STATE OF THE AGRICULTURE
LABOUR TRENDS AND NEEDS IN N.E.
BRITISH COLUMBIA

NORTHERN LIGHTS COLLEGE
EXECUTIVE SUMMARY

In April of 2020, Northern Lights College released a Regional Labour Market Strategy for Northeast B.C. Included in the strategy was a recommendation to undertake a labour market needs assessment specifically looking at the agricultural sector in the region; Northern Lights College acted on this recommendation in the Fall of 2020, undertaking research for this State of the Agriculture Labour Trends and Needs in Northeast British Columbia. The project was supported with funding from the B.C. Ministry of Social Development and Poverty Reduction.

Both secondary and primary data collection and analysis inform this labour market strategy report. Secondary data sources included relevant labour market and industry data from provincial and federal sources; primary data collection and analysis included key informant interviews, and a survey of local agricultural employers. Data from all sources were triangulated to conduct a Strengths, Weaknesses, Opportunities, and Threats (SWOT) analysis.

Projected Growth of Northeast B.C.’s Agricultural Labour Force

The number of jobs in agriculture in Northeast B.C. is expected to grow significantly over the next ten years. Two projection scenarios were developed, one drawn from BC Stats’ Industry data, and one reliant on reported growth expectations among agricultural producers who responded to this project’s survey.

In the ‘base case’ scenario, drawn from BC Stats’ data, it is expected that Northeast B.C. will see an average annual 2.7% growth in agricultural jobs over the next ten years. This is considerably higher than the projected growth rate for agricultural jobs in B.C. overall (0.68% average annual growth rate over the same time period).

The ‘optimistic case’ scenario, developed based on agribusinesses’ own anticipated growth over the coming years, suggest an even more robust growth. Between 2021 and 2026, agricultural producers and associated businesses in the region expect to see an average annual growth of approximately 8%.

SWOT Analysis

Strengths

- The values and lifestyle of agriculture as a career (particularly owner-operator roles in primary production) can be highly attractive to youth.
- Agriculture’s relative resilience and stability over the long term was noted as a potential benefit to young people looking at long-term careers.
- The relative low cost of land in Northeast B.C. was noted as an opportunity for individuals who may be interested in pursuing a career in agriculture as an owner-operator in a primary production business (e.g., cattle ranching, crop production).

Weaknesses

- The distorting effect of other sectors on wages, particularly the oil and gas sector which is able to pay significantly higher wages for work requiring similar levels of education and training.
Many interviewees noted a shrinking pool of young people interested in agriculture as a challenge to the long-term viability of their businesses.

**Competition for agricultural workers from other regions in B.C. and Canada** also emerged as a weakness for the agricultural labour market in Northeast B.C.

**Opportunities**

- An increasing consumer demand for sustainable food offers an opportunity for growth in this sub-sector, particularly with regards to animal production.
- Interest from many producers in sector growth and diversification, such as growth into value-added businesses.
- Opportunities for greenhouse construction and investment offer an area for skilled labour growth in the region, such as HVAC technicians, agronomists, and others.

**Threats**

- An inability to replace retiring workers may result in stalled growth, including agricultural operations moving elsewhere (e.g., grain mills moving bases of operations to other regions) or the closing of businesses as owner-operators retire.
- An inability to recruit qualified workers to meet growth demands may result in stalled growth and unmet expansion opportunities for businesses in the region, including diversification of the industry into secondary and tertiary businesses (e.g., value-added processing).

**Recommendations**

Based on these findings, Northern Lights College has developed the following recommendations for meeting the challenge of agricultural hiring needs in Northeast B.C. over the next ten years:

1. **Anticipate considerable hiring needs for agriculture in Northeast B.C.** Agribusiness could make use of supports such as navigators for accessing temporary foreign workers programs, job placement opportunities with local schools, and other proactive measures to meet immediate labour needs.

2. **Explore opportunities to expose young people to agriculture.** To ensure a reliable source of labour over the long term, the agriculture sector needs more young people to pursue careers in the industry. First steps would be to expose youth to these types of careers through programs such as career fairs, job placement opportunities, agri-focused volunteering, and other similar opportunities.

3. **Promote agriculture as a lifestyle to young people.** Complementary to the above recommendation, agriculture has the opportunity to offer intrinsic value to young people who tend to prioritize intangible benefits such as work-life balance and environmental sustainability when considering careers. Promoting these values in agriculture through hands-on experience opportunities, education and recruiting, and other formats may help to attract more young people to the industry.
4. **Explore opportunities to provide training locally.** There are currently no post-secondary programs in Northeast B.C. that provide many types of training relevant to agricultural producers in the region, such as agronomy and soil sciences, animal husbandry, and other fields. To build a locally-trained labour force able to meet the demands of the growing sector, Northern Lights College and other institutions may consider offering agricultural-focused training programs.

5. **Explore opportunities to diversify the sector.** To further establish Northeast B.C. as an agricultural hub, with diverse and challenging career opportunities for young people interested in the sector, the region should explore opportunities to support diversification of the industry through the adoption of technology and growth of value-added processing (e.g., butchery and charcuterie for animal production, milling and distilling for grain production). While this recommendation will largely be dependent on the initiative of private businesses and entrepreneurs to take steps to grow or open new businesses, there may be opportunities for local governments to support these efforts through local regulation.
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1. ACKNOWLEDGEMENTS

Northern Lights College wishes to thank the members of the Advisory Committee for their leadership and assistance in developing the Northeast Regional Agriculture Labour Market Strategy.

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Tamara Danshin, Ministry of Forests, Lands, Natural Resource Operations and Rural Development
Danny Soles, Northern Rockies Regional Municipality

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The Northeast Regional Agricultural Labour Market Strategy Advisory Committee and the Ministry of Social Development and Poverty Reduction expresses gratitude to the First Nations people of the Cree, Dene, Dunne-Za, Kaska, Saulteau, Tahltan, Tlingit, and Tse’khene for sharing their territory with us. We acknowledge the enduring presence of First Nations, Inuit and Métis people where we all live, work and learn from each other on this beautiful land. Together we are able to create hope and opportunity for all people as we collectively act upon the Truth and Reconciliation Commission’s Calls to Action and the United Nations Declaration on the Rights of Indigenous Peoples.
2. **BACKGROUND**

2.1 **Northeast Region and Economy**

2.1.1 **Background**

Northern Light College serves the communities of Northern British Columbia that are located on the territories of the Cree, Dene, Dunne-Za, Kaska, Saulteau, Tse’khene, Tahlitan and Tlingit. We acknowledge our hosts and honour their gracious welcome to those seeking knowledge. British Columbia’s Northeast region is the largest economic region in British Columbia, representing 21.8% of the provincial land mass. The region is bounded on the north by Yukon and Northwest Territories, to the east by Alberta, and to the south and west by the Rocky Mountains. This region is home to the Fort Nelson First Nation, Prophet River First Nation, Halfway River First Nation, Blueberry River First Nations, Doig River First Nations, West Moberly First Nations, Saulteau First Nations, Fort St. John Métis Society, Moccasin Flat’s Métis Society, North East Métis Association and River of the Peace Métis Society. The region also includes the communities of Fort Nelson, Fort St. John, Chetwynd, Tumbler Ridge, Hudson’s Hope, Taylor and Dawson Creek.

Traditionally, the economic base of the region has been grain, forage crops and beef. Over the years, the region has become heavily dependent on mining, oil and gas and forestry, all of which are prone to boom-and-bust cycles in employment and economic activity. In addition, hydroelectric projects in the region have become a major source of employment when they are underway, such as the current Site C dam project.

