



AQUACULTURE

Labour market information and forecast 2023-2030



Key Findings

- Aquaculture is one of the most rapidly growing industries in the agriculture sector, which, in turn, is driving the industry's demand for labour.
- Employers in the aquaculture industry have the lowest vacancy rate and turnover rate in the agriculture sector.
- Aquaculture's main labour challenges stem from the rural location of their operations and a lack of applicants with the necessary skills. This led to over 190 job vacancies in 2022.
- Around 70 foreign workers¹ were employed in the aquaculture industry in 2022.² Foreign worker use in the industry has been increasing, but still accounts for less than 1 per cent of the industry's total workforce.
- The domestic labour gap in the aquaculture industry is projected to increase by 35 per cent over the next 8 years, reaching 285 workers during peak season in 2030.³

Employment Trends

- The aquaculture industry employed around 7,800 domestic workers in 2022, with 48 per cent located in Atlantic Canada and an additional 34 per cent located in British Columbia.⁴
- Half of the industry's domestic employment comes from two main occupations: aquaculture and marine harvest labourers, and managers in aquaculture.⁵
- The industry reported a modest 2.7 per cent vacancy rate, which is significantly lower than Canada's all-industry average of 7.4 per cent.⁶

¹ Foreign workers include workers brought in through the Temporary Foreign Worker Program or Seasonal Agricultural Worker Program. Does not include immigrants or permanent residents. | ² Employment and Social Development Canada; The Conference Board of Canada. Foreign workers include workers brought in through the Temporary Foreign Worker Program or Seasonal Agricultural Worker Program. Does not include immigrants or permanent residents.

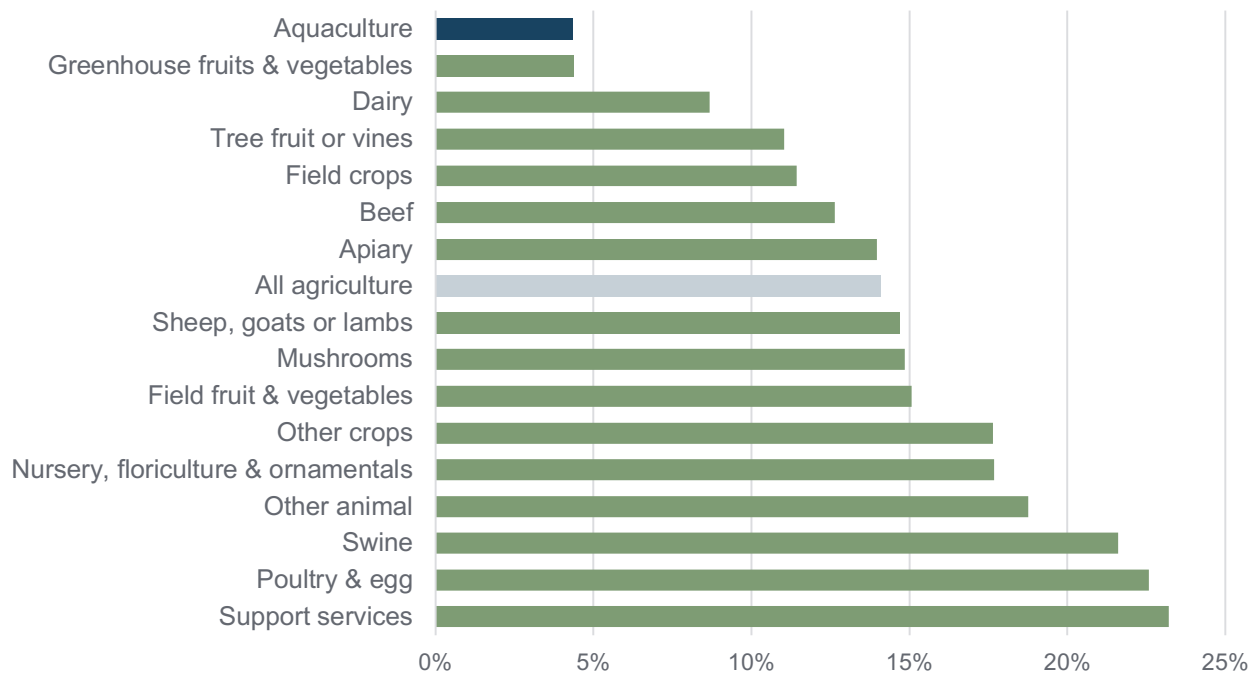
| ³ Domestic labour gap is the difference between the total number of workers required and the number of domestic workers employed which equals foreign worker employment plus the number of vacancies. Estimated at peak to reflect maximum demand during seasonal peaks in agriculture. | ⁴ Statistics Canada, Labour Force Survey (custom data); The Conference Board of Canada. | ⁵ Managers in aquaculture include farm owner-operators and hired managers. | ⁶ Statistics Canada, Job Vacancy and Wage Survey (custom data); Canadian Agricultural Human Resource Council Employer Survey 2023. Does not include agriculture wholesale industries.

