



CAHRC
Canadian Agricultural
Human Resource Council



CCRHA
Conseil canadien pour
les ressources humaines
en agriculture

HARVESTING TALENT ACROSS CANADA: EXPLORING DEMAND FOR OCCUPATION- SPECIFIC SKILLS IN AGRICULTURE



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EXECUTIVE SUMMARY



The Canadian Agricultural Human Resource Council (CAHRC), together with partners the Canadian Federation of Agriculture (CFA) and Food and Beverage Canada (FBC), launched the *National Workforce Strategic Plan for Agriculture and Food and Beverage Manufacturing* in 2022.

Developed around five key pillars (see Diagram 1), the Strategic Plan is comprehensive, actionable and broad, as well as capable of adapting to changing times and realities. It includes short, medium and long-term solutions to address both immediate labour shortages and systemic workforce challenges.

Diagram 1: CAHRC’s National Workforce Strategic Plan for Agriculture and Food and Beverage Manufacturing.





The primary objective of this report is to support CAHRC's *National Workforce Strategic Plan for Agriculture and Food and Beverage Manufacturing* by identifying areas of workforce skills gaps in the agriculture sector. This knowledge will enable stakeholders in agriculture to design targeted initiatives that can enhance the skills of agricultural workers where they are located or where their skills are needed most.

The agriculture sector is currently facing several main challenges:

1. Persistent labour shortages are hindering the industry's growth.
2. The labour force may not have the skills required to keep up with current demands nor the adoption of technology.
3. Persistent negative perceptions of careers in agriculture by job seekers and alarmingly high turnover rates of existing employees are impeding the sector's ability to recruit and retain a stable and agile workforce able to meet the demands of the future.

Highlights of this study include:

- This study was conducted using a mixed-methods research design. This included a review of relevant literature including previous related work commissioned by CAHRC, an analysis of Statistics Canada data, retrieval and analysis of job and skills demand data derived from Vicinity Jobs, data gathering and analysis of data related to post-secondary institutions and student outcomes for key occupations identified by CAHRC.
- Job posting data allows for direct observations of the skills being

demanding in occupations across Canada. The analysis of skills and skills gaps in this report offers an important opportunity to explore the use of job posting data as a potential approach to inform strategic planning efforts and initiatives. However, given that the use of job posting data to analyze occupational and skills demand is relatively recent, further development and testing is required and necessary to determine the validity of these and other ways to use the data for identification of skills gaps and skills forecasting.

- Key skills demanded in many agriculture job postings tend to be vague and focused on social and emotional skills (e.g., teamwork, communication, interpersonal skills), which can be difficult to demonstrate on a CV or in an interview.
- For two occupations — Transport truck drivers and Heavy-duty equipment mechanics — skills demanded were mostly confined to technical and operational skills, such as repairs and corrective maintenance, machinery and equipment repairs, troubleshooting and inspection of vehicles, rather than soft skills such as teamwork and leadership. This made it easy for job seekers to understand what is required for the role.
- For similar occupations, such as Managers in Agriculture and Managers in Horticulture, skill requirements varied. Job postings for Managers in Horticulture call for supervisory skills, records management and planning, whereas job postings for Managers in Agriculture do not.



- In Quebec, French language is one of the skills most in demand across all occupations, except for Heavy-duty mechanics, Agricultural service contractors and farm supervisors. This correlates with French language laws.
- Relative to the other 10 key occupations in agriculture, there were very few job postings for Managers in Agriculture and Managers in Horticulture across Canada. It is unclear if the low numbers of job postings for these occupations is representative of actual demand for these occupations, as they are comprised of both self-employed business owners and employees, and the recruitment method used in the sector is often word of mouth.
- To strengthen the agriculture workforce, stakeholders in the agriculture sector should prioritize understanding their current workforce profile. This also involves expanding their knowledge on workforce demographics, skills, experience and education; conducting research on available talent and identification of existing labour shortages, skills shortages and skills mismatches; and improving perceptions of the sector as a viable career option.
- A detailed description of key findings is available in the full report.





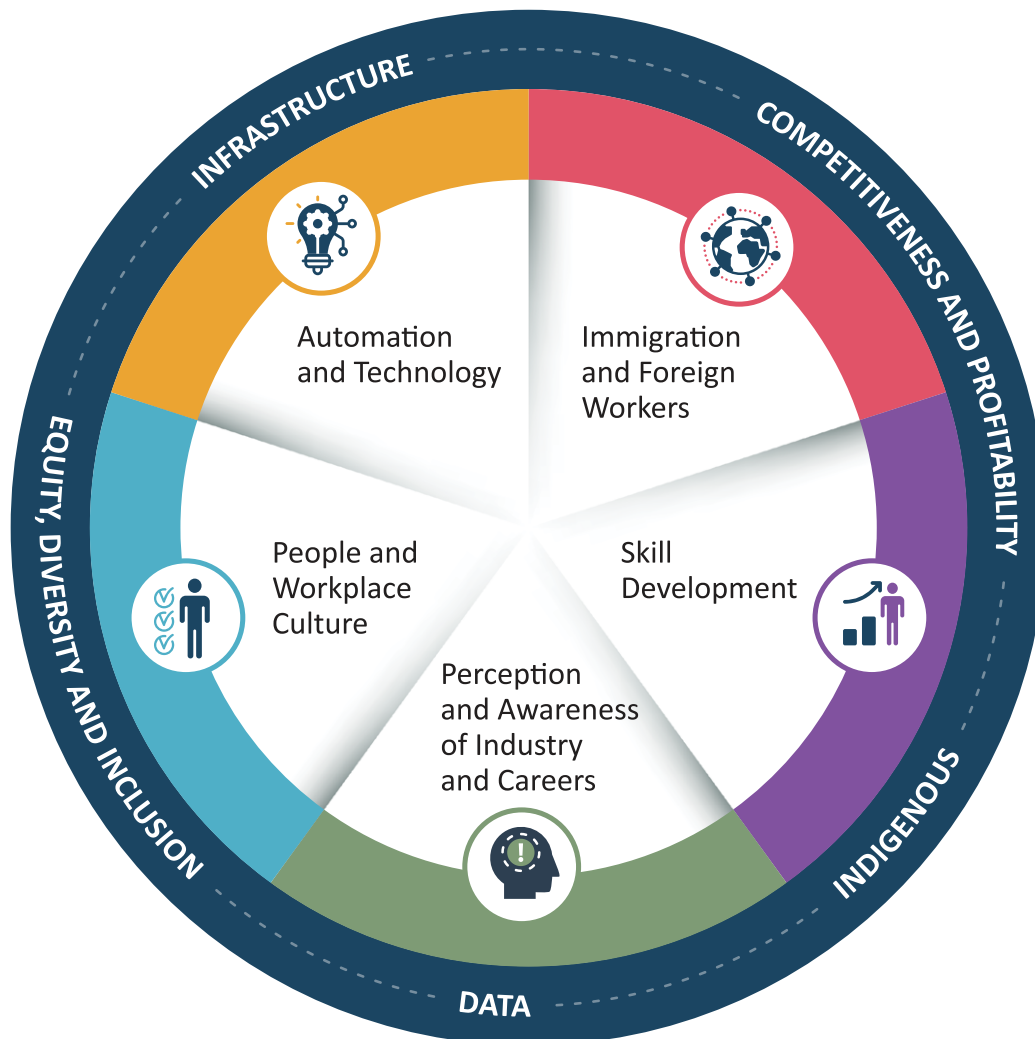
OBJECTIVES OF THIS PROJECT



The Canadian Agricultural Human Resource Council (CAHRC), together with partners the Canadian Federation of Agriculture (CFA) and Food and Beverage Canada (FBC), launched the *National Workforce Strategic Plan for Agriculture and Food and Beverage Manufacturing* in 2022.

Developed around five key pillars (see Diagram 2), the Strategic Plan is comprehensive, actionable and broad, as well as capable of adapting to changing times and realities. It includes short-, medium- and long-term solutions to address both immediate labour shortages and systemic workforce challenges.

Diagram 2: CAHRC’s National Workforce Strategic Plan for Agriculture and Food and Beverage Manufacturing.





The primary objective of this report is to support CAHRC’s *National Workforce Strategic Plan for Agriculture and Food and Beverage Manufacturing* by identifying areas of workforce skills gaps in the agriculture sector. This knowledge will enable stakeholders in agriculture to design targeted initiatives that can enhance the skills of agricultural workers where they are located or where their skills are needed most.

This report also builds on other work undertaken by CAHRC as part of their mandate related to developing and implementing a workforce strategy for the agriculture sector. The information and analysis contained in this report will guide the development of targeted training programs to better equip job seekers in agriculture with the skills most in demand, creating a future-ready workforce. The project will also enhance the sector’s

resilience by ensuring a steady supply of highly skilled workers. It is a forward-looking approach to addressing the workforce challenges faced by the Canadian agricultural sector. Through collaboration and data-driven insights, this work will contribute to the development of a robust, competitive and sustainable agricultural workforce.

The report is organized around the following six (6) sections:

- Section 1:** Rationale for the Project
- Section 2:** Overview of the Agriculture Sector
- Section 3:** Exploring Job Demand in Key Agricultural Occupations Across Canada
- Section 4:** Post-Secondary Education and Training to Support Key Agricultural Occupations
- Section 5:** Occupational Summaries
- Section 6:** Opportunities for Moving Forward





SECTION 1: RATIONALE FOR THE PROJECT



Introduction

The agriculture and food and beverage processing sector¹ is a critical part of the Canadian economy. In 2022, it accounted for \$70 billion (3.4 per cent) of Canada's gross domestic product (GDP)² and just under 10 per cent of household spending.³ Additionally, Canada's abundant land and water resources, access to international markets and strong global reputation as producers of top-quality food⁴ signal the sector is positioned to expand further, both in terms of employment and production. This growth will allow the agri-food sector to keep pace with rising global food demand, which is expected to increase 50 per cent by 2050.⁵

Canada's agricultural sector plays a vital role in ensuring Canadians have access to healthy and locally grown food. Not only does it fulfill food demands domestically, but it also does so globally, making it a major contributor to national economic prosperity. In 2022, work performed within the boundaries of a farm, nursery or greenhouse (primary agriculture) contributed over \$36 billion to the gross domestic product and employed almost 250,000 Canadians. Additionally, the wider agricultural and agri-food sector generated \$143.8 billion in gross domestic product and employed 2.3 million people nationally.⁶

While Canadians rely on the agriculture and food and beverage manufacturers⁷ sector for their food and nutrition, many depend on it for employment. Jobs in this sector are spread throughout an integrated supply chain of primary agriculture

producers, input and service suppliers, food and beverage processors, retailers and wholesalers and service providers. Positions are in both rural and urban locales, on farms, in processing plants and in traditional or home-based offices. Most notably, jobs in this sector are abundant and — given the potential for growth — employers will seek to hire more qualified workers over the coming decades.

However, the sector is at a crossroads. Although it has the potential for continued growth and prosperity in the decades to come, agriculture is facing two key issues:

- 1. Persistent labour shortages are hindering the agriculture sector's growth.** In 2022, agriculture-based organizations across the country reported that they are facing average labour shortages of 20 per cent⁸, and this issue is expected to persist. Forty-four per cent of employers surveyed in primary agriculture and the agriculture sales and services industry reported not being able to fill vacancies in 2022 and suffered earning losses of \$3.5 billion in total sales. If allowed to continue, this issue could have significant impact on Canada's ability to sustain its food production levels, posing a threat to local food security and impeding future economic development and trade growth in the sector.
- 2. The labour force may not have the skills required to keep up with current demands nor the adoption of technology.** In 2020, over half of Canadian farms (50.4

1 Sometimes abbreviated to F&BP in this report.

2 Government of Canada, "Overview of Canada's Agriculture and Agri-Food Sector."

3 Statistics Canada, "Detailed Household Final Consumption Expenditure, Canada, Quarterly."

4 Government of Canada, "Overview of Canada's Agriculture and Agri-Food Sector."

5 Agriculture and Agri-Food Canada, "Overview of the Canadian Agriculture and Agri-Food Sector."

6 Ibid.

7 Canadian Agricultural Human Resource Council, "Interim Report Developed for the National Workforce Strategic Framework for Agriculture and Food & Beverage Manufacturing."

8 Canadian Agricultural Human Resource Council, "Sowing Seeds of Change: Agriculture Labour Market Forecast 2023 – 2030."



per cent) reported they use at least one of eight types of technology,⁹ and many are exploring ways to leverage more. Farms that welcome technological advancements stand to benefit in several ways, including improved efficiency, higher quality of work and lower costs. However, farms that are becoming more technologically advanced will require a higher proportion of workers with digital skills to accommodate these changes. Over time, this could lead to notable skills gaps, which will exacerbate the already-present effects of a critical labour supply issue.

To address these challenges, it is critical for stakeholders in the Canadian agriculture and food and beverage manufacturing sector to come together to not only expand their recruitment efforts to fill current labour shortages, but also to ensure their current and future workforce is suitably skilled to meet the needs of the future.

Defining labour shortages, skills shortages and skills mismatches

Considerable debate exists around skills shortages versus skills mismatches. As the Labour Market Information Council (LMIC) (2018) notes:

- Labour shortages, skills shortages and skills mismatches negatively impact individual well-being and hinder growth, productivity and competitiveness at both the firm- and economy-wide level.
- These three concepts are often used interchangeably, creating confusion and uncertainty, potentially leading to inappropriate or ineffective solutions. As such, the following definitions are recommended:
 - Labour shortages refer to a lack of candidates for a specific job in a specific labour market.
 - Skills shortages refer to a lack of candidates with the skills required by particular employers.
 - Skills mismatches refer to situations in which an employee's current skills are not well suited to their current job.

Source: LMIC (2018): *What's in a Name? Labour Shortages, Skills Shortages, and Skills Mismatches*

⁹ Statistics Canada, "Canada's Farms Integrate Renewable Energy Production and Technologies Toward a Future of Sustainable and Efficient Agriculture."



Previous Related Research Commissioned by CAHRC

This section provides relevant details to provide contextual information on related work carried out by CAHRC and to situate the need for this research. CAHRC has commissioned several comprehensive analyses related to labour market and workforce planning analyses, including:

Sowing Seeds of Change: Agriculture Labour Market Forecast 2023-2030, CAHRC: 2024

Using a customized version of The Conference Board of Canada Model of Occupations, Skills and Technology, along with CAHRC agricultural industry surveys, the report examines how labour demand and supply between 2023 and 2030 will fluctuate for 15 different commodity groups and 25 occupational groups across the provinces.

Key findings include:¹⁰

- Agriculture's labour shortages, particularly acute in 2022 with over 28,200 vacant positions, have hampered the sector's growth. The situation is expected to worsen with the domestic labour gap forecast to increase by 15 per cent over the next eight 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.

- 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. 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, ultimately 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 these workers. Approximately 25,200 immigrants are expected to enter the agriculture sector over the next eight years, equivalent to less than one 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.

Work-integrated learning and experiential learning opportunities connected to the agriculture and food & beverage manufacturing sectors, CAHRC: 2023

This report looks at the landscape for experiential and work-integrated learning (WIL) to help attract, transition and retain students in careers in the agriculture and food and beverage processing (F&BP) sectors. It examines the agriculture and F&BP labour market and educational landscape, providing context on the current state of the sectors and opportunities and challenges; looks

¹⁰ Canadian Agricultural Human Resource Council, "Sowing Seeds of Change: Agriculture Labour Market Forecast 2023-2030."



at experiential and work-integrated learning in Canada, including recent trends and best practices; provides an analysis of experiential and work-integrated learning relevant to the agriculture and F&BP sectors in Canada; and explores opportunities for enhancing experiential and work-integrated learning connected to the agriculture and F&BP sectors and recommended approaches for making progress in these areas.

Key findings include:¹¹

- There are different types of WIL opportunities at post-secondary programs relevant to the agricultural and F&BP sectors, but traditional approaches are the most common. For example, 40.2 per cent of opportunities identified were co-ops and 20.6 per cent were internships.
- Work-integrated learning opportunities at programs connected to the sectors are available on a variety of topics in many institutions across Canada. The top provinces with opportunities were Ontario (32.4 per cent), B.C. (17.2 per cent) and Alberta (15.7 per cent), while the top institutions were University of Guelph, Lakeland College and University of British Columbia.
- The number of WIL opportunities focused on the agriculture and F&BP sectors is limited compared to other sectors. Out of 10 academic disciplines identified by Co-operative Education and Work-Integrated Learning Canada (CEWIL), agriculture had the lowest number of identified WIL opportunities.

“Ontario Agriculture and Food Processing Skills and Occupations Gaps,” CAHRC: 2021

This report summarizes the results of industry consultation across the food processing industry, agriculture sales and service industry and four subsectors in the agriculture sector. Industry stakeholders were asked to identify which skills and occupations are critical in each of the sectors, now and in the future. Industry and sector-specific skill development challenges, trends, issues and proposed actions for how to address these challenges were also discussed.

Key findings include:¹²

- Issues such as a reliance on foreign workers, the short supply of domestic workers, technology and innovation, regulatory changes, an aging workforce and higher rates of retirement, fewer younger workers entering the sector, lack of skills and educational programs related to the sector, regulatory agreements and trade agreements and/or disruptions will have the greatest impact on the workforce.
- Employers find it difficult to find qualified employees with thinking skills (e.g. problem solving, planning), skills related to operating and maintaining equipment, supervisory skills (e.g. managing and leading people, conflict management), intrapersonal or personal skills (e.g. work ethic, initiative), skills related to chemical handling, crop production, operating and maintaining equipment and machinery, trades skills (e.g. plumbing, electrician), maintaining equipment and machinery, animal health and welfare and animal production/husbandry.

11 Canadian Agricultural Human Resource Council, “Work-Integrated Learning and Experiential Learning Opportunities Connected to the Agriculture and Food & Beverage Manufacturing Sectors.”

12 Canadian Agricultural Human Resource Council “Ontario Agriculture and Food Processing Skills and Occupations Gaps.”



- Employers expect their businesses will experience reduced productivity or production delays, reduced sales and revenue and heightened levels of stress for self and employees because of being unable to find and keep employees with the right skills.
- Key barriers to developing people's skills in the sector include that new entrants

do not see jobs in the sector as viable careers, smaller operations with under 10 employees struggle to offer career opportunities because there are no higher-level positions to transition into and available training does not provide applied learning opportunities (e.g. hands-on learning).





Directly forecasting skills demand by leveraging data from online job postings

As the Future Skills Centre notes, this method draws on an important new source of data: skills and other work requirements identified in online job postings.

Extracting skills information from online job postings is achieved by using natural language processing (NLP) algorithms that categorize written text into a predefined taxonomy of work requirements (of which skills are one type). In this way, skills are directly observed at the level of each job posting.

Skills can be measured across or within occupations, industries, regions or any other feature linked to the job postings. In addition, with new job ads being posted each day, the data are available in near-real time. It is crucial, however, to understand the caveats and limitations that can limit the accuracy of forecasts.

- First and foremost, some work requirements are assumed to be obvious. As a result, they are often not explicitly included in the job posting. For example, only 19 per cent of job postings for economists in 2019 listed “Microsoft Excel,” likely because this is a basic requirement for economists.

- Secondly, the data is volatile and may be skewed toward certain types of jobs and regions, depending on the level of detail being explored. Finally, the algorithms used to scan, clean and categorize online job postings are typically proprietary, representing a “black box” when it comes to understanding how the skills information is created.

Despite these important caveats, direct observations of the skills in demand allow for greater flexibility in structuring forecast models. For example, given a sufficiently long history of job-posting data, one could forecast whether demand for data analysis is expected to grow among specific occupations.

This particular method would likely suffer from the same drawbacks noted above: namely, that shifts in economic activity would be difficult to predict accurately. In addition, as a recently developed data source, online job postings often lack a sufficient number of historical data points for standard economic forecasting. (Ideally, such models should be built upon observations from at least one full business cycle.)

While the ability to forecast skills demand based on online job-posting data offers considerable promise, it remains in its infancy. A great deal of further development and testing are merited and should be explored to determine the validity of these and other ways to use these data for skills forecasting.

Source: Future Skills Centre, 2021: *How to Forecast Skills in Demand: A Primer*



SECTION 2: OVERVIEW OF THE AGRICULTURE SECTOR



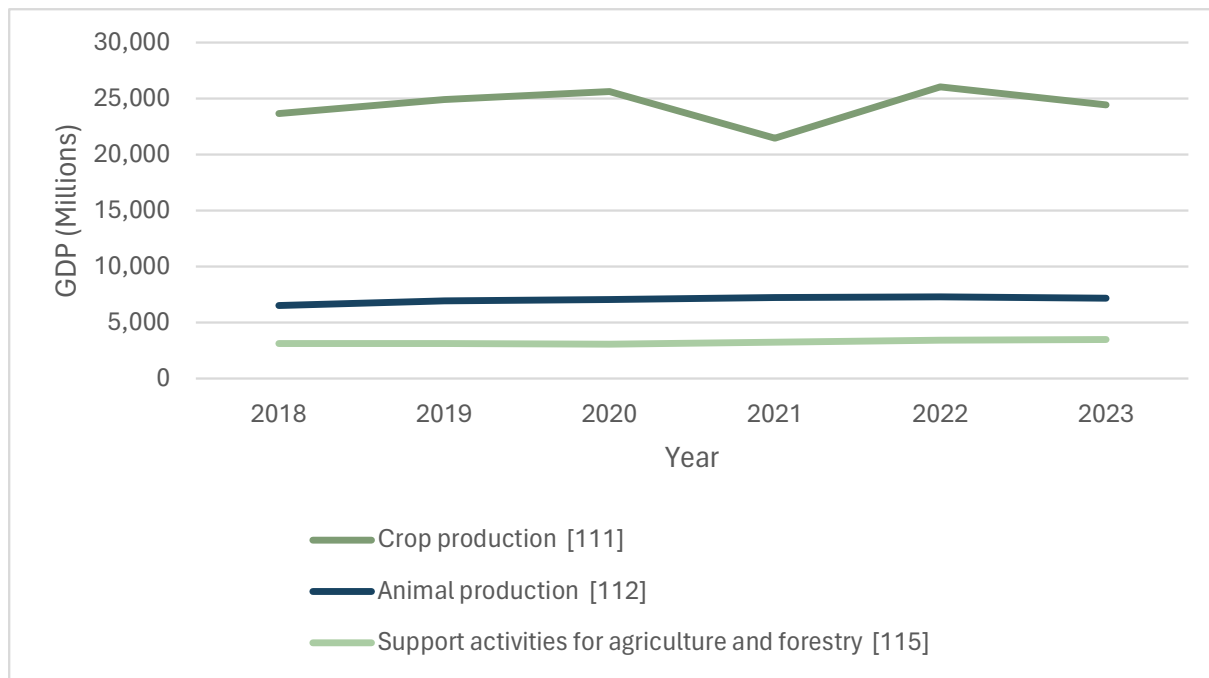
An Economic Snapshot of the Sector

In Canada, primary agriculture is defined as work performed within the boundaries of a farm, nursery or greenhouse. In 2021, Canada had 189,874 farms covering 62.2 million hectares or 6.2 per cent of Canada's land area, concentrated across the Prairies, Quebec and southern Ontario.¹³ The charts below explore gross domestic product (GDP), labour productivity and employment in the primary agriculture sector and are grouped into three main subsectors: crop production, animal production and support activities.

Gross Domestic Product (GDP)

From 2018 to 2022, Gross Domestic Product (GDP) in animal production and support activities for agriculture and forestry remained relatively steady. GDP in crop production dipped considerably in 2021, after a historic drought on the Prairies inhibited the production of several major field crops, such as wheat, canola, barley, soybeans and oats.¹⁴ However, production bounced back and GDP surpassed 2020 levels in 2022.

Chart 1: Agriculture GDP, by subsector, 2018-2023.



Source: Statistics Canada. [Table 36-10-0434-06](#) Gross domestic product (GDP) at basic prices, by industry, annual average, industry detail (x 1,000,000).

¹³ Agriculture and Agri-Food Canada, "Overview of Canada's Agriculture and Agri-Food Sector."

¹⁴ Statistics Canada, "Production of Principal Field Crops, November 2021."

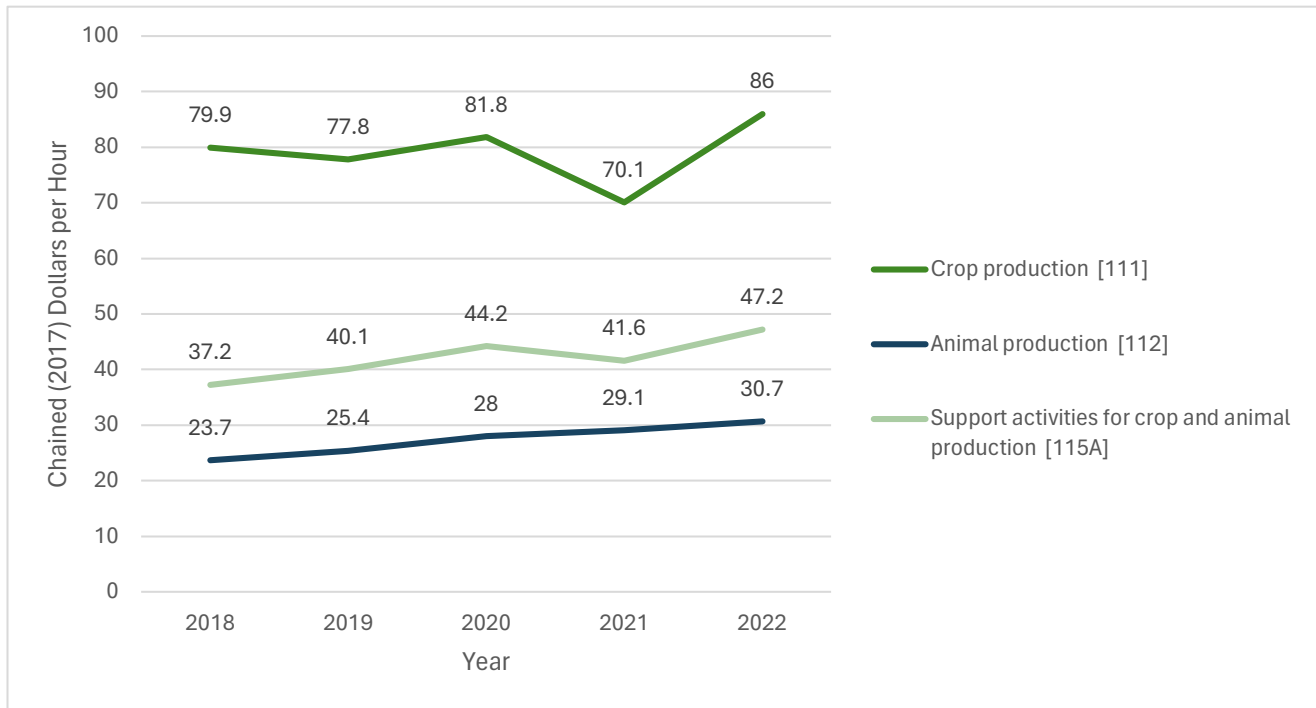


Labour Productivity

From 2018 to 2022¹⁵, labour productivity in animal production rose steadily year over year. Overall, crop production and support activities for crop and animal production saw an increase in labour productivity, but both experienced a

notable temporary decline in 2021. Western Canada experienced several extreme weather events in 2021, such as droughts, floods, wildfires and heatwaves, which adversely affected crop yields and livestock production. These climate-related disruptions can reduce productivity by damaging crops, depleting resources and increasing production costs.

Chart 2: Agriculture labour productivity, by subsector, 2018-2022.



Source: Statistics Canada. [Table 36-10-0480-01](#) Labour productivity and related measures by business sector industry and by non-commercial activity consistent with the industry accounts.

¹⁵ At the time this report was developed, data for 2023 had not yet been released by Statistics Canada.



Agriculture’s Workforce Profile

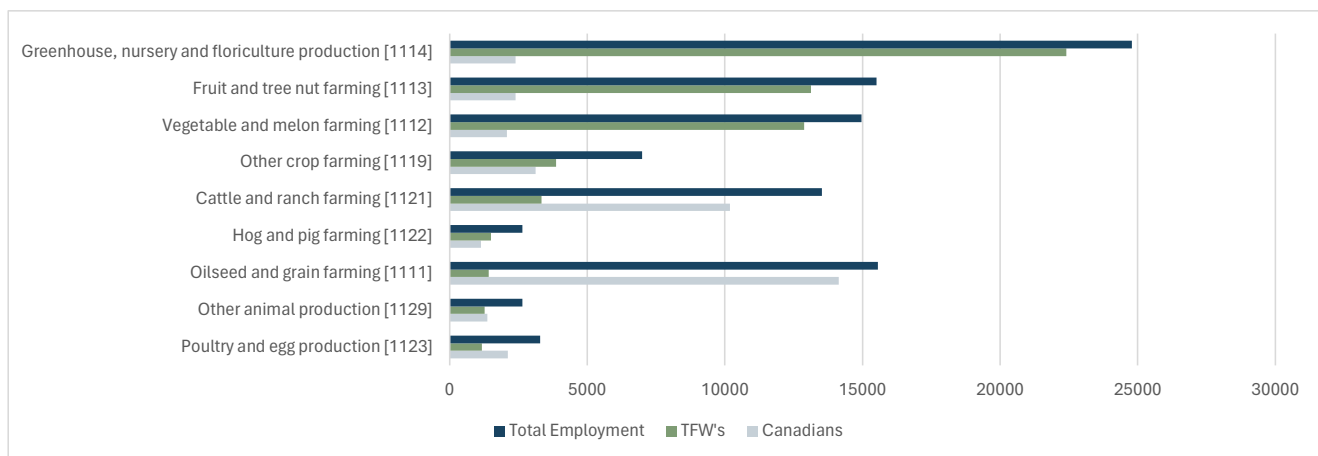
In 2021, the agriculture sector employed 251,800 Canadians,¹⁶ nearly half who were hired on a seasonal basis.¹⁷ Employment in agriculture is grouped into three main categories:

- **Crop production** (77 per cent of total production in 2021), which includes occupations pertaining to the production of oilseeds, grains, fruits, vegetables, plants, vines and cannabis and is highly export oriented. Forty-six per cent of agriculture workers are employed in occupations related to crop production.
- **Animal production** (16 per cent of total production in 2021) is the process of raising cattle, hog, poultry and other

animals for generating meat, egg and dairy products, aquaculture and apiculture. Typically, animal production serves Canada’s domestic markets rather than export markets. Forty-four per cent of agriculture workers are employed in occupations related to animal production.

- **Related support activities** (6 per cent of total production in 2021) include harvesting, fertilizing and sterilizing services and any services related to raising livestock, including companion animals. Ten per cent of agriculture workers perform related support activities.¹⁸

Chart 3: Number of Canadians and TFWs employed in agriculture operations, 2021.



Sources: Statistics Canada. [Table 32-10-0215-01](#) Employees in the agriculture sector, and agricultural operations with at least one employee, by industry; Statistics Canada. [Table 32-10-0218-01](#) Temporary Foreign Workers in the agriculture and agri-food sectors, by industry.

¹⁶ Employment and Social Development Canada, “Canadian Occupational Projection System: Industrial Summary - Agriculture.”

¹⁷ Statistics Canada, “Number of Employees in the Agriculture Sector, 2021.”

¹⁸ Employment and Social Development Canada, “Canadian Occupational Projection System: Industrial Summary - Agriculture.”



Where Are Canada's Agriculture Workers Located?

Together, Quebec and Ontario employ over half of Canada's domestic agricultural talent. Farms in Ontario hired the most employees (79,382) in 2021, followed by Quebec with 66,424 employees.¹⁹ Despite Saskatchewan being home to 43.1 per cent of Canada's cropland, the province employs just 23,158 (8.4 per cent) of domestic agriculture workers.

Map 1: Proportion of employment in the agriculture industry, by province.²⁰



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Sources: Statistics Canada. [Table 32-10-0216-01](#) Employees in the agriculture sector, and agricultural operations with at least one employee, by province; Statistics Canada. [Table 32-10-0218-01](#) Temporary Foreign Workers in the agriculture and agri-food sectors, by industry.

¹⁹ Statistics Canada, "Number of Employees in the Agriculture Sector, 2021."

²⁰ Map includes domestic employment and Temporary Foreign Workers.



Key Challenges Facing the Sector

Labour Shortages Are Worsening

Rural Work Location May Make Recruitment More Challenging

Given the importance of primary agriculture to the Canadian economy, ensuring there is a skilled and sustainable pipeline of talent for these operations is crucial. One of the primary reasons it is challenging to attract and retain workers is that agricultural operations often take place in rural and remote areas where there may not be a large enough talent pool to sustain operations locally. The shrinking talent pool is being exacerbated by an increasing percentage of the farm population²¹ moving to urban areas (7.5 per cent in 1971 versus 24.5 per cent in 2021), further limiting the number of local workers available.

As CAHRC's 2023 survey of agricultural employers noted, almost 40 per cent reported that their rural location makes recruitment more difficult.²² There are many factors contributing to why attracting workers to rural areas can be challenging. These include: inadequate transportation options, limited housing options and the general lack of amenities and resources compared to urban centres.

Domestic Labour Gaps Are Expected to Widen Further

CAHRC's agriculture labour market forecast for 2023-2030 estimates that:²³

- The domestic labour gap in Canada's agricultural sector will increase by 15

per cent over the next eight years, from 87,700 in 2023 to 101,100 by 2030 during peak season. A key contributing factor to this widening gap is the aging of Canada's population, as this trend will continue to decrease the availability of domestic workers over time.

- Canada's agriculture industries will see over 85,300 retirements over the next eight years, which is almost 30 per cent of the current Canadian workforce in the sector.
- 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. Crop production industries will account for the largest number of vacant positions, estimated at 15,200 in 2030.

Agriculture Is Not Attractive to Job Seekers

Several factors contribute to Canadians' limited interest in pursuing careers in the agriculture sector. Firstly, there is a perception of agriculture as a traditional and labour-intensive field that is not driving efficiency by adopting innovative practices or keeping up with modern technology.²⁴ This perception may deter individuals inclined toward more digitally driven career paths who do not realize that the sector's increasing reliance on technology and innovation necessitates a highly skilled workforce with expertise in areas such as data analysis, robotics, precision farming and biotechnology.

There is also a general lack of awareness among Canadians regarding the diverse array of career

²¹ Canada's farm population comprises farm operators (people responsible for the management decisions in operating a farm) and the individuals in their households (Statistics Canada, 2021).

²² Canadian Agricultural Human Resource Council, "Sowing Seeds of Change: Agriculture Labour Market Forecast 2023-2030."

²³ Ibid.

²⁴ Nutrien, Bridging the Agriculture Perception Divide.



opportunities available in the agriculture sector beyond traditional farming roles. Students, immigrants and people seeking to change career paths may have a general idea of what roles in agriculture may look like. However, limited exposure to ever-evolving career possibilities in the sector may leave them unaware of the potential for fulfilling and lucrative careers in areas such as agribusiness, agri-tech, research, sustainable food production and in agriculture retail, which supplies and sells inputs that farmers use.²⁵

The trend of urbanization in Canada has led to a growing disconnect between urban populations and rural agricultural communities. As a result, many Canadians, particularly those residing in urban areas, have minimal exposure to agriculture and a limited understanding of its significance to the economy and food security. This urban-rural divide can contribute to a lack of interest in agricultural careers, as individuals may perceive farming and related professions as not applicable or irrelevant to their daily lives.

Additionally, concerns about financial stability and job security may further deter Canadians from considering careers in agriculture. They may view the sector as financially risky or unstable due to factors such as fluctuating market prices, weather-related uncertainties and the perceived challenges associated with farming operations. Results from CAHRC's 2023 agriculture worker survey highlighted that:²⁶

- Agriculture's low pay and benefits compared to other sectors (selected by 52 per cent of respondents) is the main reason workers expressed a lack of interest in working in agriculture.

- Limited career paths or opportunities for advancement (selected by 32 per cent of respondents) was another factor that resulted in a negative view of working in agriculture.
- Low job security, physical labour and remote location of work (each selected by 18 per cent of respondents) were also factors in whether or not workers wanted to remain in the agriculture sector. However, these held significantly less influence for workers compared to low pay, inadequate benefits and limited career opportunities.

Agriculture Is Heavily Reliant on Temporary Foreign Workers

While many employers across all industries are facing challenges related to attracting and retaining talent, agricultural employers who struggle to find domestic workers often rely on Temporary Foreign Workers (TFWs) to fill labour gaps. In fact, the number of foreign workers in agriculture increased by more than 30 per cent from 2017 to 2022,²⁷ suggesting that it is getting increasingly difficult to fill agricultural positions with domestic talent. As the reliance on foreign workers continues to grow, so do the risks associated with using a global workforce, making the sector vulnerable to shifts in international policies or events.

²⁵ Canadian Association of Agri-Retailers, "Canadian Ag Labour Resolution May Have a Flaw."

²⁶ Canadian Agricultural Human Resource Council, "Sowing Seeds of Change: Agriculture Labour Market Forecast 2023-2030."

²⁷ Statistics Canada, "Temporary Foreign Workers in the Agriculture and Agri-Food Sectors, by Industry."



Shifting Skills Requirements Associated With Technological Advancements

Advancements in technology and automation have ushered in a transformation in the Canadian agriculture sector. With the integration of innovative technologies such as precision farming, drones and autonomous machinery, farmers have gained unprecedented levels of efficiency and productivity. These technological advancements have streamlined various agricultural processes, from planting and harvesting to monitoring crop health and managing resources. As a result, farmers can now optimize their operations with greater precision, minimizing waste and maximizing yields, while reducing their reliance on manual labour.

Simultaneously, changes in consumer preferences have prompted Canadian farmers to adapt their farming. As consumers increasingly prioritize factors such as organic production methods, sustainability and transparency in the food supply chain, Canadian farmers have responded by implementing new cultivation techniques and adopting environmentally friendly practices. Data from the 2021 Census of Agriculture shows that 22,576 farms reported renewable energy production, which is more than double the rate reported in the 2016 census.²⁸

This shift toward more sustainable and ethically produced food has led to the emergence of niche markets for organic produce, locally sourced goods and specialty crops.²⁹ Moreover, consumer preferences for convenience and health-conscious choices have spurred innovations in agricultural products, such as the development of functional foods and alternative protein sources, all of which require different agricultural techniques and are more labour-intensive.³⁰

The evolution of the Canadian agriculture sector, driven by advancements in technology, automation and shifting consumer preferences, has fundamentally altered the skill set required for success in agricultural careers. As technology becomes increasingly integrated into agricultural practices, professionals in the sector now need to possess a strong aptitude for leveraging digital tools and data analytics. Familiarity with precision farming technologies, drone operations and automated machinery has become essential for maximizing efficiency and productivity on modern farms. In addition, proficiency in software applications for crop monitoring, resource management and market analysis are crucial for making informed decisions and staying competitive in today's dynamic agricultural market.



Photo credit: Canadian Aquaculture Industry Alliance (CAIA)

²⁸ Statistics Canada, "Canada's Farms Integrate Renewable Energy Production and Technologies Toward a Future of Sustainable and Efficient Agriculture."

²⁹ Export Development Canada, "Canada's Organic Sector Just Keeps Growing."

³⁰ The Organic Council of Ontario, "Organic FAQ/Statistics."



Adjustments to Canada’s Temporary Foreign Worker Program Underway

In 2022, the Temporary Foreign Worker (TFW) Program experienced a surge in demand due to the post-pandemic economy, low unemployment rates and record-high job vacancy rates. On March 21, 2024, the Government of Canada announced temporary measures under the Temporary Foreign Worker Program Workforce Solutions Roadmap.

All employers identified in the 2022 Workforce Solutions Road Map will now be limited to hiring 20 per cent of their total workforce through the Temporary

Foreign Worker Program under the low wage stream (as compared to 30 per cent previously). Exceptions will be made for the construction and healthcare sectors.

“As global conditions change, as our labour market tightens and as the types of skillsets we look for in our future workforce evolves, so should our policies. We need to be more strategic in how we assess demand and the international students and temporary foreign workers that we are welcoming.”