2.1.2 **Regional Labour Market Strategy**

Northern Lights College has recently developed a regional labour market strategy for BC’s Northeast, with data collection for this regional strategy being developed from April to November 2019, and the final report being published in April of 2020. One of the recommendations coming from this labour market strategy document was that a labour market study focused solely on the agricultural sector in the region was needed (Northern Lights College, 2020). This research project – *State of the Agricultural Labour Trends and Needs in Northeast British Columbia* – responds to this recommendation. The project is led by Northern Lights College, with funding from the Ministry of Social Development and Poverty Reduction.
2.2 Agricultural Sector Labour Market Strategy Needs

2.2.1 Overview of Project Needs

Following a competitive bidding process, R.A. Malatest & Associates Ltd. was selected to develop this agricultural sector strategy for the region. The project will be guided by an Advisory Committee who will oversee the primary and secondary research, analysis and reporting. This committee will be comprised of relevant sector and region stakeholders, and will be involved in ensuring that recommendations for the Labour Market Strategy are adequately studied and considered following the completion of this project.

2.2.2 Stakeholders

As the recommendations in the final labour market strategy are expected to have ramifications for education and training, hiring, and investment decisions in the region, there are a large number of relevant stakeholders to be considered and, to varying degrees, involved in this project. Below, we have identified key stakeholders, their interest in the project, and how they (or representatives of the group, in the case of larger populations) were involved in this research.

<table>
<thead>
<tr>
<th>Stakeholder Name</th>
<th>Interest in Project</th>
<th>Involvement in Project</th>
</tr>
</thead>
<tbody>
<tr>
<td>Northern Lights College (Project Holder)</td>
<td>Project Sponsor. NLC, as a leading training and education institution in the region, has an interest in ensuring that their training offerings are aligned with anticipated trends in labour market demand.</td>
<td>As project sponsor, NLC had final approval authority over project deliverables and may request edits to deliverables, or alterations to contract terms and scope of work.</td>
</tr>
<tr>
<td>Advisory Committee</td>
<td>Advisor. The Committee is interested in ensuring that the methods and work products from this project incorporate the context and needs of a variety of industry perspectives.</td>
<td>As advisor, the committee reviewed and provided comments on work products and deliverables such as the work plan, interview guides and reports.</td>
</tr>
<tr>
<td>BC Ministry of Social Development &amp; Poverty Reduction (Project Funder)</td>
<td>Funder. The BC Government has an interest in ensuring a vibrant economy, with sufficient labour supply to meet demand both regionally and sectorally.</td>
<td>As advisor, a representative from the Ministry of SDPR reviewed and provided comments on final project deliverables; Northern Lights College is accountable to this stakeholder for these deliverables, rather than the contractor (Malatest).</td>
</tr>
<tr>
<td>Agri-business Operators and Associations</td>
<td>Impacted Group. Outcomes of this project may impact decisions by government and educational institutions (e.g., NLC) that will impact labour force supply and education, impacting operators ability to find and retain workers.</td>
<td>Representatives from this group were consulted through key informant interviews (business operators and associations) and a survey of employers (business operators only). Some from this group were also represented on the Advisory Committee.</td>
</tr>
</tbody>
</table>
### Stakeholder Name

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</tr>
</thead>
<tbody>
<tr>
<td>Indigenous Communities</td>
<td>Impacted Group. Labour force trends and employment opportunities will have impacts on communities’ members’ education, training, and employment options. Additionally, the operation of First Nations-led native plant nurseries, and other agricultural operations, in the region must be incorporated and considered in the broader labour market strategy.</td>
<td>Representatives from this group were consulted through key informant interviews (native plant nursery operators). Some from this group were also represented on the Advisory Committee.</td>
</tr>
<tr>
<td>Local Governments</td>
<td>Impacted Group. Local economic activity and trends will have impacts on a variety of local issues (e.g., population and migration, business licensing, others). Local governments also have some limited influence over economic activity through things like local property tax rates, business licensing fees, etc.</td>
<td>Representatives from this group were consulted through key informant interviews.</td>
</tr>
</tbody>
</table>
3. **METHODOLOGY**

Our research approach for this project incorporated both secondary and primary data collection and analysis: review of available labour market and industry data from provincial and federal sources, key informant interviews, and a survey of local agricultural employers. Each of these approaches are described in the sections below. The final section lists caveats and limitations of these data collection and analysis approaches.

3.1 **Industry and Labour Market Data Review**

To understand and project the labour market for agricultural producers in Northeast B.C. over the next ten years, we began with developing a “base case” scenario based on the current projections for agriculture producers in B.C. as a whole, and data available from the Censuses of Agriculture and Population (2016) regarding the number of agricultural production operations in the region.

Data sources used for this analysis included:

- The *BC Labour Market Outlook*, published by the B.C. Ministry of Advanced Education and Skills Training;
- *Employment by Occupation for BC and Regions, 2019 to 2029*, published by B.C. Stats;
- Statistics Canada's data on farm cash receipts; and
- Various data points from Statistics Canada's *Census of Agriculture* (2016), such as farm counts and farm types.

For some data sources, information was available only at the provincial level (e.g., the *BC Labour Market Outlook 2019 Edition*). To account for this, we extrapolated from this data based on the proportion of B.C.’s farms located in the Northeast region (taken from the *Census of Agriculture*’s farm counts); this approach may have some limitations, as discussed in Section 2.4 below.

Data from these sources were then used to predict the specific labour market demands of the agricultural sector within Northeast B.C. through 2029. These findings are presented as a “base case” scenario: they represent the expected change in labour market demand for the sector and region, given the assumptions made about the B.C. agricultural sector as a whole (assumptions built in to B.C. Stats’ models).

3.2 **Key Informant Interviews**

Over the course of this project, we conducted 43 key informant interviews with representatives from a variety of stakeholder groups, including:

- Local businesses;
- Industry associations;
- Local and regional governments;
- First Nations and Métis societies;
- Post-secondary institutions;
• Secondary school counselors; and
• Other representatives, as identified for inclusion by the client.

Interviews were structured by pre-developed interview guides, which ensured that all relevant topics for each stakeholder group were addressed and interviewees had the opportunity to comment on them in interviews. Summary transcripts from each interview were created, which were then analyzed using the NVivo qualitative analysis software program.

3.3 Employer Survey
3.3.1 Design and Programming
The employer survey was conducted to collect input from local agribusinesses on the following topics:
• Current workforce size and composition;
• Anticipated future (2022 and 2025) workforce size;
• Experiences in hiring for needed positions; and
• General trends or issues in the industry that impact hiring and retention.

A survey questionnaire that addressed these topics was designed by Malatest and approved by the client in January 2021. The survey was then programmed and went through rigorous in-house testing. The survey was designed for simultaneous online and telephone administration, meaning that all respondents had the option of choosing how they wished to complete the survey, and could call in to Malatest’s call centre for survey support if needed.

3.3.2 Sampling
In total, Malatest’s original sample of agribusinesses for surveying was 124. This sample was drawn from the following sources:
• Online databases of registered businesses, such as InfoCanada and Dun & Bradstreet;
• Referrals from other agribusinesses and industry associations that had participated in this research through key informant interviews;
• Internet searches for agribusinesses in the region (e.g., business listings on Google and Facebook); and
• Volunteers who submitted their contact information to participate in the survey at an open link hosted by Malatest, and shared by agricultural association contacts in the region to promote the research to their members.

3.3.3 Survey Period
The survey was initially available for respondents to complete the survey from January 21, 2021 to March 17, 2021. During this period, multiple rounds of reminder emails and/or phone calls (depending on what contact information was available) were made to non-responding sampled businesses. In addition to in-house reminders to complete the survey, Malatest coordinated with Advisory Committee members to have personal contacts of these businesses reach out and encourage survey completion. The survey period was extended twice in an effort...
to encourage higher survey completion numbers. During this period, 24 survey completions were obtained.

