Multi-Year Development Options for Yukon Agriculture

2023

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*This is a consultants' report and the Government of Yukon is not bound to implement any of its recommendations.

Acronyms

AAFC	Agriculture and Agri-Food Canada
BMPs	Beneficial Management Practices
CanNor	Canadian Northern Economic Development Agency
CAP	Canadian Agricultural Partnership
EFP	Environmental Farm Plan
GoOFY	Growers of Organic Food Yukon
MYDO	Multi-Year Development Options
NAICS	North American Industry Classification System
NICI	Northern Isolated Community Initiatives Fund
NGOs	Non-Governmental Organizations
Sustainable CAP	Sustainable Canadian Agricultural Partnership
SWOT	Strengths Weaknesses Opportunities Threats
YAA	Yukon Agricultural Association

Table of Contents

Table of Tables

Table of Figures

Executive Summary

Introduction

This updated Multi-Year Development Options (MYDO) for Yukon Agriculture report captures the present state of Yukon's agriculture and agri-food industry, and provides a well-researched, realistic vision and road map for future sector development. The MYDO report can serve as a guiding document to inform both private and public investment in Yukon's agriculture and agri-food industry. The MYDO report is intended to be relevant and useful for Yukon First Nations, territorial, federal and municipal governments, investors, the agriculture and agri-food industry—including producers, processors and retailers, and non-governmental organizations (NGOs) that intersect with the agriculture and food sector.

The population of Yukon is growing along with the demand for locally produced foods which provides opportunities for sector growth. However, growth of the agriculture and agri-food sector faces several challenges, including labour shortages, high costs of inputs, limited processing and distribution infrastructure, and the impacts of climate change on growing conditions. The MYDO report articulates clear goals and actions to address sector challenges and support sector growth and development.

To develop the MYDO report, engagement, background research and key theme development was completed throughout 2022. Engagement during the process was vital in ensuring that the key themes and recommendations represent the needs of the agri-food industry now and into the future. Engagement activities included: attending conferences; facilitating focus group sessions with producers and government staff; conducting over 50 interviews with Yukon First Nations, farmers, ranchers, industry associations, food retailers, food processors and government representatives; and conducting over 25 in-person site visits to Yukon First Nations communities and farms in the vicinity of Whitehorse, Lake Laberge, Carcross, Tagish, Marsh Lake, Dawson City and Mayo.

Results from background research and analysis were aligned with the engagement results to provide an overview of the industry and determine what is working well and what limitations and opportunities exist. The information gathered provides the rationale for the key themes, goals and recommended actions of the MYDO report.

Overview of Yukon Agriculture Sector

Yukon's agriculture and agri-food sector is diverse with a wide variety of crops and livestock produced for the domestic market. Over 6,000 hectares (ha) (15,000 acres) of land is used for farming.[1] Sectors that have seen a substantial increase in growth since 2011 include the red meat, white meat and egg sectors. Top crops produced include potatoes, carrots, beets, cabbage, Haskap berries and greenhouse grown tomatoes, cucumbers, peppers and herbs. Recently, there has been an increase in production of

[1] Statistics Canada. 2021. Census of Agriculture.

new Yukon products, including grain for human consumption and dairy milk. There are numerous businesses producing value-added products from Yukon grown and raised ingredients such as wines, jams, cheeses, meat products (sausages, jerky, bacon), syrups, and dehydrated fruits and vegetables. Products are sold primarily directly to consumers; however, producers are increasingly selling to retail stores, restaurants and institutions through the Government of Yukon local food standing offer arrangement (Local Food SOA); under this pilot procurement program a distributor was contracted to work with local producers to offer local products for sale to Yukon government grocery purchasers.

Yukon First Nations communities throughout the territory are participating and engaged in growing food. A majority of these endeavours focus on providing food security and meeting health and wellness goals for community members, as well as providing jobs and skills training, and deriving economic returns is often considered a secondary goal. Agriculture and agri-food initiatives in Yukon First Nations communities include teaching farms, community gardens, and market gardens producing a variety of fruits and vegetables and raising livestock.

Approach

The development of the MYDO report goals and recommendations were approached through the following lenses:

Truth and Reconciliation: The implementation of recommendations in the MYDO report should support reconciliation actions with Yukon First Nations across the territory. The Government of Yukon consults with Yukon First Nations governments to make decisions that are fair and well informed and that reflect Final Agreements. Consultation helps the Government of Yukon understand and include Yukon First Nations governments' views and interests, strengthens cooperation and collaboration and improves understanding as to how decisions can impact Aboriginal or treaty rights.

Climate Change Adaptation and Mitigation: Growth in the agriculture sector must occur in an environmentally, economically and socially sustainable manner. Supporting farming practices that mitigate climate change and protect the environment to support greenhouse gas (GHG) emission reductions are high priority.

Communication, Collaboration, and Partnership: Collaboration and partnerships with Yukon First Nations and all other levels of governments, the agriculture and agri-food industry and the public will be necessary to achieve the recommendations set forth in the MYDO report.

Innovation and Technology: Investments in science, technology, and innovation are crucial to addressing key challenges and opportunities, including the growth of value-added agriculture and agri-food products.

Agricultural Sector Themes

The MYDO report includes a total of 25 goals and 64 recommended actions to grow the sector. These are presented in the following 11 themes:

Industry-wide:

A) Business Planning and Development
B) Equipment and Infrastructure
C) Labour and Skills Development
D) Marketing, Branding, and Sales Channels
E) Environmentally Beneficial Management Practices

Sector-specific:

F) Livestock & Poultry Sectors
G) Egg Sector
H) Hay, Feed & Grain Sectors
I) Vegetables, Fruit & Berry Sectors
J) Dairy Sector
K) Emerging Sectors

For each of the 64 recommended actions, the MYDO report identifies key actors to support the actions, the action potential for impact and timeline for completion. For successful growth of the sector the following key actors are identified and will need to collaborate and take initiative in implementing the actions as relevant:

- Governments (may be Yukon First Nations, federal, territorial and/or municipal);
- Yukon First Nations communities across the territory;
- Industry (i.e., producers and food processors;)
- Non-governmental organizations (NGOs);
- Educational institutions; and,
- Others (other organizations and businesses such as private consultants, commercial and institutional food buyers, and others).

Recommendations with High Potential for Impact

Of the 64 MYDO report recommendations, about a third are deemed to have high potential impact for facilitating the growth of Yukon's agricultural sector. These recommendations are deemed to have high potential based on the understanding of the sector gained from research and engagement conducted during the development of the MYDO report. Each recommended action is given a ranking of 'potential for impact' to grow the industry along with a suggested timeline for completion. The rankings are based on the understanding of the sector gained from research and engagement conducted by the consulting team during the development of the MYDO report. The potential for impact ratings may not be applicable to individual farms or business decisions but are important for the overall growth of the industry as a whole when taking a broader sector view.

Recommendations are more fully described in the report and summarized below.

Equipment and Infrastructure Recommendations

- Create a Yukon-wide online platform for producers and processors that will enable them to indicate the location, product type and amount available for aggregation and distribution and connect with other producers, distributors and buyers. This will level online opportunities for producers and processors across the entire territory, rather than focusing on the Whitehorse area.
- Identify key partnerships needed to build a brick-and-mortar multi-user shared facility in Whitehorse that includes aggregation, co-packing, processing and a distribution facility. Refer to past feasibility studies for lessons learned.
- Invest in regional aggregation spaces, such as warehouses with cold and dry storage, in small remote communities. This may also require investing in on-farm cold storage to support the wider regional networks. This step will serve to increase production capacity and lengthen the season of product availability in communities outside of Whitehorse.

Labour and Skill Development Recommendations

- Provide an online matching service to connect those interested in working in Yukon agriculture with existing farms and/or Yukon First Nations agriculture and food initiatives. This will help to close the gap that currently exists for seasonal on-farm labour particularly on vegetable farms, market gardens, and mixed farms.
- Explore an Indigenous Trades Accreditation program. This step will provide an opportunity to develop a Yukon First Nations-based pool or skilled individuals who can work on farms and other agricultural-related businesses in communities across the territory while receiving meaningful trades credits.

Marketing, Branding and Sales Channels Recommendations

- Review and adapt the Government of Yukon pilot local food procurement project (Local SOA) to meet the needs of both purchasers and producers.
- Provide information to producers and purchasers on supplying commercial and institutional buyers (e.g. mining camps, airlines, hospitals, schools and nutrition programs) with locally produced vegetables, eggs, meats and other products. This will allow lessons to be learned about how best to open the door to a potentially significant client base for local food products.
- Establish a committee or working group to assess and review the current approach to marketing and branding Yukon products. Based on the assessment, develop a strategic plan for aligning existing marketing opportunities to ensure a broad level of participation by Yukon farmers and food processors. This will reduce confusion for both industry (producer/processor) and consumers, and help to ensure that marketing and communication efforts are met with greater sales of local products.

Environmental Beneficial Management Practices Recommendations

- Expand available options for advisory services for farms that have not yet completed an Environmental Farm Plan (EFP). This will help to ensure that

farms are well-positioned to conduct agricultural activities in a sustainable manner, while also providing a basis for future funding opportunities, as many government funding programs require the EFP to have been completed.
- Ensure the EFP program is aligned with Beneficial Management Practices (BMPs) for northern environments, including climate change adaptation and mitigation approaches. This will create more resilient farm businesses.
- For new agricultural land development, require that an EFP "pre-farm" screening occur, so that a plan for the future farm site can be created and BMPs for clearing land in farm plans can be implemented. This will ensure that new farmland is developed in a sustainable manner, which will have long term benefits for the resiliency of both the farm itself and its surrounding environment.

Livestock and Poultry Sectors Recommendations

- Provide consistent slaughter services throughout the territory. This may include a mobile abattoir for use in northern communities, additional poultry processing, and a fixed abattoir in Whitehorse. These investments will ensure that important services are available throughout the territory and will reduce seasonal bottlenecks that exist around meat processing. It will further invigorate the sector by opening the door to new livestock and poultry producers, and/or allow current producers to expand their production levels.
- Provide training opportunities for Yukoners to become skilled in slaughter and butchering (e.g., in-person and online courses on food safety, tools and equipment, carcass management, etc.). This will reduce the vulnerability of the meat processing sector by increasing availability of local skilled workers.
- Increase availability of veterinarians available for farm visits or video calls. This will improve the overall productivity of the livestock and poultry sector and lead to better herd and flock health and business decisions.
- In consultation with industry, Yukon First Nations and Yukon government departments, review the Sheep and Goat Control Order to evaluate the effectiveness and impacts to the domestic livestock sector growth. This will provide additional direction and clarity for the sheep and goat sector to support sound business decisions regarding individual operations.

Egg Sector Recommendations

- Invest in additional federally licensed egg grading facilities that could accommodate multiple egg producers and certified organic eggs. This will support the conditions for more egg producers to be able to sell their products beyond the farm gate.

Hay, Feed and Grain Sectors Recommendations

- Develop local expertise and extension services specifically focused on hay, feed and grain along with investment in yield growth. This will ensure that the sector can grow alongside demand for these local products and help to solve the increasing risk of livestock producers not being able to source local feed. Examples of investment may include soil fertility and irrigation support.

Vegetable, Fruit and Berry Sectors Recommendations

- Invest in greenhouses, season extension infrastructure, irrigation equipment and a cold/frozen food storage facility. This will help to provide products for consumers across a wider window of time throughout the year and will also ensure greater yield consistency so that contract sales with commercial/institutional buyers can be more viable options.
- Invest in greenhouse nursery operations/farms for the cultivation of fruit trees, berries and other northern varieties of fruits for the local agricultural market. This will enable local producers to capture a greater market share of fruit consumption.

Dairy Sector Recommendations

- Provide support to existing operators and new entrants through stable veterinarian support, dairy specialists, extension services, equipment servicing and regulatory guidance. This will help to cultivate this fledgling sector and meet the demand for local dairy products.

Figure 1. Greenhouse structure at Carcross/Tagish First Nation.

Introduction

This updated Multi-Year Development Options report (MYDO) for Yukon Agriculture has been developed to capture the present state of the agriculture and agri-food industry in Yukon and provide a well-researched road map for future sector development. The MYDO report will serve as a guiding document to inform both private and public investment in the Yukon's agriculture and agri-food industry. The MYDO report is intended to be relevant and useful for Yukon First Nations, territorial, federal and municipal governments, investors, the agriculture and agri-food industry, including producers, processors and retailers, and non-governmental organizations (NGOs) that intersect with the agriculture and food sector. Yukon's agriculture and agri-food industry is dynamic and as such, the information and recommendations within the MYDO report are subject to the changing conditions, risks and factors that consistently intersect with the sector. The information and recommendations proposed herein are put forward for the various key actors in the sector to use at their own discretion when making decisions about business, investments, funding programs, and other agri-sector initiatives.

It has been over 15 years since the 2008 Multi-Year Development Plan was completed; this set strategies for industry-wide issues and focused on routes to growth across all agricultural sectors between 2008-2012. Since that time, Yukon has seen significant change in its agriculture sector, including a substantial increase in livestock production, greater area in crop production and availability of value-added products, new non-soil-based food production, and expansion of agriculture and agri-food initiatives undertaken by Yukon First Nations communities. With this expansion of the industry, new challenges and opportunities have arisen that require collaboration between many actors. Additionally, the COVID-19 pandemic and climate change-related extreme weather events have highlighted the fragility of supply chains in the North, pointing to the need for increased self-sufficiency and reduced reliance on imports to feed Yukoners.

In 2020, the Government of Yukon approved a guiding policy document, *Cultivating Our Future: 2020 Yukon Agriculture Policy,* that set a vision, objectives and targets to create the right conditions for a growing agriculture and agri-food industry.[2] Following the creation of *Cultivating Our Future,* a need arose to prioritize implementation of policy commitments and guide negotiations around the next cost-shared agriculture funding program with the Government of Canada.

