



Canadian Agricultural Human Resource Council

SOWING SEEDS OF CHANGE

Agriculture Labour Market Forecast
2023-2030





CONTENTS

EXECUTIVE SUMMARY	6
Current Labour Market Challenges	7
Continued Shortage of Domestic Workers Expected	8
Building an Agriculture Workforce for the Future	10
INTRODUCTION	12
SECTION 1: State of the Agriculture Labour Market	17
Current Labour Market Challenges	18
Employers Can't Find the Workers They Need	18
Current Vacancies in Agriculture	20
Vacancy Rates for Most Industries have Spiked	21
The Cost of Labour Shortages	24
Recruitment Challenges	26
Employers Struggle to Attract Canadian Workers	26
Factors Making Agriculture Work Less Attractive	28
Unavoidable Seasonality	29
Rural Location and Cost of Living	30
Competition from Other Sectors	30
Lack of Awareness About Careers in Agriculture	32
Word of Mouth is the Dominant Recruitment Method	32
Foreign Workers are Essential	34
Retention Challenges	36
Turnover is at a Record High	36
Comparing Employer and Worker Perspectives	38
Barriers to HR Training	40
SECTION 2: Looking to the Future Agriculture Labour Market	41
A Growing Labour Gap	42
Labour Gap by Province	45
Labour Gap by Industry	47
Production Expected to Increase	48
Labour Productivity Gains Keep Labour Demand Stable	51



Trends Affecting Labour Supply	52
Retirements Pose Challenges to the Sector	52
Growth in Young Workers Not Enough	57
Immigration Provides Opportunity	58
Vacancies by Key Occupation	60
SECTION 3: Exploring Industry Specific Challenges	62
Supply Managed Industries	63
Dairy, and Poultry and Egg Producers Face Fewer and Less Costly Shortages	63
Price Stability in Supply Managed Commodity Sectors	64
Turnover Differs Between Dairy, and Poultry and Egg	64
Decreasing Labour Demand Due to Productivity Gains	65
Red Meat	65
Beef and Swine Producers Unable to Find Workers with Experience	66
Labour Gap Grows Despite Waning Production	66
Aquaculture	67
Aquaculture Boasts Lower Vacancies and Turnover	67
Rural Location Still Key Challenge for Aquaculture	69
Labour Needed to Build the Blue Economy	69
Horticulture	70
Greenhouse Fruit and Vegetable Production Poised for Strong Growth	70
Cannabis Supports Growth in the Greenhouse and Nursery Industry	71
Temporary Foreign Workers Help Fill the Growing Labour Gap	72
Grain and Oilseed	73
Higher Wages Don't Eliminate Vacancies	74
Rising Labour Productivity Eases Labour Challenges	75
Support Services	75
Support Services Facing Similar Labour Challenges	75
Support Services Benefit from More Immigrants and Fewer Retirements	76
Agriculture Wholesalers	76
Wholesale Industry Needs Agriculture Expertise	77

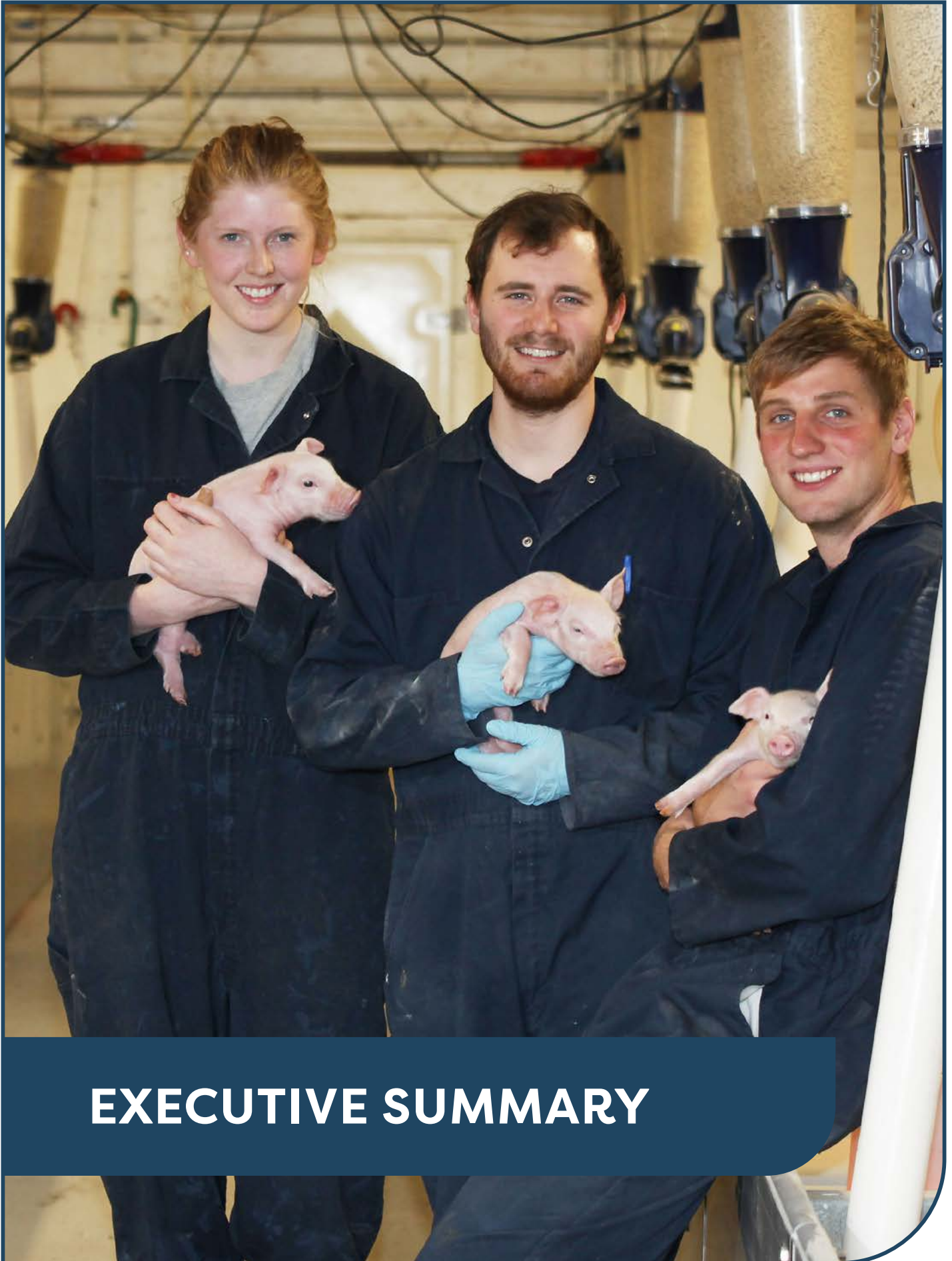


SECTION 4: Building the Future Workforce	78
Reaching Untapped Labour Pools	79
Educating Youth about Careers in Agriculture	79
Skilled Trades and Apprenticeships in Agriculture	79
Immigrants Offer an Untapped Labour Pool	80
Women Working in Agriculture	81
Foreign Workers Needed	83
Ensuring Employers have Access to Temporary Foreign Workers	83
Path to Permanent Residency for TFWs	83
Sector Vulnerable to Global Labour Market Conditions	84
Improving Retention	84
Compensation is Key	85
Improving HR Practices Goes a Long Way	86
Networking and Mentorship	86
Conclusion	87
APPENDIX A: About the Data	89
Industry Coverage	90
Note on beef and dairy split	92
Leveraging Statistics Canada Data	92
Note about Temporary Foreign Workers	92
APPENDIX B: Qualitative Research	93
About the Surveys	94
Survey Distribution	94
Employer Survey	96
Worker Survey	98
Stakeholder Survey	100
About the Interviews and Focus Groups	101
APPENDIX C: Labour Market Forecast Methodology	102
Model of Occupations, Skills and Technology	103
Historical Employment Data	103
Forecasting Employment	103
Incorporating Technology	104



Assumptions Underlying Employment	104
Forecasting Vacancies	105
Labour Gap Analysis	107
Incorporating Foreign Workers	107
Estimating Peak Values	107
Occupation Coverage	110
Note on the conversion from the 2016 to the 2021 NOC system	111
APPENDIX D: Definitions	112
REFERENCES	114
ABOUT THIS REPORT	119
About CAHRC	120
About The Conference Board of Canada	121
ACKNOWLEDGEMENTS	122





EXECUTIVE SUMMARY



Canada's agriculture sector is experiencing a severe and chronic labour shortage. Although labour shortages are a challenge for employers in many sectors across the country, they are particularly acute for agriculture employers. More than 28,200 jobs were estimated to have gone unfilled in the agriculture sector during peak season in 2022.¹ These unfilled vacancies have severe consequences. Based on the recent survey conducted by the Canadian Agricultural Human Resource Council (CAHRC), labour shortages caused a 3.7 per cent decline in sales in 2022, which, when applied to total sales in agriculture, resulted in an estimated \$3.5 billion in lost sales.²

Collaboration is needed to find solutions to current and future labour challenges. By working together, the sector can implement a variety of approaches, such as improving the perception of the sector, enhancing Human Resources (HR) management practices, attracting skilled immigrants, ensuring workers have the skills required, and embracing evolving automation and technology. These combined efforts hold the

potential to significantly improve the labour outlook for the agriculture sector in the future.

Current Labour Market Challenges

The agriculture sector plays a critical role in the Canadian economy, fulfilling both domestic and global food demands. In 2022, the Canadian agriculture sector generated \$38.8 billion in GDP, or 1.9 per cent of the national total.³ Canada has established itself as a major producer of diverse and high-quality agricultural products, ranking among the world's largest exporters with \$92.8 billion in agricultural and processed food exports in 2022.⁴

Canada's agriculture sector requires a skilled and motivated workforce in a diversity of industries that include crop and animal production, support services and agriculture wholesale. In 2022, the sector employed over 351,000 Canadian workers and 71,000 foreign workers.^{5,6}

Over the next decade, expanding global markets for Canadian food products

1 The agriculture sector includes crop production (NAICS 111), animal production (112), support services (1151 & 1152) and agriculture wholesale industries (4111 & 4183). Based on The Conference Board of Canada's Model of Occupations, Skills and Technology (MOST).

2 Canadian Agricultural Human Resource Council Employer Survey 2023. Total sales in agriculture comes from farm cash receipts from Statistics Canada. Does not include sales lost by support services or wholesale industries.

3 Agriculture GDP includes crop production (NAICS 111), animal production (112), support services (1151 & 1152) and farm product merchant wholesalers (411). Statistics Canada, Table 36-10-0402-01.

4 Agriculture and Agri-Food Canada, "Overview of Canada's agriculture and agri-food sector."

5 Foreign workers include workers brought in through the Temporary Foreign Worker Program (TFW) or Seasonal Agriculture Worker Program. Does not include immigrants or permanent residents.

6 Canadian employment at peak from the Labour Force Survey (custom data) and total TFW employment from Agriculture and Agri-food Labour Statistics Program and Employment and Social Development Canada (custom data).



are expected to drive substantial growth in this sector. However, Canada's agriculture employers are grappling with labour challenges that could impede this potential for growth.

Labour shortages have been an increasingly common issue for Canadian employers. In 2022, the sector reported a peak vacancy rate of 7.4 per cent, which was well above the 5.9 per cent Canada-wide rate.⁷ Two out of every five agriculture employers could not hire all the workers they needed that year.⁸ Further, one-third of employers reported not receiving any applications from Canadians during the hiring season and 28 per cent received just one or two applications. These recruitment challenges resulted in lost sales, production delays, cancelled expansions, as well as excessive stress on owners and staff.

Unfilled vacancies are affecting the sector's bottom line causing lost sales and cancelled expansion plans that will hamper the agriculture sector's future growth potential. Employers in the sector reported that labour shortages resulted in a 3.7 per cent decline in sales in 2022, equating to an estimated \$3.5 billion loss for the sector. This is higher than reported in previous CAHRC research due to growth in total sales, which is

supported by demand for exports, higher commodity prices and enhanced labour productivity.

Canada's agriculture employers endeavour to hire domestic workers first, but growing labour shortages have required many to increasingly turn to foreign workers in both crop and animal production operations. The number of foreign workers employed in primary agriculture increased more than 30 per cent from 2017 to 2022 (53,842 to 70,365).⁹ Crop production continued to employ the vast majority of foreign workers, but most of the growth in foreign worker employment has been in the poultry and egg, beef, dairy and swine industries.

Continued Shortage of Domestic Workers Expected

CAHRC's agriculture labour market forecast estimates that the domestic labour gap in Canada's agricultural sector will increase 15 per cent over the next 8 years from 87,700 in 2023 to 101,100 by 2030 during peak season.¹⁰ A key contributing factor is the ageing of Canada's population that will continue to decrease the availability of domestic workers. It is expected that Canada's

7 Custom data from the Job Vacancy and Wage Survey, Statistics Canada, Table: 14-10-0325-01. Does not include wholesale industries.

8 Canadian Agriculture Human Resource Council Employer Survey 2023.

9 Does not include support services or wholesale industries. Statistics Canada, Table 32-10-0218-01.

10 Domestic labour gap is the difference between the total number of workers required and the number of Canadian workers employed which equals employment of foreign workers plus the number of vacancies. Estimated at peak to reflect maximum demand during seasonal peaks in agriculture. Based on The Conference Board of Canada's Model of Occupations, Skills and Technology.



agriculture industries will see over 85,300 retirements over the next 8 years, which is almost 30 per cent of the current Canadian workforce in the sector.¹¹

Even with four out of five of otherwise vacant positions expected to be filled by foreign workers, 22,200 jobs will still be vacant during peak season in the agriculture sector by the end of the decade.¹² Crop production industries will account for the largest number of vacant positions, estimated at 15,200 in 2030.¹³

Greenhouse and nursery production, fruit and tree nut farming, and vegetable farming are poised to experience a substantial increase in the number of positions unfilled by Canadians. Overall, the domestic labour gap during peak season for crop production industries is projected to increase by 17 per cent between 2023 and 2030, reaching 80,900 in 2030.¹⁴ Support service industries are expected to see similar growth in their domestic labour gap, reaching nearly 1,600 by 2030.¹⁵

In animal production, the peak domestic labour gap is forecast to experience a

more modest 9 per cent increase from 2023 to 2030, leading to nearly 4,100 vacant positions by 2030.¹⁶ Additionally, the domestic labour gap in agriculture wholesale industries is expected to ease slightly, decreasing 3 per cent between 2023 and 2030. Nevertheless, over 1,100 vacancies will remain in that industry by 2030.¹⁷

In labour-intensive occupations like harvesting labourers and livestock labourers, the number of job vacancies are anticipated to decrease over the forecast period due to increased employment of foreign workers, upgraded automation and gains in labour productivity. However, despite these improvements, labour-intensive occupations will continue to account for the large majority of vacancies by 2030. Conversely, landscape and horticulture technicians and specialists, along with horticulture managers, are projected to see a significant increase in the number of job vacancies over the coming years. Consequently, it will be essential to implement targeted strategies to address labour shortages in specific occupations in the agriculture sector.

11 Based on The Conference Board of Canada's Model of Occupations, Skills and Technology.

12 To estimate the number of foreign workers employed during peak times, we combine the year-round foreign workers with 75 per cent of the total seasonal foreign workers, acknowledging that not all seasonal workers are in Canada simultaneously. Based on The Conference Board of Canada's Model of Occupations, Skills and Technology.

13 During peak season. Based on The Conference Board of Canada's Model of Occupations, Skills and Technology.

14 Crop production industries include NAICS 1111, 1112, 1113, 1114 and 1119. Based on The Conference Board of Canada's Model of Occupations, Skills and Technology.

15 During peak season for crop and animal support services. Based on The Conference Board of Canada's Model of Occupations, Skills and Technology.

16 During peak season. Based on The Conference Board of Canada's Model of Occupations, Skills and Technology.

17 Ibid.

Building an Agriculture Workforce for the Future

Solving the current and future structural shortage of Canadian workers and unfilled vacancies in the sector will not be easy. It is essential to put plans in place now to ensure there are enough people with the right skills to continue growing the agriculture sector. The National Workforce Strategic Plan (NWSP), a collaborative approach of Canada's agriculture and food and beverage industry launched in 2021, is a promising step towards achieving workforce stability by 2030.

Improving the perception of agriculture as a career is necessary in building a sustainable future workforce. Doing so can cultivate an understanding of

agriculture's role in securing both local and global food supplies and dispel the misconception that the only work in the sector is as a farmer. Supporting and expanding hands-on learning experiences and exposure to career opportunities in agriculture will be key to inspiring Canadians to consider careers in agriculture in the future.

Developing good HR management practices and a positive work environment plays an important role in retaining workers. Almost 30 per cent of workers said the main reason they would leave would be because of poor management practices, and similarly, 34 per cent said good management practices is what keeps them working in agriculture.¹⁸ Stakeholders agree that it is important to educate employers



¹⁸ Canadian Agricultural Human Resource Council Worker Survey, 2023.



about the benefits of HR training and help employers find the right HR supports and programs.¹⁹ This effort can bridge the gap between employers' awareness and the resources available, fostering better HR practices and workforce development.

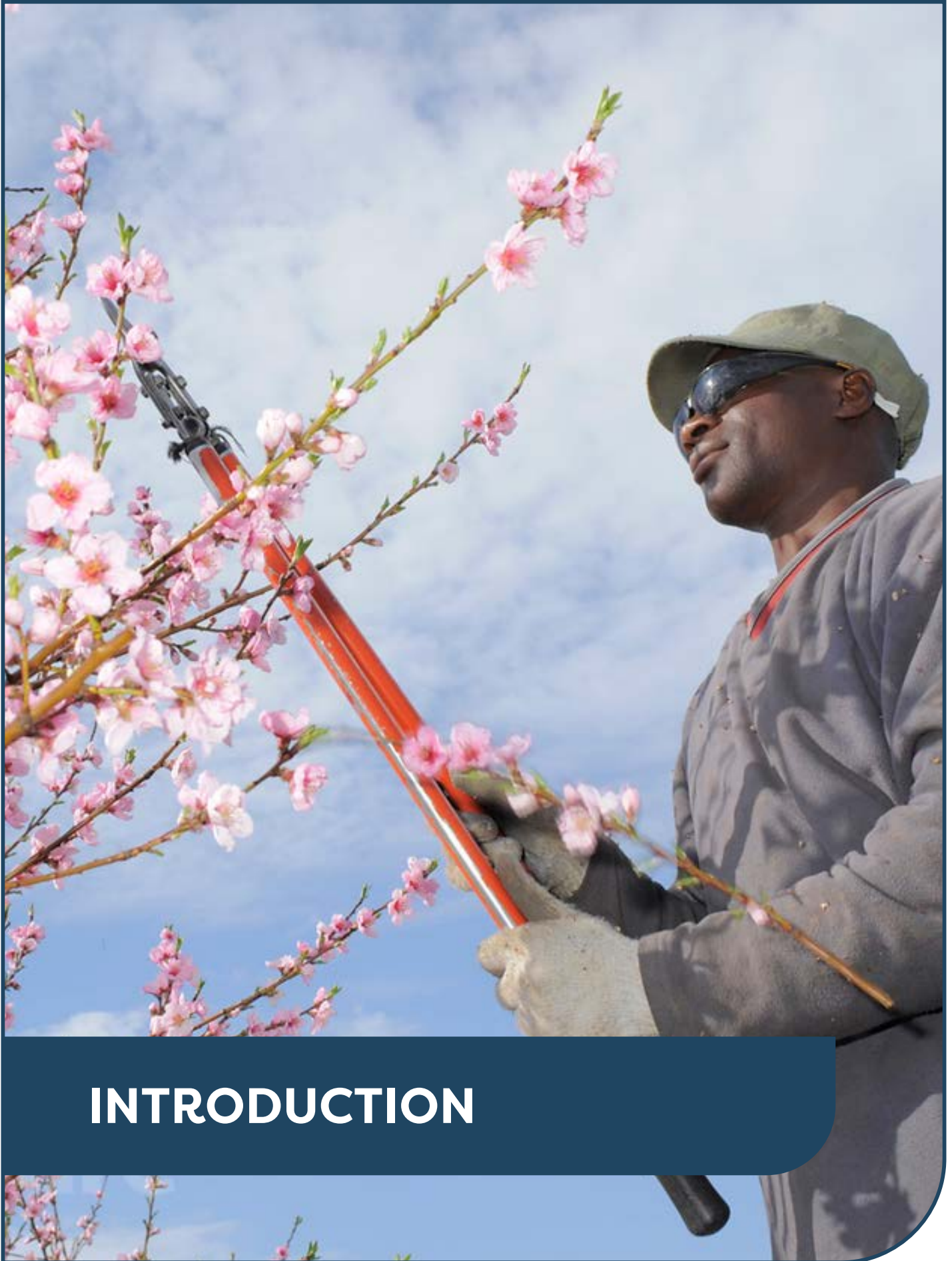
Immigration is the main driver of population growth in Canada and provides a valuable opportunity for agriculture to attract immigrants to work in the sector. A combined effort between government, placement agencies and farm operators is needed to find individuals with relevant skills and experience and encourage them to settle in rural communities where there is agriculture work. This could involve offering employment, education and cultural integration support in rural areas for potential workers and their families.

Additionally, supporting apprenticeship programs in agriculture plays an important role in building a qualified workforce by developing the technical and specialized skills required in various industries. Formalizing and promoting skilled trade certification in agriculture can increase recognition of the high-skilled jobs and rewarding career opportunities the sector offers. This shift in perception can help draw more individuals into the sector.

Over the past decades, the agriculture sector has transformed into a highly mechanized industry, leading to large increases in labour productivity. Adoption of new technology, including digitization, automation and new crop varieties, will continue to increase the sector's productivity and competitiveness. However, a concerted effort to find, train and keep workers will be needed to ensure that the adoption of new technology continues to transform the sector into the future.

Through a combination of public education, training and upskilling, improved HR management practices, targeted immigration supports, and increased adoption of automation and technology, progress can be made to ensure this vital sector has the workforce needed to meet its potential. There is no single solution to the labour market challenges facing employers in the agriculture sector. Solving current and future challenges requires ongoing collaboration among employers, industry representatives, government agencies, educators and other stakeholders. The National Workforce Strategic Plan exemplifies this commitment to collaborate and, by working together, a variety of approaches will be implemented to significantly improve the labour outlook in the agriculture sector.

¹⁹ Canadian Agricultural Human Resource Council Stakeholder Survey, 2023.



INTRODUCTION



The agriculture sector employed over 351,000 Canadians in 2022, accounting for 1.8 per cent of total Canadian employment. The sector is diverse, encompassing crop and animal production, support services for farms, and the wholesale of agriculture supplies and farm products. The sector not only produces food but also crops such as flowers, ornamental plants, animal feed and fibres, and animal products like furs and beeswax. In 2022, this sector contributed over \$143 billion to the country's economy, equivalent to almost 2 per cent of Canada's annual GDP.²⁰

Canada's agriculture sector plays a significant role in not just feeding Canadians but also feeding the world. In fact, the sector is the fifth largest exporter of agri-food and seafood in the world.²¹ In 2022, Canada exported almost \$92.8 billion in agriculture and food products, with 60 per cent of these exports going to the United States.

Canada is known for its diversity and quality of agricultural products, with provinces and regions having different areas of specialization. British Columbia, southern Ontario and Atlantic Canada lead in horticultural production, the Prairie provinces focus on the production of red meat and grains, while dairy production is the largest in Quebec. Overall, there are more than 189,800

farms across Canada, covering 62.2 million hectares of land or 6.2 per cent of the land in the country.²²

Agriculture is an ever-evolving sector. Farm consolidation has been a key trend over the past several decades, resulting in fewer and larger farms. The largest 10 per cent of farms now generate over two-thirds of all revenues.²³ These larger farms benefit from economies of scale and efficiencies that come from focusing production on a few commodities. Additionally, the agriculture sector's products have changed to adapt to market conditions and leverage new technologies to use Canada's arable land more efficiently. Lastly, the sector has seen a rapid increase in productivity, with farm operators producing more with fewer workers and the same amount of land.

As a result, labour needs in the agriculture sector have changed. The increase in the number of large agricultural producers has amplified the demand for management and human resources skills among farm operations. Simultaneously, the widespread adoption of digital technology has increased the need for high skilled labour capable of operating and maintaining advanced machinery.

Nonetheless, the enduring need for farm labourers remains, particularly during peak seasons, yet finding such labour

20 Agriculture GDP includes crop production (NAICS 111), animal production (112), support services (1151 & 1152) and farm product merchant wholesalers (411). Statistics Canada, Table 36-10-0402-01.

21 Agriculture and Agri-Food Canada, "Overview of Canada's agriculture and agri-food sector."

22 Ibid.

23 Ibid.

has become increasingly challenging in the domestic labour market. Many industries throughout Canada are grappling with tight labour markets and intensifying competition for employees. This has resulted in exceptionally high vacancy and turnover rates for employers in agriculture which is putting the growth and sustainability of Canada's agriculture sector at risk.

Rising labour shortages in agriculture have resulted in a growing reliance on foreign workers who accounted for 17 per cent of the agriculture workforce in 2022.²⁴ Consequently, the agriculture sector is highly susceptible to policy changes or global events that prevent

access to international labour. This vulnerability was starkly demonstrated during the recent COVID-19 pandemic. Border closures and travel restrictions made it difficult for agricultural employers to bring in international workers, resulting in a substantial losses for both animal and crop production.²⁵

Despite increased employment of foreign workers, more than two in five employers could not hire all the workers they needed in 2022.²⁶ It is estimated that over 28,200 jobs went unfilled during peak season that year.²⁷ These job vacancies resulted in lost sales, production delays, cancelled expansion plans, and put additional



24 Statistics Canada; The Conference Board of Canada.

25 An estimated \$2.9 billion in sales was lost due to labour shortages caused by COVID-19 (Canadian Agricultural Human Resource Council, Understanding the Effects of COVID-19).

26 Canadian Agricultural Human Resource Council Employer Survey 2023.

27 The Conference Board of Canada's Model of Occupations, Skills and Technology.



stress on employers and workers.²⁸ Based on a survey of agriculture employers conducted by the Canadian Agricultural Human Resource Council (CAHRC) as part of this research, labour shortages caused a 3.7 per cent decline in sales in 2022, which, when applied to total sales in agriculture, translated to an estimated \$3.5 billion in lost sales.

Labour shortages in the agricultural sector are expected to continue. The domestic labour gap in Canada's agricultural sector is projected to increase 15 per cent over the next 8 years from 87,700 in 2023 to 101,100 workers by 2030 during peak season.²⁹ It is forecasted that approximately four out of five of these positions will be filled by foreign workers, leaving 22,200 jobs unfilled during the peak season at the end of the decade.³⁰

The research presented in this report identifies the unique labour challenges affecting the agriculture sector today and in the future. The report builds on similar research conducted by the Conference Board of Canada for the Canadian Agricultural Human Resource Council (CAHRC) in 2014 and 2017, which also examined the labour market situation in Canada's agriculture sector. The objective of this report is to assess the current labour market environment, produce projections of labour supply and demand

for the agriculture sector, and provide recommendations for solving labour shortages.

To understand the labour market challenges in the agriculture sector, the Conference Board's Model of Occupations, Skills and Technology (MOST) was customized to provide forecasts of employment and vacancies by occupation, industry and province for the agricultural sector. Agriculture sector employers, workers and stakeholders were also surveyed to provide insight into their experiences and expectations. In addition, research results were validated through a series of focus groups and webinars with stakeholders from all provinces and commodities in agriculture. In total, more than 1,500 sector stakeholders participated in the research activities that support these findings.

In addition to this national report, there are 21 factsheets that present the findings for individual industries and provinces. This research focuses on the primary agriculture sector and related industries, including support services and wholesale. It covers all producers involved in growing crops and raising animals, including aquaculture and apiculture. It also includes businesses that provide support services to animal and crop producers and companies that wholesale

28 Canadian Agricultural Human Resource Council Employer Survey 2023.

29 The Conference Board of Canada's Model of Occupations, Skills and Technology.

30 Ibid.

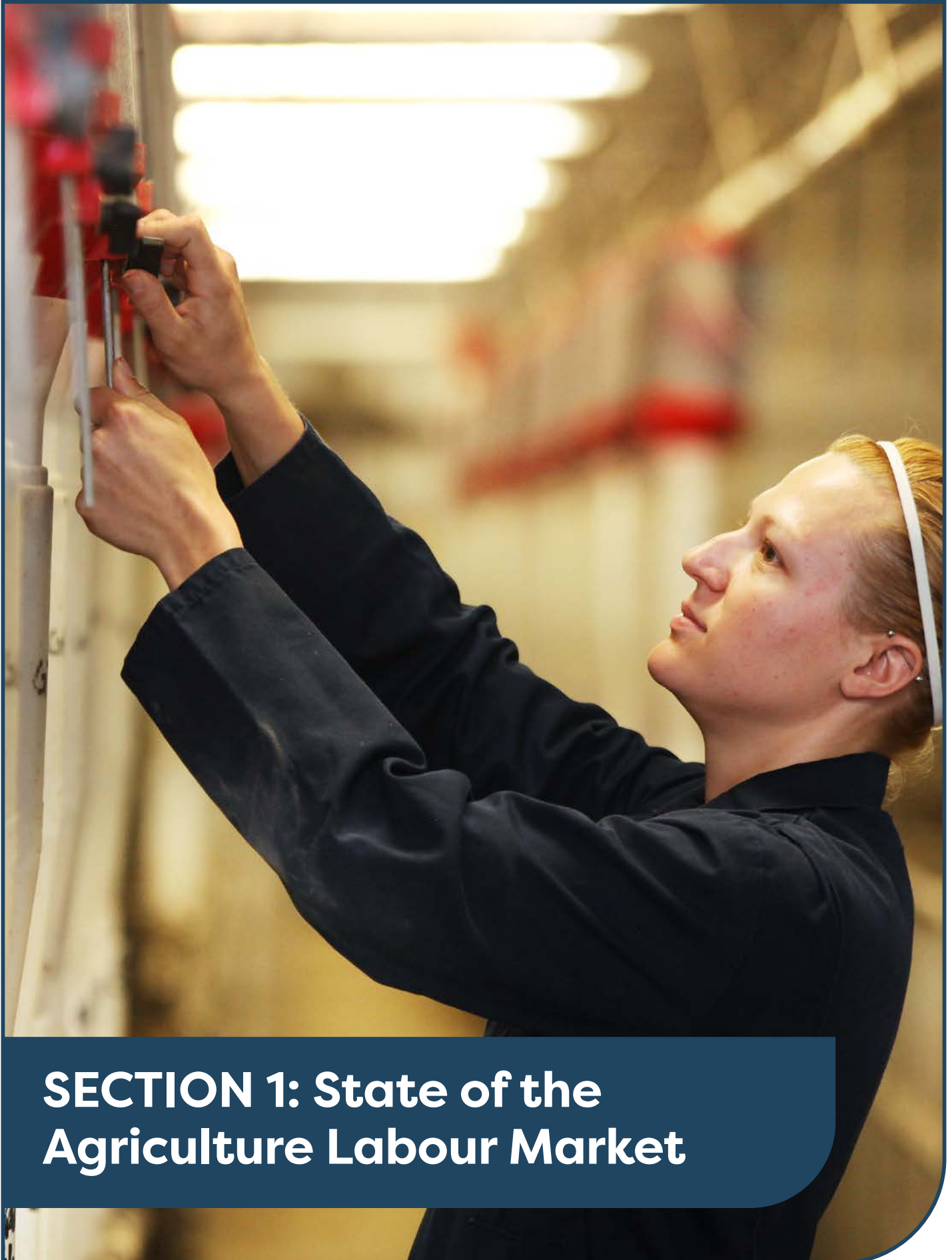


farm products and agricultural supplies.³¹ These industries not only deal with food-related items but also include non-food items like sod (grass) and ornamental plants among crop producers, and horses and fur among animal producers. All these reports are available on the Canadian Agricultural Human Resource Council website: <https://cahrc-ccrha.ca/programs/agri-lmi>

It is important to note that while our study does not directly address food processing, there is a strong connection between food processors and the primary agriculture sector. This means that labour challenges faced by farmers can affect the entire agriculture and agri-food supply chain, which includes food processing and manufacturing products.



³¹ As defined, the sector includes North American Industrial Classification System (NAICS) codes 111 (crop production), 112 (animal production), 1151 (support activities for crop production), 1152 (support activities for animal production), 4111 (farm product merchant wholesalers) and 4183 (agricultural supplies merchant wholesaler). For more information about industry coverage see Appendix A.



SECTION 1: State of the Agriculture Labour Market

Current Labour Market Challenges

As part of this research, the Canadian Agricultural Human Resource Council (CAHRC) surveyed employers, workers and stakeholders in the agriculture sector. The results of these surveys will be discussed in this section. For more information about the surveys see [Appendix B](#).

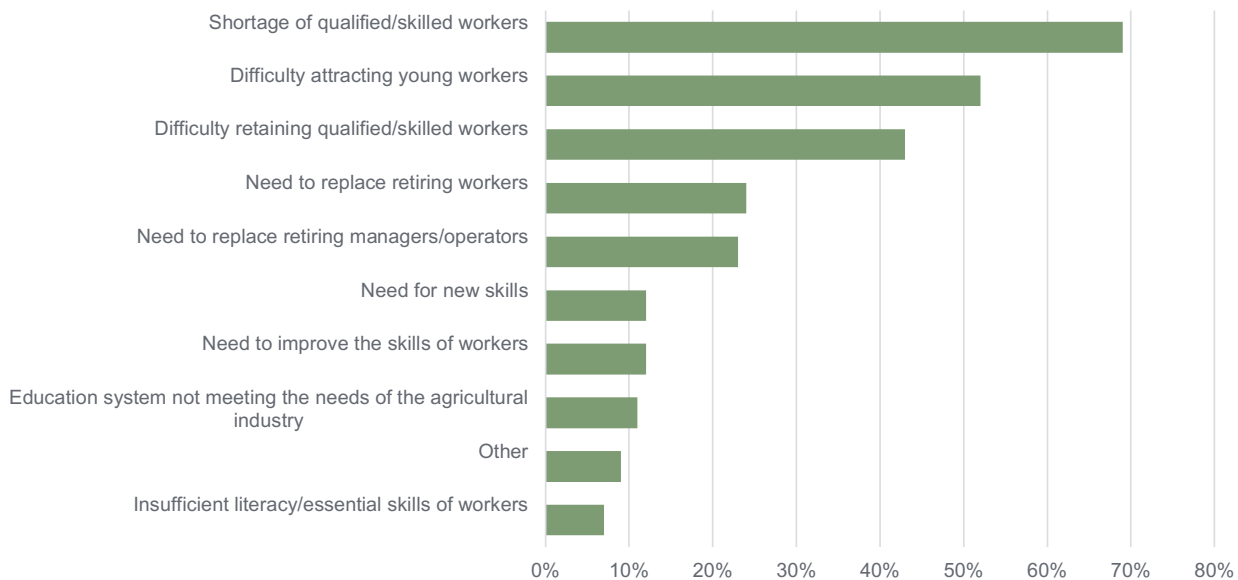
Employers Can't Find the Workers They Need

Over two-thirds (69 per cent) of stakeholders surveyed identified shortages of qualified/skilled workers as a critical workforce issue affecting agriculture operations (Chart 1.1). These shortages are fueled by related challenges such as attracting younger workers, managing retirements and addressing retention difficulties. The current backdrop of tight labour markets and high inflation are making attracting and retaining skilled workers even more difficult.

Chart 1.1: Shortage of skilled workers is the top concern.

Share of stakeholders (n=138).

Q: What do you believe are the key workforce issues that affect operations in the agriculture sector?



