

Understanding the Barriers to Livestock Production in the Clay Belt: An Economic, Social and Environmental Analysis

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Project Overview



There are significant opportunities for the expansion of the agricultural sector in northern Ontario, particularly the Clay Belt region along the Highway 11 corridor. The Clay Belt region, with an abundance of affordable productive farmland, has garnered much speculation from prospective farmers. While land is available and evidence of success in agriculture exists, the challenges associated with farming within this region are not well understood. Many challenges are based on perceptions and misconceptions regarding the geography of northern Ontario, its climate and population. To better understand these barriers, particularly related to the livestock industry, researchers from the University of Guelph and l'Université de Hearst have undertaken a joint research project.

The project, entitled *Understanding the Barriers to Livestock Production in the Clay Belt: An Economic, Social and Environmental Analysis*, has been funded through the Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA) New Directions grant program. The goal of this study was to explore and understand the institutional and individual barriers to establishing livestock productions in the Clay Belt, particularly along the northern corridor of Highway 11 (between Hearst and Cochrane). The sub-objectives of this study were as follows:

1. Explore the opinions on livestock production with the local general population, ideally including First Nations and Mennonites; identify the advantages as well as the perceived difficulties related to this topic;
2. Explore and understand perceptions of livestock production with experts (farmers, entrepreneurs, local association members from northern Ontario and from the south, decision makers from government agencies and the ministry);
3. Identify the difficulties and obstacles to the establishment of livestock farms; and
4. Propose the means and the actions necessary to reduce/eliminate these obstacles. Ideally, through an understanding of these barriers, the livestock industry within the Clay Belt can be expanded.

The following report identifies the barriers to livestock production within the Clay Belt region and potential solutions for these barriers. A variety of economic, social and environmental barriers will be discussed, followed by an overview of appropriate solutions. All of the barriers and solutions have been identified by research participants and a Community Advisory Board. Details regarding the methods utilized in this study will be presented before the findings.

Methods



This study utilized a participatory action research (PAR) approach, incorporating both research participants and a Community Advisory Board (CAB) throughout the research project. PAR is a methodological approach that is increasingly recognized internationally and is advantageous when we want to involve the people to whom the research results are directed. It is a research approach that recognizes the socially constructed nature of scientific knowledge and is distinguished from "classical" approaches by the participation of research partners who are not from an academic background. These non-academic researchers – community members, policy makers, agency representatives, etc. – take part in most stages of the research. It allows partners to benefit from the immediate benefits of research or to be involved in knowledge transfer.

The research participants were engaged with interviews to identify barriers (interview grids are included in Appendix 1) to livestock production in the Clay Belt and focus groups to identify solutions. A total of 70 in-depth, semi-structured interviews were conducted with existing farmers (including Old Order Mennonites), former farmers and prospective farmers, as well as representatives from farm organizations, municipalities and health, education and business sectors. These participants were also invited to participate in one of three focus groups that were held in Cochrane, Kapuskasing and Hearst.

The CAB was established at the start of the research project and helped develop the research questions and methods. The CAB was a mechanism for community members to have representation in research activities and participants included stakeholders from government agencies, agricultural organizations, the northern research community, northern municipalities and educational institutions. They provided insight into the goals of the study, identified knowledge gaps and enhanced the research team's understanding of the study area. Of significance, the CAB reviewed the proposed solutions and provided recommendations regarding which solutions were both appropriate and feasible.

Summary of Barriers



The barriers detailed below were generated through interviews with existing farmers (including Old Order Mennonites), former farmers, prospective farmers and representatives from farm organizations, municipalities and health, education and business sectors. In general, economic and social barriers were the most prevalent barriers identified by each participant group. In terms of economic challenges, profits were identified by all participant groups, with significant concerns related to higher costs for expenses and limited access to services. Social barriers were often related to family needs, such as employment opportunities for a spouse, school and recreational opportunities for children, a perceived lack of farming community and limited access to commercial services (e.g. shopping centres). Barriers related to the environment focused on the colder climate, shorter growing season and soil quality.

Variation between participant groups was noted. For example, farmers from the Old Order Mennonite community did not identify any social barriers to livestock production, while the prospective farmers identified many social barriers. Further, the prospective farmers identified language barriers, in particular an inability to speak French, as a significant barrier to moving from southern Ontario.

The Old Order Mennonites, existing farmers and farm organizations generally had similar concerns related to economic and environmental barriers, given their understanding of northern agriculture and current experiences with the industry. The data from these three groups is generally not based on perceptions but reality given their personal experiences and roles.

Given the unique perspectives of the education, health and municipal representatives, generalizations and comparisons between groups are difficult. Appendices 2, 3 and 4 provide a matrix of economic, social and environmental barriers, identifying overlap between participant groups. In the discussion that follows, the most prevalent economic, social and, environmental barriers are discussed. Where appropriate, differentiation between participant groups has been provided, as some barriers were specific to a particular group. To note, some barriers overlapped in content and were discussed together, in lieu of individual points.

Economic Barriers

1. Profitability
2. Access to Land/Land Clearing
3. Tile Drainage
4. Cost of Supplies
5. Access to Equipment
6. Access to Markets
7. Transportation
8. Labour
9. Access to Services
10. Availability of Grants

The economic barriers were relatively consistent between participant groups, with the most significant barrier related to profits. Many of the barriers discussed below generally impact profits (e.g. transportation costs) but are discussed as separate items.

Profitability

The most significant economic concern identified by all participants was related to the profitability of the livestock sector. Concerns related to high input costs, low value for livestock and a volatile market were viewed as negatively impacting profits and a low return on investment. Many of the economic barriers included in this report directly impact farm profits and were generally viewed with apprehension and uncertainty. Individuals already engaged in the agricultural sector were aware of the financial risks involved with agriculture but viewed the remoteness and limited northern farm industry as having a greater impact on profits than farming in southern Ontario.