Subsequently, additional surveying was conducted to increase the sample size. In June, the survey was opened for additional surveying for a month, with recruitment and outreach being conducted by a local person involved in the agricultural sector. Over this time period, an additional 20 survey completions were obtained, for a total of 44 completions (a 35% gross response rate).

3.4 Limitations

While the research team reviewed and analyzed many data sets available from Statistics Canada and BC Stats, and made every effort to ensure comprehensive primary data collection, there are some limitations to these data that have an impact on the findings of this labour market research. These limitations and caveats are discussed below.

3.4.1 Old Data from Censuses of Agriculture and Population

As the most comprehensive data sets on population and agricultural production in the country, our data sources for this analysis made heavy use of the Census of Population and the Census of Agriculture. However, it is important to keep in mind that the most recent Censuses were carried out in 2016, and we are due for another Census in 2021. As a result, the data being used for this analysis may be out of date and not reflective of the most recent trends in agriculture in Northeast B.C.

The data collected through the survey of agricultural businesses in the region does provide a timelier snapshot of the sector’s labour market, based on data collected in the first half of 2021. However, this data source is more limited (in terms of sample size) than data available through the Census of Agriculture, and can be expected to have a larger sample error (i.e., have a greater chance of being “off” to a larger degree, from the true numbers among all farms and agricultural operations in the region).

3.4.2 Data Collected During COVID-19 Pandemic

This project conducted its data collection activities from November 2020 through June 2021. Although this project began several months into the pandemic, when most businesses had largely already passed through the most acute economic impacts of the COVID-19 pandemic, there remained at the time some uncertainty around the future of product demand, supply chains, and human migration (particularly relevant for businesses that rely on temporary foreign workers) in a post-COVID BC. As a result, projected future workforce and growth demands may not have accounted for unforeseen impacts on the agriculture sector in the region, and may over- or underestimate the future growth of the workforce.

3.4.3 Suppressed Data at the Industry by Region Level

Due to data privacy policies in place by Statistics Canada and BC Stats, certain data at the regional by sector level were suppressed and not available for this analysis. For example, the number of full-time employees within the agriculture sector in B.C. as a whole is available, and the number of full-time employees working in the Northeast region is available, but the specific number of full-time employees in the agricultural sector within Northeast B.C. is not.
Our approach to dealing with this challenge was to extrapolate the proportion of Northeast agricultural employees from the overall provincial counts, using the proportion of farms in the region (of all B.C. farms) as a benchmark. This approach assumes that the average workforce size of farms in the Northeast region is roughly the same as the average workforce size of all farms in B.C. While we believe this is a reasonable assumption, given the variety of farm sizes in the region, it is an untested assumption that has been built into this analysis and projection.

3.4.4 Definition of Employment and Positions

Data on current employment numbers are based on the 2016 Census of Population, in which respondents are asked to identify their “primary” employment. Approximately 350 individuals in the Northeast region declared agriculture as their primary employment sector in the 2016 Census. However, data from our key informant interviews with agricultural stakeholders suggest that this may be an undercount of the total number of people involved in agriculture in the region.

It was noted that the challenges of running a profitable farming operation often prompt individuals to find employment in other sectors, and work on farming operations as a secondary or seasonal job. For example, an owner of a small cattle ranch may be primarily employed in truck driving for local oil and gas operations, and work the farm on a part-time basis in collaboration with other family members. This person would likely declare their “primary” employment as being in the oil and gas sector. Overall, we suspect that these declared primary occupations from Census data likely undercount the total number of persons employed in agriculture in the region.

Further, employment projections from BC Stats for the agriculture sector over the coming decade are based on full-time equivalency positions (i.e., 30 to 40 hours per week, year-round). Again, key informant interview data suggest that this does not correspond to the realities of operating a farm or ranch. Many smaller operations may employ a person on a part-time basis for the majority of the year, but during busy seasons such as seeding, calving, or harvesting, hire a number of seasonal workers for full-time hours. Given that BC Stats projections rely on an averaged, year-round employment number, it is likely that these figures undercount the number of people actually employed by the agriculture sector at one or more points throughout the year.

3.4.5 Survey Data Limitations

Growth expectations for the optimistic scenario were drawn from responses to the Employer Survey. While these data were reviewed by our research team to identify and remove any outliers or concerning data that may skew results, there remain some notable limitations to the data and the ability to extrapolate from it. These issues are:

- Small sample size – A total of 44 agribusinesses provided information on their current and anticipated workforces;
- Limited business types – All respondents to the Employer Survey represented micro and small businesses (i.e., fewer than 100 employees), which may result in an overestimate of overall sectoral employment growth in proportionate terms; and
• Self-selection – As the survey was completely voluntary, it is possible that those participating were businesses that anticipate major growth and therefore an agricultural labour market strategy is of interest to them, while those businesses anticipating little to no growth may have opted not to participate.

All of the above-mentioned issues limit the reliability of the data, and therefore the findings of the employer survey should be interpreted with some caution, particularly the optimistic growth scenario which relies heavily on self-reported data from agribusinesses.
4. FINDINGS – LABOUR MARKET TRENDS

4.1 Current Labour Market

4.1.1 Current Sector Size

At the time of the 2016 Census of Agriculture count, there were 1,335 farms located in the Northeast region of B.C.\(^1\) This represented 7.6% of all farms in B.C. that year (17,528 province-wide). Within these 1,335 farms in the region, the most commonly reported farm production activities were:

- Hay farming (40.4%);
- Cattle ranching and farming (17.3%);
- Oilseed and grain farming (14.3%);
- Horse and other equine production (9.4%); and
- Animal combination farming (6.9%).

Other farm types each represented 5% or less of all farm operations in the region.

Total farm income (in farm cash receipts) is not available at the sub-provincial level; assuming that total farm income in the region is proportional to the number of farms in the region, we estimate that farms generated nearly $306 million in gross income in the Northeast region, in 2019.\(^2\)

4.1.2 Current Labour Force Size

There are a number of sources and approaches to estimating current labour force size in Northeast B.C. These include Census of Population occupation counts, Statistics Canada’s Labour Force Survey data, and BC Stats occupation estimates.

As of the 2016 Census of Population, approximately 350 individuals in Northeast BC declared agriculture as their “primary” occupation; the Census of Agriculture from the same year, however, counted 582 employees in the agricultural sector in the Peace Region (i.e., Peace River and Northern Rockies region). This discrepancy is likely due to the need to declare one’s “primary” occupation in the Census, and the resulting effect that a person who works a few hours per week, or seasonally, in an agricultural role but the majority of their income comes from another job, will declare the other job as their primary occupation. Reporting from the Census of Agriculture in 2016 noted that among British Columbian farm operators, more than one half (51%) worked off their farms in 2015.\(^3\)

\(^1\) This count is for the Peace River Census Agricultural Region (5908), which includes the Peace River and Northern Rockies Consolidated Census Subdivisions; this region is approximately equivalent to the economic development region identified as “Northeast B.C.” in provincial data and in this report.

\(^2\) Estimate developed by multiplying the proportion of all BC farms found in the Northeast region (7.6%) by the total farm cash receipts data available from Statistics Canada. DOI: https://doi.org/10.25318/3210005201-eng

BC Stats’ employment projections by region and detailed occupation estimate that as of 2021, there are approximately 485 full-time equivalent (FTE) positions directly related to agriculture in Northeast BC (i.e., farm labourers, managers, agricultural consultants and specialists). Expanding this count of agricultural workers out to include secondary and tertiary industries, such as veterinary services and butchery, this employment estimate rises to 535 FTEs.