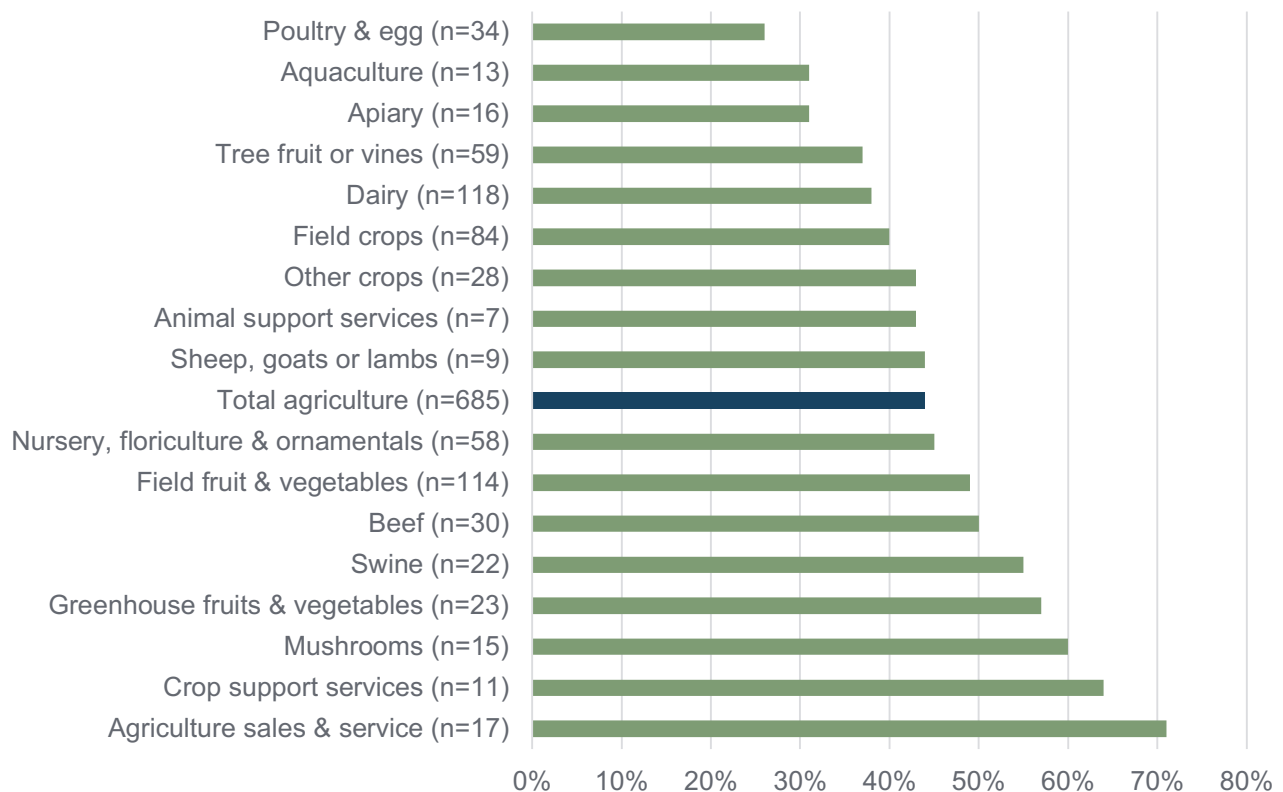
Source: Canadian Agricultural Human Resource Council Stakeholder Survey 2023.

More than two out of every five employers (44 per cent) in agriculture could not hire all the workers they needed in 2022.³² The prevalence of labour shortages varied across agriculture industries (Chart 1.2), driven by the differences in skill requirements, geographical location and seasonal

patterns. For instance, crop production sees a spike in job openings during planting and harvesting, whereas labour demands for livestock operations remain a more consistent year-round need. Industry-specific issues will be discussed in more detail in Section 3.

Chart 1.2: Prevalence of labour shortages varies across industries.

Share of employers who could not hire all the workers they needed in 2022.



Source: Canadian Agricultural Human Resource Council Employer Survey 2023.

32 Canadian Agricultural Human Resource Council Employer Survey 2023.

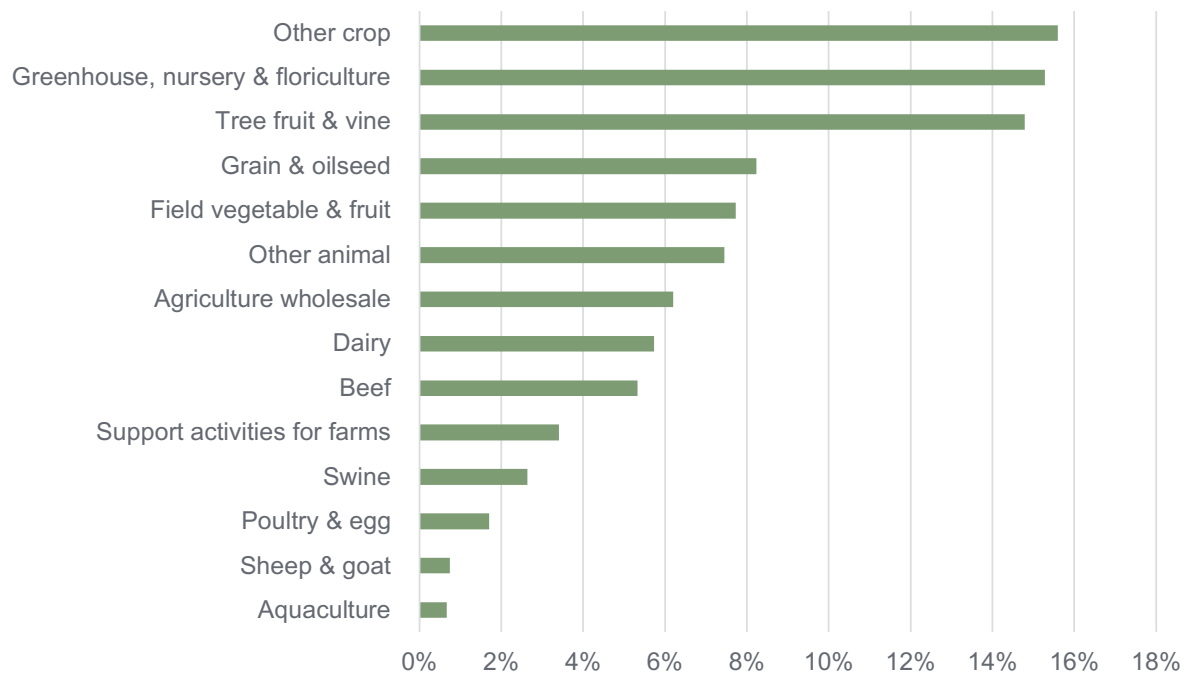
Current Vacancies in Agriculture

Over 28,200 positions are estimated to have gone unfilled in the agricultural sector (including support services and wholesalers) at peak times in 2022.³³ Among these vacancies, 62 per cent were in the crop production,³⁴ with the greenhouse and nursery, tree fruit and vine, and other crop industries

accounting for 46 per cent (Chart 1.3).³⁵ While the number of vacant positions in crop industries varies by season, a significant portion persist throughout the year. For instance, during peak times in 2022, there were approximately 17,400 vacancies in the crop industries, while the average for the year still stood at 11,500 unfilled positions.³⁶

Chart 1.3: Seasonal industries have the largest number of vacancies.

Share of total vacancies at peak, 2022.



Source: Statistics Canada; The Conference Board of Canada's Model of Occupations, Skills and Technology.

33 The Conference Board of Canada's Model of Occupations, Skills and Technology.

34 The crop sub-sector covers all operations that primarily produce goods derived from the ground or from trees, including grains, oilseed, fruit, vegetables, nuts, herbs, flowers, ornamental plants and maple syrup.

35 Other crop farming includes growing tobacco, peanuts, sugar beets, cotton, sugarcane, hay, agave, herbs and spices, mint, hops, maple sap, hay and grass seeds, and combination crop farming.

36 The Conference Board of Canada's Model of Occupations, Skills and Technology.

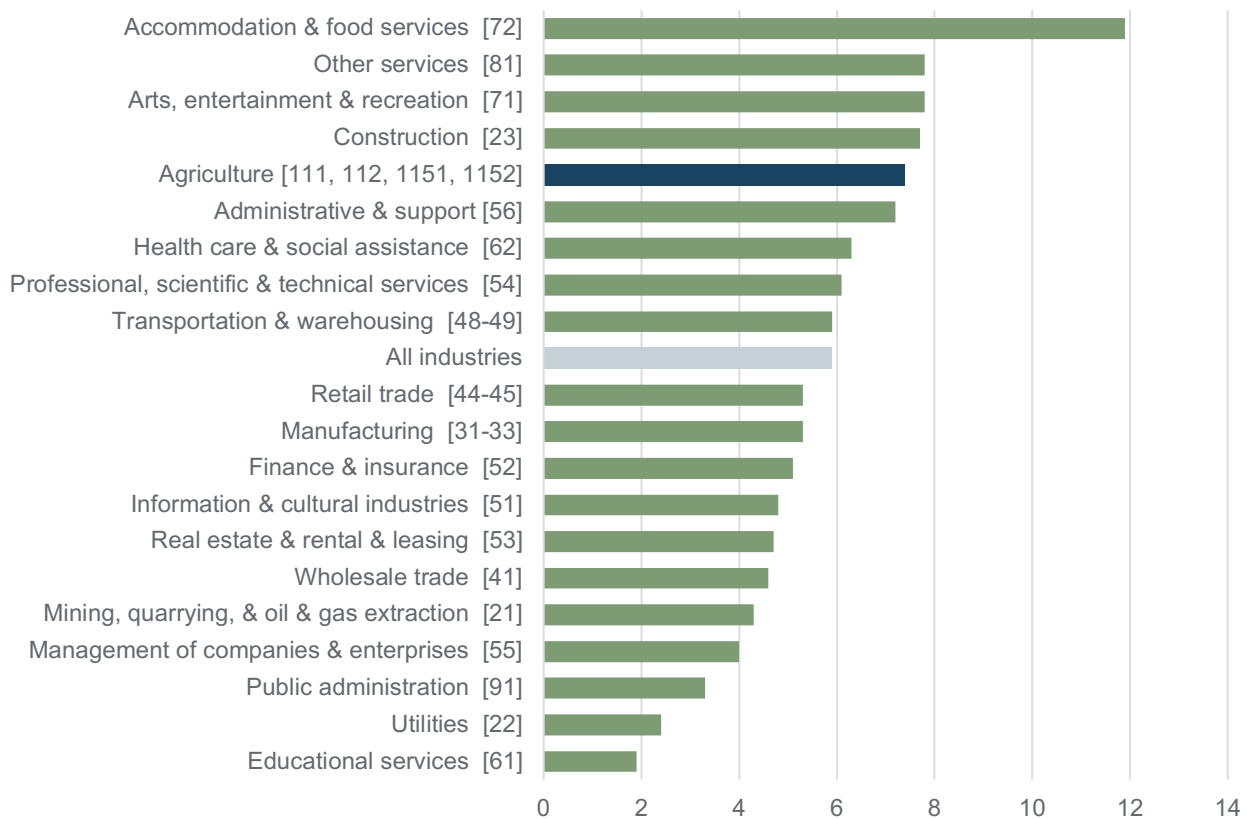
Vacancy Rates for Most Industries have Spiked

At its peak in 2022, the vacancy rate in agriculture was 7.4 per cent, compared to a peak vacancy rate across all industries in

Canada of 5.9 per cent.³⁷ Agriculture held the fifth highest vacancy rate among all industries in the country during that year (Chart 1.4).

Chart 1.4: Agriculture has the fifth highest vacancy rate among Canadian industries.

Peak vacancy rate, per cent, 2022.



Source: Statistics Canada, Table: 14-10-0326-01.

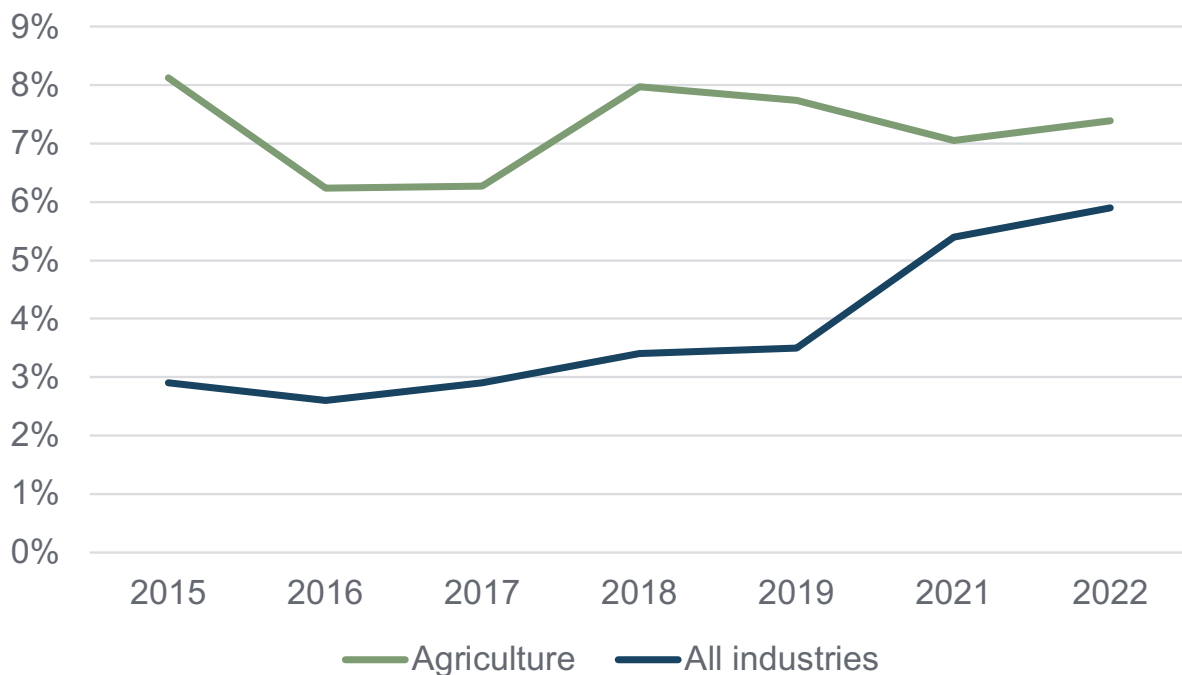
³⁷ Statistics Canada, Table: 14-10-0325-01. Does not include wholesale industries.

While the agriculture sector historically had one of the highest vacancy rates, the vacancy rate across all industries in Canada has surged to a historical high (Chart 1.5). Industries such as accommodation, arts and recreation, other services, and construction have seen

significant spikes in their vacancy rates in recent years, in part due to the outsized impact of COVID-19 on those sectors. As these industries now grapple with labour shortages, the challenge of recruiting domestic workers in the agriculture sector will intensify.

Chart 1.5: Labour market tightness increasing for all industries.

Peak vacancy rate, per cent.



Source: Statistics Canada, Table: 14-10-0326-01.

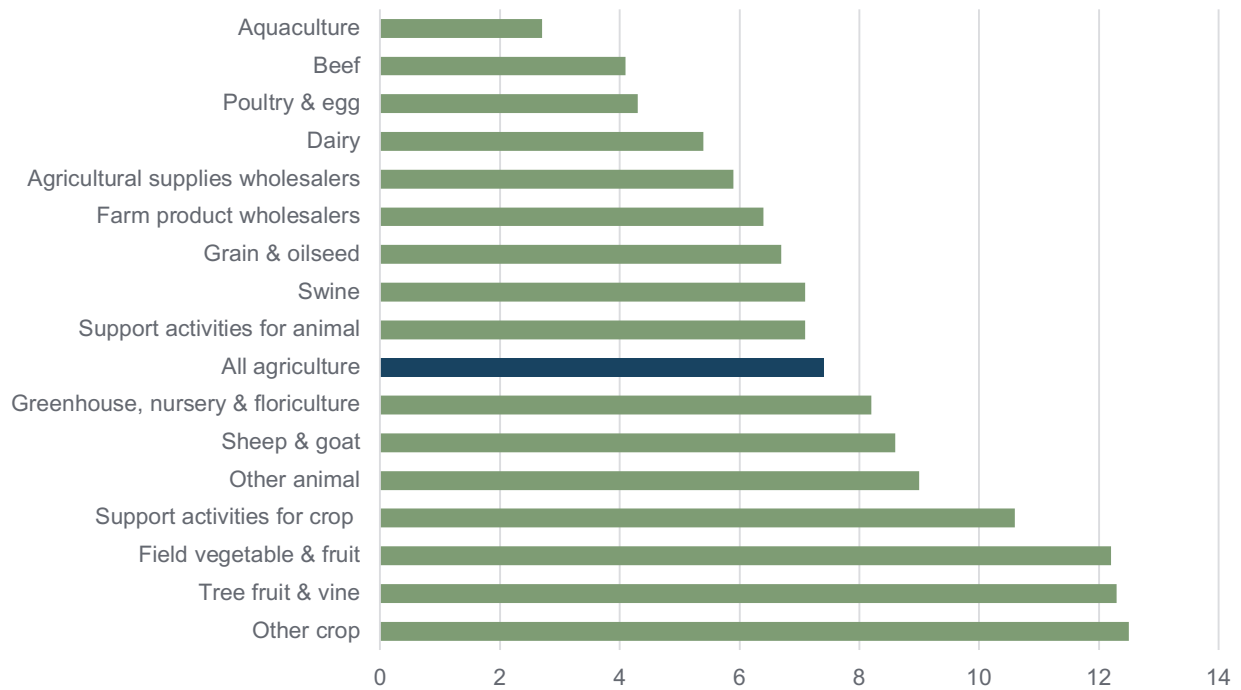
* Data for 2020 is not available. Agriculture does not include wholesale.

In the agricultural sector, the highest vacancy rates are in crop-related industries, including vegetable and fruit farming, other crop production and crop support services, which are driven by their greater peak-season labour

needs. In contrast, animal industries, specifically aquaculture, cattle farming, and poultry and egg production, experienced the lowest vacancy rates in the sector (Chart 1.6).

Chart 1.6: Peak vacancy rate highest in seasonal industries.

Peak vacancy rate, 2022.



Source: Statistics Canada; Canadian Agricultural Human Resource Council Employer Survey 2023; The Conference Board of Canada.

The Cost of Labour Shortages

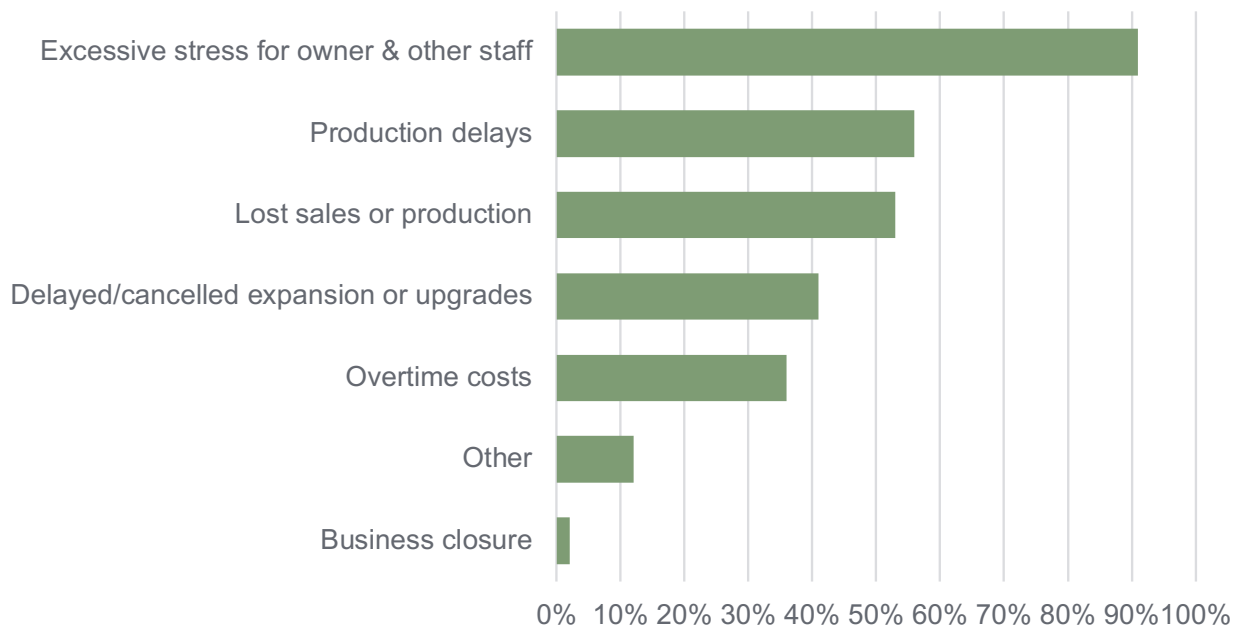
Persistent job vacancies have far-reaching consequences. The vast majority (91 per cent) of employers reported excessive stress on themselves and other staff because of unfilled job

vacancies (Chart 1.7). More than half reported delayed production and lost sales, and 41 per cent of employers had to delay or cancel expansion plans. Ultimately, these persistent vacancies are impeding growth for the whole industry.

Chart 1.7: Vacancies negatively impact workers, employers and the industry.

Share of employers (n=289).

Q: What was the impact of not being able to find required workers in 2022?

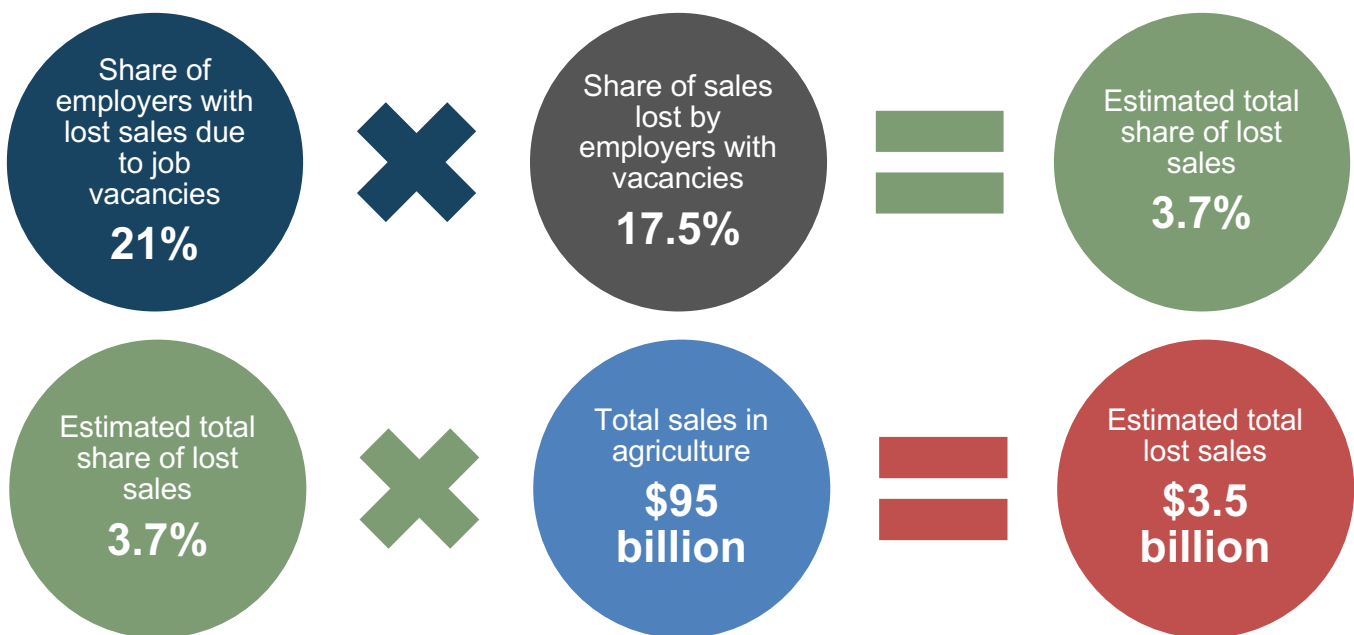


Source: Canadian Agricultural Human Resource Council Employer Survey 2023.

Drawing on the CAHRC Employer Survey 2023 data on lost sales reported by employers, we estimated the cost of unfilled positions in primary agriculture. Among 650 employers surveyed, 21 per cent reported lost sales because they

could not hire all the workers they needed in 2022.³⁸ These employers reported losing 17.5 per cent of sales, which translates into 3.7 per cent of total sales, or approximately \$3.5 billion in foregone revenue for the sector (Chart 1.8).³⁹

Chart 1.8: Labour shortages cost the industry \$3.5 billion in lost sales.



Source: Canadian Agricultural Human Resource Council Employer Survey 2023, Statistics Canada, The Conference Board of Canada.

38 Among the 289 employers who reported a labour shortage, 53 per cent of them lost sales; whereas, among the total sample of 650 employers, 21 per cent of them lost sales.

39 Statistics Canada, Table: 32-10-0045-01. Does not include sales lost by support services or wholesale industries.

Recruitment Challenges

Employers Struggle to Attract Canadian Workers

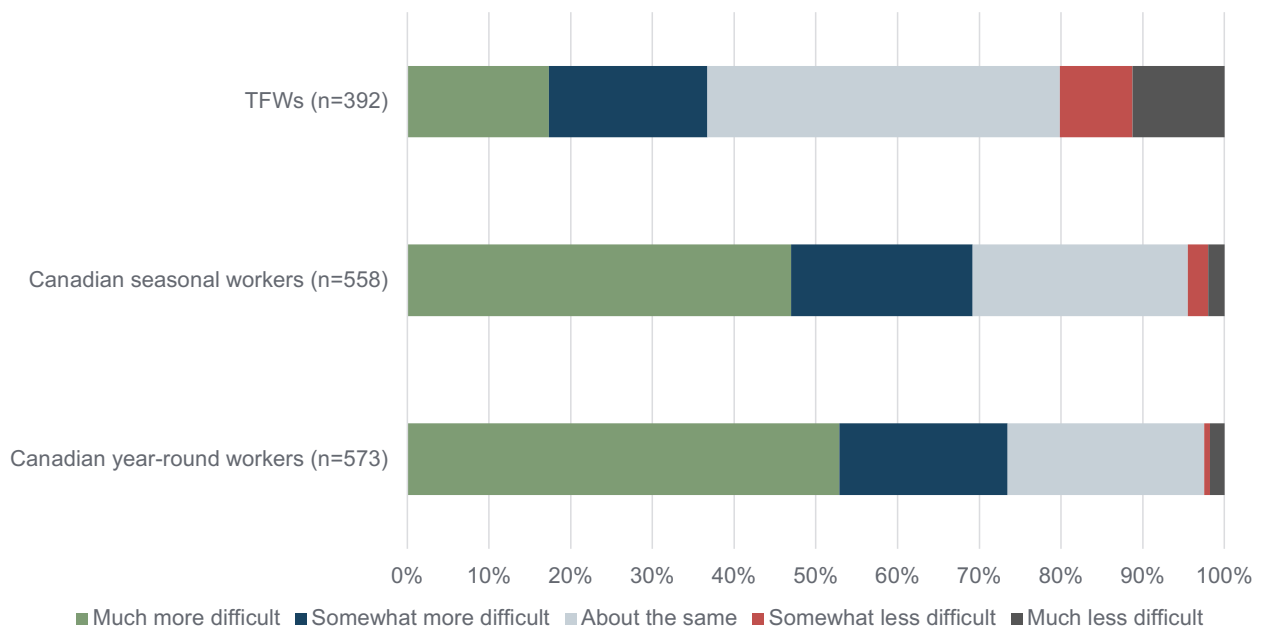
Employers are facing increasing challenges in recruiting Canadian workers, particularly for year-round

positions. Nearly three-quarters of employers reported that it was “much more difficult” or “somewhat more difficult” to recruit year-round Canadian workers in 2022 compared to 2021 (Chart 1.9). Likewise, 69 per cent of employers faced increased difficulty recruiting seasonal Canadian workers.

Chart 1.9: Recruiting Canadian workers has become more difficult.

Share of employers.

Q: How difficult was it to recruit the following types of workers in 2022 versus the previous year?



Source: Canadian Agricultural Human Resource Council Employer Survey 2023.

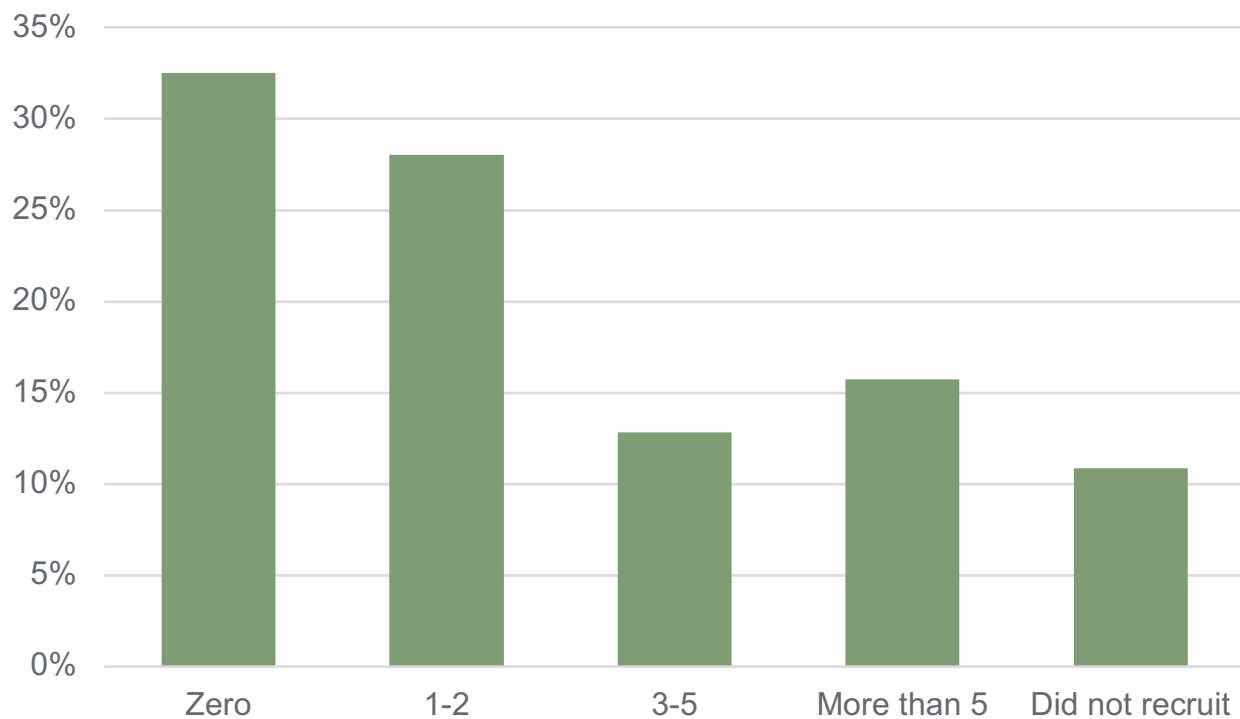
Employers report receiving fewer applications from Canadian candidates, which distinctly adds to their recruitment challenges. More than one-third of employers reported receiving no

applications from Canadians during this hiring season, while an additional 28 per cent received only one or two applications (Chart 1.10).

Chart 1.10: One-third of employers had no Canadian applicants this season.

Share of employers (n=763).

Q: How many Canadians applied for jobs at your farm this season?



Source: Canadian Agricultural Human Resource Council Employer Survey 2023.

Factors Making Agriculture Work Less Attractive

Regarding recruitment, the agriculture sector faces inherent challenges like manual labour, seasonality and rural locations. The requirement to perform manual labour is the top recruitment hurdle, as reported by 59 per cent of employers, followed by seasonality (44 per cent) and rural location (40 per cent).

However, not all industries have the same concerns. Manual labour and seasonality are a greater challenge for employers in crop industries (Chart 1.11), especially in fruit and vegetable production. Conversely, the lack of experience and awareness of career opportunities is a bigger challenge for employers in animal industries, and employers in support and sales industries struggle with workers lacking specialized skills.

Chart 1.11: Manual work and low wages make recruiting in agriculture challenging.

Share of employers.

Q: What are the top five factors that make recruitment of workers at your agricultural operation harder?



Source: Canadian Agricultural Human Resource Council Employer Survey 2023.

Unavoidable Seasonality

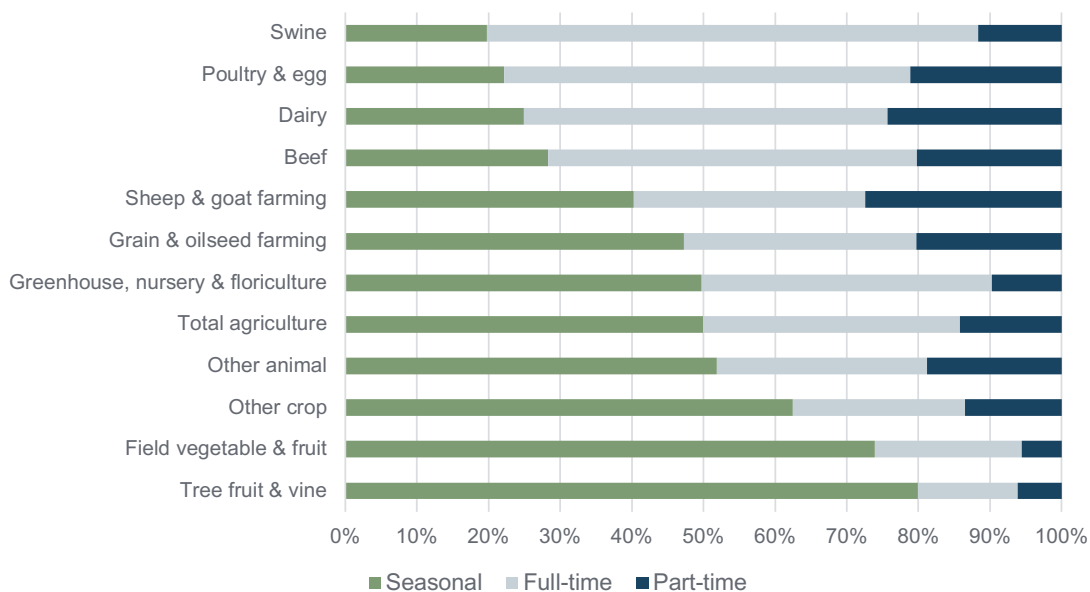
Seasonal employment fluctuations are an intrinsic feature of agriculture production, particularly in crop production industries (Chart 1.12). Overall, roughly half of employees (domestic and foreign) in agriculture are employed on a seasonal basis.⁴⁰ This inherent seasonality in agriculture is, in part, what makes its labour market challenges different from other industries.

The prevalence of labour shortages and the number of job vacancies are closely tied to the seasonal demands of specific industries. For example, 80 per cent of

employees in fruit farming and 74 per cent in vegetable farming are employed seasonally, and these industries have some of the highest peak vacancy rates in agriculture.⁴¹ Although finding year-round employees remains a challenge for all agricultural businesses, securing an adequate workforce during peak periods poses an additional hurdle for many industries. While certain groups of Canadian workers such as students or individuals with flexible schedules can engage in seasonal work, this type of employment is not practical for many Canadian workers. Consequently, the agriculture sector relies on foreign workers to address much of its labour needs.

Chart 1.12: Agriculture relies on a seasonal workforce.

Share of employees by type of employment, 2021.



Source: Statistics Canada, Table: 32-10-0215-01.
Data on support services and wholesale is not available.

40 Statistics Canada, Table: 32-10-0215-01. Measure of payroll employees (workers for which a T4 was produced).

41 Ibid.



Rural Location and Cost of Living

Nearly 40 per cent of employers reported their rural location makes recruitment more difficult.⁴² Several factors contribute to this, including declining local population base, the lack of transit and transportation options, the lack of other amenities and resources, and the general rise in the cost of living.

Around three-quarters of Canada's population live in urban centres, while only one-quarter of the farm population lives there.⁴³ This creates an additional labour challenge, since Canada's population is growing in urban centres but is essentially flat in rural areas.⁴⁴ Only 10 per cent of immigrants, which is Canada's primary source of population growth, settle in rural areas.⁴⁵ Additionally, young people often leave rural areas to study and do not return.

In the end, employers are challenged to find workers simply because there are fewer potential workers near the location of work.

The cost of living in rural areas is also a deterrent for many workers. The recent surge in the cost of living, particularly with respect to housing, food and gas prices, has decreased the affordability of living in rural areas in Canada.