Access to Land/Land Clearing

It was noted by a number of participants that in northern Ontario, it is often difficult for a farmer to expand or simply access land for operations. Knowing which lands are available, their size and the name of their owner, is a challenge. Also, some land is divided into smaller parcels: a farmer could buy land a few hundred meters from his own, but the two parcels would be separated by land owned by someone else, which would then complicate his activities. Furthermore, some landowners in the region refuse to sell, hoping that land value will rise and

that they will be able to make more money in the future. This limits purchasing opportunities for new farmers or established farmers wanting to expand their farms. While the Clay Belt region in northern Ontario has a history of farming, much of the arable land located within the Highway 11 corridor is overgrown with brush, grasses or in some instances, forested land. Some land that was previously cleared for agriculture has been left fallow and overgrown, while other land has never been farmed and is in need of significant clearing of trees. Clearing land for agricultural purposes is an added expense that must be considered and is a process that must occur before the land is deemed suitable for agriculture. While land that has become overgrown with grasses or brush may not need clearing for cattle, land that will be utilized for growing feed must be properly cleared before crops such as oats, barley and hay can be grown.

Tile Drainage

The clay soils found within the Highway 11 corridor are appropriate for agriculture given their ability to retain both moisture and nutrients. While high water retention in clay soil does not necessarily impact livestock production, crops, including feed, can be negatively impacted by highly saturated soil. As a result, clay soils often require tile drainage to remove excess water below the soil surface to improve soil quality and crop yields. During times of heavy rain and spring thaws, tile drainage removes excess water from the soil, increasing the rate at which soil dries out. As a result, farmers can gain access to their fields earlier in the spring for planting. Studies have also demonstrated higher crops yields as a result of tile drainage, as excess water is more easily removed during times of rain as fields are less saturated. While there are provincial grants available to assist with the installation costs of tile drainage, grant availability is not guaranteed and only refund part of the cost.

Supplies, Equipment, Transportation and Services

The agricultural sector in northern Ontario has grown through the expansion of existing farms, new farm entrants and a migration of farmers from southern Ontario. While the sector has grown, access to supplies, equipment and transportation operators is limited, especially when compared to southern Ontario. As demonstrated in Figure 1 agricultural businesses are generally clustered within Algoma, Sudbury and Temiskaming Districts. The focus of this research was the Highway 11 corridor between Hearst and Cochrane, and as demonstrated by Figure 1, there is no clustering of agricultural businesses within this corridor. The closest cluster

of agricultural services is located in Temiskaming Shores, approximately 220 kilometres southeast of Cochrane and over 400 kilometres away from Hearst.

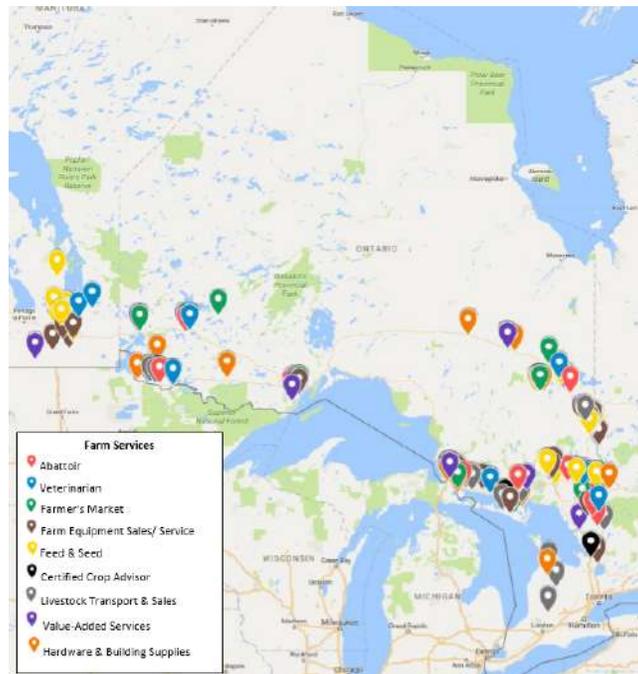


Figure 1: Location of agricultural services in northern Ontario (Caldwell, Epp and Howes, 2018)

While the distance to Temiskaming Shores is manageable, there are higher travel and shipping costs and significant issues related to road conditions, especially during winter. Furthermore, participants noted that the costs for services, supplies and equipment were higher in northern Ontario, when compared to those in the south. When considering the livestock sector, the costs related to transportation are particularly prohibitive, especially when shipping to southern Ontario. These added costs impact the profitability of the livestock farms and may dissuade new entrants from establishing a farm.

Access to Markets

Given the geographic area, lower population density and limited availability of services, access to markets is also limited. Existing farmers ship livestock to southern Ontario markets, with little remaining in the north for processing, sale and consumption. While markets and related services in northern Ontario are expected to increase as the agricultural sector grows, accessing markets in southern Ontario limit competitive advantages and result in higher expenditures due to shipping costs.

Labour

The agricultural industry in northern Ontario is significantly less developed than southern Ontario and as a result, the availability of labour is also impacted. The skill set required for agricultural labour is not well developed in northern communities and farmers compete with other, more lucrative industries, for workers. The mining and forestry sector, in particular, is high paid, with relatively consistent work. As a result, the potential labour pool for farm aid is significantly diluted. Furthermore, farming is a labour-intensive industry, with long hours and at times, inconsistent work. Those seeking employment opportunities generally look elsewhere for more consistent work, leaving farmers unsupported.

Availability of Grants

Both the federal and provincial government have created a number of grants related to agricultural development, with some available only for northern residents. Grants generally assist with the cost of infrastructure, training and development, and are considered a necessity for many participants. While the grants have been viewed favourably, concerns regarding the long-term availability of funding programs and maximum capacity were noted. Difficulty in writing grant applications and meeting all of the noted criteria also complicated the process and were a frustration for some farmers. Considering the higher costs associated with agriculture in northern Ontario, funding opportunities were extremely beneficial and viewed as a necessity.

Social Barriers

1. Lack of Employment Opportunities
2. Limited Opportunities for Youth
3. Sense of Community
4. Language
5. Lack of Farming Community
6. Isolation/Remoteness
7. Access to Healthcare
8. Lack of Mentorship
9. Access to Commercial Businesses/Services
10. Low Youth Retention

The social barriers identified below were most commonly identified by prospective farmers. It is important to note that many of these barriers are based on perceptions and not necessarily reality. Such perceptions do not diminish the importance of these barriers, as they must be addressed and demystified.