The Government of Yukon also developed *Our Clean Future* in 2020, in partnership with Yukon First Nations, transboundary Indigenous groups and Yukon municipalities.[3] The strategy was the result of over three years of engagement. During this time, a vision statement and set of values were developed and areas to focus on over the next ten years were prioritized to respond to climate change. As a result of

[2] Government of Yukon. Cultivating our Future: 2020 Yukon Agriculture Policy. 2020.
[3] Government of Yukon. Our Clean Future: A Yukon strategy for climate change, energy and a green economy. 2020.

this collaborative process, the strategy reflects multiple perspectives, worldviews and ideas.

The process of developing this MYDO report was informed by these prior reports and strategies and the Government of Yukon's discussions with the Federal Government regarding the new 2023-2028 Sustainable Canadian Agricultural Partnership (Sustainable CAP). Sustainable CAP is a five-year funding agreement between federal, provincial, and territorial governments. The new MYDO report complements *Cultivating our Future* and *Our Clean Future* and will help to prioritize the implementation of policy commitments. It may also be used to inform investments under CanNor's recently renewed Northern Isolated Communities Initiative fund.

MYDO Report Structure

Section 1: A description of the process and approach for the development of the MYDO report.

Section 2: A brief overview of Yukon's agriculture and agri-food industry, including Yukon First Nations agricultural initiatives.

Section 3: Identification of key themes, along with opportunities, challenges, and goals and recommended actions for the industry as whole and for each sector. For each action, the potential for impact, timeline for implementation and key actors involved in the success of implementation are described.

Figure 2. Cattle farm in the Ibex Valley.

Section 1: MYDO Report Process and Approach

Process

The MYDO report was guided by the following three objectives:

1) Develop an overview of current agriculture and food production in the Yukon.
2) Assess the market capacity by commodity.
3) Identify economic development opportunities and key limitations that provide direction for the future development of Yukon's agriculture and food sector.

To achieve the objectives and develop the MYDO report, the following methodology was undertaken:

- Engagement;
- Background research and analysis; and
- Key theme development including an identification of what's working, opportunities, challenges, and recommendations.

Engagement

The MYDO report engagement was separate, but in parallel, to work being undertaken during the same timeframe through *Engage Yukon* by the Government of Yukon Agriculture Branch to seek input into the development of the next cost-shared agricultural funding program (Sustainable CAP). The *Engage Yukon* work centered around producers' experience with the Canadian Agricultural Partnership (CAP) funding program and identification of funding priority areas.

A Steering Committee was established to guide the development of the MYDO report. Members included representatives from the Government of Yukon Agriculture Branch, Agriculture and Agri-Food Canada (AAFC), and the Canadian Northern Economic Development Agency (CanNor). Five meetings with the Steering Committee took place during the development of the MYDO report. The meetings served as an opportunity to discuss the engagement strategy, initial engagement results, and to obtain clear directions on project goals and objectives.

Engagement during the MYDO report process was vital in ensuring that key themes and recommendations represent the needs of the agri-food industry now and into the future. Engagement activities were completed between February and September 2022 to connect with stakeholders from the agriculture and agri-food sector including Yukon First Nations communities.

Engagement activities included:

- Attending the 2022 North of 60 Agriculture Conference;
- Attending the 2022 First Nations Agriculture Forum;
- Facilitating two focus group sessions: one with Government of Yukon Agriculture Branch staff and one with organic producers;

- Conducting over 50 interviews with Yukon First Nations, representatives of other governments, farmers, ranchers, industry associations, food retailers and food processors; and
- Conducting over 25 in-person meetings including meetings with Yukon First Nations communities, and farm tours in the vicinity of Whitehorse, Lake Laberge, Carcross, Tagish, Marsh Lake, Dawson City and Mayo.

Appendix A provides more details about engagement activities.

Background Research and Analysis

Background research and analysis was conducted to understand the context within which Yukon agriculture is situated. This included gathering information related to population, geography, biophysical conditions for agricultural production, agricultural services available in the territory, and current government programs that support the sector. A variety of secondary resources were used such as reports from the Government of Yukon Agriculture Branch, data from the Yukon Agricultural Association and the 2021 Statistics Canada Census of Agriculture. From this secondary research, a profile of the current state of agriculture was created along with a market capacity assessment to identify opportunities for expanding the market share of Yukon products into the local market. The list of key reports consulted is provided in Appendix B.

Key Theme Development: Limitations, Opportunities, and Recommendations

Background research and analysis results were aligned with the engagement results to provide an overview of the industry, as well as each sector, and inform a SWOT analysis (Strengths, Weaknesses, Opportunities, and Threats) and key theme development. The information gathered provides the rationale for the goals and recommended actions of the MYDO report.

Approach

The goals and recommendations are approached through the following lenses, many of which support related policies and strategies, such as the Government of Yukon's *Our Clean Future* and *Cultivating Our Future*.

Truth and Reconciliation
Reconciliation goes beyond policy documents, and government relations must start and end with positive personal relationships. The implementation of any of the recommendations in the MYDO report should be approached through the lens of supporting reconciliation actions within the context of the MYDO report. This includes acknowledging the unique spiritual relationship that Indigenous peoples have with the land, through strong action on climate change and building community food security. It is recognized that agricultural and food security initiatives undertaken by Yukon First Nations communities may weigh health, wellness and job creation

outcomes over and above profitability. Self-determination aims to be strengthened between Indigenous and non-Indigenous governments, organizations, and individuals through open communication and partnerships. The Government of Yukon consults with Yukon First Nations governments to make decisions that are fair and well informed and that reflect Final Agreements, which are constitutionally-protected treaties established for 11 of the 14 Yukon First Nations. Additional Self-Government Agreements define Yukon First Nations' self-government powers including law-making, taxation, and programs and services. Consultation helps the Government of Yukon understand and include Yukon First Nations governments' views and interests, strengthens cooperation and collaboration and improves understanding as to how decisions can impact Aboriginal or treaty rights.

Climate Change Adaptation and Mitigation

Growth in the agriculture sector must occur in an environmentally, economically and socially sustainable manner. Supporting farming practices that mitigate climate change and protect the environment to support GHG emission reductions are high priority, while ensuring the long-term economic resiliency of the sector. Resiliency will be achieved, in part, by becoming adaptive to climate change impacts, which continue to be acutely felt in the Yukon. It is projected that temperatures will rise by more than 2°C, accompanied by a 10 per cent-20 per cent per cent increase in precipitation over the next 50 years.[4] Precipitation is expected to increase in summer months, and snow fall is projected to come later in the fall. There will be more variability and uncertainty in temperature and precipitation patterns throughout the year. The effects of climate change have already been noted in Yukon First Nations communities which are reliant on traditional food sources; these include impacts on the ability to predict weather, and to safely travel across ice, as well as challenging the reliability of historic trapping and hunting locations and routes.[5] The projected changing weather and climate patterns will mean an increased potential for food production in the Yukon; however, extreme weather events and other impacts, such as melting permafrost, will cause challenges to the sector including disruptions to the supply chain. These factors underscore the need to invest in a hyper-regionalized agriculture and agri-food system for Yukon.

Communication, Collaboration, and Partnership

Collaboration and partnerships are the underlying threads through all of the goals and recommendations within the MYDO report. Collaboration with Yukon First Nations, all other levels of governments, the agriculture and agri-food industry, and the public will be necessary to achieve the recommendations. When possible, coordinating and partnering to implement the recommendations will increase the chance of successful sector development and information and capacity-building will empower all governments, organizations, businesses and individuals to participate in the agricultural sector.

[4] Yukon 'State of Play': Analysis of Climate Change Impacts and Adaptation, 2017. Research Northwest and Morrison Hershfield.

[5] The Impacts of Climate Change on Traditional and Local Food Consumption in the Yukon. Sheedy, A. 2018. Arctic Institute of Community-Based Research.

Innovation and Technology

Investments in science, technology, and innovation are crucial to addressing key challenges and opportunities, including the growth of value-added agriculture and agri-food products. In addition to Sustainable CAP, investment support is provided by key organizations, such as CanNor and Yukon University, to contribute strategic and targeted opportunities to advance innovation and technology at a rate and scale that is appropriate for Yukon's agricultural sector. Notably, CanNor's recently renewed NICI fund supports community-led projects for local and Indigenous food production systems, with an emphasis on innovative and practical solutions to support food security across the territories. Lending agencies, such as Farm Credit Canada, can provide financing for the adoption of new environmental technologies.[6] Ensuring the Yukon agriculture sector is supported with these investment tools will help to foster the conditions for long-term economic prosperity by strengthening the sector and allowing Yukon farmers, ranchers, food processors and food system leaders to take advantage of emerging technologies.

Figure 3. indoor growing system in Whitehorse.

[6] Farm Credit Canada: Environmental Solutions. Accessed March 2023.

Section 2: Overview of the Yukon's Agriculture and Agri-food Industry

Conventional agriculture has been part of the Yukon landscape for over a century, co-existing alongside traditional wild harvesting, hunting and fishing practices of Yukon First Nations communities. Farming in northern Canada brings a unique set of obstacles and challenges, as well as opportunities, and has been met with the innovative and self-reliant Yukon spirit. The public's awareness around the importance of locally produced food for feeding Yukoners has been on the rise in recent years and the local agriculture industry continues to expand to meet a growing consumer demand. This section provides an overview of sector trends within Yukon First Nations communities and the agriculture and agri-food industry.

Yukon First Nations Agriculture Initiatives

Yukon First Nations communities throughout the territory are participating and engaged in growing food. At the forefront of the majority of these endeavours is the desire to provide food security and meet health and wellness goals for community members, as well as provide jobs and skills training. Embarking on agricultural initiatives for the development of economic returns is often considered a secondary goal. Agriculture and agri-food initiatives occurring in Yukon First Nations communities include the development of teaching farms, community gardens, and market gardens. Yukon First Nations communities are producing fruits, vegetables and raising livestock to feed their community. In some cases, surplus products are sold to nearby consumers. A common challenge for increasing agricultural activities within Yukon First Nations communities, particularly those that are located in rural and remote areas, is often a lack of a champion, project leader or farm manager.[7] This tends to be a greater challenge than securing funding, undergoing business planning and/or building community support for the project. Many Yukon First Nations communities have developed infrastructure for production and processing; therefore opportunities exist to foster awareness of the socio-cultural benefits of local food production. Opportunities exist for further collaboration between Yukon First Nations communities and the Yukon agricultural industry more broadly, to support one another in areas such as investing in shared equipment, egg grading, and food processing infrastructure.

Yukon Agricultural Land Access

A 2015 study completed by the Institute for Sustainable Food Systems identified that Yukon could reach a maximum of 75 per cent of food self-reliance through local production, based on land availability and soil classifications.[8] There are two ways a producer can acquire agricultural land in Yukon through traditional land sales, or

[7] Findings from MYDO report engagement with Yukon First Nations agricultural stakeholders in 2022.
[8] Institute for Sustainable Food Systems. Yukon Food System Design and Planning Project: Foundational Food System Design. 2015.

through the Government of Yukon Agricultural Land Programs.[9] There are two types of Agricultural Land Programs: the Spot Land Program, and the Planned Land Program. The Spot Land Program applies to land which is more than 100 km from a municipality, 6 to 65 ha in size, and considered adequate for farming based on a series of climatic and geographic considerations. The Planned Land Program applies to land that is within 100 km of a municipality and is pre-determined by the Agriculture Branch.

According to the 2021 Census of Agriculture, 60 per cent of farmland was owned, and 36 per cent was leased, mostly from government (Crown land) (Table 1). Lease options were identified in *Cultivating Our Future* as an option to address the demand for low-cost land for some types of agricultural activities such as developing animal feed, growing hay, expanding pasture areas, or game farming. While leased land provides a good entry point for agricultural business development, when a producer is not listed on title, it affects their ability to seek out loans and other financing opportunities because the lending agencies require security in the form of land ownership.

Table 1. Land tenure in Yukon in hectares.[10]

	2011		**2016**		**2021**	
	2011	%	2016	%	2021	%
Total farm area (ha)	10,646	100%	10,330	100%	6,697	100%
Area owned (ha)	7,606	71%	6,421	62%	4,002	60%
Leased from governments (ha)	2,688	25%	3,571	34%	2,100	31%
Rented or leased from others (ha)	x	x	237	2%	287	4%

Note: In 2021, only farms that report expenses or revenues to the CRA are captured in the Census of Agriculture. Previously, all operations with an intent to sell were included.

The Agricultural Land Programs have been successful over the years in creating opportunities for new entrants to gain access to land. Since 1999 there have been 405 Agricultural Land program applications received, 9 of which were filed in 2021, 9 in 2022, and 7 in 2023.[11] However, acquiring land through Agricultural Land Programs is a slow process and it is not clear whether the programs are helping to adequately meet the needs of a growing industry, either in terms of the amount of land being cleared annually, or via the longer term use of the land for food production vs. other uses.

It is anticipated that the Government of Yukon will continue to work towards the commitments identified in the *Cultivating Our Future* report, namely that:

- Areas suitable for agricultural development will continue to be identified and priority planning will occur in consultation with Yukon First Nations;
- Agricultural parcels will be developed for lease to accommodate wide-ranging agricultural production uses;

[9] Yukon Agricultural Association. Frequently Asked Questions.
[10] Statistics Canada, Census of Agriculture. 2011, 2016. 2021.
[11] Government of Yukon. Land applications.

- Environmentally sustainable practices will be promoted during land clearing;
- Agricultural land will be prevented from being re-zoned to other land use designations; and,
- Owners of idle agricultural land will be encouraged to bring parcels back into production through extension services and funding.

The Agricultural Land Programs would benefit from evaluation to ensure that they are meeting Government of Yukon policy objectives, specifically regarding the application process, land use, clearing methods, and First Nations involvement. Yukon First Nations are the largest land holders, particularly around larger Yukon communities, and opportunities exist for co-ordinating on agricultural land development plans. First Nations community leaders are eager to remain engaged in future policy discussions regarding goals for agricultural land access.[12]

Yukon Agriculture and Agri-Food Trends

Yukon's agriculture and agri-food sector is diverse. A wide variety of crops and livestock are produced for the domestic market. The 2021 Census of Agriculture reported over 6,000 hectares (ha) (15,000 acres) in total farm area.[13] Yukon has a strong culture of homesteading and hobby farming, raising livestock and growing food for personal consumption and to local markets, and selling or trading products with friends and neighbours.