*- Marc Miller, Immigration Minister,
Government of Canada*





SECTION 3:
EXPLORING JOB DEMAND
IN KEY AGRICULTURAL
OCCUPATIONS ACROSS CANADA



The Canadian Agricultural Human Resource Council has identified 12 key occupations (five-digit NOCs) that are integral to the future growth and success of the Canadian agriculture sector (see Table 1).

Table 1: Key Occupations in Agriculture.

NOC 21112	Agricultural representatives, consultants and specialists
NOC 22114	Landscape and horticulture technicians and specialists
NOC 72401	Heavy-duty equipment mechanics
NOC 73300	Transport truck drivers
NOC 80020	Managers in agriculture
NOC 80021	Managers in horticulture
NOC 82030	Agricultural service contractors and farm supervisors
NOC 82031	Contractors and supervisors, landscaping, grounds maintenance and horticulture services
NOC 84120	Specialized livestock workers and farm machinery operators
NOC 85101	Harvesting labourers
NOC 85100	Livestock labourers
NOC 85103	Nursery and greenhouse labourers

Source: Canadian Agricultural Human Resource Council (CAHRC)



This section explores these occupations in more detail and seeks to answer the following questions:

- What do we know about the labour force for these occupations?
- What kinds of skills do these occupations require?
- What skills gaps, if any, does the job posting data identify?
- How does this vary across provinces?

Using data derived from Vicinity Jobs Inc., the following 10 tables provide key data related to the labour force for each province, including total labour force in the occupation, ranked job skills and demand for the 12 key occupations. The labour force characteristics derived from Statistics Canada included in each table capture information on Canadian employees. However, they do not include information related to TFWs.

As Statistics Canada notes, TFWs have become an increasingly important source of labour supply in Canada. However, estimating foreign workers is not straightforward because of their complexity and transient status.

Each quarter, the Temporary Foreign Worker Program (TFWP) publishes Labour Market Impact Assessment (LMIA) statistics on the Open Government Data Portal, including quarterly and annual LMIA data related to, but not limited to, requested and approved TFW positions, employment location, employment occupations,

sectors, TFWP stream and temporary foreign workers by country of origin.

The TFWP does not collect data on the number of TFWs who are hired by an employer and have arrived in Canada. The decision to issue a work permit rests with Immigration, Refugees and Citizenship Canada (IRCC) and not all positions on a positive LMIA result in a work permit. For these reasons, data provided in the LMIA statistics cannot be used to calculate the number of TFWs that have entered or will enter Canada. IRCC publishes annual statistics on the number of foreign workers who are issued a work permit.

To provide context on agriculture operations, each province begins with a short snapshot of key findings as described in the 2021 Census of Agriculture.^{31, 32} This information has been compiled in an [Interactive Map of Occupational and Skill Demand](#). The interactive map also includes information on related agricultural post-secondary programs as further discussed in Section 5 of this report.

Observations follow the provincial snapshots, highlighting findings from the analysis of Vicinity Jobs related to occupational and skills demand. This data provides information that can be used to develop recruitment, retention, succession planning and training strategies. For example, provinces where the bulk of the workforce in a particular occupation is close to retiring, a succession plan, mentoring or job shadowing initiative may be considered.

Occupations noted to have a higher number of job postings for certain occupations relative to

³¹ Statistics Canada, "Canada's 2021 Census of Agriculture: A Closer Look at Farming across the Regions."

³² Every five years, the [Census of Agriculture](#) provides a comprehensive and integrated profile of the physical, economic, social and environmental aspects of Canada's agriculture sector. It is the only data source that consistently provides high-quality, detailed statistical information on agriculture for small geographic areas. The Census collects a wide range of data at the national, provincial and sub-provincial levels, such as the number of farms and farm operators, farm area, farm size, farm type, land use, crop areas, land management practices, livestock inventories, business operating arrangements, farm operating revenues, farm operating expenses, farm capital and farm machinery.



the number of people in the labour force, or in occupations that have very low unemployment rates, could suggest there may be a deficit of workers and could indicate the need for more robust recruitment and retention strategies.

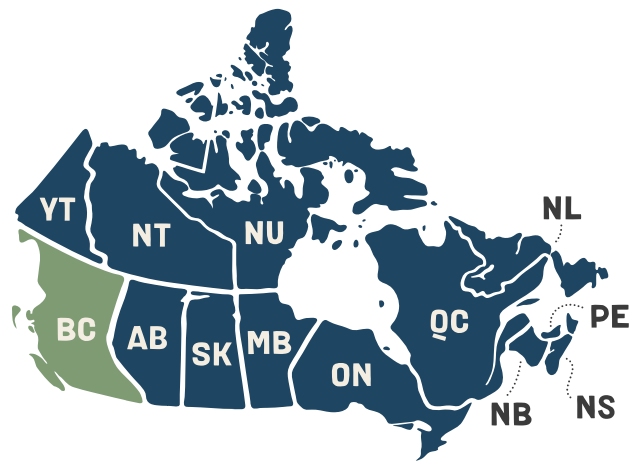
It should be noted that labour market information and job posting data for NOC 73300 Transport truck drivers and NOC 72401 Heavy-duty equipment mechanics comprise data for truck drivers and heavy-duty equipment mechanics working in all Canadian industries rather than strictly agriculture. As a result, there tend to be a higher volume of job postings for these two occupations compared to the other 10, which are specific to the agriculture sector.

Tables of the top 10 demanded skills by province are included in Appendix B. However, caution should be used when interpreting this data as some of it is based on a small number of job postings. Moreover, the overviews and analyses presented in this section have followed the categorization of skills used by Vicinity Jobs. While many are similar, some occupational skills or job requirements do not align with other definitions of skills commonly used by Employment and Social Development Canada.³³

Also of note, farm operators, as described below, refer to those persons responsible for the management decisions in operating a farm or agricultural operation. These can be owners, tenants or hired managers of the agricultural operation, including those responsible for management decisions pertinent to particular aspects of the farm: planting, harvesting, raising animals, marketing and sales and making capital purchases and other financial decisions.³⁴ This is of significant importance when understanding occupational demand, as often farm operators

function as Managers of agriculture or Managers of horticulture and vice versa. As a result, caution should be used when interpreting demand for specific occupations.

PROVINCIAL SNAPSHOT: BRITISH COLUMBIA



- Data from the 2021 Census of Agriculture shows how British Columbia has positioned itself amongst the nation's leaders in capital-intensive agriculture that uses less land, such as greenhouse and mushroom farming.
- From 2016 to 2021, the total number of farms reported in British Columbia decreased by 9.6 per cent. This was more than five times higher than the decrease reported at the national level (-1.9 per cent).
- In 2021, British Columbia had the largest number of farms in the country reporting highbush blueberries, grapes and sweet cherries. As highbush blueberries, grapes

³³ Employment and Social Development Canada, "Skills and Competencies Taxonomy."

³⁴ Statistics Canada, "Dictionary, Census of Population, 2021 – Farm Operator."



and sweet cherries are reported under fruit and tree nut farms, this farm type made up the largest proportion (19.2 per cent) of farms in the province.

- As was the case in 2016, British Columbia had the highest proportion of female operators (39.7 per cent) among provinces in Canada. This was a slight increase compared with 2016 (37.5 per cent). The province accounted for 11.8 per cent of total female operators. In 2021, farms classified as sheep and goat and other animals reported the highest share of female operators in the province.
- British Columbia also reported the largest proportion of female farm operators between 35 and 54 years of age. In 2021, 41.8 per cent of the province's operators between 35 and 54 years of age were female. This was higher than any other province and also higher than what was reported at the national level (31.6 per cent).
- As was the case at the national level, the average age of farm operators in British Columbia increased from 56.3 years in 2016 to 57.8 years in 2021. Nearly two-thirds (66.2 per cent) of farm operators in the province were 55 years and older, which was above the national level (60.5 per cent).³⁵

2023 Job Postings at a Glance – British Columbia

- Demand for teamwork is prevalent in many key occupations.
- The top three skills for Managers in agriculture are teamwork, communication and English language, while the skills required for Managers in horticulture are supervisory skills, organizational skills and teamwork.
- In 2023, there were only 22 job postings calling for Agricultural representative, consultants and specialists.
- Livestock labourers requirements are English language skills, teamwork skills and the ability to work in a fast-paced environment.
- Transport truck drivers (5,571 job postings) and Landscape and horticulture technicians and specialists (1,493 job postings) and Harvesting labourers (781 job postings) were in high demand in 2023 (see Table 2).

³⁵ Statistics Canada, "Canadian Agriculture at a Glance: Mushroom, Greenhouse and Highbush Blueberry Farming Play Pivotal Role in British Columbia."

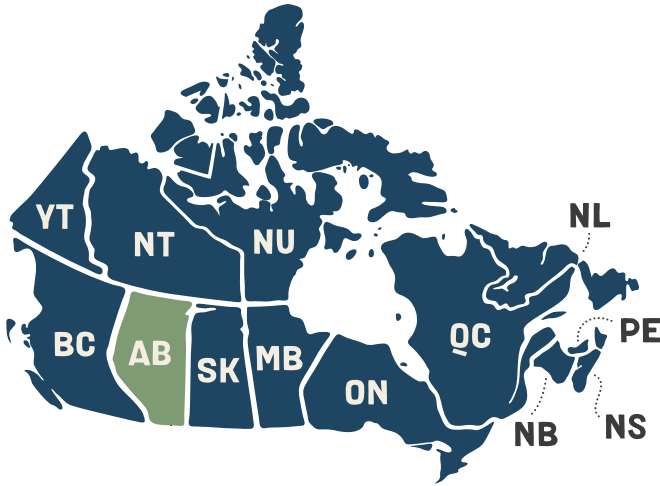
Table 2: Key Labour Market Characteristics (2021) and Skill Demand for British Columbia (2023).

Occupation/NOC	Most demanded skill	Second-most demanded skill	Third-most demanded skill	2023 demand (# of job postings)	Total labour force* (n)	Total unemployment* (n/(%))	Women in the labour force* (n/(%))	15- to 24-year-olds in the labour force* (n/(%))	25- to 54-year-olds in the labour force* (n/(%))	55- to 64-year-olds in the labour force* (n/(%))	65 years and older in the labour force* (n/(%))
Agricultural representatives, consultants and specialists (NOC 21112)	Flexibility	Planning	Ecology	22	465	25 (5%)	90 (19%)	15 (3%)	320 (69%)	85 (18%)	45 (10%)
Landscape and horticulture technicians and specialists (NOC 22114)	Cascading Style Sheets (CSS)	Teamwork	Handling heavy loads	1,493	4,885	175	1,505 (31%)	410 (8%)	3,290 (67%)	875 (18%)	305 (6%)
Heavy-duty equipment mechanics (NOC 72401)	Repairs / corrective maintenance	Mechanical skills	Machinery / equipment repairs	272	7,240	215 (3%)	60 (1%)	815 (11%)	4,820 (67%)	1,245 (17%)	365 (5%)
Transport truck drivers (NOC 73300)	Truck driving	Inspection of vehicles	Records management	5,571	44,345	2,995 (7%)	1,660 (4%)	1,560 (4%)	27,785 (63%)	11,185 (25%)	3,810 (9%)
Managers in agriculture (NOC 80020)	Teamwork	Communication skills	English language	63	13,165	485 (4%)	5,000 (38%)	315 (2%)	5,960 (45%)	3,315 (25%)	3,565 (27%)
Managers in horticulture (NOC 80021)	Supervisory skills	Organizational skills	Teamwork	38	950	10 (1%)	425 (45%)	20 (2%)	465 (49%)	260 (27%)	205 (22%)
Agricultural service contractors and farm supervisors (NOC 82030)	Supervisory skills	Process design	Work scheduling	495	485	45 (9%)	205 (42%)	15 (3%)	365 (75%)	85 (18%)	25 (5%)
Contractors and supervisors, landscaping, grounds maintenance and horticulture services (NOC 82031)	Organizational skills	Work scheduling	Supervisory skills	459	4,040	130 (3%)	800 (20%)	215 (5%)	2,850 (71%)	720 (18%)	250 (6%)

Specialized livestock workers and farm machinery operators (NOC 84120)	Records management	Attention to detail	Teamwork	34	3,785	465 (12%)	1,480 (39%)	905 (24%)	1,735 (46%)	670 (18%)	480 (13%)
Livestock labourers (NOC 85100)	Teamwork	Fast-paced setting	English language	381	3,225	195 (6%)	1,615 (50%)	1,155 (36%)	1,235 (38%)	450 (14%)	390 (12%)
Harvesting labourers (NOC 85101)	Fast-paced setting	Handling heavy loads	Teamwork	781	2,910	815 (28%)	1,755 (60%)	375 (13%)	1,335 (46%)	760 (26%)	440 (15%)
Nursery and greenhouse labourers (NOC 85103)	Teamwork	Handling heavy loads	Attention to detail	115	3,885	345 (9%)	2,305 (59%)	865 (22%)	1,900 (49%)	810 (21%)	305 (8%)

Source: Statistics Canada. Table 98-10-0593-01 Class of worker by occupation unit group, labour force status, age, and gender: Canada, provinces and territories, census metropolitan areas and census agglomerations with parts, 2021; Vicinity Jobs custom data, 2024.

*for each occupation



PROVINCIAL SNAPSHOT: ALBERTA

- Data from the 2021 Census of Agriculture showed that Alberta contributes significantly to the economic viability of Canada's agricultural sector, in large part due to its beef and field crop farming operations.
- In 2020, farms in Alberta reported \$22.2 billion in farm operating revenues. This was more than any other province and accounted for over one-quarter (25.5 per cent) of Canada's \$87 billion in total farm revenues.
- Alberta was one of two provinces in Canada to report an increase in the number of farms, with a 2.1 per cent increase from 2016. In 2021, Alberta reported 41,505 farms, accounting for 21.9 per cent of Canada's farms, up from 21.0 per cent in 2016.

- Alberta reported the third-highest use of automated guidance steering systems (auto-steer). In 2020, nearly one-third (31.1 per cent) of farms in Alberta reported using auto-steer equipment, up from 25.7 per cent in 2015. This was also higher than the national average (26.8 per cent).
- One province (Saskatchewan) had a higher rate of succession planning than Alberta. In 2021, 14.0 per cent of farms in Alberta reported a succession plan, up from 8.5 per cent in 2016. By comparison, 12.0 per cent of farms in Canada reported a succession plan in 2021.
- In 2021, farms in Alberta accounted for more than one-quarter (25.4 per cent) of Canada's share of farms that reported a succession plan, up from 21.2 per cent in 2016.
- As was the case in 2016, Alberta reported the second-highest percentage of female farm operators among provinces. In 2021, females accounted for 32.4 per cent of farm operators in the province, up from 30.8 per cent in 2016. By comparison, females made up 30.4 per cent of total farm operators in Canada in 2021. Despite making up just over one-fifth (21.8 per cent) of total farm operators in Canada, Alberta accounted for 23.2 per cent of female farm operators in the country.³⁶

³⁶ Statistics Canada, "Canadian Agriculture at a Glance: Alberta Has the Highest Farm Operating Revenues in Canada."



2023 Job Postings at a Glance – Alberta

- Demand for Transport truck drivers (7,484 job postings) far exceeds other occupations in agriculture. This was followed by Landscape and horticulture technicians and specialists (697 job postings) and Contractors and supervisors, landscaping, grounds maintenance and horticulture services (447 job postings).
- Most occupations are heavily reliant on interpersonal skills, apart from Heavy-duty equipment mechanics and Transport truck drivers.
- Demand for Agricultural service contractors and farm supervisors is high (113 job postings) compared to the total labour force (400 people) (see Table 3).



Table 3: Key Labour Market Characteristics and Skill Demand for Alberta.

Occupation/NOC	Most demanded skill	Second-most demanded skill	Third-most demanded skill	2023 demand (# of job postings)	Total labour force* (n)	Total unemployment* (n/(%))	Women in the labour force* (n/(%))	15- to 24-year-olds in the labour force* (n/(%))	25- to 54-year-olds in the labour force* (n/(%))	55- to 64-year-olds in the labour force* (n/(%))	65 years and older in the labour force* (n/(%))
Agricultural representatives, consultants and specialists (NOC 21112)	Cascading Style Sheets (CSS)	Teamwork	Communication skills	100	1,185	45 (4%)	460 (39%)	150 (13%)	750 (63%)	180 (15%)	105 (9%)
Landscape and horticulture technicians and specialists (NOC 22114)	Cascading Style Sheets (CSS)	Teamwork	Handling heavy loads	697	2,905	180 (6%)	940 (32%)	370 (13%)	1,900 (65%)	480 (17%)	155 (5%)
Heavy-duty equipment mechanics (NOC 72401)	Repairs / corrective maintenance	Machinery / equipment repairs	Troubleshooting	254	12,660	580 (5%)	205 (2%)	1,345 (11%)	8,935 (71%)	1,860 (15%)	525 (4%)
Transport truck drivers (NOC 73300)	Truck driving	Inspection of vehicles	Records management	7,484	50,505	5,025 (10%)	2,200 (4%)	1,800 (4%)	32,305 (64%)	12,220 (24%)	4,185 (8%)
Managers in agriculture (NOC 80020)	Teamwork	Communication skills	Organizational skills	25	33,820	350 (1%)	9,660 (29%)	1,065 (3%)	13,250 (39%)	9,215 (27%)	10,280 (30%)
Managers in horticulture (NOC 80021)	Teamwork	Organizational skills	Supervisory skills	33	415	0 (0%)	190 (46%)	25 (6%)	195 (47%)	150 (36%)	50 (12%)
Agricultural service contractors and farm supervisors (NOC 82030)	Teamwork	Records management	Supervisory skills	113	400	0 (0%)	55 (14%)	50 (13%)	260 (65%)	55 (14%)	35 (9%)
Contractors and supervisors, landscaping, grounds maintenance and horticulture services (NOC 82031)	Organizational	Work scheduling	Supervisory skills	447	2,975	170 (6%)	550 (18%)	265 (9%)	2,125 (71%)	455 (15%)	130 (4%)

Specialized livestock workers and farm machinery operators (NOC 84120)	Teamwork	Records management	Attention to detail	93	7,330	525 (7%)	2,125 (29%)	2,295 (31%)	3,060 (42%)	1,105 (15%)	870 (12%)
Livestock labourers (NOC 85100)	Teamwork	Handling heavy loads	Attention to detail	324	5,335	195 (6%)	1,615 (50%)	1,155 (36%)	1,235 (38%)	450 (14%)	390 (12%)
Harvesting labourers (NOC 85101)	Teamwork	Handling heavy loads	Fast-paced setting	128	800	175 (22%)	395 (49%)	350 (44%)	300 (38%)	75 (9%)	75 (9%)
Nursery and greenhouse labourers (NOC 85103)	Handling heavy loads	Teamwork	Fast-paced setting	42	2,065	285 (14%)	1,260 (61%)	705 (34%)	970 (47%)	285 (14%)	105 (5%)

Source: Statistics Canada. Table 98-10-0593-01 Class of worker by occupation unit group, labour force status, age, and gender: Canada, provinces and territories, census metropolitan areas and census agglomerations with parts, 2021; Vicinity Jobs custom data, 2024.

*for each occupation



PROVINCIAL SNAPSHOT: SASKATCHEWAN

- Data from the 2021 Census of Agriculture show how the province leads the country in the cultivation of cereal grains, oilseeds and pulses.
- Farms in the province accounted for the biggest share of Canada's total farm area (39.2 per cent). In 2021, there were 34,128 farms reported in Saskatchewan, accounting for 18.0 per cent of Canada's total.
- Saskatchewan had the highest rate of use of automated guidance steering systems (auto-steer). Auto-steer equipment uses Global Positioning System-based tractor systems for vehicle navigation and control. In 2020, 47.6 per cent of farms in Saskatchewan reported using auto-steer equipment. This rate was higher than in 2015 (41.5 per cent) and higher than the rate reported across Canada (26.8 per cent).
- Farms in Saskatchewan and Ontario were the most likely to use Geographic Information System (GIS) mapping. GIS assigns data to a specific location, enabling farmers to generate maps and interpret trends in soil fertility, yields and numerous other parameters. In 2020, 17.7 per cent of farms in Saskatchewan reported using GIS, up from 9.0 per cent in 2015, higher than the Canadian average of 13.2 per cent.
- Saskatchewan also reported the highest rate of use for drones and variable-rate input application among provinces. Drones are unmanned aerial vehicles used for field scouting and data collection. In 2020, 5.2 per cent of farms in the province reported using drones. This was higher than the national average (3.6 per cent). Variable-rate input application includes any equipment that applies fertilizer, chemicals or other inputs at a variable rate based on data from sensors or from GIS mapping. In 2020, 21.9 per cent of farms in Saskatchewan reported the use of variable-rate input application, more than the Canadian average of 16.1 per cent.
- In 2021, 14.1 per cent of farms in the province reported a succession plan, up from 8.8 per cent in 2016, which was more than any other province. By comparison, 12.0 per cent of farms in Canada reported a succession plan in 2021. Farms in Saskatchewan accounted for over one-fifth (21.1 per cent) of Canada's share of farms that reported a succession plan in 2021, up from 18.8 per cent in 2016.



- In 2021, the average age reported for farm operators in Saskatchewan was 55.8 years old and 29.6 per cent of farm operators were 35 to 54 years old.
- Despite the total number of farm operators³⁷ in Saskatchewan having decreased by 2.7 per cent from the previous census to 44,140 operators in 2021, the number of female farm operators increased (+735). In 2021, females accounted for 27.2 per cent of farm operators in the province.
- In 2020, 43.6 per cent of farm operators in Saskatchewan reported working off the farm, up slightly from 42.0 per cent in 2015. This rate remained below the national average (47.7 per cent) and was the lowest of all the provinces, except for Prince Edward Island (43.4 per cent).³⁸

2023 Job Postings at a Glance – Saskatchewan

- Demand was highest for Transport truck drivers (2,344 job postings), followed by Livestock labourers (238 job postings) and Agricultural representatives, consultants and specialists (231 job postings).
- Teamwork and attention to detail appear to be key skills in demand for several occupations.
- There were only 12 job postings for Managers in agriculture in 2023 (see Table 4).



³⁷ Statistics Canada, Farm operator refers to those persons responsible for the management decisions in operating an agricultural operation.

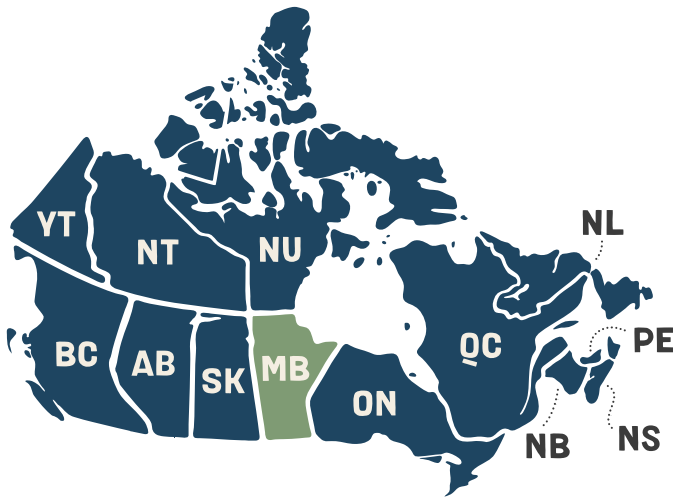
³⁸ Statistics Canada, “Canadian Agriculture at a Glance: Saskatchewan Continues to Live up to the Title of Breadbasket of Canada.”

Table 4: Key Labour Market Characteristics (2021) and Skill Demand (2023) for Saskatchewan.

Occupation/NOC	Most demanded skill	Second- most demanded skill	Third- most demanded skill	2023 demand (# of job postings)	Total labour force* (n)	Total unemployment* (n/(%))	Women in the labour force* (n/(%))	15- to 24-year-olds in the labour force* (n/(%))	25- to 54-year-olds in the labour force* (n/(%))	55- to 64-year-olds in the labour force* (n/(%))	65 years and older in the labour force* (n/(%))
Agricultural representatives, consultants and specialists (NOC 21112)	Teamwork	Customer service	Communication skills	231	1,135	30 (3%)	575 (51%)	230 (20%)	810 (71%)	70 (6%)	30 (3%)
Landscape and horticulture technicians and specialists (NOC 22114)	Teamwork	Customer service	Decision-making	102	465	25 (5%)	140 (30%)	50 (11%)	305 (66%)	65 (14%)	40 (9%)
Heavy-duty equipment mechanics (NOC 72401)	Repairs / corrective maintenance	Machinery / equipment repairs	Trouble-shooting	254	12,660	130 (4%)	20 (1%)	460 (15%)	2,005 (66%)	460 (15%)	105 (3%)
Transport truck drivers (NOC 73300)	Truck driving	Inspection of vehicles	Records management	2,344	12,540	1,155 (9%)	550 (4%)	680 (5%)	7,185 (57%)	3,205 (26%)	1,475 (12%)
Managers in agriculture (NOC 80020)	Attention to detail	Organizational skills	Financial reporting	12	30,010	160 (1%)	7,320 (24%)	715 (2%)	11,990 (40%)	8,390 (28%)	8,915 (30%)
Managers in horticulture (NOC 80021)	Records management	Teamwork	Attention to detail	5	165	15 (9%)	85 (52%)	0 (0%)	90 (55%)	55 (33%)	25 (15%)
Agricultural service contractors and farm supervisors (NOC 82030)	Teamwork	Supervisory skills	Operations management	94	305	30 (10%)	45 (15%)	35 (11%)	230 (75%)	25 (7%)	20 (7%)
Contractors and supervisors, landscaping, grounds maintenance and horticulture services (NOC 82031)	Teamwork	Records management	Attention to detail	32	580	30 (5%)	120 (21%)	40 (7%)	395 (68%)	105 (18%)	45 (8%)

Specialized live-stock workers and farm machinery operators (NOC 84120)	Dispensing of medication	Teamwork	Attention to detail	135	7,540	460 (6%)	1,690 (22%)	2,225 (30%)	3,045 (40%)	1,285 (17%)	990 (13%)
Livestock labourers (NOC 85100)	Teamwork	Handling heavy loads	Fast-paced setting	238	2,895	165 (6%)	1,265 (44%)	1,205 (42%)	980 (34%)	320 (11%)	395 (14%)
Harvesting labourers (NOC 85101)	Teamwork	Handling heavy loads	Attention to detail	190	310	45 (15%)	125 (40%)	115 (37%)	85 (27%)	50 (16%)	55 (18%)
Nursery and greenhouse labourers (NOC 85103)	Teamwork	Attention to detail	Handling heavy loads	21	625	70 (11%)	440 (70%)	265 (42%)	160 (26%)	115 (18%)	90 (14%)

Source: Statistics Canada. Table 98-10-0593-01 Class of worker by occupation unit group, labour force status, age, and gender: Canada, provinces and territories, census metropolitan areas and census agglomerations with parts, 2021; Vicinity Jobs custom data, 2024.
* for each occupation.



PROVINCIAL SNAPSHOT: MANITOBA

- Data from the 2021 Census of Agriculture shows that agriculture in Manitoba is getting a boost from both younger farm operators and female farm operators.
- Manitoba had the highest proportion of operators under the age of 35 across all provinces. The reported proportion was 11.5 per cent, which was higher than the Canadian proportion of 8.6 per cent. Manitoba also had the highest proportion of young operators in 2016, at 10.8 per cent.
- Among provinces and territories, Manitoba reported the fourth-highest rate of succession planning. In 2021, just over one-tenth (11.8 per cent) of farms in Manitoba reported a succession plan, which was just below the Canadian average (12.0 per cent). This was an increase from 2016, when

8.1 per cent of Manitoba farms reported a succession plan.

- Farms classified as dairy and milk production (24.8 per cent) and hog and pig (22.4 per cent) were the most likely to report a succession plan in Manitoba. However, with so many oilseed and grain farms in the province, over half (58.5 per cent) of succession plans came from oilseed and grain farms. In 2021, nearly half (46.4 per cent) of Manitoba's reported farms were oilseed and grain.
- In 2020, nearly half (41.4 per cent) of farms in the province reported using automated guidance steering systems (auto-steer). This was higher than all but one province and higher than the national rate (26.8 per cent). One possible reason for Manitoba's high rate of auto-steer technology is because of its high proportion of farms classified as oilseed and grain. In 2020, this farm type was the most likely (71.9 per cent) to report auto-steer equipment. Oilseed and grain farms accounted for nearly half (46.4 per cent) of total farms reported in Manitoba.
- In 2020, Manitoba reported the third-highest rate (16.1 per cent) of use for Geospatial Information System (GIS) mapping, up from 10.0 per cent in 2015 and higher than the national average (13.2 per cent). As was the case with auto-steer technology, one possible reason for Manitoba's high rate of GIS mapping is because of its high proportion of oilseed and grain farms. This farm type was more likely (27.9 per cent) to report using this technology in Manitoba.³⁹

³⁹ Statistics Canada, "Canadian Agriculture at a Glance: Manitoba Has the Highest Proportion of Young Farm Operators in Canada."



2023 Job Postings at a Glance – Manitoba

- In 2023, there were no job postings for Managers in agriculture and Nursery and greenhouse labourers in Manitoba.
- Demand for Transport truck drivers far exceeds other occupations (1,162 job postings), followed by Heavy-duty equipment mechanics (104 job postings) and Livestock labourers (59 job postings).
- Many occupations call for interpersonal skills such as communication, teamwork and customer service.
- Job postings across all occupations, except for Transport truck drivers, range between 5-10 per cent of the total labour force in that occupation (see Table 5).



Table 5: Key Labour Market Characteristics (2021) and Skill Demand (2023) for Manitoba.

Occupation/NOC	Most demanded skill	Second- most demanded skill	Third- most demanded skill	2023 demand (# of job postings)	Total labour force* (n)	Total unemployment* (n/(%))	Women in the labour force* (n/(%))	15- to 24-year-olds in the labour force* (n/(%))	25- to 54-year-olds in the labour force* (n/(%))	55- to 64-year-olds in the labour force* (n/(%))	65 years and older in the labour force* (n/(%))
Agricultural representatives, consultants and specialists (NOC 21112)	Teamwork	Cascading Style Sheets (CSS)	Customer service	33	765	15 (2%)	215 (28%)	135 (18%)	500 (65%)	90 (12%)	45 (6%)
Landscape and horticulture technicians and specialists (NOC 22114)	Handling heavy loads	Teamwork	Customer service	53	640	30 (5%)	160 (25%)	95 (15%)	410 (64%)	105 (16%)	30 (5%)
Heavy-duty equipment mechanics (NOC 72401)	Repairs / corrective maintenance	Machinery / equipment repairs	Mechanical skills	104	2,210	80 (4%)	20 (1%)	305 (14%)	1,485 (67%)	315 (14%)	105 (5%)
Transport truck drivers (NOC 73300)	Truck driving	Inspection of vehicles	Records management	1,162	17,055	975 (11%)	565 (3%)	1,355 (8%)	10,215 (60%)	3,890 (9%)	1,600 (9%)
Managers in agriculture (NOC 80020)	N/A	N/A	N/A	0	13,715	100 (1%)	3,005 (22%)	440 (3%)	6,260 (46%)	3,570 (26%)	3,445 (25%)
Managers in horticulture (NOC 80021)	Organizational skills	Communication skills	Records management	4	205	0 (0%)	100 (49%)	20 (10%)	85 (41%)	75 (37%)	20 (10%)
Agricultural service contractors and farm supervisors (NOC 82030)	Supervisory skills	Organizational skills	Records management	18	180	0 (0%)	30 (17%)	15 (8%)	105 (58%)	35 (19%)	20 (11%)
Contractors and supervisors, landscaping, grounds maintenance and horticulture services (NOC 82031)	Handling heavy loads	Records management	Organizational skills	21	785	55 (7%)	60 (8%)	40 (5%)	550 (70%)	145 (18%)	50 (6%)

Specialized livestock workers and farm machinery operators (NOC 84120)	Teamwork	Records management	Work under pressure	14	3,915	160 (4%)	800 (20%)	1,165 (30%)	1,890 (48%)	505 (13%)	355 (9%)
Livestock labourers (NOC 85100)	Fast-paced setting	Teamwork	Attention to detail	59	2,070	110 (5%)	810 (39%)	880 (43%)	710 (34%)	260 (13%)	225 (11%)
Harvesting labourers (NOC 85101)	Teamwork	English language	Hand-eye co-ordination	15	465	35 (8%)	245 (53%)	170 (37%)	160 (34%)	90 (19%)	45 (10%)
Nursery and greenhouse labourers (NOC 85103)	N/A	N/A	N/A	0	720	50 (7%)	475 (66%)	320 (44%)	230 (32%)	125 (17%)	40 (6%)

Source: Statistics Canada. Table 98-10-0593-01 Class of worker by occupation unit group, labour force status, age, and gender: Canada, provinces and territories, census metropolitan areas and census agglomerations with parts, 2021; Vicinity Jobs custom data, 2024.

*for each occupation



PROVINCIAL SNAPSHOT: ONTARIO

- Ontario once again made up the largest national share of farms and farm operators. In addition, it was the second largest contributor to the country's farm operating revenues. Moreover, Ontario was the leader among all provinces in farming commodities such as soybeans, corn for grain and greenhouse products.
- Farms in Ontario have been using sophisticated agricultural technology to improve farming efficiency, help protect the environment from fertilizer over-application and stay competitive in the global market. The types of technology include but are not limited to fully robotic milking, automated guidance steering systems and geographic information system mapping.
- The combination of aging farm operators and growing health concerns associated

with COVID-19 may have caused more farm operators to consider succession plans. In 2021, 12.4 per cent of farms in Ontario reported a succession plan, up from 8.5 per cent in 2016. The total number of farms in Ontario reporting a succession plan increased by 42.3 per cent from the previous census, up from 4,206 in 2016. By comparison, the rate of increase was 41.2 per cent at the national level, up from 16,200 in 2016.

- As was the case in 2016, the number of farm operators reported in Ontario made up over one-quarter (25.7 per cent) of total farm operators reported in Canada in 2021. Meanwhile, the number of farm operators in the province decreased by 4.4 per cent from the previous census, which was slightly above the national rate (-3.5 per cent). In 2021, there were 67,390 farm operators in Ontario, down from 70,470 in 2016.
- Although the total number of farm operators in Ontario decreased over time, the proportion of female farm operators increased from 29.7 per cent in 2016 to 31.0 per cent in 2021. This was because the number of female operators in the province remained steady over this period. There were 20,905 female farm operators in 2016, and by 2021, the number decreased marginally to 20,895. Conversely, the number of male farm operators decreased 6.2 per cent from 2016, down to 46,490 in 2021.
- The number of farm operators in Ontario younger than 35 years old (younger operators) decreased by 15 per cent from the previous census, down from 6,610 in 2016. By comparison, the number of farm



operators aged 35 to 54 years old (middle-aged operators) decreased by 20.9 per cent, down to 19,780 in 2021. Conversely, the number of farm operators aged 55 or older (older operators) increased by 8.1 per cent from 2016 up to 42,000 in 2021.

- The decrease in the number of younger and middle-aged operators has led to an aging farm operator population. The average age of Ontario's farm operators increased by 1.4 years to 56.7, up from 55.3 years in 2016.⁴⁰

2023 Job Postings at a Glance – Ontario

- Demand was highest for Transport truck drivers (10,446 job postings), followed by Landscape and horticulture technicians and specialists (1,765 job postings) and Heavy-duty equipment mechanics (698 job postings).
- Teamwork and attention to detail appear to be key skills in demand for several occupations (see Table 6).



⁴⁰ Statistics Canada, "Canadian Agriculture at a Glance: Ontario Is an Agricultural Powerhouse That Leads in Many Farming Categories."

Table 6: Key Labour Market Characteristics (2021) and Skill Demand (2023) for Ontario.

Occupation/NOC	Most demanded skill	Second-most demanded skill	Third-most demanded skill	2023 demand (# of job postings)	Total labour force* (n)	Total unemployment* (n/(%))	Women in the labour force* (n/(%))	15- to 24-year-olds in the labour force* (n/(%))	25- to 54-year-olds in the labour force* (n/(%))	55- to 64-year-olds in the labour force* (n/(%))	65 years and older in the labour force* (n/(%))
Agricultural representatives, consultants and specialists (NOC 21112)	Cascading Style Sheets (CSS)	Communication skills	Customer service	41	1,225	30 (2%)	405 (33%)	140 (11%)	705 (58%)	220 (18%)	155 (13%)
Landscape and horticulture technicians and specialists (NOC 22114)	Cascading Style Sheets (CSS)	Teamwork	Handling heavy loads	1,765	9,945	730 (7%)	2,455 (25%)	1,560 (16%)	6,465 (65%)	1,460 (15%)	460 (5%)
Heavy-duty equipment mechanics (NOC 72401)	Repairs / corrective maintenance	Mechanical skills	Machinery / equipment repairs	698	8,200	295 (4%)	75 (1%)	1,075 (13%)	5,095 (62%)	1,525 (19%)	495 (6%)
Transport truck drivers (NOC 73300)	Truck driving	Inspection of vehicles	Teamwork	10,446	125,190	9,535 (8%)	4,640 (4%)	5,445 (4%)	76,820 (61%)	33,195 (27%)	9,725 (8%)
Managers in agriculture (NOC 80020)	Teamwork	Attention to detail	Handling heavy loads	42	40,595	605 (1%)	11,590 (29%)	1,595 (4%)	17,580 (43%)	10,495 (26%)	10,930 (27%)
Managers in horticulture (NOC 80021)	Teamwork	Attention to detail	Communication skills	37	1,500	30 (2%)	530 (35%)	70 (5%)	800 (53%)	405 (27%)	230 (15%)
Agricultural service contractors and farm supervisors (NOC 82030)	Records management	Supervisory skills	Teamwork	178	985	15 (2%)	310 (31%)	70 (7%)	700 (71%)	165 (17%)	55 (6%)
Contractors and supervisors, landscaping, grounds maintenance and horticulture services (NOC 82031)	Teamwork	Leadership	Communication skills	454	9,595	425 (4%)	1,075 (11%)	715 (7%)	6,870 (72%)	1,590 (17%)	425 (4%)

Specialized livestock workers and farm machinery operators (NOC 84120)	Teamwork	Records management	Attention to detail	172	10,415	725 (7%)	3,025 (29%)	3,490 (34%)	4,385 (42%)	1,535 (15%)	1,010 (10%)
Livestock labourers (NOC 85100)	Teamwork	Fast-paced setting	Attention to detail	652	9,630	615 (6%)	4,705 (49%)	4,460 (46%)	3,200 (33%)	1,195 (12%)	780 (8%)
Harvesting labourers (NOC 85101)	Handling heavy loads	Fast-paced setting	Hand-eye co-ordination	666	3,250	635 (20%)	1,485 (46%)	1,070 (33%)	1,600 (39%)	440 (14%)	140 (4%)
Nursery and greenhouse labourers (NOC 85103)	Fast-paced setting	Handling heavy loads	Attention to detail	215	6,730	660 (10%)	3,650 (54%)	2,575 (38%)	2,945 (44%)	835 (12%)	380 (6%)

Source: Statistics Canada. Table 98-10-0593-01 Class of worker by occupation unit group, labour force status, age, and gender: Canada, provinces and territories, census metropolitan areas and census agglomerations with parts, 2021; Vicinity Jobs custom data, 2024.

*for each occupation



PROVINCIAL SNAPSHOT: QUEBEC

- Data from the 2021 Census of Agriculture shows that Quebec is among Canada's leaders in several agricultural commodities including maple products, dairy cows, pigs and cranberries. Maple farming continues to provide worldwide recognition to Quebec. The province exported over \$568.9 million worth of maple sugar and syrup in 2021.
- Because of its large number of dairy farms, Quebec had more farms reporting robotic milking than any other province. In 2020, the province accounted for 41.1 per cent of total farms in Canada that reported robotic milking technology. The number of farms reporting robotic milking in Quebec nearly doubled from the previous census. In 2015, 454 farms reported robotic milking, and by 2020, it was 902 farms.
- The rate of reported technology use in Quebec was very similar to the rest of

Canada. In 2020, just under half (49.8 per cent) of farms in the province reported using at least one of eight technologies, compared with 50.4 per cent of farms in Canada.