Lack of Employment Opportunities

For individuals moving to northern Ontario, employment opportunities for family members was an important consideration. Many believed that employment opportunities were limited to the service sector or resource extraction and were concerned that family members would not have equal opportunities for employment as southern Ontario.

Sense of Community, Isolation and Remoteness

Many of the social barriers identified by participants generally relate to the perceived isolation of northern Ontario, remote locations of farms and the lack of sense of community. There was a perception amongst prospective farmers, in particular, that livestock farming in northern Ontario would be a lonely experience. While some parts of northern Ontario are relatively remote, with extremely low population densities, the Highway 11 corridor between Hearst and Cochrane is generally well connected to larger cities, such as Timmins. There are also many small towns along this corridor, with established infrastructure, services and people. When compared to communities in southern Ontario, the north is certainly more remote; however, it is not a vast, barren landscape that some have perceived.

Limited Opportunities for Youth/Youth Retention

Many participants noted concerns regarding recreation, education and work opportunities for youth, if they relocated from southern Ontario. Northern Ontario, much like rural communities across Canada, has low levels of youth retention. There is a perception that many youth lack recreational opportunities, such as organized sports, clubs and other social organizations. While the focus group participants disagreed with this assessment, this perception may impact the appeal of northern Ontario for prospective farmers.

Language

Northern Ontario has a unique mix of francophone and anglophone residents with high rates of bilingualism. While some communities, such as Hearst, may be viewed as predominantly French speaking, focus group participants noted that no community within the Highway 11 corridor would only speak French. While some residents are likely more comfortably communicating in French, none of these communities would be labelled as francophone only. Concerns related to language barriers were primarily raised by participants in southern Ontario and can be considered a perception and not reality. This perception, however, is important as it may impact the migration of prospective farmers, thus limiting the development of the agricultural sector.

Lack of Farming Community and Mentorship

In many places, agriculture operates as a community, with an informal network of farmers offering support and mentorship. In northern Ontario, the farm sector is less developed and the geographic distance between farmers is significantly greater. The farm community, while it does exist, may operate more informally and more independently than other, more intensified areas. As a result, new and prospective farmers may sense a more independent farm sector, with more limited camaraderie. Further, new farmers often learn through mentorship and given the more rural/remote areas in northern Ontario, concerns regarding limited mentorship opportunities were also noted. A supportive farm sector is important and perceptions regarding limited development in northern agriculture, with infrequent interaction and support were viewed as significant barriers.

Access to Healthcare

For prospective farmers moving from southern Ontario, access to healthcare was viewed as a barrier impacting their move. There was a perception that northern Ontario residents do not have appropriate or adequate access to healthcare professionals. Debates about perceptions versus reality were linked to this barrier, as northern residents may have more limited access to specialized health services, but general practitioners are readily available.

Access to Commercial Businesses/Services

Given the geographic area of northern Ontario, many prospective farmers noted limited access to commercial businesses and services as a hesitation to moving. There is a sense that northern

Ontario is remote, with great distances between communities and no access to retail establishments. While some communities are quite remote, other locales offer a diversity of retail businesses and services. While these establishments may not be as prevalent as in southern Ontario, they are still available, especially in the larger towns of Timmins, Cochrane, Kapuskasing and Hearst.

Environmental Barriers

1. Climate
2. Soil Quality
3. Unpredictable Weather
4. Crop Failure Due to Weather
5. Inability to Grow Certain Crops/Feed
6. Predators
7. Pests
8. Weeds
9. Impacts of Extreme Cold on Livestock
10. Limited Diversity in Northern Crops

The environmental barriers identified by participants were diverse and generally aligned with perceptions, rather than reality. In many instances, topics that were identified as barriers by prospective farmers were considered strengths by existing farmers. While ten barriers were identified, they are presented below in groups, based on the overlap in content and efforts to reduce duplication.

Climate, Soil Quality, Unpredictable Weather, Crop Failure due to Weather, an Inability to Grow Certain Crops/Feed and Impacts of Cold on Livestock

There are many perceived barriers related to agriculture in northern Ontario and particularly the Clay Belt region. Of significance, perceptions related to an inability to grow certain crops or raise livestock due to climate, weather and soil issues were identified by many prospective farmers. The climate was generally viewed as harsh and unpredictable, with a significantly shorter growing season than southern Ontario. Likewise, the clay soil was viewed negatively, with fears related to growing conditions and suitability. Further barriers relating to weather were noted, particularly the impact of weather conditions on growing capabilities. There were concerns that weather was more unpredictable in the north and as a result, crops grown in

southern Ontario would not do well in the north. This inability to grow certain crops was further noted as a limiting factor when raising livestock, as growing feed was an important aspect of remaining profitable. In addition, those unfamiliar with the northern climate were concerned that livestock would not survive in colder weather. While climate and weather do impact growing conditions, and the clay soil may require some inputs and tile drainage, existing farmers did not view these aspects as barriers.

Predators

Predators were identified as a significant barrier given their ability to damage fields and infrastructure and attack livestock. Many farmers noted experiences with predators and an inability to invest in fencing or other preventative methods. Bears and wolves were noted as the most cumbersome predators.

Pests and Weeds

Issues related to pests and weeds were identified by prospective farmers as a concern, based on their experiences in southern Ontario. These barriers were not identified by other participants and the prospective farmers did not have any significant insights into why they expected this barrier or how it would impact their farm.

Limited Diversity in Northern Crops

For most participants, northern Ontario has significant opportunity for agricultural development. When comparing to southern Ontario, however, there were concerns that crop diversity in northern Ontario is more limited. These concerns may be linked to southern Ontario, which has significant diversity, due in part to extensive development in the agriculture sector. While some farmers noted no concerns regarding crop diversity, further development of the northern agriculture sector may broaden the spectrum of crops and provide opportunities for advanced research and development into more resilient northern varieties.