Farm Size

The exact number of farms producing agricultural products for sale and personal consumption is difficult to determine. In the 2021 Census of Agriculture, 88 farms reported expenses and/or revenues to the Canadian Revenue Agency (CRA). In 2016, Statistics Canada captured data for 142 agricultural operations that had the intent to sell products during that calendar year. In 2021, only farms that reported expenses or revenues to the CRA were captured. This change in the definition of a "census farm" means that the Census of Agriculture no longer captures production that results in revenues or expenses that are not reported to the CRA. This makes comparisons between time periods challenging. Based on engagement conducted for this report it is unlikely that this decrease in farms from 142 to 88 over 5 years reflects the actual changes on the land base, although some farms have indeed ceased operating in recent years.

While Yukon supports a diversity of farm sizes, most of the farms are small, with 18 per cent under 4 ha (10 acres) and over half of farms under 28 ha (70 acres) (Table 2, next page).

[12] Findings from MYDO report engagement with Yukon First Nations stakeholders in 2022.
[13] Statistics Canada. 2021 Census of Agriculture.

Table 2. Farm size in Yukon.[14]

	2011	%	2016	%	2021	%
Under 10 acres	21	16%	30	21%	16	18%
10 - 69 acres	37	29%	47	33%	31	35%
70 – 129 acres	14	11%	17	12%	10	11%
130 – 179 acres	19	15%	22	16%	16	18%
180 – 239 acres	13	10%	7	5%	1	1%
240 – 399 acres	8	6%	6	4%	3	4%
400 – 559 acres	8	6%	5	3%	5	6%
560 – 759 acres	1	1%	2	2%	2	2%
760 acres and over	9	7%	6	4%	4	5%
Total Number of Farms	**130**	**100%**	**142**	**100%**	**88**	**100%**

Note: In 2021, only farms that report expenses or revenues to the CRA are captured in the Census of Agriculture. Previously, all operations with an intent to sell were included.

Farm Type

Census data indicates that the most common types of farm operations in the territory that are reporting revenues and expenses to the CRA are horse and equine, hay, and greenhouse operations (Table 3, next page). While it appears that nearly all farm types have reduced in numbers, this is again likely due to the change in the Statistics Canada definition of a "census farm" (see text box), which would have reduced the number of smaller farms, who may not report the sales of agricultural products for tax purposes. Regardless, the current top three categories for farm type have remained the top three since at least 2011.

The steep decline in hay farms since 2011 is interesting as these farms are usually large operations. The reduction may be due to production challenges during the year of reporting or lower profit margins with this particular crop. There is also evidence of a shift away from egg-only producing farms into combination egg and poultry farms. Broiler chicken farms and dairy farms categories each reported one operation and are not included in Table 3 (next page).

Definition of a "Census Farm" as per Statistics Canada

In 2021, Statistics Canada changed the definition of a 'census farm' so only farms that report expenses or revenues to the Canada Revenue Agency are captured in the Census of Agriculture. Previously, any operation with an "intent to sell" was captured.

This change in the definition makes comparisons between time periods challenging and is likely not fully representative of all agricultural activities occurring in the Yukon.

[14] Statistics Canada, Census of Agriculture. 2011, 2016. 2021.

Table 3. Farm types in Yukon.[15]

	2011 (130 Farms)	2016 (142 Farms)	2021 (88 Farms)
Horse and equine	28	23	15
Hay	34	33	10
Greenhouse, nursery, and floriculture	15	12	9
Hog and pig	1	8	5
Vegetable farming	9	12	5
Fruit and tree nut	4	7	5
Combination poultry and egg	0	1	4
Honeybees	0	4	4
Beef cattle ranching	2	5	3
Sheep and goat	4	3	3
Egg production	7	5	2
Grain farming	2	5	1

Note: In 2021, only farms that report expenses or revenues to the CRA are captured in the Census of Agriculture. Previously, all operations with an intent to sell were included.

Livestock, Poultry, and Egg Production Trends

A closer look at trends in Yukon between 2011 and 2021 shows a substantial increase in the red meat, white meat and egg sectors (Table 4, next page). The following observations can be made.

- There was an increase in the number of hens and chickens, alongside a decrease in the number of farms housing them, meaning fewer, though larger, operations are reporting income to the CRA and captured by the Census of Agriculture.
- The number of farms keeping honeybees remained steady, though the number of colonies increased dramatically from 15 to 54.
- Pork production increased sharply in 2016 and held steady through 2021. This was possibly due to the accessibility of slaughter and processing services, which improved with the addition of a scalder to the mobile abattoir.
- Cattle have also seen a large increase in number of animals in 2021, with only two additional farms raising them.
- There has been a decline in number of elk, rabbits, llamas and alpacas between 2011 and 2021.
- Goat numbers have seen a steep decline since 2011, from 615 to 84 animals; however, the number of farms has not changed at the same rate. A reverse of this trend was seen with sheep as those numbers tripled but the number of farms has not increased since 2011.

[15] Statistics Canada, Census of Agriculture. 2011, 2016. 2021.

Table 4. Livestock Trends in Yukon.[16]

	2011		2016		2021	
Total Animals	# of farms	# of animals	# of farms	# of animals	# of farms	# of animals
Hens & Chickens	28	3,601	49	6,798	32	10,054
Sheep & lambs	4	72	4	54	4	165
Cattle & calves	13	213	14	245	16	613
Horses & Ponies	50	615	45	429	26	425
Pigs	7	56	28	482	24	486
Elk	4	64	4	35	1	24
Goats	6	615	11	429	6	84
Llamas & Alpacas	6	29	6	34	0	0

Note: In 2021, only farms that report expenses or revenues to the CRA are captured in the Census of Agriculture. Previously, all operations with an intent to sell were included.

Crop Production Trends

Of the crops produced in the territory, tame hay and fodder are the most common on an acreage basis; however, 2021 saw a decline in both the number of farms producing these crops as well as the total area in production. There has been a decrease in production of field crops, likely due to the change in census farm definition (Table 5).

Table 5. Most common crops in Yukon.[17]

Crops produced	**2011**		**2016**		**2021**	
	# of farms	ha	# of farms	ha	# of farms	ha
Tame hay & fodder	49	1,377	45	1,246	28	891
Alfalfa & Alfalfa Mix	15	490	17	684	10	503
Oats	24	414	22	261	13	295
Fruits, berries & nuts	13	12	16	24	13	20
Potatoes	12	22	11	19	7	14
Field vegetables	24	13	28	19	15	6

Note: In 2021, only farms that report expenses or revenues to the CRA are captured in the Census of Agriculture. Previously, all operations with an intent to sell were included.

[16] Statistics Canada, Census of Agriculture. 2011, 2016. 2021.
[17] Ibid.

Farm Capital

Total farm capital in Yukon rose from $86.5 million to $112.4 million between 2011 and 2021 (Table 6). Total farm capital includes the value of land and buildings, livestock and poultry, farm machinery, and farm equipment. Since 2011, it appears the most significant increase to total farm capital has been accrued through the value of land and buildings, reflecting both the increasing real estate demand and infrastructure improvements that have been undertaken. Further details regarding farm revenues and capital are provided in Section 3 of this report.

Table 6. Farm capital of Yukon and number of farms reporting.[18]

	2011 million $	2016 million $	2021 million $
Total farm capital	86.5 (130 farms)	108.4 (142 farms)	112.4 (88 farms)
Land & buildings (owned)	71.8 (124 farms)	85.0 (132 farms)	84.1 (77 farms)
Land & buildings (leased)	3.6 (20 farms)	12.1 (30 farms)	17.3 (30 farms)
Machinery & equipment	9.7 (130 farms)	9.6 (142 farms)	8.5 (78 farms)
Livestock & poultry	1.4 (82 farms)	1.7 (91 farms)	2.5 (62 farms)

Note: In 2021, only farms that report expenses or revenues to the CRA are captured in the Census of Agriculture. Previously, all operations with an intent to sell were included.

Figure 4. On-farm grain storage outside of Whitehorse.

[18] Statistics Canada, Census of Agriculture. 2011, 2016. 2021.

Yukon Agriculture and Agri-food Market Share and Capacity

Food Spending Trends

In 2020, Yukoners spent $141.6 million on food and beverage expenditures.[19] From 2019-2020, these expenditures increased by almost $10 million (Table 7). This jump in food spending was observed across the country, as consumer habits changed during the COVID-19 pandemic. Some of this increase can also be attributed to inflation.[20]

Table 7. Food expenditures for Yukon.[21]

	Annual (millions $)				
	2016	**2017**	**2018**	**2019**	**2020**
Food	110.3	114.7	117.5	119.8	129.3
Non-Alcoholic Beverages	11.1	11.7	12.0	11.5	12.3
Total	121.4	126.4	129.5	131.3	141.6

Every two years, Statistics Canada conducts a "Survey of Household Spending" (Table 8). The most recent data available is from 2021, and only data from Whitehorse households was collected; therefore the number for the entire territory will be more than what is reported in the table below. These details on food spending help to provide context for the market for Yukon food products.[22] Due to the rising cost of food, these numbers are likely to be higher for 2024.

Table 8. Survey of Household Spending on Food for Whitehorse 2021.[23]

	Average Expenditure per household ($)	**Aggregate Expenditure ($000)**
Food purchased from stores	**11,835**	**149,384**
Bakery products	*702*	*8,863*
Cereal grains and cereal products	*437*	*5,522*
Fruit, fruit preparations and nuts	*1,246*	*15,723*
Vegetables and vegetable preparations	*1,122*	*14,159*
Dairy products and eggs	*1,610*	*20,316*
Meat	*1,225*	*15,467*
Fish and seafood	*266*	*3,354*
Non-alcoholic beverages, other	*2,318*	*29,252*
Food purchased from restaurants	**2,910**	**36, 728**
Meals	*2,724*	*34,381*
Snacks and beverages	*186*	*2,347*
Total Food Expenditures	**11,764**	**140,239**

[19] Statistics Canada. 2021. Table 36-10-0225-01 Detailed household final consumption expenditure, provincial and territorial, annual (x 1,000,000). These numbers do not include spending in restaurants.
[20] Statistics Canada. 2019. Survey of Household Spending, 2019.
[21] Statistics Canada. 2021. Table 36-10-0225-01 Detailed household final consumption expenditure, provincial and territorial, annual (x 1,000,000). These numbers do not include spending in restaurants.
[22] Yukon Bureau of Statistics. 2021. Survey of Household Spending in Whitehorse 2019.
[23] Ibid.

Market Share Opportunities

Carrots, eggs and beets hold the top three positions for established market share, followed by kale, radish, cabbage, spinach, and greenhouse vegetables (e.g., tomatoes, cucumbers) (Table 9). Pork and red meat are being produced at less than 10 per cent of current market share. These are explored in more detail in the commodity-specific discussions in Section 3 of this report.

Table 9. Estimated annual market share captured by Yukon producers.[24]

Product	Estimated Annual Market Share (2021)
Beets	26.3 – 66.2 %
Carrots	11.8 – 49.5 %
Eggs	27.0 – 34.0 %
Kale	15.2 - 33.7 %
Radish	21.3 - 31.5 %
Cabbage	6.3 – 25.5 %
Spinach	17.1 - 24.6 %
Tomatoes	16.6 – 23.2 %
Cucumbers	16.7 – 19.7 %
Potatoes	8.6 – 16.1 %
Green and wax beans	5.4 - 12.3%
Herbs	7.5 – 11.8 %
Cauliflower	2.3 - 8.1 %
Beef	5.4 – 5.9 %
Pork	5.7 - 6.3 %
Poultry	1.2 – 1.4 %
Dairy (fluid milk)	0.5 - 1.2 %
Peppers	0.6 - 0.8 %
Goat, Sheep & Lamb*	0.6 – 0.7 %

[24] Statistics Canada Census of Agriculture numbers and Government of Yukon numbers (when possible) were used to estimate total volumes of products produced in Yukon. Numerous sources from the literature were used to estimate high and low yields for each food product. Annual food consumption data per person from Statistics Canada was used to estimate how much a Yukoner may purchase/consume each food product. This number was then used to estimate market share captured by food produced within Yukon. Food availability per person is calculated by Statistics Canada by dividing the domestic disappearance of food (e.g. shopping for food) by the Canadian population at the retail level. This number does not adjust for losses (such as waste and/or spoilage or food preparation).

Market Share Challenges

Growing the agriculture and agri-food sector and increasing local food produced for consumption by Yukoners faces several challenges. The top challenges shared across the agri-food sector include the following.

- Limited availability of skilled and unskilled labour for businesses to grow.
- Limited processing and distribution infrastructure to support sector expansion.
- High costs of inputs and long distances to markets.
- Limited availability of and access to agricultural land.
- Impacts of climate change on growing conditions.

While not all of these challenges can be fully addressed at the local level, opportunities exist for Yukon First Nations, other governments and industry to take a collaborative approach to tackling some of these issues. The MYDO report provides a shared road map for all actors in the agriculture and agri-food sector to work towards an economically and environmentally sustainable sector that meets the needs of producers and provides Yukon residents with local food options.

Figure 5. Fireweed Community Market in Whitehorse.

Section 3: Themes, Goals and Recommended Actions

This section provides a detailed description of themes, goals and recommended actions for growing Yukon's agriculture and agri-food sector. There are two key subsections:

Industry-wide: This section presents the themes and identifies what is working along with challenges, opportunities and goals and recommendations that are applicable to the entire Yukon agriculture and agri-food sector. These include the following:

A) Business Planning and Development
B) Equipment and Infrastructure
C) Labour and Skills Development
D) Marketing, Branding, and Sales Channels
E) Environmentally Beneficial Management Practices

Sector-specific: This section provides details of each sector and identifies what is working, challenges, and opportunities which inform the goals and recommendations for each sector. The section is presented as follows.

