand. As such, the gap can be interpreted as a measure of labour shortages faced by employers.
 - Foreign workers, including seasonal agricultural workers and unfilled vacancies, are used to estimate the gap. Both indicate a level of demand by employers that domestic supply was not able to fill.
- **Voluntary turnover:** The voluntary rate is calculated as the number of people who departed from a job voluntarily (such as leaving for another job) divided by the total number of workers.
- **Involuntary turnover:** The involuntary rate is calculated as the number of people who departed from a job involuntarily (such as being dismissed) divided by the total number of workers.



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About This Report

This report represents an update to the Labour Market Information (LMI) study that the Canadian Agricultural Human Resource Council (CAHRC) undertook between 2014 and 2016. The purpose is to re-assess the labour market, project supply and demand for agricultural workers from 2018 until 2029, and recommend potential solutions to labour issues.

The Conference Board of Canada, commissioned by CAHRC, constructed an economic model that forecasts agricultural labour demand and supply for each province, for 11 different commodity groups, and for 25 occupational groups.

The economic model was validated through several industry consultation activities conducted Canada-wide, including:

- **A large-scale survey** of 1,316 employers, 278 workers, and 110 industry stakeholders.
- **Eight webinars** focused on specific commodity groups, with 160 participants in total.
- **An Advisory Group** presentation.

This data was used to produce the following reports:

Commodity-specific reports and fact sheets

Apiculture ■ Aquaculture ■ Beef ■ Dairy ■ Field Fruit and Vegetable ■ Grain and Oilseed ■ Greenhouse, Nursery, and Floriculture ■ Poultry and Egg ■ Sheep and Goat ■ Swine ■ Tree Fruit and Vine

Regional reports and fact sheets

National ■ British Columbia ■ Alberta ■ Saskatchewan ■ Manitoba ■ Ontario ■ Quebec ■ New Brunswick ■ Prince Edward Island ■ Nova Scotia ■ Newfoundland and Labrador

For more information on the research, and to access additional commodity-specific, national, and provincial reports, please visit the CAHRC website at www.AgriLMI.ca.

About CAHRC

The Canadian Agricultural Human Resources Council (CAHRC) is a national, nonprofit organization focused on addressing human resource issues faced by agricultural businesses across Canada. CAHRC conducts industry research and develops products and services designed to help agricultural employers attract, retain, and develop the workforce they need to succeed.

For more information about the Council and its products and services for Canada's agriculture sector, please visit www.cahrc-ccrha.ca.



Acknowledgements:

The Canadian Agricultural Human Resource Council (CAHRC) acknowledges the support and guidance of volunteers, the Advisory Group, the Provincial LMI Panel, and the Strategic Steering Committee.

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Published September 2019

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