Solutions



While the barriers identified above challenge both new and existing farmers, the goal of this study was to provide appropriate and feasible solutions to enhance opportunities for livestock production. Through three focus groups with individuals that had previously participated in an interview, more than 100 solutions were identified. Not all solutions identified through the focus groups were practical and the CAB worked together to identify the most relevant and realistic solutions. Utilizing a process known as dotmocracy, each individual placed one dot next to the ten solutions they believed were most appropriate. The dots were then counted and the 10-15 solutions with the most dots were discussed in detail. Through these discussions, some solutions were removed, and others were added. The solutions discussed below were agreed upon during the final CAB meeting and are considered achievable and necessary for the betterment of the livestock sector within the Clay Belt region.

Economic Solutions

Barrier	Solution	Discussion
<p>Access to Land/Land Clearing</p>	<p>A map of the region containing information on each portion of land, its owner and succession plan should be created so that new and existing farmers can easily identify potential land for their farm.</p> <p>Lots already containing farm infrastructure (barn, drainage tiles) should be identified and easily accessible to farmers wanting to establish themselves in the region.</p> <p>The government should release some Crown land and make it accessible to farmers at low cost. This land should be cleared to allow farmers to purchase a piece of land without having to pay for clear-cutting.</p>	<p>The Northeast Community Network (NeCN) has contracted a study identifying private lands that may be available for farming. As part of this study, a survey has been sent to private land owners seeking information related to land availability, existing farm infrastructure and succession plans. Land availability is critical to prospective farmers and existing farmers interested in farm expansion. The NeCN study will enable farmers to easily identify land available for agriculture, thus enhancing the agricultural sector. When this study is completed, the data should be made available to farm stakeholders.</p> <p>It is important to note that purchasing land from private land owners is more affordable than Crown land; however, land availability and access issues have reduced the feasibility of private land purchase. Considering this, the release of Crown land for agricultural endeavours would provide new opportunities for agricultural expansion. It is important to note that any discussions related to Crown land release must include First Nations communities and should not move forward without their support.</p>

	<p>The government should work with the industry to fully fund the Risk Management Program currently in place. This program helps the farms in guaranteeing a certain income in a context where the price of livestock often varies.</p> <p>Financial institutions should promote lower interest rates as well as their agriculture programs to farmers.</p>	<p>Profits are a function of costs relative to revenue. The north has some distinct cost advantages. Land prices in particular are much lower than in southern Ontario. Likewise, some crops thrive in the north (including hay, pasture and certain grains). Farmers can work with government to help ensure an appropriate balance between revenue and costs. Where a deficit occurs Risk Management Programs can be very helpful. Farmers need to work with government to ensure helpful, affordable risk management programs.</p> <p>Previous funding programs were viewed positively by the farm community. While interest rates fluctuate based on market conditions, lending institutions should establish funding programs for the farm community with lower interest rates that remain flat. Given the yearly fluctuation of agricultural profits related to external markets, lower and flat interest rates would increase financial stability for farmers, while still providing a return on investment for lending institutions. Such interest rates are of critical importance to new farmers that lack capital, in comparison to more established farms..</p>
<p>Profitability</p>	<p>Farmers need to have access to professionals who could collaborate with them to come up with their business plan and thus plan their operations and income for their first years of operation.</p>	<p>Creating a thorough business plan is important for prospective farmers interested in establishing a farm. The agricultural sector, particularly livestock farming, requires significant investment and capital before a farm can be established. Profits, especially for the first few years of operation are limited. When low profits are coupled with high debts, farmers become increasingly vulnerable and farm viability may be low. The creation of a business plan with a professional organization can assist farmers in planning for financial turbulence and profitability for the short-, medium- and long- term. Although such support already exists (OMAFRA, the Ministry of Energy, Northern Development and Mines, Enterprise Centres, Community Futures Development Offices), these services need to be better promoted and uptake encouraged.</p>

	<p>Grant-related successes and advancements should be promoted and presented to farmers in order for them to see the importance of taking the time to fill out applications.</p>	<p>Grant writing can be complicated and success rates are not well-advertised. In order to encourage farmers to apply for funding, successful applications should be advertised as a demonstration of opportunity other farmers should seek. There is also an opportunity for applicants to communicate with past recipients regarding their experiences and advice for developing their own application. Such communication also encourages mentorship within the farm community.</p>
<p>Availability of Grants</p>	<p>Agents of agricultural economic development should be informed in advance of the grants available in the coming months, particularly in the case of grants delivered by a third party. Farmers should also have access to professional help in applying for grants. The existing resources for help could be better advertised.</p>	<p>While the farm community is encouraged by provincial and federal grants, applications are often cumbersome and various farm agencies are utilized for the development of an application. These agencies (e.g. NeCN, NOFIA) should be given advance notice about grants to enable earlier promotion, thus improving uptake rates. These services are crucial to the farm community as the grant process is complicated and many applicants may not understand the process, forms or jargon.</p>
<p>Labour</p>	<p>A grant should be created to allow farmers to pay students or employees to assist them in their work during the summer. This program would allow farmers to get help without spending too much out of their own pockets.</p>	<p>It is important to note that such grants already exist for youth but knowledge of the funding source and application process is lacking. The availability of such grants need to be better communicated to the farm sector, as farm employment for youth provides new opportunities for engagement, experiential learning and possible career direction.</p>

	<p>Farmers should create partnerships with other communities and groups to sell products to them.</p>	<p>While many farmers have sought diverse markets for their products, including retail establishments and farmers' markets, further community partnerships should be sought. For example, the Mennonite community is working with the First Nations in Moosonee to supply fresh food through a farmers' market that occurs every three weeks. This market provides a remote community with access to food produced in the north and provides the farmers with a new market opportunity. Partnerships with other communities and groups should be sought to provide farmers with new markets within the north.</p>
<p>Access to Markets</p>	<p>An option that could be investigated is the revision of certain laws that currently make it impossible for farmers to sell certain products directly to clients.</p>	<p>The farm sector is heavily regulated in order to protect both the producer and the consumer. As a result of these regulations, the sale of some products at the farm gate is strictly prohibited. One example stated by participants related to the slaughter and processing of some small livestock on the farm, with sales directly to consumers. Such slaughter and processing rates would likely be low but they would open a new market for farmers seeking to sell a small number of livestock directly to consumers. This arrangement would eliminate abattoir and shipping fees when a limited number of animals are being slaughtered and would provide greater control over the process for farmers. While this solution has potential to improve farmer profit and create new markets, significant review of such opportunities, their impacts and potential challenges is needed.</p>
<p>Access to Services</p>	<p>There should be a federally licenced abattoir in the region which would allow farmers to sell their products in other parts of the country.</p>	<p>It is noted that there has been much discussion around this solution and its feasibility is currently being debated by stakeholders. A federal abattoir in northern Ontario would reduce the need to ship livestock to southern Ontario for processing and allow the sale of meat to other provinces (e.g. Quebec and Manitoba). Given the proximity of northern communities to adjacent provinces, a federal abattoir would be widely supported by area farmers.</p>