4.1.3 Current Labour Supply

Key informant interviewees from agribusinesses noted that there were constraints and challenges in hiring for both general labour positions, and for skilled trades or technical positions. As a result, many agribusinesses noted that hiring for roles can be a challenge. While many businesses noted that they had at least one or two qualified, reliable staff members that they were eager to maintain, they also expressed that seasonal hiring takes a large amount of effort, and felt that their existing staff would be difficult to replace if any left for any reason.

For many positions that agribusiness interviewees discussed, there were no credentials or education needed to begin in a role, but anticipated doing a considerable amount of on-the-job training for these hires. For example, farm hands and tractor operating positions can be trained on-the-job and while past agricultural experience is helpful, it is not necessary. The challenge in hiring for these positions, noted by interviewees, is that there are also a number of general labour positions required by local oil and gas and natural resource operations, and these sectors pay a higher base wage than agribusinesses do which makes agriculture comparatively less attractive for workers in the region.

Among positions that required more education, training, and/or experience, discussed in interviews with agribusiness representatives, several noted challenges with attracting and retaining labour in the region. For individuals who may have a special interest in agriculture and be interested in pursuing it as a career, there were a couple of challenges noted:

- Training and education programs are not available in the region, so youth who are interested in agricultural training programs must go to either Alberta or Southern BC for their education, and it can be easy for youth at that point to set down roots near where they earned their education instead of returning to Northeast BC; and
- While Northeast BC is agriculturally important to the province, it is not a “hub” for agriculture in the way that the prairie provinces are, where there are a number of agricultural corporations, farms, and supporting industries (e.g., agricultural equipment) that provide greater career opportunities for those who want to dedicate their careers to agriculture.

Many interviewees also noted that it is challenging to get youth into the “pipeline” of agricultural careers, due to limited exposure to farming. It was noted that for most skilled and semi-skilled positions, a background of growing up on a farm was very common and almost a necessity for certain positions (e.g., cowboys and other positions that require work with horses). Given that the number of family-owned-and-operated farms continues to shrink over time, there continues to be a shrinking number of youth who have the exposure and experience in farming to consider it as a viable career option for themselves.
The agricultural industry is the industry most reliant on temporary foreign workers (TFWs) both across Canada and within BC; as of 2017, it was estimated that 23% of BC’s agricultural workforce was TFWs. While data on TFWs within agriculture are not available at the sub-provincial level, some inferences can be made based on the types of work that make most use of TFWs. Tree fruit and vine production, and greenhouse production, are most heavily reliant on TFWs due to the labour-intensive and highly seasonal nature of the work. As Northeast BC’s agricultural sector is largely hay, grain and oilseed, and beef cattle production, it is likely that TFWs represent a smaller proportion of the agricultural workforce in Northeast BC compared to the provincial average.

4.2 Projected Future Labour Market Trends

Our analysis of forecasted agricultural labour market data looked at both primary and secondary occupations relevant to the agricultural sector, both within Northeast BC and province-wide. Occupations identified as “primary” agricultural jobs were:

- Agricultural product inspectors;
- Agricultural representatives, consultants and specialists;
- Agricultural service contractors, farm supervisors and specialized livestock workers;
- General farm workers;
- Harvesting labourers; and
- Managers in agriculture.

Occupations identified as “secondary” to the agricultural sector were:

- Animal health technologists and veterinary technicians;
- Industrial butchers and meat cutters, poultry preparers and related workers;
- Labourers in food, beverage and associated products processes;
- Supervisors, food, beverage and associated products processing; and
- Veterinarians.

These positions were used to estimate the base and optimistic cases for an agricultural labour market forecast for Northeast BC. It should be noted that while all the above occupations were included for review in our analysis, not all positions are reported as existing in Northeast BC and so these scenarios do not reflect these occupations.

A separate report providing a more in-depth analysis of both base and optimistic cases has been provided, and should be referred to for more detail on the outlooks summarized below.

4.2.1 Base Case Scenario

Province-wide, between 2021 and 2029, BC Stats estimates a 0.44% annual growth rate among primary agricultural occupations, and a 0.68% annual growth rate among all agricultural-related occupations (primary and secondary, as identified above). Northeast BC, specifically, is expected to see much higher annual growth over that same time period: a 2.8% annual growth rate among primary agricultural occupations, and a 2.7% annual growth rate among all
agricultural-related occupations. The specific numbers that these percentages are equivalent to, for the Northeast region, are summarized in the table below. Please note that all occupation numbers are FTEs, and may not reflect the number of individual persons working in agriculture in Northeast BC. Agriculture-primary occupations are highlighted in green, while secondary occupations are highlighted in blue.
Table 4.1 Estimated Growth in Agriculture and Agriculture-Related Occupations in Northeast BC, 2021-29*

<table>
<thead>
<tr>
<th>Occupation</th>
<th>2021 Positions</th>
<th>2022 Positions</th>
<th>2025 Positions</th>
<th>2029 Positions</th>
<th>Annual Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agricultural and fish products inspectors</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>-</td>
</tr>
<tr>
<td>Agricultural representatives, consultants and specialists</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>-</td>
</tr>
<tr>
<td>Agricultural service contractors, farm supervisors and specialized workers</td>
<td>40</td>
<td>41</td>
<td>43</td>
<td>45</td>
<td>1.5%</td>
</tr>
<tr>
<td>Animal health technologists and veterinary technicians</td>
<td>12</td>
<td>13</td>
<td>14</td>
<td>15</td>
<td>2.8%</td>
</tr>
<tr>
<td>General farm workers</td>
<td>138</td>
<td>144</td>
<td>158</td>
<td>171</td>
<td>2.7%</td>
</tr>
<tr>
<td>Harvesting labourers</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>-</td>
</tr>
<tr>
<td>Industrial butchers and meat cutters, poultry preparers and related workers</td>
<td>23</td>
<td>23</td>
<td>24</td>
<td>24</td>
<td>0.5%</td>
</tr>
<tr>
<td>Labourers in food, beverage and associated products processing</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>-</td>
</tr>
<tr>
<td>Managers in agriculture</td>
<td>306</td>
<td>319</td>
<td>351</td>
<td>386</td>
<td>2.9%</td>
</tr>
<tr>
<td>Supervisors, food, beverage, and associated products processing</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>-</td>
</tr>
<tr>
<td>Veterinarians</td>
<td>15</td>
<td>15</td>
<td>16</td>
<td>18</td>
<td>2.3%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>535</strong></td>
<td><strong>555</strong></td>
<td><strong>606</strong></td>
<td><strong>663</strong></td>
<td><strong>2.7%</strong></td>
</tr>
</tbody>
</table>

*Data drawn from BC Stats’ Economic Growth Forecasts.
4.2.2 *approximately Optimistic Case Scenario*

The optimistic case labour forecast for agriculture in Northeast BC was developed based on agribusinesses’ reported anticipated hiring needs for 2022 and 2026. Survey respondents were asked to provide their estimates for how many FTEs they would need, in those years, in the following positions:

- Managers;
- Trades and technical roles; and
- General labour positions.

Overall, employers anticipated a much higher growth rate over the next ten years than the annual growth rate projected by BC Stats. By 2026, employers anticipated a net growth in their workforces of 42%, or an average annual increase of approximately 8% (more than double the provincial growth rate of 2.8% for agriculture-specific occupations in the region). The largest growth over the next five years was anticipated to be in trades and technical positions, and the smallest in managerial positions. Table 3.2 below summarizes the average anticipated growth among Northeast BC agricultural employers over the next five years.