- From 2016 to 2021, the number of farms reporting a succession plan in Quebec decreased by 162. The proportion of farms reporting a succession plan also decreased from 9.2 per cent to 8.5 per cent over the same period.
- For the first time since 1991, the number of farm operators in Quebec increased. From 2016 to 2021, the number of farm operators reported increased by 270, for a total of 42,265 farm operators.
- The proportion of female operators in the province has remained fairly stable since 1991, hovering around one-quarter of total farm operators. In 2021, 27.7 per cent of total farm operators reporting in Quebec were female, which was slightly lower than the national level (30.4 per cent).
- The average Quebec farm operator is older, in large part because of the decreasing proportions of young and middle-aged farm operators. In 2021, the average farm operator was 54.0 years old, up from 52.9 years old in 2016. Meanwhile, the proportion of young farm operators (under 35 years) continued to decline.
- The proportion of middle-aged farm operators (35 to 54 years) also declined. In 2021, middle-aged farm operators made up 38 per cent of total farm operators reporting in Quebec, which was higher



- than the national level (30.9 per cent).
- Older farm operators (55 years and older) were the only group to grow. The proportion of older farm operators reported in Quebec increased from 47.3 per cent in 2016 to 53.4 per cent in 2021. Meanwhile, older farm operators accounted for 60.5 per cent of total farm operators in Canada.⁴¹

2023 Job Postings at a Glance – Quebec

- Demand was highest for Transport truck drivers (3,821 job postings), followed by Heavy-duty mechanics (546 job postings), Landscape and horticulture technicians and specialists (498 job postings) and Livestock labourers (498 job postings).
- For all occupations, teamwork was a required skill.
- French language is one of the most-demanded skill requirements across all occupations except Heavy-duty mechanics and Agricultural service contractors and farm supervisors.
- There were only 36 job postings for Managers in agriculture compared to a labour force of 27,910 employees, not including farm operators (see Table 7).



⁴¹ Statistics Canada, “Canadian Agriculture at a Glance: Quebec Continues to Be the Main Force behind Maple, Blueberries, Cranberries, Dairy Cows and Pigs.”

Table 7: Key Labour Market Characteristics (2021) and Skill Demand (2023) for Quebec.

Occupation/NOC	Most demanded skill	Second- most demanded skill	Third- most demanded skill	2023 demand (# of job postings)	Total labour force* (n)	Total unemployment* (n/(%))	Women in the labour force* (n/(%))	15- to 24-year-olds in the labour force* (n/(%))	25- to 54-year-olds in the labour force* (n/(%))	55- to 64-year-olds in the labour force* (n/(%))	65 years and older in the labour force* (n/(%))
Agricultural representatives, consultants and specialists (NOC 21112)	Teamwork	Cascading Style Sheets (CSS)	French language	89	2,100	30 (1%)	1,090 (52%)	135 (6%)	1,560 (74%)	330 (16%)	70 (3%)
Landscape and horticulture technicians and specialists (NOC 22114)	French language	Teamwork	Cascading Style Sheets (CSS)	498	5,985	370 (6%)	2,900 (48%)	580 (10%)	3,685 (62%)	1,300 (22%)	420 (7%)
Heavy-duty equipment mechanics (NOC 72401)	Mechanical skills	Repairs / corrective maintenance	Machinery/ equipment repairs	546	8,280	240 (3%)	80 (1%)	875 (11%)	5,600 (68%)	1,560 (19%)	240 (2%)
Transport truck drivers (NOC 73300)	Truck driving	French language	Teamwork	3,821	98,350	6,395 (7%)	5,620 (6%)	8,335 (8%)	56,615 (58%)	25,065 (25%)	8,345 (8%)
Managers in agriculture (NOC 80020)	French language	Teamwork	Flexibility	36	27,910	540 (2%)	7,035 (25%)	915 (3%)	15,325 (55%)	7,430 (27%)	4,240 (15%)
Managers in horticulture (NOC 80021)	French language	Teamwork	Planning	17	270	10 (4%)	160 (59%)	0 (0%)	145 (54%)	85 (31%)	35 (13%)
Agricultural service contractors and farm supervisors (NOC 82030)	Attention to detail	Teamwork	Customer service	107	405	10 (2%)	105 (26%)	10 (2%)	290 (72%)	80 (20%)	25 (6%)
Contractors and supervisors, landscaping, grounds maintenance and horticulture services (NOC 82031)	French language	Teamwork	Customer service	113	2,215	100 (5%)	355 (16%)	145 (7%)	1,505 (68%)	445 (20%)	125 (6%)

Specialized livestock workers and farm machinery operators (NOC 84120)	French language	Teamwork	Organizational skills	15	9,465	695 (7%)	2,610 (28%)	2,270 (24%)	4,505 (48%)	1,855 (20%)	830 (9%)
Livestock labourers (NOC 85100)	French language	Teamwork	Leadership	498	5,835	315 (5%)	2,000 (34%)	1,795 (31%)	2,455 (42%)	1,000 (17%)	590 (10%)
Harvesting labourers (NOC 85101)	French language	Leadership	Teamwork	121	2,315	265 (11%)	635 (27%)	495 (21%)	1,040 (45%)	475 (21%)	300 (13%)
Nursery and greenhouse labourers (NOC 85103)	French language	Teamwork	Attention to detail	88	2,090	190 (9%)	965 (46%)	490 (23%)	955 (46%)	445 (21%)	200 (10%)

Source: Statistics Canada. Table 98-10-0593-01 Class of worker by occupation unit group, labour force status, age, and gender: Canada, provinces and territories, census metropolitan areas and census agglomerations with parts, 2021; Vicinity Jobs custom data, 2024.

*for each occupation



PROVINCIAL SNAPSHOT: NEW BRUNSWICK

- Data from the 2021 Census of Agriculture shows that New Brunswick's agriculture sector, while relatively small, is quite diverse with farms in every category.
- In 2021, less than one-tenth (7.7 per cent) of farms in New Brunswick reported having a succession plan. This is slightly higher than in 2016 (7.1 per cent), but lower than the Canadian average of 12.0 per cent. As was the case across Canada, farms in the larger revenue classes were more likely to report a succession plan in New Brunswick.
- One possible reason for the difference in succession plan rates could be the fact that New Brunswick reported a smaller proportion of farms with revenues of \$100,000 and over. In 2020, 34.0 per cent of farms in New Brunswick reported revenues of \$100,000 and over, compared with 44.2 per cent of farms in Canada.
- The total number of farm operators reported in the province decreased 17.6

per cent from 2016 to 2021, whereas in Canada the total number of farm operators decreased 3.5 per cent. Meanwhile, the proportion of female farm operators in New Brunswick increased to just under one-quarter of all farm operators (23.6 per cent). However, this was still below the national level of 30.4 per cent.

- In 2021, the average age reported for farm operators in New Brunswick was 57 years old, up from 55.6 in 2016. This was also higher than the Canadian average of 56.0 years old. From 2016 to 2021, the proportion of farm operators 55 years and older increased from 57.2 per cent to 62.8 per cent, while the proportion of younger farm operators (younger than 55 years old) decreased from 42.8 per cent to 37.2 per cent.⁴²

2023 Job Postings at a Glance – New Brunswick

- Demand for Transport truck drivers far exceeds other occupations (814 job postings), followed by Heavy-duty equipment mechanics (71 job postings) and Landscape and horticulture technicians and specialists (67 job postings).
- There were only four job postings for Managers in agriculture and only two key skills required: communication and leadership.
- Out of all occupations analyzed, only Livestock labourers required French language skills.
- Teamwork is a top skill requirement for Transport truck drivers (see Table 8).

⁴² Statistics Canada, "Canadian Agriculture at a Glance: New Brunswick Leads Atlantic Canada in Maple Taps and Lowbush Blueberries."

Table 8: Key Labour Market Characteristics (2021) and Skill Demand (2023) for New Brunswick.

Occupation/NOC	Most demanded skill	Second- most demanded skill	Third- most demanded skill	2023 demand (# of job postings)	Total labour force* (n)	Total unemployment* (n/(%))	Women in the labour force* (n/(%))	15- to 24-year-olds in the labour force* (n/(%))	25- to 54-year-olds in the labour force* (n/(%))	55- to 64-year-olds in the labour force* (n/(%))	65 years and older in the labour force* (n/(%))
Agricultural representatives, consultants and specialists (NOC 21112)	Teamwork	Customer service	Planning	20	115	0 (0%)	40 (35%)	10 (9%)	60 (52%)	45 (39%)	0 (0%)
Landscape and horticulture technicians and specialists (NOC 22114)	Cascading Style Sheets (CSS)	Teamwork	Handling heavy loads	67	390	45 (12%)	90 (23%)	25 (6%)	270 (69%)	65 (17%)	25 (6%)
Heavy-duty equipment mechanics (NOC 72401)	Mechanical skills	Repairs / corrective maintenance	Troubleshooting	71	855	60 (7%)	0 (0%)	100 (12%)	525 (61%)	185 (22%)	45 (5%)
Transport truck drivers (NOC 73300)	Truck driving	Inspection of vehicles	Teamwork	814	9,545	1,345 (14%)	265 (3%)	345 (4%)	5,255 (55%)	2,880 (30%)	1,060 (11%)
Managers in agriculture (NOC 80020)	Communication skills	Leadership	N/A	4	1,755	70 (4%)	385 (22%)	85 (5%)	870 (50%)	420 (24%)	385 (22%)
Managers in horticulture (NOC 80021)	N/A	N/A	N/A	0	105	0 (0%)	35 (33%)	0 (0%)	55 (52%)	15 (14%)	30 (29%)
Agricultural service contractors and farm supervisors (NOC 82030)	Attention to detail	Organizational skills	Fast-paced setting	12	35	0 (0%)	10 (29%)	0 (0%)	30 (86%)	0 (0%)	0 (0%)
Contractors and supervisors, landscaping, grounds maintenance and horticulture services (NOC 82031)	Organizational skills	Fast-paced setting	Attention to detail	27	315	50 (16%)	40 (13%)	15 (5%)	190 (60%)	60 (19%)	45 (14%)

Specialized livestock workers and farm machinery operators (NOC 84120)	English language	Fast-paced setting	Organizational skills	26	890	175 (20%)	190 (21%)	160 (18%)	430 (48%)	230 (26%)	70 (8%)
Livestock labourers (NOC 85100)	English language	Teamwork	French language	40	595	80 (13%)	260 (44%)	195 (33%)	235 (39%)	85 (14%)	80 (13%)
Harvesting labourers (NOC 85101)	Teamwork	Handling heavy loads	Hand-eye co-ordination	26	480	160 (33%)	150 (31%)	95 (20%)	235 (49%)	105 (22%)	45 (9%)
Nursery and greenhouse labourers (NOC 85103)	Teamwork	Handling heavy loads	English language	14	630	65 (10%)	320 (51%)	190 (30%)	250 (40%)	145 (23%)	45 (7%)

Source: Statistics Canada. Table 98-10-0593-01 Class of worker by occupation unit group, labour force status, age, and gender: Canada, provinces and territories, census metropolitan areas and census agglomerations with parts, 2021; Vicinity Jobs custom data, 2024.
*for each occupation



PROVINCIAL SNAPSHOT: PRINCE EDWARD ISLAND

- Data from the 2021 Census of Agriculture demonstrated how potato farming in Prince Edward Island plays a major role in agriculture in the province as well as in Canada’s agriculture sector.
- In 2021, more than one-tenth (11.3 per cent) of farms in Prince Edward Island reported a succession plan, up from 8.4 per cent in 2016. Despite the increase, the proportion of farms reporting a succession plan remained below the Canadian average of 12 per cent.
- The total number of farm operators in the province decreased 11.7 per cent from 2016 to 2021. Meanwhile, in Canada, the total number of farm operators decreased 3.5 per cent.
- The proportion of female farm operators in Prince Edward Island increased to one-

fifth of all farm operators (20 per cent). However, this is still below the national level of 30.4 per cent.

- In 2021, the average age reported for farm operators in Prince Edward Island was 56.4 years old, up from 55.0 in 2016, and higher than the Canadian average of 56.0 years old. More than six in 10 farm operators (60.6 per cent) in Prince Edward Island were 55 years and older, higher than 55.1 per cent of farm operators in 2016. Throughout Canada, 60.5 per cent of all farm operators were 55 years and older. Meanwhile, the proportion of farm operators in the province younger than 55 decreased.⁴³

2023 Job Postings at a Glance – Prince Edward Island

- Demand was highest for Transport truck drivers (233 job postings).
- There was only one job posting for Managers in horticulture.
- Teamwork and attention to detail appear to be key skill requirements for several occupations.
- Demand for Agricultural service contractors and farm supervisors (26 job postings) was more than 50 per cent of the total labour force (50 people) (see Table 9).

⁴³ Statistics Canada, “Canadian Agriculture at a Glance: Prince Edward Island Leads the Way in Potato Production.”

Table 9: Key Labour Market Characteristics (2021) and Skill Demand (2023) for Prince Edward Island.

Occupation/NOC	Most demanded skill	Second- most demanded skill	Third- most demanded skill	2023 demand (# of job postings)	Total labour force* (n)	Total unemployment* (n/(%))	Women in the labour force* (n/(%))	15- to 24-year-olds in the labour force* (n/(%))	25- to 54-year-olds in the labour force* (n/(%))	55- to 64-year-olds in the labour force* (n/(%))	65 years and older in the labour force* (n/(%))
Agricultural representatives, consultants and specialists (NOC 21112)	Communication skills	Interpersonal skills	Teamwork	10	50	0 (0%)	20 (40%)	10 (20%)	35 (70%)	0 (0%)	0 (0%)
Landscape and horticulture technicians and specialists (NOC 22114)	Handling heavy loads	Attention to detail	English language	33	100	30 (30%)	9 25 (25%) 0 (23%)	10 (10%)	45 (45%)	40 (40%)	0 (0%)
Heavy-duty equipment mechanics (NOC 72401)	Mechanical skills	Repairs / corrective maintenance	Machinery / equipment repairs	25	225	20 (9%)	0 (0%)	15 (7%)	135 (60%)	70 (31%)	15 (7%)
Transport truck drivers (NOC 73300)	Truck driving	Customer service	Handling heavy loads	233	1,640	250 (15%)	15 (1%)	40 (2%)	860 (52%)	495 (30%)	240 (15%)
Managers in agriculture (NOC 80020)	Attention to detail	Organizational skills	Fast-paced setting	4	1,265	40 (3%)	210 (17%)	30 (2%)	615 (49%)	330 (26%)	290 (23%)
Managers in horticulture (NOC 80021)	Organizational skills	Supervisory skills	Teamwork	1	35	0 (0%)	15 (43%)	0 (0%)	10 (29%)	15 (43%)	10 (29%)
Agricultural service contractors and farm supervisors (NOC 82030)	Records management	Fast-paced setting	Supervisory skills	26	50	15 (30%)	25 (50%)	0 (0%)	35 (70%)	10 (20%)	0 (0%)
Contractors and supervisors, landscaping, grounds maintenance and horticulture services (NOC 82031)	Communication skills	Leadership	Self-starter/ self-motivated	4	125	20 (16%)	20 (16%)	20 (16%)	55 (44%)	25 (20%)	25 (20%)

Specialized livestock workers and farm machinery operators (NOC 84120)	Teamwork	Fast-paced setting	Attention to detail	21	760	120 (16%)	145 (19%)	145 (19%)	345 (45%)	160 (21%)	110 (14%)
Livestock labourers (NOC 85100)	Attention to detail	Teamwork	Handling heavy loads	50	285	30 (11%)	105 (37%)	125 (44%)	110 (39%)	30 (11%)	20 (7%)
Harvesting labourers (NOC 85101)	Handling heavy loads	English language	Flexibility	24	310	50 (16%)	90 (29%)	55 (18%)	150 (48%)	65 (21%)	35 (11%)
Nursery and greenhouse labourers (NOC 85103)	Fast-paced setting	Handling heavy loads	English language	6	115	10 (9%)	55 (48%)	40 (35%)	45 (39%)	25 (22%)	0 (0%)

Source: Statistics Canada. Table 98-10-0593-01 Class of worker by occupation unit group, labour force status, age, and gender: Canada, provinces and territories, census metropolitan areas and census agglomerations with parts, 2021; Vicinity Jobs custom data, 2024.

*for each occupation



PROVINCIAL SNAPSHOT: NOVA SCOTIA

- Data from the 2021 Census of Agriculture reaffirms the province's reputation for blueberry and apple farming.
- The total number of farms reported in Nova Scotia decreased by 21.2 per cent from the previous census. This was the largest decrease among provinces in Canada. By comparison, the number of farms reported across Canada decreased by 1.9 per cent over the same period.
- Farms classified as hog and pig had the biggest percentage decrease. From 2016 to 2021, the number of pig farms dropped by 56.5 per cent. In total, there were 2,741 farms reported in Nova Scotia in 2021.
- In 2021, 8.1 per cent of farms in Nova Scotia reported a succession plan, up from 5.2 per cent in 2016. By comparison,

12.0 per cent of farms across Canada reported a succession plan.

- As was the case in 2016, Nova Scotia reported the highest average farm operator age in Canada. The average age of farm operators in the province increased from 56.5 years in 2016 to 58.2 years in 2021. In Nova Scotia, over two-thirds (67.6 per cent) of farm operators were aged 55 years and older, which was above the national level of 60.5 per cent.
- The proportion of female operators in Nova Scotia increased from 27.3 per cent in 2016 to 29.5 per cent in 2021. However, this was still below the national level of 30.4 per cent.
- In 2021, the number of total farm operators (3,785) in Nova Scotia decreased by 18.3 per cent from 2016. The decrease in the number of farm operators was quite similar to the decrease of 21.2 per cent in the total number of farms in the province.⁴⁴

2023 Job Postings at a Glance – Nova Scotia

- Demand for Transport truck drivers far exceeds other occupations (873 job postings).
- In terms of skills, the demand for teamwork is prevalent across most occupations.
- In 2023, there were no job postings for Managers in horticulture and only two job postings for Agricultural representatives, consultants and specialists (see Table 10).

⁴⁴ Statistics Canada, "Canadian Agriculture at a Glance: Lowbush Blueberries, Apples, Mink and Poultry Play a Large Role in Nova Scotia Farming."

Table 10: Key Labour Market Characteristics (2021) and Skill Demand (2023) for Nova Scotia.

Occupation/NOC	Most demanded skill	Second-most demanded skill	Third-most demanded skill	2023 demand (# of job postings)	Total labour force* (n)	Total unemployment* (n/(%))	Women in the labour force* (n/(%))	15- to 24-year-olds in the labour force* (n/(%))	25- to 54-year-olds in the labour force* (n/(%))	55- to 64-year-olds in the labour force* (n/(%))	65 years and older in the labour force* (n/(%))
Agricultural representatives, consultants and specialists (NOC 21112)	Communication skills	Analytical skills	Flexibility	2	50	0 (0%)	30 (60%)	0 (0%)	50 (100%)	0 (0%)	0 (0%)
Landscape and horticulture technicians and specialists (NOC 22114)	Cascading Style Sheets (CSS)	Teamwork	Communication skills	177	530	50 (9%)	160 (30%)	45 (8%)	340 (64%)	110 (21%)	30 (6%)
Heavy-duty equipment mechanics (NOC 72401)	Mechanical skills	Repairs / corrective maintenance	Machinery / equipment repairs	60	985	60 (6%)	0 (0%)	130 (13%)	580 (59%)	200 (20%)	75 (8%)
Transport truck drivers (NOC 73300)	Truck driving	Teamwork	Inspection of vehicles	873	7,500	875 (12%)	190 (3%)	440 (6%)	3,905 (52%)	2,230 (30%)	925 (12%)
Managers in agriculture (NOC 80020)	Teamwork	Customer service	Flexibility	4	2,390	70 (3%)	635 (27%)	90 (4%)	1,000 (42%)	705 (29%)	590 (25%)
Managers in horticulture (NOC 80021)	N/A	N/A	N/A	0	175	10 (6%)	30 (17%)	0 (0%)	55 (31%)	40 (23%)	75 (43%)
Agricultural service contractors and farm supervisors (NOC 82030)	Records management	Fast-paced setting	Supervisory skills	6	25	0 (0%)	10 (40%)	0 (0%)	10 (40%)	15 (20%)	10 (40%)
Contractors and supervisors, landscaping, grounds maintenance and horticulture services (NOC 82031)	Teamwork	Leadership	Records management	28	550	15 (3%)	115 (21%)	35 (6%)	375 (68%)	115 (21%)	25 (5%)

Specialized livestock workers and farm machinery operators (NOC 84120)	Fast-paced setting	Attention to detail	Teamwork	18	775	90 (12%)	185 (24%)	220 (28%)	300 (39%)	160 (21%)	90 (12%)
Livestock labourers (NOC 85100)	Handling heavy loads	Teamwork	Attention to detail	53	665	75 (11%)	245 (37%)	220 (33%)	285 (43%)	135 (20%)	30 (5%)
Harvesting labourers (NOC 85101)	Teamwork	Hand-eye	Flexibility	24	310	75 (22%)	125 (37%)	135 (40%)	110 (33%)	60 (18%)	25 (7%)
Nursery and greenhouse labourers (NOC 85103)	co-ordination	Handling heavy loads	50	335	115	100 (20%)	245 (49%)	140 (28%)	180 (36%)	140 (28%)	30 (6%)

Source: Statistics Canada. Table 98-10-0593-01 Class of worker by occupation unit group, labour force status, age, and gender: Canada, provinces and territories, census metropolitan areas and census agglomerations with parts, 2021; Vicinity Jobs custom data, 2024.
*for each occupation



PROVINCIAL SNAPSHOT: NEWFOUNDLAND AND LABRADOR

- Farming in Newfoundland and Labrador has faced many challenges, in part because of the province's geography, climate and soil conditions. Despite this, vegetable and melon farming has played a major role in the province's primary agriculture, as indicated in data from the 2021 Census of Agriculture.
- In 2021, nearly one-quarter (23.5 per cent) of total farms reported in Newfoundland and Labrador were classified as vegetable and melon. The next most frequently reported farm type was greenhouse, nursery and floriculture (16.3 per cent).
- Despite operators being older than in the rest of the country on average, farms in Newfoundland and Labrador were less likely to report that they had a succession plan. In 2021, less than one-tenth (9.3

per cent) of farms in Newfoundland and Labrador reported a succession plan. This was higher than in 2016 (5.7 per cent), but lower than the Canadian average of 12 per cent. As was the case across Canada, farms reporting \$100,000 and over in revenues were more likely to report a succession plan in Newfoundland and Labrador.

- One possible reason for the difference in succession plan rates could be because Newfoundland and Labrador reported a smaller proportion of farms with revenues of \$100,000 and over. In 2020, nearly one-third (32.6 per cent) of farms in the province reported revenues of \$100,000 and over, compared with 44.2 per cent of farms in Canada.
- In 2021, the average age reported for farm operators in Newfoundland and Labrador was 57.5 years old, up from 55.8 in 2016, and higher than the Canadian average of 56.0.
- Almost two-thirds of farm operators (65.6 per cent) in Newfoundland and Labrador were aged 55 years and older, which was higher than 58.2 per cent in 2016. In Canada, 60.5 per cent of all farm operators were aged 55 years and older.
- In 2021, 28.9 per cent of farm operators in Newfoundland and Labrador were aged 35 to 54, just below the Canadian average of 30.9 per cent. Farm operators younger than 35 years old accounted for 3.3 per cent of farm operators in the province, which was lower than the rate across Canada (8.6 per cent).



- The total number of farm operators reported in the province decreased 9.6 per cent from 2016 to 450 farm operators in 2021. Conversely, the proportion of female farm operators in Newfoundland and Labrador increased to just over one-quarter (25.6 per cent) of total farm operators, up from 23.0 per cent in 2016. However, this was still below the national level of 30.4 per cent.⁴⁵

2023 Job Postings at a Glance – Newfoundland and Labrador

- Demand for Transport truck drivers far exceeds other occupations (306 job postings).
- In terms of skills, demand for teamwork is prevalent across most occupations.
- In 2023, there were no job postings for Managers in horticulture and only one posting each for Managers in agriculture and Nursery and greenhouse labourers (see Table 11).



⁴⁵ Statistics Canada, “Canadian Agriculture at a Glance: Vegetable and Melon Farms Make up the Biggest Share of Farms in Newfoundland and Labrador.”

Table 11: Key Labour Market Characteristics (2021) and Skill Demand (2023) for Newfoundland and Labrador.

Occupation/NOC	Most demanded skill	Second- most demanded skill	Third- most demanded skill	2023 demand (# of job postings)	Total labour force* (n)	Total unemployment* (n/(%))	Women in the labour force* (n/(%))	15- to 24-year-olds in the labour force* (n/(%))	25- to 54-year-olds in the labour force* (n/(%))	55- to 64-year-olds in the labour force* (n/(%))	65 years and older in the labour force* (n/(%))
Agricultural representatives, consultants and specialists (NOC 21112)	Supervisory skills	Time management	Decision-making	5	15	0 (0%)	0 (0%)	0 (0%)	10 (67%)	10 (67%)	0 (0%)
Landscape and horticulture technicians and specialists (NOC 22114)	Cascading Style Sheets (CSS)	Teamwork	English language	25	80	30 (38%)	10 (13%)	0 (0%)	65 (81%)	0 (0%)	10 (13%)
Heavy-duty equipment mechanics (NOC 72401)	Mechanical skills	Repairs / corrective maintenance	Machinery / equipment repairs	17	880	45 (5%)	10 (1%)	105 (12%)	570 (65%)	160 (18%)	45 (5%)
Transport truck drivers (NOC 73300)	Truck driving	Inspection of vehicles	Handling heavy loads	306	3,935	810 (21%)	155 (4%)	150 (4%)	2,315 (59%)	1,155 (29%)	305 (8%)
Managers in agriculture (NOC 80020)	Teamwork	Time management	Decision-making	1	325	35 (11%)	40 (12%)	0 (0%)	200 (62%)	80 (25%)	50 (15%)
Managers in horticulture (NOC 80021)	N/A	N/A	N/A	0	35	0 (0%)	15 (43%)	0 (0%)	10 (29%)	0 (0%)	25 (71%)
Agricultural service contractors and farm supervisors (NOC 82030)	Supervisory skills	Operations management	Teamwork	3	10	0 (0%)	0 (0%)	0 (0%)	10 (100%)	0 (0%)	0 (0%)
Contractors and supervisors, landscaping, grounds maintenance and horticulture services (NOC 82031)	Teamwork	Decision-making	Truck driving	6	125	10 (8%)	0 (0%)	0 (0%)	90 (72%)	25 (20%)	0 (0%)

Specialized livestock workers and farm machinery operators (NOC 84120)	Teamwork	Fast-paced setting	Attention to detail	5	195	60 (31%)	45 (23%)	15 (8%)	130 (67%)	50 (26%)	0 (0%)
Livestock labourers (NOC 85100)	Teamwork	Attention to detail	Organizational skills	10	250	40 (16%)	85 (34%)	40 (16%)	155 (62%)	55 (22%)	0 (0%)
Harvesting labourers (NOC 85101)	Handling heavy loads	Teamwork	Flexibility	12	40	15 (38%)	20 (50%)	10 (25%)	25 (63%)	0 (0%)	10 (25%)
Nursery and greenhouse labourers (NOC 85103)	English language	N/A	N/A	1	165	35 (21%)	95 (58%)	60 (36%)	50 (30%)	45 (27%)	0 (0%)

Source: Statistics Canada. Table 98-10-0593-01 Class of worker by occupation unit group, labour force status, age, and gender: Canada, provinces and territories, census metropolitan areas and census agglomerations with parts, 2021; Vicinity Jobs custom data, 2024.

*for each occupation



SECTION 4: POST-SECONDARY EDUCATION AND TRAINING TO SUPPORT KEY AGRICULTURAL OCCUPATIONS



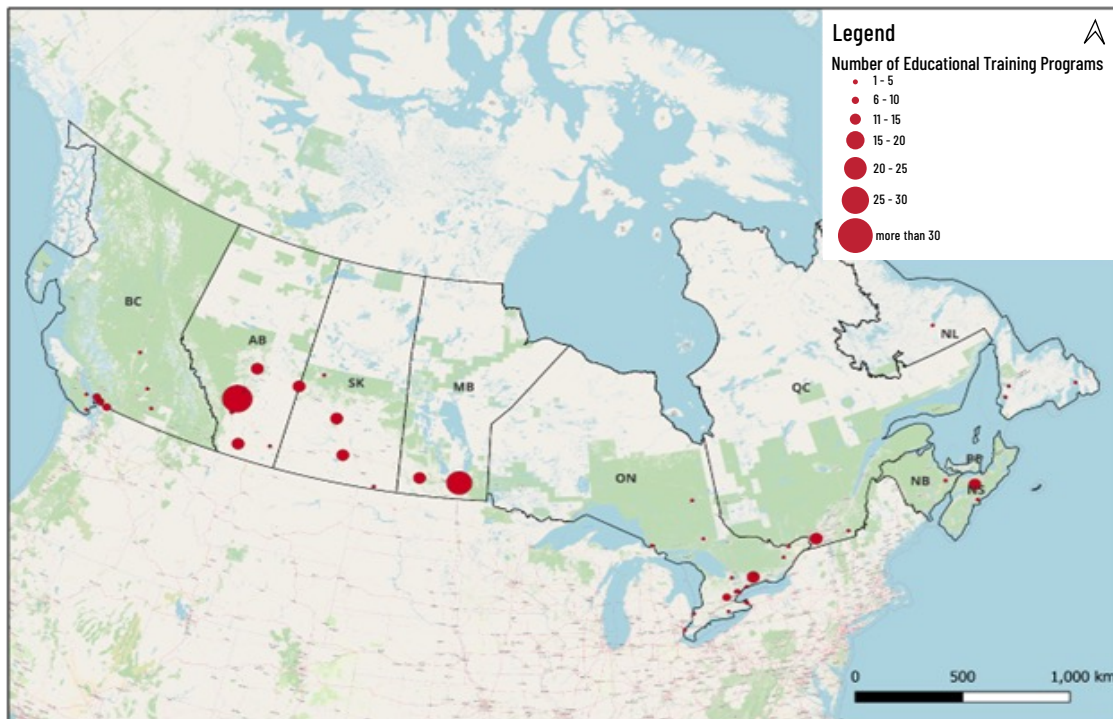
Agriculture-Focused Post-Secondary Programs

The Job Bank indicates that nine of the 12 key occupations analyzed in this study may require some form of post-secondary education (PSE). In order to determine if skills gaps exist between the skills that one is required to have to work in each of the 12 key occupations (according to the Job Bank), the occupation-specific skills employers are calling for in their job postings and the skills being taught in related post-secondary programs, a database of key information related to agriculture-related Canadian post-secondary programs was developed.

Data collected included names of institutions that offer programs related to the 12 key occupations, their campus locations, program format (in-person, remote or blended), program name, specializations/majors (where applicable), expected program length, whether or not co-op is offered and the average cost for a domestic student.

Information related to PSE programs is summarized in this [Interactive Map of Occupational and Skill Demand](#). Click on the graduation cap symbols to learn more about the agriculture-related programs that are offered in that region.

Map 2: Concentrations of Agricultural Training Programs in Canada.



Source: HR Trends Research Group, 2024



Work-Integrated Learning Programs in Agriculture

Work-integrated learning (WIL) is an educational approach that integrates academic learning with practical work experience. It is designed to provide students with real-world experience in their chosen field while they are still studying. WIL programs can take various forms, such as internships, co-operative education, apprenticeships, practicums and field placements.

The goal of work-integrated learning is to bridge the gap between theoretical knowledge gained in the classroom and practical skills needed in the workplace. By engaging in hands-on work experiences, students can develop a deeper understanding of their field, gain relevant skills, build professional networks and enhance their employability upon graduation.

Less Than Five Per Cent of Canadian WIL Programs Are Related to Agriculture

In recent years, developing and promoting WIL programs across Canadian higher education institutions has been top-of-mind for many stakeholders in post-secondary education. There has been substantial interest and investment in WIL by many provincial governments as well as unprecedented federal funding invested in the Canadian WIL ecosystem.⁴⁶

In 2022, Co-operative Education and Work-Integrated Learning (CEWIL) found that, between 2021 and 2022, there was growth of eight per cent in student placements at universities (67,447 in 2021 compared to 73,140 in 2022). A 2021

survey of graduating university students found half (50 per cent) of graduating students reported participating in some type of WIL program.⁴⁷ In addition, they found that Canadian post-secondary institutions offer 3,413 unique WIL programs across 13 academic disciplines and eight academic levels, from diploma to doctorate, but that only 152 of them are in the agriculture, natural resource and conservation space.⁴⁸



⁴⁶ Stirling and Pretti, "The Practice of Co-Op and Work-Integrated Learning in the Canadian Context."

⁴⁷ Canadian University Survey Consortium, "2021 Graduating Student Survey Master Report."

⁴⁸ Drewery, "2022 CEWIL Canada Data Report."



SECTION 5: OCCUPATIONAL SUMMARIES

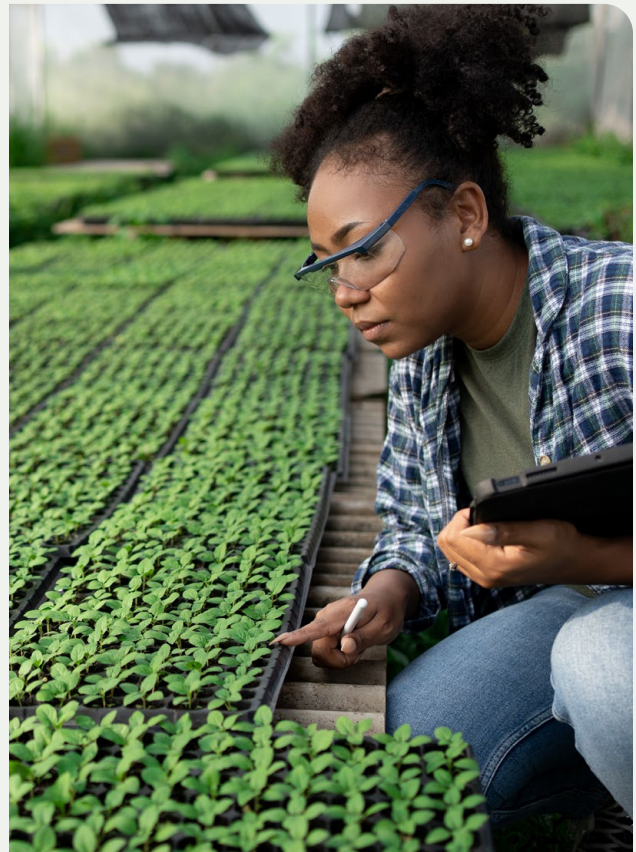


The agriculture sector is undergoing significant transformations driven by technological advancements, demographic shifts and evolving consumer preferences. As we look ahead to the year 2030, it becomes increasingly vital to anticipate the changing landscape of agricultural occupations and identify the careers and skills that will be in high demand. By understanding the projected trends in agricultural occupations, stakeholders can better prepare for the workforce needs of the future and capitalize on emerging opportunities in the evolving agricultural landscape.

The occupational summaries presented in this section provide an overview of key information related to the 12 key occupations that CAHRC has identified as integral to the future growth and success of the Canadian agriculture sector.⁴⁹ Summaries include each occupation's:

- Job Description
- Future Outlook⁵⁰
- Workforce Summary
- Job Prospects by Province
- Average Hourly Wages
- Typical Job Titles
- Map of Occupational Demand Across Canada⁵¹
- Educational Requirements (if applicable)⁵²
- Map of Related Canadian Post-Secondary Programs (if applicable)⁵³
- Overview of Related Canadian Post-Secondary Programs (if applicable)⁵⁴
- PSE Learning Outcomes (if applicable)

- Top Five Skills Demanded by Canadian Employers⁵⁵
- Very High-, High- and Moderate-Level Skills Requirements
- Skills Gaps Between Skills Demanded, Skills Required and Skills Taught
- Occupational Challenges in Recruiting and Retaining Employees
- Recommendations for Strengthening the Labour Force



⁴⁹ Job description, workforce summary, job prospects by province, average hourly wages, typical job titles and skills requirements are derived from the Job Bank.

⁵⁰ Canadian Agricultural Human Resource Council, "Sowing Seeds of Change: Agriculture Labour Market Forecast 2023-2030."

⁵¹ Maps of occupational demand were created by the HR Trends Research Group using 2023 job posting data from Vicinity Jobs.

⁵² Educational requirements, where applicable, were derived from the Job Bank and the Occupational and Skills Information System (OaSIS).

⁵³ Maps of related Canadian post-secondary programs, overviews of related Canadian post-secondary programs, PSE learning outcomes, skills gaps between skills demanded, skills required, skills taught, occupational challenges in recruiting and retaining employees and recommendations for strengthening the labour force were developed by the HR Trends Research Group.

⁵⁴ Average program costs for domestic students do not include the cost of Cégep programs.

⁵⁵ Top five skills demanded by Canadian employers were analyzed by HR Trends Research Group using 2023 job posting data from Vicinity Jobs.



NOC 21112 – Agricultural Representatives, Consultants and Specialists

Job Description

Provide assistance and advice to farmers on all aspects of farm management, cultivation, fertilization, harvesting, soil erosion and composition, disease prevention, nutrition, crop rotation and marketing. Typically employed by businesses, institutions and governments or may be self-employed.

Future Outlook

Between 2024 and 2030, labour demand and supply are expected to be broadly in line at the national level. In 2030, this occupation is expected to have 46 peak vacancies.