Employer Survey Insights

- Employers in the aquaculture industry have an easier time finding workers, with just 31 per cent of employers reporting a labour shortage, compared to 44 per cent for the entire agricultural sector.⁷
- Employers in aquaculture get more job applicants, with 35 per cent of employers receiving more than five Canadian applicants this season, compared to just 18 per cent for the agriculture sector as a whole.⁸
- However, one-third of aquaculture employers reported applicants lacked essential skills like reading, problem solving and arithmetic, compared to 13 per cent of employers across the broader agriculture sector.⁹
- At 4 per cent, the aquaculture industry had the lowest voluntary turnover rate of any industry in agriculture in 2022 (Chart 1).
- Unlike other agriculture industries, where manual labour, long work hours and seasonality of employment are the most pressing labour issues, aquaculture employers' main labour challenges are due to the remote locations of their operations, the ongoing trend of rural depopulation, limited transportation options and wage competition.
- Human resource (HR) training was well utilized in the aquaculture industry, with more than two-thirds of the staff having received HR training in the past year, underscoring the industry's commitment to effective management.¹⁰

Chart 1: The aquaculture industry has the lowest turnover rate.

Voluntary turnover rates,* per cent, 2022.



Source: Canadian Agricultural Human Resource Council Employer Survey 2023.

* The voluntary turnover rate is the number of voluntary departures as a share of the total number of workers in a year. Voluntary departures are comprised of workers who quit, including seasonal workers who leave before contract completion.

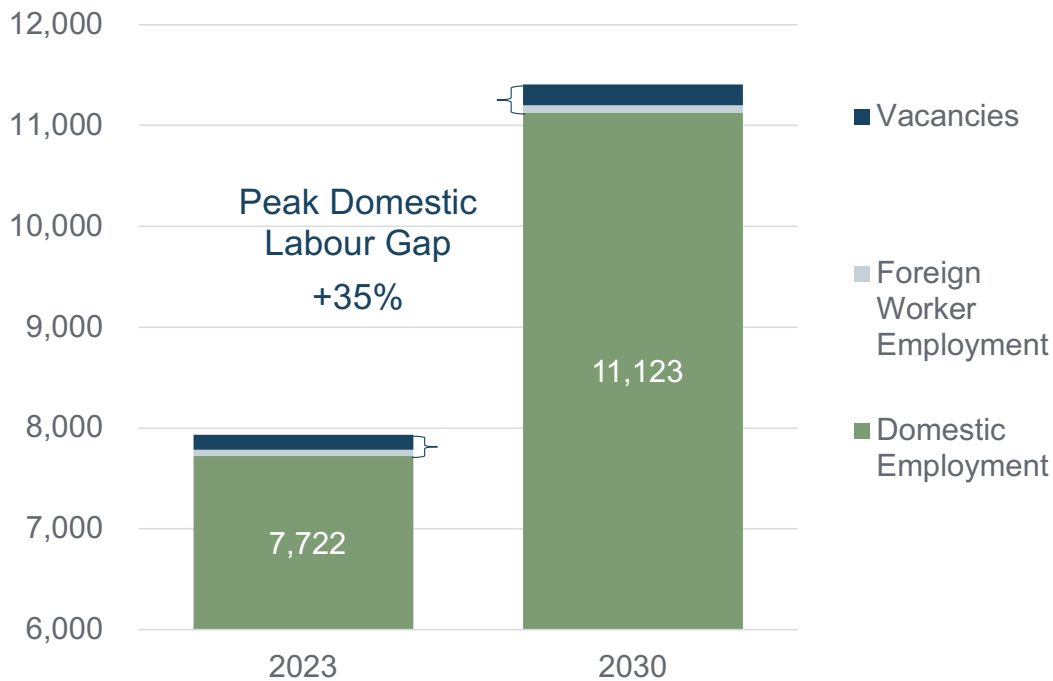
⁷ Canadian Agricultural Human Resource Council Employer Survey 2023 (n=13, 685). | ⁸ Canadian Agricultural Human Resource Council Employer Survey 2023 (n=20, 763). | ⁹ Canadian Agricultural Human Resource Council Employer Survey 2023 (n=12, 724). | ¹⁰ Canadian Agricultural Human Resource Council Employer Survey 2023 (n=12).