F) Livestock & Poultry Sectors
G) Egg Sector
H) Hay, Feed & Grain Sectors
I) Vegetable, Fruit & Berry Sectors
J) Dairy Sector
K) Emerging Sectors

Each recommended action is given a ranking of 'potential for impact' to grow the industry along with a suggested timeline for completion. The rankings are based on the understanding of the sector gained from research and engagement conducted by the consulting team during the development of the MYDO report. The potential for impact ratings may not be applicable to individual farms or business decisions but are important for the overall growth of the industry as a whole when taking a broader sector view.

Potential for Impact

High: Critical for sector development and growth.

Moderate: Important for long term sector growth.

Low: Will contribute positively to the agriculture sector.

Timeline

Immediate: To be completed within 1 - 2 years

Short: To be completed within 5 years

Long: To be completed within 10 years

For each of the recommended actions, the MYDO report identifies which actors within the sector are best suited to lead or support the actions. Collaboration and partnerships among key actors will be crucial in completing most of the recommended actions.

The following actors are identified and will need to collaborate and take initiative in implementing the actions:

- Governments (may be Yukon First Nations, federal, territorial and/or municipal);
- Yukon First Nations communities across the territory;
- Industry (i.e., producers and food processors);
- Non-governmental organizations (NGOs);
- Educational institutions; and,
- Others (i.e., other organizations and businesses such as private consultants, commercial and institutional food buyers, and others).

Figure 6. Goat farm in Marsh Lake.

Industry-Wide Themes, Goals, and Recommendations

A. Business Planning and Development

Producers in Yukon must offset income with costs for land, labour, chemical and fertilizer inputs, and fuel. It is not uncommon for farms to have difficulty generating sufficient financial resources to invest in additional farm labour, equipment, and other farm inputs to enhance production levels. Most producers need financial assistance (through loans or other investments) in order to scale up their production and often one family member must work off the farm.

In 2021, fewer farms were reporting total farm capital under $500,000 compared to 2011 and 2016 (Table 11). This includes land and buildings, livestock and poultry, farm machinery, and farm equipment. In particular, there has also been a more than doubling of farms reporting over $1.5 million in farm capital since 2011 (Table 10). This is likely due to in part to the increase in value of land and buildings across Yukon.

Table 10. Farms categorized by farm capital.[25]

Value of Farm Capital	2011 (130 farms)	2016 (142 farms)	2021 (88 farms)
Under $100,000	9	11	4
$100,000 – $199,000	14	20	4
$200,000 – $349,000	21	23	3
$350,000 – $499,999	20	21	12
$500,000 – $999,999	43	39	27
$1,000,000 – $1,499,999	13	13	13
$1,500,000 and up	10	15	25

Note: In 2021, only farms that report expenses or revenues to the CRA are captured in the Census of Agriculture. Previously, all operations with an intent to sell were included.

The Census of Agriculture also provides information on farm profitability (Table 11), which is highly variable. From 2011 to 2016, gross margin of farm operations rose from -1 per cent to +8.9 per cent. In 2021 it fell to -5.5 per cent, which means the average farmer in Yukon is spending about $1.06 for every $1.00 earned by their operation. This indicates the need for more robust business planning strategies to respond to higher inflation and costs of inputs.

Table 11. Gross margin of farm operations in Yukon.[26]

	2011	2016	2021
Gross farm receipts (million $)	3.69	4.26	5.19
Total operating costs (million $)	3.73	3.88	5.47
Gross margin (%)	-1.0	+8.9	-5.5

Note: In 2021, only farms that report expenses or revenues to the CRA are captured in the Census of Agriculture. Previously, all operations with an intent to sell were included.

[25] Statistics Canada, Census of Agriculture. 2011, 2016. 2021.
[26] Ibid.

Only 35 per cent of farms in Yukon are reporting gross farm receipts above $50,000, while 34 per cent generate under $10,000 (Table 12). The drop-off in the number of farms operating below the $10,000 revenue level in 2021 is likely reflective of the change in definition of a 'census farm'.

Table 12. Total gross farm receipts.[27]

Total Gross Farm Receipts	2011 (130 farms)	2016 (142 farms)	2021 (88 farms)
Under $10,000	72	80	30
$10,000 – $24,999	25	28	14
$25,000 - $49,999	15	14	13
$50,000 - $99,000	8	9	19
$100,000 – $249,999	7	10	10
$250,000 – $499,999	2	0	1
$500,000 – 999,999	1	1	1

Note: In 2021, only farms that report expenses or revenues to the CRA are captured in the Census of Agriculture. Previously, all operations with an intent to sell were included.

What's Working

- There was an increase of 10 farms reporting $50,000 – $99,000 in gross farm receipts from 2016 to 2021.
- Funding for business planning and development has been available for producers through Sustainable CAP, CanNor, and other government programs. Examples of funding include:
    - Business plans, and succession plans;
    - Hiring a consultant to assist with business planning;
    - Yukon First Nations farm and business plans; and
    - Mentorship program.
- There are resources available to producers to assist with growing their business, which include extension services, knowledge transfer events such as workshops and conferences, labour support programs, as well as local farmers' markets and marketing opportunities with the tourism sector.
- Relationships have been developed with BC's regional agrologists to provide additional extension services on an as-needed basis.

What's Challenging

- Businesses have small or negative profit margins due to high operating costs compared to revenues.
- Agricultural business planning expertise specific to Yukon is limited.
- There are many farms in the Yukon without business plans, which puts them at a disadvantage when seeking financing and/or grants.
- The cost and availability of insurance is prohibitive for many Yukon producers. There is currently low uptake in the Yukon of risk management programs offered by the federal government, such as AgriStability.

[27] Ibid.

- The economies of scale applicable in other jurisdictions such as Alberta and/or BC may not work for the Yukon, due to the smaller land base, size of the local market, and distance to markets outside the Yukon.
- Many producers may have difficulty accessing retailers' distribution systems because they are operating on a scale that is too small to meet product quantities, or there may be challenges around labeling, quality control, traceability, and food safety certifications.
- The average age of farmers is 55 with only 7 per cent of farms having written succession plans.[28]

Opportunities

- There is a need for increased access to business planning advisory services tailored to the Yukon context. Business plans can lead to funding and investment opportunities and are often a requirement for applications.
- With continued growth to both the population of Yukon and the territory's tourism sector, the market demand for local products is also anticipated to increase, creating opportunities for business expansion.
- The development of processing infrastructure such as abattoirs, cold storage, and value-added equipment will assist with business growth and development.
- All products are estimated at being produced at less than a third of market share, indicating strong opportunity for cross-sectoral growth.

Figure 7. Yukon-made products for sale in retail stores.

[28] Statistics Canada. 2021 Census of Agriculture.

Goals and Recommendations for Business Planning and Development

Table 13. Theme A. Business Planning and Development.

Goal	Recommended Actions	Potential for Impact	Timeline	Key Actors
A.1 Yukon farm businesses have access to and utilize business planning supports, and the majority of farm businesses have up to date business plans.	1. Provide and maintain a list of pre-approved consultants with farm business planning expertise.	Moderate	Immediate	Governments
	2. Provide business and farm planning resources that are specific to New Entrants (see BC's New Entrants program and Young Agrarians Business Resources for examples).	Moderate	Immediate	Governments Others
	3. Provide private business advisory services tailored to Yukon agriculture.	Moderate	Short	Industry Others
	4. Create Yukon-specific templates and publications for business planning to reflect current regulations, required permits, expenses and feasible product pricing.	Moderate	Immediate	Governments Others
	5. Provide regular access to online workshops for producers to walk through business planning steps.	Moderate	Short	Governments Industry Others
	6. Require a new business plan (or an updated business plan if the current plan is 5 years old or older) to accompany all applications for Government of Yukon funding opportunities.	Moderate	Short	Governments

B. Equipment and Infrastructure

Both on-farm and shared equipment are required for all sectors of the Yukon agriculture and agri-food industry to grow. Funding for on-farm equipment has been supported through the CAP program over the last 5 years. However, there are limited farm equipment dealers and mechanics within the territory. Most producers develop their own skills in maintenance and repairs of small equipment, but the time spent undertaking this work reduces valuable time to complete other farm-related tasks.

Due to the long distances between farms and customer markets, a combination of on-farm and shared infrastructure should be considered to increase the resilience of the sector. For example, cold storage infrastructure on farms as well as a larger facility in Whitehorse would facilitate aggregation and distribution of products. Efficient transportation and distribution of products from farms to markets is also required; currently most producers are transporting products to markets themselves, with some informal aggregation occurring when feasible. Grocery stores and restaurants must contact farms to set up individual procurement agreements, which requires managing multiple accounts. To meet the quantity and consistency of demands for larger buyers such as government, mining camps and institutional facilities, producers may benefit from aggregating their products. Having a shared virtual or brick-and-mortar option for aggregation, packing and distribution could facilitate access to these markets.

Since the 2000s, there have been discussions and feasibility studies conducted for an innovation centre, including community kitchen and abattoir, within the vicinity of Whitehorse.[29] A community fairgrounds has been built, but no other shared infrastructure has been developed. Most other jurisdictions in Canada have undertaken investments in the development of "food hubs" whereby producers can pay a fee (e.g., a monthly membership or pay-by-use) to access equipment and materials that would otherwise be cost-prohibitive to invest in on a farm-to-farm basis.

What's Working

- Studies have been completed to provide feasibility assessments for options for shared infrastructure, which provide baseline information about the initiative.
- Equipment and infrastructure funding has been provided through a variety of sources, including Sustainable CAP, other Government of Yukon departments, and federal partners.
- Previous efforts by private industry to aggregate and distribute products on a limited basis were met with success and are continuing at a small scale.

What's Challenging

- Retailers have noted the logistical, quality control and food safety challenges with contracting multiple producers as a limitation to stocking more locally produced foods.

[29] YAA Land. Yukon Agricultural Association.

- It is difficult to access specialized equipment (it must be ordered from afar), and there is a lack of equipment dealers and mechanics available with agricultural specializations.
- Some equipment and infrastructure is difficult to share because it is often required by multiple farms at the same time of year, particularly in the case of seasonal crop planting, weeding, harvesting and storing.
- Due to the long distances to market (and associated costs), there are inefficiencies in individual producers transporting products to far away markets.
- There is an overall lack of distribution, packing and cold storage facilities in the territory.

Opportunities

- Food retailers in the territory would benefit from having one place from which to order Yukon products and, in tandem, producers would benefit from online and/or brick-and-mortar options for aggregation of local products to meet demand from retailers.
- Flexibility could be increased to ensure that the funding available for equipment aligns with the type, size, and scale of equipment needed by Yukon farms. For example, occasionally small or low-tech equipment could be the best solution to growing the business of some farms. Information regarding the type and variety of funding initiatives that exist for equipment and infrastructure investments could be more widely communicated.
- A platform for selling used equipment or renting equipment from producers could be developed, particularly in remote communities.

Figure 8. Farm equipment at Yukon Grain Farm.

Goals and Recommended Actions for Equipment and Infrastructure

Table 14. Theme B. Equipment and Infrastructure.

Goal	Recommended Actions	Potential for Impact	Timeline	Key Actors
B.1 Equipment and services for different sizes of operations are available and accessible for Yukon farms	1. Provide services for agricultural equipment maintenance and repair in-territory.	Moderate	Immediate	Industry Others
	2. Investigate opportunities to create an online platform to purchase used equipment and rent equipment already present in the territory.	Moderate	Short	Industry NGOs Others
	3. Provide skills training for basic agricultural equipment repairs and maintenance with in-person and online options.	Moderate	Long	Industry NGOs Others
	4. Develop mobile processing equipment that can be used by multiple farms.	Low	Short	Governments Industry
B.2 Remote farms can access equipment servicing.	1. Develop businesses that can provide mobile agricultural equipment repair services.	Moderate	Short	Industry Others
	2. Explore partnerships between agriculture producers and Yukon First Nations communities to share farm equipment and servicing needs.	Moderate	Short	Yukon First Nations Industry

B.3 Yukon producers and processors have access to a shared aggregation and distribution network	1. Create a Yukon-wide online platform for producers and processors that will enable them to indicate the location, product type and amount available for aggregation and distribution and connect with other producers, distributors, and buyers.	High	Immediate	Industry Yukon First Nations NGOs Others
	2. Identify key partnerships needed to build a brick-and-mortar multi-user shared facility in Whitehorse that includes aggregation, co-packing, processing and a distribution facility. Refer to past feasibility studies for lessons learned.	High	Immediate	Governments NGOs Others
	3. Invest in regional aggregation spaces, such as warehouses with cold and dry storage, in small remote communities. This may also require investing in on-farm cold storage to support the wider regional networks.	High	Short	Yukon First Nations Other Governments Industry NGOs
	4. Develop a small agri-food distribution/ transportation business servicing key communities for pick-up and delivery.	Moderate	Long	Industry Yukon First Nations Other Governments

C. Labour and Skills Development

Finding and securing skilled and non-skilled labour for the agri-food sector is vital for long-term growth. There has been a substantial increase in seasonal workers on farms since 2016 (Table 15). In 2021, based on Census of Agriculture data and Statistics Canada data, there were between 117-280 workers (full or part-time) involved in farming or other jobs related to the production of food (for example, soil preparation services).[30] Despite these increases, several Yukon farms recently ceased operating due to challenges associated with finding labour.[31]

Table 15. Farm labour characteristics in 2016 and 2021.[32]

	2016		2021	
Labour Types	Farms reporting	Total employees	Farms reporting	Total employees
Year-round full time	3	8	6	14
Year-round part time	0	0	4	6
Seasonal/ Temporary	14	39	19	97
Total Workers	**15**	**47**	**19**	**117**

Note: In 2021, only farms that report expenses or revenues to the CRA are captured in the Census of Agriculture. Previously, all operations with an intent to sell were included.