Social Solutions

Barrier	Solution	Discussion
<p>Lack of Mentorship.</p>	<p>Older, well-established farmers could create partnerships with new farmers.</p>	<p>Mentorship is of critical importance for new farm entrants that are not familiar with agriculture and/or northern Ontario. The skill and knowledge of existing farmers is highly valued and while no formal mentorship programs currently exist, opportunities to connect new farmers with mentors should be sought. Furthermore, farmers seeking successors could enter into a mentorship arrangement with a prospective new entrant to share knowledge and resources, and potentially explore succession options.</p>
	<p>Agricultural studies, research and demonstrations should continue to be conducted in the region and made available to the population.</p>	<p>The value of research for farmers and other stakeholders cannot be understated. While northern research has been supported by both the provincial and federal governments, this support must be maintained and enhanced. Further, research conducted on northern agriculture must recognize regional variation and not present findings as broadly representing all of the north. Opportunities to compensate farmers that allow their fields to be used for research purposes is also encouraged.</p>
<p>A database containing research related to agriculture in northern Ontario should be established.</p>	<p>Much research regarding agriculture in northern Ontario and more specifically, the Clay Belt region has been undertaken; however, the availability of this research is quite limited. Existing, new and prospective farmers may not have access to this research, which could be utilized to enhance an existing operation or establish a new farm. A database containing northern research should be established regionally and could be maintained by a farm organization or the Centre d'archives de la Grande Zone argileuse at l'Université de Hearst.</p>	

<p>Low Youth Retention</p>	<p>Agriculture-related school activities and school visits to farms should be encouraged to expose young people to the farming lifestyle.</p>	<p>In an effort to expose youth to agriculture, initiatives undertaken at school are important. These initiatives should include farm visits to allow youth the experience of being on a farm and understanding the farm lifestyle and agriculture courses that provide youth experiential learning opportunities. It is important that exposure to farming begins at an early age to pique the interest of youth in agriculture. Through farm visits and farming courses, an interest in farming may be established and more youth may want to farm as a result. Given the abundance of farmland available in the Clay Belt, youth do not need to leave the area to establish a farm, so youth retention rates may increase. These two solutions would help eliminate the stigma of farming and demonstrate the real opportunities that exist and the realities of agriculture.</p>
	<p>Farming courses should be offered in school as early as the first school year to expose young people to farming.</p>	<p>Community activities, recreation and job opportunities should be promoted during farmer recruitment activities to dispel the myth that no such thing exists in the region.</p>
<p>Limited Opportunities for Youth</p>		<p>There is a perception that northern Ontario lacks opportunities for youth related to community activities, recreation and employment. In reality, such opportunities do exist and this assumption is based on a myth, not reality. These opportunities need to be promoted during farmer recruitment events by every community within the Clay Belt region, so that families and not just farmers, are aware of the opportunities that exist. Part of a robust community is economic development; however, the attraction of families is equally important and greater emphasis on the benefits of a northern migration for youth is needed. The media, farm organizations and municipalities can all work to promote the Clay Belt region, dispel this myth and improve attraction initiatives.</p>

<p>Lack of Farming Community</p>	<p>Local farmers need to be better promoted to the regional population in order to enhance their presence, expand their networks and make their products more widely known.</p>	<p>In order to better establish a farm network, municipalities should create an asset map identifying area farms, products and retail outlets. Municipal websites should also be updated to highlight the local agricultural sector and enhance the local farm network. Many communities in the Clay Belt already have a developed or emerging agricultural sector but better promotion is needed. The media should also work to promote the local farm sector and highlight municipal initiatives being undertaken. As promotion of the agricultural sector increases, the availability of local products will also increase, and the sale of such products should be promoted by retail establishments. There is a novelty attached to the local agri-food sector and retail establishment should capitalize on this novelty and promote any local products they sell.</p>
<p>Sense of Community</p>	<p>Fresh local products should be promoted and sold in more local grocery stores and restaurants.</p>	

Environmental Solutions

Barrier	Solution	Discussion
<p>Climate</p>	<p>Mixed farms (cropping and livestock) are viable in the Clay Belt and need to be better promoted to dispel the myth that climate does not permit such farming endeavours in the north.</p>	<p>Agriculture in the Clay Belt is quite diverse, with many farmers raising livestock and growing a variety of feed and crops. This reality needs to be better promoted to those from outside of the Clay Belt area. While the growing season is shorter than southern Ontario, daylight hours in the summer are significantly longer and many of the crops and livestock found in the south have been successfully produced in the Clay Belt. Municipalities and farm organizations need to better promote the realities of agriculture in the north to demonstrate the possibilities and dispel lingering myths.</p>
<p>Soil Quality</p>	<p>Soil quality in the Clay Belt region needs to be promoted as a strength.</p>	<p>The Clay Belt region in northern Ontario has extremely productive soil that is ideal for a variety of agricultural endeavours. While some inputs, such as manure, fertilizer and tile drainage may be needed, the soil is highly productive, with comparable yields to southern Ontario. Agricultural stakeholders must promote the uniqueness of the clay soil in order to effectively dispel this myth.</p>
<p>Predators</p>	<p>Grants for perimeter fencing should be maintained and promoted.</p>	<p>Predators are a significant concern for farmers in northern Ontario. One solution to dealing with this challenge is enacting perimeter fencing to keep predators out. While fencing can be expensive, existing grants under the Canadian Agriculture Partnership should be maintained and promoted. The availability of such grants may not be well known within the agricultural community, so farm organizations should promote these grants and if possible, assist with the application process to ensure increased utilization.</p>
	<p>Trappers should be trained to manage predators for farmers.</p>	<p>Predators can be a significant nuisance to the farm community. Arrangements could be established with local trappers to manage predators on private farmland. A First Nations representative suggested partnering with the local Indigenous community to allow hunting of predators on farmland as a method of predator control. Both opportunities should be sought as viable solutions to predator issues.</p>