**Table 4.2 Current and Anticipated Medium-Term Workforce Change, by Position Type, Agribusinesses in Northeast BC**

<table>
<thead>
<tr>
<th>Position Type</th>
<th>Average Workforce 2021</th>
<th>2026 Average Net Change</th>
<th>Net Change as a Proportion of 2021 Workforce</th>
</tr>
</thead>
<tbody>
<tr>
<td>Managers</td>
<td>1.9</td>
<td>+.3</td>
<td>+16%</td>
</tr>
<tr>
<td>Trades / Technical</td>
<td>1.2</td>
<td>+.8</td>
<td>+67%</td>
</tr>
<tr>
<td>General Labour</td>
<td>2.7</td>
<td>+1.3</td>
<td>+48%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>5.7</strong></td>
<td><strong>+2.4</strong></td>
<td><strong>+42%</strong></td>
</tr>
</tbody>
</table>
5. FINDINGS – LABOUR MARKET CHALLENGES AND OPPORTUNITIES

5.1 Strengths

5.1.1 Values and Lifestyle of Agriculture as a Career

Despite nearly all interviewees acknowledging that the agriculture sector does not pay as well as other industries in the region (see Section 4.2.1 for more details), many interviewees also noted that the sector offers other, less tangible benefits that may be attractive to people considering (or reconsidering) their career options. These values, as noted by interviewees, included:

- The ability to work outdoors, engaged in physical labour rather than sitting at a desk;
- The overall lifestyle or “family-friendly” structure of day-to-day farming;
- The ability to be one’s own boss (if an owner-operator);
- The ability to engage in work that has a tangible, direct benefit – feeding one’s community; and
- Opportunities to live out eco-conscious values through, for example, engaging in sustainable and/or organic agriculture production.

While these values may not be compelling to everyone, they are likely to attract people who will be committed to farming for a longer term (particularly if they value more than one of the above items). Sustainable and/or organic farming operations are opportunities to engage in healthier, earth-conscious career; as youth tend to report valuing this highly and being very concerned about climate change, this aspect of agriculture may be helpful in attracting young people to the industry.

5.1.2 Resistance to Boom-and-Bust Cycles

While the oil and gas sector in Northeast B.C. pays well and tends to attract many workers away from agriculture, the sector can be influenced by external forces such as access to foreign markets, which can result in slowdowns and reduced work. In contrast, agriculture can be much steadier over the long term, offering career stability for those with a focus on the long term. Many interviewees noted this benefit to agricultural careers, although a few did note that crop failures or other challenges do sometimes result in a slow year. One interviewee, as well, noted that it can be challenging to get youth to look to the long term instead of focusing on short-term earnings possibilities.

As the Northeast region is a resource hinterland, our economies are based on resource sectors: ag, oil and gas, and forestry. Agriculture is the only reliable one in that list. I don’t think long-term things factor into kids’ minds; they’re pretty focused on the bottom line.

Secondary school counselor

5.1.3 Low Land Costs in Northeast B.C.

Relative to other regions of B.C., land costs in Northeast B.C. are low, making investment in land for agricultural production more feasible than in regions such as the Okanagan and Fraser Valley. This benefit was noted by several interviewees from a variety of stakeholder
groups (agribusiness, secondary school counselors, agricultural associations), and is corroborated by available data on the cost of farmland in the province. According to the 2019 FCC Farmland Values report, the Peace Region—Northern B.C. region had the lowest cost per acre of agricultural land in 2019, at $1,712 per acre, as well as the lowest percent increase in value over the previous year. While the cost of agricultural land is not the only barrier to the establishment of new agricultural operations, or the expansion of existing ones (other challenges include the cost of machinery and other capital equipment, and finding sufficient labour to make use of the land purchased, for example), this benefit of operating in Northeast B.C. may be helpful in attracting potential owner-operators to the region to operate farms and ranches. It should be noted, however, that while this may expand the number of businesses operating in the region, attracting new owner-operators to the region would not address labour shortages and may, in fact, exacerbate them if new operations quickly grow and need additional labour.

5.2 Weaknesses

5.2.1 Distorting Effect of Other Sectors

Nearly all interviewees who participated in this research identified the high wages paid in the oil and gas sector, and to a lesser extent in other natural resources sectors (e.g., forestry) as creating considerable challenges in hiring workers for agribusiness operations in the region. For many positions needed by agricultural producers, the training and skills needed overlap considerably with needed positions in these natural resource sectors. These include, but are not limited to:

- General or unskilled labour (i.e., no job-specific training or education needed at hire, on-the-job training is sufficient);
- Heavy duty equipment operation and repairs;
- Class 1 drivers; and
- Some familiarity (not necessarily ticketed) with trades skills such as carpentry and welding.

Given the high demand and price for oil and gas and natural resource products, these industries are able to pay considerably higher wages to workers than positions requiring comparable skill sets in agriculture. This is borne out by survey data from Statistics Canada’s Job Vacancy and Wage Survey. As of the fourth quarter of 2020, the average wage for a job in the agriculture, forestry, fishing and hunting sector in B.C. was $18.50, compared to $31.70 for mining, quarrying, and oil and gas extraction.


\[5\] Statistics Canada. Table 14-10-0326-01: Job vacancies, payroll employees, job vacancy rate, and average offered hourly wage by industry sector, quarterly, unadjusted for seasonality. DOI: [https://doi.org/10.25318/1410032601-eng](https://doi.org/10.25318/1410032601-eng)
The big challenge is, the other industries in the region generally have a better pay scale and are looking for workers with the same qualification levels. It's not as attractive to get training in agriculture compared to other industries.

Grain farmer

5.2.2 Shrinking Pool of Young People Interested in Agriculture

Many of the agribusiness representatives, as well as all secondary school counselors, that we spoke to over the course of this project noted that agriculture as a career is often “set up” by growing up in a farm, or at least a rural, setting. Early exposure to the daily routines of farming or ranching, understanding the breadth of skills and knowledge needed to do the work, and a general skill or hands-on training were all noted as being things that are very difficult for youth without first-hand exposure to farming do not have, and therefore they are very unlikely to consider agriculture as a career for themselves.

If I was going to hire a ranch hand, my son at 15 could outwork any of the hands because he could get on a horse and rope me a cow...maybe Dawson campus could have a full equine course, but it maybe wouldn’t be as good as learning from birth like our kids do.

Rancher

Further, even among youth who do grow up in farming and ranching settings, not all are interested in an agricultural career. Some may have intrinsic motivations to pursue different career paths (e.g., medicine, law, etc.) while others may be daunted by the high costs and low returns on owning and operating a farm or ranch. This trend was noted by several interviewees, and one interviewee noted that this has been a long-standing trend even among farming families.

It [youth disinterest in agriculture] started with the farmers themselves where they've had this negative attitude towards it, where they've been like “Farming is so hard and makes so little money, our kids should go off and get a real job somewhere else.”

Rancher

Finally, even among youth who are interested in agriculture as a career and have intrinsic motivations that balance or outweigh financial considerations (e.g., lifestyle, ability to work outdoors), the cost of getting started as an operator in agriculture can be prohibitive. For youth who do not stand to take over an existing operation from a retiring parent or other family member, the capital costs involved in starting an agricultural production operation can be overwhelming. This challenge was noted by several interviewees.

The challenge is the accessibility of getting into the market – the ownership of land or a greenhouse. For a young person, they could work as a labourer, that's easy, but it's hard to be a sole proprietor.

Secondary school counselor
As a result of these pressures, agricultural businesses are experiencing shortages of young people both for general labour positions, and for long-term career plans to own and operate agribusinesses. Because of this, the agriculture sector in Northeast B.C. is aging considerably faster than other industries.

5.2.3 Competition from Other Regions for Agricultural Careers

While Northeast B.C. is crucial to the province’s food supply, especially for beef cattle and grain, it is less established than other regions in Canada related to those same products. Alberta, for example, is more well-known for beef cattle operations and Saskatchewan has a more established grain and oilseed production sector. Other regions of B.C. are highly established in orchard, fruit, and vine production (e.g., Okanagan, Fraser Valley).