Workforce Summary

Number of people employed: 35,000

Median age of workers: 42

Median retirement age: 65

Job Prospects

GOOD: Manitoba

MODERATE: Alberta, Ontario, Quebec, Saskatchewan

LIMITED: British Columbia

UNDETERMINED for all other provinces and territories

Average Hourly Wage

Low: \$24.46

Medium: \$35.58

High: \$50.48

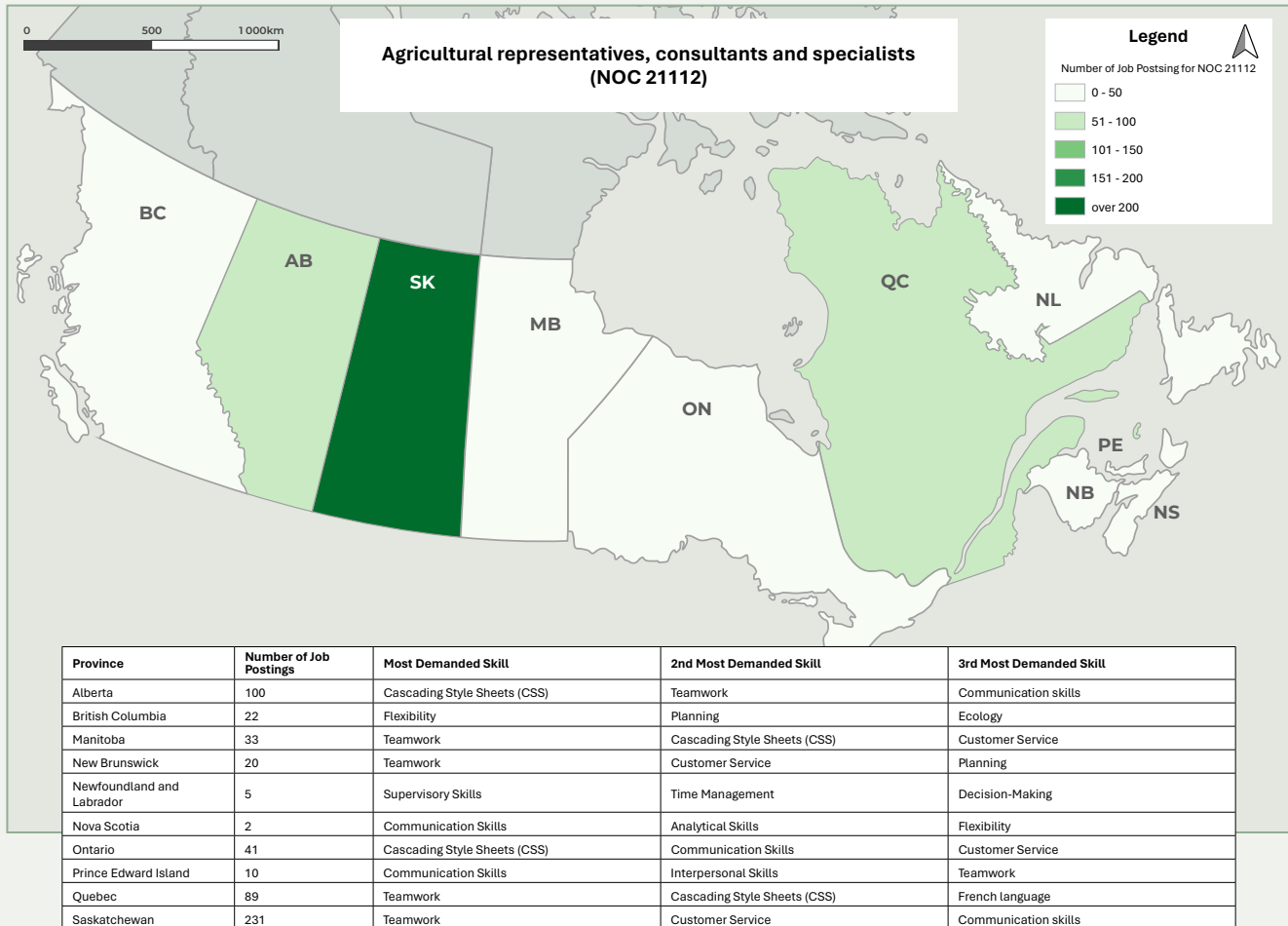
Examples of Job Titles

- Agricultural consultant
- Agricultural extension supervisor
- Agricultural livestock specialist
- Agricultural representative
- Agricultural soil and crop specialist
- Agriculturist
- Agrologist
- Agronomist
- Consulting agrologist
- Crop specialist
- Farm management consultant
- Field service adviser – agriculture
- Growers' advisor
- Professional agrologist (PAg)





Map of Occupational Demand Across Canada

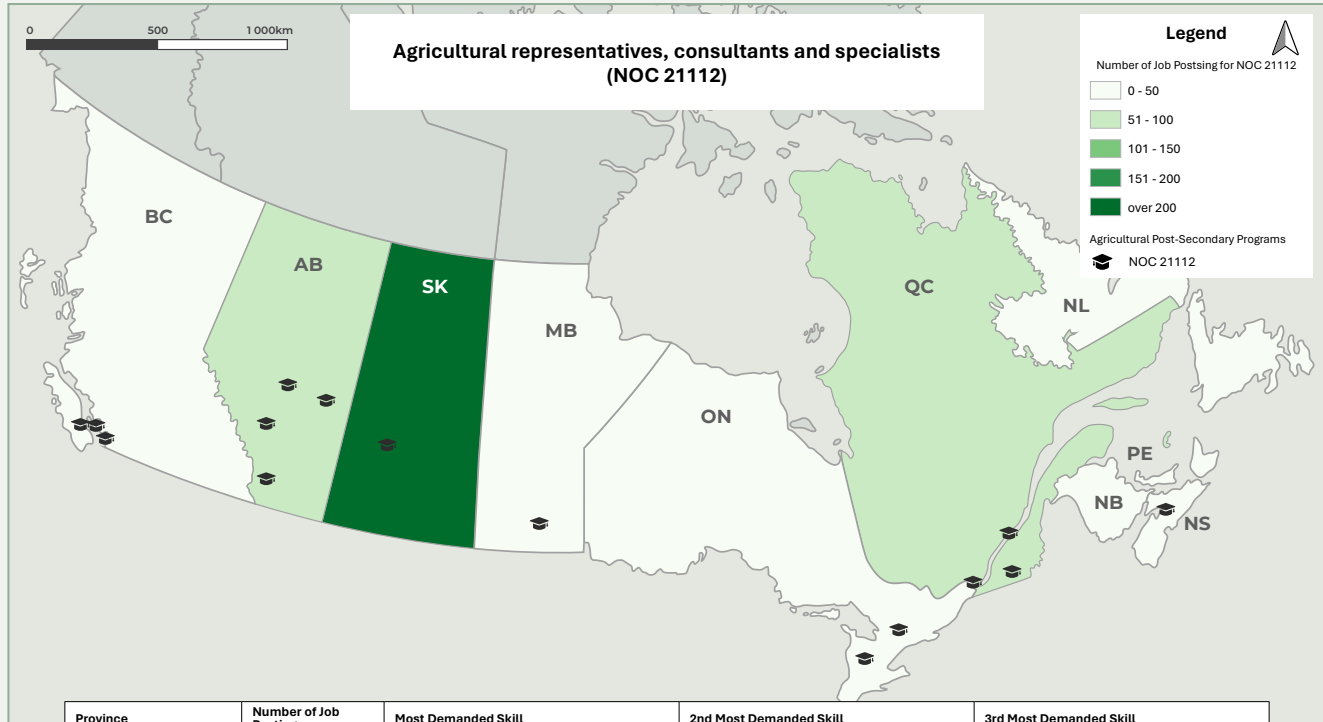


Educational Requirements and Other Qualifications

- A bachelor's or master's degree in agriculture or in a related science is required.
- Membership or eligibility for membership in a provincial institute of agrolgy is usually required.
- In Quebec, membership in the Ordre professionnel des agronomes is mandatory.



Map of Related Canadian Post-Secondary Education (PSE) Programs



Province	Number of Job Postings	Most Demanded Skill	2nd Most Demanded Skill	3rd Most Demanded Skill
Alberta	100	Cascading Style Sheets (CSS)	Teamwork	Communication skills
British Columbia	22	Flexibility	Planning	Ecology
Manitoba	33	Teamwork	Cascading Style Sheets (CSS)	Customer Service
New Brunswick	20	Teamwork	Customer Service	Planning
Newfoundland and Labrador	5	Supervisory Skills	Time Management	Decision-Making
Nova Scotia	2	Communication Skills	Analytical Skills	Flexibility
Ontario	41	Cascading Style Sheets (CSS)	Communication Skills	Customer Service
Prince Edward Island	10	Communication Skills	Interpersonal Skills	Teamwork
Quebec	89	Teamwork	Cascading Style Sheets (CSS)	French language
Saskatchewan	231	Teamwork	Customer Service	Communication skills

Cost of Related PSE Programs for Domestic Students

- The average cost of a 4-year bachelor's degree in agriculture is \$33,414.43.
- The average cost of a 2-year master's degree in agriculture is \$12,776.91.

PSE Learning Outcomes

- Effective use of farm-level and firm-level decision analysis tools.

- Understanding rural development concerns, rural politics, aboriginal agriculture and Canadian public policy.
- Application of soil, plant and agro-ecological sciences in enhancing sustainable food production. Knowledge of methods for predicting and mitigating the degradation of soil and water.
- Knowledge and practical skills in plant biotechnology and breeding and production management techniques used to develop, grow and market high-quality and high-yield crops.



Top 5 Skills Demanded

1. Teamwork
2. Cascading Style Sheets
3. Communication Skills
4. Customer Service
5. Leadership

Skills Requirements Proficiency Level 4 – High Level

- Learning and Teaching Strategies
- Critical Thinking
- Persuading
- Problem Solving
- Evaluation
- Active Listening
- Writing
- Reading Comprehension
- Oral Expression
- Oral Comprehension

Skills Gaps

- Technology and automation
- Governance Interpersonal skills such as teamwork, communication and leadership

Occupational Challenges in Recruiting and Retaining Employees

- Keeping pace with rapidly evolving agricultural technologies, computer systems and robotics, best practices and regulatory changes.
- Dealing with unpredictable weather patterns affecting crop yields.
- Often requires employees to live in, move to, or travel frequently to rural areas.

Recommendations for Strengthening the Labour Force for Agricultural Representatives, Consultants and Specialists (NOC 21112)

- Strengthen and build partnerships with post-secondary institutions to ensure programming meets current and future demand.
- Partner with post-secondary institutions and other key stakeholders to facilitate innovative and experiential learning projects.
- Create mentorship programs and succession planning strategies to ensure current employees have access to increased professional development and learning opportunities. Develop multi-faceted recruitment, retention and training strategies to mitigate the anticipated shortfall in future labour supply.

Sources: Vicinity Jobs custom data (2024); Government of Canada Job Bank (2024); Occupational and Skills Information System (OaSIS) (2024); HR Trends Research Group (2024).





NOC 22114 – Landscape and Horticulture Technicians and Specialists

Job Description

Survey and assess landscapes; draw sketches and build models of landscape designs; construct and maintain gardens, parks and other landscaped environments; advise clients on issues related to horticulture; breed, cultivate, treat and study plants. Typically employed by landscape, lawn service or tree care establishments, golf courses, nurseries and greenhouses, and parks, or may be self-employed.

Future Outlook

Between 2024 and 2030 labour demand is expected to moderately outpace supply at the national level. In 2030, this occupation is expected to have 519 peak vacancies.

Workforce Summary

Number of people employed: 15,100
Median age of workers: 42
Median retirement age: 65

Job Prospects

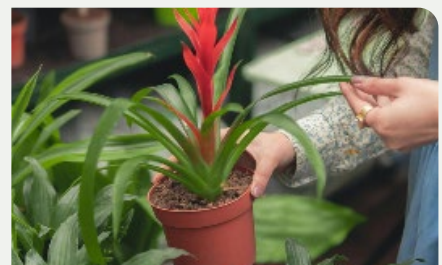
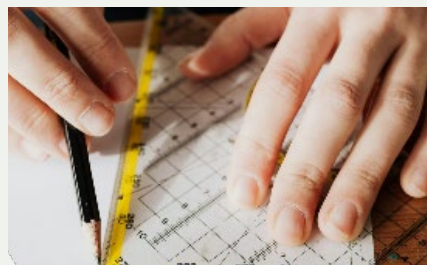
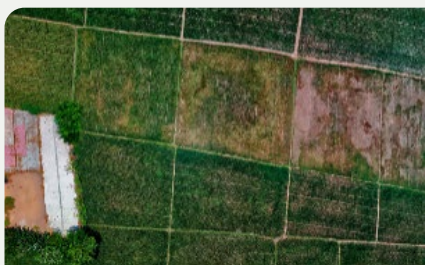
GOOD: British Columbia, Ontario, Prince Edward Island
MODERATE: Manitoba, Nova Scotia, Quebec
Saskatchewan
LIMITED: Alberta
UNDETERMINED for all other provinces and territories

Average Hourly Wage

Low: \$17.50
Medium: \$26.00
High: \$34.00

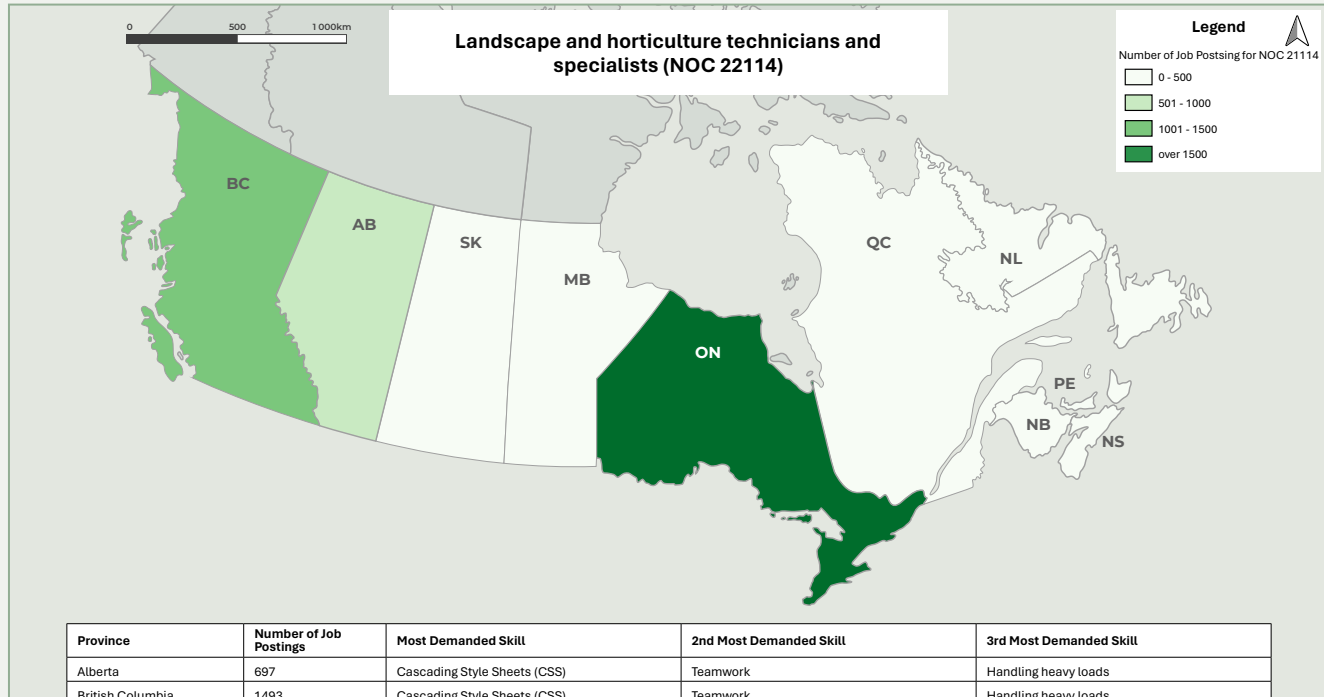
Examples of Job Titles

- Arborist
- Greenskeeper
- Horticulture technician
- Horticulture specialist
- Horticulturist
- Hydroponics technician
- Landscape architectural technician
- Landscape designer
- Landscape gardener
- Landscape technician
- Landscaper
- Lawn care specialist
- Tree service technician





Map of Occupational Demand Across Canada



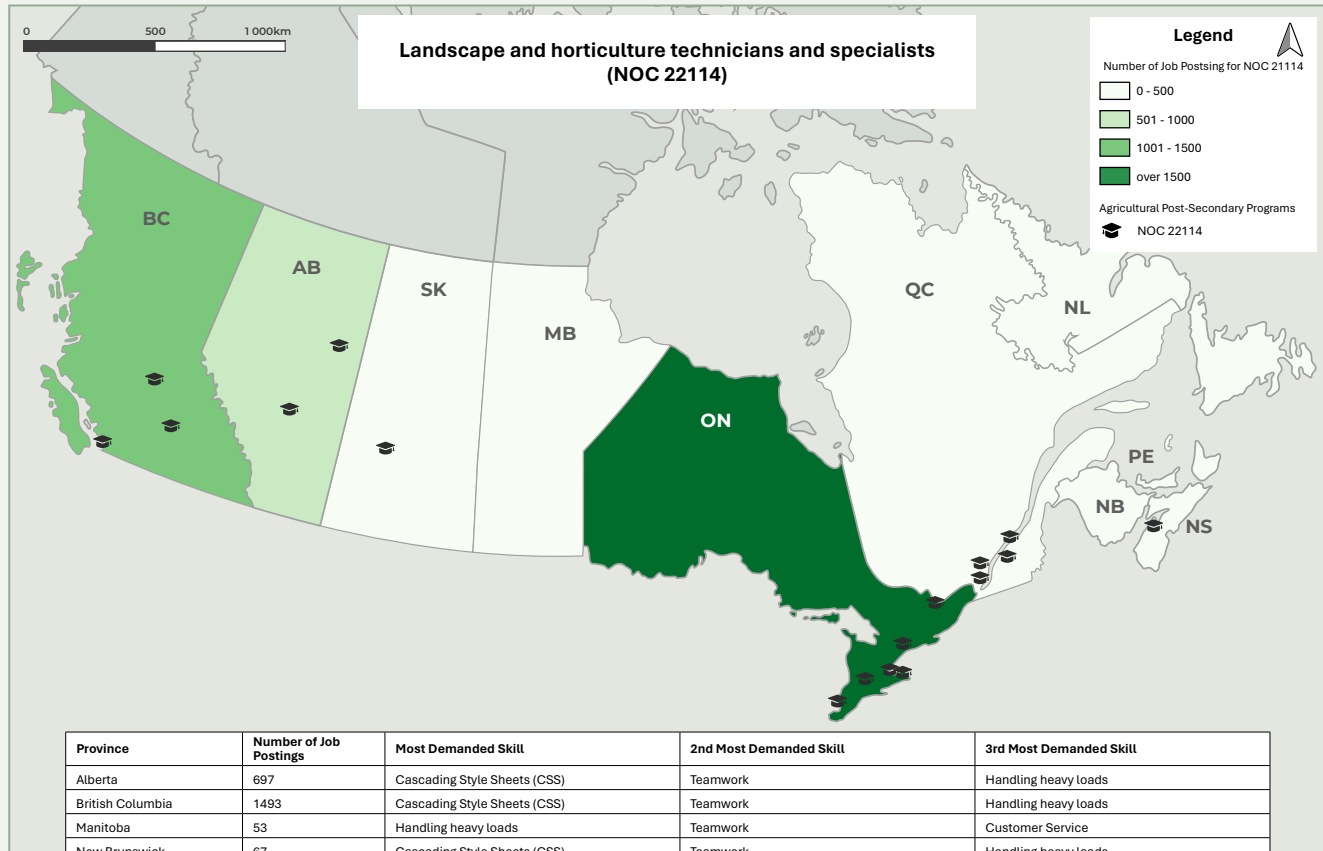
Province	Number of Job Postings	Most Demanded Skill	2nd Most Demanded Skill	3rd Most Demanded Skill
Alberta	697	Cascading Style Sheets (CSS)	Teamwork	Handling heavy loads
British Columbia	1493	Cascading Style Sheets (CSS)	Teamwork	Handling heavy loads
Manitoba	53	Handling heavy loads	Teamwork	Customer Service
New Brunswick	67	Cascading Style Sheets (CSS)	Teamwork	Handling heavy loads
Newfoundland and Labrador	25	Cascading Style Sheets (CSS)	Teamwork	English language
Nova Scotia	177	Cascading Style Sheets (CSS)	Teamwork	Communication skills
Ontario	1765	Cascading Style Sheets (CSS)	Teamwork	Handling heavy loads
Prince Edward Island	33	Handling heavy loads	Attention to Detail	English language
Quebec	498	French language	Teamwork	Cascading Style Sheets (CSS)
Saskatchewan	102	Teamwork	Customer Service	Decision-Making

Educational Requirements and Other Qualifications

- Completion of a two- to three-year college program in agronomy, arboriculture, horticulture, landscaping, landscape design or landscape technology is usually required.
- Experience as a landscape and grounds maintenance labourer may be required for golf course superintendents, landscape gardeners and landscapers.
- An apprenticeship program is available for horticulturists, arboriculturists and landscape gardeners.
- Trade certification for landscape horticulturists is available, but voluntary, in all provinces.
- A provincial licence to apply chemical fertilizers, fungicides, herbicides and pesticides may be required.
- In Quebec, membership in the regulatory body is required to use the title of Professional Technologist.
- Red Seal endorsement is also available to qualified landscape horticulturists upon successful completion of the interprovincial Red Seal examination.



Map of Related Canadian Post-Secondary Education (PSE) Programs



Province	Number of Job Postings	Most Demanded Skill	2nd Most Demanded Skill	3rd Most Demanded Skill
Alberta	697	Cascading Style Sheets (CSS)	Teamwork	Handling heavy loads
British Columbia	1493	Cascading Style Sheets (CSS)	Teamwork	Handling heavy loads
Manitoba	53	Handling heavy loads	Teamwork	Customer Service
New Brunswick	67	Cascading Style Sheets (CSS)	Teamwork	Handling heavy loads
Newfoundland and Labrador	25	Cascading Style Sheets (CSS)	Teamwork	English language
Nova Scotia	177	Cascading Style Sheets (CSS)	Teamwork	Communication skills
Ontario	1765	Cascading Style Sheets (CSS)	Teamwork	Handling heavy loads
Prince Edward Island	33	Handling heavy loads	Attention to Detail	English language
Quebec	498	French language	Teamwork	Cascading Style Sheets (CSS)
Saskatchewan	102	Teamwork	Customer Service	Decision-Making

Cost of Related PSE Programs for Domestic Students

- The average cost of a 2-year college diploma in a horticulture-related program is \$9,468.34.
- The average cost of a 2-year college diploma in a landscaping-related program is \$8,821.99.

PSE Learning Outcomes

- Ability to build and maintain landscapes, gardens and indoor spaces.
- Ability to plan, design and develop beautiful and sustainable landscapes for residential and commercial clients.
- Understanding of arboriculture, landscape design, plant identification, plant production and business management.



Top 5 Skills Demanded

1. Cascading Style Sheets
2. Teamwork
3. Handling Heavy Loads
4. Customer Service
5. Attention to Detail

Skills Requirements

Proficiency Level 4 – Moderate Level

- Equipment and Tool Selection
- Coordinating
- Operation Monitoring of Machinery and Equipment
- Operation and Control
- Preventative Maintenance

Skills Gaps

- Technology and automation
- Interpersonal skills such as teamwork, communication and leadership.

Occupational Challenges in Recruiting and Retaining Employees

- Job seekers and new entrants to the labour force do not view careers in landscaping and horticulture as viable career options.

- Handling physically demanding tasks such as lifting heavy plants and equipment. Dealing with seasonal fluctuations in demand for landscaping services.
- Compensation and benefits vary across employers.
- Opportunities for professional development and career mobility are limited.

Recommendations for Strengthening the Labour Force for Landscape and Horticulture Technicians and Specialists (NOC 22114)

- Strengthen and build partnerships with post-secondary institutions to ensure programming meets current and future demand.
- Develop more post-secondary programs that have hands-on or applied learning components (e.g., co-ops, internships) incorporating new and emerging technologies.
- Partner with post-secondary institutions and other key stakeholders to facilitate innovative and experiential learning projects.
- Leverage marketing strategies, career fairs or rebranding initiatives to highlight the viability of a career in horticulture.

Sources: Vicinity Jobs custom data (2024); Government of Canada Job Bank (2024); Occupational and Skills Information System (OaSIS) (2024); HR Trends Research Group (2024).





NOC 72401 – Heavy-Duty Equipment Mechanics

Job Description

Repair, troubleshoot, adjust, overhaul and maintain mobile heavy-duty equipment used in construction, transportation, forestry, mining, oil and gas, material handling, landscaping, land clearing, farming and similar activities. Typically employed by companies which own and operate heavy equipment and by heavy equipment dealers, rental and service establishments, railway transport companies and urban transit systems.

Future Outlook

Between 2024 and 2030 labour demand and supply are expected to be broadly in line at the national level. In 2030, this occupation is expected to have 93 peak vacancies.

Workforce Summary

Number of people employed: 68,300
Median age of workers: 41
Median retirement age: 63

Job Prospects

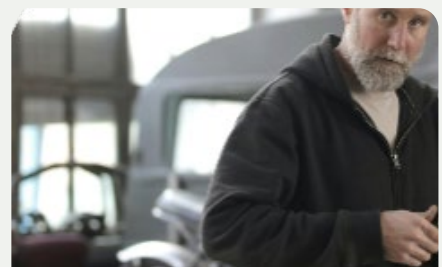
VERY GOOD: Prince Edward Island
GOOD: Nova Scotia, Yukon Territory
MODERATE: Alberta, British Columbia, Manitoba, Quebec, New Brunswick, Newfoundland and Labrador, the Northwest Territories, Nunavut, Ontario, Saskatchewan

Average Hourly Wage

Low: \$21.00
Medium: \$35.00
High: \$50.00

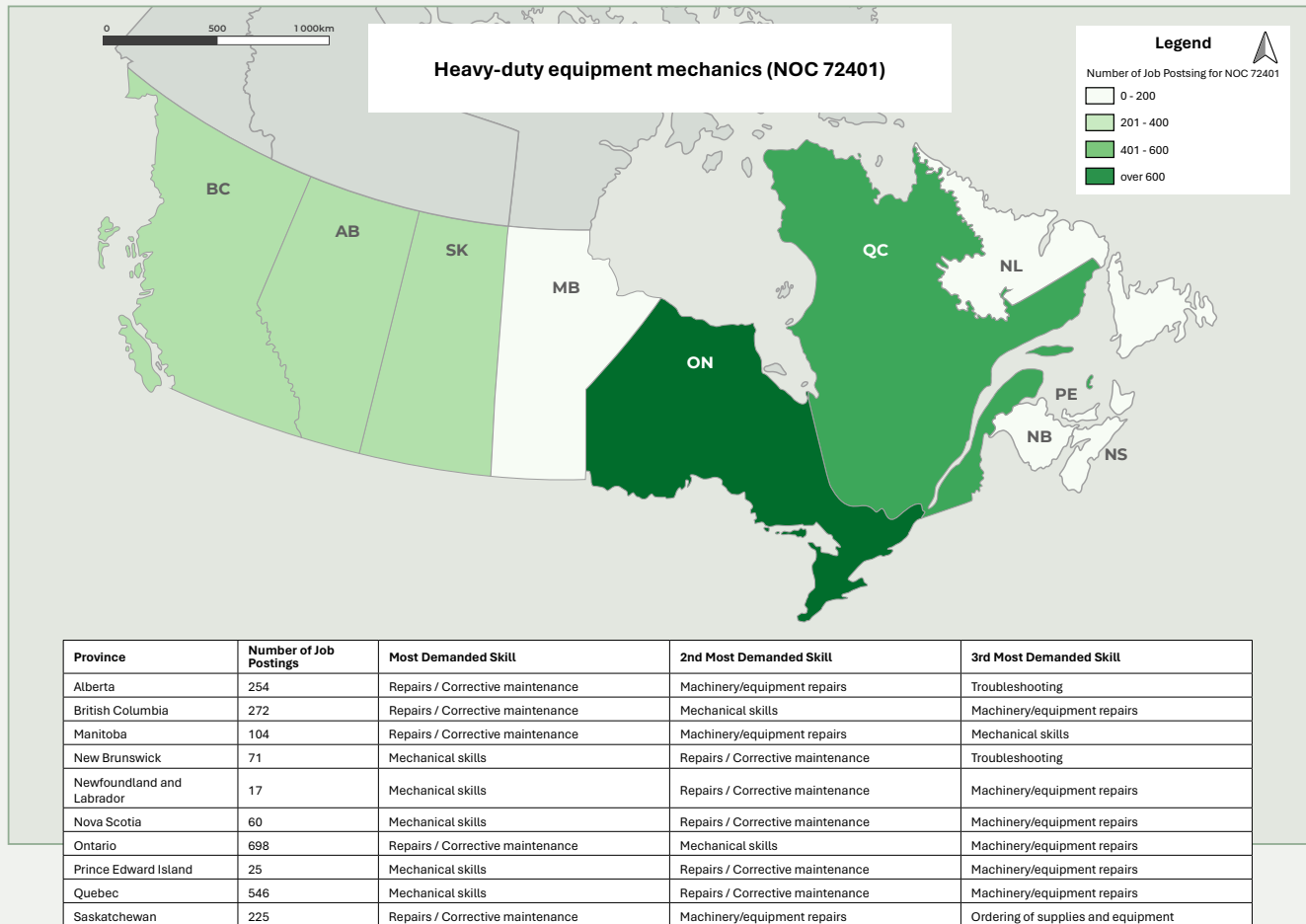
Examples of Job Titles

- Agricultural equipment technician
- Construction equipment mechanic
- Diesel mechanic – heavy equipment
- Farm equipment mechanic
- Heavy equipment mechanic
- Heavy mobile logging equipment mechanic
- Heavy mobile mining equipment mechanic
- Heavy-duty equipment mechanic apprentice
- Heavy-duty equipment technician
- Locomotive mechanic
- Tractor mechanic





Map of Occupational Demand Across Canada

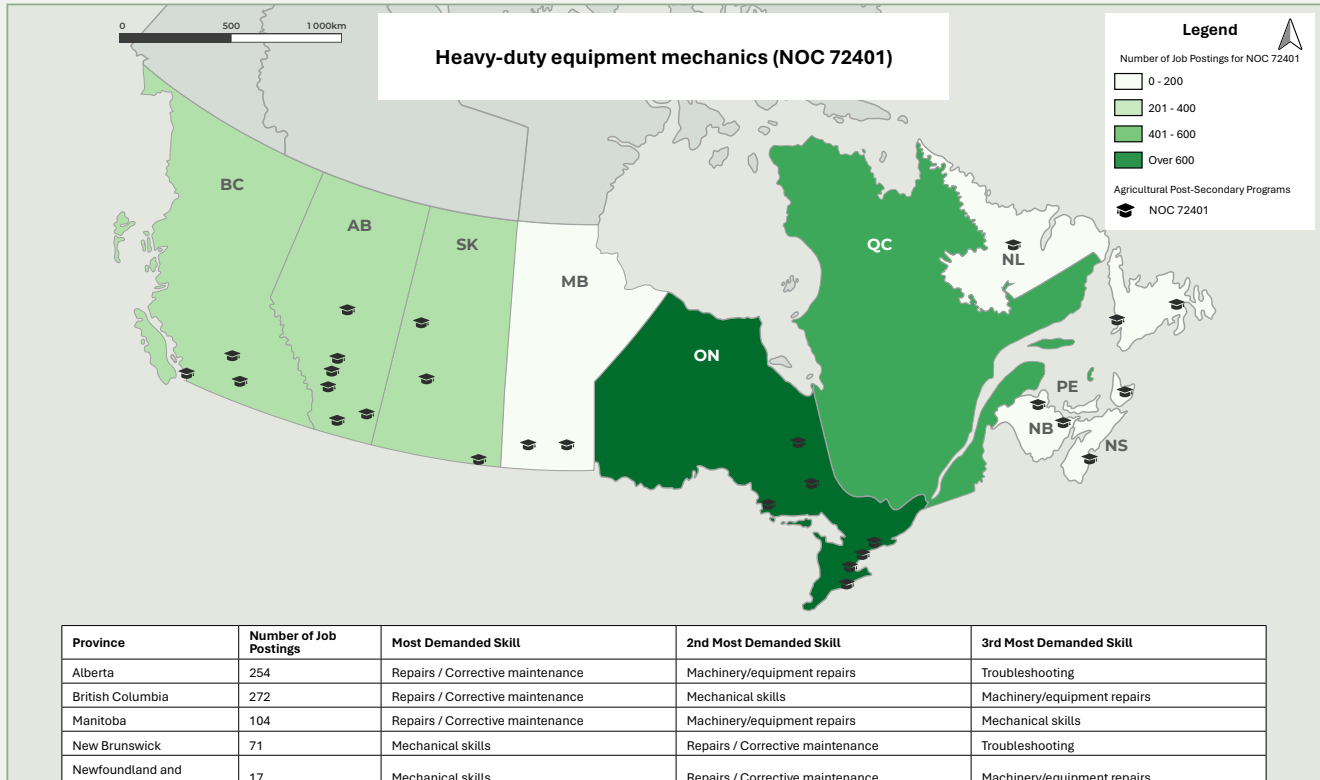


Educational Requirements and Other Qualifications

- Completion of a three- to five-year apprenticeship program or a combination of over four years of work experience and industry courses in heavy equipment repair is usually required to be eligible for trade certification.
- Agricultural equipment technician trade certification is available, but voluntary, in Newfoundland and Labrador, Nova Scotia, Prince Edward Island, New Brunswick, Ontario, Manitoba, Saskatchewan, Alberta and British Columbia.
- Heavy-duty equipment technician trade certification is compulsory in Quebec (only in the construction industry) and Alberta and available but voluntary in all other provinces and the territories.
- Completion of secondary school and training courses or a vocational program is usually required.
- Red Seal endorsement is also available to qualified heavy-duty equipment technicians and agricultural equipment technicians upon successful completion of the interprovincial Red Seal examination.



Map of Related Canadian Post-Secondary Education (PSE) Programs



Province	Number of Job Postings	Most Demanded Skill	2nd Most Demanded Skill	3rd Most Demanded Skill
Alberta	254	Repairs / Corrective maintenance	Machinery/equipment repairs	Troubleshooting
British Columbia	272	Repairs / Corrective maintenance	Mechanical skills	Machinery/equipment repairs
Manitoba	104	Repairs / Corrective maintenance	Machinery/equipment repairs	Mechanical skills
New Brunswick	71	Mechanical skills	Repairs / Corrective maintenance	Troubleshooting
Newfoundland and Labrador	17	Mechanical skills	Repairs / Corrective maintenance	Machinery/equipment repairs
Nova Scotia	60	Mechanical skills	Repairs / Corrective maintenance	Machinery/equipment repairs
Ontario	698	Repairs / Corrective maintenance	Mechanical skills	Machinery/equipment repairs
Prince Edward Island	25	Mechanical skills	Repairs / Corrective maintenance	Machinery/equipment repairs
Quebec	546	Mechanical skills	Repairs / Corrective maintenance	Machinery/equipment repairs
Saskatchewan	225	Repairs / Corrective maintenance	Machinery/equipment repairs	Ordering of supplies and equipment

Cost of Related PSE Programs for Domestic Students

- The average cost of a 1-year certificate program is \$6,874.02.
- The average cost of a 2-year college diploma program is \$7,447.24.
- The average cost of a 4-year apprenticeship program is \$5,451.62.

PSE Learning Outcomes

- Ability to maintain, diagnose problems and repair or overhaul equipment such as tractors and harvesting equipment.

- Develop skills and knowledge to overhaul, repair and service a variety of off-highway and industrial equipment. A comprehensive background in mechanical studies, preventative maintenance, safe shop practices and equipment management systems.
- Understand how to interpret work orders and technical manuals; maintain, clean and lubricate equipment; diagnose faults and malfunctions; adjust, repair or replace defective parts; and follow manufacturers specifications and legislated regulations.



Top 5 Skills Demanded

1. Mechanical Skills
2. Repairs/Corrective Maintenance
3. Machinery/Equipment Repairs
4. Troubleshooting
5. Lubrication

Skills Requirements

Proficiency Level 5 – Highest Level

- Equipment and Tool Selection
- Repairing
- Troubleshooting
- Preventative Maintenance

Proficiency Level 4 – High Level

- Setting Up
- Quality Control Testing
- Operation Monitoring of Machinery and
- Equipment Operation and Control

Proficiency Level 3 – Moderate Level

- Evaluation
- Numeracy

Skills Gaps

- Essential skills such as literacy
- Keeping pace with new and emerging technologies

Occupational Challenges in Recruiting and Retaining Employees

- Keeping pace with advancements in technology, computer systems and

robotics. Managing heavy workloads during peak maintenance seasons.

- Ensuring workplace safety while working with large machinery. Working with heavy equipment poses inherent safety risks, including the potential for crushing injuries and falls.
- Limited opportunities for career advancement.

Recommendations for Strengthening the Labour Force for Heavy-Duty Equipment Mechanics (NOC 72401)

- Strengthen and build partnerships with post-secondary institutions to ensure programming meets current and future demand.
- Develop more post-secondary programs that have hands-on or applied learning components (e.g., co-ops, internships) incorporating new and emerging technologies.
- Partner with post-secondary institutions and other key stakeholders to facilitate innovative and experiential learning projects.
- Conduct essential skills assessments and develop materials to support workers with lower skill levels.

Sources: Vicinity Jobs custom data (2024); Government of Canada Job Bank (2024); Occupational and Skills Information System (OaSIS) (2024); HR Trends Research Group (2024).





NOC 73300 – Transport Truck Drivers

Job Description

Transport truck drivers drive straight trucks or tractor-trailers to transport freight. Long-haul truck drivers operate heavy trucks over urban, provincial and international routes, while short-haul transport truck drivers operate over urban routes. Typically employed by transportation, manufacturing, distribution and moving companies and trucking employment service agencies or may be self-employed.

Future Outlook

Between 2024 and 2030 labour demand is expected to moderately outpace supply at the national level. In 2030, this occupation is expected to have 404 peak vacancies.

Workforce Summary

Number of people employed: 315,600

Median age of workers: 47

Median retirement age: 66

Job Prospects

VERY GOOD: Ontario, Prince Edward Island

GOOD: Alberta, British Columbia, Manitoba, New Brunswick, the Northwest Territories, Nova Scotia, Quebec

MODERATE: Newfoundland and Labrador, Nunavut

Average Hourly Wage

Low: \$17.50

Medium: \$25.00

High: \$35.00

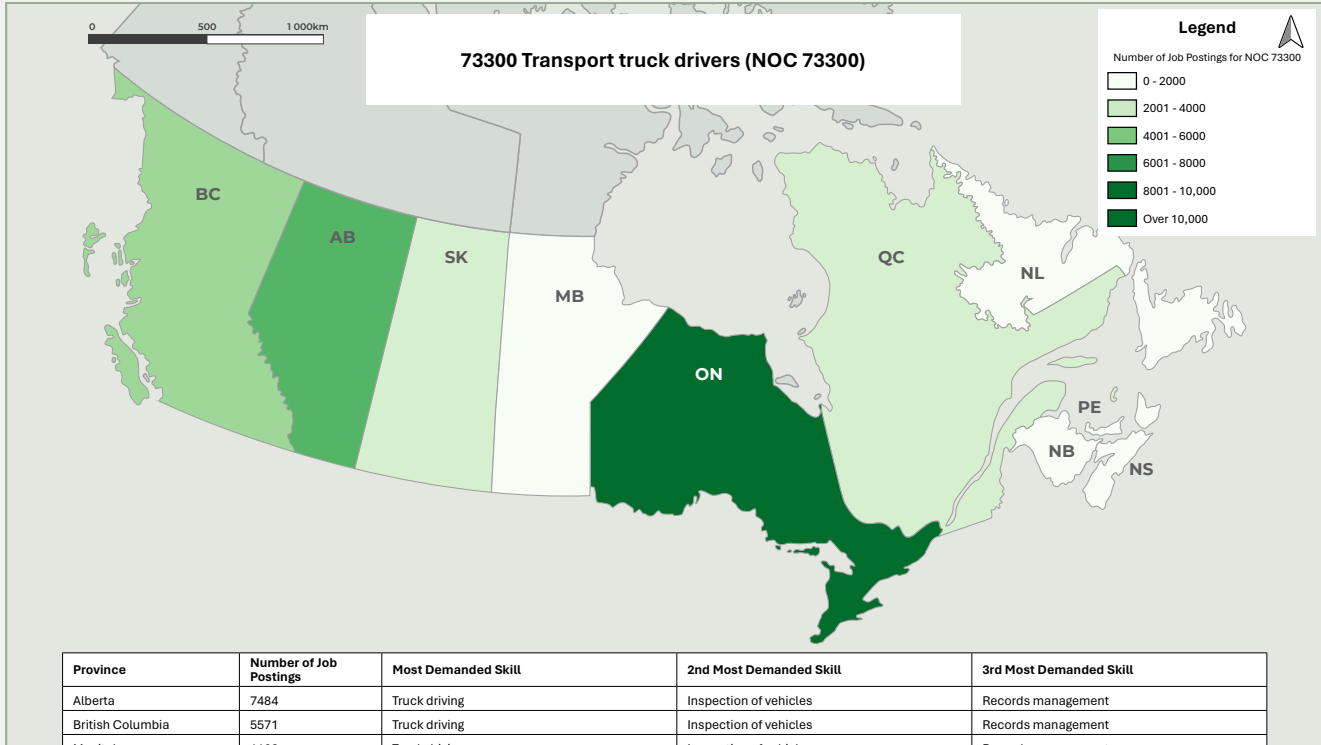
Examples of Job Titles

- Bulk goods truck driver
- Dump truck driver
- Flatbed truck driver
- Heavy truck driver
- Logging truck driver
- Long-haul truck driver
- Shunt truck driver
- Tow truck driver
- Tractor-trailer truck driver
- Transport driver
- Truck driver





Map of Occupational Demand Across Canada



Educational Requirements and Other Qualifications

- Completion of secondary school is usually required.
- On-the-job-training is provided.
- Completion of an accredited driver training course of up to three months duration through a vocational school or community college may be required.
- A Class 3 or D licence is required to drive straight-body trucks.
- A Class 1 or A licence is required to drive long combination vehicles.
- Air brake endorsement (Z) is required for drivers who operate vehicles equipped with air brakes.
- Transportation of dangerous goods (TDG) certification is required for drivers who transport hazardous products or dangerous goods.
- Additional licensing endorsement or certification may be required to drive articulated trucks.