Research Outcomes



There are significant opportunities related to agricultural development within the Highway 11 corridor in the Clay Belt; however, economic, social and environmental barriers have limited the expansion of the agricultural sector. Through this study, it has become evident that many of the barriers identified by participants were actually perceptions and not reality. In an effort to address these perceptions, the research team has identified 10 myths, summarized below. The full details on these myths, including a discussion on the realities of each are included in Appendix 5.

Agriculture in Northern Ontario: Ten Myths

Language

Myth: Northern Ontario's population, including farmers, only speak French.

Reality: While a large part of the Clay Belt's population is fluent in French, most of it is bilingual. In fact, a total of 89,3% of the population in the Clay Belt considers themselves bilingual or speaks only English.

Jobs

Myth: There are no job opportunities in northern Ontario.

Reality: There are many and diverse jobs in northern Ontario including those in the service sector, tourism industry and mining, among others.

Social Activities/Recreational Opportunities

Myth: There are limited social and recreational opportunities in the north.

Reality: Most communities in the Clay Belt offer a diverse range of social and recreational activities for a variety of age groups and interests.

Weather

Myth: It is always cold in northern Ontario.

Reality: While winters may be longer in the north, summer temperatures are not so different than those in Southern Ontario. In fact, if we compare average summer temperatures between Kapuskasing and Guelph, the difference is only two or three degrees Celsius.

Healthcare

Myth: Healthcare services in northern Ontario are extremely limited.

Reality: While access to specialists is limited in northern Ontario, most communities have access to doctors, dentists and nurse practitioners.

Post-secondary Opportunities

Myth: There are no post-secondary opportunities in northern Ontario.

Reality: Across northern Ontario, there are numerous universities, colleges and technical institutions.

Nothing Grows in the North

Myth: The climate and landscape do not permit agriculture.

Reality: There are vast regions in northern Ontario with suitable soils and climate to produce a range of crops and livestock.

No Agriculture Services in the North

Myth: Services that support the agricultural sector are not available in northern Ontario.

Reality: There are concentrations of agricultural services in a number of communities, that service broader areas.

Isolation/Remoteness

Myth: Residents live in isolation within remote communities.

Reality: Many communities in northern Ontario have a strong sense of community with well-developed social networks to support area residents.

No Youth

Myth: The youth of northern Ontario leave at the first opportunity.

Reality: Many youth choose to pursue their education in the north and choose to work in the north. In the last few years, an entrepreneurial movement has been observed in the Clay Belt, where young entrepreneurs moved back into the region to launch various businesses and initiatives.

In addition to this document, toolkits have also been created for municipalities, the province and farmers, to assist in the development or enhancement of agriculture. These toolkits are provided in the Appendices 6, 7 and 8. These toolkits are based on the findings from this study but are intended for one of the three groups listed above. They provide straightforward actions that can be undertaken to enhance the livestock sector, with examples of successful initiatives that can be referenced.

Finally, a literature review and jurisdictional scan was also compiled and utilized as background information for much of this study. The literature review is included in Appendix 9.

Conclusion



The goal of this study was to understand the economic, social and environmental barriers to livestock production along the Highway 11 corridor of the Clay Belt. Through in-depth semi-structured interviews, focus groups and the utilization of the Community Advisory Board (CAB), this objective has been met. While the barriers identified in this project are quite diverse, they demonstrate the opinions of a diverse group of stakeholders and the importance of understanding both perceptions and reality.

In working with the CAB, realistic solutions were identified for some economic, social and environmental barriers. It is important to understand that many of the barriers and solutions identified by participants were not practicable within the confines of this study and the final solutions presented represent the most appropriate, realistic and achievable solutions. It is the recommendation of this study that the solutions listed below be adopted by farm stakeholders in order to enhance the livestock sector within the Clay Belt.

Economic Solutions

1. A map of the region containing information on each portion of land, its owner and succession plan should be created to allow farmers or new farmers to easily identify potential land for their farm.
2. Lots already containing farm infrastructure (barn, drainage tiles) should be identified and easily accessible for farmers wanting to establish themselves in the region.
3. The government should release some Crown land and make it accessible to farmers at low cost. This land should be cleared to allow farmers to purchase a piece of land without having to pay for clear-cutting.
4. The government should work with the industry to fully fund the Risk Management Program currently in place. This program helps the farms in guaranteeing a certain income in a context where the price of livestock often varies.

5. Institutions should promote lower interest rates as well as their agriculture programs to farmers.
6. Farmers need to have access to professionals who could collaborate with them to come up with their business plan and thus plan their operations and income for their first years of operation.
7. Grant-related successes and advancements should be promoted and presented to farmers in order for them to see the importance of taking the time to fill out applications.
8. Agents of agricultural economic development should be informed in advance of the grants available in the coming months, particularly in the case of grants delivered by a third party. Farmers should also have access to professional help in applying for grants. The existing resources for help could be better advertised.
9. Farmers should create partnerships with other communities and groups to sell products to them.
10. An option that could be investigated is the revision of certain laws that currently make it impossible for farmers to sell certain products directly to clients.
11. A grant should be created to allow farmers to pay students or employees to assist them in their work during the summer. This program would allow farmers to get help without spending too much out of their own pockets.
12. There should be a federally licenced abattoir in the region which would allow farmers to sell their products in other parts of the country.

Social Solutions

1. Older, well-established farmers could create partnerships with new farmers.
2. Agricultural studies, research and demonstrations should continue to be conducted in the region and made available to the population.
3. A database containing research related to agriculture in northern Ontario should be established.
4. Agriculture-related school activities and school visits to farms should be encouraged to expose young people to the farming lifestyle.