What's Working

- The Government of Canada's summer jobs programs and other programs offered by the Government of Yukon (e.g., Departments of Education and Economic Development) have been utilized by some farms for accessing short-term labour.
- The Sustainable CAP program can support internships, training and skills development.
- In the past, agricultural career opportunities have been taught in elementary and high school.
- Established programs that bring children on to farms have been a popular and successful method of raising awareness of Yukon agriculture.

What's Challenging

- The temporary nature of existing labour programs is resource-intensive for producers, who are required to invest in individuals who may not return the next season and apply to the programs each year. This results in a lack of stable skilled labour in all sectors but particularly in slaughtering, butchering, crop production and pest management.

[30] Statistics Canada uses the North American Industry Classification System (NAICS) to categorize job types, including jobs in agriculture and food. Whereas the Census of Agriculture captures farms who are reporting expenses or revenues to the CRA.
[31] Interviews with multiple Yukon producers, 2022. Upland Agricultural Consulting.
[32] Census of Agriculture, 2011, 2016, 2021. Statistics Canada.

- Many producers defer paying themselves a salary to ensure that employees are paid instead.
- For Yukon First Nations agricultural endeavors, a lack of a champion, project leader, or farm manager is the most important limitation to project success — more so than funding, business planning, or community support.[33]
- There is a lack of formal agricultural education/curriculum in the Yukon. Inclusion of agriculture in elementary and high school curriculum is based on teacher interest and ability to secure resources.

Opportunities

- As farms develop business plans, more specific labour needs will be defined that can help guide investment in and support labour initiatives.
- The development of an educational program that provides Yukoners with the opportunity to learn about the agricultural labour sector and offer agricultural skills development could help fill the labour gap. Partnerships with education institutions between Yukon University and universities in Alberta and BC can bring educational resources and capacity.
- The agricultural employment gap in Yukon First Nations communities could be aligned with wellness programs and priorities.
- Technology, such as labour-saving machinery and equipment suited to the scale of Yukon farms, could be used to reduce labour requirements.

Figure 9. Vegetable plot being prepared for planting.

[33] Personal communication during interviews for MYDO report development.

Goals and Recommended Actions for Labour and Skills Development

Table 16. Theme C. Labour and Skills Development

Goal	Recommended Actions	Potential for Impact	Timeline	Key Actors
C.1 Farms have increased access to skilled and unskilled agricultural labour	1. Provide an online matching service to connect those interested in working in Yukon agriculture with existing farms and/or Yukon First Nations agriculture and food initiatives.	High	Short	Industry NGOs Yukon First Nations Others
	2. Provide resources and information sessions with clear information about accessing federal and territorial labour programs and funding.	Moderate	Immediate	Governments NGOs
	3. Explore opportunities to formally or informally partner with other jurisdictions to facilitate work exchange programs (e.g. Quebec and/or BC).	Moderate	Short	Governments NGOs
C.2 Opportunities for agricultural education and skill development exist across Yukon	1. Explore an Indigenous Trades Accreditation program (for example, see the Skilled Trades BC – Indigenous People in Trades Training Programs).	High	Short	Yukon First Nations Educational Institutions Other Governments
	2. Develop agricultural-related course offerings. This could include establishing a Canada Research Chair in Northern Agriculture position and partnering with universities in the provinces.	Moderate	Short	Educational Institutions Governments
	3. Identify curriculum opportunities to strengthen agriculture's profile within elementary and high school education.	Low	Short	Yukon First Nations Other Governments NGOs

D. Marketing, Branding and Sales Channels

In 2022, Yukoners spent approximately $160 million on food and beverages.[34] The population of Yukon is projected to grow from 43,575 residents today to 55,570 residents in 2040.[35] These numbers speak to the growing market opportunities for Yukon produced foods. Yukoners and visitors are increasingly interested in purchasing locally produced foods as demonstrated by the increase in attendance at farmers' markets over the past few years, and by the increased availability of locally sourced foods at restaurants and retail stores. As the resident population and tourism numbers grow, demand for locally-produced foods can be expected to continue to rise.

The main sales channels available to Yukon producers include direct to consumer (farmgate, farmers' markets, direct deliveries), wholesale retail, and government procurement. Direct to consumers sales are popular, and many farms have established local customer bases. In 2021, 63 per cent of Yukon farms reported selling through direct sales.[36] Recently, the Government of Yukon began a pilot project for procurement of locally-produced foods. Most farms do not sell to large institutional or commercial clients, such as hospitals, mining camps, or airlines.

Marketing and branding are an important component of raising awareness to consumers of the diversity of local products available from Yukon producers and food businesses. There are numerous programs and initiatives related to marketing and branding of Yukon produced foods, such as Yukon Grown, Buy Local Whitehorse, Buy Yukon, and the Yukon Story. Having a clear recognizable label for consumers is important in highlighting local producers and showing the diversity of products that can be grown in the territory. However, having too many can lead to confusion amongst producers, processors, and retailers, as well as consumers.

What's Working

- Farmers' markets such as the Fireweed Market, Mayo Farmers Market and Dawson Farmers Market are a foundational sales channel for many producers.
- Work has been done to establish the Yukon Grown label.
- Good relationships have been formed between producers and local retail grocery stores and restaurants to sell local products.
- Events with local chefs and producers (e.g., Meet your Maker) and events through the Tourism Industry Association of Yukon have been successful in forming partnerships and raising awareness of local agriculture.

What's Challenging

- Challenges exist around current branding and marketing initiatives due to the number of initiatives, lack of administrative oversight and scope of branding.

[34] 2020 numbers from Statistics Canada were adjusted for inflation: Statistics Canada. Table 36-10-0225-01 Detailed household final consumption expenditure, provincial and territorial, annual (x 1,000,000)
[35] Yukon Bureau of Statistics. 2018. Population Projections.
[36] Statistics Canada, Census of Agriculture. 2021.

- Although several options exist for producers to enter into procurement agreements with commercial and institutional buyers, purchases are currently limited.
- There is a lack of regulations in place that would facilitate compliance and enforcement with product labeling, for example some producers self-label as “organic” when they are not actually certified.

Opportunities

- A cohesive strategy for branding foods produced within the territory that link to other local branding and marketing initiatives.
- Government of Yukon procurement process has some challenges but can potentially provide producers with a stable market.
- There are untapped sales channels such as mining camps and airlines that producers could access if challenges around quantity and quality of products are overcome.
- On-farm activities and promotion of Yukon grown products can be provided to tourists through culinary experiences.

Figure 10. Produce grown on Yukon farms.

Goals and Recommended Actions for Marketing, Branding, and Sales Channels

Table 17. Theme D. Marketing, Branding, and Sales Channels.

Goal	Recommended Actions	Potential for Impact	Timeline	Key Actors
D.1 Yukon farms have access to a diverse client base	1. Review the Government of Yukon pilot local food procurement project and adapt accordingly to meet the needs of purchasers and producers.	High	Immediate	Yukon First Nations Other Governments Industry
	2. Provide information to producers and purchasers on supplying commercial and institutional buyers (e.g. mining camps, airlines, hospitals, schools and nutrition programs) with locally produced vegetables, eggs, meats, and other products.	High	Short	Governments Industry NGOs Others
	3. Promote Yukon products through trade shows, events to match buyers and sellers, and other events.	Low	Short	Industry NGOs Others
D.2 There is a unified, well recognized branding approach for locally produced foods	1. Establish a committee or working group to assess and review the current approach to marketing and branding Yukon products. Based on the assessment, develop a strategic plan for aligning existing marketing opportunities to ensure a broad level of participation by Yukon farmers and food processors.	High	Immediate	Industry NGOs Governments
	2. Work with Yukon Tourism Association representatives to test key messaging and branding to ensure that visitors are attracted to agricultural-related activities and businesses during their visits.	Moderate	Short	Industry NGOs

D.3 Awareness of product labelling is well communicated and understood by both producers and consumers	1. To counteract the misuse of product labelling, disseminate information regarding the Canadian Organic Standards, the federal Organic Products Regulation, the Food and Drugs Act, and the Consumer Packaging and Labelling Act. This will assist producers in protecting the investments that have been made in their operations.	Moderate	Long	NGOs Governments

E. Environmentally Beneficial Management Practices

Beyond identifying the origin of the product, consumers are also interested in supporting farms that are engaging in environmentally-friendly practices and are aligned with food safety protocols. These practices may also provide benefits and resiliency against the impacts of climate change and assist in reducing dependency on fossil fuels.

The 2021 Agriculture Census indicated that many Yukon farms are using beneficial management practices (BMPs).[37] For example:

- Environmentally-beneficial tillage practices are used on 60 per cent of farms, including no-till or zero-till seeding, retaining crop residue on the soil surface, and/or tillage that incorporates crop residue into the soil;
- Only 16 per cent of Yukon farms use herbicides and 2 per cent use insecticides or fungicides;
- 31 per cent of farms practice rotational grazing;
- 80 per cent of farms have shelterbelts or windbreaks along and between their fields; and
- 35 per cent of farms produce renewable energy for use on the farm operation.

The Environmental Farm Plan (EFP) program assists producers in identifying farming practices that can mitigate negative environmental impacts while maintaining farm viability. Many Yukon farms have participated in the program, modified their practices based on recommendations and received funding support to implement BMPs.

There is a small number of farms using organic production practices. Between 2011 and 2021, the number of farms reporting sales of certified organic products increased from 8 to 10 (Table 18). Additional Yukon farms undertake organic production methods without seeking out formal certification. There is an active association representing Yukon organic producers; the Growers of Organic Food Yukon (GoOFY). Farms do not need to be certified organic in order to become members of GoOFY. Members of GoOFY include vegetable growers, fibre producers, grain growers, and poultry, pork, and egg producers. While several farms have small on-farm processing equipment, there are no large-scale centralized facilities for processing organic products within the territory.

Table 18. Organic production in Yukon.[38]

	2011 # farms	2016 # farms	2021 # farms
Certified organic products for sale	5	7	10
Transitional organic products for sale	3	1	0
Total	**8**	**8**	**10**

Note: In 2021, only farms that report expenses or revenues to the CRA are captured in the Census of Agriculture. Previously, all operations with an intent to sell were included.

[37] Statistics Canada. 2021 Census of Agriculture.
[38] Census of Agriculture, 2011, 2016, 2021. Statistics Canada.

What's Working

- More than 80 Yukon farms have now completed an EFP.
- Yukon producers are already using many environmental BMPs.
- There are a small number of established producers demonstrating the viability of growing organically in the territory.
- There is funding that subsidizes the cost of producers to attend professional development opportunities related to the organic sector and environmental BMPs outside the territory.
- Funding from various levels of government exist to promote and encourage sustainable agricultural practices.

What's Challenging

- Resources to assist farmers with developing their EFPs are limited in the territory compared to southern jurisdictions.
- There are few industry and extension resources available which address the unique climate of Yukon and sub-arctic growing conditions for some BMPs and organic production practices.
- There is a lack of available certified organic inputs and organic livestock feed, and organic producers must order their farm inputs from BC or Alberta, which adds significantly to the cost of certified organic production.
- The higher price point that producers who use environmentally-friendly and/or organic practices have been able to fetch on the market in the past is being eroded by increasing input costs and inflation, thereby shrinking profit margins.

Opportunities

- Trials of environmental BMPs suited for growing in the northern climate could be conducted at the Yukon government's Research and Demonstration farm.
- Impacts of climate change projected for Yukon (i.e. changes in Growing Degree Days) may provide opportunities for new crops, or crop varieties, if other climate change challenges can be adequately managed.
- Additional on-farm demonstration days, mentorships and workshops can be used to transfer knowledge of BMPs.
- Collaboration with Yukon First Nations on food production initiatives and the potential for implementing traditional knowledge can be encouraged.
- Farms can be incentivized to transfer to green energy sources.

Goals and Recommended Actions for Environmental Beneficial Management Practices

Table 19. Theme E. Environmentally Beneficial Management Practices.

Goals	Recommended Actions	Potential for Impact	Timeline	Key Actors
E.1 The number of farms that have completed EFPs is maximized	1. Expand capacity for advisory services to assist farms with completing and/or updating an EFP. This will increase funding opportunities for farmers.	High	Immediate	Governments Industry
	2. Ensure the EFP program is aligned with BMPs for northern environments, including climate change adaptation and mitigation approaches. This will create more resilient farm businesses.	High	Immediate	Governments
	3. For new agricultural land development, require that an EFP "pre-farm" screening occur, so that a plan for the future farm site can be created and BMPs for clearing land in farm plans can be implemented. Disseminating information to all producers regarding methods and tools for clearing land using environmental BMPs will ensure that ecosystem services are protected.	High	Short	Governments Industry
E.2 Producers have access to extension services and research on environmental BMPs and local inputs for soil amendments	1. Develop extension services, research programs and/or pilot projects regarding organic and/or environmentally sustainable farming practices, with a focus on the impacts of climate change on the North. This will ensure Yukon farms remain competitive in a changing climate.	Moderate	Short	Industry Governments NGOs
	2. Increase producer knowledge about BMPs that can be used to sequester carbon. Provide	Low	Long	Governments Educational Institutions

	funding to measure and monitor carbon levels in agricultural soils.			
	3. Investigate opportunities to increase access to gravel, sand, wood chips, mulch and other material inputs used in the mining and forestry industry, to reduce input costs for farms.	Low	Long	Industry
E.3 Yukon's agriculture sector has opportunities to transition to green energy sources	1. Invest in clean energy sources such as electric-based equipment. This will help save Yukon farmers on heating and cooling costs over the long term.	Moderate	Long	Industry Governments
	2. Invest in on-farm small-scale hydroelectric and/or solar energy production initiatives such that they provide significant power during summer months.	Moderate	Long	Industry Governments

Figure 11. Environmental Farm Plan sign.

F. Livestock and Poultry Sectors

The Yukon's livestock and poultry sectors have grown over the past decade with increasing numbers of cattle, pigs, sheep, goats, chickens and turkeys being raised in the territory.