Map of Related Canadian Post-Secondary Education (PSE) Programs

- N/A for this occupation.

Cost of Related PSE Programs for Domestic Students

- N/A for this occupation.

PSE Learning Outcomes

- N/A for this occupation.

Top 5 Skills Demanded

1. Truck driving
 2. Inspection of vehicles
 3. Teamwork
 4. Records management
 5. Loading and unloading
-

Skills Requirements

Short-Haul Transport Truck Drivers Proficiency Level 3 – Moderate Level

- Operation and Control

Long-Haul Transport Truck Drivers Proficiency Level 4 – High Level

- Operation and Control
 - Management of Material Resources
 - Quality Control Testing
 - Operation Monitoring of Machinery/ Equipment
 - Troubleshooting
 - Repairing
 - Preventative Maintenance
-

Skills Gaps

- New and emerging technologies
- Records management
- Essential skills such as literacy and numeracy

Occupational Challenges in Recruiting and Retaining Employees

- Job seekers and new entrants to the labour force do not view careers in agriculture or truck driving as viable career options.
- Coping with long hours of driving and irregular schedules, both of which have negative impacts on health. Managing fatigue and maintaining focus during extended periods of driving.
- Stressful work environment when dealing with traffic, inclement weather conditions, tight delivery schedules and operating equipment in less-than-ideal states of repair.
- Work-life balance can be difficult to maintain as long-haul truck drivers are often away from home for long periods of time.
- Duties in some industries can be physically demanding and may require loading and unloading of heavy supplies and goods.
- Compensation and benefits vary.
- Employment arrangements vary. Positions can be part-time, self-employed, seasonal or casual. Maintaining administrative responsibilities such as filling out logbooks.



- Keeping pace with advancements in technology. Limited career progression opportunities.

Recommendations for Strengthening the Labour Force for Transport Truck Drivers (NOC 73300)

- Provide higher, more-competitive wages.
- Curate more-comprehensive benefits packages or provide alternative forms of compensation such as subsidized housing or discounted food and/or products.
- Offer recruitment and retention bonuses.

- Create attraction, recruitment and retention strategies, e.g., exploring options to recruit employees from other countries.
- Cover the cost of obtaining truck drivers' licenses.
- Create interactive, online or modular training programs such as virtual reality driving simulators.
- Provide upskilling opportunities that align with varying levels of essential skills (e.g., reading, writing, etc.) and language.
- Leverage marketing strategies, career fairs or rebranding initiatives to highlight the viability of a career in truck driving.

Sources: Vicinity Jobs custom data (2024); Government of Canada Job Bank (2024); Occupational and Skills Information System (OaSIS) (2024); HR Trends Research Group (2024).





NOC 80020 - Managers in Agriculture

Job Description

Plan, organize, direct, control and evaluate the operations and functions of farms. They are responsible for growing crops; raising and breeding livestock, poultry and other animals; and marketing farm products and enhancing farms' sustainability through the implementation of new technologies. They usually own and operate their own business.

Future Outlook

Between 2024 and 2030 labour demand is expected to moderately outpace supply at the national level. In 2030, this occupation is expected to have 537 peak vacancies.

Workforce Summary

Number of people employed: 130,700
Median age of workers: 53
Median retirement age: 70

Job Prospects

GOOD: Nova Scotia, Ontario, Quebec, Saskatchewan

MODERATE: Alberta, British Columbia, New Brunswick, Prince Edward Island

LIMITED: Manitoba

UNDETERMINED for all other provinces and territories

Average Hourly Wage

Low: \$15.00

Medium: \$24.48

High: \$43.27

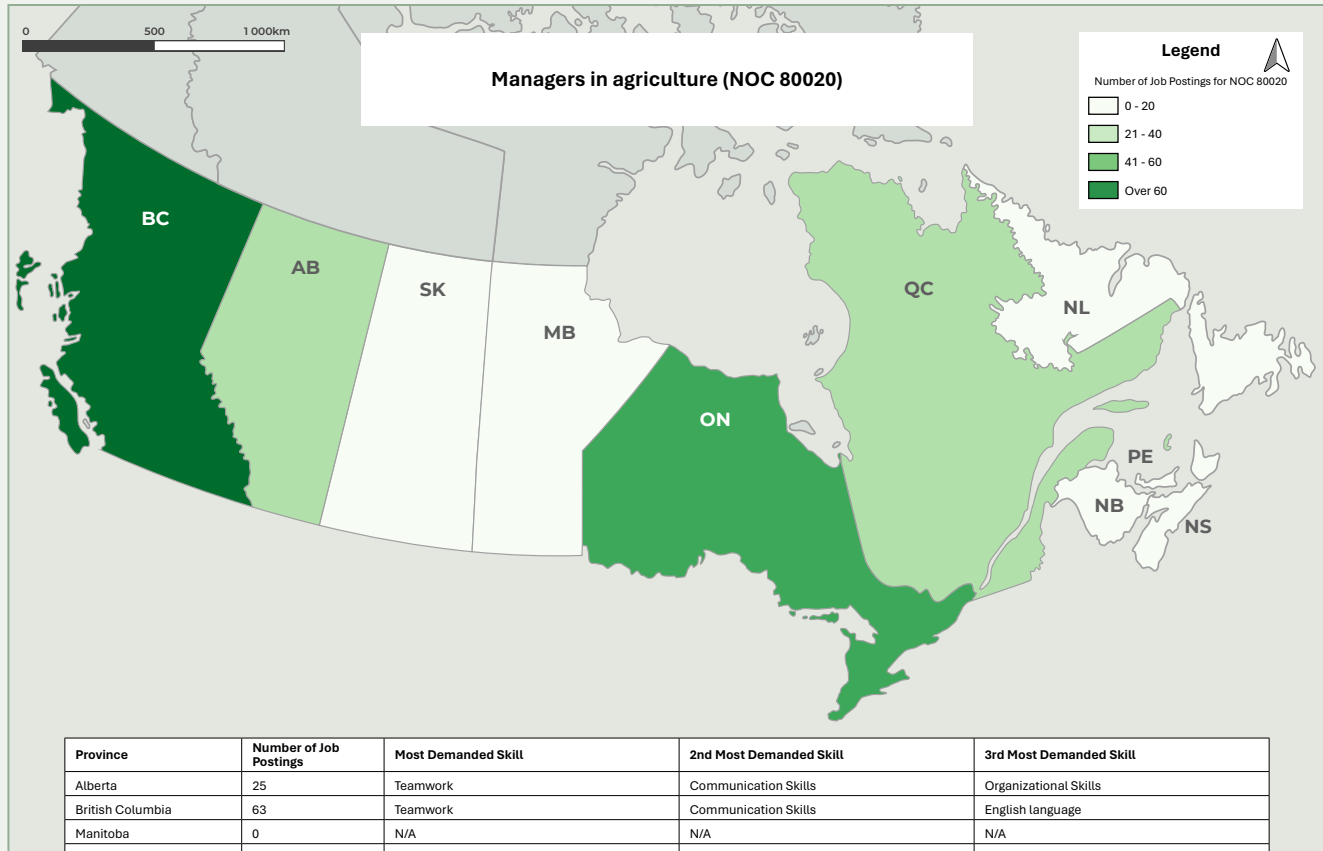
Examples of Job Titles

- Apiarist
- Apple grower
- Chicken farmer
- Dairy farmer
- Domestic animal breeder
- Fruit farmer
- Horse breeder
- Maple syrup producer
- Market gardener
- Rancher
- Seed grower
- Sod farmer
- Vegetable grower
- Vineyard manager
- Viticulturist
- Wheat farmer





Map of Occupational Demand Across Canada

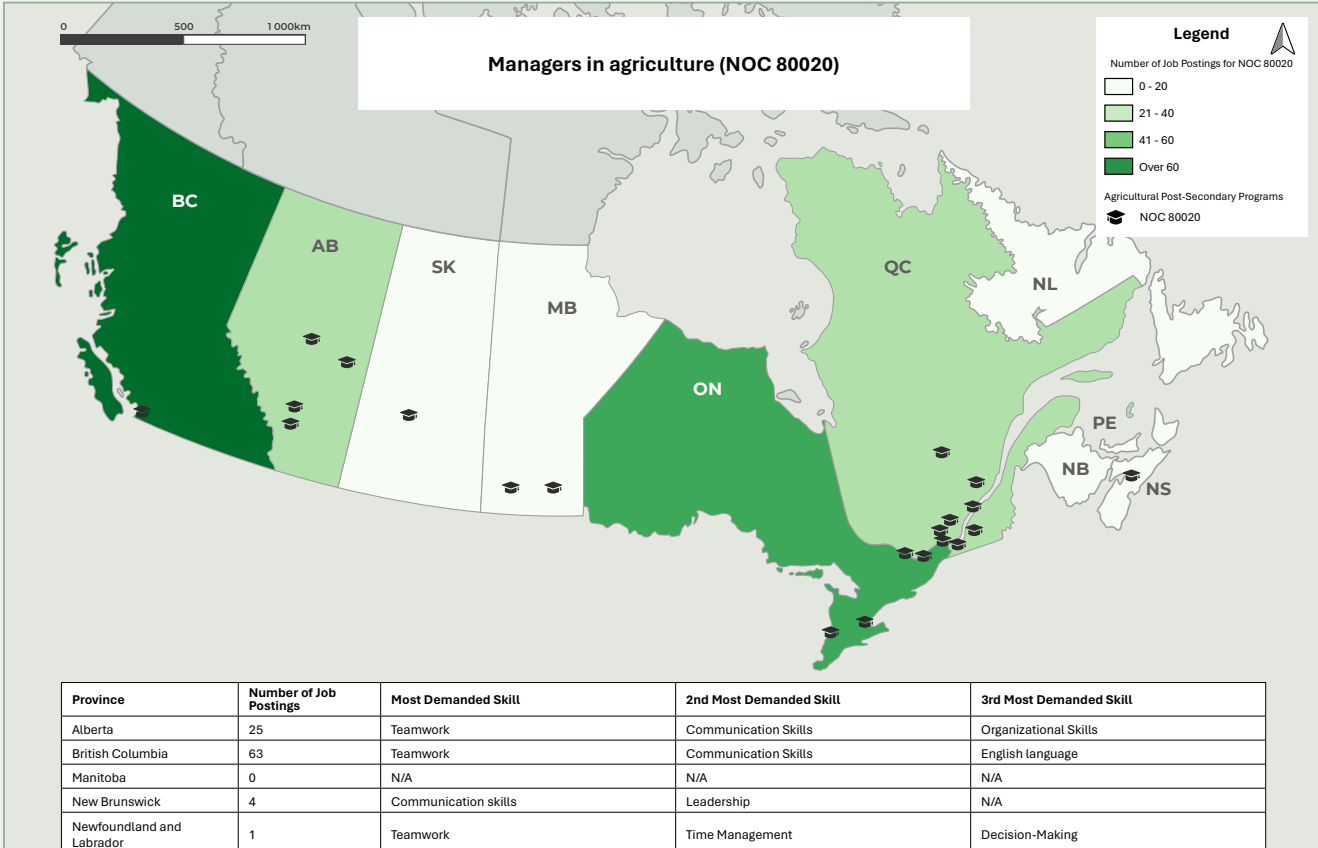


Educational Requirements and Other Qualifications

- Extensive farming experience obtained as a farm supervisor or specialized crop or livestock worker or by working on a farm is usually required.
- A university degree or college diploma in agricultural management or other field related to crop or livestock production may be required.



Map of Related Canadian Post-Secondary Education (PSE) Programs



Province	Number of Job Postings	Most Demanded Skill	2nd Most Demanded Skill	3rd Most Demanded Skill
Alberta	25	Teamwork	Communication Skills	Organizational Skills
British Columbia	63	Teamwork	Communication Skills	English language
Manitoba	0	N/A	N/A	N/A
New Brunswick	4	Communication skills	Leadership	N/A
Newfoundland and Labrador	1	Teamwork	Time Management	Decision-Making
Nova Scotia	4	Teamwork	Customer Service	Flexibility
Ontario	42	Teamwork	Attention to Detail	Handling heavy loads
Prince Edward Island	4	Attention to Detail	Organizational Skills	Fast-paced Setting
Quebec	36	French language	Teamwork	Flexibility
Saskatchewan	12	Attention to Detail	Organizational Skills	Financial Reporting

Cost of Related PSE Programs for Domestic Students

- The average cost of a 2-year college diploma program in agricultural management is \$16,673.00.
- The average cost of a 2-year CEGEP diploma program in agricultural management is \$2,500.86.
- The average cost of a 4-year bachelor's degree in agribusiness or agriculture is \$28,562.60.

PSE Learning Outcomes

- Professional competencies needed to operate and manage a modern agricultural enterprise.
- The fundamentals of business management theories and practices to prepare employees to take up a leadership role in any agribusiness or agricultural agency.
- Understanding of the production of food, feed, fuel and fibre; livestock physiology and health; farm and pest management; crop production soil and nutrition; and precision crop systems.



Top 5 Skills Demanded

1. Teamwork
2. Attention to detail
3. Communication skills
4. Organizational skills
5. Flexibility

Skills Requirements

Proficiency Level 5 – Highest Level

- Management of Material Resources

Proficiency Level 4 – High Level

- Persuading
- Management of Financial Resources
- Problem Solving
- Evaluation
- Oral Communication: Active Listening
- Negotiating
- Instructing
- Coordinating
- Time Management

Skills Gaps

- Knowledge of new and emerging technologies
- Keeping up with health and safety regulations
- Written communication skills

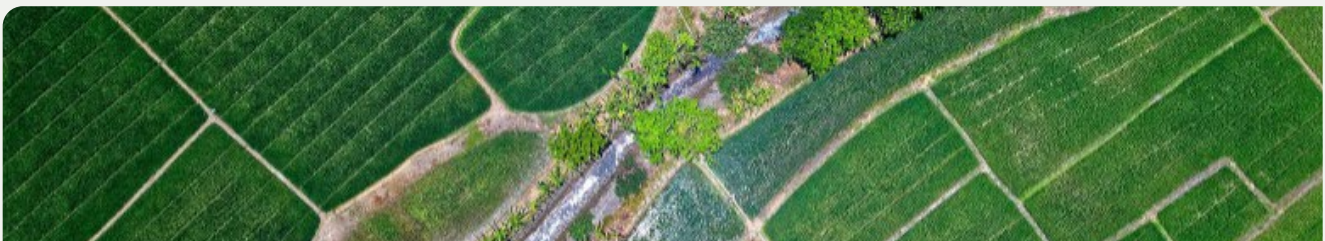
Occupational Challenges in Recruiting and Retaining Employees

- Handling labour shortages during peak seasons.
- Requires employees to live in/move to rural areas.
- Adapting to changing government regulations and agricultural policies.
- Recruiting employees with diverse skillsets, such as leadership, critical thinking, knowledge and experience in agriculture, conflict and resolution skills, digital literacy, and an understanding of machinery and equipment can be challenging.

Recommendations for Strengthening the Labour Force for Managers in Agriculture (NOC 80020)

- Strengthen and build partnerships with post-secondary institutions to ensure programming meets current and future skills demand.
- Create mentorship programs to ensure current employees have access to increased professional development and learning opportunities.
- Succession planning strategies to ensure continuous knowledge transfer and the creation of a strong talent pipeline as current employees retire.

Sources: Vicinity Jobs custom data (2024); Government of Canada Job Bank (2024); Occupational and Skills Information System (OaSIS) (2024); HR Trends Research Group (2024).





NOC 80021 – Managers in horticulture

Job Description

Plan, organize, direct and control the activities of nursery and greenhouse staff who grow and market trees, shrubs, flowers and plants. Establish the environmental conditions required to grow trees, shrubs, flowers and plants, and design planting and care schedules accordingly.

Future Outlook

Between 2024 and 2030 labour demand and supply are expected to be broadly in line at the national level. In 2030, this occupation is expected to have 79 peak vacancies.

Workforce Summary

Number of people employed: 130,700

Median age of workers: 53

Median retirement age: 71

Job Prospects

VERY GOOD: Manitoba

GOOD: Ontario, Quebec

MODERATE: Alberta, British Columbia,
Saskatchewan

UNDETERMINED for all other provinces and territories

Average Hourly Wage

Low: \$18.00

Medium: \$27.00

High: \$51.28

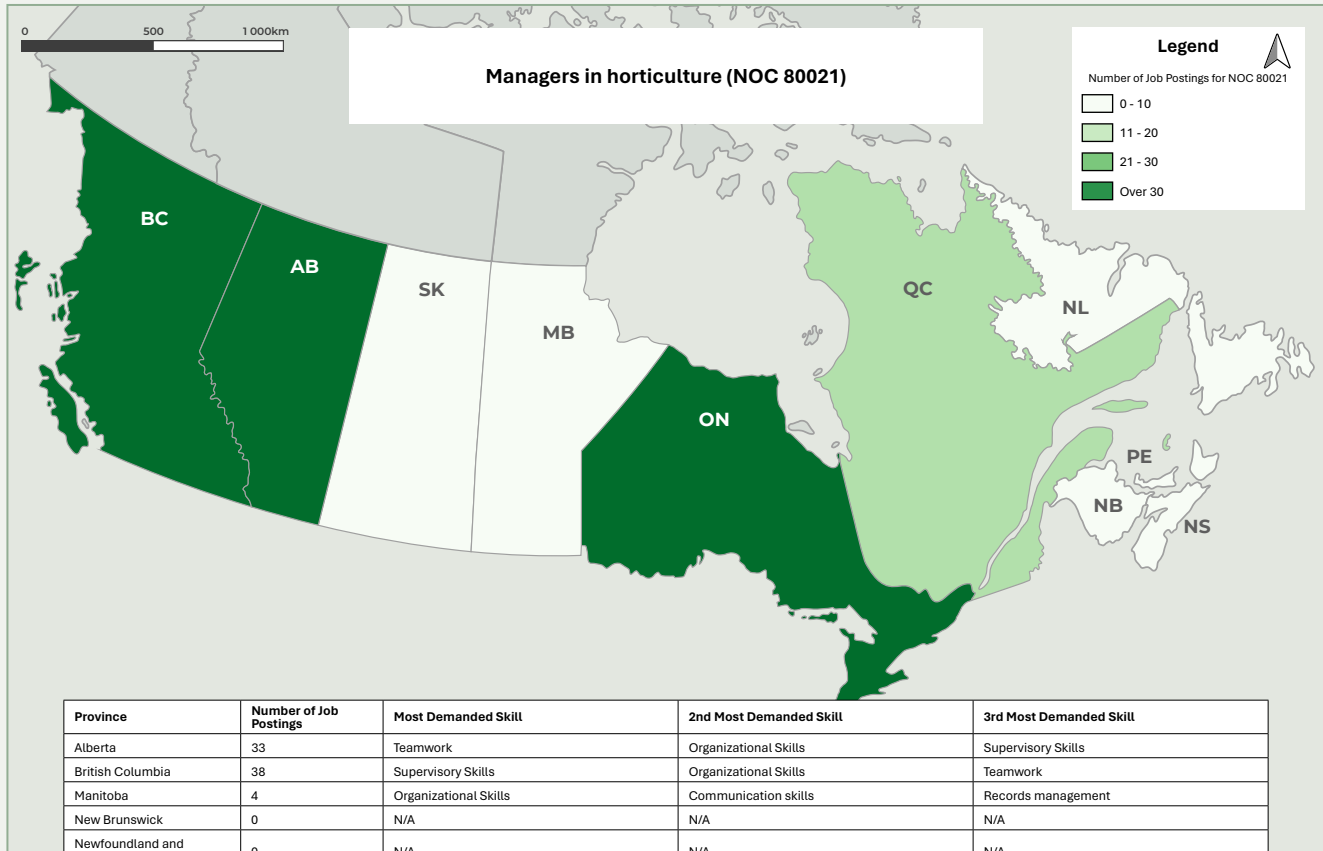
Examples of Job Titles

- Christmas tree farm operator
- Flower grower
- Greenhouse manager
- Greenhouse operator
- Nursery manager
- Nursery operator
- Plant grower – nursery





Map of Occupational Demand Across Canada

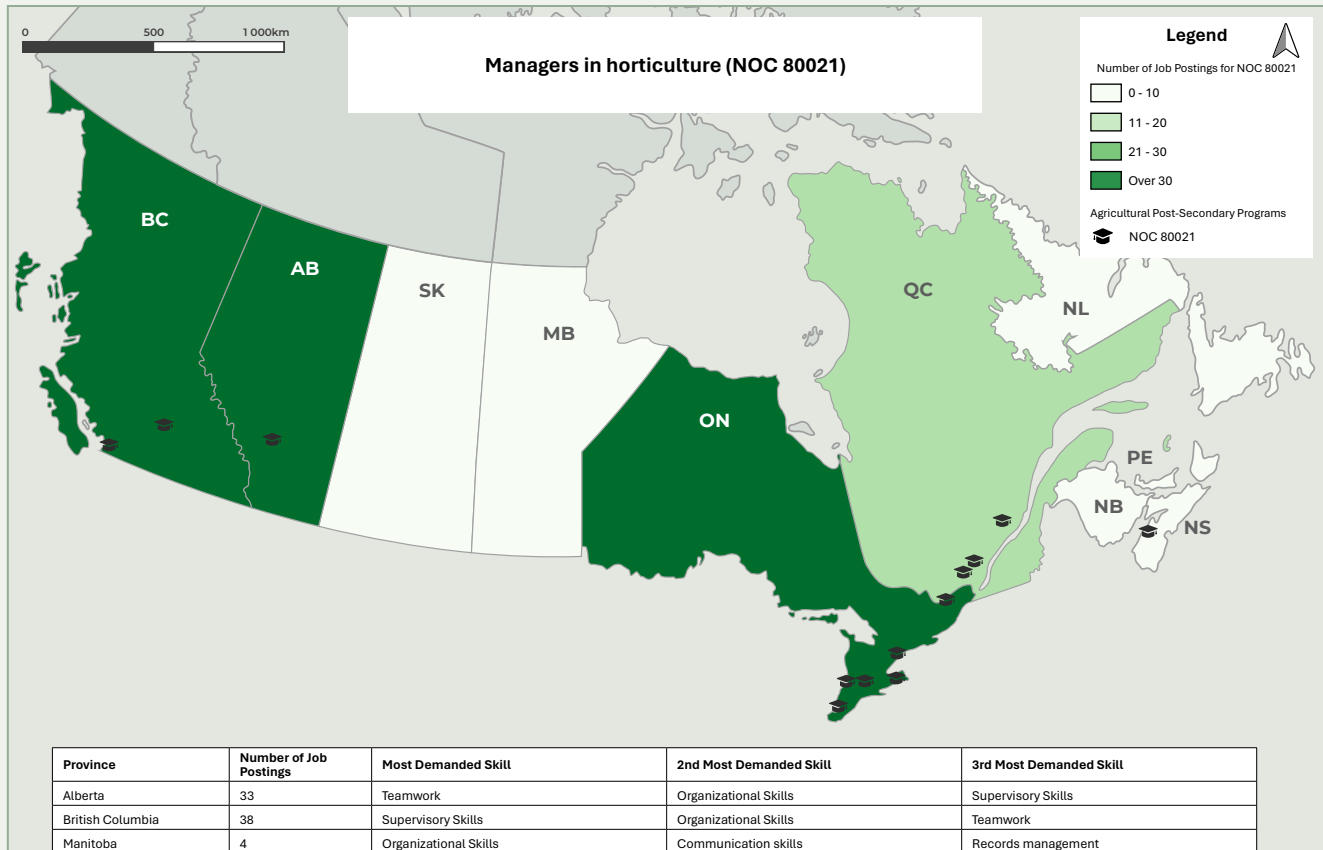


Educational Requirements and Other Qualifications

- Completion of a college program in horticulture is usually required.
- Experience as a nursery or greenhouse supervisor is required.



Map of Related Canadian Post Secondary Education (PSE) Programs



Province	Number of Job Postings	Most Demanded Skill	2nd Most Demanded Skill	3rd Most Demanded Skill
Alberta	33	Teamwork	Organizational Skills	Supervisory Skills
British Columbia	38	Supervisory Skills	Organizational Skills	Teamwork
Manitoba	4	Organizational Skills	Communication skills	Records management
New Brunswick	0	N/A	N/A	N/A
Newfoundland and Labrador	0	N/A	N/A	N/A
Nova Scotia	0	N/A	N/A	N/A
Ontario	37	Teamwork	Attention to Detail	Communication skills
Prince Edward Island	1	Organizational Skills	Supervisory Skills	Teamwork
Quebec	17	French language	Teamwork	Planning
Saskatchewan	5	Records management	Teamwork	Attention to Detail

Cost of Related PSE Programs for Domestic Students

- The average cost of a 2-year college diploma in a horticulture-related program is \$9,578.84

PSE Learning Outcomes

- Landscape maintenance techniques
- Equipment operation
- Pest management
- Landscape design and construction
- Plant identification
- Pruning techniques
- Plant propagation methods
- Basic irrigation hydraulics



Top 5 Skills Demanded

1. Organizational skills
 2. Teamwork
 3. Supervisory skills
 4. Records management
 5. Attention to detail
-

Skills Requirements

Proficiency Level 5 – Highest Level

- Management of Material Resources

Proficiency Level 4 – High Level

- Persuading
 - Management of Financial Resources
 - Problem Solving
 - Evaluation
 - Oral Communication: Active Listening
 - Negotiating
 - Instructing
 - Time Management
 - Monitoring
 - Management of Personnel Resources
-

Skills Gaps

- Records management
- Interpersonal skills such as teamwork, supervising and leadership
- Essential skills such as numeracy

Occupational Challenges in Recruiting and Retaining Employees

- Job seekers and new entrants to the labour force do not view occupations in horticulture as viable career options.
- Limited career progression opportunities. Physically demanding work.
- Compensation and benefits vary.
- Some seasonality.

Recommendations for Strengthening the Labour Force for Managers in Horticulture (NOC 80021)

- Strengthen and build partnerships with post-secondary institutions to ensure programing meets current and future skills demand.
- Create mentorship programs to ensure current employees have access to increased professional development and learning opportunities.
- Develop succession planning strategies to ensure continuous knowledge transfer and the creation of a strong talent pipeline as current employees retire.
- Leverage marketing strategies, career fairs or rebranding initiatives to highlight the viability of a career in horticulture.

Sources: Vicinity Jobs custom data (2024); Government of Canada Job Bank (2024); Occupational and Skills Information System (OaSIS) (2024); HR Trends Research Group (2024).





NOC 82030 – Agricultural Service Contractors and Farm Supervisors

Job Description

Provide agricultural services such as livestock and poultry breeding, soil preparation, crop planting, crop spraying, cultivating or harvesting. Farm supervisors supervise the work of specialized livestock workers, farm machinery operators, livestock labourers, aquaculture labourers and harvesting labourers. Contractors may be self-employed.

Future Outlook

Between 2024 and 2030 labour demand and supply are expected to be broadly in line at the national level. In 2030, this occupation is expected to have 97 peak vacancies.

Workforce Summary

Number of people employed: 35,300
Median age of workers: 42
Median retirement age: 62

Job Prospects

GOOD: Nova Scotia, Prince Edward Island

MODERATE: Manitoba, Ontario, Quebec

LIMITED: Alberta, Saskatchewan

VERY LIMITED: British Columbia

UNDETERMINED for all other provinces and territories

Average Hourly Wage

Low: \$18.00

Medium: \$27.00

High: \$51.28

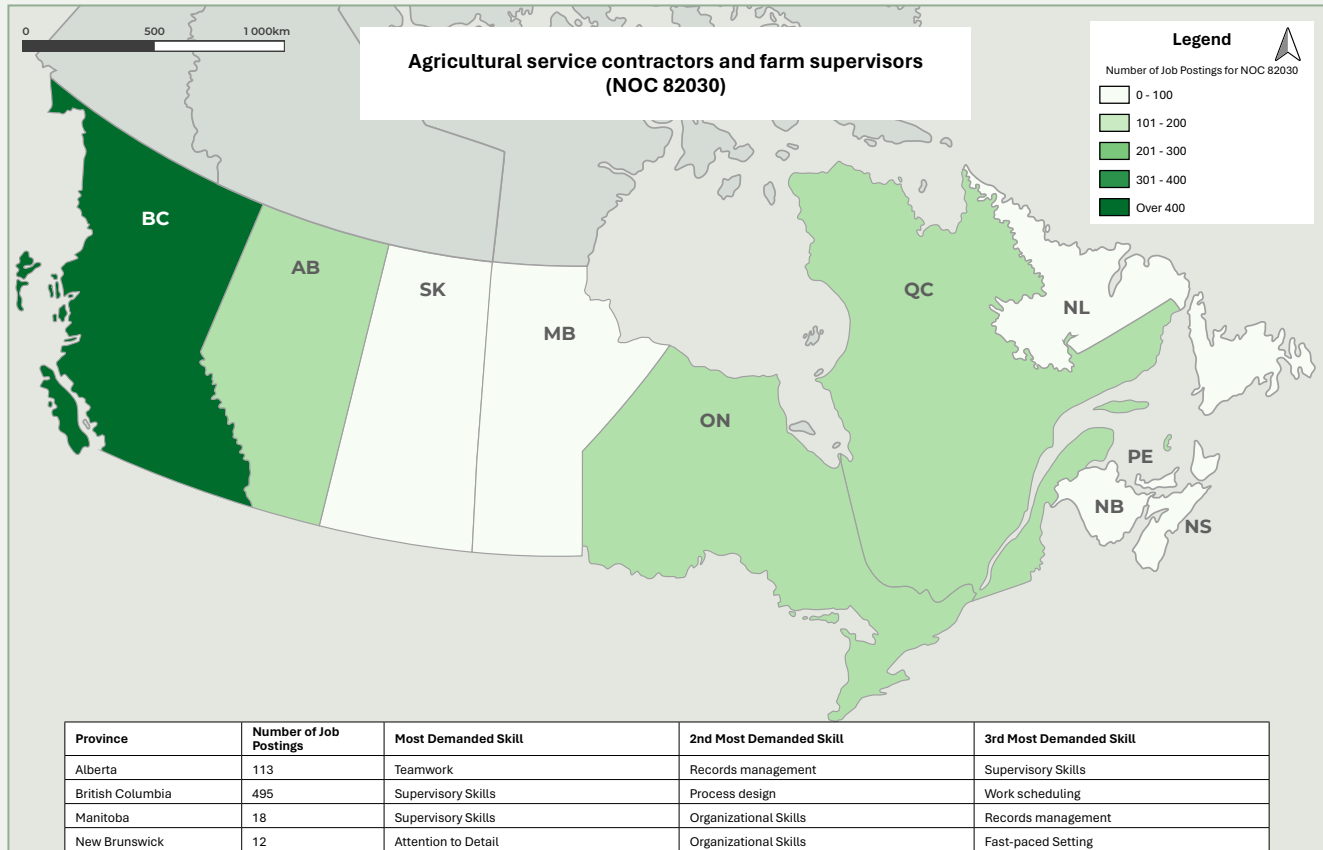
Examples of Job Titles

- Artificial insemination service contractor
- Crop harvesting service contractor
- Farm foreman/woman
- Farm supervisor
- Feedlot foreman/woman
- Hog operation supervisor
- Livestock breeding service contractor
- Ranch foreman/woman





Map of Occupational Demand Across Canada



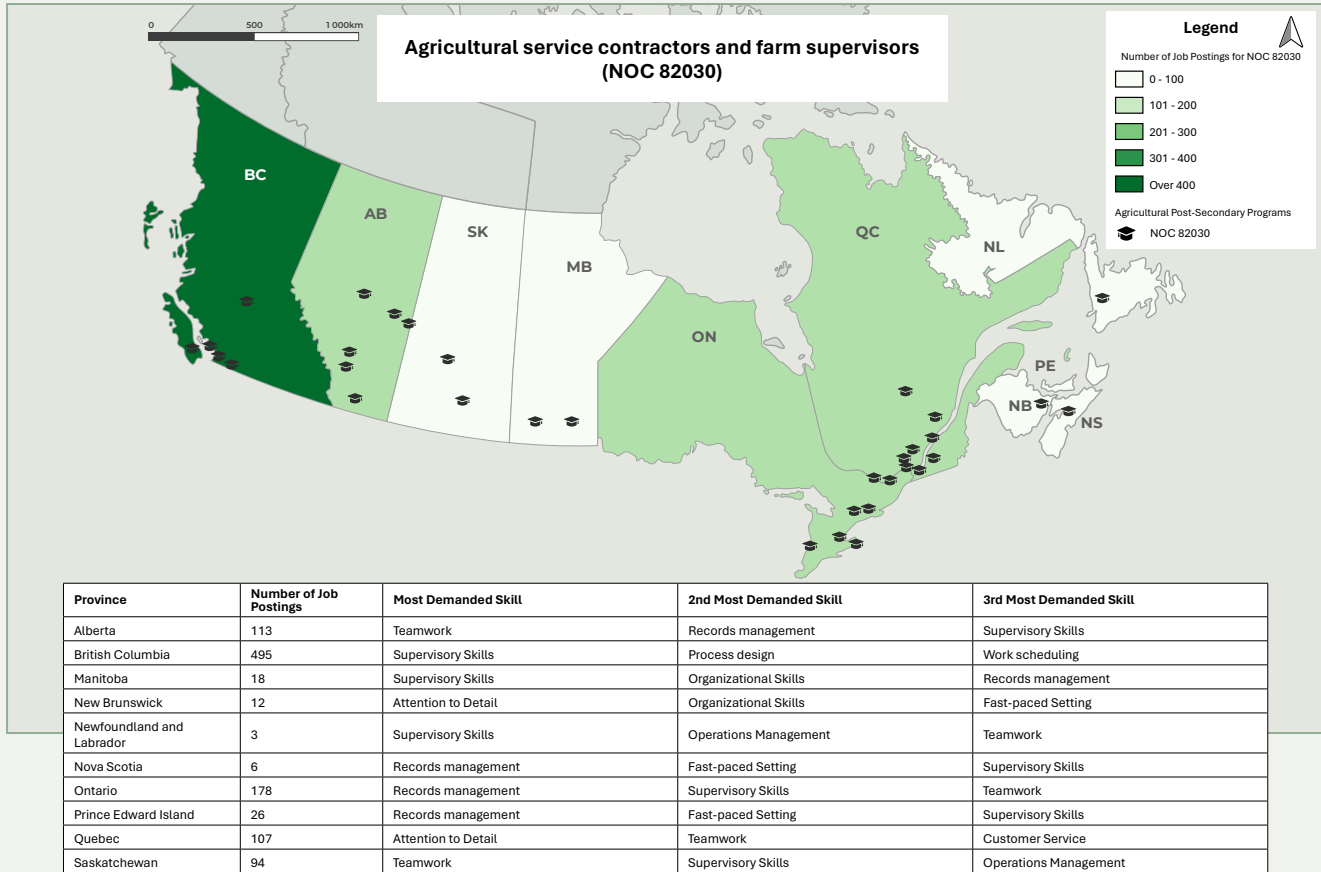
Province	Number of Job Postings	Most Demanded Skill	2nd Most Demanded Skill	3rd Most Demanded Skill
Alberta	113	Teamwork	Records management	Supervisory Skills
British Columbia	495	Supervisory Skills	Process design	Work scheduling
Manitoba	18	Supervisory Skills	Organizational Skills	Records management
New Brunswick	12	Attention to Detail	Organizational Skills	Fast-paced Setting
Newfoundland and Labrador	3	Supervisory Skills	Operations Management	Teamwork
Nova Scotia	6	Records management	Fast-paced Setting	Supervisory Skills
Ontario	178	Records management	Supervisory Skills	Teamwork
Prince Edward Island	26	Records management	Fast-paced Setting	Supervisory Skills
Quebec	107	Attention to Detail	Teamwork	Customer Service
Saskatchewan	94	Teamwork	Supervisory Skills	Operations Management

Educational Requirements and Other Qualifications

- Agricultural service contractors usually require a university degree, college diploma or industry courses in agricultural studies and several years of experience related to the service offered.
- Contractors providing certain services, such as artificial insemination and pesticide application, may require training certificates and provincial licensing.
- Farm supervisors may require a college certificate or other specialized training in agriculture or livestock husbandry.
- A course or certificate in first aid may be required.



Map of Related Canadian Post-Secondary Education (PSE) Programs



Cost of Related PSE Programs for Domestic Students

- The average cost of a 2-year college diploma in an agriculture program is \$11,713.29.
- The average cost of a 4-year bachelor's degree in an agriculture program is \$34,220.38.
- The average cost of a 2-year master's degree in an agriculture program is \$13,015.24.

PSE Learning Outcomes

- Skills related to soil science, water management, grasslands management, livestock production and crop production.

- In-depth understanding of how to leverage advancing technology with the science of agronomy to make data-driven decisions that favourably impact crop production.
- Professional competencies needed to operate and manage a modern agricultural enterprise. Knowledge and practical skills in animal production systems including dairy, swine, beef, poultry and diversified livestock in the context of agricultural systems.
- Knowledge and practical skills in plant biotechnology, breeding and production management techniques used to develop, grow and market high-quality and high-yield crops.



Top 5 Skills Demanded

1. Supervisory skills
 2. Records management
 3. Teamwork
 4. Attention to detail
 5. Operations management
-

Skills Requirements

Agricultural Service Providers

Proficiency Level 5 – Highest Level

- Management of Material Resources

Proficiency Level 4 – High Level

- Time Management
- Management of Personnel Resources
- Negotiating
- Management of Financial Resources
- Preventative Maintenance

Proficiency Level 3 – Moderate Level

- Coordinating, Instructing, Monitoring
- Quality Control Testing

Farm Supervisors

Proficiency Level 4 – High Level

- Time Management
- Management of Personnel Resources
- Management of Material Resources
- Management of Financial Resources
- Preventative Maintenance

Proficiency Level 3 – Moderate Level

- Coordinating, Instructing, Monitoring
 - Quality Control Testing
 - Operation Monitoring of Machinery and Equipment
-

Skills Gaps

- Technology and automation
- Leadership, supervisory and interpersonal skills
- Digital literacy

Occupational Challenges in Recruiting and Retaining Employees

- Keeping pace with new and emerging technologies.
- Job seekers and new entrants to the labour force do not view occupations in agriculture as viable career options.
- Requires employees to live in/move to rural areas.

Recommendations for Strengthening the Labour Force for Agricultural Service Contractors and Farm Supervisors (NOC 82030)

- Strengthen and build partnerships with post-secondary institutions to ensure programming meets current and future demand.
- Partner with post-secondary institutions and other key stakeholders to facilitate innovative and experiential learning projects.
- Create mentorship programs to ensure current employees have access to increased professional development and learning opportunities.
- Develop succession planning strategies to ensure continuous knowledge transfer and the creation of a strong talent pipeline as current employees retire.
- Develop multi-faceted recruitment, retention and training strategies to mitigate the anticipated shortfall in future labour supply.
- Leverage marketing strategies, career fairs or rebranding initiatives to highlight the viability of a career in agriculture.



NOC 82031 – Contractors and Supervisors, Landscaping, Grounds Maintenance and Horticulture Services

Job Description

Supervise and coordinate the activities of nursery and greenhouse workers and landscaping and grounds maintenance labourers. They are employed by landscaping companies, cemeteries, lawn care and tree service companies, nurseries and greenhouses and by landscaping operations. Contractors may be self-employed.

Future Outlook

Between 2024 and 2030 labour demand and supply are expected to be broadly in line at the national level. In 2030, this occupation is expected to have 105 peak vacancies.