Insights gathered from stakeholders during our surveys and focus groups indicate that employers struggle to pay wages that allow workers to live in their area. Employers also struggle to find affordable accommodations for workers. In the end, workers are not able to move to rural areas for agricultural work if they cannot find affordable housing.

Competition from Other Sectors

Wages are consistently part of the conversation when discussing recruitment in agriculture. In the current labour market, where employers across all industries are vying for workers, agriculture employers face stiff competition. Although average wages in agriculture typically fall slightly below those of all industries in Canada, wages differ across industries in agriculture (Chart 1.13). For instance, wages in grain and oilseed farming, and poultry and egg production tend to be higher, while wages for greenhouse and nursery, and fruit and vegetable farming tend to be lower.

42 Canadian Agricultural Human Resource Council Employer Survey 2023 (n=724).

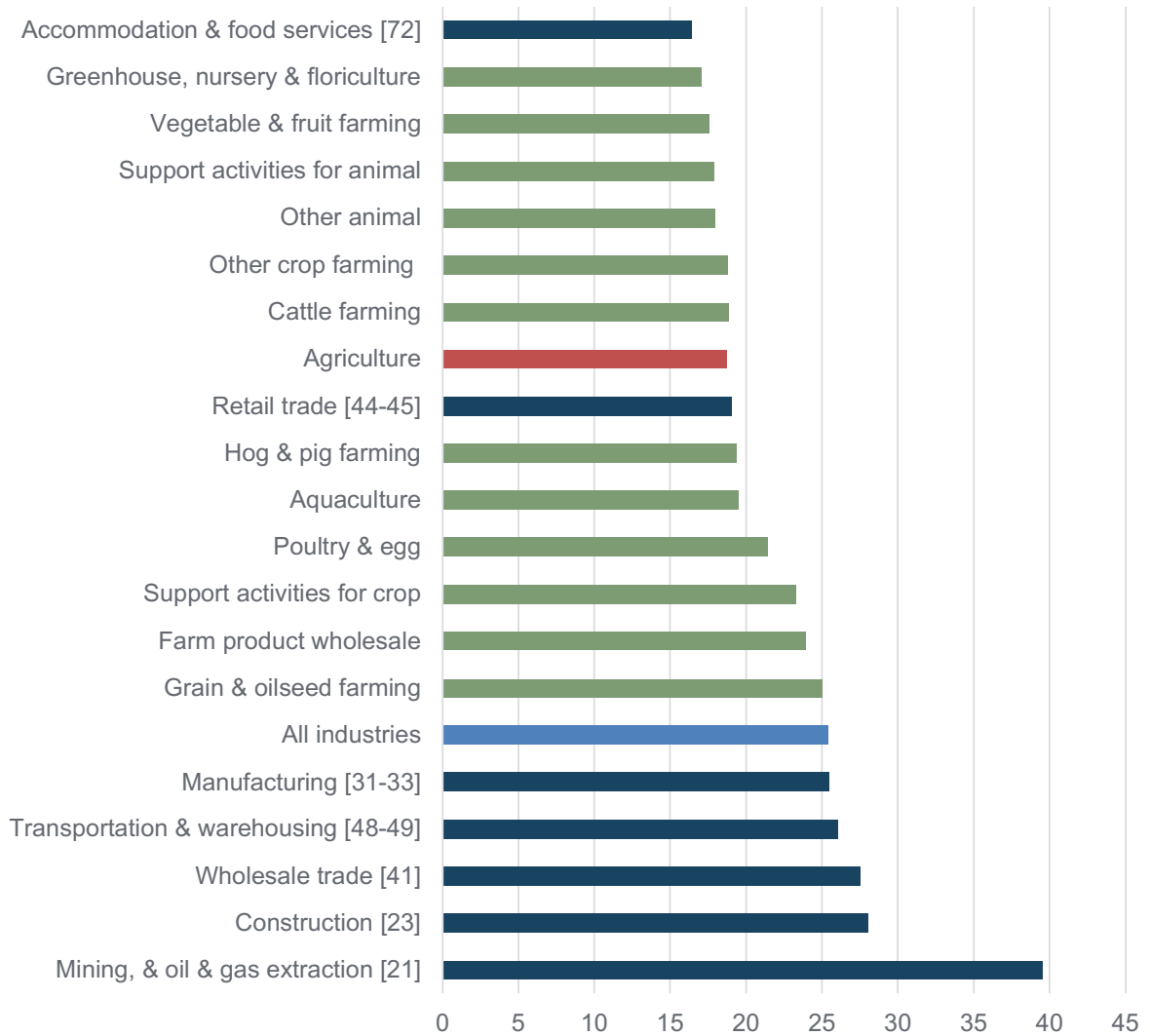
43 Statistics Canada, "Canada's large urban centres continue to grow and spread." An urban centre is defined as an area with 100,000 people or more. Statistics Canada, "The socioeconomic snapshot of Canada's evolving farm population, 2021."

44 Statistics Canada, "Population growth in Canada's rural areas, 2016 to 2021."

45 Statistics Canada, "Canada's large urban centres continue to grow and spread."

Chart 1.13: Wages vary in agriculture but are lower than pay in other sectors.

Average offered hourly wage, 2023 Q1.



Source: Statistics Canada, Table 14-10-0326-01, Job Vacancy and Wage Survey custom data.

*Aquaculture data are only available for 2022 Q3. Cattle includes beef and dairy. Data on beef and dairy separately unavailable.



While wages certainly play a role, the appeal of urban areas can also make jobs in other industries, such as manufacturing or construction, more attractive to potential workers. Consequently, agriculture employers must, more than ever, understand their value proposition to employees. Offering other benefits such as flexibility, benefits packages and opportunities for career advancement can be vital in attracting and retaining workers.

“Flexibility is a key factor in attracting and retaining employees, even if the pay is not as competitive.... Having enough tools in the toolbox to overcome the inability to pay competitive wages is crucial.”

**~ Interviewee,
Agriculture Sector
Stakeholder**

Lack of Awareness About Careers in Agriculture

The lack of awareness about careers in agriculture, particularly among youth, was a consistent theme in interviews and focus groups. Common perceptions of agriculture tend to be outdated and often miss the extent to which innovation and technology have created and transformed numerous occupations in the sector. Stakeholders generally agree that more efforts are needed at all education levels to raise awareness and interest among young people in pursuing work in agriculture. It is essential to highlight the wide range of technical and non-technical career opportunities in the sector.

Word of Mouth is the Dominant Recruitment Method

Employers are using a variety of recruitment methods to find domestic workers. The majority rely on word of mouth, over half have online job boards and over 40 per cent use social media (Chart 1.14).

Word of mouth offers certain benefits, including less time and financial cost than other methods. Forty-one per cent of employers found it to be the most effective method, compared to online job boards (29 per cent) and social media (16 per cent). However, it is worth noting that relying solely on word of mouth can limit the number of potential workers an employer can reach.



“Additional promotion at high school trade shows and career fairs encouraging young people to consider agriculture diplomas and degrees would benefit the entire sector.”

**~ Peggy Brekveld,
Chair of the Canadian
Agricultural Human
Resource Council
Board of Directors**

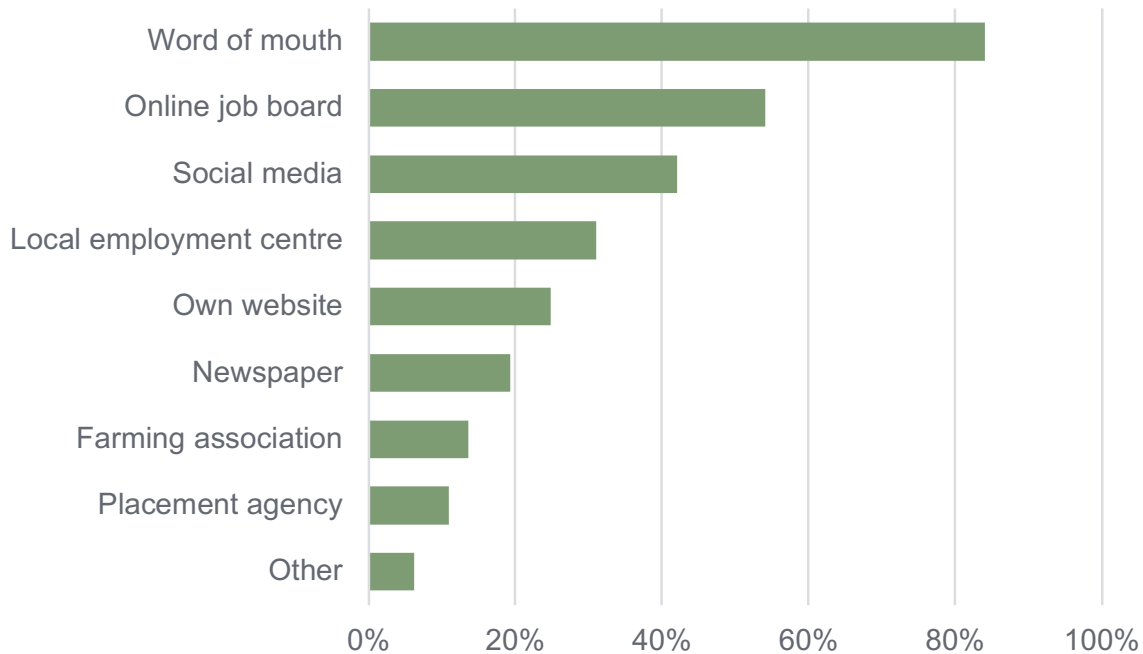
Unfortunately, employers have found other recruitment techniques, such as advertising on online job boards, on social media and through employment centres, have not been effective in recruiting domestic workers. Feedback from various stakeholders has indicated that online job postings frequently result in a flood of spam, which can be time-consuming and frustrating for employers. This challenge can make online job postings seem not worth the effort.

As a result, there is a pressing need to develop more innovative recruitment strategies to attract Canadians to the agriculture sector. Education, especially of youth, about career opportunities in agriculture could be an effective approach. Additionally, there is potential for the sector to reach underrepresented groups, such as women or immigrants. Finding creative and efficient ways to connect with potential workers will be essential to address the recruitment challenges employers face in agriculture.

Chart 1.14: Word of mouth is the dominant recruitment method used in agriculture.

Share of employers (n=729).

Q: Which of the following methods did you use to try to recruit workers in 2022?



Source: Canadian Agricultural Human Resource Council Employer Survey 2023.

Foreign Workers are Essential

Foreign workers are an increasingly important source of labour in agriculture in both crop and animal production. Almost half (49 per cent) of employers surveyed reported using the Temporary Foreign Worker Program, including the Seasonal Agriculture Worker Program (SAWP), to recruit workers in 2022.⁴⁶ This marks a significant increase from the 2018 CAHRC

Employer Survey when only 33 per cent of employers reported using these programs.

The number of Temporary Foreign Workers (TFWs), including SAWP workers, employed in primary agriculture has increased over 30 per cent in the past 5 years, from 53,840 to 70,370 in 2022.⁴⁷ While crop production industries still employ the vast majority of foreign workers (86 per cent), there is growing demand for access

46 Canadian Agricultural Human Resource Council Employer Survey 2023 (n=729).

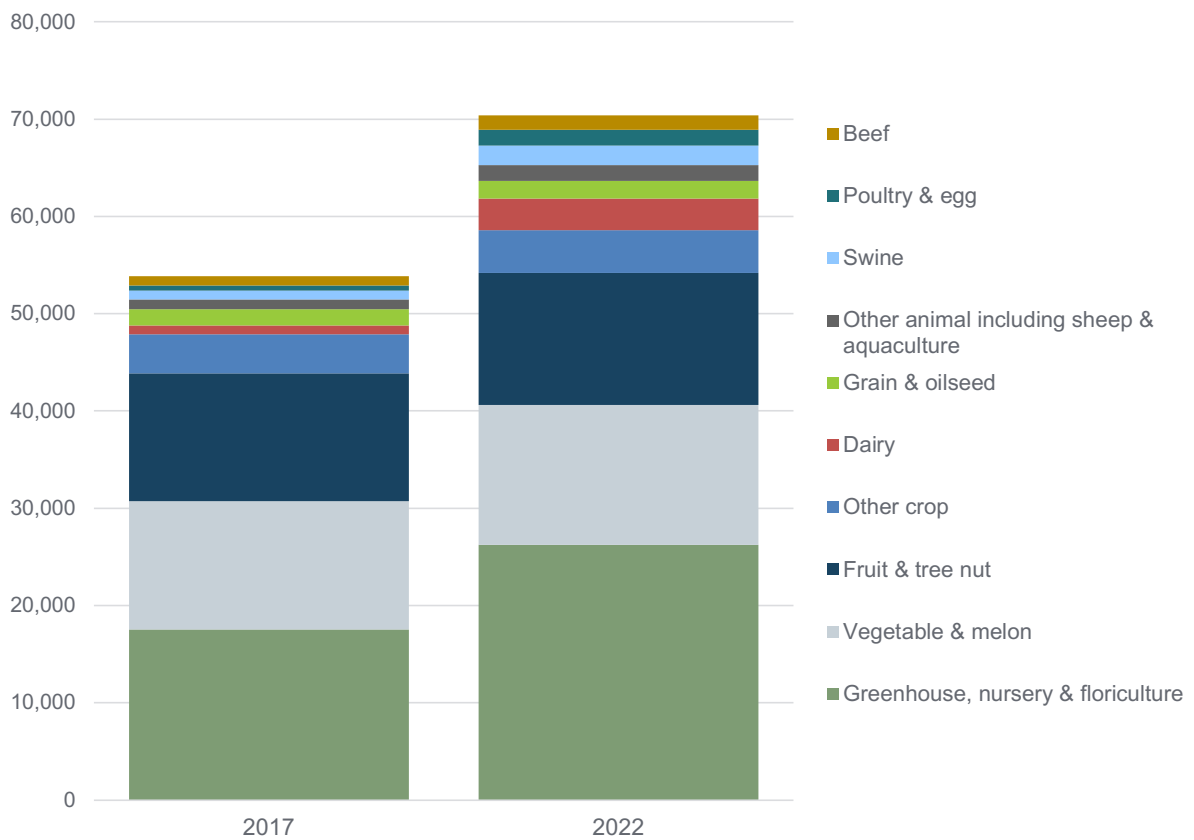
47 Statistics Canada, Table: 32-10-0218-01. Does not include support services or agriculture wholesale industries.

to foreign labour in other agriculture industries (Chart 1.15).⁴⁸ The highest growth was in dairy, poultry and egg, and swine industries. In total, foreign workers accounted for 17 per cent of the entire workforce in agriculture in 2022.⁴⁹

Stakeholders emphasized that many industries rely heavily on foreign workers and access to foreign workers is essential for agriculture to continue to thrive.

Chart 1.15: The number of foreign workers has grown, especially in animal industries.

Number of foreign workers in primary agriculture.



Source: Statistics Canada, Table: 32-10-0218-01; The Conference Board of Canada. Does not include support services and wholesale industries.

48 Ibid.

49 Statistics Canada; The Conference Board of Canada.



“Due to Canada’s demographics, as well as the challenges associated with attracting people to the agricultural sector, temporary foreign workers are necessary and are a long term solution for the shortage of labour faced by the sector.”

~ British Columbia Focus Group Attendee

Retention Challenges

Turnover is at a Record High

Labour challenges in agriculture encompass more than just vacancies. High turnover rates are also putting substantial strain on employers, both in terms of time and finances. Based on findings from the CAHRC Employer Survey 2023, the agriculture sector experienced a voluntary turnover rate of 14 per cent in 2022.⁵⁰ This is a marked increase from the 10 per cent rate recorded in 2018, and well above the 2022 Canada-wide voluntary turnover rate of 7.7 per cent.⁵¹

Voluntary turnover varies by industry, with the highest rates being in support services, poultry and egg, and swine (Chart 1.16). Conversely, aquaculture,

dairy, and the tree fruit and vine industries had the lowest turnover rates.

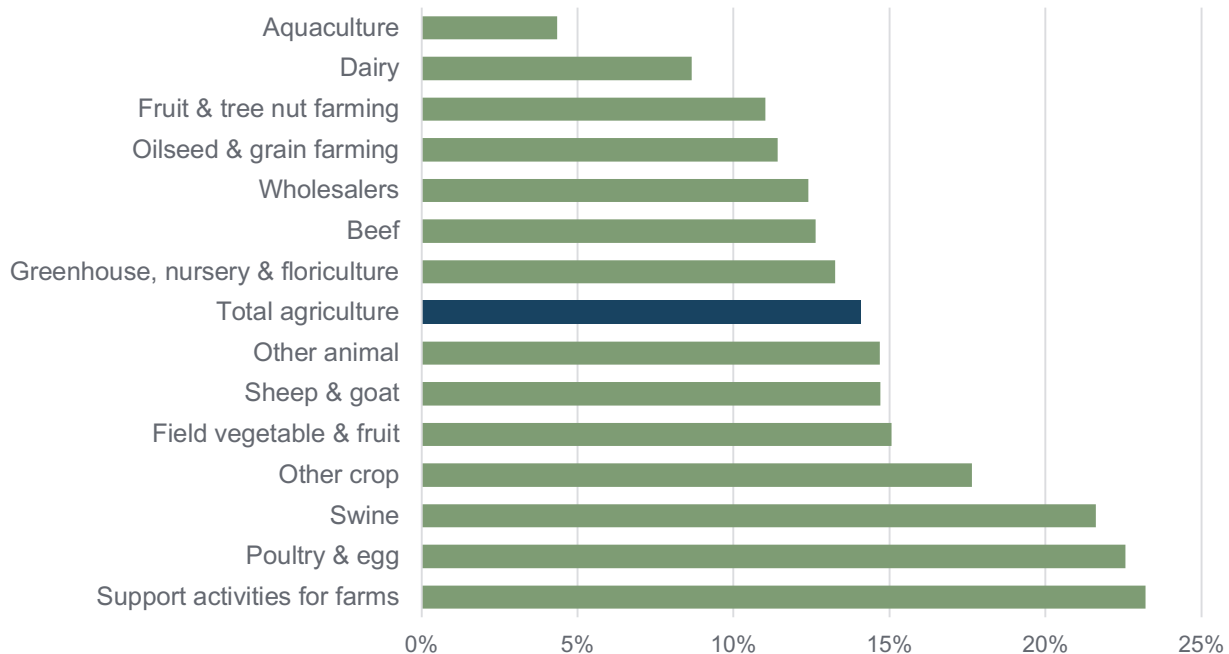
Industries that experienced high job vacancies did not always have high turnover rates. For example, the greenhouse and nursery industry has the largest number of vacancies, yet it has a lower than average turnover rate (13 per cent). Meanwhile, the poultry and egg industry registered one of the highest turnover rates (23 per cent), yet reported one of the lowest incidences of job vacancies. Industries with high turnover but fewer vacancies have an easier time finding workers, but their workers don’t stay as long. Conversely, industries with low turnover and many vacancies have a harder time finding workers, but the workers they get tend to stay longer.

⁵⁰ Voluntary turnover measures the number of workers who departed voluntarily (on their own). Voluntary departures are comprised of workers who quit, including seasonal workers who leave before contract completion. These are often people who leave to take another job. The voluntary turnover rate equals the number of voluntary departures divided by the total number of workers in a given year.

⁵¹ Leman and Marcil, *Preparing for an Impending Employee Exodus, 2023*.

Chart 1.16: Turnover rates vary by industry.

Voluntary turnover rate, per cent, 2022.



Source: Canadian Agricultural Human Resource Council Employer Survey 2023.

Despite the high level of turnover, the findings from the CAHRC Worker Survey indicate a generally high level of job satisfaction among workers. Two-thirds of workers said they were likely or highly likely to recommend working in the agriculture sector.⁵² Additionally, 57 per cent of workers expect to work in agriculture for more than 5 years.⁵³ These results suggest that a dedicated segment of the workforce is engaged and committed to remaining in the sector.

Unfortunately, there is another portion of the workforce that does not stay in an agriculture job for long. Stakeholders reported that many new hires attempt agricultural work but depart shortly after starting, sometimes staying less than a week. This group of workers contributes significantly to the overall turnover rate. Consequently, employers are challenged to identify the right candidates and implement effective incentives to encourage long term retention.

52 Canadian Agricultural Human Resource Council Worker Survey 2023 (n=198).

53 Canadian Agricultural Human Resource Council Worker Survey 2023 (n=247).

Comparing Employer and Worker Perspectives

Employers are more likely to attribute workers leaving to reasons like the physical nature of the job, long hours and outdoor work compared to the workers themselves. Conversely, workers tend to point to low pay and limited career growth as the main reasons they are less interested in agriculture (Chart 1.17). It is worth noting that we only surveyed workers currently employed in agriculture; therefore, we do not know the opinions of those who have quit. It is possible that the perspectives of departed workers align more with employers, i.e., they could not handle the

physical work and long hours. Still, these results indicate that current agriculture workers generally do not mind the physical demands, and prioritizing wages and career opportunities could improve retention.

It is critical to recognize that employees also value their work environment and the quality of management. In fact, nearly 30 per cent of agriculture workers cited poor management practices as their primary reason for leaving their jobs.⁵⁴ Therefore, prioritizing improvements in HR and management practices could improve retention and foster a more positive and productive workplace culture.



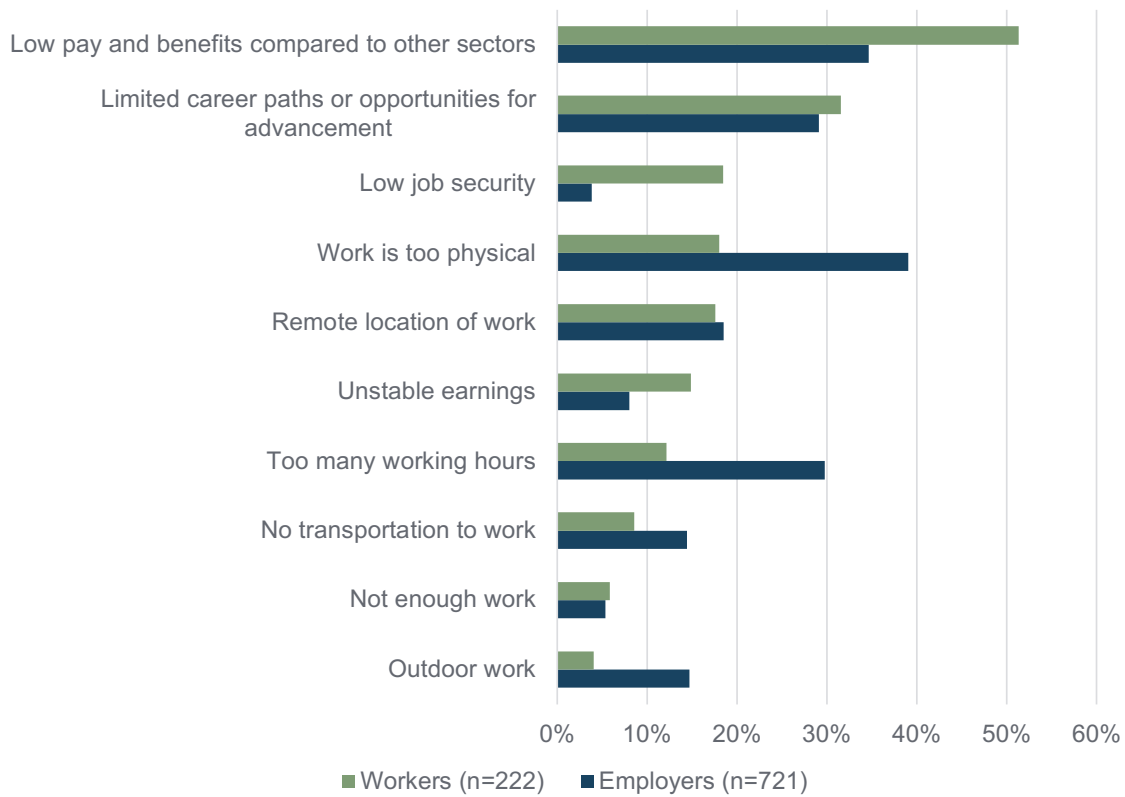
54 Canadian Agricultural Human Resource Council Worker Survey 2023 (n=101).

Chart 1.17: Physical labour and long hours affect workers less than employers think.

Share of respondents.

Employers Q: What factors make retaining workers harder?

Workers Q: What factors limit your interest in working in agriculture?



Source: Canadian Agricultural Human Resource Council Employer Survey 2023. Canadian Agricultural Human Resource Council Worker Survey 2023.

Barriers to HR Training

The underutilization of HR tools and training in the agriculture sector is no surprise to many. In the CAHRC Employer Survey, 70 per cent of employers indicated that neither they nor their staff had participated in HR training over the past year.⁵⁵ This was even higher (78 per cent) for smaller businesses (less than \$100,000 in revenue), but lower (58 per cent) for large businesses (over \$2 million in revenue).⁵⁶ Over half of these employers cited a shortage of time as a barrier, which is understandable considering the ongoing labour challenges requiring employers and staff to work overtime. However, 22 per cent reported they believed HR training was unnecessary and 16 per cent said

they were not interested. These findings highlight the need to raise awareness about the benefits and relevance of HR training in the sector. Addressing this could pave the way for improved workforce development, particularly for smaller operations.

Several other barriers further impede access to HR training and resources in the agriculture sector. These include the cost of the training, the challenge of locating relevant resources, and the difficulty in using available HR tools and resources. Overcoming these barriers is essential to ensure valuable HR training and resources are readily available to farm owner-operators and managers, thereby fostering better management practices.



55 Canadian Agricultural Human Resource Council Employer Survey 2023 (n=706).

56 Canadian Agricultural Human Resource Council Employer Survey 2023 (n= 80, 213).



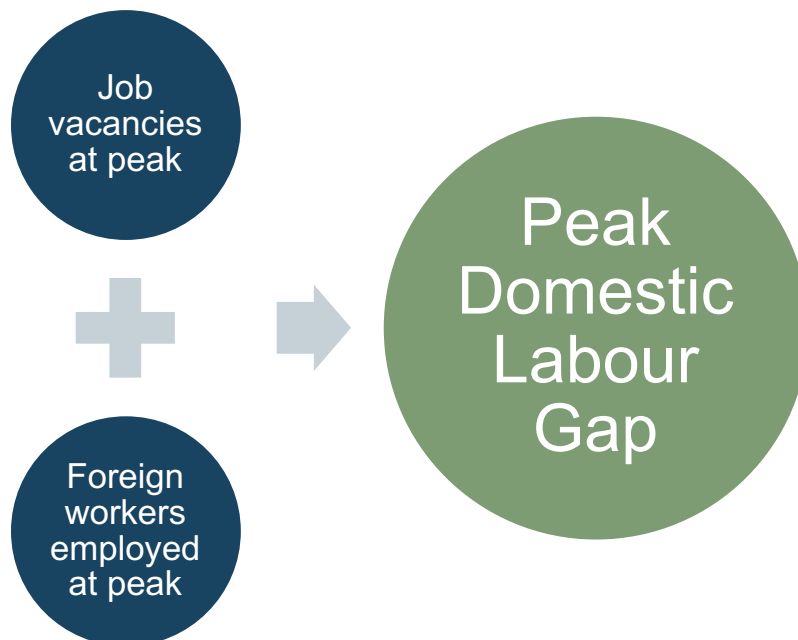
SECTION 2: Looking to the Future Agriculture Labour Market

A Growing Labour Gap

The surveys, interviews and focus group discussions with stakeholders reveal that the agriculture sector is grappling with significant labour shortages. More precisely, employers are finding it increasingly challenging to recruit and retain Canadian workers. These experiences are validated by observations of how much the domestic labour gap has increased over the past 6 years. This section looks ahead at the expected labour market trends and ongoing challenges facing agriculture employers.

The peak domestic labour gap represents the number of peak season positions the agriculture sector would like to fill with domestic workers but is unable to do so. These positions are then either filled by foreign workers or remain vacant. The expected peak domestic labour gap is equal to the forecasted number of foreign workers employed at peak plus the forecasted number of vacancies reported at peak (Chart 2.1). For more information about how this measure is produced, see [Appendix C](#).

Chart 2.1: The peak domestic labour gap measures the number of workers the sector needs but is not able to find in Canada.



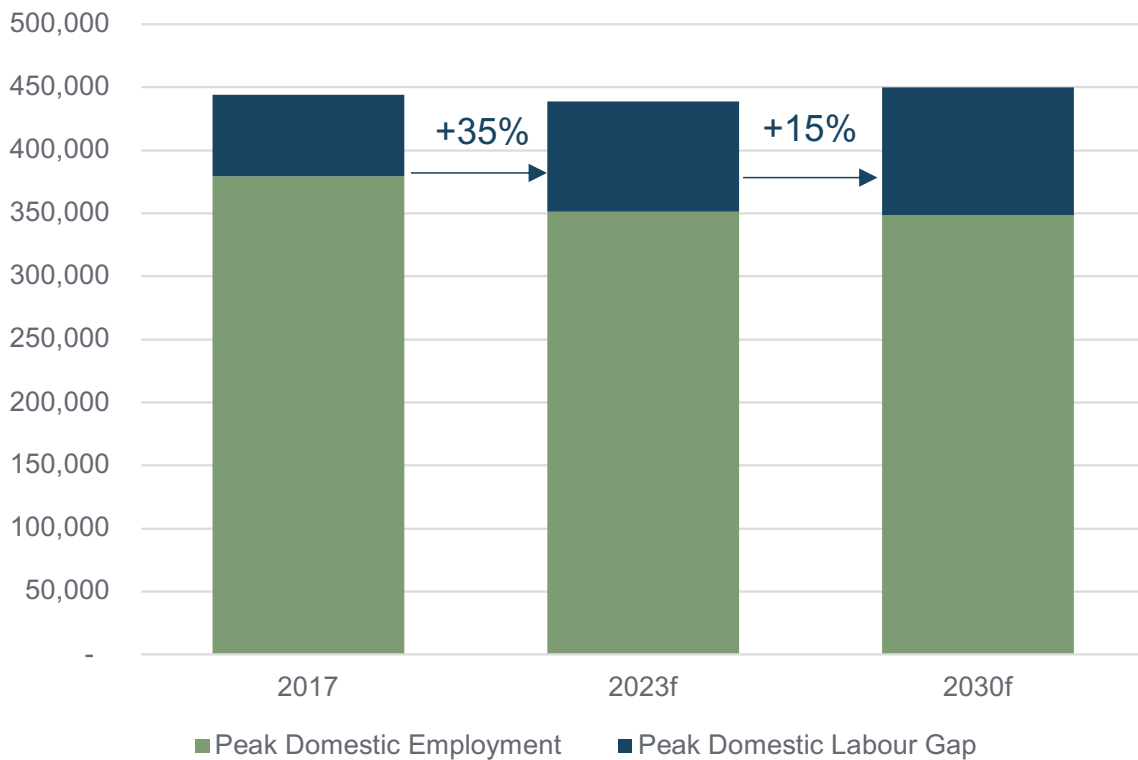
Source: The Conference Board of Canada.

Between 2017 and 2023, the peak domestic labour gap (the number of foreign workers in the sector plus job vacancies) increased over 35 per cent, from 64,800 to 87,700 workers (Chart 2.2). This trend was predicted in the previous labour market information (LMI) forecast conducted in 2017. In the last 2 years alone (2020-2022), the peak domestic labour gap has increased by over 21,400 workers, driven by the tight labour markets across Canada.

Going forward, the peak domestic labour gap is expected to continue to expand, albeit at a more moderate rate of 15 per cent over the next 8 years, increasing from 87,700 in 2023 to 101,100 by 2030. This is equivalent to 22 per cent of total demand, meaning that by 2030 a Canadian worker will be unable to be found for more than one out of every five jobs in the sector.

Chart 2.2: The domestic labour gap expected to increase 15 per cent by 2030.

Domestic employment and domestic labour gap at peak season.



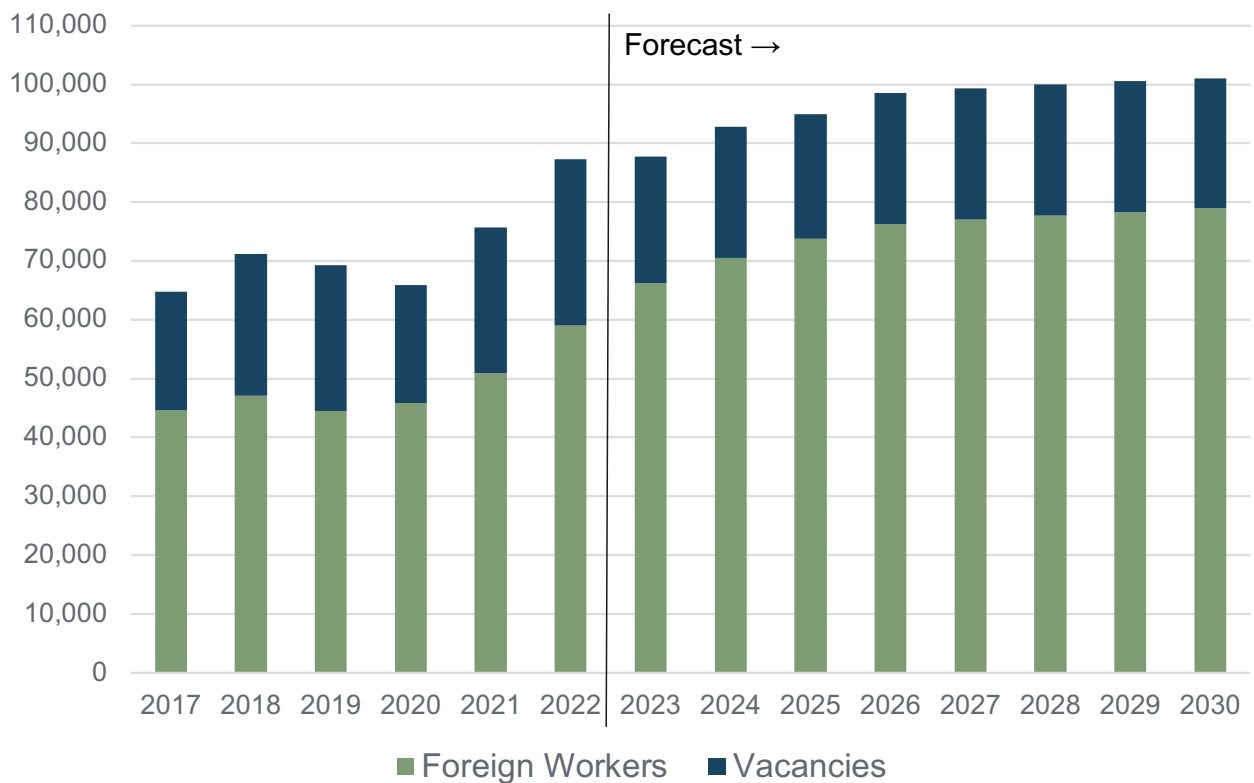
Source: The Conference Board of Canada's Model of Occupations, Skills and Technology.
 *f indicates forecast values.

Currently, foreign workers fill over two-thirds (68 per cent) of the peak domestic labour gap, and this share is expected to increase to 78 per cent by 2030. Despite the expected increase in foreign worker employment, over 20 per cent of the peak domestic labour gap or 22,200

positions will remain vacant (Chart 2.3). These persistent vacancies underscore a structural issue in the agriculture labour market, one that necessitates attention and solutions for the sector’s long term sustainability.

Chart 2.3: Vacancies remain despite the increase in foreign worker employment.

Temporary foreign worker employment and vacancies during peak season.



Source: Statistics Canada; The Conference Board of Canada’s Model of Occupations, Skills and Technology. Foreign workers include workers brought in through the Temporary Foreign Worker Program and the Seasonal Agriculture Worker Program.