Pork and Red Meat

The pork sector has increased nearly ten-fold since 2011 with over 20 farms now raising hogs (Table 20). The number of pigs reported by the Census of Agriculture under-represents the number of pigs raised, as indicated by the number of pigs and wild boar slaughtered under inspection (Figure 12, next page). An estimate of the number of animals raised for red meat is presented in Table 20. The beef industry has grown steadily since 2011, along with sheep & lamb. There is one active bison producer in the territory, not captured by the Census of Agriculture data, and potentially at least one additional elk farmer. A 2019 report indicated 250 beef cows, 21 bison, and 64 elk were present in the territory.[39] Processing is seasonal, as some livestock are not overwintered, and producers tend to farm part-time and keep other off-farm work.

Table 20. Number of farms and number of animals raised for meat.[40]

		2011	2016	2021
Pigs	# farms	7	28	24
	# pigs	56	482	486
Cattle	# farms	10	10	12
	# beef cows	x	96	242
Bison	# farms	1	1	0
	# bison	X	x	0
Elk	# farms	4	4	1
	# elk	64	35	24
Sheep	# farms	4	4	4
	# sheep	61	45	158
Goats	# farms	6	11	6
	# goats	90	85	85

Note: In 2021, only farms that report expenses or revenues to the CRA are captured in the Census of Agriculture. Previously, all operations with an intent to sell were included.

[39] Economic Impact of Large Animal Livestock Production in the Yukon. 2019. Serecon Inc.
[40] Statistics Canada, Census of Agriculture. 2011, 2016, 2021.

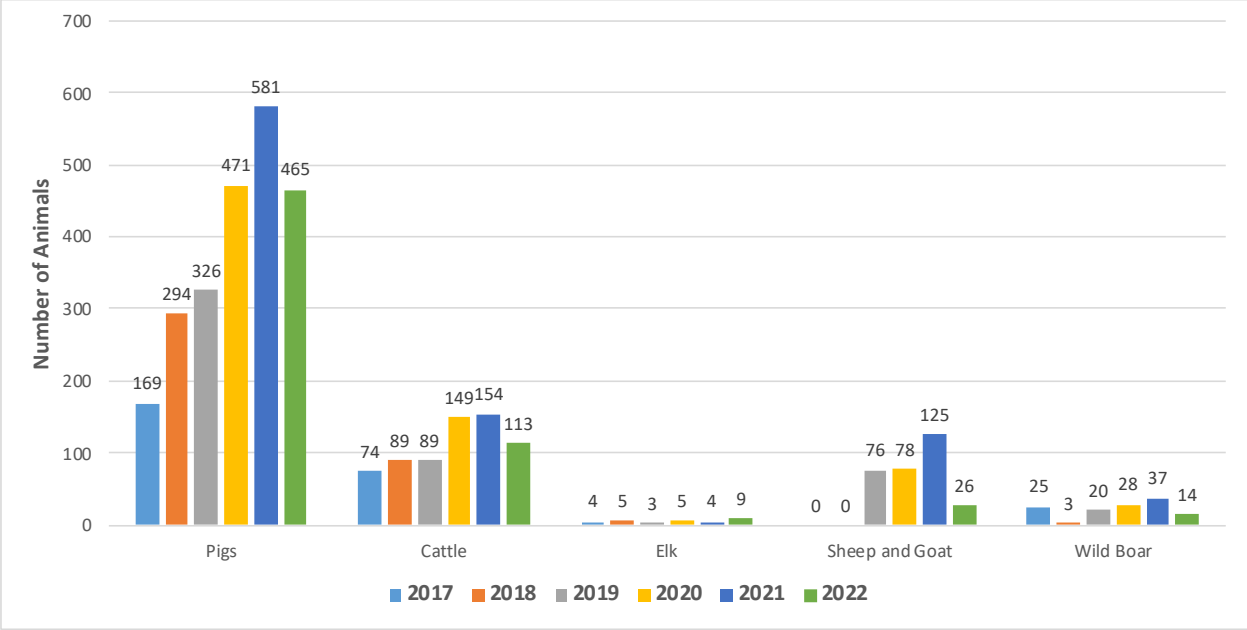

Figure 12. Number of animals slaughtered under inspection from 2017-2022.[41]

Table 21 provides estimates of the market share of pork, beef and goat/sheep/lamb meat captured by Yukon producers. Small numbers of bison, elk and wild boar are also slaughtered in inspected facilities and sold retail to consumers. No data around consumption per person was available for bison, elk, or wild boar.

Table 21. Estimates of Meat Market Share captured by Yukon Producers in 2022.[42]

	Number of Animals	Weight to Market (kg)	Availability for consumption per person (kg)[43]	Availability for consumption in Yukon (kg)	Market Share (%)
Pork	465 - 511	35,800 – 39,400	14.4	627,916	5.7 - 6.3
Beef	113 - 124	41,400 – 45,500	17.7	770,842	5.4 – 5.9
Goat, Sheep & Lamb*	26 - 28	238 - 262	0.9	37,910	0.6 – 0.7

*Only an aggregate number was available.

[41] Government of Yukon, Agriculture Branch.
[42] Number of animals was provided by Government of Yukon based on inspection numbers and estimates of non-inspected meat for personal consumption. Food availability for consumption per person per year (and extrapolated to the entire population of Yukon) from Statistics Canada were used to estimate consumption. Food available per person is calculated by Statistics Canada by dividing the domestic disappearance by the Canadian population as of July 1st of the reference year, at the retail level. Domestic disappearance represents the total food available for human consumption from the Canadian food supply chain. This number does not adjust for losses.
[43] Food Availability in Canada. 2022. Statistics Canada.

Poultry

The poultry sector has fluctuated over the last ten years (Table 22). The relatively low number of farms means that slight shifts within the sector can change numbers significantly. The growth between 2016-2021 for broiler chickens was accelerated by the establishment of a licensed poultry abattoir in 2020. This points to the influence that processing availability has on production levels. Poultry meat production is seasonal with most producers completing two cycles per year.[44]

Table 22. Poultry farms and number of birds from 2011 - 2021.[45]

		2011	2016	2021
Broilers, roasters and Cornish production	# farms	13	28	25
	# birds	2,221	2,732	3,865
Turkeys	# farms	5	16	9
	# birds	190	289	268

Note: In 2021, only farms that report expenses or revenues to the CRA are captured in the Census of Agriculture. Previously, all operations with an intent to sell were included.

Currently, it is estimated that Yukon producers are supplying approximately 2 per cent of the poultry consumed by Yukoners on an annual basis (Table 23).

Table 23. Estimates of market share captured by Yukon poultry in 2022.[46]

	Number of Animals	Total Weight to Market (kg)	Availability for consumption per person (kg)[47]	Availability for consumption in Yukon (kg)	Market Share Range (%)
Broilers, roasters, Cornish	2,789-3,068	4,390 - 5,270	34.5	1,502,902	0.29 - 0.35
Turkey	431 - 474	2,940 – 3,260	3.7	159,049	1.85 – 2.05

Meat Processing

To sell meat into retail markets, including commercial kitchens, restaurants and farmers' markets, the meat must be processed at an inspected and licensed abattoir and butchering facility. Uninspected meat products can be sold at the farm gate, through the sale of a live animal from producer to consumer.[48] Between 2016-2022 there was a fixed licensed abattoir, just north of Whitehorse. The closure of the fixed

[44] Multi-Year Development Plan for Yukon Agriculture 2008. Serecon Consulting.
[45] Statistics Canada, Census of Agriculture. 2011, 2016, 2021.
[46] Number of animals was provided by Government of Yukon based on inspection numbers and estimates of non-inspected meat for personal consumption. Food availability for consumption per person per year from Statistics Canada. This number was then used to estimate market share captured by food produced within Yukon. Food available per person is calculated by Statistics Canada by dividing the domestic disappearance by the Canadian population as of July 1st of the reference year, at the retail level. Domestic disappearance represents the total food available for human consumption from the Canadian food supply chain. This number does not adjust for losses.
[47] Food Availability in Canada. 2022. Statistics Canada.
[48] Selling meat in the Yukon. Nd. Government of Yukon.

licensed abattoir left a major gap in slaughter and butcher services for livestock producers, which is starting to be filled with new licensed operations coming into service. In 2020, a fixed inspected poultry abattoir began operating, opening the door to selling locally produced chicken and turkey in the retail market.[49] This facility primarily processes poultry raised on-farm due to limited capacity to process other producers' birds.

There are several licensed butcher shops throughout the territory that process local meats into various cuts and products. A small number of producers have licensed processing, cut & wrap, and/or butcher facilities on-farm, in which they slaughter meat with an inspector present and then process their own meat products after slaughter. There are several butcher shops operating in the Whitehorse area and one in Dawson City.

What's Working

- Most meat producers operate small to medium-sized operations successfully and many are vertically integrated such that they slaughter on-farm or use the mobile abattoir.
- Government funding has provided support for on-farm equipment and infrastructure to livestock producers across the territory.

What's Challenging

- There is a need for increased services and knowledge transfer regarding livestock husbandry and animal welfare. In-person veterinary services are limited through the Yukon at this time due to broader labour challenges.
- Hay and grain for feed grown in the Yukon does not meet the demand of livestock producers, therefore hay is imported from BC and Alberta.
- With short growing seasons and few snow-free days, the ability to graze animals in field is minimal.
- Costs to manage interactions with wildlife (e.g., wild elk, sheep, goats, moose, foxes, coyotes and others) can be high for farmers and impact the ability to plan for future production.
- Uncertainty around seasonal processing capacity, high costs of poultry feedand lack of veterinary resources may be preventing producers from increasing production.
- There is an overall need for skilled labour for slaughtering and butcher services.
- Local options for youngstock are limited, and Yukon livestock operators must often source youngstock from BC and Alberta

[49] CBC News. Yukon-raised chicken for sale in local grocery stores for 1st time. July 2020.

Opportunities

- There is a growing number of farms with livestock, which provides opportunities for the sector to form producer groups and other advocacy initiatives.
- There is public support for purchasing locally-produced meats at the retail level and at restaurants, which speaks to the opportunity to find solutions to stable slaughter, cut & wrap, and specialty butchering.

Figure 13. Mobile abattoir at work on a Yukon farm.

Goals and Recommended Actions for the Livestock and Poultry Sectors

Table 24. Theme F. Livestock and Poultry Sectors.

Goal	Recommended Actions	Potential for Impact	Timeline	Key Actors
F.1 Meat processing capacity increases to support a stable and sustainable industry	1. Provide stable slaughter services throughout the Yukon.	High	Immediate	Industry Yukon First Nations Other Governments
	2. Establish additional poultry processing facilities throughout the Yukon.	High	Immediate	Industry Yukon First Nations Other Governments
	3. Establish a fixed abattoir based in Whitehorse.	High	Short	Industry Governments
	4. Provide training opportunities for Yukoners to become skilled in slaughter and butchering (e.g., in-person and online courses on food safety, tools and equipment, carcass management, etc.).	High	Short	Educational Institutions Yukon First Nations Other Governments
F.2 Livestock production is well supported by veterinary services and extension services	1. Increase availability of veterinarians available for farm visits or video calls.	High	Immediate	Governments Industry
	2. Increase the number of workshops and services available to producers related to good animal husbandry, artificial insemination, grazing management, and other topics.	Moderate	Short	Governments Industry NGOs

F.3 Goat, sheep and domestic elk producers are supported in overcoming issues related to wildlife interactions	1. In consultation with industry, Yukon First Nations, and Yukon government departments, review the Sheep and Goat Control Order to evaluate the effectiveness and impacts to the domestic livestock sector growth.	High	Immediate	Yukon First Nations Industry Other Governments
	2. Encourage stewardship of wildlife populations (such as elk, sheep, bison, bears, and others) that weighs and balances the needs of the game farming industry, with those of Yukon First Nations, hunters, the tourism industry and the general population.	Low	Long	Yukon First Nations Industry Other Governments
F.4 Yukon farms are able to access a supply of available local youngstock	1. Investigate the feasibility of developing a Yukon-based youngstock breeding program, including necessary support programs.	Moderate	Long	Industry Governments

G. Egg Sector

Egg production has been growing in the past five years as producers gain more production skills and scale up operations. Three farms in Yukon are currently processing eggs through federally inspected egg grading stations. Egg producers that do not have their own grading station currently have no opportunity to access the retail market. Smaller Yukon farms are producing eggs for personal consumption or for direct sales. The number of laying hens estimated in the Yukon are:

- 6,000-7,000 hens (between three producers) for inspected egg retail market sales; and
- 2,000-3,000 hens (unknown number of producers) for direct egg market sales.

Based on these numbers, it is estimated that current egg production in Yukon is:

- 150,000 – 175,000 dozen eggs per year for retail market sales; and
- 50,000 – 75,000 dozen eggs per year for direct market sales.

This means that Yukon egg producers are currently supplying between 27-34 per cent of Yukon's total market for eggs. Locally produced eggs (graded and non-graded) in Yukon can be sold for $6-10 per dozen. The current supply of eggs from local producers appears to be meeting consumer demand in the retail/grocery store environment, while at the farmers' markets (during good weather and attendance) eggs are often the first local product to be sold out.

What's Working

- Government funding has assisted producers in scaling up operations and building egg grading facilities.
- There is strong consumer demand for locally produced eggs.

What's Challenging

- There is currently no option for small-scale producers to access a multi-user grading facility and therefore enter the retail market.
- The costs associated with operating an enclosed laying hen barn in the winter are very high due to heating requirements.
- Feed, youngstock, and other inputs are expensive and must often be imported from other parts of Canada.
- Concerns have been raised about the suitability of supply management and the long-term outlook for a sustainable egg sector in Yukon.

Opportunities

- As eggs are a staple in many households' diets, it is possible to increase the market share captured by Yukon eggs.
- In addition to grocery retailers, potential market opportunities for licensed egg sales include mining camps, restaurants, and schools (e.g., lunch programs).
- Increased branding and marketing of locally produced and graded eggs will help with accessing markets and educating consumers.
- There are no certified organic eggs produced in the territory, which presents an opportunity.
- For eggs that do not meet grading standards, there is an opportunity to investigate the feasibility of processing facilities and sales channels for different size/grades of eggs that cannot be sold at retail (e.g. for baking or other culinary purposes).