Workforce Summary

Number of people employed: 35,300
Median age of workers: 42
Median retirement age: 62

Job Prospects

VERY GOOD: British Columbia, Ontario
GOOD: Alberta, Manitoba, New Brunswick, Saskatchewan
MODERATE: Nova Scotia, Quebec
UNDETERMINED for all other provinces and territories

Average Hourly Wage

Low: \$18.00
Medium: \$26.00
High: \$40.87

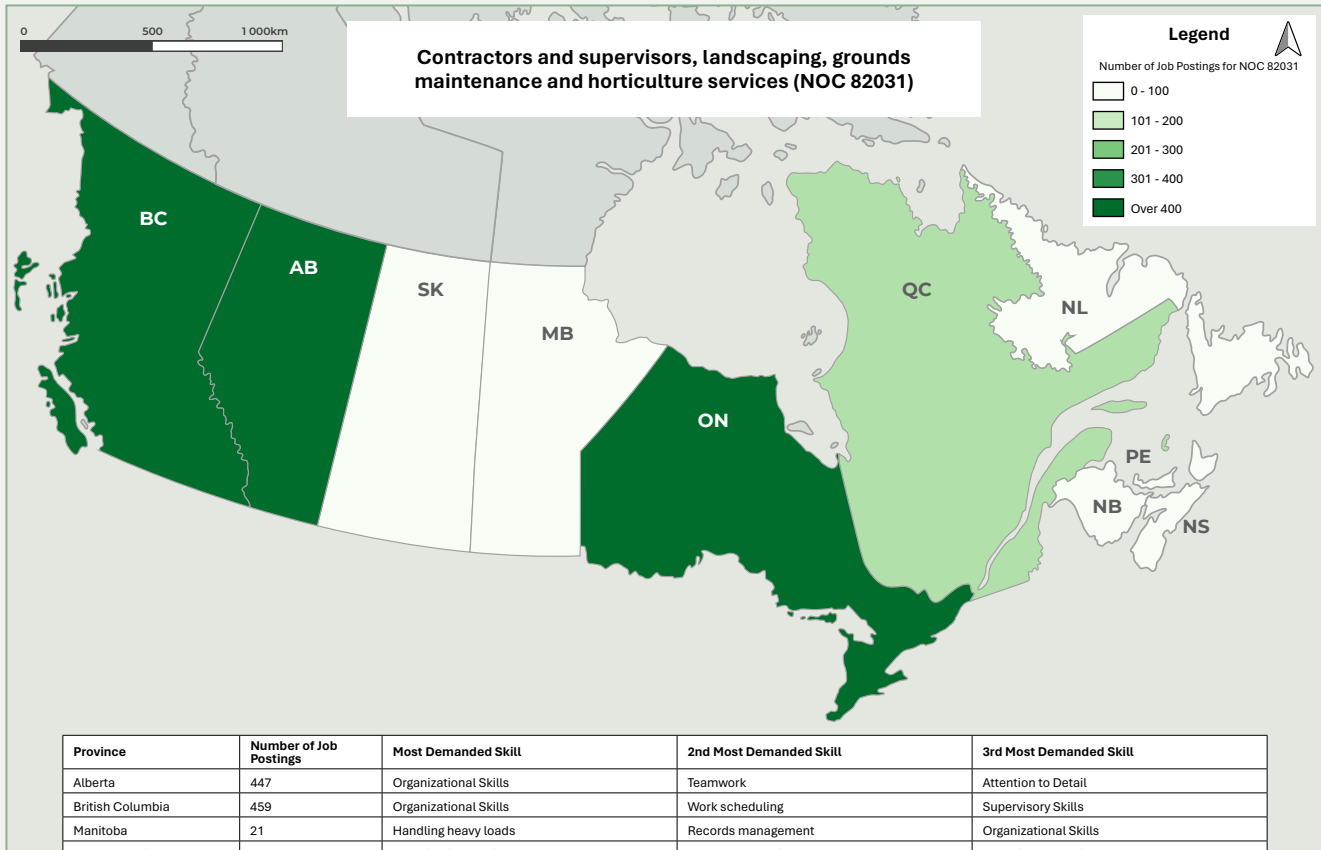
Examples of Job Titles

- Greenhouse supervisor
- Grounds maintenance supervisor
- Horticultural contractor
- Landscape design contractor
- Landscape service contractor
- Lawn care service contractor
- Lead grower – cannabis
- Nursery supervisor
- Park caretaker
- Park labourers supervisor
- Park maintenance head
- Tree removal contractor





Map of Occupational Demand Across Canada



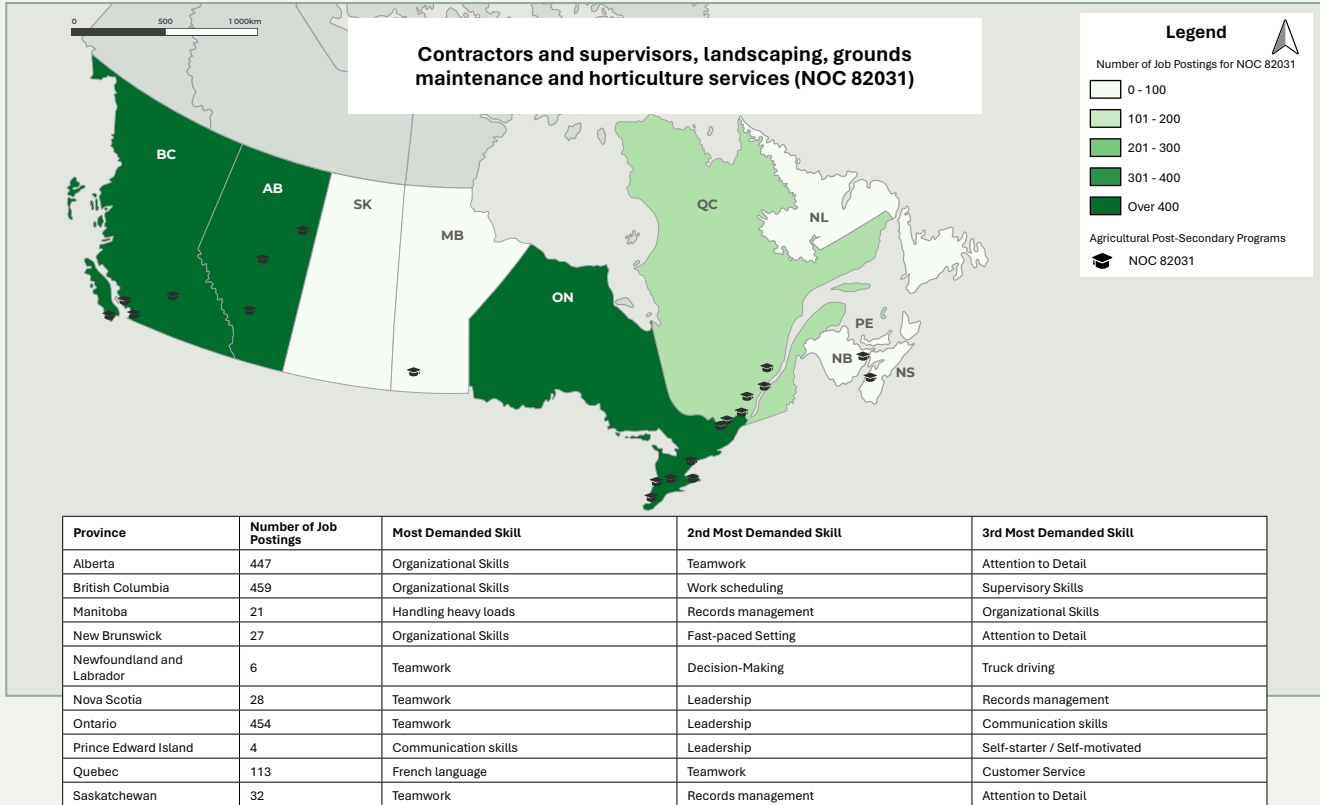
Province	Number of Job Postings	Most Demanded Skill	2nd Most Demanded Skill	3rd Most Demanded Skill
Alberta	447	Organizational Skills	Teamwork	Attention to Detail
British Columbia	459	Organizational Skills	Work scheduling	Supervisory Skills
Manitoba	21	Handling heavy loads	Records management	Organizational Skills
New Brunswick	27	Organizational Skills	Fast-paced Setting	Attention to Detail
Newfoundland and Labrador	6	Teamwork	Decision-Making	Truck driving
Nova Scotia	28	Teamwork	Leadership	Records management
Ontario	454	Teamwork	Leadership	Communication skills
Prince Edward Island	4	Communication skills	Leadership	Self-starter / Self-motivated
Quebec	113	French language	Teamwork	Customer Service
Saskatchewan	32	Teamwork	Records management	Attention to Detail

Educational Requirements and Other Qualifications

- Experience as a landscape or horticulture supervisor or as a landscape or horticulture technician is required.
- Completion of secondary school is usually required. Experience in the type of work supervised is required.
- A college diploma, specialized courses or industry-related training and certification in landscaping and horticulture are usually required.
- A provincial licence to apply chemical fertilizers, fungicides, herbicides and pesticides may be required.



Map of Related Canadian Post-Secondary Education (PSE) Programs



Cost of Related PSE Programs for Domestic Students

- The average cost of a 2-year college diploma in a horticulture-related program is \$9,468.34.
- The average cost of a 2-year college diploma in a landscaping-related program is \$8,821.99.
- The average cost of a horticulture-related certificate program ranging from 8-12 months in duration is \$4,976.59.

PSE Learning Outcomes

- Knowledge and skills needed to work successfully in the greenhouse production of vegetables, flower crops and field and container production of ornamental plants.

- A variety of skills in areas such as drafting, computer-aided design, three-dimensional modelling, design illustration and visualization.
- Knowledge of design theory, plant and hard materials, landscape construction and new technologies to provide students with the skills necessary to source employment in the expanding field of landscape design.
- Sustainable growing techniques and maintenance practices to help increase the biodiversity of the urban/suburban landscape.
- Skills required to create landscapes, renew historical gardens, enhance communities and express their creativity while learning the complexities involved in a broad range of professional environments.



Top 5 Skills Demanded

1. Teamwork
2. Organizational skills
3. Leadership
4. Attention to detail
5. Records management

Skills Requirements

Proficiency Level 4 – High Level

- Time Management
- Management of Personnel Resources
- Management of Material Resources

Proficiency Level 3 – Moderate Level

- Learning and Teaching Strategies
- Critical Thinking
- Persuading
- Management of Financial Resources
- Problem Solving
- Evaluation
- Equipment and Tool Selection

Skills Gaps

- Technology and automation
- Interpersonal skills such as teamwork and customer service

Occupational Challenges in Recruiting and Retaining Employees

- Job seekers and new entrants to the labour force do not view careers in landscaping

and horticulture as viable career options.

- Handling physically demanding tasks such as lifting heavy plants and equipment. Dealing with seasonal fluctuations in demand for landscaping services.
- Compensation and benefits vary across employers.
- Opportunities for professional development and career mobility are limited.

Recommendations for Strengthening the Labour Force for Contractors and Supervisors, Landscaping, Grounds Maintenance and Horticulture Services (NOC 82031)

- Strengthen and build partnerships with post-secondary institutions to ensure programming meets current and future demand.
- Develop more post-secondary programs that have hands-on or applied learning components (e.g., co-ops, internships) incorporating new and emerging technologies.
- Partner with post-secondary institutions and other key stakeholders to facilitate innovative and experiential learning projects.
- Leverage marketing strategies, career fairs or rebranding initiatives to highlight the viability of a career in horticulture.

Sources: Vicinity Jobs custom data (2024); Government of Canada Job Bank (2024); Occupational and Skills Information System (OaSIS) (2024); HR Trends Research Group (2024).





NOC 84120 – Specialized Livestock Workers and Farm Machinery Operators

Job Description

Carry out feeding, health and breeding programs on dairy, beef, sheep, poultry, swine and other livestock farms. Farm machinery operators operate and maintain farm machinery and equipment. They are employed on crop, livestock, fruit, vegetable and specialty farms.

Future Outlook

Between 2024 and 2030 labour demand is expected to significantly outpace supply at the national level. In 2030, this occupation is expected to have 5,460 peak vacancies.

Workforce Summary

Number of people employed: 76,300
Median age of workers: 38
Median retirement age: 68

Job Prospects

VERY GOOD: Prince Edward Island

GOOD: Ontario, Quebec

MODERATE: Manitoba, New Brunswick, Nova Scotia

LIMITED: Alberta, British Columbia, Saskatchewan

UNDETERMINED for all other provinces and territories

Average Hourly Wage

Low: \$14.00

Medium: \$20.00

High: \$29.00

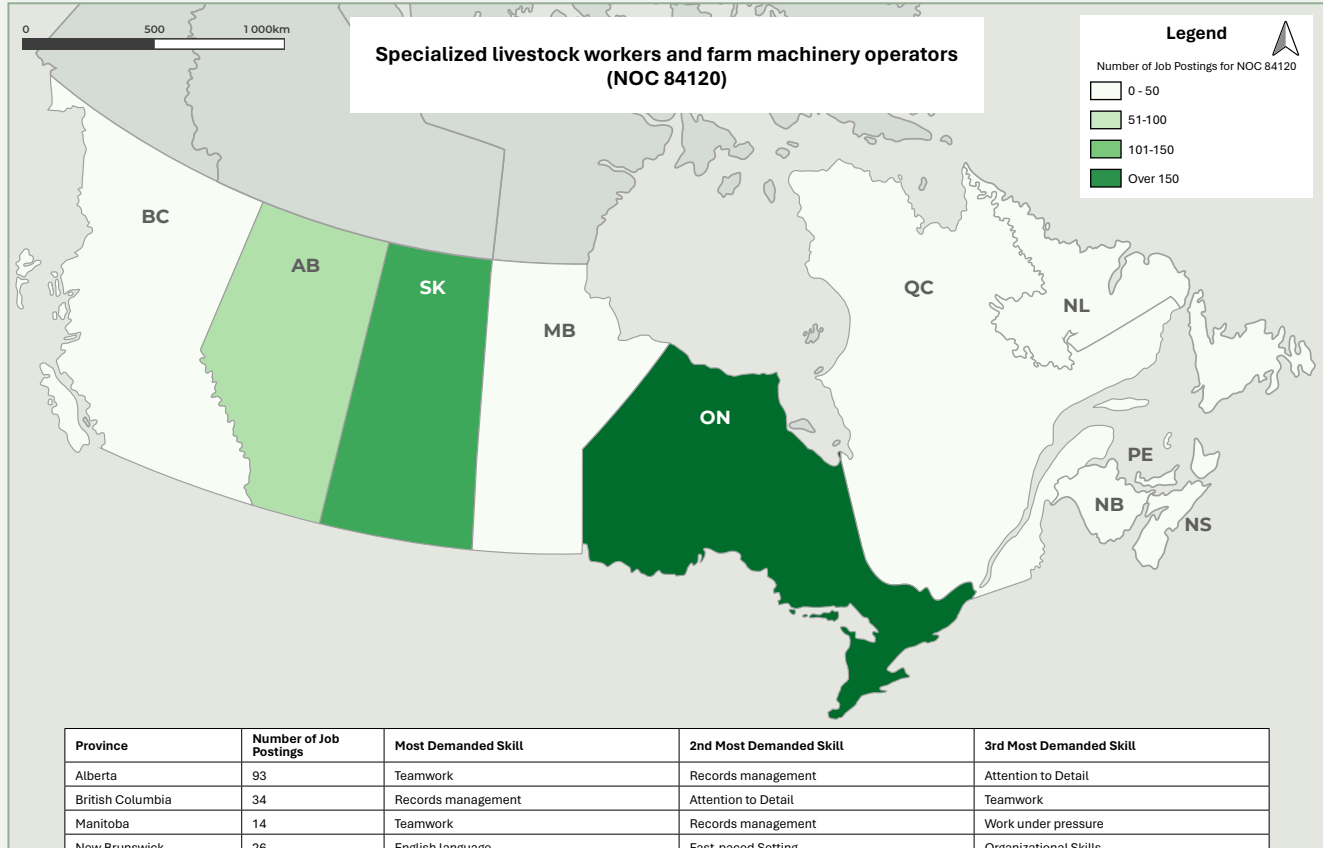
Examples of Job Titles

- Artificial inseminator
- Cattle herdsman
- Dairy herdsman
- Farm machinery operator
- Harvester machine operator
- Horse trainer
- Pork production technician
- Swine herdsman





Map of Occupational Demand Across Canada



Educational Requirements and Other Qualifications

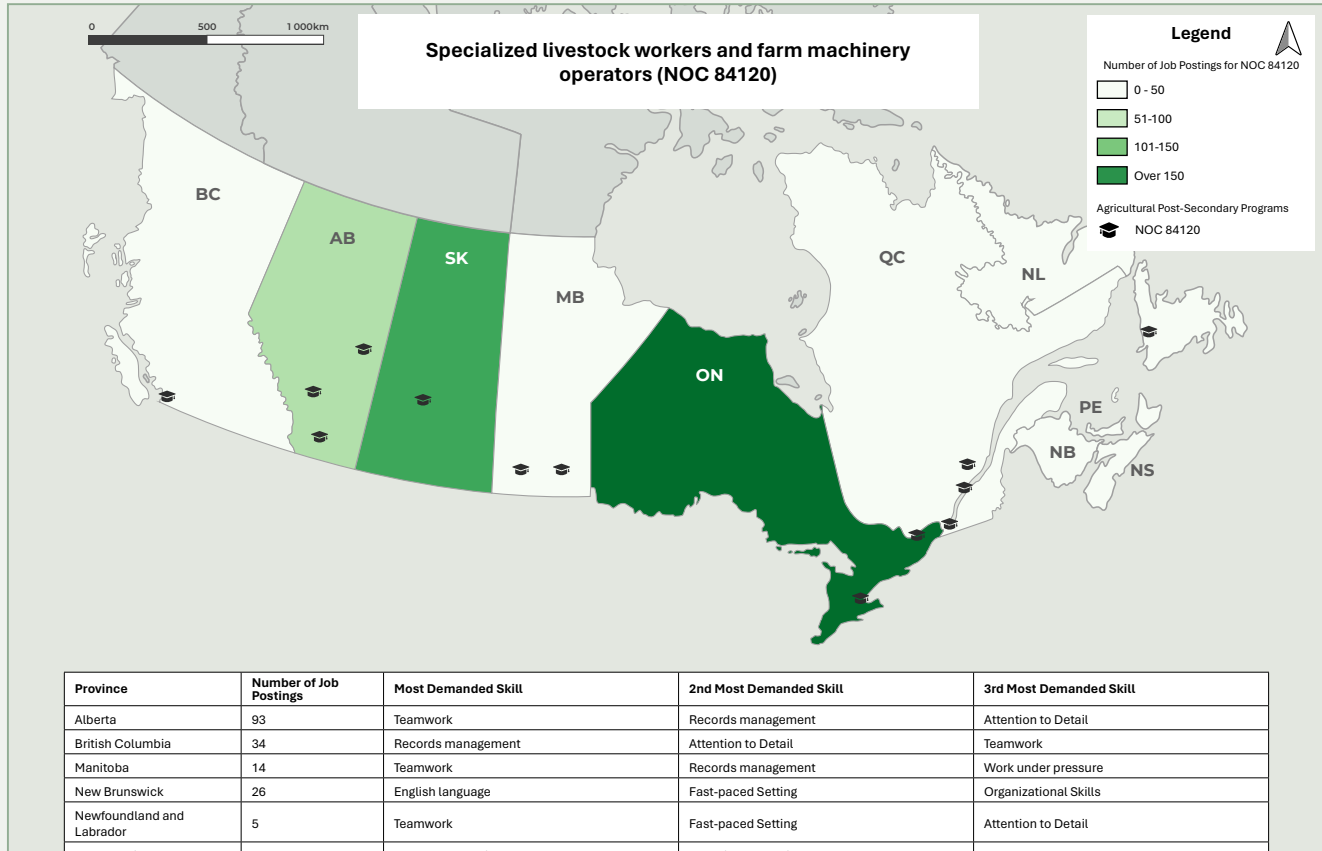
- Specialized livestock workers may require a college certificate or other specialized training in agriculture or livestock husbandry.
- There are no specific education or training requirements for farm machinery operators. However, a college certificate or specialized courses related to farming, such as farm

equipment mechanics, agricultural welding and pesticide application are available.

- Basic farm knowledge, usually obtained from working on a family farm, may be required for employment.
- A course or certificate in first aid may be required.



Map of Related Canadian Post-Secondary Education (PSE) Programs



Province	Number of Job Postings	Most Demanded Skill	2nd Most Demanded Skill	3rd Most Demanded Skill
Alberta	93	Teamwork	Records management	Attention to Detail
British Columbia	34	Records management	Attention to Detail	Teamwork
Manitoba	14	Teamwork	Records management	Work under pressure
New Brunswick	26	English language	Fast-paced Setting	Organizational Skills
Newfoundland and Labrador	5	Teamwork	Fast-paced Setting	Attention to Detail
Nova Scotia	18	Fast-paced Setting	Attention to Detail	Teamwork
Ontario	172	Teamwork	Records management	Attention to Detail
Prince Edward Island	21	Teamwork	Fast-paced Setting	Attention to Detail
Quebec	15	French language	Teamwork	Organizational Skills
Saskatchewan	135	Dispensing of medications	Teamwork	Attention to Detail

Cost of Related PSE Programs for Domestic Students

- The average cost of a 1-year certificate program is \$7,627.74.
- The average cost of a 2-year college diploma in a related agriculture program is \$12,395.30.

PSE Learning Outcomes

- Computer training; keeping accurate business records; using up-to-date technology for precision farming.

- Understanding of a variety of related topics, including:
 - Health and nutrition of farm animals
 - Management and production of beef, sheep and goats, or management and production of poultry and swine
 - Farm and equipment safety
 - Soils and soil fertility
 - Forage crop production
 - Dairy production and management

- Knowledge of how to milk high-producing dairy cows quietly and efficiently, following sanitary procedures and correct milking techniques.



Top 5 Skills Demanded

1. Teamwork
2. Records management
3. Fast-paced setting
4. Attention to detail
5. Organizational skills

Skills Requirements

Specialized Livestock Workers

Proficiency Level 4 – High Level

- Management of Material Resources
- Quality Control Testing
- Operation Monitoring of Machinery and Equipment
- Troubleshooting
- Repairing
- Equipment and Tool Selection
- Preventative Maintenance
- Operation and Control

Farm Machinery Operators

Proficiency Level 3 – Moderate Level

- Quality Control Testing
- Operation
- Monitoring of Machinery and Equipment
- Troubleshooting
- Repairing
- Equipment and Tool Selection
- Preventative Maintenance
- Operation and Control

Skills Gaps

- Interpersonal skills
- Records management
- Problem solving

Occupational Challenges in Recruiting and Retaining Employees

- Keeping pace with new and emerging technologies and changing occupational health and safety requirements and food inspection practices.
- Job seekers and new entrants to the labour force do not view occupations in agriculture as viable career options.
- Dealing with emergencies such as animal illnesses or injuries. Adapting to changing market demands and production requirements. Requires employees to live in/ move to rural areas.
- Managing diverse teams with different skill levels and backgrounds.

Recommendations for Strengthening the Labour Force for Specialized Livestock Workers and Farm Machinery Operators (NOC 84120)

- Strengthen and build partnerships with post-secondary institutions to ensure programing meets current and future demand.
- Develop more post-secondary programs that have hands-on or applied learning components (e.g., co-ops, internships) incorporating new and emerging technologies.
- Partner with post-secondary institutions and other key stakeholders to facilitate innovative and experiential learning projects.
- Leverage marketing strategies, career fairs or rebranding initiatives to highlight the viability of a career in agriculture.



NOC 85101 – Harvesting Labourers

Job Description

Assist other farm workers to plant, harvest, sort and pack crops. They participate in soil preparation, irrigation, crop planting, spraying and thinning. They also pick row and orchard crops; sort, weigh and pack fruit and vegetables at the farm, and load, unload and transfer crates, supplies, farm; produce and products for transport. They are employed on fruit, vegetable and specialty crop farms.

Future Outlook

Between 2024 and 2030 labour demand is expected to significantly outpace supply at the national level. In 2030, this occupation is expected to have 3,098 peak vacancies.

Workforce Summary

Number of people employed: 7,700

Median age of workers: 37

Median retirement age: 68

Job Prospects

VERY GOOD: Prince Edward Island

GOOD: Manitoba, New Brunswick, Nova Scotia, Ontario

MODERATE Alberta, Quebec

LIMITED: Saskatchewan

VERY LIMITED British Columbia

UNDETERMINED for all other provinces and territories

Average Hourly Wage

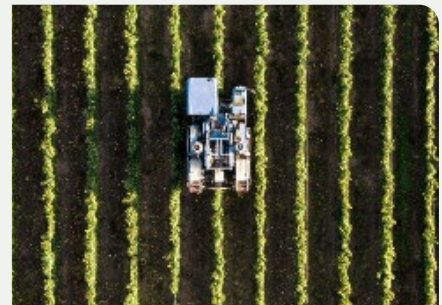
Low: \$14.60

Medium: \$16.50

High: \$23.28

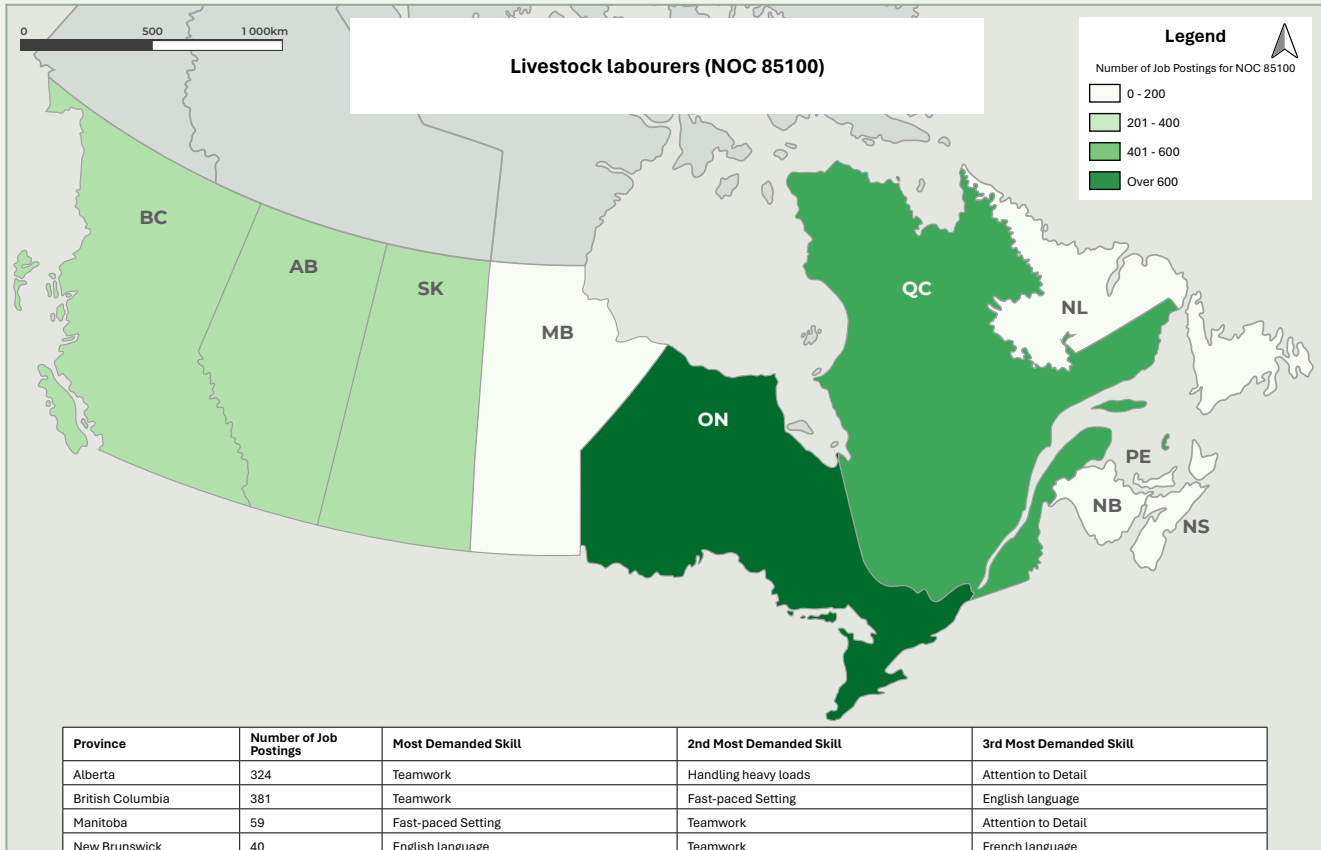
Examples of Job Titles

- Apple picker
- Berry picker
- Crop farm labourer
- Fruit picker
- Fruit sorter
- Harvest hand
- Vegetable packer





Map of Occupational Demand Across Canada



Educational Requirements and Other Qualifications

There are no specific education or training requirements for this occupation.

Related Post-Secondary Education (PSE) Programs and Learning Outcomes

N/A



Top 5 Skills Demanded

1. Teamwork
2. Handling heavy loads
3. Fast-paced setting
4. Hand-eye coordination
5. Attention to detail

Skills Requirements

Workers in this occupation are not required to have very high, high or moderate-level proficiency in any particular skill.

Skills Gaps

- Interpersonal skills such as teamwork
- Organizational skills

Occupational Challenges in Recruiting and Retaining Employees

- Job seekers and new entrants to the labour force do not view occupations in agriculture as viable career options.
- Limited career progression opportunities. Physically demanding work.

- Compensation and benefits vary. Some seasonality.
- Requires employees to live in/move to rural areas.

Recommendations for Strengthening the Labour Force for Harvesting Labourers (NOC 85101)

- Improve compensation and benefits.
- Offer sign-on or retention incentives such as bonuses, subsidized housing and discounted or free food and products.
- Leverage marketing strategies, career fairs or rebranding initiatives to highlight the viability of a career in agriculture.

Sources: Vicinity Jobs custom data (2024); Government of Canada Job Bank (2024); Occupational and Skills Information System (OaSIS) (2024); HR Trends Research Group (2024).





NOC 85100 – Livestock Labourers

Job Description

Assist other farm workers to raise cattle, poultry and other animals; help carry out feeding, health and breeding programs; process animal products; and assist in the maintenance and repair of farm equipment and buildings. They are employed on livestock farms.

Future Outlook

Between 2024 and 2030 labour demand is expected to significantly outpace supply at the national level. In 2030, this occupation is expected to have 4,033 peak vacancies.

Workforce Summary

Number of people employed: 76,300
Median age of workers: 38
Median retirement age: 68

Job Prospects

VERY GOOD: Prince Edward Island
GOOD: Nova Scotia, Ontario
MODERATE: Alberta
LIMITED: Manitoba, New Brunswick, Quebec
VERY LIMITED: British Columbia, Saskatchewan
UNDETERMINED for all other provinces and territories

Average Hourly Wage

Low: \$14.00
Medium: \$18.60
High: \$28.85

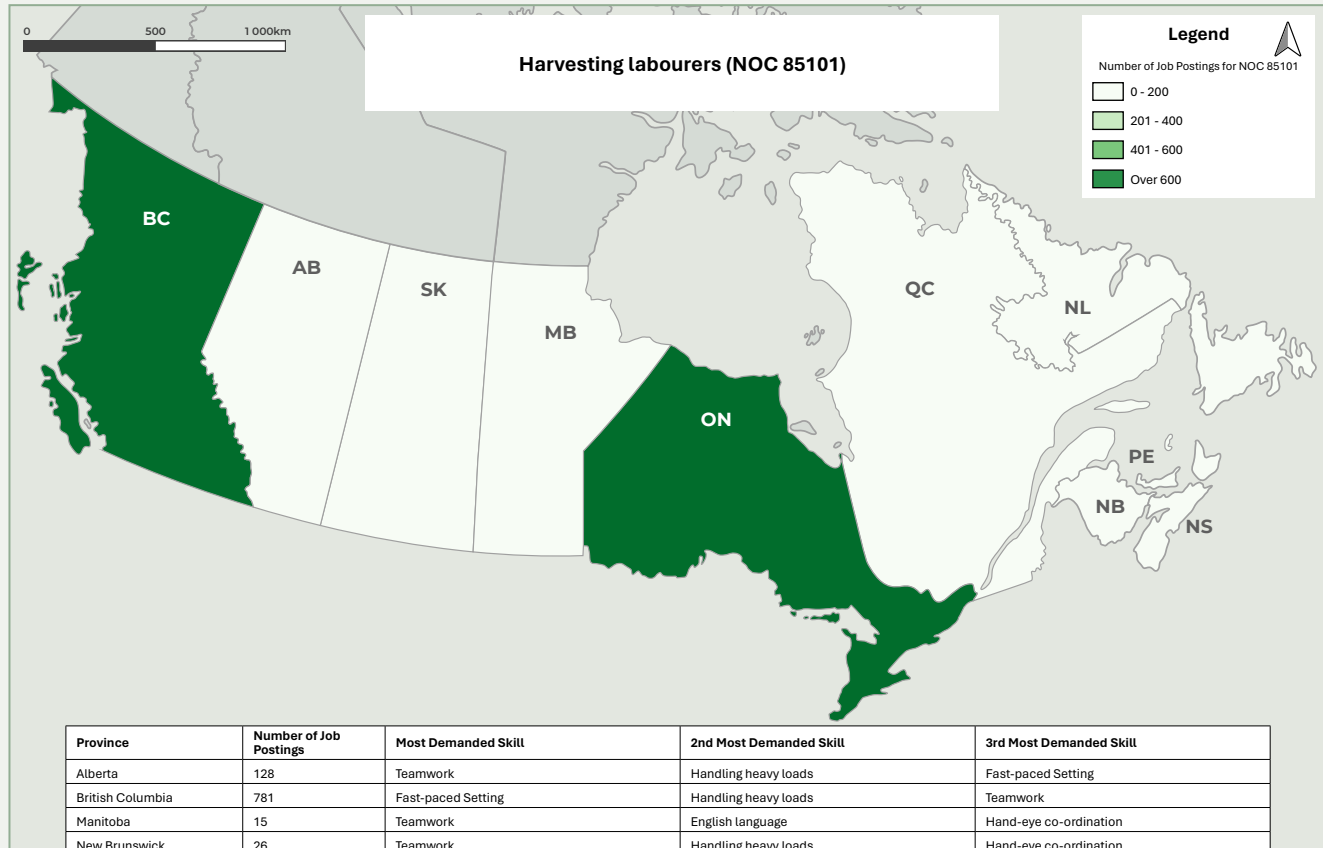
Examples of Job Titles

- Beef cattle farm worker
- Cattle ranch labourer
- Dairy farm worker
- Livestock labourer
- Poultry farm worker





Map of Occupational Demand Across Canada



Province	Number of Job Postings	Most Demanded Skill	2nd Most Demanded Skill	3rd Most Demanded Skill
Alberta	128	Teamwork	Handling heavy loads	Fast-paced Setting
British Columbia	781	Fast-paced Setting	Handling heavy loads	Teamwork
Manitoba	15	Teamwork	English language	Hand-eye co-ordination
New Brunswick	26	Teamwork	Handling heavy loads	Hand-eye co-ordination
Newfoundland and Labrador	12	Handling heavy loads	Teamwork	Flexibility
Nova Scotia	50	Teamwork	Hand-eye co-ordination	Handling heavy loads
Ontario	666	Handling heavy loads	Fast-paced Setting	Hand-eye co-ordination
Prince Edward Island	24	Handling heavy loads	English language	Flexibility
Quebec	121	French language	Leadership	Teamwork
Saskatchewan	190	Teamwork	Handling heavy loads	Attention to Detail

Educational Requirements and Other Qualifications

There are no specific education or training requirements for this occupation.

Related Post Secondary Education (PSE) Programs and Learning Outcomes

N/A



Top 5 Skills Demanded

1. Teamwork
2. Fast-paced setting
3. Handling heavy loads
4. Attention to detail
5. Organizational skills

Skills Requirements

Workers in this occupation are not required to have very high, high or moderate-level proficiency in any particular skill.

Skills Gaps

- Interpersonal skills such as teamwork
- Organizational skills

Occupational Challenges in Recruiting and Retaining Employees

- Job seekers and new entrants to the labour force do not view occupations in agriculture as viable career options.

- Limited career progression opportunities. Physically demanding work.
- Compensation and benefits vary. Some seasonality.
- Requires employees to live in/move to rural areas.

Recommendations for Strengthening the Labour Force for Livestock Labourers (NOC 85100)

- Improve compensation and benefits.
- Offer sign-on or retention incentives such as bonuses, subsidized housing and discounted or free food and products.
- Leverage marketing strategies, career fairs or rebranding initiatives to highlight the viability of a career in agriculture.

Sources: Vicinity Jobs custom data (2024); Government of Canada Job Bank (2024); Occupational and Skills Information System (OaSIS) (2024); HR Trends Research Group (2024).





NOC 85103 – Nursery and Greenhouse Labourers

Job Description

Plant, cultivate and harvest trees, shrubs, flowers and plants, and serve nursery and greenhouse customers. They prepare soil; plant bulbs, seeds and cuttings; graft and bud plants; transplant seedlings and rooted cuttings; and monitor plants for healthy growth and potential weed, insect, disease and fertilizer problems in greenhouse crops. They are employed in indoor and outdoor nurseries and greenhouses.

Future Outlook

Between 2024 and 2030 labour demand is expected to significantly outpace supply at the national level. In 2030, this occupation is expected to have 4,871 peak vacancies.