Labour Market Forecast

- A weaker economy will result in less domestic employment and fewer job vacancies in the industry in 2023 compared to 2022.
- Over the longer term, strong production growth and small productivity declines will result in a 44 per cent increase in peak labour demand in the next 8 years.¹¹
- Aquaculture benefits from an increasing supply of domestic labour. While 1,437 workers will retire between 2023 and 2030, 387 immigrants and 1,240 school leavers are projected to enter the workforce.¹²
- Domestic employment in the aquaculture industry is projected to increase from 7,722 in 2023 to 11,123 in 2030.
- Demand for workers will slightly outpace growth in domestic employment, leading to an increasing domestic labour gap, from 211 in 2023 to 285 by 2030 (Chart 2).¹³
- The number of foreign workers employed is expected to increase slightly over the forecast period, filling 31 per cent of the peak domestic labour gap by 2030.
- Over 200 vacancies will remain by 2030, the largest share (13 per cent) being for biological technicians. A further 9 per cent will be specialized livestock workers or farm machinery operators, 8 per cent for aquaculture and marine harvest labourers, and 6 per cent for livestock labourers.

Chart 2: Strong growth in domestic employment expected over the next 8 years.

Number of workers required at peak season in the aquaculture industry, forecast.



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

Foreign workers include workers brought in through the Temporary Foreign Worker Program or Seasonal Agricultural Worker Program. Does not include immigrants or permanent residents. The peak number of foreign workers is less than the cumulative total employed over the year since not all workers will be employed simultaneously.

¹¹ A decline in labour productivity can be attributed to the industry maturing, necessitating a higher number of support staff, and shifting farming practices towards more labour-intensive yet higher-value products. Peak labour demand is equal to the number of Canadians employed at peak, plus the number of foreign workers employed at peak, plus the number of vacancies at peak. | ¹² School leavers is the number of workers finished school (all levels of education) and entering the workforce. | ¹³ Domestic labour gap is the difference between the total number of workers required and the number of domestic workers employed which equals foreign worker employment plus the number of vacancies. Estimated at peak to reflect maximum demand during seasonal peaks in agriculture.



Building the Future Workforce

- Aquaculture faces fewer labour challenges compared to other industries in the sector, marked by a lower prevalence of labour shortages, more job applicants, fewer job vacancies and less voluntary job turnover. These conditions will need to continue for the industry to unlock its growth potential and expand employment over the coming years.
- There is growing demand for skilled occupations, including biological technicians, specialized livestock workers and farm machinery operators. Additionally, as the industry grows and adopts more high-tech production methods, workers will need the skills to be able to work with new technology.
- The rural location of aquaculture operations continues to be a key barrier to recruitment and retention. Going forward, continued efforts will be needed to ensure these rural areas have the infrastructure required, including housing and transportation, to support the growing workforce.

About the Aquaculture Industry

This factsheet pertains to the ‘aquaculture’ industry as defined by Statistics Canada as NAICS 1125, “establishments primarily engaged in farm-raising aquatic animals and plants.”

The main species grown by Canada’s aquaculture industry include salmon, mussels, oysters and trout. Steelhead, Arctic char, Atlantic cod, sablefish, geoducks, Atlantic halibut, quahogs, white sturgeon, tilapia and scallops are also produced.

Since this factsheet defines the aquaculture industry according to Statistics Canada’s NAICS 1125, it does not cover operations engaged in seafood processing activities (NAICS 3117). As a result, the estimated size of the workforce in this report is smaller than some industry estimates. Also, foreign worker estimates will be smaller, since most foreign workers are involved in the processing side.

Canada’s aquaculture industry is geographically concentrated in British Columbia and Atlantic Canada, which account for most of the industry’s employment.



About This Factsheet

The data cited in this factsheet is based on a Labour Market Information (LMI) study that took place between March and September 2023. This study involved modelling labour demand and supply by province, commodity, and occupation; conducting a survey of more than 1,400 sector stakeholders; and validating the results through webinars as well as an advisory group presentation. For more information about this LMI study, please see the National Report.

The study was initiated by the Canadian Agricultural Human Resource Council (CAHRC), a national, nonprofit

organization focused on addressing human resource issues faced by agricultural businesses across Canada. For more information about the Council and its products and services for Canada's agriculture sector, please visit www.cahrc-ccrha.ca.

This research was conducted by The Conference Board of Canada, our country's foremost independent organization for applied research. Through the use of sophisticated data modelling, best-in-class forecasting, and multi-method research approaches, they deliver research to help leaders take action.



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