Figure 14. Graded eggs for sale from a Yukon egg farm.

Goals and Recommended Actions for the Egg Sector

Table 25. Theme G. Egg Sector.

Goal	Recommended Actions	Potential for Impact	Timeline	Key Actor
G.1 The number of laying hens being raised by Yukon producers is increased	1. Increase the availability of knowledge, extension, and veterinary services to producers to support poultry health and growth in egg production.	Moderate	Short	Industry Governments NGOs
	2. Investigate options to reduce costs associated with winterizing layer barns.	Low	Short	Industry Governments NGOs
G.2 New local markets are opened for Yukon egg producers	1. Invest in additional federally licensed egg grading facilities, particularly those that could accommodate multiple egg producers and certified organic eggs. This may be in the form of a co-operative or through an intermediary egg purchasing business.	High	Immediate	Industry Governments
	2. Establish processing facilities and sales channels for different size/grades of eggs that can't be sold at retail (e.g. for baking or other culinary purposes).	Moderate	Long	Industry

H. Hay, Feed, and Grain Sectors

Production of hay for livestock feed is well-established in Yukon. The Agricultural Census does not provide an accurate picture of the amount of hay being produced commercially vs. for on-farm use because it does not distinguish between the two uses. However, according to Government of Yukon staff, there are over 1,000 hectares of land under hay production in the territory and this amount has not fluctuated very much over the last 10-15 years. Hay is produced either as a dryland crop or as an irrigated crop, with dryland yields typically in the range of 1.0 to 1.5 tons per acre and yields on irrigated land typically between 3.0 to 4.0 tons per acre.[50] It is estimated that between 4,600-11,500 tons of hay is produced within the territory annually and over 80 per cent of hay is currently being cultivated on fields without irrigation (Table 26).

Table 26. Estimate of Hay Production.[51]

	Hectares	Yield Range (ton/ha[52])	Yield Production Range (ton/total ha)	Total Yield Production Range (tons)
Irrigated*	250	7.4 – 12.4	1,853 – 3,088	4,678 – 11,565
Not irrigated	1,144	2.5 – 7.4	2,826 – 8,477	

*A total of 272 hectares of agricultural land was reported as irrigated in the 2021 census; it is assumed 250 of those hectares is in hay production.

Hay is often marketed to the horse industry, mainly to outfitters, individual owners and boarding operations. Cattle farms also grow hay for livestock feed and some purchase hay from off-farm sources. Locally produced hay is of high value to the Yukon horse and cattle sector because it otherwise must be imported at high shipping costs. High-value local hay is often sold first to local horse owners, and hay for cattle sales is often mixed with silage and is of lower value. As the cost of fuel and fertilizer both continue to rise it is anticipated that hay production costs will rise, impacting market prices. A 2019 report on the potential of large livestock production in Yukon compared costs associated with raising elk, bison and cattle on dryland fields to irrigated fields. The report found that in all cases irrigated fields generated more profit in a shorter time than dryland fields. This is partially due to irrigated operations on average requiring only a third of the land that a dryland operation requires. This speaks to the value of investing in irrigation equipment for this sector.

From experimentation in Fort Selkirk in 1848 to current farms, grains are being tested and succeeding in the Yukon climate.[53] Grain and oilseed is produced in the Yukon mainly for animal feed. Recently, some farms have started producing grain for human consumption. A small artisan flour mill in Whitehorse produces and mills barley and hard red spring wheat, a variety of wheat suitable for northern climates, and their flour and baking mixes are sold in retail locations around Yukon.

[50] Multi-Year Development Plan for Yukon Agriculture 2008. Serecon Consulting.
[51] Hectares of hay data from the Census of Agriculture, 2021.
[52] Ferris, K. 2019. Hay Production in Yukon, Best Management Practices.
[53] Michele Genest. Backyard Grain-Growing in Yukon: The Logical Next Step. 2018.

Since 2011 there have been a number of trends in cover cropping, feed and grain production (Table 27). These include:

- An increase in farms producing barley from 2016 to 2021;
- Canola was first reported in 2016, and was reported on 2 farms by 2021; and
- Despite a drop in the number of farms since 2016 there are more acres under production in oats for cover crops and/or forage.

Table 27. Grain and forage production in Yukon.[54]

		2011	2016	2021
Oats	#farms	24	22	13
	ha	414	261	295
Canola	#farms	0	1	2
	ha	0	x	213
Barley	#farms	2	3	8
	ha	x	x	121
Mixed grains	#farms	1	1	1
	ha	x	x	10
Rye	#farms	2	3	0
	ha	x	9	0

Note: In 2021, only farms that report expenses or revenues to the CRA are captured in the Census of Agriculture. Previously, all operations with an intent to sell were included.

What's Working

- Hay is well suited to the growing conditions in Yukon and is an established crop with experienced producers and equipment throughout the territory.
- Grain varieties suited for the northern climate fill a niche consumer market (e.g. pre-mixes for baked goods).
- Government funding has assisted producers in purchasing irrigation equipment for this sector.

What's Challenging?

- Irrigation equipment is expensive to purchase and install on large acreages.
- The cost of fertilizers is increasing, therefore potential yields may be hampered.
- There is limited research regarding ideal grain varieties to grow in the Yukon.

Opportunities

- Research into varieties and adoption of best management practices around grains may open up production opportunities.
- The demand for Yukon hay, feed and forage exceeds supply.
- Investment in irrigation could lead to increased crop yield and quality.

[54] Statistics Canada, Census of Agriculture. 2011, 2016, 2021.

Goals and Recommended Actions for the Hay, Feed, and Grain Sectors

Table 28. Theme H. Hay and Grain Sectors.

Goal	Recommended Actions	Potential for Impact	Timeline	Key Actors
H.1 More locally produced hay, feed, and grain is available to local farms	1. Develop local expertise and extension services specifically focused on hay, feed, grains and forage crop rotations.	High	Immediate	Industry Governments
	2. Invest in irrigation infrastructure and encourage funding applications through the BMP program and others.	Moderate	Short	Industry Governments
	3. Conduct market research to refine and guide further investment in hay, feed and grain production.	Moderate	Short	Industry Governments NGOs
	4. Continue research into improving hay, feed and grain yields through fertilizer efficiencies and soil health, with a focus on locally available inputs.	Low	Long	Industry Governments NGOs

I. Vegetable, Fruit, and Berry Sectors

Field Vegetable Production

Field vegetable production in Yukon is limited due to the short growing season, soil temperature and soil quality constraints. However, with the addition of season extension practices such as row covers and tunnels, vegetable production can increase. There are many market garden farms throughout the territory, most of them relatively small, with the majority primarily located in the vicinities of Whitehorse and Dawson City. There is a wide variety of vegetables being produced, albeit on a relatively small land base. Carrots, potatoes, cabbage, and beets are the top field vegetable crops produced by area (Table 29). A large proportion of these top crops are produced at one larger-scale commercial farm. A variety of other crops are grown in smaller areas. Based on a quick scan of local producers' websites and offerings at the farmers' markets, the "other" category likely encompasses garlic, kohlrabi, herbs and specialty salad greens.

Table 29. Field vegetables in Yukon.[55]

Crop		2011	2016	2021
Potatoes	#farms	12	11	7
	ha	10	9	14
Carrots	#farms	9	12	10
	ha	3	3	3
Cabbage	#farms	8	9	7
	ha	<1	1.5	1
Beets	#farms	8	9	7
	ha	<1	1.5	1
Tomatoes	#farms	1	4	5
	ha	X	<1	<1
Green and wax beans	#farms	2	2	3
	ha	X	X	<1
Cauliflower	#farms	8	7	4
	ha	1	<1	<1
Radishes	#farms	4	6	4
	ha	X	<1	<1
Spinach	#farms	6	4	2
	ha	1	<1	<1
Kale	#farms	X	X	7
	ha	X	X	<1
Cucumbers	#farms	1	1	3
	ha	X	X	X
Green peas	#farms	10	7	5
	ha	1.5	<1	X
Broccoli	#farms	9	9	6
	ha	<1	<1	X
Brussel Sprouts	#farms	3	1	2
	ha	x	X	X
Rutabaga and turnips	#farms	5	4	3
	ha	<1	<1	X

[55] Statistics Canada, Census of Agriculture. 2011, 2016, 2021.

Crop		2011	2016	2021
Dry onions	#farms	3	2	3
	ha	x	x	X
Lettuce	#farms	10	7	9
	ha	<1	<1	X
Squash and zucchini	#farms	3	2	2
	ha	x	x	X
Other	#farms	15	17	3
	ha	3.5	12	X

Note: In 2021, only farms that report expenses or revenues to the CRA are captured in the Census of Agriculture. Previously, all operations with an intent to sell were included.

Table 30 provides an estimate of the annual current market share captured by some of the more common vegetable crops grown in the Yukon. Numbers vary widely based on yield potentials. The low market share estimate is likely closer to the yields experienced by most Yukon producers due to growing condition limitations.

Table 30. Estimates of annual market share of Yukon grown field vegetables.[56]

	Yukon 2021 (ha)[57]	Yukon Yield Range (kg)	Availability for consumption per person [58] (kg/year)	Availability for consumption in Yukon [59] (kg/year)	Market Share Range (%)
Potatoes	14	224,000 -420,000	60.0	2,614,500	8.6 – 16.1
Carrots	3	33,000 – 138,000	6.4	278,880	11.8 – 49.5
Cabbage	1	12,350 – 50,000	4.5	196,088	6.3 – 25.5
Beets	1	11,110 – 28,000	1.0	42,268	26.3 – 66.2
Beans*	0.5	2,161 - 4,940	0.9	40,089	5.4 - 12.3
Cauliflower*	0.5	2,779 - 9,880	2.8	122,010	2.3 - 8.1
Radish*	0.5	3,335 - 4,940	0.4	15,687	21.3 - 31.5
Spinach*	0.5	6,863 - 9,880	0.9	40,089	17.1 - 24.6
Kale*	0.5	5,558 - 12,350	0.8	36,603	15.2 - 33.7

** These crops reported less than 1 ha of production in the 2021 Census of Agriculture; 0.5 ha of production are used for ease of calculations.*

Greenhouse Production

Yukon producers have long utilized greenhouses to aid in vegetable and flower production. The Yukon greenhouse industry grew by 63 per cent since 2016 (in terms of floor area) to a total of over 5,200 m^2, while the number of farms with greenhouses shrunk by a third (Table 31).[60] In 2021, cucumbers were the most common crop grown

[56] Census of Agriculture data was for used growing area numbers. Food availability for consumption per person per year from Statistics Canada was used to estimate how much is consumed, calculated by dividing the domestic disappearance (the total food available for human consumption) by the population as of July 1st of the reference year, at the retail level. This number does not adjust for losses.
[57] Census of Agriculture. 2021. Statistics Canada.
[58] Statistical Overview of the Canadian Vegetable Industry 2019. 2020. Government of Canada.
[59] The 2021 population of Yukon (43,575) was used to estimate total consumption of each vegetable.
[60] Statistics Canada. 2021. Census of Agriculture.

(40 per cent of vegetables grown), followed by herbs (17 per cent), tomatoes (13 per cent), and peppers (6 per cent).[61] There has been a substantial increase in greenhouse space being used to cultivate non-edible crops such as ornamental tree seedlings, cuttings, bedding plants, transplants or plugs.

There is one large scale greenhouse business located in Whitehorse selling vegetables, fruits, flowers and ornamental plants that likely account for the majority of the crop area reported by Statistics Canada. Estimates of annual market share are captured in Table 32.

Table 31. Greenhouse production in Yukon.[62]

		2011	2016	2021
Total greenhouse area in use	**#farms**	**26**	**24**	**16**
	m^2	**3,591**	**3,212**	**5,233**
Flowers	#farms	13	15	4
	m^2	1,908	1,621	500
Tomatoes, cucumbers, peppers	#farms	20	19	15
	m^2	1,576	1,261	2,637
Lettuce, strawberries, sprouts, microgreens, shoots, eggplants	#farms	N/A	N/A	8
	m^2	N/A	N/A	268
Ornamental tree seedlings, cuttings, bedding plants, transplants or plugs	#farms	4	5	3
	m^2	106	329	2,096

Note: In 2021, only farms that report expenses or revenues to the CRA are captured in the Census of Agriculture. Previously, all operations with an intent to sell were included.

Table 32. Estimates of annual market share of Yukon greenhouse grown produce.[63]

	Area (m^2)	Yield Range (kg/m^2)	Availability for consumption per person [64] (kg/year)	Availability for consumption in Yukon [65] (kg/year)	Market Share Range (%)
Cucumbers	462	25,410 - 30,030	3.5	152,512	16.7 – 19.7
Tomatoes	1,630	57,050 - 79,870	7.9	344,243	16.6 – 23.2
Peppers	77	1,186 - 1,401	4.2	183,015	0.6 -0.8
Herbs	200	980 - 1,540	0.3	13,073	7.5 – 11.8

[61] Statistics Canada. 2021. Census of Agriculture.
[62] Greenhouse area in use on day of census in 2011, 2016, and 2021. Statistics Canada.
[63] Census of Agriculture data were used for growing area numbers. Food availability for consumption per person per year from Statistics Canada was used to estimate how much a Yukoner may purchase/consume each food product. This number was then used to estimate market share captured by food produced within Yukon. Food available per person is calculated by Statistics Canada by dividing the domestic disappearance as of July 1st of the reference year, at the retail level. This number does not adjust for losses.
[64] Statistical Overview of the Canadian Vegetable Industry 2019. 2020. Government of Canada.
[65] The 2021 population of Yukon (43,575) was used to estimate total consumption of each vegetable.

Fruit and Berry Production

Currently, a very limited volume and variety of fruits and berries are grown in Yukon. Haskap berries are by far the most common berry crop grown on commercial farms. The data for "other" fruit was significant in years prior, and appears to have been largely Haskaps, which were recorded for the first time in 2021 (Table 33). Haskaps are sold fresh and processed through drying, freezing and turned into value-added products like jams and wines. Other fruit grown on farms include raspberries, Saskatoon berries, strawberries and apples.