5. Farming courses should be offered in school as early as the first school year to expose young people to farming.
6. Community activities, recreation and job opportunities should be promoted during farmer recruitment activities to dispel the myth that no such thing exists in the region.
7. Local farmers need to be better promoted to the regional population in order to enhance their presence, expand their networks and make their products more widely known.
8. Fresh local products should be promoted and sold in more local grocery stores and restaurants.

Environmental Solutions

1. Mixed farms (cropping and livestock) are viable in the Clay Belt and need to be better promoted to dispel the myth that climate does not permit such farming endeavours in the north.
2. Soil quality in the Clay Belt region needs to be promoted as a strength.
3. Grants for perimeter fencing should be maintained and promoted.
4. Trappers should be trained to manage predators for farmers.

Appendix 1 : Interview Grids



Interview questions – Farmers

Group A – Farmers in the Clay Belt, particularly between Hearst and Cochrane

Group B — Former farmers in the Clay Belt, particularly between Hearst and Cochrane (For Group B, most of the questions would be using the past tense)

Group C – Farmers who have chosen to set up their livestock operations outside of the Cochrane District (or more precisely, not between Hearst and Cochrane)

1. Where are your farming operations located?
2. How long have you lived in Northern Ontario?
3. How long have you been a farmer in Northern Ontario?
4. If you moved to Northern Ontario to farm, where did you move from (e.g. country or region)?
5. Out of the following, which best describes the nature of your farming operation?
 - a) Large scale production of crops
 - b) Large scale production of livestock
 - c) Medium scale production of crops
 - d) Medium scale production of livestock
 - e) Small scale production of crops
 - f) Small scale production of livestock
 - g) Mixed operations
 - h) Hobby farm (limited farm income with an interest in agriculture)
6. Approximately how large is your farm?
7. Approximately how many acres of your farm are workable?

8. What type of livestock do you have and how many are there (e.g. 120 head of cattle and 25 pigs)?
9. What types of crops do you grow and what are their acreage (e.g. 200 acres of barley, 10 acres of hay and 5 acres of vegetables for a market garden)?
10. Do you consider yourself to be :
 - a) Full-time farmer
 - b) Part-time farmer
11. Is farming your primary source of income?
 - a) Yes, If yes, please skip to question 13
 - b) No
12. If no, approximately what percentage of your income is derived from the farm?
13. The Growth Plan for Northern Ontario and the Ministry of Agriculture, Food and Rural Affairs (OMAFRA) are stimulating the growth of the agri-food industry in Northern Ontario. An important goal is to increase the number of livestock farms (+100 000 head over the next twenty years). Several strategies will be put in place (Beef Farmers of Ontario has contributed a model, the government is investing, a possible change in legislation regarding access to Crown lands, etc.)
 - a) What are your general thoughts on this?
14. To the best of your knowledge, is there an interest in livestock production within your area? If there is an interest in livestock production within your area, is it increasing ?
 - a) Any movement of new farmers
 - b) The development of new farms, conversion to livestock farms
 - c) Clearing of land
 - d) Other-please specify
15. Are there active groups of farmers in your area (e.g. young farmers, new immigrants, Mennonites, First Nations, Other-please identify)

If you are interviewing an active farmer whose farm is located in the Clay Belt, particularly between Hearst and Cochrane, skip to question #18

16. Question for former farmers in the Clay Belt, particularly between Hearst and Cochrane:
 - a) Why did you stop your activities related to livestock production?
 - b) What could be done for you to restart your activities related to livestock production?

17. Question for farmers who have chose to set up their activities related to livestock production elsewhere than in the Clay Belt, particularly between Hearst and Cochrane:
 - a) Why did you not set up your activities related to livestock production in the Clay Belt, particularly between Hearst and Cochrane?
 - b) What could be done for you to move your activities related to livestock production to the Clay Belt, particularly between Hearst and Cochrane?

18. What are the economic challenges to livestock production in the Clay Belt, particularly between Hearst and Cochrane?
 - a) Grants/incentives
 - i. Federal
 - ii. Provincial
 - iii. Municipal
 - iv. Regional
 - b) Economic returns (e.g. cost of production versus returns)
 - c) Transport cost
 - d) Public services (electricity, heating, water)
 - e) Land cost
 - i. Land acquisition
 - i. Crown land
 - ii. Private land
 - ii. Land clearing
 - iii. Tile drainage
 - iv. Buildings
 - i. New construction
 - ii. Existing infrastructure
 - v. Approvals (e.g. land clearing, building permits)
 - f) Financing (e.g. access to banks, credit unions to secure funding)
 - g) Market access (e.g. local retail, livestock sales, dairy sales)
 - h) Cost of feed and availability of local feed
 - i) Labor cost

19. What are the social or services challenges to livestock production?
- a) Availability of skilled labour
 - b) Availability of programs to assist with
 - i. Youth retention
 - ii. Training in agriculture
 - c) Availability of technology (e.g. wifi)
 - d) Availability of equipment (e.g. machinery)
 - e) Availability of knowledge
 - i. Research
 - ii. Training programs
 - iii. Extension services from OMAFRA and private consultants
 - iv. Access to information
 - v. Experts
 - f) Availability of infrastructure (e.g. value chain, transportation)
 - i. Transportation networks
 - ii. Roads
 - iii. Winter maintenance of roads
 - iv. Access to water
 - v. Access to hydro
 - g) Availability of related services
 - i. Abattoirs
 - ii. Vets
 - iii. Food processing
 - iv. Branding/packaging
 - v. Markets
 - h) Community
 - i. Churches
 - ii. Schools
 - iii. Childcare
 - iv. Retail
 - v. Recreation
 - vi. Medical
 - vii. Other-please specify
 - i) Emergency services
 - i. Fire
 - ii. Ambulance
 - iii. Policing