While this does not diminish the importance of Northeast B.C.’s contribution to agriculture and food security in Canada, it does create challenges in creating a recognizable “brand” for the region as an agricultural hub, as well as in attracting the types of large and diversified agricultural firms that would help grow the industry. When regions are recognized as being “hubs” for a particular sector or industry, a compounding effect of firms, training programs, and jobs result whereby operations are set up in a region due to the existing pool of talent in the region. This encourages 1) the creation of training programs to further meet the labour needs of these firms, and 2) the in-migration of professionals to the region to pursue careers in the field, as they are likely to have many opportunities in such a region. These “hubs” are perceived to exist elsewhere in the country – notably in Alberta and Saskatchewan, in our research – but not in Northeast B.C., which can result in outmigration of talented young people seeking careers in agriculture.

For youth who complete secondary school with an interest in agriculture, pursuing a degree in the discipline requires leaving the region entirely. The most-referred to programs among interviewees in this project were the Fairview campus of Grande Prairie Regional College, and Olds College, both in Alberta. Given that post-secondary education can offer youth opportunities to begin their careers or otherwise set down roots in the communities where they attend school (e.g., work placement opportunities and part-time jobs in relevant industries), not all can be expected to return to Northeast B.C. to make use of their education.

In addition to the pull of educational programs, there are also a wider variety of career opportunities in agriculture elsewhere in the country, particularly for those who are interested in professional and technical roles but not as owner-operators of farms (e.g., agronomists, commodity purchasers). These types of roles are in higher demand elsewhere, and therefore other regions may be more attractive to qualified young people looking to grow their careers.

People come here for a job [in agriculture], to get experience, and get out of here. Most of them want to go East – they want to deal with crop farmers…They want to go back to Alberta or Saskatchewan, wherever they came from. Most of them are young and are looking to get experience, and it’s easier to get hired here because there are fewer people wanting to work here.

Agricultural supply firm owner
5.3 Opportunities

Despite the challenges facing the agriculture sector in Northeast B.C., our research team heard from many interviewees and survey respondents who saw opportunities for growth, diversification, and overall strength in the agriculture sector for the region. These opportunities are discussed below.

5.3.1 Increasing Demand for Sustainable Agriculture

Many agribusiness interviewees, and some interviewees from other groups, noted that there is an increasing public awareness around the environmental impact of agriculture, and an accompanying increase in demand for organic and sustainably-produced food (e.g., organic fruits and vegetables, humanely and/or sustainably-raised beef). This provides an opportunity for local agricultural producers in the Northeast to meet this demand. Further, as young people tend to be more concerned about environmental issues and seek careers and lifestyles that support these values, a trend towards organic and/or sustainable agriculture can help the industry build a public profile that appeals to young people considering their career options.

Growing, and publicly emphasizing, the sustainable and eco-conscious aspects of agricultural production would likely have a variety of impacts on agricultural producers, including labour demands. These include:

- The ability to command higher prices for organically and/or sustainably grown or raised food;
- Increased labour needs, as many aspects of organic food production rely on higher labour inputs (e.g., soil tilling and other manual methods to control weeds instead of herbicides); and
- Higher production costs, due to higher labour inputs (and potentially the costs of being certified as an organic operation).

A few of the interviewees who participated in this research were themselves operating cattle ranches that utilized sustainable methods such as regenerative agriculture, although these operations were not necessarily certified organic. Given that Northeast B.C. is already a major beef cattle producer for the province and Canada overall, there are opportunities to explore demand for humanely and/or sustainably raised beef cattle in the region, responding to increasing consumer demand for these products as well as concern about the environmental impacts of meat consumption. A couple of interviewees described their operations using this type of ranching.

We use regenerative agriculture – it's a practice of agriculture that focuses on building soil through animal movement. We don't use barns; all animals are raised out on pasture. We move animals intensively, anywhere from once to twice daily to once a week. We use that to build soil; in the end run, we get more protein out of it.

Rancher

Our primary operation is soil-based, so we are looking after the soil in a regenerative way. We're working with nature, no chemicals, no fertilizer, managing our livestock in a way that enhances nature rather than degrades

Rancher
5.3.2  Sector Growth and Diversification

A major theme from key informant interviews was a variety of opportunities to support the growth and development of the agricultural sector in Northeast B.C. As described in 4.2.3 above, a robust and varied sector in a region – a “hub” – can make a region more attractive to talent. Many interviewees emphasized expanding the presence of value-added food production facilities and businesses in the region; while Northeast B.C. is a major producer of primary agricultural products such as wheat, other grains, and beef cattle, there is relatively little value-added processing in the region.

With regards to beef cattle processing, there are only two Class A (and no Class B) slaughtering facilities for cattle in the region, and both are located relatively far south (Dawson Creek and Farmington, about a 20-minute drive outside of Dawson Creek) which creates challenges for ranchers in the north to get their cattle to these facilities. The costs of this challenge fall into two main areas:

1. Inability to be cost-competitive with other cattle producers in B.C. and Alberta, due to the high costs of shipping their cattle to slaughter, which results in lower production than ranchers could otherwise support; and
2. Lost opportunities for value-added processing such as retail-ready butchery, smoking, and charcuterie.

Nearly all ranchers who participated in an interview identified this lack of slaughtering capacity as a barrier to their business growth. Further, a few ranchers noted that they would like to expand their business operations into these value-added sectors such as charcuterie for retail sale but were stymied by the insufficient slaughtering capacity in their region.

[We are limited by] slaughter capacity at existing abattoirs. There are limited Class D and E slaughter licenses for the region, and challenging current regulatory frameworks on processing capacity at abattoirs...We need value-added work to the butchery components, not just breaking down but also creating products like sausage and smoking. It's very hard for us to offer value-added products because we can't find staff with the knowledge and skills to do it.

Rancher

Our rough estimate is that 50% of the local demand could be met locally in terms of beef currently, and potentially the same figure for poultry and pork, but that is impeded by the added cost of transporting out for slaughter and back for market.

Local government representative

The addition of value-added processing capacity would be a boon to the agricultural sector in the region, as it would increase the potential value (i.e., GDP) of products being produced, sold, and exported in the region; it would encourage local beef cattle producers to increase their output as they would be able to send their cattle to slaughter at a higher rate, increasing turnover and overall production.

Similarly, a few interviewees – primarily those associated with local government and an interest in regional economic growth – noted opportunities for value-added processing of grains in the region, such as milling, distilleries, and breweries. While interviewees did not note that the lack of value-added processing was creating a “bottleneck” for producers in the same way that cattle ranchers noted, there was a belief that the region was missing out on significant economic development opportunities by not being involved in all aspects of food production, from primary production to secondary processing and tertiary sale / service.

There is significant opportunity for taking products and processing them “down the line” – milling wheat, operating distilleries, etc. We have done a Northeast climate risk assessment, and if the calculations are current the opportunities are significant, but technology will have to change to get out in the field.

Local government representative

It is important to note, however, that these activities would result in increased labour demand for the region, without necessarily increasing labour supply. As a result, rapid expansion of these types of secondary and tertiary businesses could result in a major labour shortage for agricultural businesses in the region; the existing challenges of finding qualified labour for agricultural work due to competition from other sectors would likely be further compounded by the creation of a large number of these types of businesses without accompanying efforts to increase labour supply. Training programs offered by local institutions may be able to support or meet some of this demand for labour supply, while also helping to bolster the region’s credibility as a “hub” for agriculture. Specific training programs or areas of focus to support these secondary and tertiary industries, as noted by interviewees, include:

- Food Safe, Slaughter Safe, and other provincial credentials for the safe handling of meat products;
- Butchery and charcuterie-focused culinary programs;
- Degree programs related to brewing and distilling such as microbiology or chemistry, and brewery operations management; and
- Other trade- and sector-specific qualifications programs, as appropriate (e.g., partnering with organizations that provide cicerone testing and certifications).
It is important to note that this sector diversification and expansion, including the creation of relevant training programs, with the aim of becoming an agricultural hub in B.C., is a long-term project with likely short-term challenges in labour shortages. While over the long term, this growth could potentially support the creation of a robust and dedicated agricultural workforce, short-term challenges with finding labour to support even small expansions could create challenges and barriers for local businesses.