Table 33. Fruit and berry production in Yukon.[66]

		2011	2016	2021
Haskaps	#farms	x	x	8
	ha	x	x	17
Other (e.g., blackberries, hazelnuts, walnuts, nectarines, gooseberries)	#farms	7	12	3
	ha	2	19	1
Raspberries	#farms	8	10	4
	ha	X	2	X
Saskatoons	#farms	9	7	3
	ha	3	2	X
Strawberries	#farms	3	2	2
	ha	X	X	X
Apples	#farms	1	2	1
	ha	x	x	x

Note: In 2021, only farms that report expenses or revenues to the CRA are captured in the Census of Agriculture. Previously, all operations with an intent to sell were included.

Table 34 outlines an estimate of Yukon consumption for fruits and berries that could be grown in Yukon. A 2007 study conducted at the Research and Demonstration farm found that a single hectare of raspberries could yields 2,000 kg.[67] This would amount to capturing approximately 4 per cent of the market share.

Table 34. Volumes of fruit and berries consumed by Yukoners.

Fruit	Availability for consumption per person [68] (kg/year)	Availability for consumption in Yukon [69] (kg/year)
Apples	9.9	432,700
Strawberries	2.9	125,932
Other (e.g. raspberries, blackberries)	1.2	50,983

[66] Statistics Canada, Census of Agriculture. 2011, 2016, 2022.
[67] Yukon Agriculture Research and Demonstration, 2007 Progress Report. Energy, Mines & Resources – Agriculture Branch.
[68] Statistical Overview of the Canadian Fruit Industry 2020. 2021. Agriculture and Agri-Food Canada.
[69] The 2021 population of Yukon (43,575) was used to estimate total consumption of each fruit in the territory.

What's Working

- Government funding for production, processing and storage is available to support small scale vegetable, fruit and berry producers.
- Relationships with retailers, local restaurants and consumers have been established by producers.
- Farmers' markets are a foundational sales channel for Yukon vegetable producers.
- Research at the Government of Yukon's Research and Demonstration Farm has contributed to helping the sector develop and expand.

What's Challenging

- A lack of locally available soil amendments such as compost or mineral-based additives increases costs of production.
- There is a lack of widespread use of season extension methods.
- Increasing cost of fuel for heating greenhouses is constraining the industry.
- Limited knowledge around farming practices applicable to the North that are adaptive to climate change, in particular impacts related to pest management.
- Most of the work is done manually, and therefore this sector is vulnerable to labour shortages and increasing cost of labour.

Opportunities

- Several studies at the Government of Yukon's Research and Demonstration Farm and local on-farm successes have shown that raspberries may have potential for commercial production.[70]
- Opportunity to undertake further crop trials for fruits and vegetables to provide knowledge sharing to the industry.
- Demand for local produce during the winter months is high.
- Basic processing equipment to create value-added products, such as fries or peeled potatoes, would create an opportunity to turn culled raw vegetables, fruits and berries into value-added products.
- Changing climate may bring opportunities to grow new crops and open new tracts of land. Extension services can acknowledge the complicated mix of impacts that climate change is bringing to the sector.
- Further irrigation, drainage, water storage and season extension investments could help to increase yields.

[70] Yukon Agriculture Research and Demonstration, 2007 Progress Report. Energy, Mines & Resources – Agriculture Branch.

Goals and Recommended Actions for the Vegetable, Fruit and Berry Sector

Table 35. Theme I. Vegetable, Fruit, and Berry Sectors.

Goals	Recommended Actions	Priorities	Timeline	Key Actors
I.1 Yields of field vegetables, fruit, and berries are increased	1. Invest in greenhouses, season extension infrastructure, irrigation equipment and access to maintenance and repair services.	High	Immediate	Industry Governments
	2. Expand extension services for fruit and vegetable producers, including Integrated Pest Management strategies.	Moderate	Short	Industry Governments
	3. Invest in on-farm water storage and drainage infrastructure.	Low	Short	Industry Governments
I.2 Locally produced vegetables, fruit, and berries are available during off-season months	1. Invest in a centralized freezer (frozen food storage) facility or warehouse to provide a depot for producers to stock their products and distribute them to retailers over longer periods of time. This could align with recommendation B.3.2 and/or B.3.3.	High	Immediate	Industry Governments
	2. Initiate new research trials to experiment with a wide variety of crops that considers the climate change impacts, including an increase in Growing Degree Days.	Low	Long	Industry Governments NGOs

I.3 Locally developed seeds and plant stock are available to Yukon producers	1. Invest in greenhouse nursery operations/farms for the cultivation of fruit trees, berries and other northern varieties of fruits for the local agricultural market.	High	Immediate	Industry Governments
	2. Invest in a Yukon-based northern seed saving and collection library.	Moderate	Short	Industry Governments
	3. Develop local seed potato production for northern varieties.	Moderate	Long	Industry Governments

J. Dairy Sector

The Yukon dairy sector is small but growing. From 2016-2021, the Census of Agriculture reported an increase from 6 to 11 dairy cows on commercial farms, although there may also be additional dairy cows on homesteads raised for personal milk consumption.[71] There is no data on goat milk production; however, it is likely people are raising goats for personal milk consumption.

In Spring 2022, a new Yukon dairy producer became licensed and began selling fluid milk and butter to several retail stores in Whitehorse. There is at least one established cheese maker in the territory, selling to retail stores. Local milk and cheese cost more than imported products, and thus far consumers have been willing to purchase these products and demand is consistent. It is likely that the market capacity for local dairy is not yet saturated[72]; however, there are production limitations such as high costs of feed, energy and processing equipment. There is also limited veterinary and extension service expertise in Yukon when it comes to dairy husbandry.

What's Working

- Producers are demonstrating the ability to raise dairy cows in the North and consumers are interested in the products.

What's Challenging

- Due to skilled labour capacity challenges across the industry, the availability of extension services and veterinarian care is limited.
- High costs of hay and feed are constraining the industry.
- The low number of dairy farms results in a lack of farm-to-farm learning and a reliance on dairy producers outside of the Yukon for advice and expertise.

Opportunities

- There is a local market opportunity to consumers, retailers and restaurants for increasing production of fluid milk, butter and cheeses.

[71] Statistics Canada, 2021. Census of Agriculture.
[72] It is estimated that around 36,000L of milk are produced which is 1% of the market share.

Goals and Recommendations for the Dairy Sector

Table 36. Theme J. Dairy Sector.

Goal	Recommended Actions	Potential for Impact	Timeline	Key Actors
J.1 The volume of cow milk and cheese produced in the territory is increased	1. Provide support to existing operators and new entrants through stable veterinarian support, dairy specialists, extension services, equipment servicing and regulatory guidance.	High	Immediate	Industry Governments
J.2 A goat and/or sheep dairy industry is developed	1. Conduct market research for goat and/or sheep dairy products in Yukon and use the results to guide investment.	Moderate	Short	Industry Governments

Figure 15. Yogurt for sale at the Alpine Bakery in Whitehorse.

K. Emerging Sectors

Several additional agricultural sectors are present within Yukon, as presented in Table 37. They are considered "emerging" based on the relatively small size of the industry.

Table 37. Number of farms in emerging sectors.[73]

Sector	Description
Nursery Products	There are four farms reporting nursery products for sale with a total growing area of just under 2 ha (5 acres) using a combination of greenhouses for seedlings and fields for tree production.
Sod Production	One farm is reporting growing sod for sale on 4 ha (10 acres).
Mushroom Production	Two farms were recorded in 2021 growing button and specialty mushrooms.
Honey Production	In 2016, four farms reported keeping 15 honeybee colonies; by 2021 that number jumped to 54 colonies on 4 farms. Colonies in Yukon are often pollinating wildflowers, most notably fireweed; however some producers are also offering pollination services to commercial growers.
Birch Syrup Production	There is at least one commercial birch syrup producer in the territory.

Note: In 2021, only farms that report expenses or revenues to the CRA are captured in the Census of Agriculture. Previously, all operations with an intent to sell were included.

Controlled environment agriculture, or indoor cultivation, may also be considered as an emerging sector in Yukon. There is one business in Whitehorse growing leafy greens and herbs in self-contained hydroponic growing units.

What's Working

- Producers are finding niches in multiple product lines that can be grown within the territory.

What's Challenging

- Lack of extension services for the speciality sectors.
- Lack of data regarding market supply and demand for emerging sectors.
- Production for sectors like nursery and sod is limited by access to irrigation.

Opportunities

- Research into market demand and opportunities for expansion.
- The Government of Yukon procurement policy could include some emerging products to help stimulate the industry.
- Recent expansion of mushroom and honey sectors indicate a growing demand for these products.

[73] Statistics Canada, Census of Agriculture. 2011, 2016. 2021.

Goals and Recommended Actions for Emerging Sectors

Table 38. Theme K. Emerging Sectors.

Goals	Recommended Actions	Potential for Impact	Timeline	Key Actors
K.1 Emerging sectors continue to grow and develop	1. Support honey producers though research and knowledge sharing of best practices for bee health and integrated pest management (see BC's Bee BC program for example).	Moderate	Short	Industry Governments
	2. Invest in irrigation, drainage, and water conservation technologies for sod and nursery producers.	Moderate	Short	Industry Governments
	3. Conduct market research and product testing for emerging sectors.	Moderate	Long	Industry Governments
	4. Invest in indoor year-round mushroom growing facilities.	Low	Long	Industry Governments
	5. Develop extension resources and BMPs to guide the mushroom sector, particularly regarding waste management.	Low	Long	Governments Industry

Appendix A: Engagement Summary

A variety of engagement methods were used to ensure meaningful input into the MYDO report.

Steering Committee Meetings
Throughout the engagement the consultants and the project Steering Committee maintained close communication regarding the details of engagement activities. The Steering Committee is made up of representatives from the Government of Yukon Agriculture Branch and the Government of Canada through Agriculture and Agri-food Canada and the Canadian Northern Economic Development Agency. Five meetings of the Steering Committee took place. The meetings served as an opportunity to discuss the engagement strategy and initial engagement results, and to obtain clear directions on project goals and objectives.

Attendance at North of 60 Agriculture Conference and First Nations Agriculture Forum
Members of the consulting team virtually attended the North of 60 Agriculture Conference on February 19, 2022 and the First Nations Agriculture Forum on February 21, 2022. The conferences provided an opportunity for the consultants to be introduced to Yukon First Nations and agricultural stakeholders and get an initial sense of the challenges and opportunities facing agriculture in the Yukon. The conference attendees were also made aware of the MYDO report objectives and process.

Interviews
A total of 51 interviews were conducted

- 26 producers;
- 7 retailers;
- 3 government representatives;
- 2 industry association representatives;
- 2 consultants;
- 2 food processors; and
- 1 school district representative.

A second set of interviews were conducted with 8 Yukon First Nations community members and employees.

The interview questions and discussions were tailored to each specific stakeholder; however, questions for industry centred around the following themes:

- Obtaining details around farming and food processing activities being undertaken;
- Documenting key issues and challenges being experienced by the Yukon agriculture sector;
- Identifying gaps in policy, regulations and/or support from the Government of Yukon;

- Exploring what programs and policies are working well, and which are no longer useful; and
- Opportunities for growth of the agriculture and food sector.

Site Visits
Over 25 in-person and on-farm meetings were conducted with stakeholders in May and July 2022, including 14 farm site visits in the vicinity of Whitehorse, Lake Laberge, Carcross, Tagish, Marsh Lake, Dawson City and Mayo.

Focus Group Meetings
There were 2 focus group meetings (via Zoom) hosted by the consulting team:

- Agriculture Branch staff
- Organic sector producers

These sessions allowed for a more in-depth discussion between participants regarding challenges and opportunities affecting the agriculture sector.

Appendix B: Reports Consulted for Background Research

Title	Year
Regulating the Yukon's Game Farming Industry: A discussion paper *Government of Yukon Renewable Resources*	1992
Revising the Yukon Agriculture Policy *Government of Yukon Department of Energy Mines and Resources*	2004
Multi-Use Facility Feasibility Study *Yukon Agricultural Association*	2006
Yukon Multi Year Development Plan (MYDP) *Government of Yukon Department of Energy Mines and Resources*	2008 - 2012
Oilseed Production for Biodiesel Potential in the Yukon *Government of Yukon Agriculture Branch*	2010
Humble Dreams: an Historical Perspective on Yukon Agriculture Since 1846 *Sally Robinson*	2010
Yukon Agriculture: State of the Industry Report *Government of Yukon Agriculture Branch*	2013 - 2017
Yukon Food System Design and Planning Project: Foundational Food system Design *KPU - Institute for Sustainable Food Systems*	2015
Ploughing Toward an Updated Yukon Agriculture Policy: What we heard *Government of Yukon Agriculture Branch*	2018
Local Food Strategy for Yukon *Government of Yukon*	2016 - 2021
Yukon Agriculture Association (YAA) Strategic Plan *Yukon Agricultural Association*	2017 - 2021
Haskap Production and IPM for Yukon Berry Crops *Kristine Ferris & Government of Yukon Agriculture Branch*	2017
Mapping Yukon Climate Change and Northern Food System Assets *Arctic Institute of Community Based Research & Government of Yukon Agriculture Branch*	2019
Hay Production in Yukon: Best Management Practices *Kristine Ferris & Government of Yukon Agriculture Branch*	2019
Economic Impact of Large Animal Livestock Production in the Yukon *Yukon Agricultural Association*	2019
Our Clean Future: A Yukon strategy for climate change, energy, and green economy *Government of Yukon*	2020
Cultivating Our Future: 2020 Yukon Agriculture Policy *Government of Yukon Agriculture Branch*	2020
Yukon Mobile Abattoir Procedures Manual *Tum Tum's Black Gilt Meats LTD*	2020
Local Food and Urban Agriculture Study: Potential Actions *City of Whitehorse*	2020- 2030
Greenhouses for the Northern Climate *Simone Rudge*	Unknown