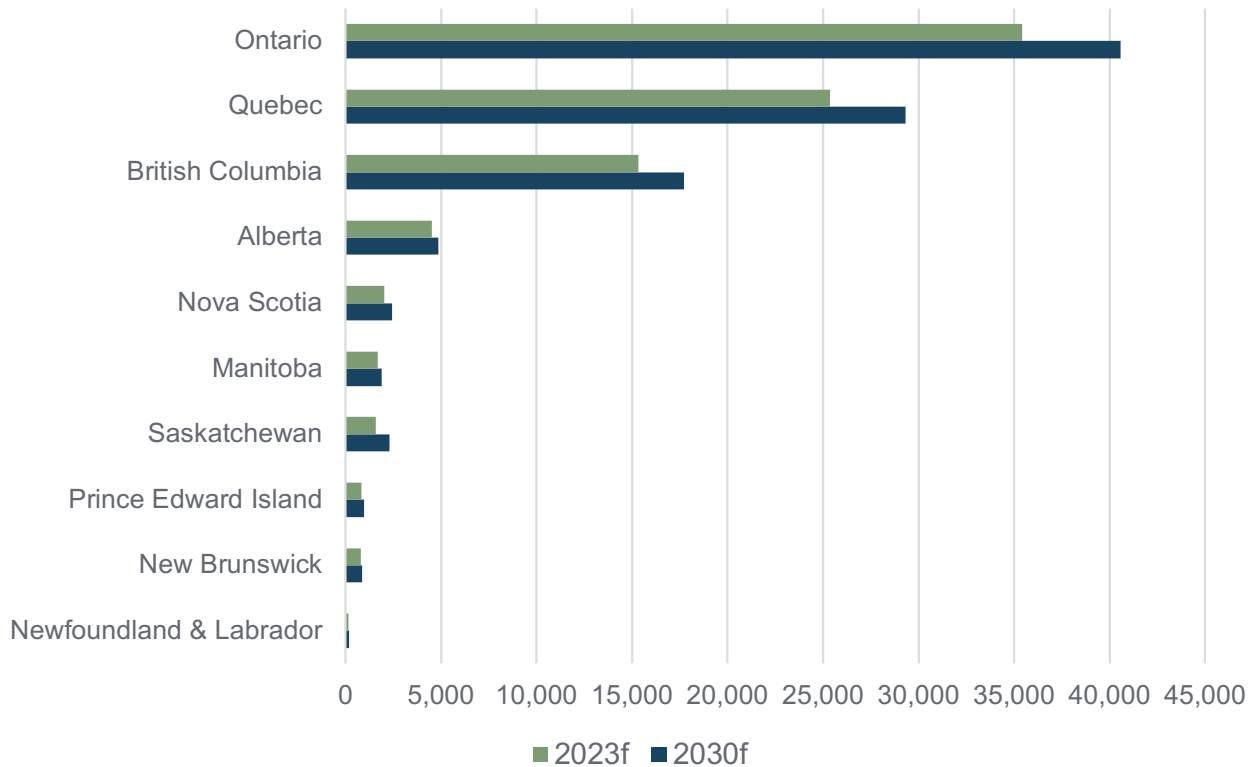
Labour Gap by Province

The domestic labour gap is concentrated in provinces with larger agriculture sectors and this concentration will persist in the future (Chart 2.4). Over 40 per cent of the gap is in Ontario, followed by

29 per cent in Quebec and 17 per cent in British Columbia. This concentration is due to the size and structure of the agriculture sector in these provinces, particularly in the seasonal greenhouse, and fruit and vegetable industries.

Chart 2.4: Ontario and Quebec account for over two-thirds of the domestic labour gap.

Peak domestic labour gap by province.



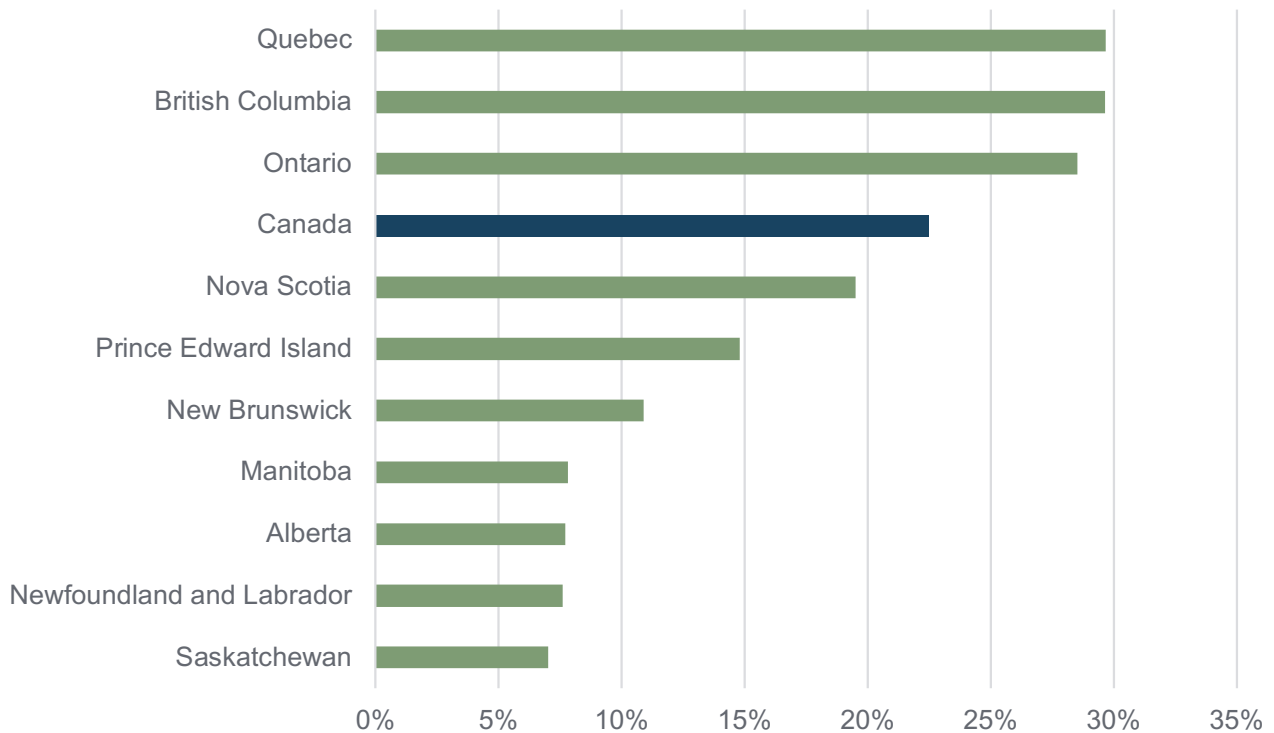
Source: The Conference Board of Canada's Model of Occupations, Skills and Technology.
 *f indicates forecast data.

Further, in Ontario, Quebec and British Columbia, the peak domestic labour gap will account for almost 30 per cent of total labour demand in their agriculture sectors by 2030 (Chart 2.5).

This implies that nearly one in three jobs in agriculture in these provinces cannot be filled by domestic workers during the peak season.

Chart 2.5: Quebec, BC and Ontario also have the highest ratio of gap to demand.

Peak domestic labour gap as a share of peak labour demand by province in 2030, forecast.



Source: The Conference Board of Canada's Model of Occupations, Skills and Technology.
 *f indicates forecast data.

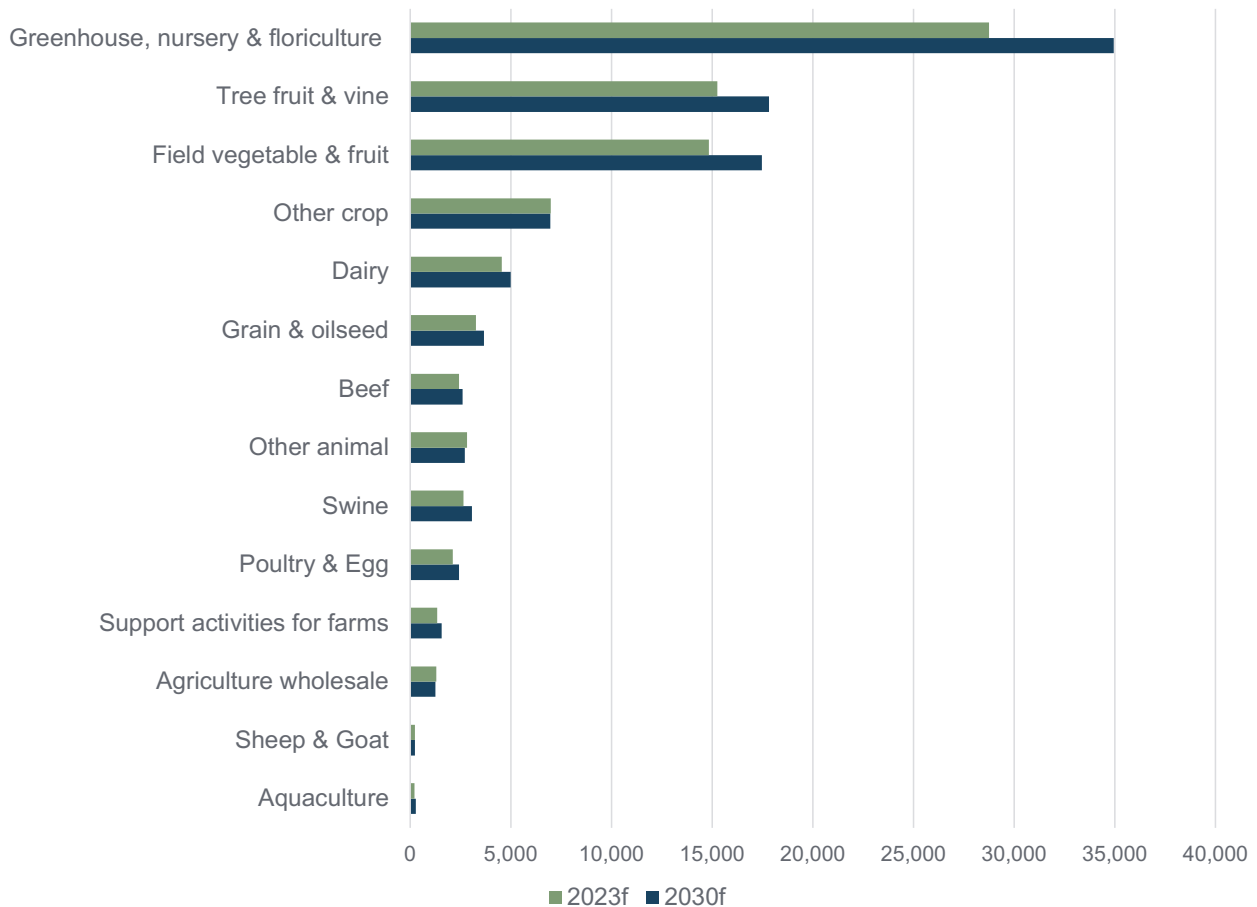
Labour Gap by Industry

The peak domestic labour gap will continue to be largest in the greenhouse, nursery and floriculture industry, accounting for over one-third of the labour gap in agriculture by 2030 (Chart 2.6). The tree fruit and vine, and field fruit and vegetable industries will account for another 35 per cent of the peak domestic labour gap by 2030. These industries

have the largest seasonal fluctuations, which creates intense challenges finding enough domestic workers during peak seasons. By 2030, the peak domestic labour gap will account for over half of total peak labour demand in field fruit and vegetable, and tree fruit and vine industries. This means one in two jobs in those industries will be unable to be filled by a domestic worker in peak season.

Chart 2.6: The greenhouse, nursery and floriculture industry will continue to have the largest domestic labour gap.

Peak domestic labour gap by industry.



Source: The Conference Board of Canada's Model of Occupations, Skills and Technology.
 *f indicates forecast data.

The domestic labour gap is determined by analyzing the demand for labour and the supply of labour over the forecast period. The demand for labour is primarily driven by production and productivity across various industries in the sector, while labour supply is related to the demographic changes in the Canadian workforce. The rest of this chapter will discuss the trends driving changes in labour supply and demand.

Production Expected to Increase

After suffering through both droughts and floods in 2021, the agriculture sector rebounded in 2022. Going forward, despite restraints due to high energy prices and inflation, gross domestic product (GDP) growth in the primary agriculture sector (crop and animal production) is expected to outpace other sectors in the Canadian economy, averaging 2.9 per cent annually over the forecast period versus a more modest 1.8 per cent rate for GDP growth across all sectors (Chart 2.7).

Chart 2.7: GDP growth in agriculture outpaces other sectors over the next 8 years.

Average annual per cent change GDP by sector, 2023-2030 forecast.



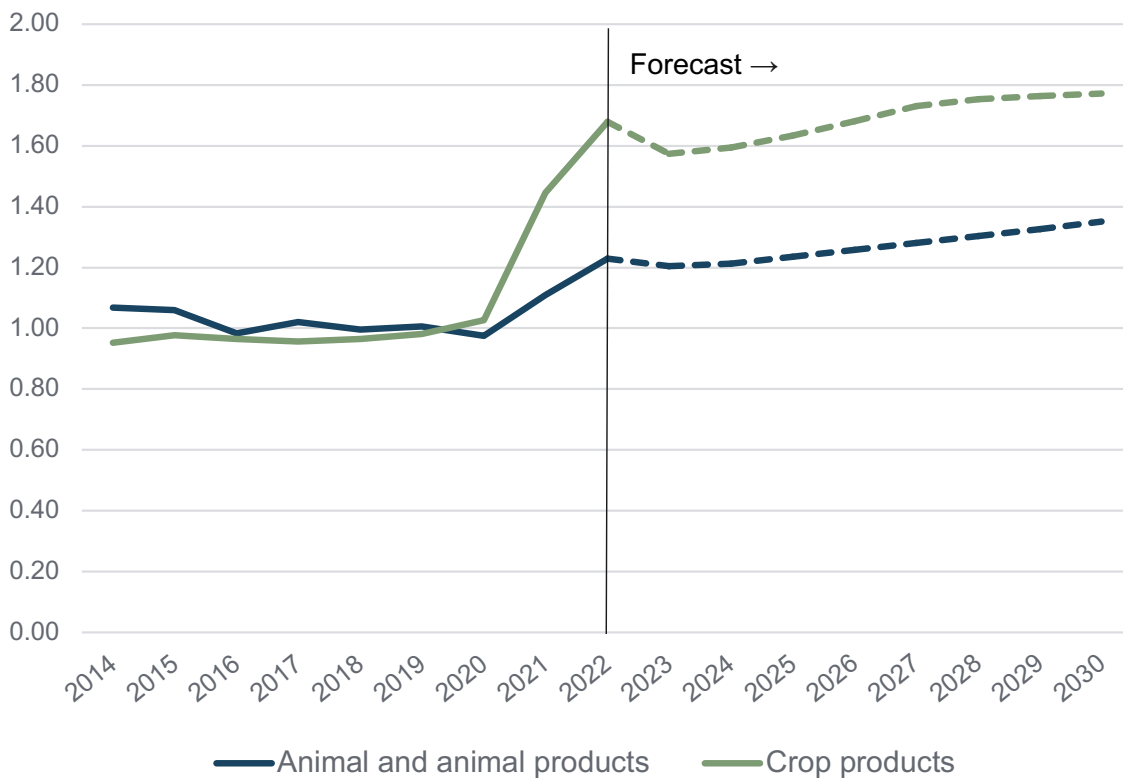
Source: The Conference Board of Canada, 20-year forecast.

Price increases for both crop and animal products are expected to ease over the next couple years, following a surge that began in 2020 (Chart 2.8). However,

prices will remain elevated compared to historical levels as global demand remains strong.

Chart 2.8: Prices of crop products have risen significantly since 2020.

Annual average Raw Materials Price Index, January 2010=1.0.



Statistics Canada; The Conference Board of Canada.

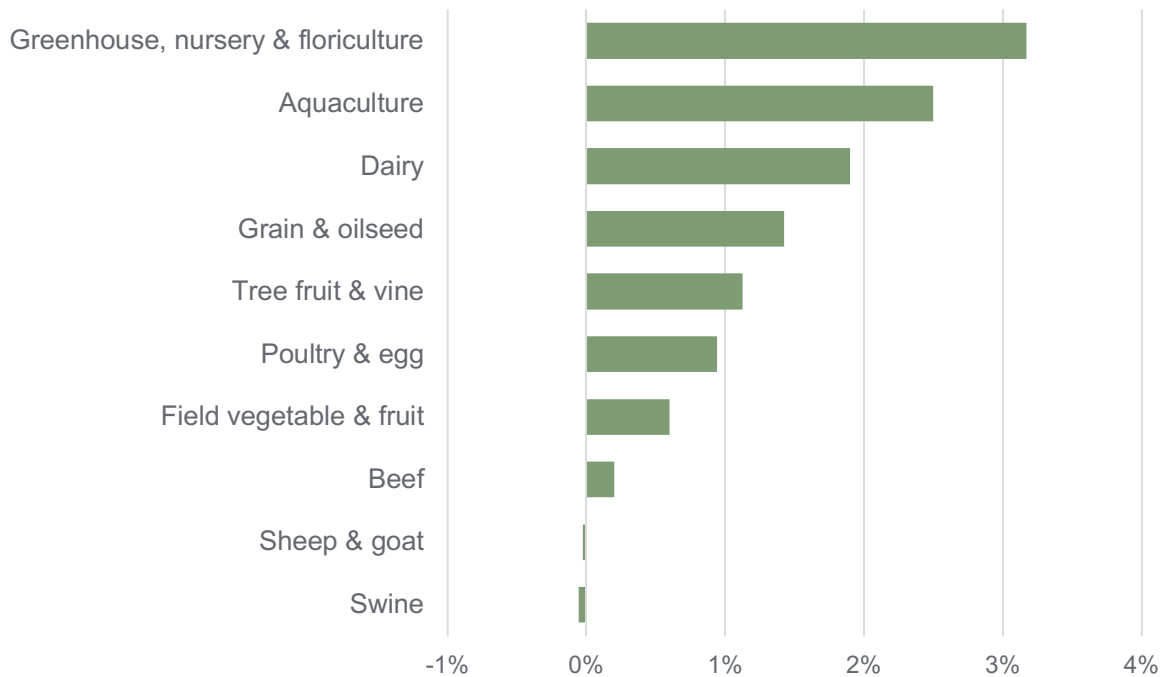
Growth in crop production, driven by increasing demand for greenhouse products including vegetables and cannabis, is expected to outpace growth in animal production over the forecast period. This trend will also be supported by elevated prices and improved yields.

On the animal production side, aquaculture and poultry production are expected to grow more than other types of animal production as inflation and

weak income growth cause consumers to shift towards lower priced meats (Chart 2.9). Some additional impetus will come from a move by consumers towards what they may see as a more sustainable protein source. Aquaculture production is anticipated to grow at a solid rate of 2.5 per cent over the forecast period. Additionally, Canada’s dairy sector is expected to see moderate growth, supported in part by the need to replenish low butter stocks.⁵⁷

Chart 2.9: Greenhouse vegetables poised for strongest growth.

Average annual per cent change in production volume, 2023-2030 forecast.



Source: OECD/FAO Agriculture Outlook 2023-2032; Statistics Canada; The Conference Board of Canada.

57 Farm Credit Canada, “2023 Dairy Sector Outlook.”

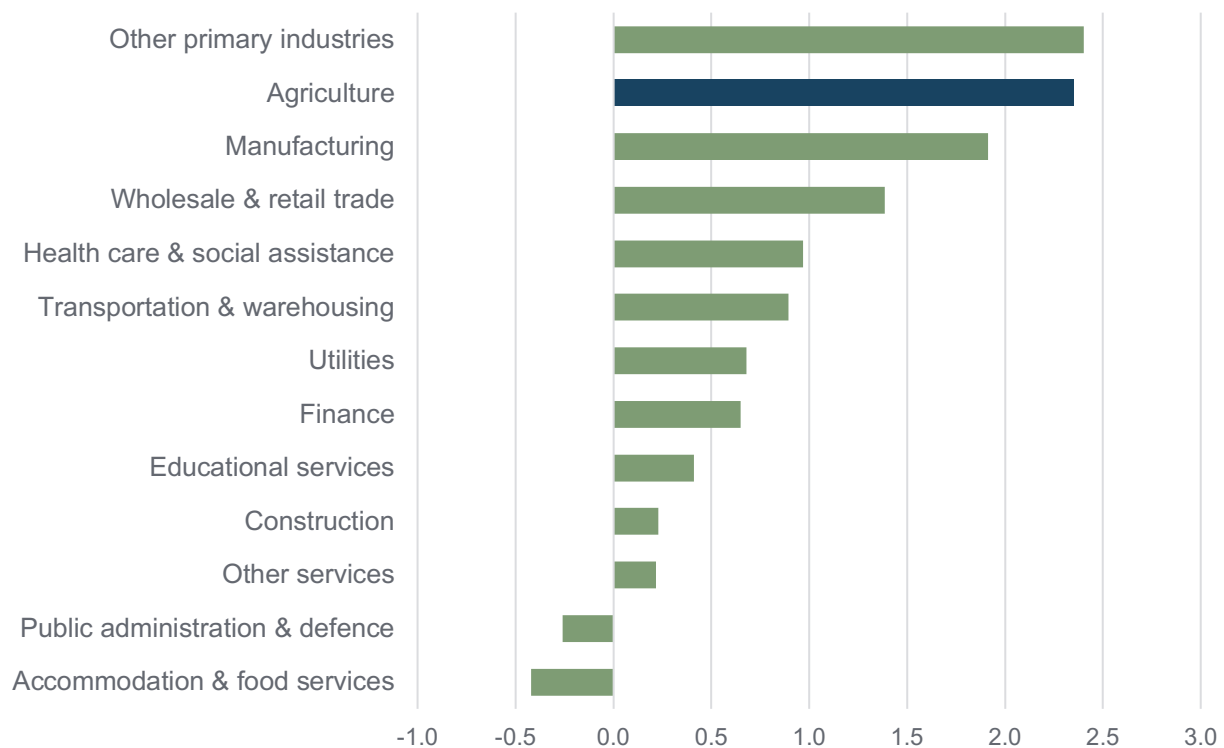
Labour Productivity Gains Keep Labour Demand Stable

Even though the agricultural sector is projected to have moderate production growth, the increase in labour demand will expand by just 2 per cent from 2023 to 2030. This is primarily due to the ongoing improvements in labour productivity. Labour productivity in

agriculture, as measured by the output per worker, is expected to grow at an average annual rate of 2.4 per cent throughout the forecast period, outpacing most other sectors in Canada (Chart 2.10). Such improvements in productivity enable the agricultural sector to increase production without a commensurate increase in employment.

Chart 2.10: Labour productivity growth in agriculture will outpace other sectors.

Average annual per cent change labour productivity by sector, 2023-2030 forecast.



Source: The Conference Board of Canada, 20-year forecast.
 *Agriculture does not include wholesale industries.

Trends Affecting Labour Supply

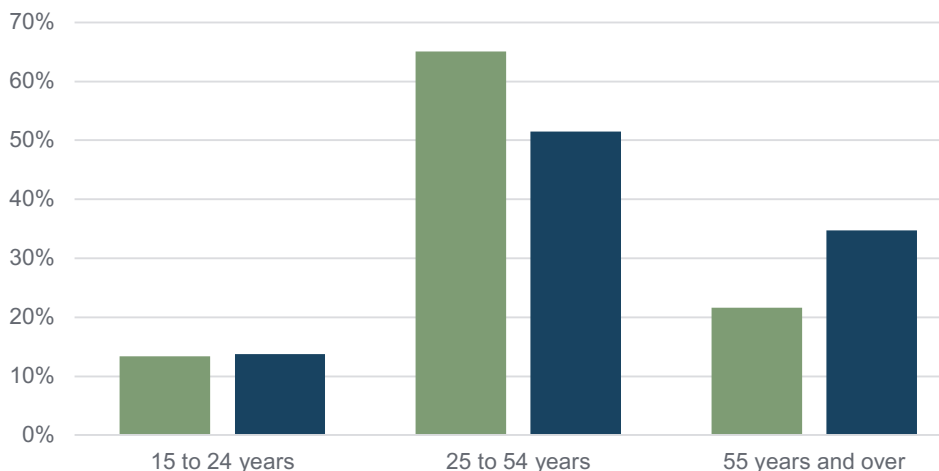
Changing demographics play a fundamental role in shaping the future labour market. The number of domestic workers available to work in the agriculture sector is estimated by how many people will exit and enter the sector's workforce each year. Demographic factors, including retirements, interprovincial and international migration, and new entrants to the workforce from school are all key determinants. Additional impacts come from those people who choose to enter or leave the agricultural workforce each year from or to other sectors of the economy. Personal preferences for the nature of the work, relative wages and broader economic conditions can all influence these movements.

Retirements Pose Challenges to the Sector

The agriculture sector is grappling with an aging workforce. On average, agriculture sector workers are older than those in other sectors of the economy (Chart 2.11). In 2022, 35 per cent of the workforce in agriculture was over the age of 55, compared to only 22 per cent across all sectors.⁵⁸ Moreover, an overall aging population has intensified the challenge of finding workers, no matter the sector, as there are fewer people available to fill the vacancies left as older workers retire.

Chart 2.11: Older than average workforce adds recruitment challenges to the agriculture sector.

Share of Canadian workforce by age group, 2022.



Source: Statistics Canada, Labour Force Survey.
 * Does not include wholesale industries.

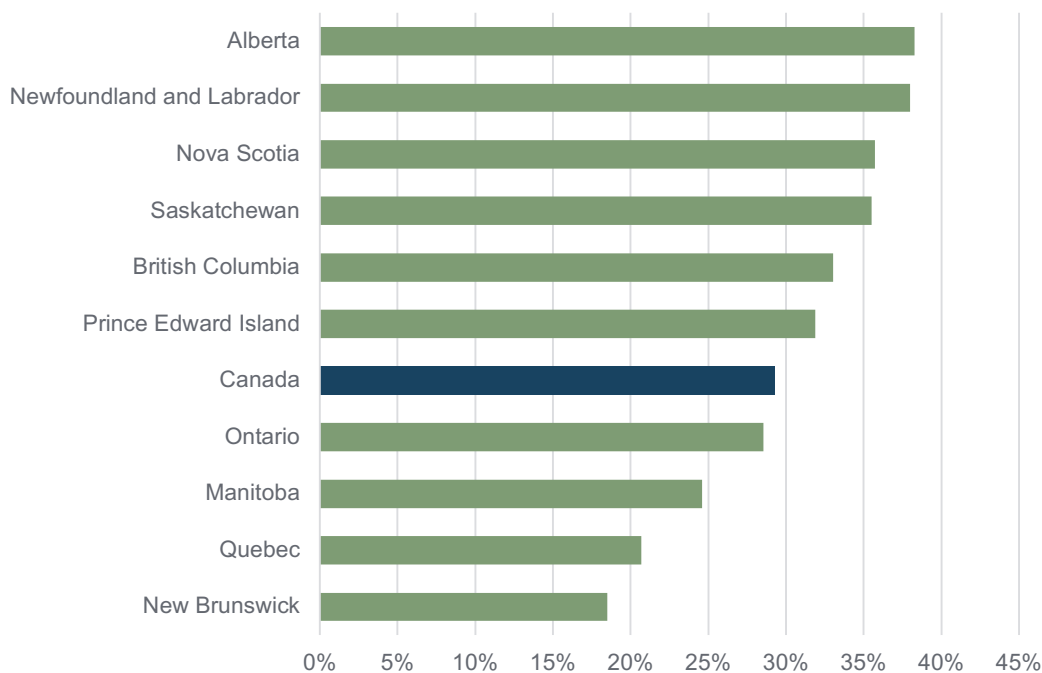
58 Statistics Canada, Labour Force Survey (Table: 14-10-0023-01).

Retirements in the sector also pose a significant risk to production and productivity. On average, over 10,600 workers, including owner-operators, are expected to retire each year between 2023 and 2030, for a total of over 85,300 retirements or almost 30 per cent of the sector’s current Canadian workforce.⁵⁹ At the provincial level, Alberta, Newfoundland and Labrador, Nova Scotia and Saskatchewan are expected to shoulder the largest number of retirements, exceeding 35 per cent of their current domestic workforce (Chart 2.12).

This trend means that operations will need to replace valuable industry experience and knowledge held by older workers. Employers are trying to get ahead of the problem by promoting mentorship to transfer knowledge and skills, an approach cited by 61 per cent of employers surveyed.⁶⁰ This is vital if workers who are expected to become managers are to have the necessary skills and knowledge required to fill the gaps left by retirees.

Chart 2.12: Retirements will impact some provinces more severely.

Share of 2022 domestic workforce expected to retire by 2030.



Source: The Conference Board of Canada’s Model of Occupations, Skills and Technology.

59 The Conference Board of Canada’s Model of Occupations, Skills and Technology.

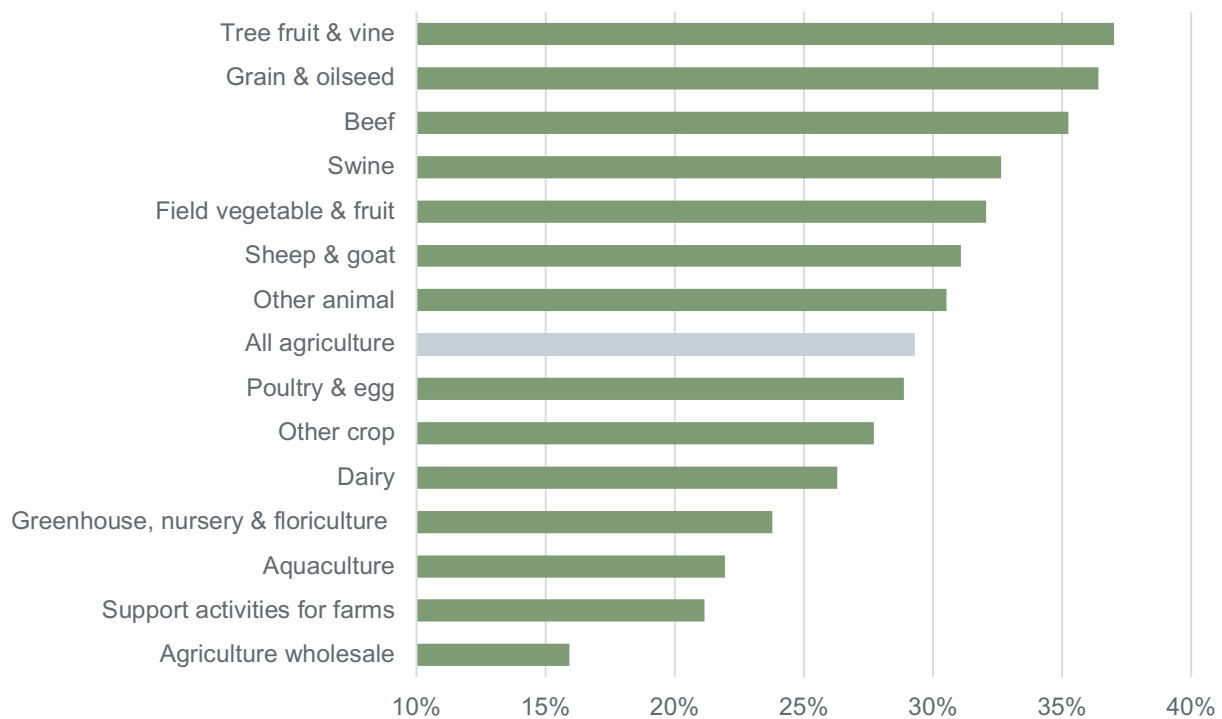
60 Canadian Agricultural Human Resource Council Employer Survey 2023 (n=707).

The retirement picture is also expected to vary markedly across industries in the sector. The tree fruit and vine, grain and oilseed, and beef industries are anticipated to have the largest share of

retirements (Chart 2.13). This variation is due to the specific age profiles and occupational make-up of the workforces in these industries.

Chart 2.13: Some industries will be more burdened by retirements than others.

Share of 2022 domestic workforce expected to retire by 2030.



Source: The Conference Board of Canada's Model of Occupations, Skills and Technology.

Managers in agriculture, including owner-operators and hired managers, are facing the highest retirement rates. This is a cause for concern as managers represent the largest occupational group in the domestic workforce. Half of the managers in agriculture, a total of 47,600, are expected to retire by 2030, resulting in a pressing need for

experienced workers and leaders to fill these roles. Many of these retirements will be owner-operators, highlighting the need for succession planning to identify and prepare workers to take over.

Although many managers and owner-operators are expected to retire, this is not expected to translate into a mass

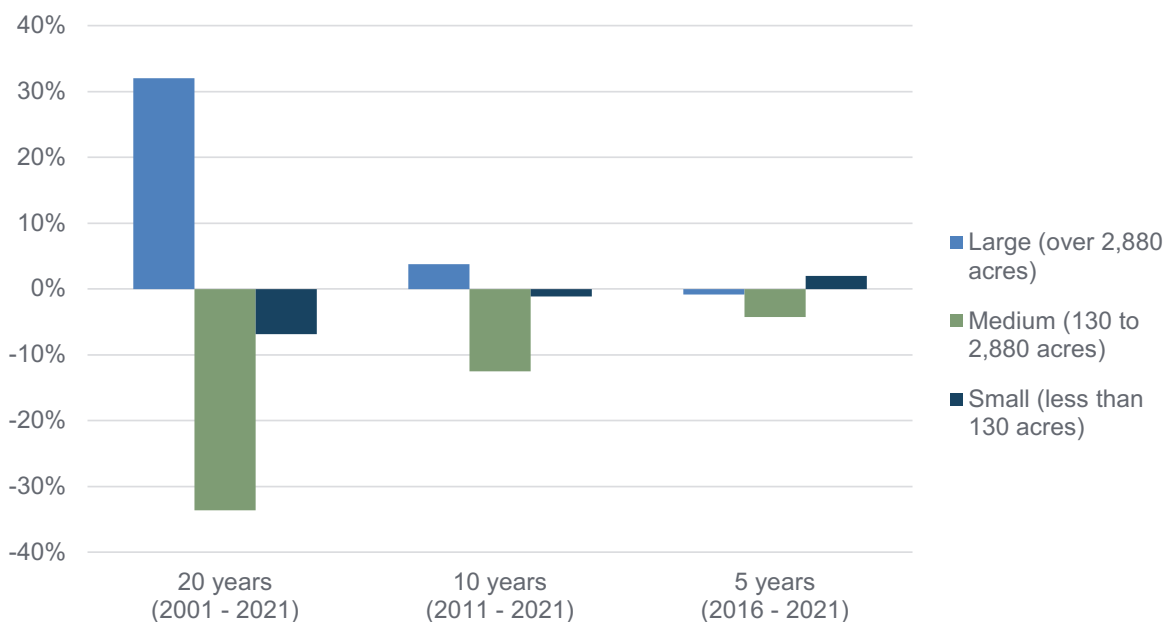
of job postings or vacancies for these positions. Historically, managers in agriculture positions represent a small share of vacancies (3 per cent in 2022), despite accounting for a large share of the workforce (over 30 per cent) and a large number of retirements (an estimated 6,000 managers retired in 2022). It appears that when managers in agriculture including owner-operators retire, other managers, workers or family members take over or are promoted internally.

Consolidation has also been a key characteristic in lessening the impact of owner-operator and manager

retirements in the sector, with Canada having approximately 75 per cent of the farms it had 20 years ago (246,900 in 2001 compared to 189,900 in 2021).⁶¹ Most of this consolidation was mid-sized farms being consolidated into larger farms, with the number of mid-sized farms decreasing by 34 per cent, while the number of large farms increased by 32 per cent (Chart 2.14). That said, farm consolidation has slowed most recently, with only a 2 per cent decrease in the number of farms between 2016 and 2021 (3,600 less farms), well below the number of retirements seen over that period (an estimated 40,000 managers retired between 2016 and 2021).

Chart 2.14: Medium sized farms consolidated into larger farms.

Per cent change in total farm counts by size.



Source: The Conference Board of Canada's Model of Occupations, Skills and Technology.