5.3.3  Increasing Opportunities for Greenhouse Construction and Investment

The Clarke Lake Geothermal Project, currently underway and led by Fort Nelson First Nation in Northeast B.C., will result in a geothermal-powered electricity plant capable of generating an expected 15 megawatts of electricity for the region. In addition to the electricity generated, excess heat from the project can be used to support one or more greenhouses, which Fort Nelson First Nation currently has plans to do. In addition, there are greenhouses operated by the Saulteau and West Moberly First Nations, as part of Twin Sisters Native Plant Nursery.

The Canadian Geothermal Energy Association has identified most of the Northeast B.C. region to have moderate to high potential for geothermal energy production, and the gradual winding down of natural gas extraction sites (i.e., fracking sites) as reserves are depleted offer an opportunity to make use of existing drilling and infrastructure. Making use of excess heat from geothermal operations (rather than heating and maintaining greenhouses using electricity from the electrical grid) can make greenhouse operations more affordable and financially feasible for local businesses to operate.

Additionally, expanding greenhouse operations may be an opportunity to meet local and Northern demand for fresh fruits and vegetables. Due to the short growing season in the North, and the long transport required to bring fresh produce in from southern B.C., these products can be both expensive to purchase, and less fresh by the time it reaches the consumer. Greenhouses can be used to grow in-demand produce such as tomatoes, peppers, spinach and other greens, and other produce.

Despite this opportunity to build a new subsector of agriculture, however, this research found no evidence of greenhouses being used for food production. The Twin Sisters Native Plant Nursery operates its greenhouses for horticulture purposes – propagating and growing native plants to be used for land reclamation work in the region, such as after forestry or mining operations that close down in an area. Similar plans were in place for any greenhouses that may be built by Fort Nelson First Nation – these facilities would be used to grow plants for land reclamation purposes, rather than for food production. Nonetheless, interviewees associated with these operations noted that they anticipated a demand for skilled and technical workers in horticulture, specifically for maintaining and operating greenhouse systems to support these businesses. Specific job skills and positions noted included responsibilities such as maintaining HVAC and other systems to maintain the environment within the greenhouse, applied chemistry skills related to soil testing and maintenance, and knowledge of native plant species.

5.4 Threats

5.4.1 Inability to Replace Retiring Workers

The agricultural workforce, in Northeast B.C. and throughout the province, is aging more quickly than the all-industry average, with fewer young people entering and remaining in the workforce. As discussed in Section 3 and in the more in-depth Labour Market Projections report, approximately nine of every ten new hires over the coming decade are expected to be needed to replace retiring workers; this represents a roughly 2.5% replacement rate annually.

Among respondents to our employer survey, businesses anticipated seeing retirements in the next five years at the following rates:

- 30% of businesses anticipated seeing at least one FTE retirement in a managerial role;
- 20% of businesses anticipated seeing at least one FTE retirement in a technical role; and
- 16% of businesses anticipated seeing at least one FTE retirement in a general labour role.

It is worth noting that the businesses responding to the employer survey tended to have small workforces (i.e., less than seven FTE positions), so even one FTE retirement represents a considerable proportion of their workforce. These rates of anticipated retirements were even higher among key informant interviewees; 65% of agribusiness representatives, and all “other” representatives (e.g., agricultural association representatives, local government representatives) anticipated seeing retirements in key agricultural operations roles over the next ten years.

Among agribusiness representatives, many reported that they had some form of succession planning in place, although the formality and comprehensiveness of these plans varied. In general, larger firms with more corporate structures reported comprehensive training approaches and long-term planning to train people for specific roles such as managerial and highly technical roles, while smaller owner-operator firms reported planning to leave operations to their children or grandchildren.

Despite most agribusinesses reporting that they had succession plans in place, agricultural associations and other representatives that we spoke to reported concern about the inability to replace retiring workers. Several noted that many owner-operators continue working into their 70s, due to not having anyone to buy their operation from them. This ties in with the issue noted in Section 4.2.2, that of the high cost of taking over an agricultural operation. While owner-operators may be interested in leaving an operation to their children or grandchildren, most have been self-employed for the vast majority of their working career and therefore must rely on the sale of their business to fund their retirement; if would-be recipients of the operation do not have the means to purchase the operation, current owners must either continue to work, or seek out alternative buyers such as larger corporate farming operations with an interest in expanding their land base.

Overall, the next ten years in agriculture in the region are likely to see continued aging of the workforce, retirements from high-level roles such as managers and owner-operators, and some challenges in filling these roles. Without sufficient supports and strategies to address
this challenge, this may compound already-existing challenges in finding qualified staff for various agricultural roles, as well as insufficient numbers of young people joining the agricultural workforce (discussed above in Section 4.2). These labour shortages may result in a variety of negative impacts on the sector, including decreased productivity, the loss of small and medium sized operations to sale to larger corporations, and potentially the loss of agricultural land entirely, resulting in reduced agricultural outputs overall.

5.4.2 Inability to Recruit Qualified Workers to Meet Growth Demands

Similar to the challenge of recruiting sufficient workers to replace retirements from the workforce in the region, there is also a threat of being unable to source sufficient labour for the agricultural workforce to meet growth demands for the sector. Our labour market projections anticipate between 2.8% annual growth (baseline projection) and 8.0% annual growth (optimistic projection) over the next five years in the sector; this translates to between 68 and 184 new FTE positions by 2026.

As noted in Section 4.2, attracting workers to the agricultural sector has been challenging due to strong labour competition from other industries in the region that are able to pay much higher wages (i.e., oil and gas). These challenges are likely to be compounded as growth in the agricultural sector creates more demand for workers. Further, as noted by many interviewees from agricultural operations, there is a need for skilled and technical positions for which there are limited training opportunities in the region. These types of positions include: butchery and meat processing work; agrology, soil mapping, and other applied sciences knowledge to support agricultural seeding and growth; and mechanical and technical skills to support maintenance of specialized agricultural equipment, including on-board computerized systems such as GIS technology for applications like precision fertilizing and self-steering equipment.

Inability to meet labour demands due to growth in the sector may result in decreased productivity of agricultural land, challenges for the region to compete in national and international markets due to the inability to take advantage of technological innovation to lower costs and/or increase yields, and challenges in growing the agricultural sector in the region to make up a larger proportion of the region’s overall economic profile and GDP.
6. **RECOMMENDATIONS**

6.1 **Anticipate Considerable Hiring Needs for Agriculture in Northeast B.C.**

Between sector growth projections and high anticipated numbers of retirements, the agricultural sector in Northeast B.C. will likely see high demand for labour over the coming decade. Among replacement hires, a large number of these positions will be in managerial, and skilled and technical, positions, while sector growth hires will see labour demand across all types of positions (managerial, skilled / technical, and general labour).

This increase in demand for labour in the sector will likely result in labour shortages in agriculture, due to difficulty recruiting for the sector in a region that is so heavily dominated by higher-paying industries such as oil and gas extraction. Given that the presence of these industries is not expected to see any severe declines in the region over the next decade, approaches to addressing labour demands should anticipate continued challenges in hiring needed positions. Some specific suggested strategies and approaches are discussed in the following sections.