Workforce Summary

Number of people employed: 20,400
Median age of workers: 38
Median retirement age: 68

Job Prospects

GOOD: Nova Scotia, Ontario

MODERATE: Manitoba, New Brunswick, Prince Edward Island, Quebec

VERY LIMITED: Alberta, British Columbia, Saskatchewan

UNDETERMINED for all other provinces and territories

Average Hourly Wage

Low: \$14.25

Medium: \$18.00

High: \$26.00

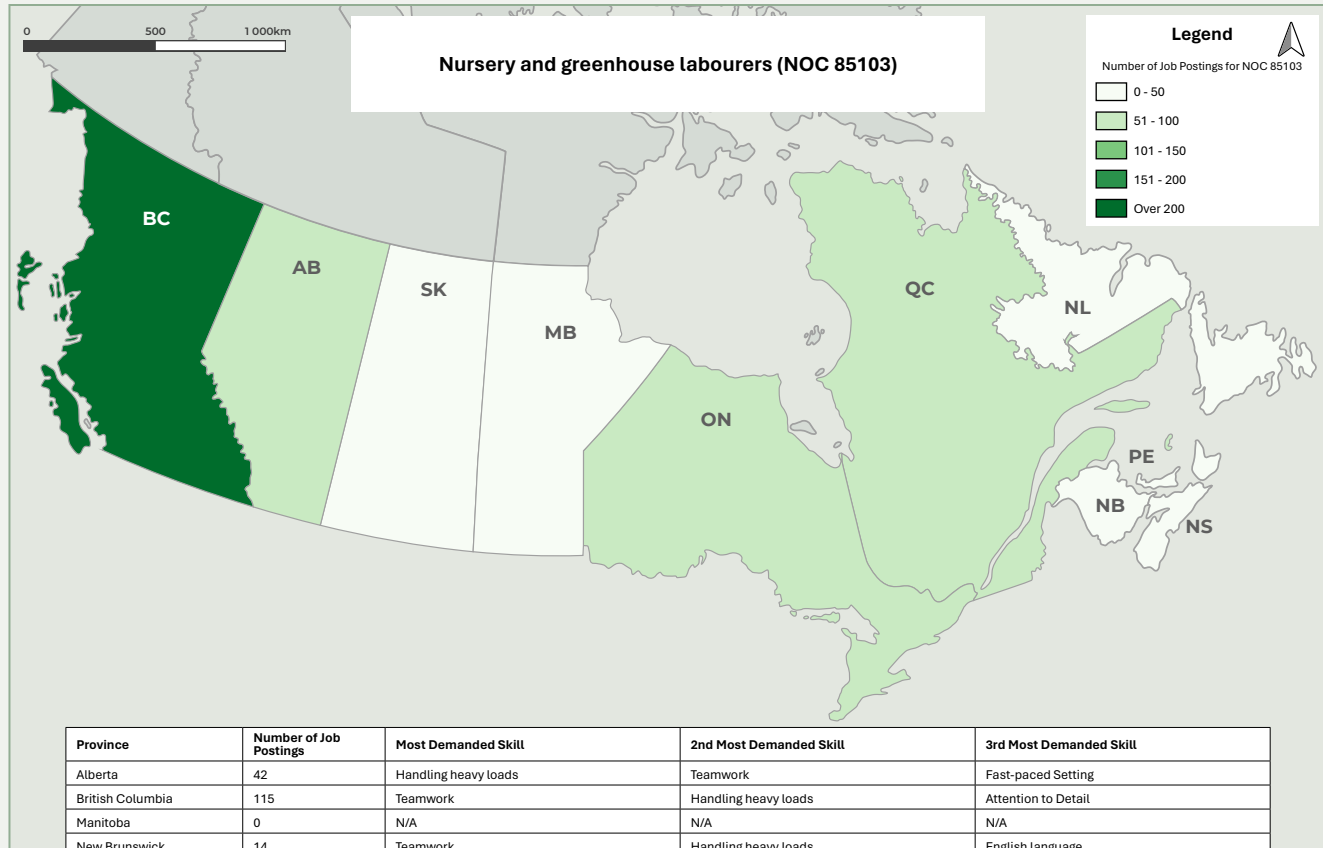
Examples of Job Titles

- Forest nursery labourer
- Greenhouse labourer
- Horticulture labourer
- Hothouse labourer
- Hydroponics labourer
- Nursery labourer





Map of Occupational Demand Across Canada



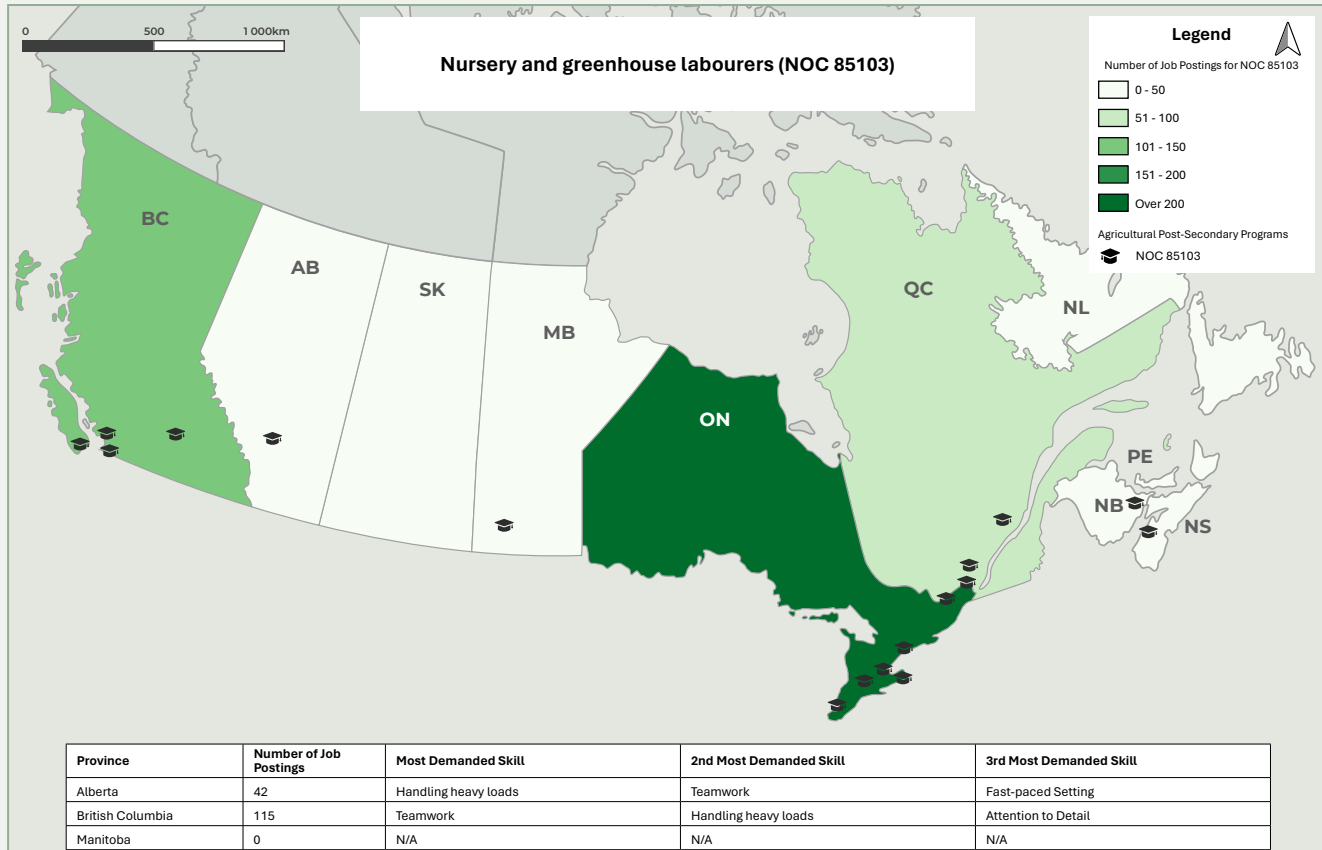
Educational Requirements and Other Qualifications

- Completion of secondary school may be required.
- Completion of college courses in horticulture or a related field may be required. On-the-job training is provided.

- A provincial licence to apply chemical fertilizers, fungicides, herbicides and pesticides may be required.



Map of Related Post-Secondary Education (PSE) Programs



Province	Number of Job Postings	Most Demanded Skill	2nd Most Demanded Skill	3rd Most Demanded Skill
Alberta	42	Handling heavy loads	Teamwork	Fast-paced Setting
British Columbia	115	Teamwork	Handling heavy loads	Attention to Detail
Manitoba	0	N/A	N/A	N/A
New Brunswick	14	Teamwork	Handling heavy loads	English language
Newfoundland and Labrador	1	English language	N/A	N/A
Nova Scotia	6	Teamwork	Attention to Detail	Loading and unloading
Ontario	215	Fast-paced Setting	Handling heavy loads	Attention to Detail
Prince Edward Island	6	Fast-paced Setting	Handling heavy loads	English language
Quebec	88	French language	Teamwork	Attention to Detail
Saskatchewan	21	Teamwork	Attention to Detail	Handling heavy loads

Cost of Related PSE Programs for Domestic Students

- The average cost of a 2-year college diploma in a horticulture-related program is \$9,468.34 .
- The average cost of a horticulture-related certificate program ranging from 8-12 months in duration is \$4,976.59.

PSE Learning Outcomes

- Agribusiness principles
- Horticulture skills and techniques
- Plant identification
- Greenhouse production
- Nursery production and propagation
- Integrated pest diagnosis and treatment
- Fruit and vegetable crop production
- Soil analysis and fertility
- Proper use of farm and safety equipment



Top 5 Skills Demanded

1. Teamwork
2. Fast-paced setting
3. Handling heavy loads
4. Attention to detail
5. Hand-eye coordination

Skills Gaps

- Interpersonal skills such as teamwork

Occupational Challenges in Recruiting and Retaining Employees

- Job seekers and new entrants to the labour force do not view occupations in horticulture as viable career options.
- Limited career progression opportunities. Physically demanding work.
- Compensation and benefits vary.
- Some seasonality.

Recommendations for Strengthening the Labour Force for Nursery and Greenhouse Labourers (NOC 85103)

- Improve compensation and benefits.
- Subsidize the cost of post-secondary education where applicable.
- Offer sign-on or retention incentives such as bonuses, subsidized housing and discounted or free food and products.
- Leverage marketing strategies, career fairs or rebranding initiatives to highlight the viability of a career in agriculture.

Sources: Vicinity Jobs custom data (2024); Government of Canada Job Bank (2024); Occupational and Skills Information System (OaSIS) (2024); HR Trends Research Group (2024).





SECTION 6: OPPORTUNITIES FOR MOVING FORWARD



As noted earlier in the report, the Canadian agriculture sector is facing acute skills and labour-related challenges exacerbated by technological transformation. These challenges include:

- Shifting demographics and an aging workforce
- Negative perceptions of agriculture as a viable career for job seekers
- Persistent labour shortages
- High employee turnover
- Existing and emerging employee skills gaps that are being compounded by the sector's movement toward technology and automation

This section provides recommendations for developing comprehensive strategies that can be implemented by all stakeholders in the sector to reduce labour shortages and/or skills gaps moving forward. Our commitment to following through on these recommendations is integral to the future success of agricultural operations in Canada.

Employer-Led Initiatives

Collecting Workforce Data Is Key

Understand your workforce. Better understanding workforce demographics and skill sets through data-driven approaches allows organizations to tailor recruitment efforts, optimize training programs and implement targeted retention strategies to combat persistent labour shortages.

Gather data. Collect regularly to build and understand your workforce profile to create a

comprehensive overview of the characteristics, demographics, skills and attributes of your employees. Include information such as age distribution, gender diversity, educational backgrounds, job roles, experience levels and any other relevant factors that define the composition of the workforce. Explore recruitment, retention and vacancies to determine impact. Understand why vacancies persist. Create targets for training and worker development.

Measure progress. Work with agriculture partners, such as CAHRC, to develop and participate in regular employer surveys to develop a comprehensive database of key workforce metrics.

Rely on HR as a Valuable Resource for Improvements

Involve Human Resources (HR) in the strategic planning process. HR can play a pivotal role in aligning workforce planning with organizational goals and objectives, and ensuring the agriculture sector has the right talent in place to drive growth and innovation. Moreover, HR's involvement enables businesses to implement proactive measures, such as talent pipelining, succession planning and workforce development initiatives, such as developing peer mentoring and job shadowing opportunities, to mitigate labour shortages and build a sustainable workforce for the future.

Sharpen HR management practices. By implementing effective human resource management strategies, such as streamlined recruitment processes, competitive compensation packages, employee training and development programs and employee retention initiatives, agricultural businesses can attract and retain skilled workers. Additionally, HR best practices can help optimize workforce productivity and efficiency through strategic workforce planning, job design and performance



management. Moreover, by fostering a positive work culture and investing in employee well-being, agricultural companies can enhance employee satisfaction and engagement, leading to higher levels of productivity and reduced turnover rates. Additionally, networking and sharing best practices among employers could further strengthen HR capabilities, ultimately making the sector a more desirable place to work.⁵⁶

Use clear definitions of skills. Foster improved awareness of upskilling and reskilling opportunities for existing workers and potential career seekers. Identify new and emerging skillsets that are required to meet the technological demands of the future. Align with current national definitions and skills categorizations.

Conduct Research on Your HR Requirements

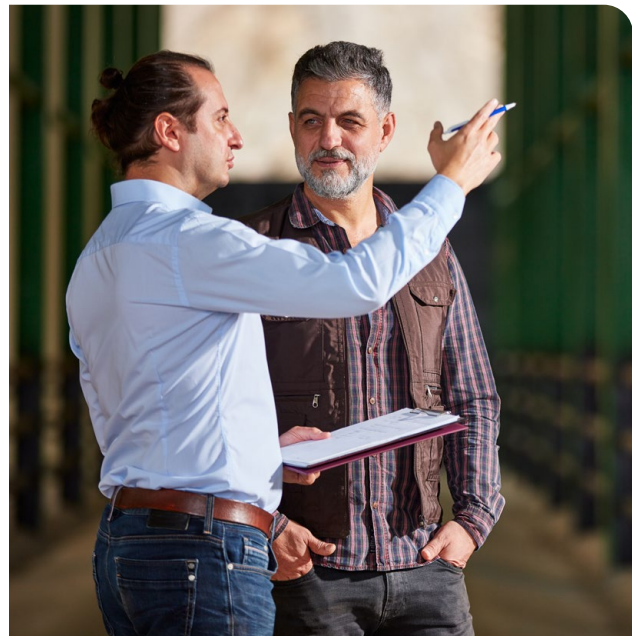
Identify available talent. Conduct a labour market assessment (LMA) to identify available talent by NOC, region and community and province. Understanding the composition of the local labour market is key to designing and implementing labour force development initiatives and to gauging the availability of skilled workers.

Design and Implement Initiatives With Actionable Outcomes

Create a strategy for identifying and addressing skills gaps. Explore factors contributing to potential skills gaps, such as technological advancements, changing job requirements and evolving industry landscapes. Identify specific skills in demand over the short, medium and long-term and compare them to the skills

available in the workforce. Analyze job postings, conduct surveys and interview employees and employers to understand skill gaps. Develop learning or training plans based on identified gaps. Implement training programs, collaborate with educational institutions or provide on-the-job training. Address the mismatch between education and industry requirements.

Consider the succession planning process. Well-developed and robust succession plans help ensure organizations retain corporate knowledge and maintain the efficiency of their workforce. However, in 2021, only 12 per cent of farms reported having a succession plan in place. While this represents an increase of 6,673 farms from 2016, it is still only a fraction of all Canadian farms.⁵⁷ Given that over 60 per cent of farm operators are over the age of 55, having strong succession plans in place is vital for the sustainability of Canadian agricultural operations. This suggests that the farming industry



⁵⁶ Farm Credit Canada (FCC), “Sharpen Your HR Skills to Solve Farm Labour Shortages.”

⁵⁷ Statistics Canada, “Canada’s 2021 Census of Agriculture: A Story about the Transformation of the Agriculture Industry and Adaptiveness of Canadian Farmers.”



is at high risk of losing many workers to retirement over the next decade, leading to an impending shortage of farm operators.

Engage Current and Potential Employees

Training and skills needs assessments. Evolving workplace requirements are creating demands for increased training and skills for most work processes. The rapid pace of technological change, increasing content knowledge required and rapidly changing production processes requires continuous learning. Research indicates that training needs diagnostics and/or assessments have been done in an unsystematic way in organizational settings.

Employers need to take a broader and more proactive approach to focus on the long-term objectives. Training and skills needs should be regularly assessed and include pertinent details such as workforce characteristics and demographics, training budgets, organizational structures, and individual training needs, competencies, occupational requirements and learning styles.

Develop learning plans and career trajectories.

Existing workers need more flexible learning pathways in the quest for relevant skills and training that prepare them for current and future occupations.

Cast a wider net on workforce development and engagement. Consider providing appropriate compensation plans and opportunities for career advancement and professional development to workers. Involve all levels of leadership in the strategy. Encourage staff feedback and create actions. Explore employee wellness programming. Improve the perception on the importance of agriculture work through promotional events that highlight appreciation and the viability of a career in the sector. Offer spot bonuses to recognize

employees for a job well done. Include the perspectives and voices of employees in decision-making where relevant and/or possible (e.g. new initiatives or new resources).

Collaborate With Sector Stakeholders

Share information within and across businesses and industries. Understanding the benefits and risks associated with technological adoption could be greatly enhanced by an increased willingness of companies to collaborate and share information about their experiences. Similarly, the agricultural sector could be more open to learning from other sectors, especially regarding their workforce development. Workers from other sectors (such as manufacturing or mining) have expertise that could be passed on to the agricultural sector, including an understanding of certain relevant technologies to ensure training and skills development planning is designed to equip future workers with the skills they need to succeed in agricultural careers.

Facilitate positive perceptions of the sector as a viable career option. Research conducted by Agriculture and Agri-Food Canada highlights that finding people with the right skillset for particular occupations in the agriculture sector is becoming increasingly difficult, given the perception that agriculture and agri-food operations only offer opportunities that require minimal skills. Overcoming this misconception is critical so that job seekers are aware of the wide range of opportunities available in the sector.⁵⁸

To entice individuals to join the agriculture sector, stakeholders should collaborate to develop a comprehensive — and easily accessible — list of careers that highlights the diverse range

⁵⁸ Agriculture and Agri-Food Canada, “What We Heard Report - Agricultural Labour Strategy.”



of opportunities in the sector. This list should include detailed information on:

- Educational and/or training requirements
- Institutions that offer the required education or training
- The cost of the required education and/or training
- Salary expectations at the entry, mid and endpoint
- Possible career paths
- Career progression opportunities
- A snapshot of what a “day-in-the-life” looks like
- How innovative technologies, robotics and Artificial Intelligence (AI) are being utilized

Conduct in-depth sector-wide research. Develop case studies on skills requirements for employers in the agriculture sector. Identify promising practices. Develop comprehensive inventory of agricultural employers across Canada, capturing information such as location of operations, type of operation, number of employees, etc.

Foster stakeholder understanding of barriers to labour market entry. Conducting regular research to better understand what is deterring potential employees, specifically youth, from entering the agriculture sector is critical to developing actionable solutions to mitigate the issues.

Develop robust plans and policies to eliminate barriers. Reducing some of the barriers identified by career seekers may encourage them to consider careers in agriculture as a viable option for their future. Initiatives to reduce

barriers should be designed in collaboration with government, educators, workers and operators to ensure they are meeting the needs of all those involved in Canadian agricultural operations.

Improve Recruitment and Retention by Fostering a Diverse and Inclusive Workforce

Support skill matching and training support.

Develop government-sponsored immigrant incentive programs, as well as an initiative to facilitate the matching of immigrants' skills and expertise with the needs of the agriculture sector. This could provide training programs, workshops and resources to help immigrants acquire or enhance the skills required for various agricultural roles, such as farm management, agri-tech and sustainable agriculture.

Streamline immigration pathways and work permits.

Develop fast-track immigration pathways and work permit processes specifically for individuals interested in working in the agriculture sector. This could include expedited visa processing, extended work permits or pathways to permanent residency for immigrants who commit to working in agriculture for a specified period.

Provide financial incentives and support. Offer financial incentives to immigrants who choose to work in agriculture, such as relocation assistance, housing subsidies or tax incentives for agricultural employment. Additionally, the program could provide grants or low-interest loans to support immigrants interested in starting their own agricultural businesses or ventures.

Provide scholarship opportunities for children of immigrants.

Create agriculture scholarship opportunities targeted at the children of immigrants



who already work in the sector. These scholarships would not only incentivize the children of immigrant agricultural workers to pursue educational pathways in agriculture-related fields but also address potential barriers to access and affordability. By supporting the academic and professional development of immigrant families' children, the agriculture sector can foster diversity, inclusion and intergenerational continuity, enriching the sector with fresh perspectives and talent and replenishing the dwindling Canadian farm population.

Engage governments in dialogue to develop appropriate policies, collaborations and projects to support.

Foster Early Interest Among Children and Youth

Introduce Agriculture to Students in Elementary School

Introducing agriculture to students in elementary school is crucial for fostering a foundational understanding of where food comes from, the importance of agriculture in our daily lives and the interconnectedness of food systems and the environment.

This is where the work of Agriculture in the Classroom (AITC) is pivotal. AITC, a Canadian not-for-profit organization, aims to bring agriculture to every classroom by providing accurate, balanced and current curriculum-linked resources. Incorporating agricultural concepts into the curriculum helps educators provide students with hands-on learning experiences that promote curiosity, critical thinking and environmental stewardship. Early exposure to agriculture can inspire students to explore future career paths in agriculture-related fields, contributing to the

development of a skilled workforce and the long-term sustainability of the agriculture sector.

Provide hands-on learning activities. Create hands-on activities like planting seeds, tending to a garden or caring for classroom pets (such as fish or small animals). These experiences allow children to see how agriculture contributes to food production and the environment.

Arrange field trips to farms. Organize field trips to local farms where children can observe farm animals, learn about different crops and see farm machinery in action. This first-hand experience helps children understand where their food comes from and the work involved in agricultural production.

Create cooking and nutrition activities. Incorporate cooking and nutrition activities that highlight the connection between agriculture, food and health. Encourage children to help prepare simple recipes using fresh fruits and vegetables and discuss the importance of eating a balanced diet with plenty of whole foods.





Involve guest speakers and community members. Invite guest speakers such as farmers, agricultural scientists, chefs or dietitians to talk to children about their work and the importance of agriculture in our daily lives. Community members involved in agriculture can share their experiences and answer children's questions.

Play interactive games and puzzles. Use interactive games, puzzles and educational apps or websites to teach children about agriculture in a fun and engaging way. There are many resources available that introduce concepts like crop rotation, soil health and the water cycle through interactive games and activities.

Explore the outdoors. Take children on nature walks or outdoor scavenger hunts to explore the natural world and learn about the plants, animals and ecosystems that are essential to agriculture. Use these opportunities to discuss the interdependence of living organisms and the importance of biodiversity.

Encourage High Schools to Spotlight Agriculture

As students progress through high school, they are encouraged to think about the career they want to have and the steps that they need to take to achieve it. In many cases, students have to start making critical career-determining decisions as early as Grade 9 or 10, as they have to make sure that they are taking the right courses at the right levels that will allow them to graduate with the proper prerequisites for their path of choice.

Students often choose their prospective career with the help of their parents, teachers and guidance counsellors, in conjunction with their own interests that may have been piqued through their school curriculum. This allows ample opportunity for educational institutions to highlight how interesting and important Canadian

agriculture is by introducing one or more of the following initiatives:

Enhance agriculture education. Incorporate agriculture-related courses into the curriculum, such as agricultural science, agronomy, horticulture, animal science and agricultural engineering. These courses can provide students with foundational knowledge and skills in various aspects of agriculture.

Establish agricultural clubs and organizations. Encourage students to join agricultural clubs, such as a horticulture club, a junior garden club, or a 4-H club. These clubs provide opportunities for students to participate in agricultural activities, competitions and leadership-development programs.

Offer hands-on learning experiences. Provide students with hands-on learning experiences, such as school gardens, greenhouse projects and livestock management programs. These experiences allow students to gain practical skills and a deeper understanding of agricultural practices.

Arrange field trips and guest speakers. Organize field trips to local farms, agricultural research institutions and agribusinesses to expose students to different aspects of agriculture. Invite guest speakers, such as farmers, agricultural scientists and other sector professionals, to share their experiences and insights with students.

Facilitate internships and job-shadowing opportunities. Partner with local farms, agricultural businesses and government agencies to offer internship and job-shadowing opportunities for students interested in pursuing careers in agriculture. These experiences provide students with valuable real-world experience and help them explore potential career paths.



Highlight diverse career opportunities.

Showcase the diverse range of career opportunities available in agriculture beyond traditional farming, such as agricultural engineering, agribusiness management, agricultural education, food science and sustainable agriculture. Highlight the importance of agriculture in addressing global challenges like food security, climate change and environmental sustainability.

Collaborate with sector partners. Collaborate with local agriculture partners, including farmers, ranchers, agribusinesses and agricultural organizations to develop educational programs, mentorship opportunities and career pathways for students interested in agriculture.

Create Opportunities for Post-Secondary Students

Offer grants and/or scholarships. Given the high costs associated with certain post-secondary programs in agriculture, offering scholarships or grants may be a way to reduce the financial burden for those interested in working in agriculture. On average for domestic students:

- A two-year college diploma in an agriculture-related program costs \$14,119.26
- A four-year bachelor's degree in an agriculture-related program costs \$15,058.93
- A two-year master's degree in an agriculture-related program costs \$14,149.69

These programs should be tied to in-demand occupations and provide skills training relevant to current and future agricultural jobs. Offering

financial assistance could be used to incentivize or encourage workers to more rural and remote workplaces, helping increase the number of labour market participants.

Identify cross-collaborative real-world initiatives.

Engage with post-secondary institutions to involve students in experiential learning and solve modern-day agricultural challenges.

Create more flexible program pathways.

Agricultural employers and academic institutions need to work together and mutually agree on how agricultural education should prepare future workers for the expectations about what it means to be “job ready” out of school. This could be achieved through a multi-pronged approach to agricultural education including adding or enhancing the work-integrated learning component of agriculture-focused programs. A stronger presence of agricultural representatives on academic advisory committees as well as co-development of training programs would also help strengthen collaboration.





Leverage future skills to develop the next generation of agricultural workers. A key challenge for both industry and academia is the rapid adoption of new technologies, which comes with both benefits and risks. Academic institutions could develop curricula that fosters skills in critical thinking, judgment and decision-making, teamwork and other skills that are increasingly important for future generations of agricultural workers.

Increase collaborative efforts between employers and post-secondary institutions. Many Canadian colleges, universities and trade schools offer diverse agricultural-related programs designed to train for various in-demand occupations. However, a commonly expressed concern from industry is that academic programming needs to better reflect the industry's skills requirements and prepare graduates for the challenges of working in agriculture. To meet shifting demands, post-secondary institutions and employers need to work closely to identify gaps and opportunities to upskill.

A pivotal strategy in fostering ongoing career interest and addressing skill gaps is the Growing Opportunities initiative by the Canadian Agricultural Human Resource Council. This program, in partnership with the Government of Canada's Student Work Placement Program (SWPP), aims to mitigate the chronic agri-workforce gaps that persist in the sector, leading to significant operational challenges.

Across All Stakeholder Groups, Celebrate the Wins

Celebrate the agriculture sector's efforts and recognize that this is a journey and success will not happen overnight. Different stakeholders in

the agriculture sector play vital roles in building a future workforce by providing opportunities, resources and support for education, training and career development.

Spotlight: Agriculture in the Classroom (AITC)

Agriculture in the Classroom (AITC) is a Canadian not-for-profit organization whose vision is to bring agriculture to every classroom and inspire every student. In a complex and changing world, it is more important than ever to share the story of food production with the next generation so that they care about the food they eat, where it comes from and how it gets to their plates. We:

- Consist of 10 provincial member organizations that deliver agriculture education on the ground and foster a passion for lifelong learning through collaboration and creativity.
- Provide accurate, balanced and current curriculum-linked resources, and programs and initiatives for educators and students at all grade levels from coast to coast to coast.
- Are a network of dedicated partners representing government, industry and the public — all of whom share our passion for creating meaningful educational experiences.
- Collaborate with our network of partners, stakeholders and volunteers who share our goal of delivering agriculture education across Canada.

Source: Agriculture in the Classroom Canada



APPENDIX A: GLOSSARY OF KEY TERMS



Gross Domestic Product (GDP): The gross domestic product is the standard measure of economic output. It represents the monetary value of all final goods and services made in a region or country in a given period.

Labour Productivity: Labour productivity, also known as workforce productivity, is defined as real economic output per labour hour. Growth in labour productivity is measured by the change in economic output per labour hour over a defined period. As an economy's (or industry's) labour productivity grows, it produces more goods and services for the same amount of relative work.

Skill: By definition, a skill is the ability to do an activity or job well, especially because you have practiced it.⁵⁹ In the literature of skills gaps, there is lack of clarity in the definition of “skills.” Often, the proxy variable for “skills” is “qualifications,” such as degrees, certificates, diplomas and other credentials that show the successful completion of an educational program. The main flaw with this concept is that it excludes the skills acquired through informal training and experience.

The Programme for the International Assessment of Adult Competencies (PIAAC), developed by the Organization for Economic Co-operation and Development (OECD), aims to assess and analyze adult skills and allow for international comparability. PIAAC measures the proficiency of adults in key information-processing skills — literacy, numeracy and problem solving — and gathers information and data on how adults use their skills at home, at work and in the wider community.⁶⁰

Skills Gaps: Definitions for “skills gaps” are often vague and ambiguous. For this project, skills gaps are defined as notable differences between the skills that an incumbent requires to be successful

in an occupation, the skills that employers are calling for in job postings and the skills that relevant post-secondary education programs teach.

Methodology

The methodology developed for this report relied on a multi-faceted approach organized around seven (7) key phases. The research process included:

Phase One: Data and information gathering.

Data was collected from Statistics Canada on the key labour force characteristics for each occupation under consideration. To supplement this, a systematic review of the literature was also conducted to examine existing research, reports and scholarly articles related to skills gaps in the agriculture sector. As well, efforts were made to incorporate CAHRC's most-recent labour market information reports as insight for this research. The search strategy involved identifying relevant databases, selecting appropriate search terms and applying inclusion criteria to ensure the retrieval of high-quality and pertinent literature. Peer-reviewed articles, publicly available government publications, industry reports and studies published in the last five years were included in the analysis.

Phase Two: Inventory of Canadian post-secondary programs and courses.

Information related to agriculture and associated with the 12 key occupations in agriculture (see Table 1) summarized data from various sources such as Canadian university and college websites, course catalogs, academic databases and government publications. Keywords related to agriculture, agribusiness, agronomy, animal science, horticulture, aquaculture and related fields were used to ensure the retrieval of pertinent information. Inclusion criteria were established

⁵⁹ Cambridge Dictionary, “Skill Definition.”

⁶⁰ Statistics Canada, “Determinants of Skill Gaps in the Workplace and Recruitment Difficulties in Canada.”



to select programs and courses directly related to agriculture, including undergraduate and graduate degree programs, diplomas, certificates, individual courses and micro credentials and training. Information on program duration, delivery methods, average cost for domestic students and key skills were systematically extracted and organized into a comprehensive inventory.

Phase Three: Examination of skills demand Across Canada and creation of an inventory of occupation-specific skills, based on key occupations previously identified by CAHRC.

Data on job and skills demand was derived from Vicinity Jobs which collects and analyzes information from online job postings and job boards to provide data related to skills requirements and other factors included in job postings across all Canadian sectors. Vicinity Jobs links each posting to a unique occupation and set of work requirements, which are defined by their proprietary taxonomy for categorizing text descriptions in online job ads.⁶¹

Data was also retrieved from Vicinity Jobs Inc. on the number of job postings by employer to illustrate the proximity of main employers to post-secondary institutions. Attempts were made to map employers with the largest number of job postings per occupation and by province. However, in many cases, sample sizes were very small — i.e., one job posting — and were not representative. As well, as some employers have multiple locations within or across provinces, it was impossible to map their exact locations. As a result, a table with this information is provided in Appendix D.

Phase Four: Development of location-specific reports for each province.⁶² Provincial-level reports highlight key labour market information and the top three skills demanded in job postings by occupation. Each provincial report also contains a short snapshot of the main findings from the 2021 Census of Agriculture and a summary of key skills-related findings as evidenced by Vicinity Jobs Inc. data.

⁶¹ Labour Market Information Council (LMIC), "Overview: Learn More about the Canadian Job Trends Dashboard."

⁶² See discussion on 'Limitations' and 'Cautionary Demand' for more details.



Phase Five: Development of occupational summaries. A comprehensive occupational summary was developed for each of the 12 key occupations in agriculture. Summaries include each occupation’s job description, future outlook, workforce summary, job prospects by province, average hourly wages, typical job titles, map of occupational demand across Canada, educational requirements (if applicable), map of related Canadian post-secondary programs (if applicable), overview of related Canadian post-secondary programs (if applicable), PSE learning outcomes (if applicable), the top five skills demanded by Canadian employers, very high, high and moderate-level skills requirements, a summary of skills gaps between skills demanded, skills required and skills taught, occupational challenges in recruiting and retaining employees and occupation-specific recommendations for strengthening the labour force.

Phase Six: Identification of actionable recommendations based on the research findings. This was used to guide the development of initiatives that can effectively address the skill development needs of agriculture workers and employers.

Phase Seven: Development of interactive and static maps. QGIS software was used to plot data related to occupations, educational institutions and skills from various sources including Statistics Canada, university and college websites and Vicinity Jobs. In total, 21 static maps were created and have been included in the Occupational Summaries found in Section 5 of this report.

ArcGIS software was used to develop an interactive map that highlights the size of the Canadian labour force, the number of nationwide job postings, the most-demanded skills by

province, the number of job postings by province for each occupation and the location and details of PSE programs⁶³ related to the 12 key occupations listed below.

For this project, provincial occupational demand data for the following 12 key occupations in agriculture was collected and examined from Vicinity Jobs and Statistics Canada:

1. NOC 21112 - Agricultural representatives, consultants and specialists
2. NOC 22114 - Landscape and horticulture technicians and specialists
3. NOC 72401 - Heavy-duty equipment mechanics
4. NOC 73300 - Transport truck drivers
5. NOC 80020 - Managers in agriculture
6. NOC 80021 - Managers in horticulture
7. NOC 82030 - Agricultural service contractors and farm supervisors
8. NOC 82031 - Contractors and supervisors, landscaping, grounds maintenance and horticulture services
9. NOC 84120 - Specialized livestock workers and farm machinery operators
10. NOC 85101 - Harvesting labourers
11. NOC 85100 - Livestock labourers
12. NOC 85103 - Nursery and greenhouse labourers

⁶³ The Job Bank notes that some of these occupations “may require” some form of post-secondary education. This is discussed in greater detail later in the report.



These 12 occupations were previously identified by The Conference Board of Canada (2024) as occupations forecasted to reach peak seasonal vacancies in 2023 and 2030. According to The Conference Board of Canada, 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.

It should be noted that the analysis in this report is based on data on skill demands and other work requirements as captured in Canadian online job postings in 2023. Unlike other forms of data which take longer to gather and analyze, job posting data is generated in near-time and is easily available to access. However, job posting information has limitations as a new and emerging source of data and more understanding is required to determine its validity and use for forecasting and analysis. This is discussed in greater detail in the following section.

As the Future Skills Centre ⁶⁴ has noted, job posting data allows for direct observations of the skills being demanded in occupations across Canada. The analysis of skills and skills gaps in this report offers an important opportunity to explore the use of job posting data as a potential approach to inform strategic planning efforts and initiatives.

Limitations of the Study

As earlier stated, this project utilized a mixed-methods research design. This included:

- A literature review, including previous related work commissioned by CAHRC.
- Analysis of Statistics Canada data, such as Labour Force Survey and publicly available census data.

- Retrieval and analysis of job and skills demand data derived from Vicinity Jobs.
- Data gathering and analysis of data related to post-secondary institutions and student outcomes for agricultural-specific occupations identified by CAHRC.

All research studies have limitations, which may include sample-size limitations, data collection methods, the validity and reliability of measures used and time constraints. Limitations can affect the key findings, conclusions and generalizability of the study and should be stated in advance of the analysis and conclusions. The objective of presenting limitations in this section is to provide meaningful information that may offer insights for using the data presented and for future research considerations.

The following provides an overview of limitations to this project and in reporting.

First Steps in This Work

This study provides the foundation of what will be a larger undertaking built over time. There were certain limitations encountered given the time sensitive process of accessing and analyzing data that is not publicly available. For example, a custom data request from Statistics Canada on Census data of where workers in the occupational categories under consideration reside typically goes beyond the project time parameters. As such, this phase relied on comprehensive literature reviews from previously conducted research on available talent and labour market analysis within provinces and regions. The analysis of labour supply was based on data obtained from the Statistics Canada Labour

⁶⁴ Future Skills Centre (FSC) and Labour Market Information Council (LMIC), "How to Forecast Skills in Demand: A Primer."



Force Survey and publicly available Census data, CAHRC's most recent labour market information report, and other related data publications, which was analyzed at the provincial level. The results of this study provide a strong direction for continuing to build out this work.

As well, to conduct a detailed analysis of post-secondary institutional data also requires considerable lead time to request through Statistics Canada's Post-Secondary Information System (PSIS) or via individual educational institutions. Where publicly available, data was collected on agriculture-related programs, including institutions that offer such programs, their campus locations, program format (in-person, remote or blended), program name, specializations/majors (where applicable), expected program length, whether or not co-op is offered and the average cost for a domestic student. Attempts were also made to contact all related post-secondary institutions to gather information and data on Key Performance Indicators (KPIs) such as graduation rates, enrolment rates, graduate satisfaction rates and employer satisfaction rates. Data was analyzed on occupational and skills demand and measured within agricultural occupations linked to the job postings.

Mapping Skills Is Complex and Challenging

Determining a skills gap is a complex process that involves an analysis of the skills demanded by employers with those possessed by job seekers and/or employees. It is not easily mapped across a country. In general, the fragmentation of Canadian skills-related data sources and inconsistent reporting standards across provinces and territories hinder efforts

to compile a comprehensive database of skills supply for any industry. This renders the analysis of skills gaps difficult without distributing surveys to a large proportion of Canadian farms and agricultural facilities to assess the skills possessed by their current workforce.

This study gathered information available related to skills from reliable data sources including the Government of Canada's Job Bank labour market information portal⁶⁵ and the Occupational and Skills Information System (OaSIS).⁶⁶ Both platforms rate skills on a scale of 1 to 5 according to the level of proficiency or complexity required for the job (1 being the lowest level and 5 being the highest level). Only skills requiring level 3, 4 and 5 proficiencies were included in the analysis. However, the definitions and skills requirements for some occupations varied slightly by source. When a discrepancy was noted, the Job Bank's data was used.

The analysis used a triangulated approach to examine skills gaps for the 12 key occupations and used the following information and data:

- Skills identified related to the occupations via the Job Bank and OaSIS
- Job demand data via postings captured by Vicinity Jobs Inc.⁶⁷
- Post-secondary data such as learning outcomes highlighted by post-secondary programs in agriculture

Data Collected by Vicinity Jobs Inc. Has Constraints

According to Economic and Social Development Canada, which also delivers the Job Bank used

⁶⁵ Employment and Social Development Canada, "Job Bank - Labour Market Information."

⁶⁶ Employment and Social Development Canada, "Welcome to the Occupational and Skills Information System."

⁶⁷ Many jobs in agriculture are advertised and filled by word of mouth. As a result, Vicinity Jobs Inc. data – which collects information



in the National Occupational Classification (NOC) system, skills are developed capacities that an individual must have to be effective in a job, role, function, task or duty.⁶⁸ Skills are often categorized around foundational, technical, analytical, resource-management and interpersonal abilities. Skills are acquired through education, training and work-related experiences or by other informal means. Over the past decade what constitutes (or contributes to) a skill has been much debated.

Vicinity Jobs Inc. captures all words included in job postings and often categorizes job requirements, such as “face masks” or “Personal Protective Equipment (PPE)” as skills rather than as an occupational requirement. To mitigate this issue, terms associated with job requirements rather than skills were removed from the dataset.

Vicinity Jobs Inc. has noted that they do not re-tag skills retroactively. For example, if a skill is initially captured and coded into the database in 2023, it may not appear in the data from 2018-2022. In 2023, “truck driving” was included in the list of skills related to Transport truck drivers (NOC 73300), but not included retroactively in the data for previous years. In this sense, it appears that job postings for Transport truck drivers seeking truck driving skills only began in 2023.

Not all skills or work requirements are captured by Vicinity Jobs Inc. as many are assumed to be obvious and part of foundational occupational training. As a result, they are often not explicitly included in the data (e.g. economists should be proficient in Microsoft Excel, truck drivers should have truck driving). As well, as not all jobs are posted online, the data is not representative. Some jobs may be internally advertised only

through internal communications and/or posters on job boards, posted on association websites, shared via social media or publicized through word of mouth. As a new source of data, Vicinity Jobs has been continually refining its methodologies to better capture occupational and skills coding in alignment with skills categorizations used in Canada. In addition, trend analysis of year-over-year job postings and skills demand proved to be difficult and was further compounded by fluctuations observed by the recent pandemic. As a result, only 2023 data was analyzed.

Lack of Available Talent Is Not Always Due to Skills Gaps

As Statistics Canada has noted⁶⁹ (and is well understood by the agriculture sector), population aging coupled with technological change has raised concerns about labour and skills shortages. The retirement rate of workers is also at an all-time high and is expected to continue to increase with many baby boomer employees retiring. As well, the introduction (and/or adoption) of new technologies has increased the level of required skills for some jobs while rendering others obsolete, potentially resulting in skills gaps in a company’s workforce. Employers may find it difficult to recruit employees with the required skills and may be forced to hire less-qualified employees.

Despite the considerable effort that is being made, a lack of clarity and agreement in the literature on how to define skills and skills gaps persists. Consideration is also not often given to skills acquired through informal training and/or previous experience. Often, the proxy for skills is limited to existing credentials, skills testing or from assessment scores.

⁶⁸ Employment and Social Development Canada, “Skills and Competencies Taxonomy.”