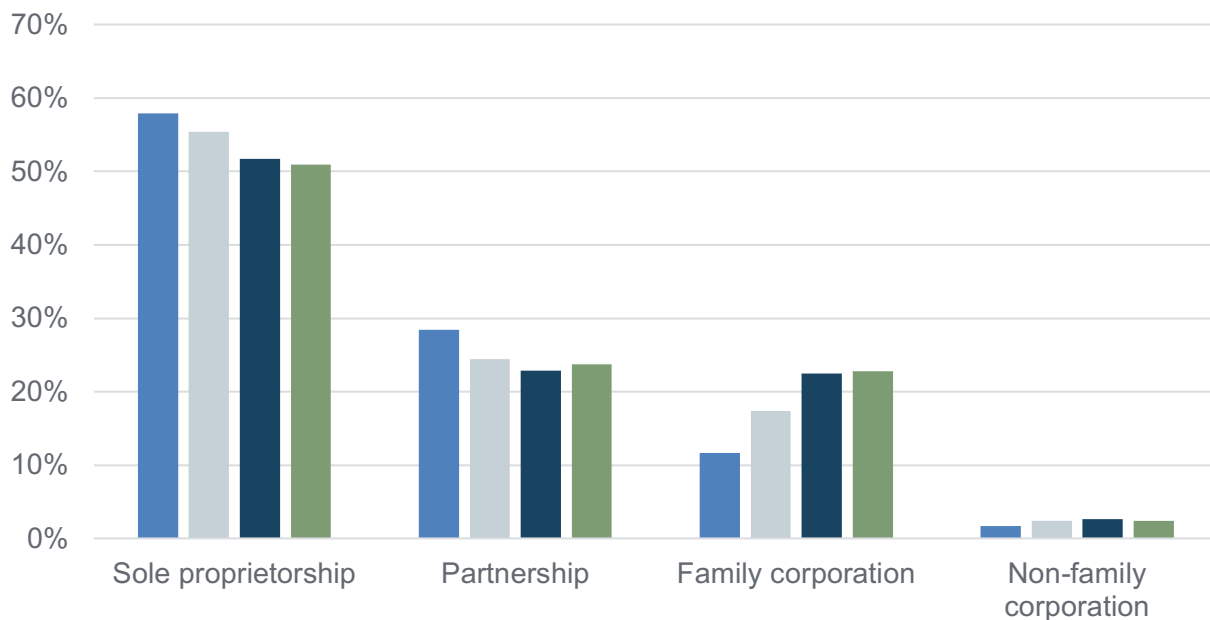
61 Statistics Canada, Table: 32-10-0166-01.

If farm consolidation follows the same trend seen between 2016 and 2021, we would expect there to be around 6,300 fewer farms by 2030.⁶² So, while another 47,600 managers in agriculture are expected to retire over the next 8 years, it is unclear how much this will ultimately influence vacancy rates and job postings.

The type of farm ownership is also changing, possibly due to the high retirement rates. There are more family corporations and fewer sole proprietorships than in the past (Chart 2.15). This trend is expected to continue as owner-operators retire and farms are passed on to children or other workers with an ownership stake.

Chart 2.15: As owners-operators retire there are fewer sole proprietorships.

Share of total farm counts by ownership type.



Source: Statistics Canada, Table: 32-10-0158-01.

62 Based on the annual growth rate from 2016 to 2021.



Growth in Young Workers Not Enough

Over the next 8 years, the total population of individuals aged 65 and older in Canada is projected to increase by 21 per cent, while the number of individuals aged 15 to 24 will not change.⁶³ Consequently, this dynamic is fostering intense competition among employers vying to attract young workers and recent graduates.

The number of school leavers⁶⁴ is expected to remain fairly constant over the next 8 years, aligning with the population forecast. Approximately 2 per cent of the domestic workforce will be school leavers each year. This will result in an estimated 52,100 new entrants into the agriculture sector between 2023 and 2030 (Chart 2.16). While this is an improvement from the previous agriculture LMI forecast, it is still not enough to close the domestic labour gap, especially given the large number of retirements.

While managers make up more than half of the projected retirees, less than 20 per cent of school leavers will enter managerial roles. In contrast, one-third of school leavers are expected to enter farm labourer occupations, and nearly 25 per cent will become specialized livestock workers and farm machinery

operators.⁶⁵ Consequently, a skills gap is anticipated to emerge in the coming years as experienced managers and owner-operators retire, and younger workers take on entry level positions.



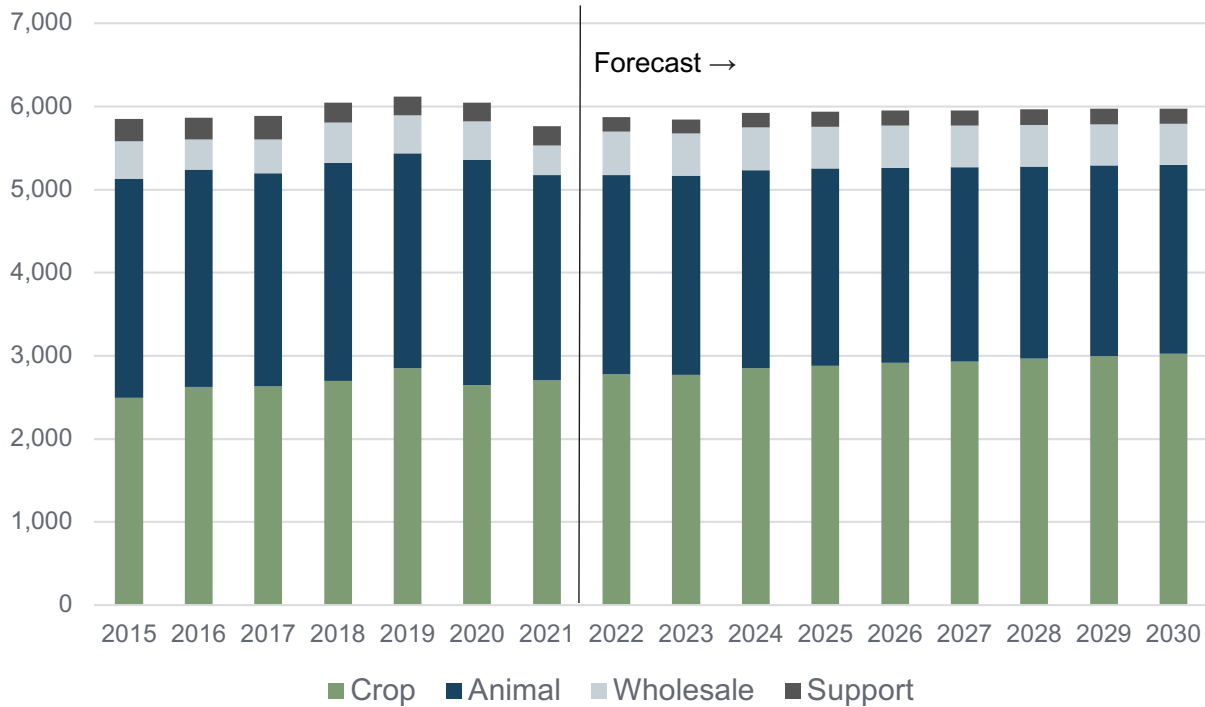
63 The Conference Board of Canada, 20-year Population Forecast.

64 School leavers is the number of workers finished school (all levels of education) and entering the workforce.

65 Labourer positions include livestock labourers (85100), harvesting labourers (NOC 85101), aquaculture and marine harvest labourers (85102), nursery and greenhouse labourers (85103), and landscaping and grounds maintenance labourers (85121).

Chart 2.16: Number of young workers entering the sector will remain constant over the next 8 years.

Number of school leavers entering the agriculture workforce each year.



Source: The Conference Board of Canada's Model of Occupations, Skills and Technology.

Immigration Provides Opportunity

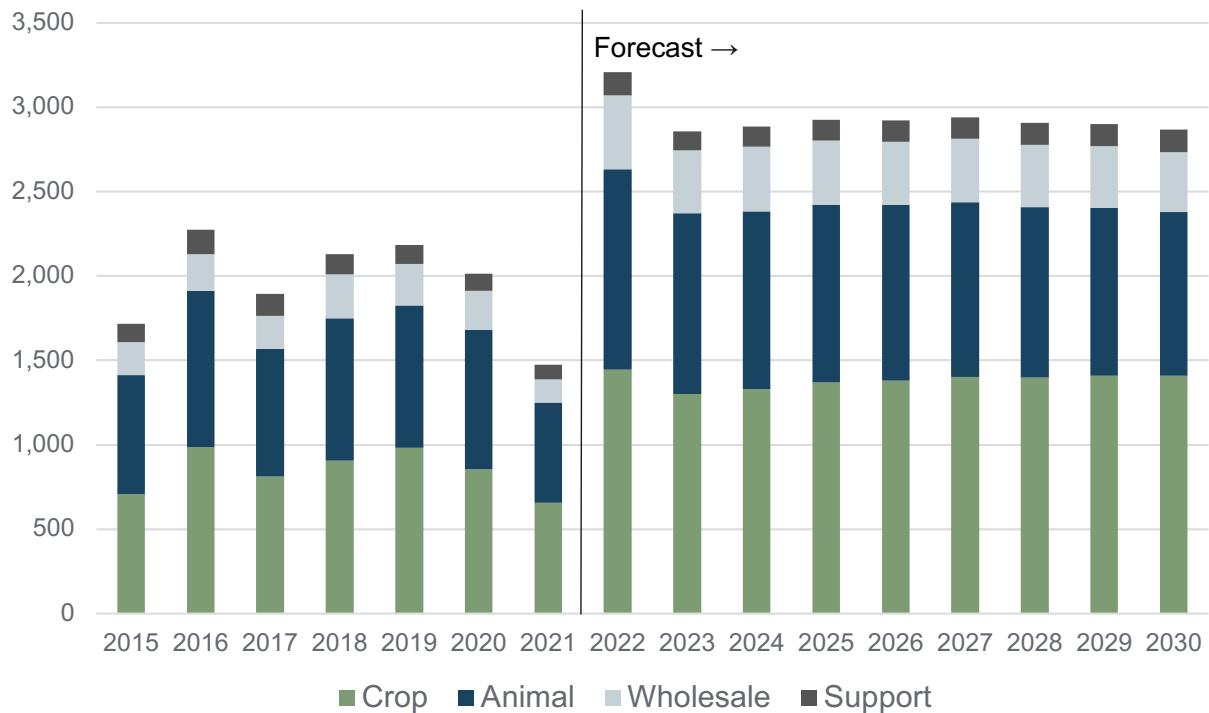
Immigration serves as a key source of labour supply, and given the federal government's efforts to increase immigration, recruiting immigrants into the agriculture sector offers promising opportunities. Between 2021 and 2022, the number of immigrants entering the sector more than doubled, in line with the overall surge in immigration across Canada (Chart 2.17).⁶⁶

Between 2023 and 2030, around 25,200 immigrants are expected to enter the agriculture sector, but this constitutes just 0.7 per cent of immigrants arriving in Canada during these years. Considering that the agriculture sector constitutes nearly 1.5 per cent of the domestic workforce, there is ample potential to increase the proportion of immigrants working in the sector.

66 Statistics Canada; The Conference Board of Canada.

Chart 2.17: Immigration higher than in previous years.

Number of immigrants (new permanent residents) entering the workforce.



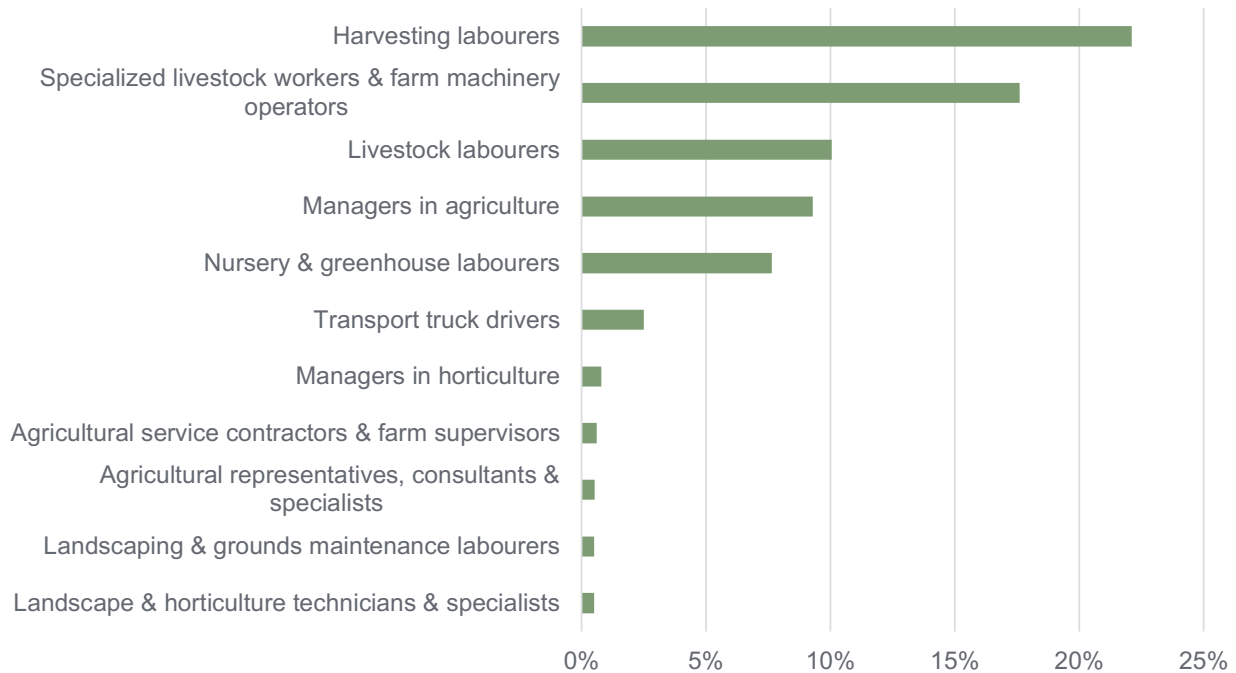
Source: The Conference Board of Canada's Model of Occupations, Skills and Technology.

Over 40 per cent of immigrants entering the sector are expected to take farm labourer positions, while only 10 per cent are projected to assume managerial positions (Chart 2.18). Almost 18 per cent of immigrants will become specialized livestock workers and farm machinery

operators. Very few immigrants will become farm supervisors, agriculture specialists or horticulture technicians. This presents an opportunity to develop tailored programs to ensure immigrants have the skills required for specific occupations in the agriculture sector.

Chart 2.18: Immigrants expected to fill a variety of agriculture occupations.

Share of total immigrants entering agriculture by occupation, 2023-2030.



Source: The Conference Board of Canada’s Model of Occupations, Skills and Technology.

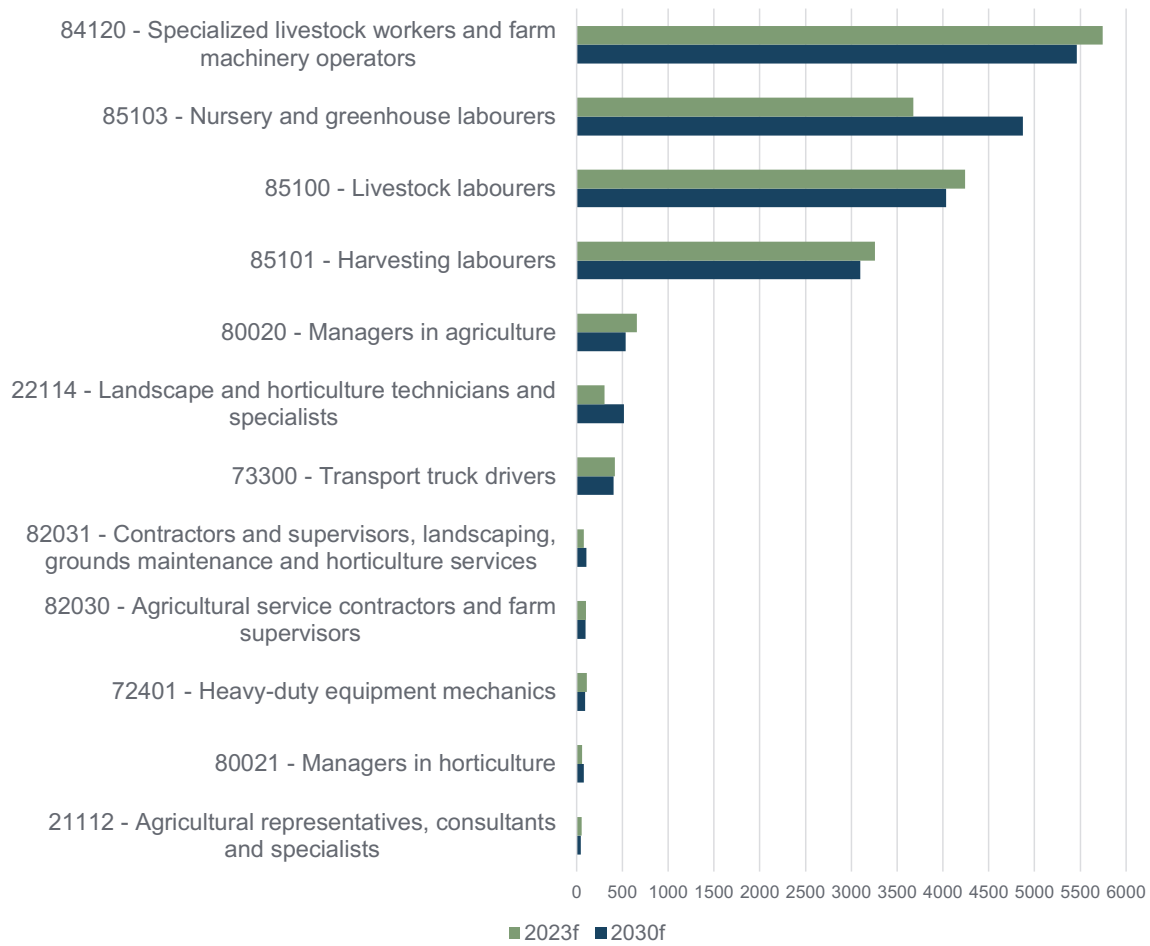
Vacancies by Key Occupation

While the number of job vacancies for specialized livestock workers or farm machinery operators, harvesting labourers and livestock labourers is expected to be significant, there will be a slight decrease over the forecast period (Chart 2.19). The increased employment of foreign workers and the adoption of technology will play a role in reducing the number of vacancies over the next decade. However, there is still a sizable unfilled need, as there are projected to be over 13,200 vacancies remaining in 2030 for these essential occupations.

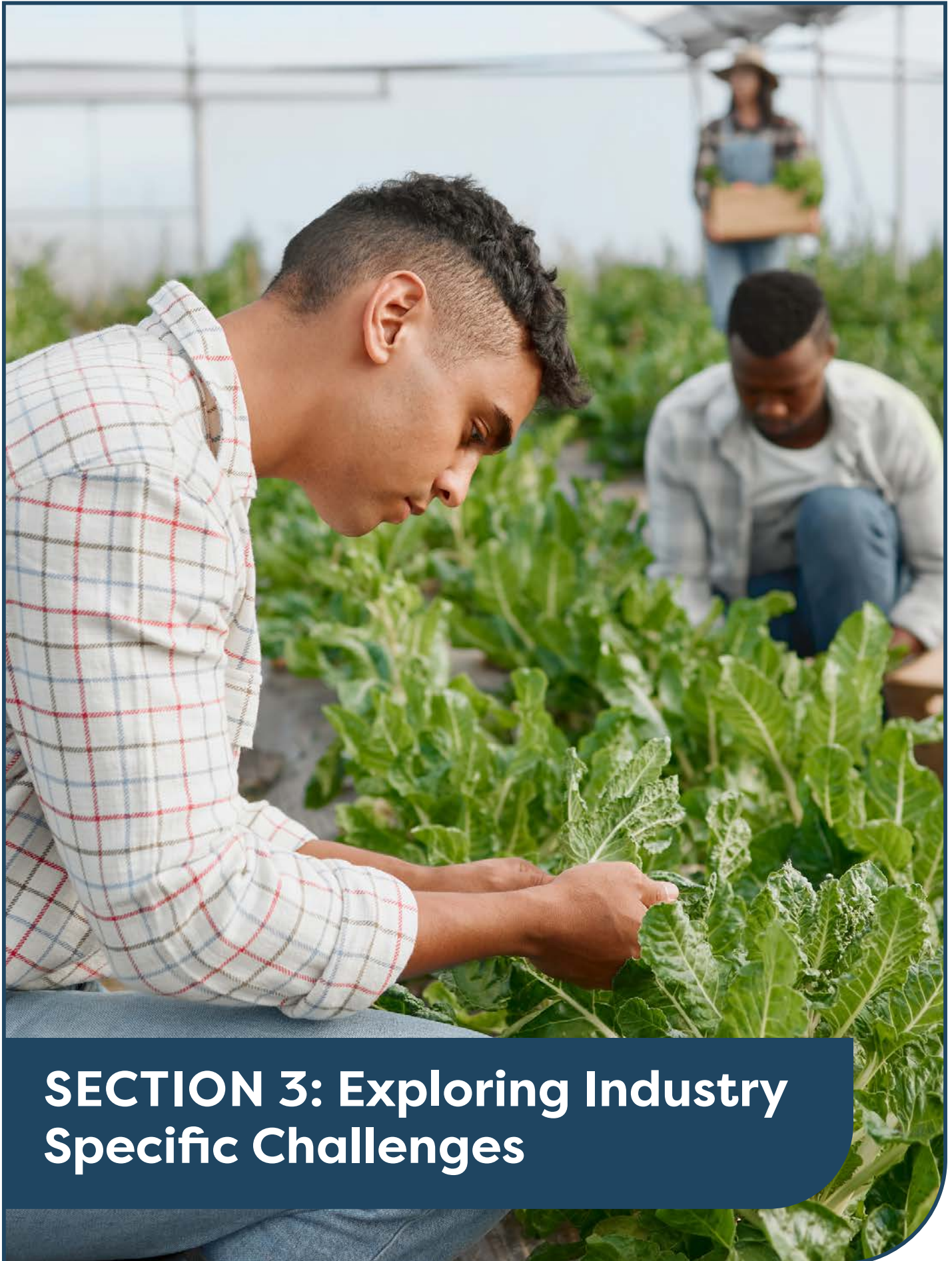
The expansion of the greenhouse industry (discussed more in Section 3) is a driving force behind the rising number of vacancies for occupations required for this industry, as the rise in labour demand exceeds the available labour supply. Without intervention, occupations including nursery and greenhouse labourers, managers in horticulture, contractors and supervisors in horticulture services, and landscape and horticulture technicians will all experience more vacancies in the years ahead.

Chart 2.19: Specialized livestock workers and farm machinery operators account for largest share of vacancies.

Peak vacancies in agriculture by key occupation.



Source: The Conference Board of Canada's Model of Occupations, Skills and Technology.
 *f indicates forecast data.



SECTION 3: Exploring Industry Specific Challenges

Supply Managed Industries

Canada uses supply management systems to regulate two commodity groups in the agriculture sector (dairy; poultry and egg) to ensure production aligns with market demand. These systems are meant to prevent costly shortages and surpluses, while supporting balanced industry output.

The largest of these supply managed commodities is the dairy industry, encompassing farm operations primarily engaged in milk production. The second largest is the poultry and egg industry, comprising farm operations primarily involved in breeding, hatching and raising poultry for meat or egg production. While chickens and turkeys constitute most of this production, this category also includes all other game

birds, such as ducks, geese, pheasants, partridges and pigeons.

Dairy, and Poultry and Egg Producers Face Fewer and Less Costly Shortages

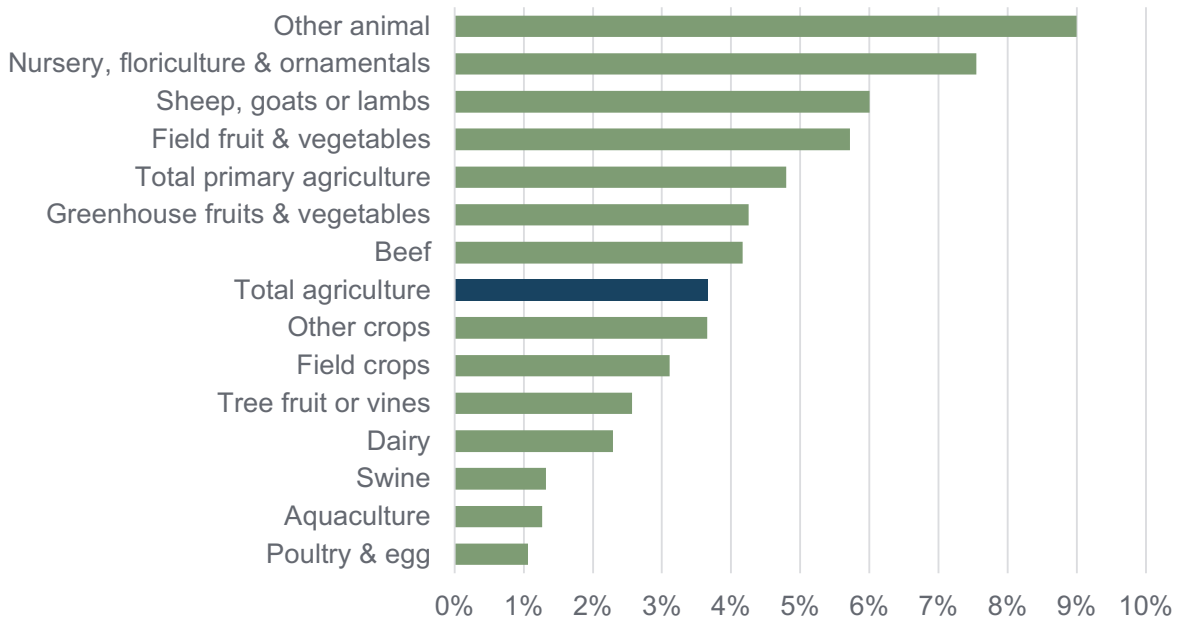
These supply managed industries tend to face fewer labour shortages. Only 26 per cent of employers in poultry and egg, and 38 per cent in dairy were unable to find all the workers required in 2022, as compared to 44 per cent reported for the entire sector.⁶⁷ Moreover, employers with vacancies in these supply managed industries experienced fewer lost sales (Chart 3.1). This reduced impact of labour shortages can be attributed to several factors, including price stability, lower turnover rates and higher levels of automation.



67 Canadian Agricultural Human Resource Council Employer Survey 2023 (n=34, 118).

Chart 3.1: Labour shortages are less costly for supply managed commodities.

Estimated share of lost sales due to labour shortages, 2022.



Source: Canadian Agricultural Human Resource Council Employer Survey 2023.

Price Stability in Supply Managed Commodity Sectors

Industries operating under supply management tend to have steadier demand and more stable pricing for their products, providing a more reliable revenue stream and making them better equipped to weather labour challenges.

Additionally, supply management allows farmers to more easily align their labour needs with production schedules

and adapt more quickly to fluctuating worker availability. This is reflected in the vacancy rates in the dairy industry, and poultry and egg industry, which were among the lowest in the sector at 5.4 and 4.3 per cent, respectively. This was well below the 7.4 per cent for all primary agriculture.⁶⁸

Turnover Differs Between Dairy, and Poultry and Egg

Dairy, and poultry and egg also experience less seasonal fluctuations,

68 Statistics Canada; The Conference Board of Canada Model of Occupations, Skills and Technology.



allowing them to provide stable year-round employment, which can ease recruitment and improve retention.

Dairy, in particular, has some of the most stable employment levels and one of the lowest turnover rates at 8.7 per cent, which is much lower than the 14 per cent for all agriculture.⁶⁹ Fewer employees leaving their jobs and fewer vacancies to fill also help to enhance overall productivity for that industry.

Conversely, poultry and egg had the highest reported turnover rate at 23 per cent.⁷⁰ Employers reported that the remote locations of their operations, coupled with limited transportation options for workers, contributed to high turnover. These factors affected poultry and egg producers more than the average agriculture producer. Poultry and egg employers also reported that the physically demanding nature of the work and the long hours required make retention more difficult.

Decreasing Labour Demand Due to Productivity Gains

Continued labour productivity growth and stable production will result in an overall decrease in labour demand for the poultry and egg industry, and dairy industry over the forecast period. Both industries are expected to see peak labour demand decline 14 per cent between 2023 and 2030. However,

despite the decline in demand, the peak domestic labour gap will increase 14 per cent in poultry and egg (from 2,130 in 2023 to 2,420 in 2030) and 9 per cent for dairy (from 4,550 in 2023 to 5,000 in 2030) over that time.

This gap will be increasingly filled by foreign workers, with foreign worker employment increasing 19 per cent over the forecast period (from 5,260 in 2023 to 6,260 in 2030). In the end, 12 per cent of the jobs in poultry and egg, and 20 per cent of the jobs in dairy will remain vacant by 2030, resulting in almost 1,300 vacancies in these industries.

Red Meat

Red meat producers include beef producers, operations that raise and finish cattle, swine producers, and operations that raise hogs and pigs. Feedlots and producers that raise cattle for dairy herd replacement are also included in the beef industry. For more information about industry coverage see [Appendix A](#).

The beef and swine industries in Canada share many commonalities in terms of market trends, supply chains, regulatory oversight, seasonality and labour requirements. Both industries have experienced growth in production in recent years; however, this growth is expected to ease in the coming years. As these industries continue to navigate the evolving demands of consumers,

69 Canadian Agricultural Human Resource Council Employer Survey 2023.

70 Ibid.



regulations and environmental considerations, a skilled workforce is essential in sustaining their growth and resilience.

Beef and Swine Producers Unable to Find Workers with Experience

More than half of employers in the beef and swine industries were unable to find all the workers they needed in 2022, compared to 44 per cent in the overall agriculture sector.⁷¹ Employers in beef and swine cited several barriers to recruitment, including the manual labour involved, low wages and the remote locations of their operations. These are unfortunately common barriers faced by the many agriculture industries.

What sets the beef and swine industries apart, however, is that nearly half (47 per cent) of employers in these industries identified the lack of experienced applicants as an obstacle to recruitment, compared to only 31 per cent of employers for the entire sector.⁷² Additionally, 37 per cent of beef and swine producers noted a lack of understanding about agriculture as a recruitment barrier, while only 25 per cent of all employers faced this challenge.⁷³ Given the specialized nature of the beef and swine industries, it makes sense that employers are desperate for workers

who have experience in their industries. Consequently, support programs that provide industry specific education and training would contribute to a better pool of candidates for employment in beef and swine production.

Labour Gap Grows Despite Waning Production

Both the swine and beef industries have experienced strong growth over the past several years, with the production of beef and pork increasing 9 per cent since 2017.⁷⁴ However, given the weaker economic environment with higher inflation and slower consumer spending, demand for pork and beef is expected to wane over the coming years. In turn, peak labour demand in beef is expected to decrease 13 per cent between 2023 and 2030 (from 35,830 to 31,720), while peak demand in swine decreases a more modest 1 per cent over that period (from 12,920 to 12,840).

Labour supply is forecast to shrink faster than demand, mainly due to a large wave of retirements. Between 2023 and 2030, more than one-third of workers, totaling 14,100 individuals, are expected to retire. In contrast, only 7,100 school leavers and 3,100 immigrants are expected to enter these industries during that time. In turn, domestic employment is projected to decrease 5 per cent in

71 Canadian Agricultural Human Resource Council Employer Survey 2023 (n=52, 685).

72 Canadian Agricultural Human Resource Council Employer Survey 2023 (n=60, 724).

73 Ibid.

74 OECD/FAO. "OECD-FAO Agricultural Outlook 2023-2032."



swine (from 10,260 in 2023 to 9,760 in 2030) and 14 per cent in beef (from 33,390 in 2023 to 29,110 in 2030).

In the end, the imbalance between labour demand and supply will cause the peak labour gap to grow by 7 per cent in beef (from 2,440 in 2023 to 2,610 in 2030) and by 16 per cent in swine (from 2,650 to 3,080).

Over 65 per cent of retirements in the beef and swine industry will be managers in agriculture, including owner-operators. A large majority of retiring managers and owner-operators will be replaced by existing workers and family members. As a result, ensuring these workers have the necessary skills and training to take on more responsibilities and leadership will be important for these industries.

Aquaculture

The aquaculture industry (NAICS 1125) consists of businesses primarily engaged in farm-raising aquatic animals and plants. It is important to note that while this research pertains only to this Statistics Canada's definition, there are many supporting industries, such as seafood processing (NAICS 3117) that are an essential part of aquaculture production.

Aquaculture Boasts Lower Vacancies and Turnover

A smaller share (31 per cent) of employers in aquaculture were unable to hire all the workers required in 2022 compared to the entire agriculture sector (44 per cent).⁷⁵ Moreover, aquaculture employers reported a lower than average turnover rate at just 4 per cent, compared to the 14 per cent sector average.⁷⁶ These figures suggest the aquaculture industry has fewer labour challenges compared to other industries in agriculture.

Employers in aquaculture were more likely to have invested in improving HR practices, with over two-thirds of both employers and staff in aquaculture participating in HR training over the past year.⁷⁷ This is the highest level of participation in HR training among all industries in agriculture (Chart 3.2). The higher representation of large businesses among aquaculture employers correlates with the greater investment in HR training.

75 Canadian Agriculture Human Resource Council Employer Survey 2023 (n=13, 685).

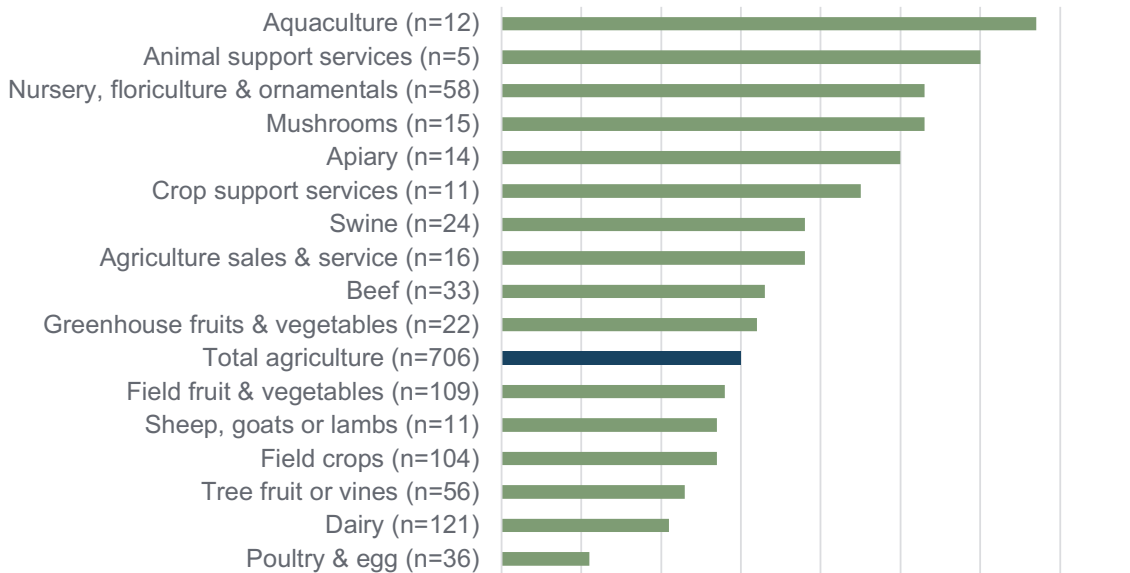
76 Canadian Agriculture Human Resource Council Employer Survey 2023.

77 Canadian Agriculture Human Resource Council Employer Survey 2023 (n=12, 706).

Chart 3.2: Aquaculture employers prioritize in HR training.

Share of employers and staff that took HR training in the past year.

Q: Have you or your staff taken training in HR management topics in the past year?



Source: Canadian Agricultural Human Resource Council Employer Survey 2023.

Additionally, the nature of work in aquaculture appears to be less of an issue when it comes to retaining employees compared to other industries.

- Only 25 per cent of aquaculture employers listed physical labour as a barrier to retention, in contrast to the 57 per cent reported by employers across agriculture.⁷⁸
- Only 17 per cent of aquaculture employers cited long working hours

as a barrier to retention, compared to 43 per cent for all employers.⁷⁹

- Just 8 per cent of aquaculture employers reported outdoor work as a challenge for retention, lower than the 21 per cent reported by employers in all industries.⁸⁰

These factors contribute to lower turnover rates in the aquaculture industry.