6.2 **Explore Opportunities to Expose Young People to Agriculture**

As noted previously in this report, there is considerable overlap in needed positions and skillsets among agricultural work, and work in other sectors such as oil and gas. Some of these overlaps include Class 1 drivers’ licenses, soil testing and applied chemistry or geography knowledge, heavy duty mechanics and equipment operators, and trades skills such as welding. As such, there may be opportunities to increase young workers’ exposure to agricultural work during their training and education through work placement and co-op training opportunities. Further, there may be opportunities to encourage workers with these skills to work in agriculture on a part-time or casual basis each year, to meet seasonal demands and help build a skilled workforce with exposure and experience in agriculture in the region.

6.3 **Promote Agriculture as a Lifestyle to Young People**

Attraction, recruitment, and retention of young people to agriculture is challenging due to, as noted, wage disparities between agriculture and other natural resource sectors in Northeast B.C. Despite this, there are other benefits to agricultural careers that may be uniquely appealing to young people considering their career options, and may be effective in attracting young people dedicated to a long-term career in the sector.

Current movements towards more eco-conscious and sustainable agricultural practices are in alignment with cultural trends and an increasing awareness of climate change among young people. Many youth are seeking careers where they can contribute to combating or mitigating climate change. Agriculture is well-placed in the region in this regard, as it is one of the sectors that aligns with these values.

Agricultural careers also offer other values-based benefits to young people, such as the opportunity to work outdoors, to work with one’s hands, to have work-life balance, to contribute to feeding one’s community and supporting local food security, and in the case of owner-operators, to be one’s own boss. These aspects of an agricultural career can be appealing to people with strong values for their career outside of its financial benefits.
Overall, promoting agricultural careers based on the lifestyle and values that it can offer in the long term may be an opportunity to attract young people to the sector. While this approach does not attempt to compete with other sectors in the region based on financial compensation, it may be effective in reaching young people who are seeking more from their careers than just high earnings, and therefore may be effective in recruiting long-term workers to the sector who stay for more reasons than just how much money they can earn.

This recommendation may be most effectively taken up by local agricultural associations such as 4-H clubs and industry associations (e.g., Organic Council, Cattlemen’s Association, others). Additional support for this effort may be found through collaboration with the BC Ministry for Advanced Education and Skills Training (e.g., including agricultural careers in the Find Your Fit Tour, promoting agricultural careers on the WorkBC website, etc.).

6.4 Explore Opportunities to Provide Training Locally

While there are a number of job skills and qualifications that are applicable to both natural resources industries and agriculture (as described above), there are also agriculture-specific skills that are not trained locally. Some of these skills and education include animal husbandry practices, soil management for various crops, and business skills required to operate an agricultural operation (e.g., direct marketing practices). Currently, there are no opportunities to receive this education within the Northeast region, and youth looking for this type of training must either go to Alberta, or the Okanagan region of B.C. to attend agricultural college programs. This can be a disincentive for youth to pursue education in this field, and among those that do leave the region for this training, they may not return to apply their skills and knowledge in Northeast B.C.

Further, anticipated growth in the agricultural sector with expansion in value-added industries (e.g., meat processing, brewing) will require workers with relevant training and qualifications such as Food Safe, Slaughter Safe, culinary training in butchery and charcuterie, and degrees and diplomas in programs such as microbiology, chemistry, and food production management and operations.

There is an opportunity for local post-secondary institutions to fill this gap in available training and education, and support the growth of the agriculture sector in the region by ensuring a supply of skilled workers in the region. While further consultation with local agribusinesses and associations may be necessary to better estimate demand for specific programs and develop business cases for programs, some opportunities to offer more training in the region may include:

- Partnering with existing agricultural training programs to deliver training at one of Northern Lights College's campuses, or through a mix of online and hands-on learning at these campuses;
- Partnering with other accrediting organizations and bodies to support industry-specific training, such as agriculture-specific heavy duty mechanics training; and/or
- Introducing new programs and training courses at Northern Lights College to meet demand for agriculture-specific skills (e.g., animal husbandry courses, agronomy-focused programs).
6.5 Explore Opportunities to Diversify the Sector

6.5.1 Greenhouse Operations

Given the region’s natural resources making large swaths suitable for geothermal electricity generation, as well as existing workforce skills and site infrastructure supporting drilling and construction, geothermal electricity generation represents a major opportunity for many communities throughout the region over the coming decades. Related to these types of operations, greenhouses can be built that make use of excess heat generated by geothermal electricity operations. Greenhouses can then be used for agricultural operations, specifically the growing of fresh fruits and vegetables that otherwise could not be grown in the natural climate of Northeast B.C.

However, it should be noted that some greenhouses do currently exist in the region, or are planned, but focus on horticulture rather than agriculture. Specifically, these operations are focusing on propagating and growing native plant species for use in land reclamation and renewal following the closure of mine sites and forestry operations. It is likely that the income generated by providing these services for natural resource operations is higher than that which could be generated by agriculture, as natural resource operations generally have higher revenues as well as legal obligations to engage in land reclamation activities following the closure of a site. Therefore, while greenhouses may represent an opportunity to meet local demand for fresh produce, individuals and organizations considering investment in greenhouses may see greater value in using these facilities for non-food production purposes in the short- to medium- term, as demand for land reclamation services continues in the region.

6.5.2 Secondary and Value-Added Processing of Agricultural Products

While Northeast B.C. is a major producer of both grains and beef cattle for the province, and nationally, it does not have many of the secondary and value-added processing available for these agricultural products within the region. Additional processing of agricultural products adds value to the product, generating additional revenue for local businesses, increasing GDP for the region, and retaining a greater portion of the value generated by finished products within the region. For grain products, secondary and value-added processing noted by interviewees included milling, brewing, and distilling (and associated tertiary and service-oriented industries such as bakeries, bars and pubs operating at craft breweries, etc.). Currently a small number of craft breweries exist in the region, but several interviewees felt there were opportunities for more; in addition, no mills exist in the region for processing of grain crops. These types of operations represent opportunities to build out the grains subsector of agriculture in the region.

Nearly all of the ranchers that participated in an interview, as well as several other interviewees from other stakeholder groups such as local government representatives, raised the need for greater slaughtering capacity in the region for beef cattle. While interviewees were able to articulate clear and compelling reasons for this change – increasing the value of products created in the region, creating products that are more cost-competitive with beef from other regions, and some producers feeling constrained from producing as much as they could due to lack of slaughter capacity – there were a number of logistical and political challenges to this proposal, including the then-existing Class A through E system of licensing slaughter facilities and requirements for slaughtering for sale.
In the Summer of 2021, a new system for licensing slaughter facilities in BC was introduced, with just three licenses – Farmgate, Farmgate Plus, and Abbatoir. While there are many areas of overlap between the old licenses and the new ones (e.g., Class D and E facilities under the old system, and Farmgate Plus under the new system, were limited to slaughtering a maximum of 25 animal units per year), there are some differences. Most notably, Farmgate Plus licenses will be allowed throughout the province rather than in specific regions, and on-farm slaughter will now be allowed throughout all of BC under a Farmgate license. These changes appear to address the constraints placed on animal producers in Northeast BC and make slaughter more accessible, however these changes were made after data collection for this project had completed. This report cannot comment on whether these changes have had the desired impact of increasing slaughter capacity in the region, or the effects that these changes may have on animal producers’ operations.

In addition to slaughter capacity issues related to licensing, it is important to note that interviewees noted that hiring and retaining labour to operate these facilities can be challenging, due to the emotionally challenging nature of the work as well as the physicality and skill required to break down whole animals. As noted previously in this report, increasing the facilities and businesses in Northeast B.C. that engage in agricultural production and processing will not directly address labour supply issues (the focus of this report), and may in the short term even exacerbate labour shortages and make sector growth more challenging for investors.