⁶⁹ Statistics Canada, “Determinants of Skill Gaps in the Workplace and Recruitment Difficulties in Canada.”



It is also important to note that when vacancies or recruitment challenges are experienced by employers, often a labour shortage or skills gap is perceived as the root cause. However, too few qualified candidates can also stem from a lack of interest or awareness of opportunities or vacancies in a particular occupation.

To better understand the challenges facing the agriculture sector, casting a wider net to triangulate data related to skills is warranted. This will present a more holistic analysis and understanding, including skill requirements for each occupation, perceived or noted skills gaps, recruitment efforts and challenges, training efforts, vacancies and employee retention and engagement rates.

Sample-Size Limitations

The data derived for this project through Vicinity Jobs captured actual numbers of job postings by province, skill and organized by NOC. In some cases, there were very few job postings to report. In one instance, only one posting was observed, as noted in the tables containing provincial data. Again, this may not be indicative of a lack of demand but may rather be related to recruitment methods such as word of mouth which are not captured by Vicinity Jobs.

Using Five-Digit NOCs in Analysis Has Drawback

CAHRC has identified 12 five-digit NOCs (see Table 1) to examine in this analysis. However,



examining and mapping skills demand for five-digit NOCs, rather than four-digit NOCs, presents a notable limitation. Five-digit NOCs are the most detailed level of the classification and represent one or several occupations combined. When analyzing data related to these NOCs, small sample sizes for certain occupations may limit the robustness and reliability of the data. As a result, this project analyzes skills data for each of the 12 NOCs at the provincial level, rather than the municipal, regional or county level. For an overview of NOC structure, hierarchy and composition, and an example of how they apply to occupations in agriculture, please see Appendix C.

Labour Market Data on Temporary Foreign Workers Is Limited

As Statistics Canada notes, Temporary Foreign Workers (TFWs) have become an increasingly important source of labour supply in Canada. However, estimating foreign workers is not straightforward because of their complexity and transient status.

Each quarter, the Temporary Foreign Worker Program (TFWP) publishes Labour Market Impact Assessment (LMIA) statistics on the Open Government Data Portal, including quarterly and annual LMIA data related to, but not limited to, requested and approved TFW positions, employment location, employment occupations, sectors, TFWP stream and temporary foreign workers by country of origin.

The TFWP does not collect data on the number of TFWs who are hired by an employer and have arrived in Canada. The decision to issue a work permit rests with Immigration, Refugees and Citizenship Canada (IRCC) and not all positions on a positive LMIA result in a work permit. For these reasons, data provided in the LMIA

statistics cannot be used to calculate the number of TFWs who have entered or will enter Canada. IRCC publishes annual statistics on the number of foreign workers who are issued a work permit.

This report relied on census data from Statistics Canada, which does not capture data on TFWs. Where Statistics Canada does report, it uses estimates rather than actual numbers. As a result, most of the information contained in this report is limited to domestic workers.





APPENDIX B: RAW DATA FROM VICINITY JOBS

Table B1: Top 10 list of “skills” from 2023 for Agricultural representatives, consultants and specialists (NOC 21112) (as a percentage of job postings).

	Alberta n=100		British Columbia n=22		Manitoba n=33		New Brunswick n=20		Ontario n=41		Prince Edward Island n=10		Quebec n=89		Saskatchewan n=231		Nova Scotia n=2		Newfoundland n=5	
1st	Cascading Style Sheets (CSS)	67%	Flexibility	55%	Teamwork	70%	Teamwork	100%	Cascading Style Sheets (CSS)	66%	Communication skills	90%	Teamwork	53%	Teamwork	66%	Communication skills	100%	Supervisory skills	100%
2nd	Teamwork	65%	Planning	55%	Cascading Style Sheets (CSS)	64%	Customer service	90%	Communication skills	61%	Interpersonal skills	90%	Cascading Style Sheets (CSS)	53%	Customer service	49%	Analytical skills	50%	Time management	100%
3rd	Communication skills	58%	Ecology	50%	Customer service	58%	Planning	85%	Customer service	59%	Teamwork	90%	French language	42%	Communication skills	47%	Flexibility	50%	Decision-making	80%
4th	Customer service	44%	Teamwork	41%	Leadership	55%	Bilingual	65%	Teamwork	59%	Writing	90%	Organizational skills	26%	Cascading Style Sheets (CSS)	36%	French language	50%	Project management	40%
5th	Flexibility	34%	Inventory management	27%	Communication skills	45%	English language	65%	Leadership	51%	Data analysis	70%	Customer service	24%	Leadership	27%	Interpersonal skills	50%	Reports preparation	40%
6th	Planning	33%	Cascading Style Sheets (CSS)	27%	Self-starter / self-motivated	36%	French language	65%	Interpersonal skills	44%	Attention to detail	70%	Writing	21%	Planning	27%	Leadership	50%	Organizational skills	40%
7th	Microsoft Office	32%	Communication skills	23%	Virtual reality	33%	Communication skills	50%	Organizational skills	37%	Fast-paced setting	70%	Data analysis	18%	Interpersonal Skills	19%	Organizational skills	50%	Teamwork	40%
8th	Problem solving	29%	Project management	18%	Fast-paced setting	30%	Presentation skills	40%	Records management	34%	Cascading Style Sheets (CSS)	70%	Communication skills	17%	Inventory management	18%	Problem solving	50%	Customer service	20%
9th	Decision-making	27%	Problem solving	18%	Interpersonal skills	30%	Research skills	25%	Planning	27%	Records management	60%	Leadership	15%	Self-starter / self-motivated	18%	Team leadership	50%	Financial analysis	20%
10th	Interpersonal Skills	26%	Business planning	14%	Problem solving	27%	Leadership	20%	Decision-making	24%	Reports preparation	60%	Planning	15%	Organizational skills	18%	Teamwork	50%	GHG emissions	20%

*Data limited for Nova Scotia and Newfoundland

**Data suppressed for Yukon, Northwest Territories and Nunavut

***Data is from a filtered dataset containing only agriculture-related job postings from Vicinity Jobs

Table B2: Top 10 list of “skills” from 2023 for Landscape and horticulture technicians and specialists (NOC 22114) (as a percentage of job postings).

	Alberta n=697		British Columbia n=1493		Manitoba n=53		New Brunswick n=67		Ontario n=1765		Prince Edward Island n=33		Quebec n=498		Saskatchewan n=102		Nova Scotia n=177		Newfoundland n=25	
1st	Cascading Style Sheets (CSS)	66%	Cascading Style Sheets (CSS)	56%	Handling heavy loads	62%	Cascading Style Sheets (CSS)	57%	Cascading Style Sheets (CSS)	69%	Handling heavy loads	52%	French language	49%	Teamwork	60%	Cascading Style Sheets (CSS)	60%	Cascading Style Sheets (CSS)	72%
2nd	Teamwork	56%	Teamwork	48%	Teamwork	55%	Teamwork	46%	Teamwork	47%	Attention to detail	42%	Teamwork	46%	Customer service	50%	Teamwork	53%	Teamwork	32%
3rd	Handling heavy loads	31%	Handling heavy loads	30%	Customer service	42%	Handling heavy loads	45%	Handling heavy loads	27%	English language	42%	Cascading Style Sheets (CSS)	42%	Decision-making	34%	Communication skills	32%	English language	28%
4th	Attention to detail	30%	Attention to detail	25%	Communication skills	42%	Customer service	33%	Attention to detail	25%	Teamwork	39%	Customer service	20%	Handling heavy loads	31%	Ability to learn	32%	Flexibility	28%
5th	Communication skills	27%	Communication skills	22%	Repairs / corrective maintenance	38%	Communication skills	31%	Flexibility	23%	Cascading Style Sheets (CSS)	39%	Organizational skills	17%	Flexibility	29%	Self-starter / self-motivated	26%	Attention to detail	24%
6th	Customer service	27%	Flexibility	22%	Interpersonal skills	34%	Attention to detail	31%	Communication skills	23%	Dexterity	30%	Attention to detail	16%	Organizational skills	27%	Chainsaws	26%	Repairs / corrective maintenance	20%
7th	Organizational skills	22%	Customer service	20%	Organizational skills	32%	Flexibility	31%	French language	21%	Communication skills	24%	English language	12%	Problem solving	25%	Leadership	24%	Time management	16%
8th	Leadership	22%	English language	18%	Attention to detail	32%	Lawn mowers	28%	Customer service	19%	Flexibility	24%	Bilingual	11%	Ability to learn	25%	Truck driving	22%	Organizational skills	16%
9th	Decision-making	21%	French language	15%	Dexterity	30%	French language	25%	Leadership	17%	Customer service	24%	Planning	9%	Communication skills	25%	Handling heavy loads	21%	Communication skills	16%
10th	French language	21%	Organizational skills	15%	Flexibility	28%	English language	22%	English language	13%	Interpersonal skills	18%	Flexibility	9%	Repairs / corrective maintenance	25%	Time management	21%	Decision-making	12%

*Data suppressed for Yukon, Northwest Territories and Nunavut

**Data is from a filtered dataset containing only agriculture-related job postings from Vicinity Jobs

Table B3: Top 10 list of “skills” from 2023 for Heavy-duty equipment mechanics (NOC 72401) (as a percentage of job postings).

	Alberta n=254		British Columbia n=272		Manitoba n=104		New Brunswick n=71		Ontario n=698		Prince Edward Island n=25		Quebec n=546		Saskatchewan n=225		Nova Scotia n=60		Newfoundland n=17		Northern Canada n=43	
1st	Repairs / corrective maintenance	88%	Repairs / corrective maintenance	92%	Repairs / corrective maintenance	91%	Mechanical skills	100%	Repairs / corrective maintenance	94%	Mechanical skills	92%	Mechanical skills	95%	Repairs / corrective maintenance	81%	Mechanical skills	97%	Mechanical skills	100%	Mechanical skills	100%
2nd	Machinery / equipment repairs	81%	Mechanical skills	89%	Machinery / equipment repairs	86%	Repairs / corrective maintenance	96%	Mechanical skills	88%	Repairs / corrective maintenance	88%	Repairs / corrective maintenance	76%	Machinery / equipment repairs	58%	Repairs / corrective maintenance	93%	Repairs / corrective maintenance	82%	Repairs / corrective maintenance	88%
3rd	Trouble- shooting	76%	Machinery / equipment repairs	86%	Mechanical skills	73%	Trouble- shooting	90%	Machinery / equipment repairs	81%	Machinery / equipment repairs	84%	Machinery / equipment repairs	55%	Ordering of supplies and equipment	57%	Machinery / equipment repairs	73%	Machinery / equipment repairs	76%	Trouble- shooting	53%
4th	Mechanical skills	73%	Trouble- shooting	74%	Lubrication	72%	Teamwork	72%	Trouble- shooting	72%	Lubrication	76%	French language	46%	Trouble- shooting	51%	Mechanical repairs	58%	Lubrication	76%	Machinery / equipment repairs	51%
5th	Lubrication	52%	Lubrication	55%	Trouble- shooting	64%	Communica- tion skills	70%	Lubrication	56%	Handling heavy loads	68%	Teamwork	41%	Lubrication	47%	Trouble- shooting	50%	Trouble- shooting	76%	Teamwork	49%
6th	Handling heavy loads	37%	Teamwork	36%	Attention to detail	39%	Machinery / equipment repairs	55%	Teamwork	53%	Teamwork	68%	Lubrication	33%	Mechanical skills	37%	Teamwork	47%	Handling heavy loads	47%	Flexibility	44%
7th	Teamwork	32%	Welding	32%	Hand-eye co-ordination	39%	Lubrication	54%	Attention to detail	43%	Mechanical repairs	64%	Customer service	31%	Handling heavy loads	28%	Electrical repairs	43%	English language	41%	Leadership	44%
8th	Attention to detail	29%	Attention to detail	31%	Handling heavy loads	38%	Handling heavy loads	46%	Inventory management	40%	Trouble- shooting	56%	Installation of machinery / equipment	27%	Mechanical repairs	26%	Handling heavy loads	40%	Dexterity	35%	Preventive maintenance	42%
9th	Mechanical repairs	28%	Mechanical repairs	28%	Customer service	35%	Attention to detail	35%	Customer service	40%	Electrical repairs	52%	Trouble- shooting	19%	Teamwork	22%	Welding	33%	Mechanical repairs	29%	Decision- making	42%
10th	Hand-eye co-ordination	23%	Handling heavy loads	28%	Teamwork	34%	Fast-paced setting	34%	Handling heavy loads	38%	Attention to detail	44%	Farm tractors	19%	Hand-eye co-ordination	19%	Communica- tion skills	32%	Welding	29%	Self-starter / self-motivated	40%

**Data is from a filtered dataset containing only agriculture-related job postings from Vicinity Jobs

Table B4: Top 10 list of “skills” from 2023 for Transport truck drivers (NOC 73300) (as a percentage of job postings).

	Alberta n=7484		British Columbia n=5571		Manitoba n=1162		New Brunswick n=814		Ontario n=10446		Prince Edward Island n=233		Quebec n=3821		Saskatchewan n=2344		Nova Scotia n=873		Newfoundland n=306		Northern Canada n=156	
1st	Truck driving	97%	Truck driving	96%	Truck driving	97%	Truck driving	92%	Truck driving	79%	Truck driving	98%	Truck driving	79%	Truck driving	96%	Truck driving	93%	Truck driving	97%	Truck driving	93%
2nd	Inspection of vehicles	51%	Inspection of vehicles	56%	Inspection of vehicles	79%	Inspection of vehicles	41%	Inspection of vehicles	43%	Customer service	40%	French language	39%	Inspection of vehicles	52%	Teamwork	42%	Inspection of vehicles	32%	Teamwork	41%
3rd	Records management	45%	Records management	46%	Records management	76%	Teamwork	37%	Teamwork	35%	Handling heavy loads	37%	Teamwork	26%	Records management	44%	Inspection of vehicles	38%	Handling heavy loads	31%	Loading and unloading	36%
4th	Loading and unloading	42%	Loading and unloading	42%	Loading and unloading	58%	Customer service	33%	Handling heavy loads	33%	Inspection of vehicles	33%	Customer service	25%	Repairs / corrective maintenance	37%	Customer service	35%	Customer service	30%	Handling heavy loads	28%
5th	Repairs / corrective maintenance	41%	Teamwork	42%	Handling heavy loads	56%	Records management	32%	Customer service	33%	English language	32%	Loading and unloading	19%	Loading and unloading	35%	Records management	34%	Records management	29%	Customer service	26%
6th	Teamwork	35%	Repairs / corrective maintenance	41%	Repairs / corrective maintenance	56%	Loading and unloading	31%	Loading and unloading	33%	Records management	31%	Inspection of vehicles	18%	Customer service	28%	Loading and unloading	34%	Teamwork	28%	Inspection of vehicles	23%
7th	Handling heavy loads	30%	Handling heavy loads	30%	Teamwork	51%	Communication skills	29%	Records management	32%	Flexibility	29%	English language	10%	Teamwork	27%	Handling heavy loads	32%	Loading and unloading	28%	Flexibility	20%
8th	Preventive maintenance	30%	Flexibility	28%	Organizational skills	44%	Attention to detail	28%	Repairs / corrective maintenance	29%	Teamwork	28%	Bilingual	9%	Handling heavy loads	27%	Attention to detail	31%	Attention to detail	27%	Decision-making	19%
9th	Customer service	24%	Preventive maintenance	26%	Preventive maintenance	41%	Handling heavy loads	27%	Communication skills	28%	Attention to detail	28%	Handling heavy loads	9%	Attention to detail	25%	Flexibility	29%	English language	24%	First aid	18%
10th	Attention to detail	23%	Organizational skills	26%	Flexibility	41%	Flexibility	26%	Attention to detail	23%	Communication skills	28%	Communication skills	9%	Preventive maintenance	25%	Communication skills	28%	Communication skills	21%	Records management	18%

**Data is from a filtered dataset containing only agriculture-related job postings from Vicinity Jobs

**Table B5: Top 10 list of “skills” from 2023 for Managers in agriculture (NOC 80020)
(as a percentage of job postings).**

	Alberta n=25		British Columbia n=63		New Brunswick n=4		Ontario n=42		Prince Edward Island n=4		Quebec n=36		Saskatchewan n=12		Nova Scotia n=4		Newfoundland n=1	
1st	Teamwork	60%	Teamwork	52%	Communication skills	100%	Teamwork	40%	Attention to detail	75%	French language	58%	Attention to detail	75%	Teamwork	50%	Teamwork	100%
2nd	Communication skills	56%	Communication skills	44%	Leadership	100%	Attention to detail	36%	Organizational skills	75%	Teamwork	50%	Organizational skills	50%	Customer service	50%	Time management	100%
3rd	Organizational skills	40%	English language	27%			Handling heavy loads	31%	Fast-paced setting	75%	Flexibility	19%	Financial reporting	50%	Flexibility	50%	Decision-making	100%
4th	Attention to detail	36%	Interpersonal skills	27%			Communication skills	31%	Work under pressure	75%	Organizational skills	14%	Records management	33%	Communication skills	50%	Supervisory skills	100%
5th	Interpersonal skills	32%	Leadership	25%			Self-starter / self-motivated	31%	Inventory management	75%	Bilingual	11%	Teamwork	33%	Interpersonal skills	50%	Data analysis	100%
6th	Handling heavy loads	28%	Handling heavy loads	21%			Organizational skills	29%	Supervisory skills	75%	Records management	11%	English language	33%	Time management	50%	Research skills	100%
7th	Customer service	28%	Blueprint reading	21%			Flexibility	26%	Flexibility	50%	Planning	11%	Time management	33%	Computer skills	50%		
8th	French language	28%	Records management	19%			Fast-paced setting	24%	Teamwork	25%	Self-starter / self-motivated	11%	Supervisory Skills	33%	Records management	25%		
9th	Planning	24%	Self-starter / self-motivated	17%			Work under pressure	21%	Communication skills	25%	Attention to detail	8%	Communication skills	17%	Writing	25%		
10th	English language	20%	Planning	17%			Writing	21%	Time management	25%	English language	6%	Decision-making	17%	French language	25%		

**Data is from a filtered dataset containing only agriculture-related job postings from Vicinity Jobs

Table B6: Top 10 list of “skills” from 2023 for Managers in horticulture (NOC 80021) (as a percentage of job postings).

	Alberta n=33		British Columbia n=38		Manitoba n=4		Ontario n=37		Prince Edward Island n=1		Quebec n=17		Saskatchewan n=5	
1st	Teamwork	79%	Supervisory skills	82%	Organizational skills	100%	Teamwork	65%	Organizational skills	100%	French language	71%	Records management	100%
2nd	Organizational skills	64%	Organizational skills	68%	Communication skills	100%	Attention to detail	62%	Supervisory skills	100%	Teamwork	53%	Teamwork	100%
3rd	Supervisory skills	61%	Teamwork	63%	Records management	75%	Communication skills	57%	Teamwork	100%	Planning	18%	Attention to detail	80%
4th	Self-starter / self-motivated	58%	Flexibility	50%	Handling heavy loads	50%	Organizational skills	49%	Interpersonal skills	100%	Planning	18%	Organizational skills	80%
5th	Records management	55%	Attention to detail	47%	Teamwork	50%	Fast-paced setting	49%	Self-starter / self-motivated	100%	Business planning	12%	Financial reporting	80%
6th	Work scheduling	55%	Communication skills	45%	Attention to detail	50%	Supervisory skills	49%	Work scheduling	100%	Attention to detail	12%	Supervisory skills	80%
7th	Financial reporting	55%	Interpersonal skills	45%	Writing	50%	Work scheduling	49%			Handling heavy loads	12%	Flexibility	80%
8th	Attention to detail	27%	Work scheduling	42%	Leadership	50%	Interpersonal skills	46%			Leadership	6%	Interpersonal skills	80%
9th	Interpersonal skills	27%	Self-starter / self-motivated	39%	Supervisory skills	50%	Self-starter / self-motivated	43%			Organizational skills	6%	Work scheduling	80%
10th	Leadership	24%	Fast-paced setting	39%	First aid	50%	Flexibility	43%			Communication skills	6%	Operations management	80%

**Data is from a filtered dataset containing only agriculture-related job postings from Vicinity Jobs

Table B7: Top 10 list of “skills” from 2023 for Agricultural service contractors and farm supervisors (NOC 82030) (as a percentage of job postings).

	Alberta n=113		British Columbia n=495		Manitoba n=18		New Brunswick n=12		Ontario n=178		Prince Edward Island n=26		Quebec n=107		Saskatchewan n=94		Nova Scotia n=6		Newfoundland n=3		Northern Canada n=1	
1st	Teamwork	77%	Supervisory skills	86%	Supervisory skills	61%	Attention to detail	83%	Records management	81%	Records management	81%	Attention to detail	56%	Teamwork	82%	Records management	83%	Supervisory skills	100%	Communication skills	100%
2nd	Records management	70%	Process design	78%	Organizational skills	56%	Organizational skills	58%	Supervisory skills	74%	Fast-paced setting	73%	Teamwork	50%	Supervisory skills	77%	Fast-paced setting	83%	Operations management	100%	Leadership	100%
3rd	Supervisory skills	65%	Work scheduling	75%	Records management	56%	Fast-paced setting	50%	Teamwork	70%	Supervisory skills	65%	Customer service	45%	Operations management	68%	Supervisory skills	83%	Teamwork	67%	Occupational health and safety	100%
4th	Fast-paced setting	60%	Operations management	74%	Teamwork	100%	Teamwork	42%	Attention to detail	64%	Attention to detail	50%	French language	41%	Work scheduling	66%	Teamwork	67%	Records management	67%	Project management	100%
5th	Attention to detail	59%	Records management	63%	Attention to detail	44%	English language	42%	Process design	62%	English language	50%	Records management	14%	Process design	65%	Flexibility	67%	Attention to detail	67%	Planning	100%
6th	Process design	59%	Teamwork	39%	Work scheduling	44%	Work under pressure	42%	Work scheduling	61%	Communication skills	46%	Organizational skills	12%	Organizational skills	60%	Communication skills	67%	Communication skills	67%		
7th	Work scheduling	58%	Organizational skills	36%	Process design	44%	Operations management	42%	Fast-paced setting	60%	Teamwork	38%	Supervisory skills	12%	Records management	51%	Self-starter / self-motivated	67%	Writing	67%		
8th	Work under pressure	53%	Teaching and training	36%	Operations management	39%	Records management	33%	Organizational skills	59%	Organizational skills	35%	Interpersonal skills	9%	Attention to detail	51%	Truck driving	50%	Work under pressure	67%		
9th	Organizational skills	52%	Attention to detail	32%	Communication skills	28%	French language	25%	Work under pressure	48%	Work scheduling	35%	Process design	9%	Work under pressure	30%	Problem solving	50%	Work scheduling	67%		
10th	Operations management	42%	Work under pressure	30%	Financial reporting	28%	Bilingual	25%	Teaching and training	43%	Work under pressure	35%	Repairs / corrective maintenance	7%	Communication skills	28%	Planning	50%	Process design	67%		

Table B8: Top 10 list of “skills” from 2023 for Contractors and supervisors, landscaping, grounds maintenance and horticulture services (NOC 82031) (as a percentage of job postings).

	Alberta n=447		British Columbia n=459		Manitoba n=21		New Brunswick n=27		Ontario n=454		Prince Edward Island n=4		Quebec n=113		Saskatchewan n=32		Nova Scotia n=28		Newfoundland n=6		Northern Canada n=5	
1st	Organizational skills	62%	Organizational skills	68%	Handling heavy loads	86%	Organizational skills	59%	Teamwork	54%	Communication skills	100%	French language	78%	Teamwork	31%	Teamwork	43%	Teamwork	50%	Teamwork	100%
2nd	Teamwork	50%	Work scheduling	58%	Records management	81%	Fast-paced setting	52%	Leadership	44%	Leadership	75%	Teamwork	75%	Records management	31%	Leadership	43%	Decision-making	33%	Preventive maintenance	100%
3rd	Attention to detail	48%	Supervisory skills	56%	Organizational skills	76%	Attention to detail	48%	Communication skills	44%	Self-starter / self-motivated	50%	Customer service	51%	Attention to detail	28%	Records management	39%	Truck driving	33%	Truck driving	60%
4th	Records management	48%	Ordering of supplies and equipment	55%	Attention to detail	76%	Communication skills	44%	Attention to detail	33%	Customer service	50%	Leadership	50%	Organizational skills	25%	Organizational skills	36%	Fast-paced setting	33%	Records management	60%
5th	Ordering of supplies and equipment	46%	Teamwork	47%	Work scheduling	71%	Teamwork	41%	Organizational skills	33%	Fast-paced setting	25%	Organizational skills	19%	Communication skills	25%	Ordering of supplies and equipment	36%	Preventive maintenance	33%	Attention to detail	60%
6th	Supervisory skills	42%	Records management	45%	Blueprint reading	62%	Records management	41%	Customer service	28%	Supervisory skills	25%	Communication skills	18%	Dexterity	25%	English language	32%	Supervisory skills	17%	Organizational skills	60%
7th	Work scheduling	40%	Attention to detail	36%	Process design	57%	Supervisory skills	41%	Supervisory skills	26%	Attention to detail	25%	Attention to detail	16%	Supervisory skills	22%	Fast-paced setting	29%	Attention to detail	17%	Supervisory skills	60%
8th	Communication skills	38%	Preventive maintenance	34%	Supervisory skills	52%	French language	37%	Records management	26%	English language	25%	Handling heavy loads	12%	Handling heavy loads	22%	Attention to detail	25%	Communication skills	17%	Communication skills	40%
9th	Customer service	32%	Process design	34%	Preventive maintenance	48%	Handling heavy loads	37%	Fast-paced setting	23%	Teamwork	25%	Self-starter / self-motivated	12%	Decision-making	19%	Handling heavy loads	25%	English language	17%	Flexibility	40%
10th	Fast-paced setting	31%	Communication skills	32%	Communication skills	43%	Blueprint reading	37%	Blueprint reading	23%	Work under pressure	25%	Work under pressure	11%	Machinery/equipment repairs	19%	Machinery/equipment repairs	25%	Time management	17%	First aid	40%

Table B9: Top 10 list of “skills” from 2023 for Specialized livestock workers and farm machinery operators (NOC 84120) (as a percentage of job postings).

	Alberta n=447		British Columbia n=459		Manitoba n=21		New Brunswick n=27		Ontario n=454		Prince Edward Island n=4		Quebec n=113		Saskatchewan n=32		Nova Scotia n=28		Newfoundland n=6		Northern Canada n=5	
1st	Teamwork	59%	Records management	38%	Teamwork	79%	English language	46%	Teamwork	57%	Teamwork	67%	French language	80%	Dispensing of medications	53%	Fast-paced setting	67%	Teamwork	100%	Handling heavy loads	100%
2nd	Records management	46%	Attention to detail	29%	Records management	71%	Fast-paced setting	42%	Records management	54%	Fast-paced setting	38%	Teamwork	60%	Teamwork	36%	Attention to detail	67%	Fast-paced setting	80%	Decision-making	100%
3rd	Attention to detail	35%	Teamwork	24%	Work under pressure	64%	Organizational skills	23%	Attention to detail	44%	Attention to detail	38%	Organizational skills	33%	Attention to detail	27%	Teamwork	61%	Attention to detail	80%	Lifting equipment	100%
4th	Work under pressure	30%	Flexibility	24%	Fast-paced setting	64%	Teamwork	23%	Organizational skills	30%	Forklifts	33%	Records management	20%	Fast-paced setting	21%	Records management	50%	Records management	80%	Milking equipment	100%
5th	Fast-paced setting	29%	Financial reporting	24%	Organizational skills	43%	Attention to detail	19%	Fast-paced setting	29%	Handling heavy loads	29%	Communication skills	7%	Work under pressure	19%	Organizational skills	50%	Work under pressure	80%	Skid steers	100%
6th	Organizational skills	25%	English language	21%	Attention to detail	43%	Records management	19%	Flexibility	22%	Communication skills	24%	Supervisory skills	7%	Handling heavy loads	18%	Handling heavy loads	39%	Organizational skills	80%		
7th	English language	23%	Work scheduling	18%	Communication skills	36%	Work under pressure	15%	English language	22%	Records management	24%	Forklifts	7%	Communication skills	16%	Machinery/equipment repairs	33%	English language	60%		
8th	Handling heavy loads	22%	Process design	18%	Handling heavy loads	21%	Handling heavy loads	12%	Communication skills	21%	Flexibility	24%	Interpersonal skills	7%	Records management	15%	Decision-making	33%	Communication skills	20%		
9th	Communication skills	18%	Organizational skills	15%	Writing	21%	Communication skills	8%	Work under pressure	21%	Power tools	24%	Flexibility	7%	Hand-eye co-ordination	11%	Multi-tasking	33%				
10th	Flexibility	17%	Handling heavy loads	15%	English language	14%	Preventive maintenance	8%	Supervisory skills	15%	Post drivers	24%	Operations management	7%	Ordering of supplies and equipment	11%	Forklifts	33%				

Table B10: Top 10 list of “skills” from 2023 for Livestock labourers (NOC 85100) (as a percentage of job postings).

	Alberta n=324		British Columbia n=381		Manitoba n=59		New Brunswick n=40		Ontario n=652		Prince Edward Island n=50		Quebec n=498		Saskatchewan n=238		Nova Scotia n=53		Newfoundland n=10		Northern Canada n=4	
1st	Teamwork	50%	Teamwork	43%	Fast-paced setting	66%	English language	55%	Teamwork	47%	Attention to detail	58%	French language	80%	Teamwork	62%	Handling heavy loads	57%	Teamwork	80%	Handling heavy loads	50%
2nd	Handling heavy loads	47%	Fast-paced setting	32%	Teamwork	63%	Teamwork	50%	Fast-paced setting	44%	Teamwork	56%	Teamwork	27%	Handling heavy loads	51%	Teamwork	53%	Attention to detail	70%	Time management	50%
3rd	Attention to detail	46%	English language	31%	Attention to detail	59%	French language	50%	Attention to detail	43%	Handling heavy loads	48%	Leadership	13%	Fast-paced setting	46%	Attention to detail	43%	Organizational skills	70%	Customer service	50%
4th	Fast-paced setting	42%	Handling heavy loads	30%	Handling heavy loads	58%	Bilingual	45%	Handling heavy loads	37%	Fast-paced setting	46%	Customer service	6%	Attention to detail	46%	Flexibility	36%	Flexibility	50%	Ability to learn	25%
5th	Organizational skills	31%	Organizational skills	29%	Work under pressure	39%	Handling heavy loads	40%	English language	35%	Organizational skills	38%	Flexibility	6%	Organizational skills	30%	Fast-paced setting	34%	Machinery cleaning	50%		
6th	Work under pressure	29%	Flexibility	28%	Organizational skills	39%	Flexibility	38%	Flexibility	34%	Flexibility	36%	Repairs/ corrective maintenance	6%	Work under pressure	29%	English language	30%	Records management	40%		
7th	Records management	26%	Work under pressure	25%	Flexibility	25%	Organizational skills	33%	Organizational skills	26%	English language	34%	Records management	6%	Hand-eye co-ordination	27%	Decision-making	26%	Handling heavy loads	40%		
8th	English language	25%	Attention to detail	21%	English language	22%	Fast-paced setting	30%	Work under pressure	24%	Communication skills	26%	English language	5%	Records management	25%	Organizational skills	19%	English language	30%		
9th	Flexibility	24%	Machinery cleaning	15%	Records management	20%	Attention to detail	28%	Hand-eye co-ordination	22%	Records management	22%	Handling heavy loads	5%	Communication skills	23%	Records management	17%	Interpersonal skills	30%		
10th	Communication skills	20%	Supervisory skills	15%	Interpersonal skills	20%	Records management	20%	Interpersonal skills	19%	Work under pressure	22%	Fast-paced setting	5%	Flexibility	18%	Interpersonal skills	17%	Inventory management	30%		

**Table B11: Top 10 list of “skills” from 2023 for Harvesting labourers (NOC 85101)
(as a percentage of job postings).**

	Alberta n=128		British Columbia n=761		Manitoba n=15		New Brunswick n=26		Ontario n=666		Prince Edward Island n=24		Quebec n=121		Saskatchewan n=190		Nova Scotia n=50		Newfoundland n=12		Northern Canada n=2	
1st	Teamwork	61%	Fast-paced setting	43%	Teamwork	93%	Teamwork	50%	Handling heavy loads	69%	Handling heavy loads	50%	French language	83%	Teamwork	67%	Teamwork	60%	Handling heavy loads	92%	Attention to detail	100%
2nd	Handling heavy loads	52%	Handling heavy loads	42%	English language	87%	Handling heavy loads	50%	Fast-paced setting	66%	English language	50%	Leadership	31%	Handling heavy loads	46%	Hand-eye co-ordination	52%	Teamwork	67%	Communication skills	100%
3rd	Fast-paced setting	45%	Teamwork	34%	Hand-eye co-ordination	67%	Hand-eye co-ordination	50%	Hand-eye co-ordination	52%	Flexibility	46%	Teamwork	27%	Attention to detail	42%	Handling heavy loads	50%	Flexibility	67%	Flexibility	100%
4th	Attention to detail	44%	English language	32%	Organizational skills	60%	English language	46%	Attention to detail	50%	Teamwork	38%	Repairs / corrective maintenance	26%	Fast-paced setting	40%	Attention to detail	44%	Interpersonal skills	67%		
5th	Work under pressure	33%	Flexibility	31%	Fast-paced setting	53%	French language	42%	Teamwork	45%	Fast-paced setting	33%	Handling heavy loads	17%	Hand-eye co-ordination	34%	Fast-paced setting	34%	English language	33%		
6th	English language	24%	Attention to detail	25%	Attention to detail	53%	Flexibility	42%	English language	44%	Attention to detail	25%	Loading and unloading	17%	Flexibility	33%	English language	32%	Hand-eye co-ordination	33%		
7th	Hand-eye co-ordination	24%	Loading and unloading	23%	Handling heavy loads	53%	Bilingual	35%	Work under pressure	41%	Work under pressure	17%	Flexibility	15%	Work under pressure	28%	Organizational skills	26%	Attention to detail	25%		
8th	Flexibility	23%	Work under pressure	22%	Work under pressure	47%	Fast-paced setting	31%	Flexibility	31%	Loading and unloading	17%	English language	15%	Organizational skills	26%	Flexibility	22%	Work under pressure	25%		
9th	Organizational skills	20%	Hand-eye co-ordination	22%	Flexibility	33%	Attention to detail	31%	Organizational skills	23%	Hand-eye co-ordination	13%	Bilingual	15%	English language	25%	Interpersonal skills	16%	Loading and unloading	25%		
10th	Interpersonal skills	16%	Organizational skills	14%	Interpersonal skills	27%	Self-starter / self-motivated	19%	Interpersonal skills	15%	Self-starter / self-motivated	13%	Attention to detail	15%	Interpersonal skills	23%	Reports preparation	14%	Organizational skills	17%		

Table B12: Top 10 list of “skills” from 2023 for Nursery and greenhouse labourers (NOC 85103) (as a percentage of job postings).

	Alberta n=42		British Columbia n=115		New Brunswick n=14		Ontario n=215		Prince Edward Island n=88		Quebec n=88		Saskatchewan n=21		Nova Scotia n=6		Newfoundland n=1		Northern Territory n=1	
1st	Handling heavy loads	69%	Teamwork	50%	Teamwork	57%	Fast-paced setting	72%	Fast-paced setting	67%	French language	61%	Teamwork	81%	Teamwork	50%	English language	100%	Handling heavy loads	100%
2nd	Teamwork	64%	Handling heavy loads	47%	Handling heavy loads	57%	Handling heavy loads	70%	Handling heavy loads	50%	Teamwork	58%	Attention to detail	81%	Attention to detail	33%			Teamwork	100%
3rd	Fast-paced setting	62%	Attention to detail	44%	English language	57%	Attention to detail	62%	English language	50%	Attention to detail	10%	Handling heavy loads	71%	Loading and unloading	33%			English language	100%
4th	Attention to detail	62%	Fast-paced setting	34%	Fast-paced setting	50%	Hand-eye co-ordination	56%	Teamwork	50%	Handling heavy loads	6%	Fast-paced setting	38%	Mechanical skills	33%				
5th	Hand-eye co-ordination	40%	English language	28%	Attention to detail	43%	Teamwork	53%	Interpersonal skills	50%	Leadership	5%	English language	33%	Pruners	33%				
6th	English language	31%	Hand-eye co-ordination	21%	French language	29%	Work under pressure	37%	Customer service	50%	Organizational skills	5%	Interpersonal skills	24%	Handling heavy loads	17%				
7th	Work under pressure	24%	Interpersonal skills	17%	Flexibility	21%	English language	33%	Forklifts	50%	Hand-eye co-ordination	5%	Cleaning	19%	Fast-paced setting	17%				
8th	Flexibility	19%	Work under pressure	15%	Bilingual	21%	Interpersonal skills	14%	Attention to detail	33%	Customer service	5%	Customer service	19%	English language	17%				
9th	Interpersonal skills	17%	Dexterity	11%	Cleaning	21%	Flexibility	10%	Truck driving	33%	Self-starter / self-motivated	5%	Inventory management	14%	Organizational Skills	17%				
10th	Customer service	17%	Flexibility	10%	Decision-making	14%	Customer service	9%	Flexibility	17%	Installation of machinery / equipment	5%	Hand-eye co-ordination	10%	Interpersonal skills	17%				



APPENDIX C: **UNDERSTANDING NATIONAL OCCUPATIONAL CLASSIFICATIONS (NOCS)**



Canada’s National Occupational Classification (NOC) system is a classification of occupations designed primarily for use in statistical programs. It is also used for employment-related program administration and to compile, analyze and communicate information about occupations, such as labour market information (Statistics Canada, 2021).

The structure of the NOC is hierarchical and enables the standardized collection, analysis and publication of data at different levels of detail using 10 broad occupational categories that are defined by the type of work performed

based on the industry of employment and field of study required for entry into an occupation and six TEER (Training, Education, Experience and Responsibilities) categories.

The standard classification structure uses a five-tiered hierarchical arrangement of occupational groups with successive levels of disaggregation and contains broad, major, sub-major, minor and unit groupings. The structure of the NOC 2021 Version 1.0 is based on two key occupational categorizations: occupational categories and TEER categories, which are identified in the first two digits of the five-digit code, as shown in the table below.

Title of Hierarchy	Format	Digit	Represents
Broad category	X	First digit – X	Occupational categorization
Major group	XX	Second digit xX	TEER categorization
Sub-major group	XXX	xxX	Top level of the sub-major group
Minor group	XXXX	xxXX	Hierarchy within the sub-major group
Unit group	XXXXX	xxXXX	Hierarchy within the minor group

The six TEER categories are defined by the amount and type of training and education required to enter and perform the duties of an occupation. It also takes into consideration

the experience required and the complexity of responsibilities involved in the work. Each TEER category reflects commonly accepted paths to employment in an occupation.



Select NOC 2021 V1.0 Training, Education, Experience and Responsibility (TEER) examples	When 2nd digit is...
Management - TEER	0
Completion of a university degree (bachelor's, master's or doctorate) or previous experience and expertise in subject matter knowledge from a related occupation found in TEER 2 (when applicable)	1
Completion of a post-secondary education program of two to three years, completion of an apprenticeship training program of two to five years, or occupations with supervisory or significant safety (e.g. police officers and firefighters) responsibilities	2
Completion of a post-secondary education program of less than two years, completion of an apprenticeship training program of less than two years, or more than six months of on-the-job training	3
Completion of secondary school, several weeks of on-the-job training with some secondary school education or experience in a related occupation from TEER 5 (when applicable)	4
Short work demonstration and no formal educational requirements	5

An agricultural example of NOC hierarchy

Level	NOC Code	NOC Title
Broad occupational group	8	Natural resources, agriculture and related production occupations
Major group	80	Middle management occupations in production and agriculture
Sub-minor group	800	Middle management occupations in production and agriculture
Minor group	8002	Managers in agriculture, horticulture and aquaculture
Unit group	80020	Managers in agriculture



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