78 Canadian Agricultural Human Resource Council Employer Survey 2023 (n=12, 721).

79 Ibid.

80 Ibid.



Rural Location Still Key Challenge for Aquaculture

The remote and predominantly coastal locations of aquaculture farms make finding and keeping workers more challenging. This issue is intensified by the fact that populations are decreasing in these areas. In fact, 42 per cent of aquaculture employers listed shrinking rural population as a barrier to obtaining new employees, which is much higher than the 23 per cent reported across the entire agricultural sector.⁸¹ Aquaculture employers were also more likely (58 per cent compared to 40 per cent overall) to say that the rural location of their business does not interest potential job applicants.⁸²

These challenges do not stop after aquaculture employers manage to hire workers. The remote location of their operations was cited by 67 per cent of employers as a major factor causing workers to leave, in contrast to just 27 per cent of all employers in agriculture.⁸³ Similarly, 33 per cent of aquaculture employers said that a lack of transportation for employees to get to work was causing retention problems, which is higher than the 21 per cent reported by all employers.⁸⁴

In summary, the rural nature of aquaculture operations will continue to be a significant labour market challenge, especially in smaller provinces.

Labour Needed to Build the Blue Economy

Canada's aquaculture industry has robust growth potential. This is highlighted in Canada's Blue Economy Strategy 2040, which promotes seafood as sustainable protein and encourages investment in aquaculture.⁸⁵ Nevertheless, to meet this potential, aquaculture needs workers.

Continued growth in aquaculture production coupled with low productivity declines will lead to an increase in labour demand.⁸⁶ While peak labour demand for the entire agriculture sector is expected to only increase 2.5 per cent between 2023 to 2030, labour demand in aquaculture is expected to increase 44 per cent over the same period (from 7,930 to 11,410). In turn, the peak domestic labour gap in aquaculture is forecast to increase 35 per cent over the forecast, reaching 290 workers in 2030.

Aquaculture benefits from an increasing supply of relatively younger domestic

81 Canadian Agricultural Human Resource Council Employer Survey 2023 (n=12, 724).

82 Ibid.

83 Canadian Agricultural Human Resource Council Employer Survey 2023 (n=12, 721).

84 Ibid.

85 Canadian Aquaculture Industry Alliance & Fisheries Council of Canada, "Canada's Blue Economy Strategy 2040"

86 A decline in labour productivity can be attributed to the industry maturing, necessitating a higher number of support staff, and shifting farming practices towards more labour-intensive yet higher-value products. Technology adoption is taking place in the industry, and this will lead to long term productivity gains but those will not occur over this forecast horizon, especially as the industry needs time to find/train workers with the right skills.



labour. It also has a lower retirement rate, with only 22 per cent of the current workforce (1,440 workers) expected to retire over the next 8 years. Additionally, 390 immigrants and 1,240 school leavers are projected to enter the workforce in that time. Overall, peak domestic employment in the aquaculture industry is projected to increase from 7,720 in 2023 to 11,120 in 2030. However, demand for workers will still slightly outpace the growth in domestic employment supply, leading to an increasing domestic labour gap, from 211 in 2023 to 285 by 2030.

Over 200 vacancies will remain by 2030, the largest share (13 per cent) being for biological technicians. There is a growing need for skilled occupations, including biological technicians, specialized livestock workers and farm machinery operators. As the industry grows and adopts more high-tech production methods, workers will need the skills to be able to work with new technology.

Horticulture

There are three distinct industries in horticulture: field vegetables and fruit (NAICS 1112), tree fruit and vine (NAICS 1113), and greenhouse, nursery and floriculture (NAICS 1114). Whether the product is grown indoors in greenhouses or outside on the field, Canadian horticulture industries experience significant seasonality in production and demand for their products. Over 126,000 workers (domestic and foreign) were employed during peak times in horticulture in 2022.⁸⁷

The combination of physical labour, low pay and seasonal hours make recruiting domestic workers for positions in horticulture extremely difficult. As a result, the vacancy rates in horticulture industries are typically higher than in other agriculture industries, in the 8 to 12 per cent range. In 2022, and an estimated 10,700 positions went unfilled in these industries.

Over the next 8 years, strong growth in the greenhouse and nursery industry is expected to drive labour demand in horticulture up by 26 per cent, from 140,100 to 178,000 positions in 2030.

Greenhouse Fruit and Vegetable Production Poised for Strong Growth

Innovations in greenhouse technology provide promising alternatives to traditional food production systems. Greenhouses can produce up to 15 times more per square meter than outdoor agriculture, while using less water and recapturing carbon dioxide emissions.⁸⁸ Greenhouse operations are also less vulnerable to changing climate patterns and allow for year-round operation.

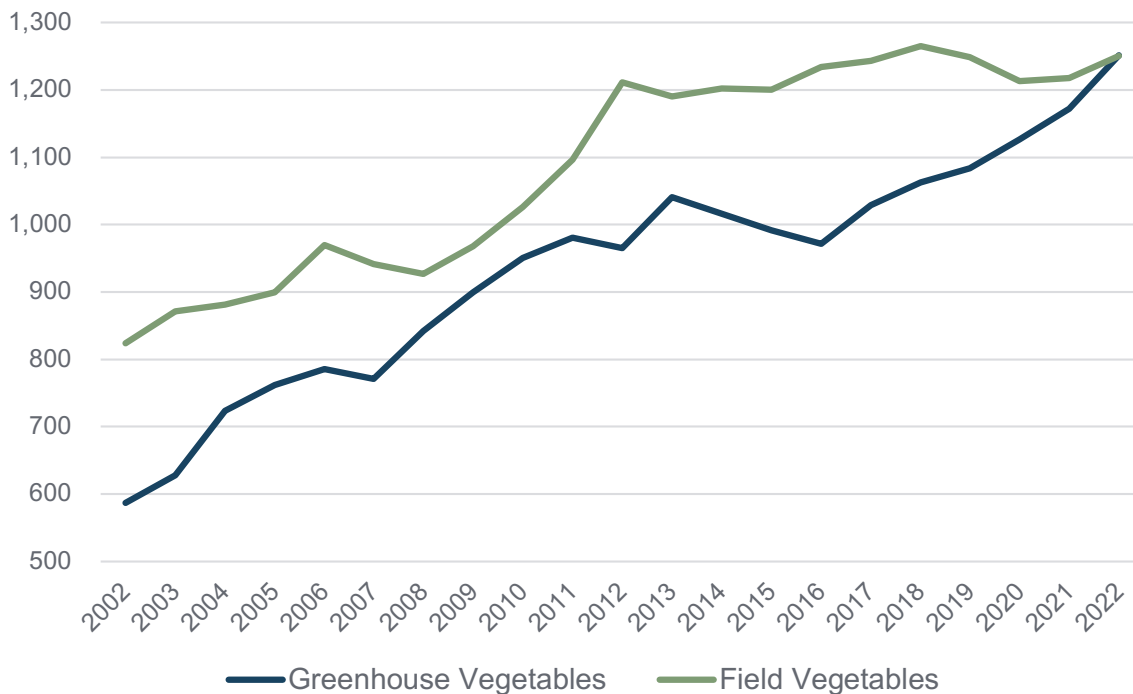
As a result, sales of greenhouse vegetables have been increasing steadily since 2016 (Chart 3.3) and, in 2022, slightly surpassed sales of field vegetables. Over the forecast horizon, growth in the production of greenhouse fruit and vegetables is expected to remain strong, supporting growth in the greenhouse and nursery industry.

87 Statistics Canada, Table 32-10-0218-01, Labour Force Survey custom data.

88 Ontario Greenhouse Vegetable Growers, "OGVG Factsheet."

Chart 3.3: Greenhouse vegetable sales surpass field vegetables for the first time.

Farm cash receipts, \$ 2007 millions.



Source: Statistics Canada, Table: 32-10-0045-01, Table: 32-10-0098-01; The Conference Board of Canada. Farm cash receipts were deflated into real dollar terms using Statistics Canada's Farm Product Price Index 2007=100.

Cannabis Supports Growth in the Greenhouse and Nursery Industry

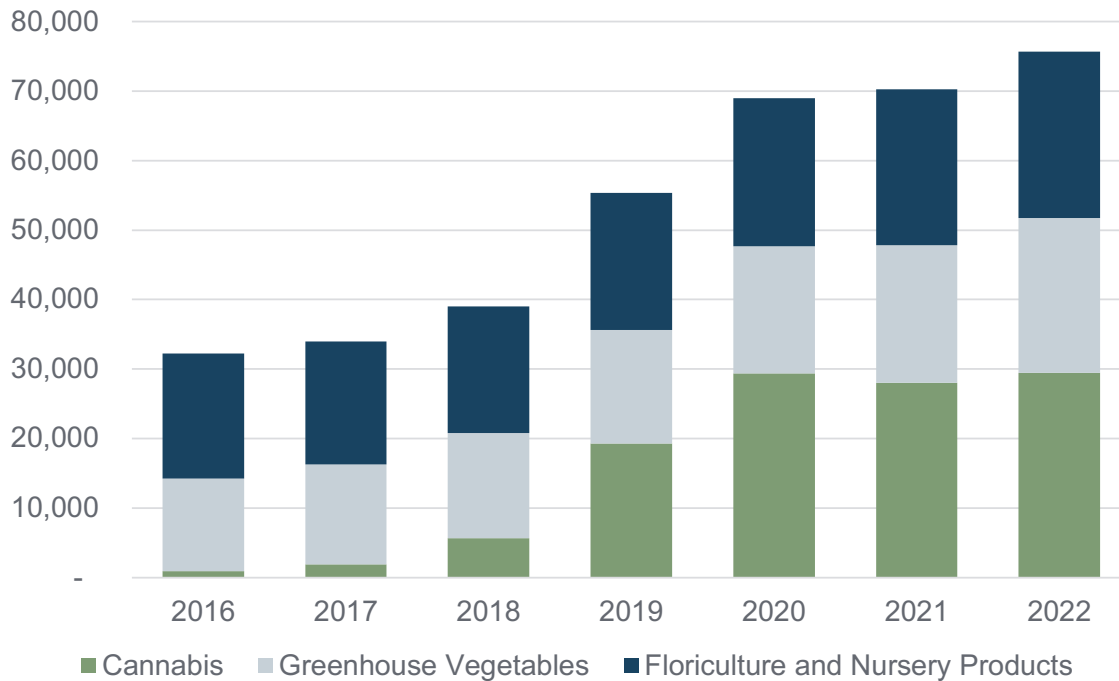
Since its legalization for recreational use in 2018, the cannabis subsector has been a driving force of growth in the greenhouse and nursery industry.⁸⁹ After quintupling between 2018 and 2020, farm cash receipts from cannabis sales stabilized at around \$2.9 billion

(Chart 3.4), accounting for almost 40 per cent of sales in the greenhouse and nursery industry in 2022. Going forward, cannabis production is expected to grow at a modest pace but will remain a key supporting element in the overall growth of the greenhouse and nursery industry.

⁸⁹ Most cannabis is grown in greenhouses, with around 18 per cent grown in fields outdoors.

Chart 3.4: Revenues reach new highs from cannabis legalization.

Farm cash receipts, millions of dollars.



Source: Statistics Canada, Table: 32-10-0045-01

Temporary Foreign Workers Help Fill the Growing Labour Gap

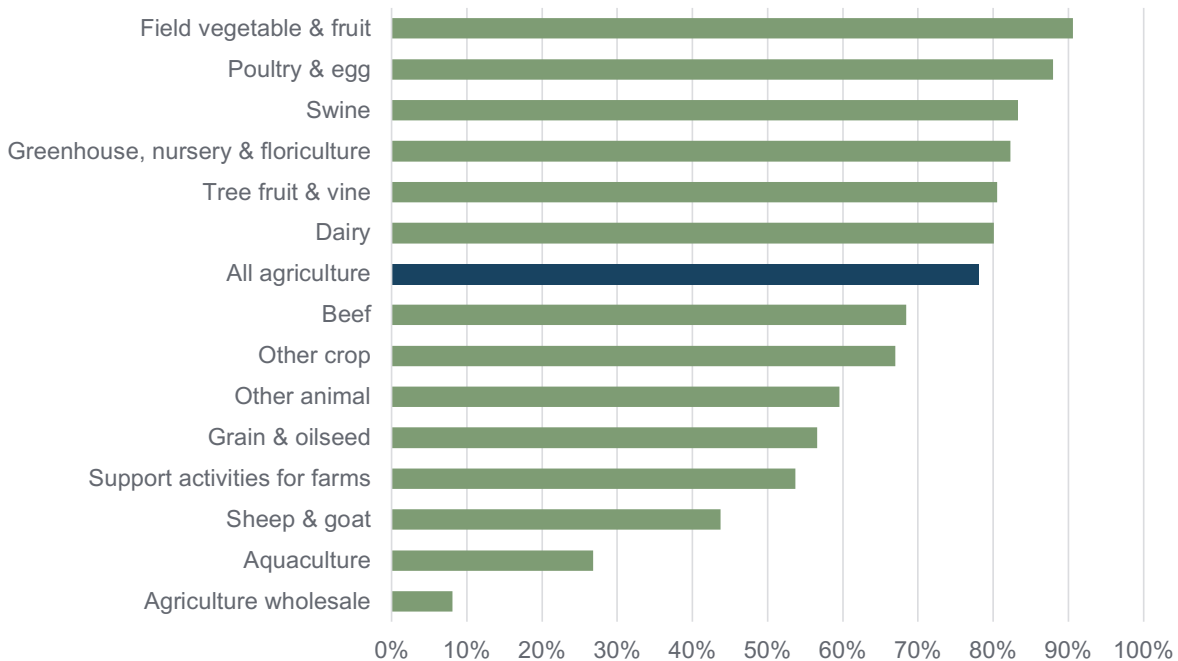
Horticulture continues to be the largest employer of foreign workers, accounting for over three-quarters of foreign workers in agriculture. The inherent nature of horticulture work - labour-intensive, temporary and time-sensitive (planting and harvesting) - makes it challenging to find enough domestic workers. Access to foreign workers through the Temporary Foreign Worker Program and the Seasonal Agriculture Workers Program has allowed farmers to remain operational and

productive despite the lack of available Canadian workers, particularly during peak seasons. Going forward, foreign workers will continue to be a cornerstone of horticulture’s workforce.

The peak domestic labour gap in horticulture is expected to increase 19 per cent over the forecast period, reaching 70,200 positions by 2030. Foreign workers will help fill around 84 per cent of this gap, filling almost 59,000 positions at peak season (Chart 3.5). However, even with the reliance on foreign workers, 11,300 positions are forecasted to remain vacant in 2030.

Chart 3.5: Foreign workers expected to fill over 80 per cent of the labour gap in horticulture.

Share of peak domestic labour gap expected to be filled by temporary foreign workers in 2030, forecast.



Source: The Conference Board of Canada’s Model of Occupations, Skills and Technology.

Grain and Oilseed

The grain and oilseed industry is a vital segment of the Canadian agriculture sector. The industry is geographically concentrated in Alberta, Saskatchewan and Manitoba. It plays a pivotal role in producing crops like wheat, canola, soybeans and feed corn, contributing to both domestic and global markets.

Export-focused, this industry has over 90 per cent of sales in the global market.⁹⁰ Canadian wheat accounted for 40 per cent of the world’s supply in 2022, and oilseed (canola, sunflower seed and peanuts) amounted to 21 per cent.⁹¹ This is a testament to the quality and competitive advantage of the Canadian grain and oilseed industry.

90 OECD/FAO, “Agriculture Outlook 2023-2032.”

91 Ibid.

Higher Wages Don't Eliminate Vacancies

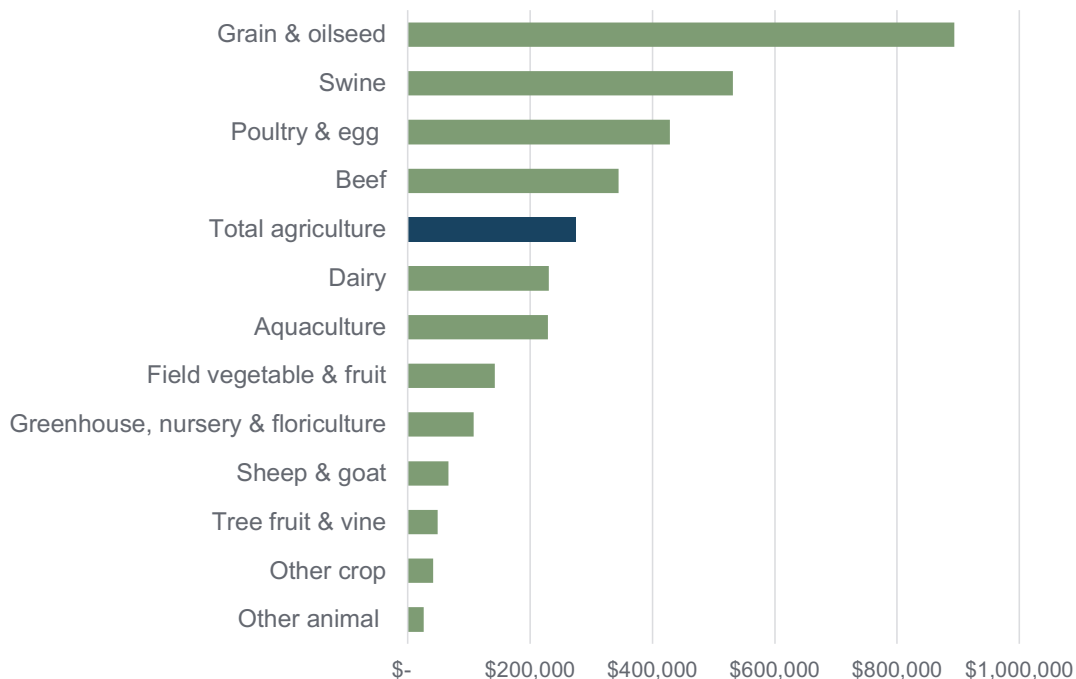
Workers in the grain and oilseed industry require technical and mechanical skills due to the highly technical harvesting processes that Canadian producers use. Sales per worker in this industry are by far the highest in agriculture (Chart 3.6). At \$25/hr, average wages are higher in grain and oilseed than other agriculture industries, and more comparable to other sectors such as manufacturing at \$25/hr, transportation at \$26/hr and

construction at \$28/hr.⁹² Nevertheless, with a vacancy rate of 7 per cent, employers still face difficulty finding staff. While this is lower than other industries in agriculture, it is still higher than the Canadian average across all industries (5.9 per cent).

Employers in grain and oilseed struggle with recruiting because of their rural location, seasonal hours and manual labour needs. Ultimately, grain and oilseed vacancies come at a great cost, considering the high sales per worker.

3.6: Sales per worker are the highest in the grain and oilseed industry.

Sales \$ per worker, 2022.



Source: Statistics Canada, Table: 32-10-0045-01, Table 32-10-0218-01, Labour Force Survey custom data. Workers includes domestic and temporary foreign workers.

92 Statistics Canada, "Table 14-10-0326-01", Job Vacancy and Wage Survey custom data.



Rising Labour Productivity Eases Labour Challenges

Advancing technology continues to improve yields and increase labour productivity in the grain and oilseed industry. As a result, labour demand continues to decline. Labour demand fell 12 per cent between 2017 and 2022 and is expected to decrease another 9 per cent between 2023 and 2030.

Declining labour demand is good news for this industry since almost two out of every five domestic workers in the grain and oilseed industry are expected to retire over the next 8 years, equaling over 12,700 retirements. Many retiring managers and owner-operators will be replaced by existing workers and family members. Additionally, 2,200 immigrants and 6,500 school leavers are projected to enter the workforce. Overall, domestic employment in this industry is expected to decrease 10 per cent between 2023 and 2030.

With domestic employment falling more than labour demand, the peak domestic labour gap will grow 12 per cent over the next 8 years, reaching 3,700 in 2030.

Support Services

Support services play an integral role in animal and crop production. Animal

support activities (NAICS 1152) include services like breeding, insemination and registering animals. Crop support activities (NAICS 1151) include services like farm management, chemical soil treatments, cleaning services, custom harvesting, disease control for crops, inspection and grading, and pollination services. This industry accounts for almost 3 per cent of domestic employment in agriculture.⁹³

Support Services Facing Similar Labour Challenges

Employers in support services face just as daunting a task in finding workers as their counterparts in primary agriculture industries. In fact, 56 per cent of employers in support services experienced a labour shortage in 2022, a figure surpassing the 44 per cent across the entire sector.⁹⁴ Peak vacancy rates in crop and animal support services reached 10.6 per cent and 7.1 per cent respectively in 2022.⁹⁵ Furthermore, 78 per cent of employers reported lost sales as a direct consequence of their vacancies, a figure notably higher than the 53 per cent observed across the entire agriculture sector.⁹⁶

In addition to common barriers such as remote locations, seasonality and manual labour, employers expressed that the lack of experienced and qualified applicants makes recruitment

93 Statistics Canada, Labour Force Survey custom data.

94 Canadian Agricultural Human Resource Council Employer Survey 2023 (n=18, 685).

95 Statistics Canada, Job Vacancy and Wage Survey custom data.

96 Canadian Agricultural Human Resource Council Employer Survey 2023 (n=9, 289).



difficult. For example, a larger share of employers in support services (27 per cent compared to 13 per cent of all employers) reported their applicants lacked essential skills like reading and arithmetic.⁹⁷ One-third of employers in support services also listed limited awareness of career opportunities among young people as a barrier to recruitment.⁹⁸

To compound their labour challenges, employers in support services also experienced the highest turnover rate in the agriculture sector, which reached 23 per cent in 2022.⁹⁹ Consequently, identifying and addressing labour challenges in support services holds equal importance as it does for other industries in agriculture.

Support Services Benefit from More Immigrants and Fewer Retirements

As agricultural production continues to increase, there will be a corresponding rise in the demand for support services. Consequently, the need for workers in support services is expected to grow throughout the forecast period, with labour demand projected to increase by over 7 per cent between 2023 and 2030. Support services will benefit

from a lower share of retirements (21 per cent compared to 29 per cent) and higher share of immigrants (13 per cent compared to 9 per cent) relative to the entire sector.¹⁰⁰ In turn, domestic employment will increase 6 per cent over the next 8 years.

Still, the domestic labour gap will increase 17 per cent over the forecast period, reaching 1,600 workers by 2030. Foreign worker employment is increasing in support services and will account for over half of the labour gap by 2030. Ultimately, 730 positions will remain vacant without further intervention, impeding the success of these vital industries.

Agriculture Wholesalers

Wholesale industries in our definition of the agriculture sector include agriculture supplies wholesalers (NAICS 4183) and farm product wholesalers (NAICS 4111). Together these two industries capture both ends of the agriculture value chain. They include businesses that sell supplies like feed, seeds and chemicals to farms, and businesses that wholesale farm products like livestock, grain and nursery plants. These industries are an essential part of agriculture and account for over 10 per cent of domestic employment in the sector.¹⁰¹

97 Canadian Agricultural Human Resource Council Employer Survey 2023 (n=15, 724).

98 Canadian Agricultural Human Resource Council Employer Survey 2023 (n=15).

99 Canadian Agricultural Human Resource Council Employer Survey 2023.

100 Measure of total number of retirements/immigrants entering the workforce between 2023 and 2030 as a share of 2022 domestic employment.

101 Statistics Canada, Labour Force Survey custom data, 2022.



Wholesale Industry Needs Agriculture Expertise

While the occupational composition of the wholesale industry has more sales-related jobs and fewer labourers compared to the sector as a whole, they nonetheless face similar labour challenges.

The nature of sales-related work in the wholesale industry requires technical and industry-specific knowledge, for example knowledge about various fertilizers or animal feeds. This makes a lack of understanding of agriculture, or a lack of experience in the sector, a

main recruitment issue for employers. Over 70 per cent of employers surveyed in wholesale said they were not able to hire all the workers they needed in 2022, which is by far the highest among the industries surveyed.¹⁰²

Continued gains in labour productivity will help ease labour challenges over the coming years. The peak labour demand is expected to decrease 3 per cent between 2023 and 2030, and domestic employment will fall at the same rate. As a result, the labour gap will remain relatively unchanged, decreasing by just 1.5 per cent over the next 8 years, to around 1,200 workers by 2030.



102 Canadian Agricultural Human Resource Employer Survey 2023 (n=17).



SECTION 4: Building the Future Workforce



Reaching Untapped Labour Pools

Educating Youth about Careers in Agriculture

Educating youth about careers in agriculture can help build a sustainable workforce in the future. It will cultivate an understanding about agriculture's role in securing both local and global food supplies, and dispel the misconception that work in agriculture is only low-skilled manual labour. Introducing students to agriculture during their elementary and secondary education can inspire them to pursue agricultural studies in post-secondary education, a pivotal factor in shaping their career paths. However, a recent CAHRC study revealed that students currently have limited exposure to agriculture before entering post-secondary education.¹⁰³

Initiatives to help elementary and secondary schools increase awareness include integrating agriculture-related subjects into the curriculum, organizing field trips to agriculture operations, and partnering with local agriculture businesses to offer co-ops and apprenticeships. There are agriculture education organizations across Canada, such as Agriculture in the Classroom Canada and 4-H Canada that provide youth with hands-on learning experiences and exposure to career opportunities in the sector. Support for

these programs can help inspire youth to consider careers in agriculture after school.

Furthermore, there is a growing need to promote work-integrated learning (WIL), such as co-ops and internships, for students studying agriculture in post-secondary institutions. WIL helps post-secondary graduates learn what they want to do in their careers, while also providing them with the skills they need to successfully move into the sector's workforce.¹⁰⁴ CAHRC helps connect post-secondary institutions with work-integrated learning opportunities in agriculture through the Student Work Placement Program.

Skilled Trades and Apprenticeships in Agriculture

Developing apprenticeship programs and promoting skilled trades in agriculture helps improve the sector's reputation, attract more workers, and highlights the technical and specialized skills needed in the sector's various industries.

There are several programs that are working towards this in Canada. The Red Seal Program currently offers agricultural equipment technician and heavy-duty equipment technician certifications, and there may be opportunity to expand the trades in agriculture certified by the Red Seal Program. At a provincial level, there are a variety of organizations that create apprenticeships in agriculture, such as the Nova Scotia Apprenticeship Agency, Skilled

103 Canadian Agricultural Human Resource Council, "Work-integrated learning and experiential learning opportunities connected to the agriculture and food & beverage manufacturing sectors."

104 Ibid.



“There is a lack of training and hands-on opportunities in the agricultural sector, particularly in my region [Newfoundland and Labrador]. There’s only one place [post-secondary] to study agricultural courses, and there’s a lack of education in high schools about careers in agriculture. There is a need to increase awareness of what a career in agriculture even looks like.”

~ Christa Wright, Relationship Manager at Agriculture in the Classroom Canada

Trades Ontario, and Alberta Apprenticeship and Industry Training.¹⁰⁵ Supporting and expanding programs like these would help build a more qualified workforce for the agriculture industries of tomorrow.

Immigrants Offer an Untapped Labour Pool

Immigrants are an underutilized source of labour for agriculture. Over 437,000 people immigrated to Canada in 2022, accounting for most of Canada’s population growth, but very few (less than 1 per cent) work in agriculture.¹⁰⁶

While agriculture employers and stakeholders agree that more effort needs to be made to encourage

immigrants to work in agriculture, there are two challenges to achieving that goal. Firstly, Canada needs to attract immigrants with relevant skills and experience for working in agriculture, even for occupations considered ‘low-skilled.’ Secondly, those immigrants need to be encouraged to settle in rural communities where agriculture work primarily takes place. This could involve offering employment, education and cultural integration support in rural areas, not only for potential workers, but also for spouses and children. In addition, it will be equally important to build awareness and develop relationships with immigration policy makers, settlement agencies and support services to ensure Canada is attracting immigrants with

105 Nova Scotia Apprenticeship Agency, <https://www.nsapprenticeship.ca/agency/news-events/ft>; Skilled Trades Ontario, <https://www.skilledtradesontario.ca/trade-information/agricultural-fruit-grower/>; Alberta Apprenticeship and Industry Training, <https://tradesecrets.alberta.ca/>.

106 Statistics Canada, “Canada’s population estimates: Record-high population growth in 2022.”



skills to work in agriculture, immigrants are being encouraged to live in rural communities, and they have access to support in those communities.

Over the last decade, the number of international students in Canada has risen significantly, surpassing 800,000 in 2022.¹⁰⁷ This presents an opportunity for the agriculture sector to engage and encourage these students to remain in Canada post-graduation and work in the sector. Notably, 60 per cent of students who gained work experience during their studies stayed in Canada (become a landed immigrant within 10 years), compared to only 20 per cent who did not.¹⁰⁸ This underscores the potential benefits of establishing connections and offering work placements to international students while they are in school.

Similarly, refugees represent a potential source labour for agricultural employers. Here as well there needs to be collaboration between employers and stakeholders with refugee agencies to promote employment opportunities in the agricultural sector. By providing benefits such as on-the-job training, language tutoring, housing support, competitive wages and health coverage, employers could make agriculture a great option for refugees seeking employment.

Women Working in Agriculture

Women continue to be underrepresented in the agriculture workforce, especially in full-time positions. Only 25 per cent of full-time workers in agriculture are female, compared to 44 per cent across all sectors (Chart 4.1). According to the CAHRC Worker Survey, for female workers, poorer compensation relative to other sectors is a more influential factor in their retention compared to male workers (Chart 4.2). Moreover, manual labour and long working hours discourage female workers more than their male counterparts. Offering competitive wages, promoting work-life balance and flexible working arrangements can help create a more appealing environment for women in agriculture.

Based on results from the CAHRC Worker Survey, women working in agriculture had higher levels of job satisfaction compared to their male counterparts. Seventy-eight per cent of female workers reported they enjoy working in the sector, surpassing the 65 per cent of male workers, and 71 per cent of female workers were likely or highly likely to recommend working in agriculture, compared to 64 per cent of male workers.¹⁰⁹ Communicating the positive experiences of women who work in the sector to the public could help attract more female workers in the future.

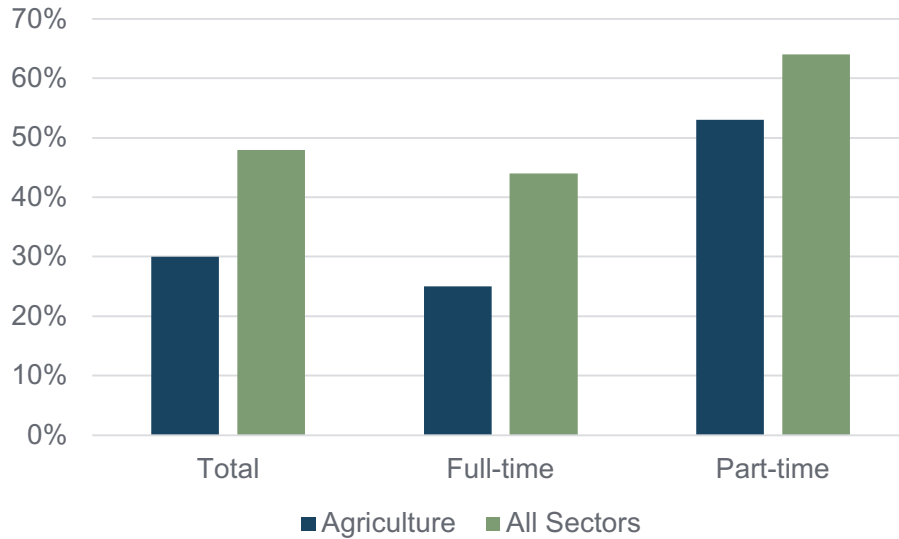
107 Immigration, Refugees and Citizenship Canada.

108 Statistics Canada, “International students as a source of labour supply: A summary of recent trends.” Across all fields of study.

109 Canadian Agricultural Human Resource Council Worker Survey 2023 (n=79, 110).

Chart 4.1: Women underrepresented in full-time agriculture employment.

Share of female employment, 2022.

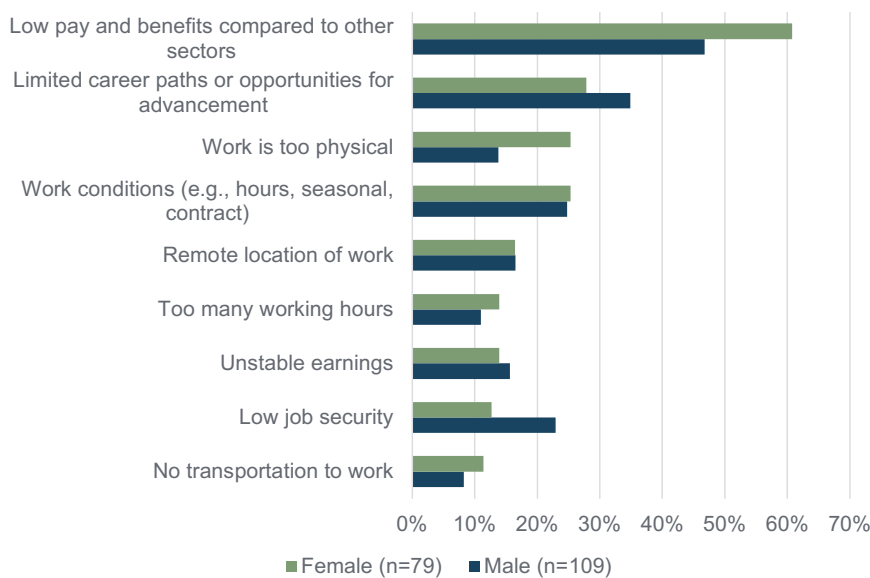


Source: Statistics Canada, Table: 14-10-0023-01.
 *Agriculture does not include wholesale industries.

Chart 4.2: Compensation is the top factor limiting women’s interest in agriculture work.

Share of workers.

Q: What are the top five factors that limit your interest in working in agriculture?



Source: Canadian Agricultural Human Resource Council Worker Survey 2023.



Foreign Workers Needed

Ensuring Employers have Access to Temporary Foreign Workers

Temporary foreign workers are a key part of the long term solution to agriculture's labour shortage. They currently make up 17 per cent of the workforce, and that share is expected to increase to 23 per cent by 2030.¹¹⁰ Additionally, foreign worker employment is expected to fill almost 80 per cent of the domestic labour gap by 2030. Ensuring employers have access to this source of labour is vital for the prosperity of the sector.

In response to the persistent challenges employers in Canada's agri-food sector face in recruiting and retaining foreign workers, the National Workforce Strategic Plan (NWSP) for Agriculture and Food & Beverage Manufacturing has established a dedicated Foreign Worker and Immigration Working Group. This group, integral to the overarching framework, has delved into critical areas aimed at enhancing the contribution of international workers to the sector. Key areas identified for enhancement include the application process for TFWP and SAWP, housing standards, appropriate wages, integrity programs and a recognized employer model to ensure a comprehensive approach to meet the increased need of foreign workers in the agriculture sector. The NWSP recognizes the imperative for ongoing dialogue to implement these measures

effectively and acknowledges the need for collaborative efforts from stakeholders across the industry. Further discussions will be essential to refine and implement the proposed strategies, ensuring a harmonized approach that strengthens the agricultural labour market and sustains Canada's food production capabilities.

Path to Permanent Residency for TFWs

Many employers and stakeholders discussed the benefits of a path to permanent residency for foreign workers, especially in industries with year-round employment needs. Recently, the Government of Canada extended the Agri-Food Pilot, which was launched in May of 2020 and is now extended to May 2025. This program is intended to help workers in agriculture and food processing gain permanent residency.¹¹¹ This program signals awareness of the chronic labour shortages in agriculture and progress in building and retaining a skilled workforce.

Occupations eligible under the Agri-Food Pilot include farm supervisors and specialized livestock workers, general farm workers, and harvesting labourers for greenhouse (including mushroom), nursery and floriculture, and animal production (excluding aquaculture). This pilot does not include Quebec as they have a separate immigration policy. A total of 2,750 applicants (and their families) can be processed each year.¹¹²

110 The Conference Board of Canada's Model of Occupations, Skills and Technology.

111 Immigration, Refugees and Citizenship Canada. "Canada Announces Extension to the Agri-Food Pilot, Facilitating Access to Permanent Residence for Workers and Their Families."

112 Ibid.

Sector Vulnerable to Global Labour Market Conditions

Agriculture’s increasing reliance on foreign workers makes the sector vulnerable to policy changes or global events that prevent access to this labour pool. The pandemic highlighted this vulnerability when lack of foreign workers led to lost animal and crop production in several industries. Since most employers have no choice but to rely on foreign workers, they are also susceptible to market changes that make employing foreign workers more expensive. The recent surge in housing costs is a prime example of this challenge. We heard from several employers and stakeholders about the struggle to find and afford housing for foreign workers in today’s housing market.

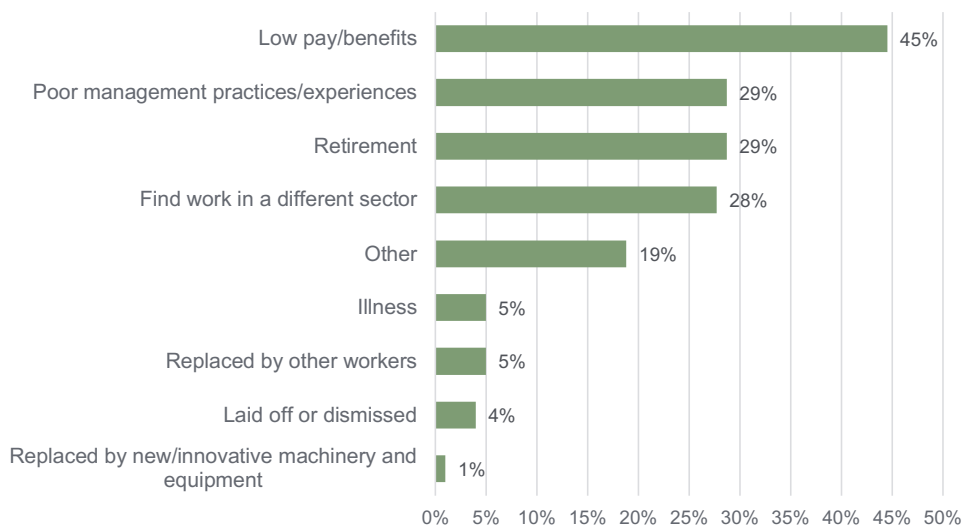
Improving Retention

Turnover has increased, a concern that was consistently voiced during our discussions with employers and stakeholders. While there is a portion of the workforce that is engaged and committed to staying in the sector, there is also a portion of the workforce that does not stay at a job very long. The turnover issue does not affect every worker or even every employer in the same way. The top factors that cause workers to leave are unsatisfactory compensation and poor management practices (Chart 4.3). Consequently, employers must put more effort into creating a positive work environment and offer benefits to retain their workers.

Chart 4.3: Improving compensation and management practices are key to retention.

Share of workers (n=101).

Q: What would be your main reason for leaving?



Source: Canadian Agricultural Human Resource Council Worker Survey 2023.



Compensation is Key

A major challenge that agriculture employers face when it comes to retention is wages. This problem is exacerbated in this competitive labour market and high inflation environment. Almost 45 per cent of workers said their main reason for leaving is because of low pay and benefits.¹¹³ It was even higher for entry level labourers at 50 per cent and for experienced workers (including farm assistants or equipment operators) and managers at 56 per cent, but lower for specialized workers (truck drivers, mechanic, etc.) and supervisors at 25 per cent.¹¹⁴ Wages not only influence retention in the sector but also impact recruiting workers into the sector.

Agriculture employers are often limited in their ability to raise the wages because they have little control over how their products are priced in the market. Consequently, employers need to explore non-monetary incentives to attract and retain workers. Some of these benefits may include offering meals and transportation, and highlighting the good quality of life associated with working in the sector. These advantages are not always effectively communicated or advertised to potential workers. Additionally, offering more flexible work arrangements can improve retention.

Another approach to improve retention is to provide employees the ability to develop an ownership stake in the business. While many farm operators pass down their businesses to family members, this is not always feasible. In fact, according to the most recent Census of Agriculture, two-thirds of farm operators reported having no succession plan.¹¹⁵ Meanwhile, lack of opportunities for career advancement was reported by 42 per cent of employers and 32 per cent of workers as a barrier to retention.¹¹⁶ By offering employees the opportunity to “buy in,” farm operators create a succession plan, while also giving workers career advancement opportunities.

**“Wages, hours, benefits
and working conditions
need to be attractive
and competitive to make
the job appealing in the
agriculture sector.”**

**~ Stephen Heckbert,
Executive Director
Canadian Pork Council**

113 Canadian Agricultural Human Resource Council Worker Survey 2023 (n=101).

114 Canadian Agricultural Human Resource Council Worker Survey 2023 (n=12, 48, 24).

115 Statistics Canada, Table: 32-10-0244-01.

116 Canadian Agricultural Human Resource Council Employer Survey 2023 (n=721), Canadian Agricultural Human Resource Council Worker Survey 2023 (n=222).



Improving HR Practices Goes a Long Way

Almost 30 per cent of workers said their main reason for leaving would be because of poor management practices, and similarly, 34 per cent said good management practices is what keeps them working in agriculture.¹¹⁷ Having good management and a positive workplace culture play crucial roles in retaining workers. Training provided by industry associations was the top activity employers believe will help them address their HR needs (Chart 4.4).

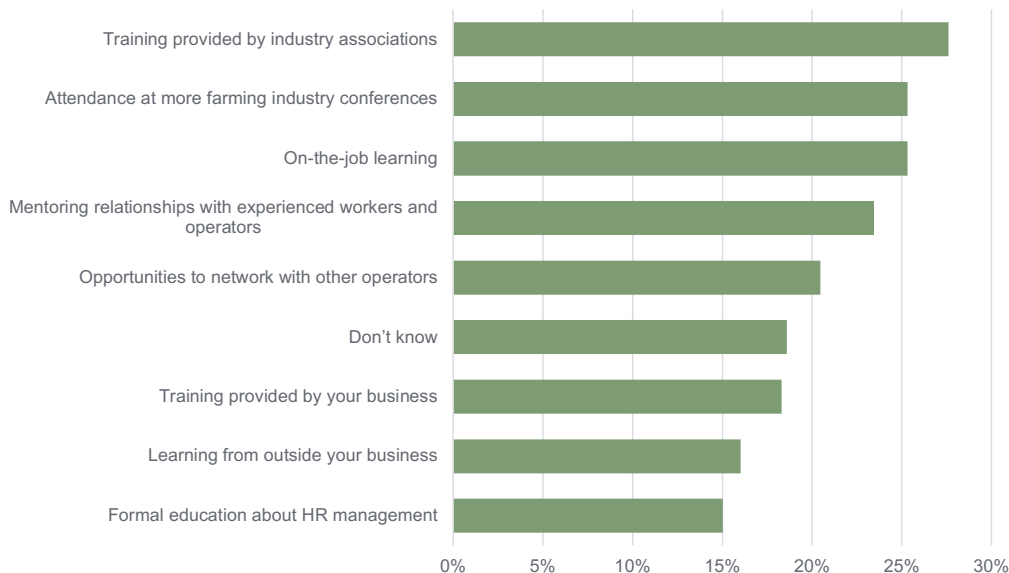
Networking and Mentorship

When asked about which activities would help address HR needs on their farms, employers suggested they want more opportunities to network and build mentorships with other agriculture employers. This was also a theme that continued to surface throughout interviews and focus group discussions. There seems to be a particular need to connect smaller owners-operators with employers from larger operations to share best HR management practices and provide support.

Chart 4.4: Employers want more networking and mentorship.

Share of employers (n=699).

Q: Which of the following activities would help to address the HR needs in your farm operation/business?



Source: Canadian Agricultural Human Resource Council Employer Survey 2023.

117 Canadian Agricultural Human Resource Council Worker Survey 2023 (n=101, 197).



Conclusion

The importance of the agriculture sector in the Canadian economy is undeniable, contributing significantly to GDP and serving as a global exporter of high-quality products. However, the sector's success hinges on securing a skilled and motivated workforce. Labour shortages, particularly acute in 2022 with over 28,200 vacant positions, have hampered growth, resulting in lost sales, production delays and increased stress for workers. Further, the situation is expected to worsen with the domestic labour gap forecast to increase by 15 per cent over the next 8 years.

Outdated perceptions of the agricultural sector and a lack of awareness of career opportunities are fundamental challenges limiting the supply of labour in the sector. There is a need to advertise the sector's role in food sustainability to potential workers and offer them a

more comprehensive view of the diverse career opportunities available beyond traditional farming. Promoting education to youth and skilled trades in agriculture can also help improve the perception of the sector over the coming years.

With a concerning high turnover rate – almost double the national average – Canada's agriculture sector will need to continue to improve workplace culture to increase retention. Over one-third of workers reported they stayed in agriculture because of good management practices, and 30 per cent of workers consider leaving because of poor management. Increasing awareness of, and access to, HR training and tools can help employers improve retention. Additionally, networking and sharing best practices among employers could further strengthen their HR capabilities, helping make the sector a more desired place to work.





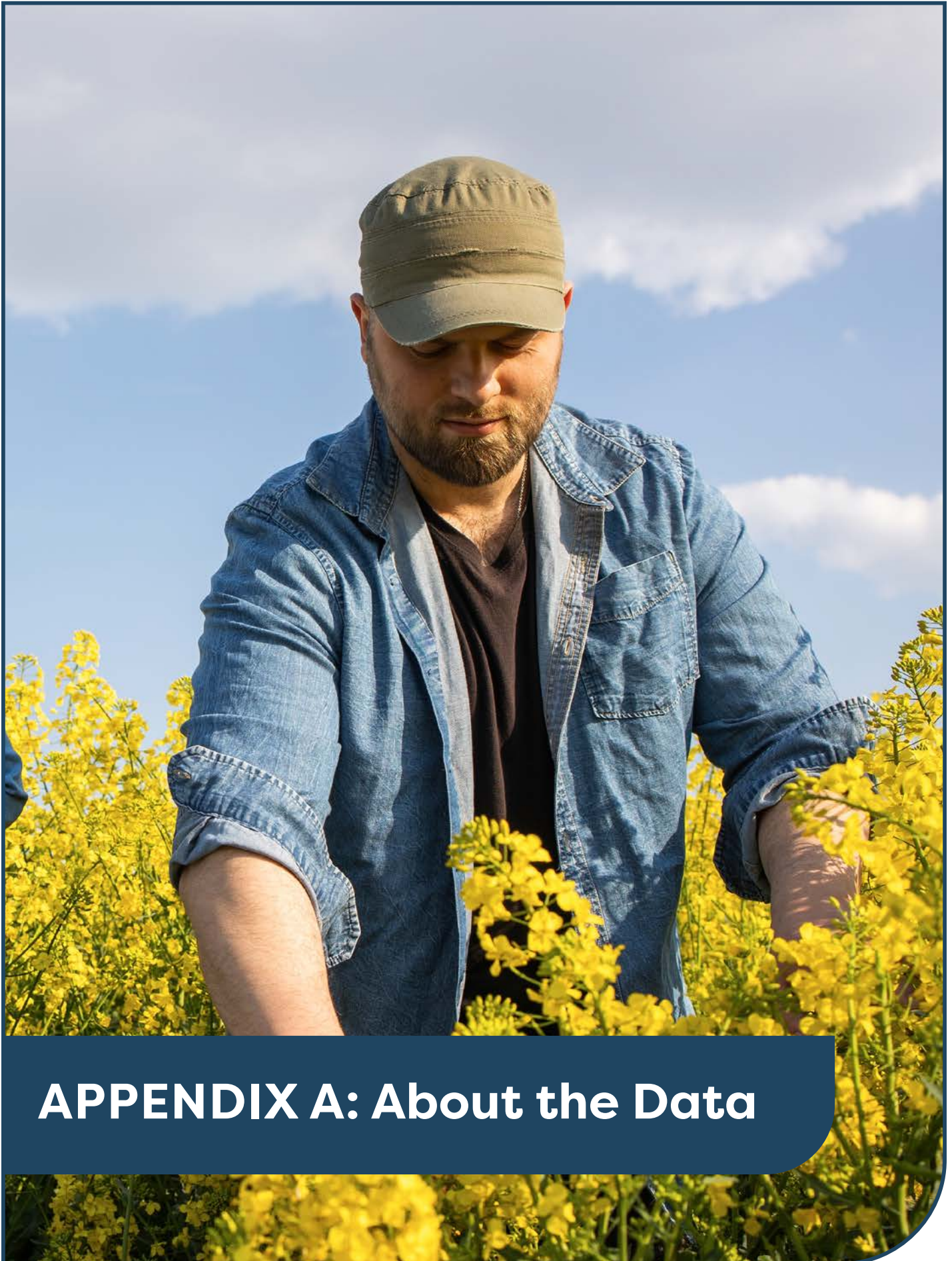
As Canada continues to bring in more immigrants, agriculture needs to find ways to attract and retain workers from this population. Around 25,200 immigrants are expected to enter the agriculture sector over the next 8 years, equivalent to less than 1 per cent of all immigrants arriving in Canada. Collaborative efforts between all orders of government, placement agencies and agriculture employers are needed to help ensure immigrants have the awareness, skills and necessary support to thrive in the agricultural sector.

Temporary foreign workers will continue to be required to meet labour demand in agriculture over the coming years. With the sector's peak domestic labour gap reaching over 101,000 positions by 2030, most of these positions will need to be filled by foreign workers. Therefore, ensuring employers have access to seasonal foreign worker programs continues to be essential. Further, many industries would benefit from programs that allow industries with year-round employment access to foreign workers. In the end, understanding the importance of foreign workers and providing support to employers and workers will help the sector meet the growing demand for Canada's agricultural products.

As in other sectors, Canada's aging workforce poses additional challenges. Expected retirements in the agriculture sector are particularly concerning among farm business owners and managers, with almost one in every two retiring over the next 8 years. This wave of retirements will create skills

gaps as retirees leave with many years of experience and industry-specific knowledge. Meanwhile, the majority of new entrants to the workforce, consisting of immigrants and school leavers, will not have the experience needed to fill these positions. Identifying and growing the managerial skills needed over the coming years will be critical to properly plan for how these changing workforce dynamics will impact the sector and help ensure appropriate training programs exist for workers.

As the sector looks to the future, it is imperative to continue adopting new technologies that enhance productivity and competitiveness. While automation and technology present promising solutions to enhance labour productivity and alleviate labour gaps, they also require a skilled workforce to operate and maintain these systems. Therefore, concerted effort is needed to ensure that the workforce possesses the necessary technical skills as well as industry expertise. This can be achieved through training and upskilling programs that equip workers with the knowledge and expertise required to work alongside advanced agricultural technologies.



APPENDIX A: About the Data

Industry Coverage

This research focuses on the agriculture sector, including 15 key industries (Table A.1). These industries involve crop and animal production, along with sales and services that support these activities. Support services are tasks specific to the industry but not directly tied to production. For instance, support activities for animal production include services like breeding, insemination and registering animals. Similarly, supporting crop production includes outsourced tasks like spraying, harvesting, planting and seeding. We also included wholesalers of farm products and agriculture supplies in this category because they are closely connected to buying and selling in the industry.

Other crop farming (NAICS 1119) includes operations primarily engaged in growing tobacco, peanuts, sugar beets, cotton, sugarcane, hay, agave, herbs and spices, mint, hops, and hay and grass seeds. Farming a combination of crops (without a dominant one that would fall into another crop industry) and a combination of animals and crops (with crops being more dominant) also fall into this category. Additionally, the gathering of maple sap is included in this industry group.¹¹⁸

Other animal farming (NAICS 1129) includes operations primarily engaged in raising bees, horses and other equines,

rabbits and other fur-bearing animals, llamas, deer, worms, crickets, laboratory animals and companion animals, including dogs, cats, pet birds and other pets. The production of animal products, such as honey and other bee products, are also in this category. Farming a combination of animals (without a dominant one that would fall into another animal industry) and a combination of animals and crops (with animals being more dominant) are also included in this industry group.¹¹⁹

When a farmer is involved in more than one type of production, the activities will be classified under the category that accounts for the largest part of overall sales.



118 Statistics Canada, “North American Industry Classification System (NAICS) Canada 2022.”

119 Ibid.

Table A.1

Industries included in agriculture.

NAICS 3-digit	NAICS 4-digit
111 - Crop production	1111 - Grain and oilseed farming
	1112 - Vegetable and melon farming
	1113 - Fruit and tree nut farming
	1114 - Greenhouse, nursery, and floriculture production
	1119 - Other crop farming
112 - Animal production and aquaculture	1121 - Cattle ranching and farming (includes beef and dairy)
	1122 - Hog and pig farming
	1123 - Poultry and egg production
	1124 - Sheep and goat farming
	1125 - Aquaculture
	1129 - Other animal production
115 - Support activities	1151 - Support activities for crop production
	1152 - Support activities for animal production
411 - Farm product merchant wholesalers	4111 - Farm product merchant wholesalers
418 - Miscellaneous merchant wholesalers	4183 - Agricultural supplies merchant wholesalers



Note on beef and dairy split

While Statistics Canada does separate beef and dairy at the 5-digit NAICs level (11211 & 11212), NAICS 1121 combines both beef and dairy. Thus, obtaining separate data for the beef industry and the dairy industry is challenging because Statistics Canada only reports at the 4-digit NAICS in sources like the Labour Force Survey, Job Vacancy and Wage Survey and Agriculture Taxation Data Program. In addition, custom analysis is necessary to extract separate figures for these industries. We rely on data from Statistics Canada Business Counts (with and without employees) and from the Canadian Agricultural Human Resource Council Employer Survey 2023 to create separate analyses for this study.

Leveraging Statistics Canada Data

Many data sources from Statistics Canada were used in this body of research, the main ones being the Labour Force Survey (LFS), Census, Agriculture and Agri-food Labour Statistics Program (AALSP), Job Vacancy and Wage Survey (JVWS), and Business Register. Each data source has unique industry coverage.

Note about Temporary Foreign Workers

Temporary foreign workers (TFWs) are an important source of labour in agriculture. Temporary foreign workers are foreign workers (not Canadian citizens or permanent residents) who are hired

through the Temporary Foreign Worker Program (TFWP), including the Seasonal Agriculture Workers Program (SAWP) or International Mobility Program (IMP) to fill short term labour and skill shortages. A Labour Market Impact Assessment (LMIA), a work permit and other requirements are required to hire a TFW through the TFWP. Unfortunately, this important source of labour is not formally accounted for in key sources such as the Labour Force Survey or Census of Population.

The main source of data on TFWs comes from the AALSP. The AALSP reports the number of TFWs derived from T4 slips produced by agricultural businesses by industry and province. Unfortunately, the AALSP does not cover NAICS 1151, 1152, 4111 and 4183, as well as 1124 and 1125, are combined with 1129. In these cases, alternative data sources are used. The AALSP also does not report the number of TFWs by occupation. However, some custom data was received from Statistics Canada to help determine this breakdown.

Employment and Social Development Canada (ESDC) and Immigration, Refugees and Citizenship Canada (IRCC) are two other sources of data on TFWs, each with a different measure of TFWs. ESDC has data on the number of approved positions for TFWs by 4-digit NAICS. This is a broad scope that overestimates the number of TFWs employed. IRCC publishes data on the number of TFW work permit holders by 4-digit NOC and entry program/stream. Thus, it is not feasible to assess TFWs by industry using IRCC data. The solution was to take IRCC data by occupation and apply the industry distributions from ESDC data.



APPENDIX B: Qualitative Research



About the Surveys

When it comes to LMI in agriculture, surveys play a critical role in understanding workforce issues by capturing the perspectives of employers, employees and stakeholders. The surveys conducted by CAHRC identify challenges and opportunities in the agriculture labour market, and shed light on labour shortages, working conditions, training needs and specific industry/province dynamics. Three surveys were undertaken between April 3 and May 8, 2023, one each for employers, workers and stakeholders. Each survey featured a distinct set of questions tailored to its respective audience.

The employer survey was the largest and most instrumental in our research. It was used to measure key metrics such as vacancies, turnover rates and lost sales, and provided insights into challenges surrounding recruitment, retention and HR strategies. With the highest response rate, the employer survey permitted meaningful industry and provincial level analysis. Data received from the employer survey is especially valuable when examining smaller industries and provinces because it helps fill in the gaps in official data sets.¹²⁰ It also provides data for industries, such as support services and wholesalers, which some agriculture data sets do not cover.

The worker survey was used to understand how agriculture employees think about their industry, including

what they like and dislike about their jobs. Due to a low response rate in this survey, conducting analyses at the provincial and industry level was not feasible. However, it remained valuable for comparing the views of workers with those of employers, especially when there were differences in their opinions.

The stakeholder survey was used to gain insight into how leaders, decision-makers and experts in the agriculture field perceive the current challenges in the labour market. We heard from individuals with a range of backgrounds, including government, sector councils, industry associations and educational institutions, which provided a broad range of perspectives on the industry.

Ultimately, by leveraging these surveys, business owners, industry leaders and policymakers can make informed decisions, implement targeted solutions and foster a resilient workforce that sustains the growth of this essential sector.

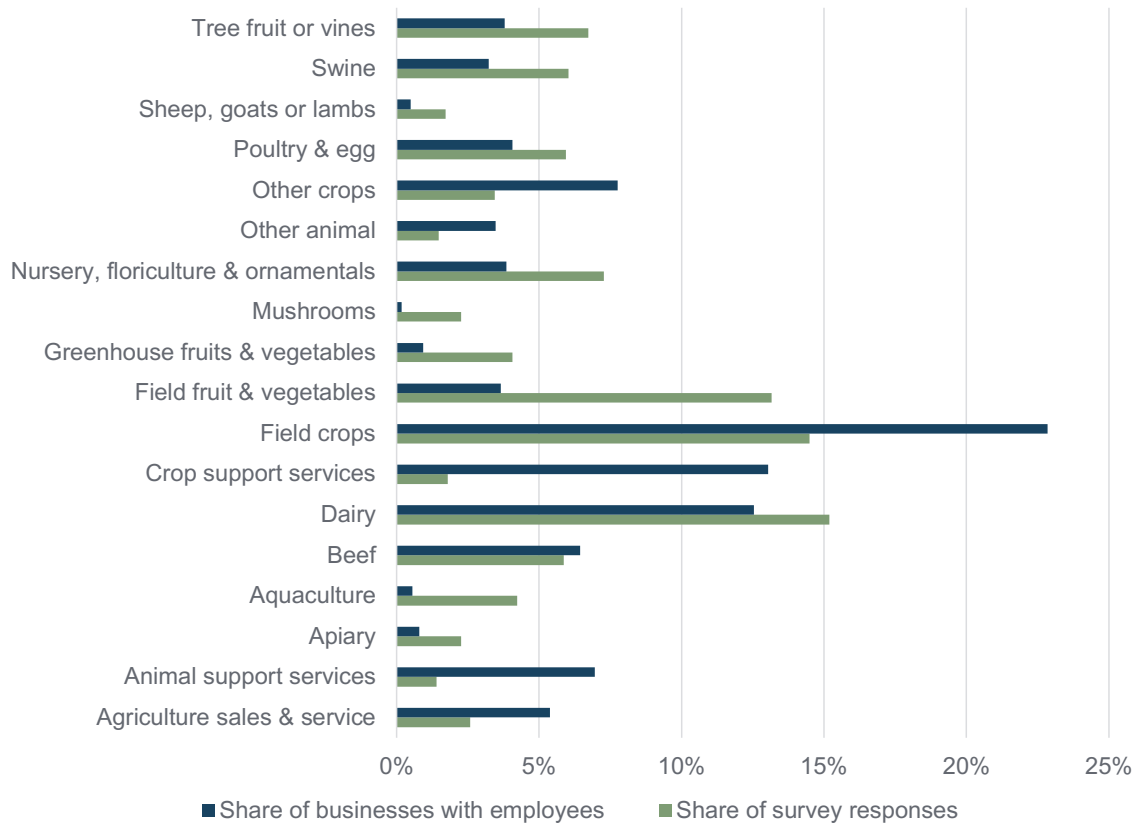
Survey Distribution

The survey targets were based on the count of businesses with employees categorized by province and commodity. Our aim was to align the survey distribution closely with the actual distribution of employers across Canada, as depicted by the business count data (Chart B.1). The following section provides the number of responses by various characteristics for each survey.

¹²⁰ Data is often missing for smaller industries or provinces because of confidentiality requirements which cause the data to be suppressed.

Chart B.1: Survey distribution compared business counts.

Share of responses by commodity compared to share of business counts.



Source: Statistics Canada, Table: 33-10-0568-01; Canadian Agricultural Human Resource Council Employer, Worker and Stakeholder Survey 2023.

Employer Survey

Table B.2: Number of employers by province.

	Number of responses from employers
Newfoundland and Labrador	16
Prince Edward Island	28
Nova Scotia	33
New Brunswick	51
Quebec	162
Ontario	428
Manitoba	72
Saskatchewan	48
Alberta	58
British Columbia	150
Nunavut	1
Yukon	1
Total	1048

Source: Canadian Agricultural Human Resource Council Employer Survey 2023.

Table B.3: Number of employers by commodity.

	Number of responses from employers
Agriculture Sales and Service	30
Animal support services (e.g., AI services, farrier, farm management services)	11
Apiary	19
Aquaculture (including Aquaponics)	20
Cattle (Beef)	47
Cattle (Dairy)	171
Crop support services (e.g., custom harvesting, pruning, farm management advice)	22
Field crops (including hay, seed, cereals, pulses, grains and oilseed, forages and fibre)	147
Field fruit and vegetables (including melons or potatoes)	153
Greenhouse fruits and vegetables	47
Mushrooms	21
Nursery, floriculture and ornamentals (includes turf and cannabis production)	81
Other animal (e.g., horse, bison, llama, alpaca, rabbits, deer/elk, fox/mink)	9
Other crops (herbs and spices, maple syrup, tobacco, hemp, non-timber forest products)	39
Poultry and eggs	54
Sheep, goats or lambs	13
Swine	38
Tree fruit or vines (includes grapes, cherries, blueberries, and nuts)	81
Total	1003

Source: Canadian Agricultural Human Resource Council Employer Survey 2023.

Table B.4: Number of employers by revenue size.

	Number of responses from employers
Less than \$99,999	106
\$100,000 to \$249,999	83
\$250,000 to \$499,999	86
\$500,000 to \$999,999	154
\$1,000,000 to \$1,999,999	210
\$2,000,000 and over	315
Total	954

Source: Canadian Agricultural Human Resource Council Employer Survey 2023.

Worker Survey

Table B.5: Number of workers by region.

	Number of responses from workers
Ontario	41
Quebec	14
Prairies	66
East Coast	19
British Columbia	59
Territories	1
Total	200

Source: Canadian Agricultural Human Resource Council Worker Survey 2023.

Table B.6: Number of workers by commodity.

	Number of responses from workers
Agriculture Sales and Service	3
Animal support services (e.g., AI services, farrier, farm management services)	3
Apiary	2
Aquaculture (including Aquaponics)	34
Cattle (Beef)	13
Cattle (Dairy)	6
Crop support services (e.g., custom harvesting, pruning, farm management advice)	1
Field crops (including hay, seed, cereals, pulses, grains and oilseed, forages and fibre)	12
Field fruit and vegetables (including melons or potatoes)	15
Greenhouse fruits and vegetables	5
Mushrooms	5
Nursery, floriculture and ornamentals (includes turf and cannabis production)	12
Other animal (e.g., horse, bison, llama, alpaca, rabbits, deer/elk, fox/mink)	3
Other crops (herbs and spices, maple syrup, tobacco, hemp, non-timber forest products)	5
Poultry and eggs	7
Sheep, goats or lambs	1
Swine	26
Tree fruit or vines (includes grapes, cherries, blueberries and nuts)	5
Total	158

Source: Canadian Agricultural Human Resource Council Worker Survey 2023.

Table B.7: Number of workers by occupation.

	Number of responses from workers
Manager	71
Experienced worker, farm assistant, equipment operator	65
Specialized worker (e.g., truck driver, mechanic, pesticide applicator)	26
Supervisor/lead hand	23
Entry-level labourer	13
Total	198

Source: Canadian Agricultural Human Resource Council Worker Survey 2023.

Stakeholder Survey

Table B.8: Number of stakeholders by region.

	Number of responses from stakeholders
Ontario	42
Quebec	54
Prairies	31
East Coast	25
British Columbia	22
Territories	2
Total	176

Source: Canadian Agricultural Human Resource Council Stakeholder Survey 2023.

Table B.9: Number of stakeholders by organization.

	Number of responses from stakeholders
An industry association	46
Other	37
Government	21
An educational institution	16
A sector council	16
Research	2
Total	138

Source: Canadian Agricultural Human Resource Council Stakeholder Survey 2023.

About the Interviews and Focus Groups

Our research involved both semi-structured interviews and focus group discussions with stakeholders in the agricultural sector. We conducted 20 interviews in April and May, 2023 with individuals from various industry associations, sector councils and government agencies. As well, we conducted five provincial focus groups with 60 participants in total during the week of June 27, 2023. These focus groups brought together business owners, industry representatives and government officials to discuss labour market challenges and successes. Together, these interactions provided a multi-faceted approach to our LMI research.

The combination of interviews and focus groups added a qualitative dimension that captures insights surveys alone might miss. These engagements enabled us to delve into specific regulatory concerns, policy implications and the intricate workforce dynamics of specific industries. Such qualitative insights are integral for gaining a complete understanding of the agricultural labour market and allow us to contextualize statistical findings.





**APPENDIX C: Labour Market
Forecast Methodology**



Model of Occupations, Skills and Technology

A key objective of this research project was to generate an 8-year forecast for labour supply and labour demand in the agriculture sector. This included employment (domestic and foreign) and job vacancies projections for each province, 15 different industries and 25 occupational groups.

The forecast presented in this report was produced by The Conference Board of Canada (CBOC) using their Model of Occupations, Skills and Technology (MOST). The MOST is a unique tool that generates detailed employment and vacancy projections at the occupation, industry and provincial level.¹²¹

Historical Employment Data

The most detailed source depicting how the labour market operates in Canada comes from Statistics Canada's Census of Population, the most recent data being from 2021. This includes employment by 4-digit NAICS and 4-digit NOCS by province and territory and is the dataset that historical estimates and projections are based on. Different sources are used to make the adjustments over historical periods where reported data at detailed levels

do not exist (or do not exist reliably) as well as over both the short and longer term. Specifically for agriculture, the Census does not produce data for all the 4-digit NAICS industries required. Data from the LFS is used to disaggregate Census data to the required industry level of detail.

Forecasting Employment

To capture agriculture specific labour market trends, we use production forecasts at the industry level based on the OECD Agriculture Outlook for 2023-2032, with some adjustments based on industry-specific knowledge from stakeholders. While the aggregate levels remain anchored to The Conference Board of Canada industry forecasts at the 3-digit NAICS level, MOST allows for industry specific trends.

Short term employment trends are informed by various sources, including changes at both an industry and occupational basis over the past three censuses (2021, 2016 and 2011). These longer term trends have a bigger influence earlier in the projection period (up to 2025), with its effect gradually diminishing over time.

Long term trends from the industry and occupations from the U.S. Bureau of Labor's 10-year projections are also

121 Conference Board of Canada, "The Labour Market of Tomorrow: Projections From the Model of Occupations, Skills and Technology (MOST)."



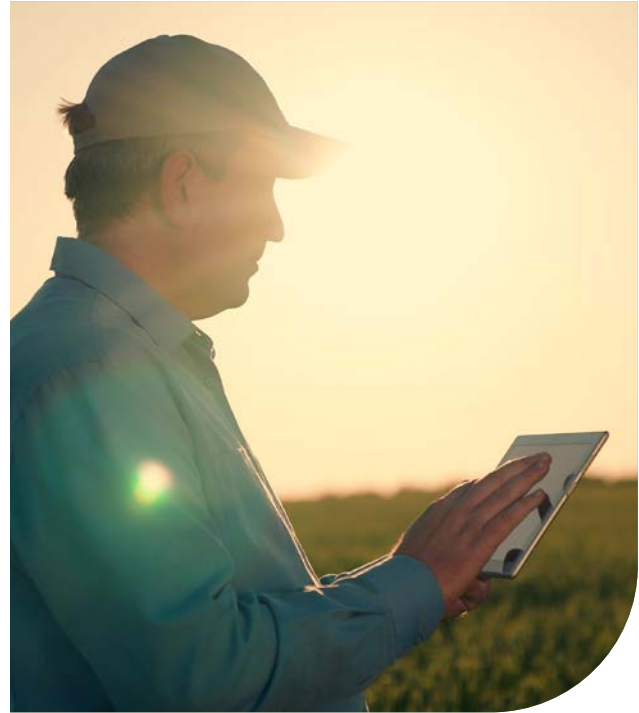
used.¹²² More weight is given to these trends in the later years of the forecast (up to 2030). Incorporating short term trends from Canadian data and long term trends from U.S. data sources brings both historical and forward-looking perspectives into the model.

Incorporating Technology

To account for the impact of technology, MOST builds on the work of McKinsey & Company to identify the proportion of tasks that can be automated, and the work of Frey and Osborne to assess the likelihood that it will occur over the next 10-20 years. In essence, the impact on occupations is calculated as being the product of both the proportion and likelihood. This approach effectively differentiates the impact of automation on an occupational basis. To be conservative, the aggregate effect of automation is assumed to represent 50 per cent of the actual product of the proportion and likelihood with the full effect only slated to occur by 2040. From a phasing-in perspective, MOST assumes that the pace of automation will begin to impact labour markets in 2023 and increase on an annual basis until it achieves the full effect in 2040.

Assumptions Underlying Employment

MOST has been developed using a wide variety of credible and regularly



updated data sources, including CBOC's own national and provincial/territorial economic forecasts that span both the medium term (5-year horizon) and longer term (20-year horizon). MOST is designed so that aggregate employment projections (at the 2-digit NAICS level) align with the most recent CBOC projections.

Given CBOC economic and demographic projections are regularly updated, the projections presented in this report reflect the economic and demographic perspective of labour markets in Canada at that time. See Table C.1 for a list of the CBOC forecast used in the model and the time they were released.

¹²² While the industry breakdowns from the U.S. Bureau of Labour largely align with the coding of industries used in Canada, occupations require a specific mapping that shows a concordance between different occupation coding systems, including that of Statistics Canada, "Correspondence: National Occupational Classification (NOC) 2016 Version 1.3 to Standard Occupational Classification (SOC) 2018 (US)."

Table C.1: Release dates of The Conference Board of Canada Forecasts

	Time of release
National – 20-year Forecast	Spring 2023
National – 5-year Forecast	Summer 2023
Provincial – 20-year Forecast	Winter 2023
Provincial – 5-year Forecast	Summer 2023
Population and Household Forecast	Fall 2022

Source: The Conference Board of Canada.

It should be noted that employment projections produced by MOST, as well as those from the Conference Board’s own national and provincial/territorial economic forecasts, assume that the demand for labour will largely be met within the economy. This implies that the inner workings of the labour market will adapt to escalating imbalances and inefficiencies. It does not mean labour market adaptation will eliminate imbalances and inefficiencies in the labour market; rather, it means interactions in the labour market are dynamic. In fact, it will be through the interactions of labour demand and labour supply in MOST that the extent of changes required to allow the economy to perform at the levels projected will become evident. On this basis, it is important that projections of MOST remain consistent with the Conference Board’s aggregate employment projections, which are interwoven in a broader range of economic, demographic and fiscal assumptions devised to create the projections.

While these assumptions largely explain how the aggregate employment projections (largely at the 2-digit NAICS level) are derived, there are considerable discrete movements to account for at the 3- and 4-digit NAICS levels as well as at the occupational level. In this respect, MOST, once again, relies on a variety of sources such as the Census of Population and the Labour Force Survey to adjust the relative performance of industries at the 3- and 4-digit NAICS level to that of the more aggregate 2-digit NAICS level to which they fall under.

Forecasting Vacancies

The aggregate measure of vacancies represents the number of unfilled jobs at a point in time. To forecast vacancies for a given occupation or industry, we need to forecast both the number of job openings that are expected to occur as well as the number of qualified job seekers. From a dynamic perspective, the change in vacancies is determined by the difference between the pace of



new job openings added relative to the number of qualified job seekers hired. Hence, the projection of vacancies depends on projections of both job openings and job seekers.

Job Openings

In a general sense, job openings are driven from labour demand in two distinct categories: expansion and replacement demand.

As an industry grows, it will generate job openings for newly created positions, which is the expansion component. Expansion demand for workers comes from changes in employment. In other words, if employment in each industry is increasing, that increase is considered the expansion demand or number of job openings for new positions.

Job openings also come from replacement demand, whereby workers leave for a variety of reasons which leaves employers with an unfilled position. This category includes retirements, mortalities, migration (workers who move away) and turnover.

Retirements and mortality rates are estimated based on labour force participation rates by age for each occupation. Interprovincial and international emigration is anchored to CBOC forecasts and then distributed by occupation based on Census data. Turnover is when individuals leave either voluntarily or involuntarily from their positions and look for new employment.

Job Seekers

Job seekers include workers who are available and qualified to fill an open job. They come from school leavers, immigrants and interprovincial migration into the area. Job seekers also includes turnover or individuals who are looking for a new job.

The number of school leavers is estimated based on three factors:

1. The likelihood for an individual to pursue various levels of educational attainment (such as no high school, high school, college, university bachelor degree or higher), relying on data from Statistics Canada.
2. The likelihood of an individual to pursue various “majors,” drawing on Canadian Information Processing Society (CIPS) data.
3. The likelihood to obtain various positions based on level of education and major, drawing on CIPS data by age.

International and interprovincial immigration is anchored to CBOC forecasts and then distributed by occupation based on Census data.

Turnover creates a pool of workers who either find a job in the same occupation or industry, or look for a job in a new occupation or industry. The model assumes a fixed share of these workers



find a job in the same occupation and a fixed share look for a job in a new occupation. The success rate of a worker to find a job in a new occupation is based on job availability and skills matching.

Labour Gap Analysis

The labour gap, or more correctly referred to as the domestic labour gap, is the number of positions that are not able to be filled by the domestic labour force. In MOST, the domestic labour gap is determined by adding the number of vacancies to the number of foreign workers. By measuring the domestic labour gap by province, industry and occupation, we can assess severity of domestic labour shortages in agriculture across Canada. Identifying areas where the labour shortages are most critical can provide valuable insight to inform policy and program decisions.

Incorporating Foreign Workers

In previous iterations of this research, foreign worker employment was not incorporated into the forecast of labour supply. However, in our current approach, we have included a forecast for foreign workers. This allows us to not only report the domestic labour gap but also determine the proportion of this gap that is expected to be filled by foreign workers. Given that foreign workers account for around 17 per cent of the agriculture workforce in Canada, it is important to include them in our forecasts to obtain a more accurate measurement of vacancies. The number of vacancies represents the structural

labour gap that is not filled either by domestic workers or foreign workers without additional intervention.

Data on foreign workers comes from various sources. The primary source used is Agriculture and Agri-food Labour Statistics Program (AALSP) from Statistics Canada. This source provided the number of foreign workers, and the number of jobs filled by foreign workers by province and by industry. AALSP Does not include support services and wholesale (1151, 1152, 4111 and 4183). Data on the number of approved positions by industry from Employment and Social Development Canada (ESDC) was used to estimate foreign workers in industries not covered by AALSP. The distribution of foreign workers by occupation was obtained from Immigration, Refugees and Citizenship Canada (IRCC).

Projections for foreign workers over the next 5 years are anchored to CBOC's forecast for non-permanent residents. The distribution and growth of foreign workers by industry and occupation is assumed to remain constant over time.

It is important to note that the number of foreign workers employed is highly sensitive to policy changes. This sensitivity was a main reason why they were excluded from previous forecasts. However, for our current forecast, we assume a stable and consistent policy environment going forward.

Estimating Peak Values

It was vital to estimate employment (domestic and foreign) and vacancies to

capture the full extent of labour needs in the agriculture sector. To do this, we calculated the per cent increase between average and peak numbers for both domestic employment and vacancies with the most recent data (2022), and applied that per cent increase to the forecast. Peak domestic employment was determined using custom monthly employment data from the Labour Force Survey, and peak vacancies was determined using custom quarterly vacancy data from the Job Vacancy and Wage Survey. Peak estimates were done on an industry basis. See the breakdown by industry in Table C.2.

Because we only had cumulative annual data (from the Agriculture and Agri-food Labour Statistics Program), a different

approach was required to determine peak foreign employment. Peak employment needed to be lower than the cumulative figure since foreign workers are not all employed simultaneously. Using custom data from Employment and Social Development Canada, we estimated the proportion of year-round and seasonal foreign workers for each industry. At peak times, we assumed all year-round foreign workers were employed and three-quarters of seasonal foreign workers. Similarly, average foreign employment for the year was determined by combining year-round foreign workers with one-third of seasonal foreign workers. Then, to estimate peak foreign employment, the forecast was multiplied by the percentage increase between average and peak (Table C.2).





Table C.2: Seasonal fluctuations in domestic employment and vacancies by industry

Difference between peak and average as a share of average, per cent, 2022.

Industry	Domestic Employment	Foreign Employment	Vacancies
1111 Grain and oilseed farming	18%	32%	45%
1112 Vegetable and melon farming	48%	56%	46%
1113 Fruit and tree nut farming	55%	78%	105%
1114 Greenhouse, nursery and floriculture	25%	57%	30%
1119 Other crop farming	23%	77%	48%
1121 Cattle ranching and farming	12%	17%	7%
1122 Hog and pig farming	30%	5%	26%
1123 Poultry and egg production	27%	7%	5%
1124 Sheep and goat farming	56%	9%	43%
1125 Aquaculture	19%	28%	5%
1129 Other animal production	11%	69%	11%
1151 Support activities for crop production	29%	30%	33%
1152 Support activities for animal production	49%	2%	55%
4111 Farm product merchant wholesalers	39%	2%	33%
4183 Agricultural supplies merchant wholesalers	24%	34%	36%

Source: Statistics Canada; Employment and Social Development Canada; The Conference Board of Canada



Occupation Coverage

For this research, we classified the agriculture workforce by 18 specific occupations and 7 groupings of other occupations (Tables C.3 and C.4). The selected occupations and groupings

were determined based on the number of agricultural workers found in each occupation and the predominance of the occupation in the agriculture sector. The classification was in line with the National Occupational Classification (NOC) 2021 system used by Statistics Canada to organize occupational data.

Table C.3: Occupation Coverage

Eighteen core occupations covered in this research.

4-digit NOCs (2021)
00018 - Senior managers
80020 - Managers in agriculture
80021 - Managers in horticulture
80022 - Managers in aquaculture
21112 - Agricultural representatives, consultants and specialists
22111 - Agricultural and fish products inspectors
22114 - Landscape and horticulture technicians and specialists
72401 - Heavy-duty equipment mechanics
73300 - Transport truck drivers
82030 - Agricultural service contractors and farm supervisors*
84120 - Specialized livestock workers and farm machinery operators*
82031 - Contractors and supervisors, landscaping, grounds maintenance and horticulture services
85121 - Landscaping and grounds maintenance labourers
85100 - Livestock labourers*
85101 - Harvesting labourers*
85103 - Nursery and greenhouse labourers
85102 - Aquaculture and marine harvest labourers
84143 - Testers and graders, food and beverage processing

*Do not have a direct one-to-one mapping between version 2016 and 2021 of the NOC system. See Chart C.3 for more details.

Table C.4: Occupation Groupings

Seven broad occupational groups covered in this research.

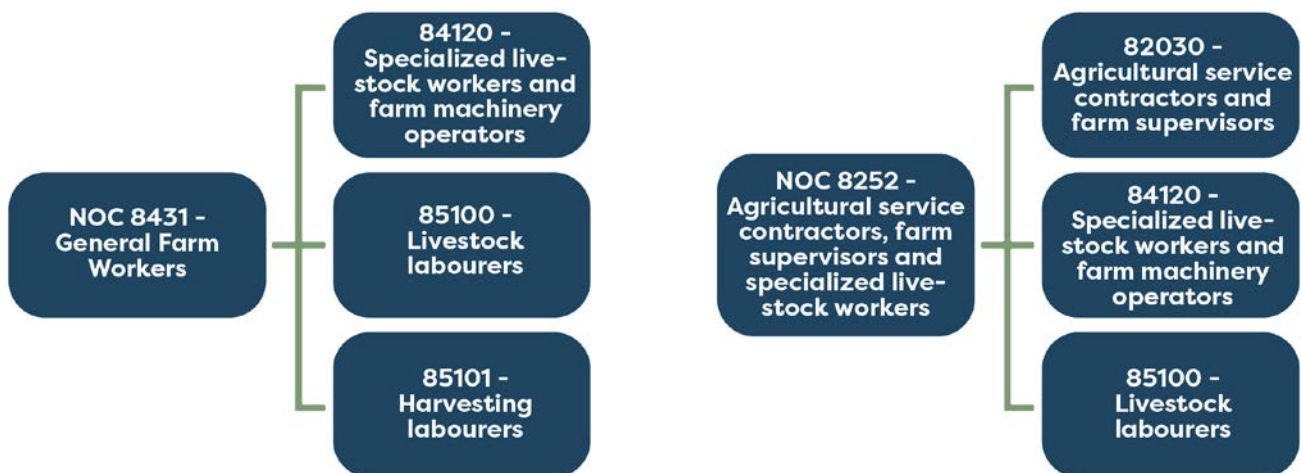
Other NOC groupings (2021)
1 - Business, finance and administration occupations
2 - Other natural and applied sciences and related occupations
3,4 - Occupations in health, education, law and social, community and government services
6 - Sales and service occupations
7 - Other trades, transport and equipment operators and related occupations
8 - Other natural resources, agriculture and related production occupations
9 - Other occupations in manufacturing and utilities

*Do not have a direct one-to-one mapping between version 2016 and 2021 of the NOC system. See Chart C.3 for more details.

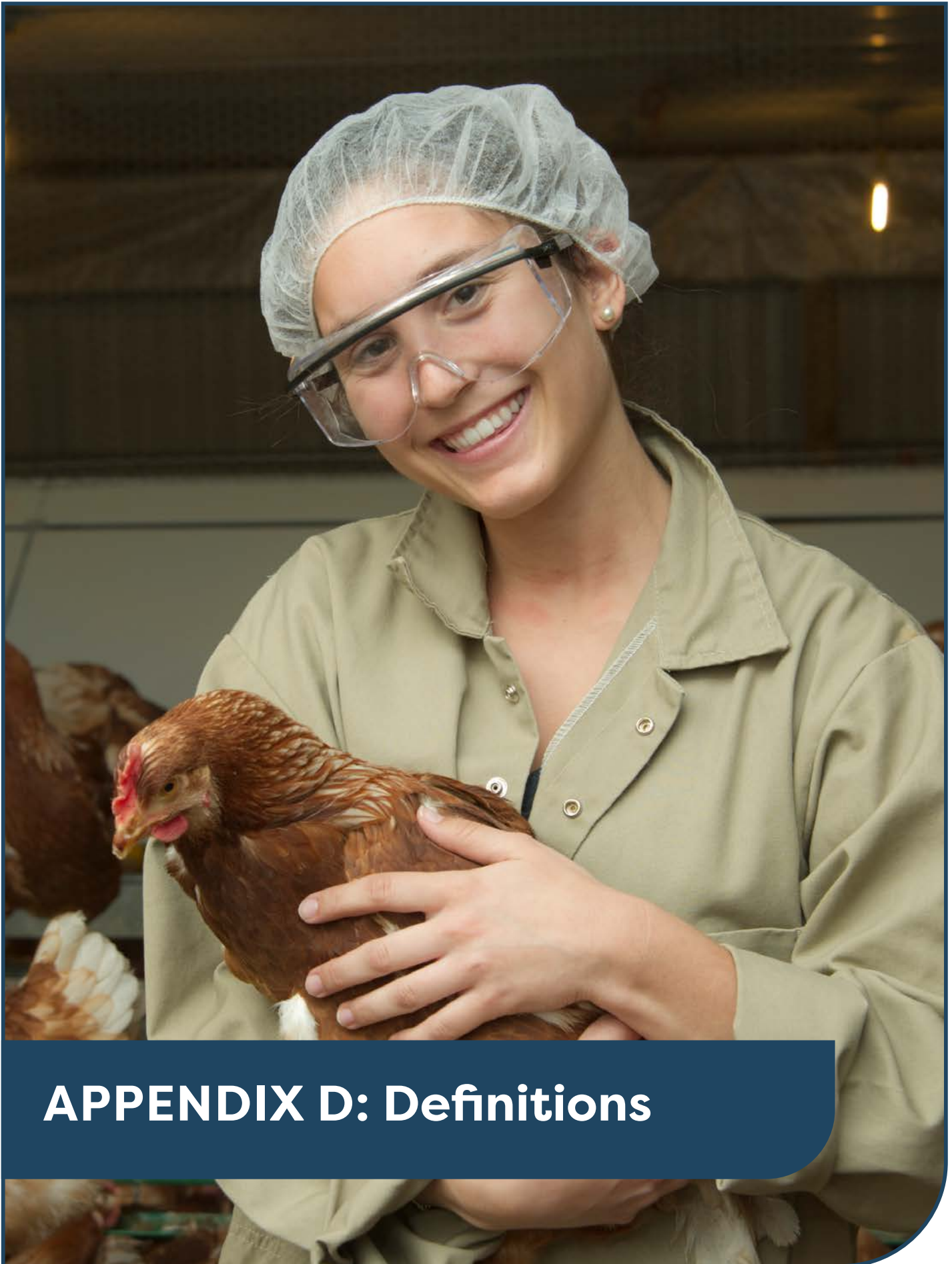
Note on the conversion from the 2016 to the 2021 NOC system

While most 2016 NOC codes mapped directly to the new 2021 codes, not all had a one-to-one match. Notably, NOC 8431 and 8252 (2016) did not follow this pattern (Chart C.5).

Chart C.5: Mapping from 2016 to 2021 NOC system for key agriculture occupations.



Source: Statistics Canada; The Conference Board of Canada.



APPENDIX D: Definitions



Agriculture sector: Agriculture sector includes animal and crop production industries (NAICS 111 and 112), animal and crop support services (NAICS 1151 and 1152) and related wholesale industries (NAICS 4111 and 4183).

Domestic labour gap: The number of jobs that are not able to be filled by domestic workers. It equals foreign worker employment plus the number of remaining vacancies.

Foreign worker: A foreign worker is a non-permanent resident working in the agriculture sector on a temporary basis. This includes workers brought in through the Temporary Foreign Worker Program and the Seasonal Agriculture Worker Program.

Involuntary turnover: The involuntary turnover 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.

Labour 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.

Primary agriculture: Primary agriculture refers to animal and crop production industries (NAICS 111 and 112).

Workforce: Every person who contributes to the operation of a farm, including owner-operators, paid workers, unpaid workers and foreign workers.





REFERENCES

Agriculture and Agri-Food Canada. “Overview of Canada’s agriculture and agri-food sector.” AAFC, June 2023, Accessed September 12, 2023.
<https://agriculture.canada.ca/en/sector/overview>.

Canadian Agricultural Human Resource Council. “Understanding the Effect of COVID-19 on Canada’s Agriculture Workforce,” CAHRC, April 1, 2021.
https://cahrc-ccrha.ca/sites/default/files/2021-11/COVID_19_E_Fin.pdf.

Canadian Aquaculture Industry Alliance and Fisheries Council of Canada. “Canada’s Blue Economy Strategy 2040.” CAIA-FCC, Accessed October 17, 2023.
<https://www.seafoodopportunity.ca/wp-content/uploads/2021/02/Canadas-Blue-Economy-Strategy-2040.pdf>.

The Conference Board of Canada. “Modelling Job Transitions in Canada.” Ottawa: The Conference Board of Canada, March 16, 2021.

The Conference Board of Canada. “The Labour Market of Tomorrow: Projections from the Model of Occupations, Skills and Technology (MOST).” Ottawa: The Conference Board of Canada, 2022. CBoC, October 2022.

Farm Credit Canada. “2023 Dairy Sector Outlook.” FCC, February 01, 2023.
<https://www.fcc-fac.ca/en/knowledge/economics/2023-dairy-outlook.html>.

Employment and Social Development Canada. “Hire a temporary foreign worker through the Recognized Employer Pilot: Overview.” ESDC, August 2023. Accessed September 8, 2023.
<https://www.canada.ca/en/employment-social-development/services/foreign-workers/recognized-employer.html>.

Immigration, Refugees and Citizenship Canada. “Canada Announces Extension to the Agri-Food Pilot, Facilitating Access to Permanent Residence for Workers and Their Families.” IRCC, May 8, 2023.
<https://www.canada.ca/en/immigration-refugees-citizenship/news/2023/05/canada-announces-extension-to-the-agri-food-pilot-facilitating-access-to-permanent-residence-for-workers-and-their-families.html>.

Immigration, Refugees and Citizenship Canada. “Temporary Residents: Study Permit Holders – Monthly IRCC Updates – Canada – Study permit holders on December 31st by province/territory and study level.” IRCC, Accessed November 16, 2023.
<https://open.canada.ca/data/en/dataset/90115b00-f9b8-49e8-afa3-b4cff8facaee/resource/b663a97c-61d4-4e17-af51-0cba01ef3a44>.



Leman, Dilys, and Liz Marcil. "Preparing for an Impending Employee Exodus: Increased Turnover and Retirement Risk Necessitate Succession Planning." Ottawa: The Conference Board of Canada, 2023.

National Center for O*NET Development. "O*NET OnLine." n.d. Accessed September 8, 2023. <https://www.onetonline.org/>.

OECD/FAO. "OECD-FAO Agricultural Outlook 2023-2032." *OECD Publishing*, July 2023. Paris, <https://doi.org/10.1787/08801ab7-en>.

Ontario Greenhouse Vegetable Growers, "OGVG Factsheet." OGVG. August 2023. https://www.ogvg.com/files/ugd/2b0cf3_886f806a02124c01b266ebe1d90eafdc.pdf.

Statistics Canada, "Businesses – Canadian Industry Statistics." *Statistics Canada*, Accessed October 18, 2023. <https://ised-isde.canada.ca/app/ixb/cis/businesses-entreprises/4111>.

Statistics Canada, "Canada's large urban centres continue to grow and spread." *Statistics Canada*, March 9, 2022. <https://www150.statcan.gc.ca/n1/daily-quotidien/220209/dq220209b-eng.htm>.

Statistics Canada, "Canada's population estimates: Record-high population growth in 2022." *Statistics Canada*, March 22, 2023. <https://www150.statcan.gc.ca/n1/daily-quotidien/230322/dq230322f-eng.htm>.

Statistics Canada, "International students as a source of labour supply: A summary of recent trends." *Statistics Canada*, March 23, 2023. <https://www150.statcan.gc.ca/n1/pub/36-28-0001/2022003/article/00001-eng.htm>.

Statistics Canada. "Model-based principal field crop estimates, July 2023." *Statistics Canada*, Accessed September 8, 2023. <https://www150.statcan.gc.ca/n1/daily-quotidien/230829/dq230829a-eng.htm>.

Statistics Canada. "North American Industry Classification System (NAICS) Canada 2022." *Statistics Canada*, Accessed October 16, 2023. <https://www23.statcan.gc.ca/imdb/p3VD>.

Statistics Canada, "Population growth in Canada's rural areas, 2016 to 2021." *Statistics Canada*, February 9, 2022. <https://www150.statcan.gc.ca/n1/daily-quotidien/220209/dq220209b-eng.htm>.



Statistics Canada, “Table: 32-10-0158-01 Farms classified by operating arrangement, Census of Agriculture historical data.” *Statistics Canada*, Accessed November 14, 2023. <https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=3210015801>.

Statistics Canada, “Table: 32-10-0166-01 Farms classified by farm type, Census of Agriculture historical data.” *Statistics Canada*, Accessed November 14, 2023. <https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=3210016601>.

Statistics Canada. “Table 32-10-0045-01 Farm cash receipts, annual (x 1,000).” *Statistics Canada*, Accessed July 14, 2023. <https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=3210004501>.

Statistics Canada. “Table: 32-10-0215-01 Employees in the agriculture sector, and agricultural operations with at least one employee.” *Statistics Canada*, Accessed September 8, 2023. <https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=3210021501>.

Statistics Canada. “Table 32-10-0218-01 Temporary foreign workers in the agriculture and agri-food sectors, by industry.” *Statistics Canada*, Accessed September 8, 2023. <https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=3210021801>.

Statistics Canada. “Table: 32-10-0456-01 Production and value of greenhouse fruits and vegetables.” *Statistics Canada*, Accessed September 8, 2023. <https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=3210045601>.

Statistics Canada. “Table: 32-10-0364-01 Area, production and farm gate value of marketed fruits.” *Statistics Canada*, Accessed September 8, 2023. <https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=3210036401>.

Statistics Canada. “Table: 32-10-0365-01 Area, production and farm gate value of marketed vegetables.” *Statistics Canada*, Accessed September 8, 2023. <https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=3210036501>.

Statistics Canada. “Table 33-10-0568-01 Canadian Business Counts, with employees, June 2022.” *Statistics Canada*, Accessed July 15, 2023. <https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=3310056801>.

Statistics Canada. “Table 36-10-0402-01 Gross domestic product (GDP) at basic prices, by industry, provinces and territories (x 1,000,000).” *Statistics Canada*, Accessed September 20, 2023. <https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=3610040201>.

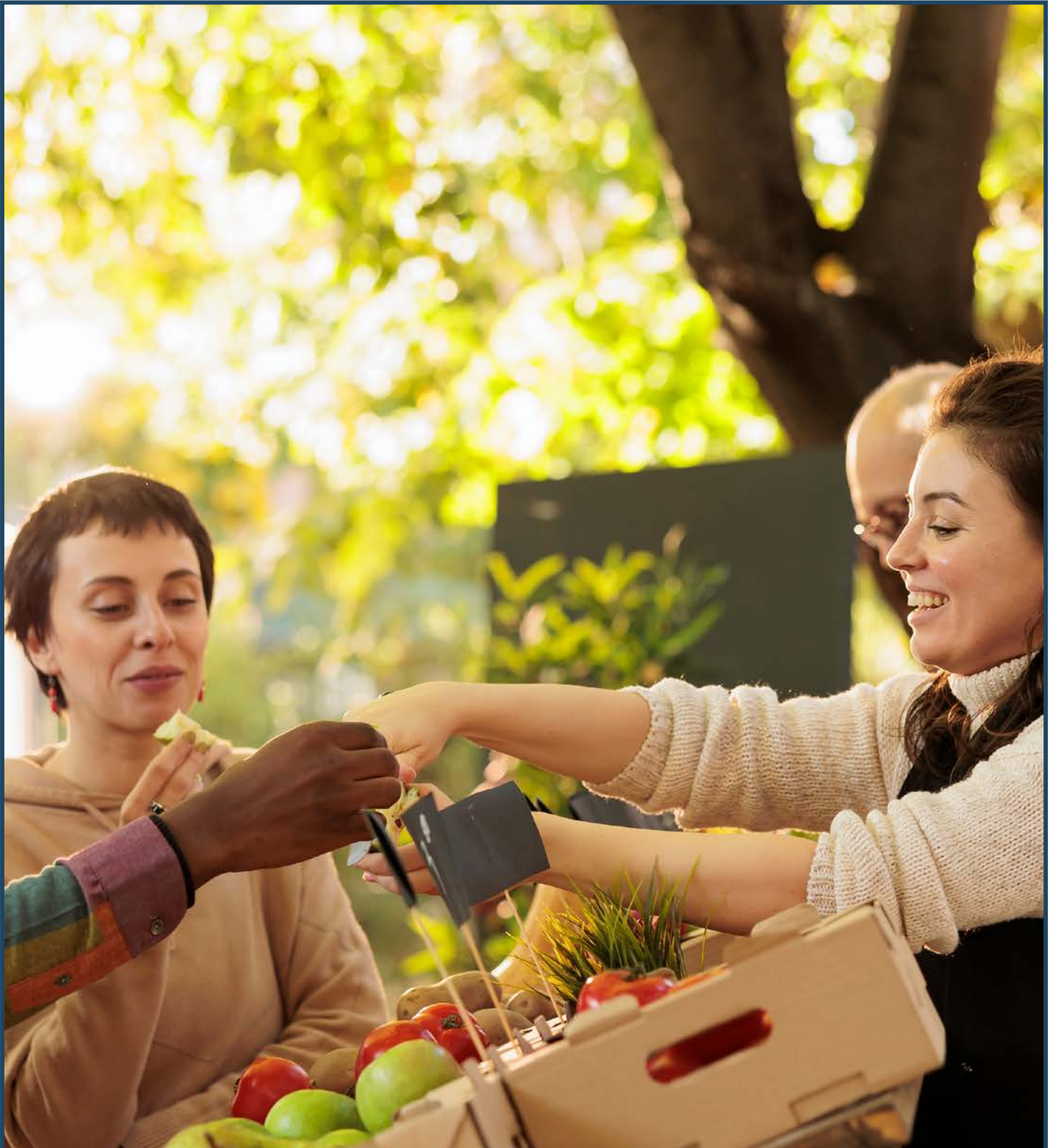
Statistics Canada. “Table: 14-10-0023-01 Labour force characteristics by industry, annual (x 1,000).” *Statistics Canada*, Accessed September 20, 2023.
<https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=1410002301>.

Statistics Canada. “Table 14-10-0325-01 Job vacancies, payroll employees, job vacancy rate, and average offered hourly wage by provinces and territories, quarterly, unadjusted for seasonality.” *Statistics Canada*, Accessed October 16, 2023.
<https://www150.statcan.gc.ca/t1/tbl1/en/cv.action?pid=1410032501>.

Statistics Canada. “Table 14-10-0326-01 Job vacancies, payroll employees, job vacancy rate, and average offered hourly wage by industry sector, quarterly, unadjusted for seasonality.” *Statistics Canada*, Accessed October 16, 2023.
<https://www150.statcan.gc.ca/t1/tbl1/en/cv.action?pid=1410032601>.

Statistics Canada, “The socioeconomic snapshot of Canada’s evolving farm population, 2021.” *Statistics Canada*, August 25, 2023.
<https://www150.statcan.gc.ca/n1/daily-quotidien/230825/dq230825a-eng.htm>.





ABOUT THIS REPORT



This report represents an update to the Labour Market Information (LMI) study that the Conference Board of Canada conducted for the Canadian Agricultural Human Resource Council (CAHRC) in 2014 and 2017. The purpose is to re-assess the labour market, project supply and demand for agricultural workers from 2023 until 2030 and recommend potential solutions to labour issues.

The Conference Board of Canada, commissioned by CAHRC, customized their Model of Occupations, Skills and Technology to forecast agricultural labour demand and supply for each province, for 15 different commodity groups and 25 occupational groups.

The survey results and economic model were validated through several industry consultations conducted Canada-wide, including:

- A large-scale survey of 1,048 employers, 249 workers and 152 industry stakeholders
- Five regional focus groups with 60 participants.
- Five commodity-specific webinars with 81 participants.
- An LMI Advisory Group and Provincial LMI Panel presentation.

This data was used to produce the following reports:

Industry-specific factsheets

- Apiculture
- Aquaculture

- Beef
- Dairy
- Fruit and Vegetable
- Grain and Oilseed
- Greenhouse, Nursery, and Floriculture
- Poultry and Egg
- Sheep and Goat
- Swine
- Support Services

Regional factsheets

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

This research was funded in part by the Government of Canada's Sectoral Workforce Solutions Program.

For more information on the research, and to access additional commodity-specific, national and provincial reports, please visit the CAHRC website at <https://cahrc-ccrha.ca/programs/agri-lmi>.

About CAHRC

The Canadian Agricultural Human Resource 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.

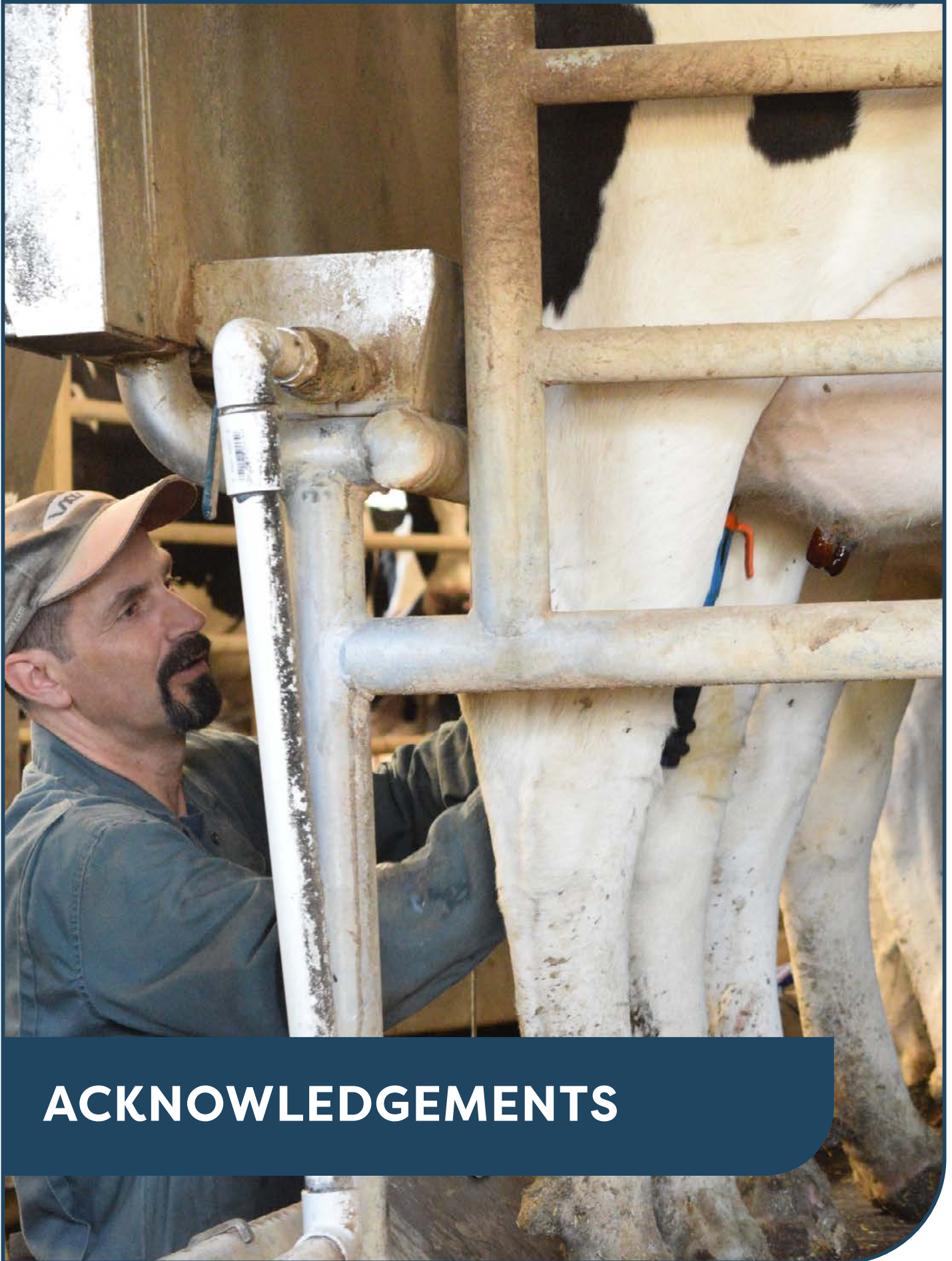
For more information about the Council and its products and services for Canada’s agriculture sector, please visit www.cahrc-ccrha.ca.

About The Conference Board of Canada

The Conference Board of Canada is our country’s foremost independent

organization for applied research. Researchers and economists with profound subject matter expertise bring applied insights to the Conference Board’s key focus areas of: Economics, Education and Skills, Health, Human Resources, Inclusion, Indigenous & Northern Communities, Innovation, Immigration and Sustainability. Through the use of sophisticated data modelling, best-in-class forecasting and multi-method research approaches, the Conference Board of Canada delivers research to help leaders take action.





ACKNOWLEDGEMENTS



The Canadian Agricultural Human Resource Council (CAHRC) extends their gratitude to the dedicated volunteers of this study for their invaluable contributions. We also express sincere appreciation for the guidance provided by the LMI Advisory Group and the LMI Provincial Panel.

LMI Advisory Group

Chair: Ontario Federation of Agriculture – **Peter Sykanda**

Aboriginal Aquaculture Association – **Marguerite Parker**

AGRIcarrières – **Geneviève Lemonde**

Agricultural Alliance of New Brunswick – **Marc Ouellet**

Agricultural Manufacturers of Canada – **Donna Boyd**

Agriculture and Agri-Food Canada – **Jay Conte**

Agri-Food Management Excellence – **Heather Broughton**

Alberta Federation of Agriculture – **Humphrey Banack**

Canada East Equipment Dealers' Association – **Andy Svetec, Scott Weagant**

Canadian Aquaculture Industry Alliance – **Cyr Couturier**

Canadian Canola Growers Association – **Julia Ilashchuk**

Canadian Federation of Agriculture – **Brodie Berrigan**

Canadian Nursery and Landscape Association – **Leslie Sison**

Canadian Pork Council – **Chloé Belchamber**

Canadian Sheep Federation – **Corlena Patterson**

Farm Credit Canada – **Darlene McBain**

First Nations Agriculture Association – **Trevor Kempthorne**

Flowers Canada Growers – **Andrew Morse**

Fruit and Vegetable Growers Canada – **Beth Connery**

Immigration, Refugees and Citizenship Canada – **Ruba Moubarak, Sébastien Vachon**

Newfoundland and Labrador
Federation of Agriculture –
Andy Wright

Ontario Fruit and Vegetable Growers’
Association – **Stefan Larrass**

Prince Edward Island Agriculture
Sector Council – **Laurie Loane**

LMI Provincial Panel

Alberta: Agriculture and Irrigation –
Lynn Jacobson, Mark Chochula

British Columbia: Agriculture and
Food – **Dennis Jess Palmer,**
Connor Williamson

Manitoba: Manitoba Agriculture –
Stephanie Cruickshanks

Quebec: Ministère de l’Agriculture,
des Pêcheries et de l’Alimentation –
Ignacio Ferraro

New Brunswick: Agriculture,
Aquaculture and Fisheries –
Ayesha Noel

Newfoundland and Labrador:
Fisheries, Forestry and Agriculture –
Ann Marie Whelan

Immigration, Population Growth
and Skills – **Derrick Barrett**

Nova Scotia: Nova Scotia Agriculture
– **Brian Udoh**

Ontario: Ontario Ministry of
Agriculture, Food and Rural Affairs –
Katie Dunn, Alissa Moenting

Prince Edward Island: Prince Edward
Island Agriculture – **Fred Vanderkloet**

Saskatchewan: Saskatchewan
Agriculture – **Hannah Crook**





CAHRC-CCRHA

Canadian Agricultural Human Resource Council
Conseil canadien pour les ressources humaines
en agriculture

The use of any part of this publication, whether it is reproduced, stored in a retrieval system, or transmitted in any form or by any means (including electronic, mechanical, photographic, photocopying or recording), without the prior written permission of CAHRC is an infringement of copyright law.

Canadian Agricultural Human Resource Council

Published February 2024

T: 613.745.7457

E: info@cahrc-ccrha.ca

This document may be downloaded from www.cahrc-ccrha.ca

All rights reserved. © 2024 CAHRC

Front and back cover photo credit: © LJM Photo / AgStock
All other photos courtesy of Adobe Stock | istockphoto | FarmPhotos.ca
Farmstockimages.com | Shutterstock

Funded in part by the Government
of Canada's Sectoral Workforce
Solutions Program

Canada

CAHRC
Canadian Agricultural
Human Resource Council



CCRHA
Conseil canadien pour
les ressources humaines
en agriculture

SOWING SEEDS OF **CHANGE**

Agriculture Labour
Market Forecast
2023-2030