- j) Off farm employment opportunities
 - i. Principal farmer and/or partner
 - k) Anything else?
20. What are the climate and other environmentally-related challenges to livestock production in the Clay Belt, particularly between Hearst and Cochrane?
- a) Soil conditions
 - b) Shorter growing season
 - c) Colder weather
 - i. Calving
 - ii. Need for livestock housing
 - d) Ability to grow certain crops for livestock feed
 - e) Clearing of land
 - f) Drainage
21. Have you considered an expansion of your livestock operation?
- a) For what reasons have you decided not to expand?
22. What are the most important barriers preventing the Clay Belt area, particularly between Hearst and Cochrane, from attracting new farms?
23. Considering all of your responses, what are the three most important barriers to livestock production and is it possible to overcome those barriers? If so, how? (if no social barriers are identified, ask)
24. What should be done to help grow livestock production in the Clay Belt, particularly between Hearst and Cochrane?
25. Any other comments you want to provide regarding the perceived or actual economic or social barriers associated with livestock production in the Clay Belt and/or the possible actions (e.g. youth retention, education, access to land, finances, lack of services, etc.)?

Interview questions - Business/Service Sector

1. The Growth Plan for Northern Ontario and the Ministry of Agriculture, Food and Rural Affairs (OMAFRA) are stimulating the growth of the agri-food industry in Northern Ontario. An important goal is to increase the number of livestock farms (+100 000 head over the next twenty years). Several strategies will be put in place (Beef Farmers of Ontario has contributed a model, the government is investing, a possible change in legislation regarding access to Crown lands, etc.)
 - a) What are your general thoughts on this?
2. To the best of your knowledge, is there an increasing interest in livestock production within your area (e.g. any movement of new farmers, the development of new farms, conversion to livestock farms, clearing of land, etc.)?
3. What groups of farmers are active in your area (e.g. young farmers, new immigrants, Mennonites, First Nations, etc.)?
4. There is an important relationship between the services you provide and the success of agriculture in the Claybelt. Are there any barriers that you face to providing these services and if so what could be done to help you better service the agricultural sector?
5. Have you pursued or thought of pursuing any of the following actions to encourage livestock production within the North Cochrane region?
 - a) Encourage the cooperative movement
 - b) Establish partnerships with services providers/businesses elsewhere in the province
 - c) Provide credit to purchase your services
 - d) Provide any education or training services
 - e) Any special arrangements (leasing etc.)
6. What should be done to help grow livestock production in the Clay Belt, particularly between Hearst and Cochrane?
7. Are there any impediments that have held you back from pursuing the items listed in question 5?
8. Any other comments you want to provide regarding the perceived or actual difficulties associated with livestock production in the Clay Belt and/or the possible actions (e.g. youth retention, education, access to land, finances, lack of services, etc.)?

Interview questions - Farm Organizations

1. To the best of your knowledge, is there an increasing interest in livestock production within your area (e.g. any movement of new farmers, the development of new farms, conversion to livestock farms, clearing of land, etc.)?
2. To the best of your knowledge, what groups of farmers are active in your area (e.g. young farmers, new immigrants, Mennonites, First Nations, etc.)?
3. What are the barriers to livestock production in the Clay Belt, particularly between Hearst and Cochrane?
4. What should be done to encourage livestock production in Northern Ontario (e.g. expansion of existing farms, attract young and new farmers, develop a fully functional value chain, etc.)?
 - a) Have you pursued or thought of pursuing any of the following actions to encourage livestock production in Northern Ontario?
 - i. Lobby government
 - ii. Provide technical assistance
 - iii. Provide educational services or training
 - iv. Work with individual farmers to resettle in the Clay Belt
5. What do you think will be the biggest challenges in ten years regarding livestock production in the region?
 - a) Why?
6. Any other comments you want to provide regarding the perceived or actual difficulties associated with livestock production in the Clay Belt and/or the possible actions (e.g. youth retention, education, access to land, finances, lack of services, etc.)?

Interview questions – Health Sector

1. To the best of your knowledge, is there an increasing interest in livestock production within your area (e.g. any movement of new farmers, the development of new farms, conversion to livestock farms, clearing of land, etc.)?
2. To the best of your knowledge, what groups of farmers are active in your area (e.g. young farmers, new immigrants, Mennonites, First Nations, etc.)?
3. Do you think farmers are generally well aware of the rules and processes related to producing and selling food?
 - a) If not, what could be done to better inform this group?
4. From a public health perspective, what should be done to help grow the livestock industry in the Clay Belt, particularly between Hearst and Cochrane?
 - a) Expansion of existing farms
 - b) Attraction of new farmers
 - c) Encourage local food opportunities (farmers markets, CSA agriculture etc.)
 - d) Changing regulations for local food, food inspection, abattoirs etc.
 - e) Programs to deal with the stress of farming
 - f) Programs to encourage more youth to consider agriculture (in the Schools, 4H etc).
5. Are there any impediments that have held you back from pursuing the items listed in question 3?
6. Any other comments you want to provide regarding the perceived or actual difficulties associated with livestock production in the Clay Belt and/or the possible actions (e.g. youth retention, education, access to land, finances, lack of services, etc.)?

Interview questions – Education Sector

Target interviewee is a guidance counselor at a local high school

Goal is to capture high schools on the highway 11 corridor between Hearst and Cochrane

1. Name of high school:
2. Student population:
3. Area high school services:
4. Do you have students in your school that have an agriculture background (e.g. currently residents on farms)?
5. Do you have courses that deal with agriculture?
6. Would your school board consider integrating lessons in the field of agriculture into the curricula? (e.g. talk about entrepreneurship and agriculture as a career choice, invite a farmer to talk about agricultural concepts related to various topics)
7. Do you have students taking co-op placements within the agriculture sector?
8. Are you aware of any of your students going to an agricultural college or seeking post-secondary courses in agriculture (e.g. OAC, programs in Quebec, etc.)?
9. Do you have at your school, resource materials that help inform students about careers in agriculture?
10. Do you have teachers or guidance counsellors with expertise that can help to advise students about programs in agriculture?
11. What resource materials would be helpful to you to provide advice to students in agriculture?
12. What barriers, if any, do you see for students in your school seeking a career in agriculture?
13. Do you see the potential for the agricultural sector to assist with youth retention and the development of the rural economy?
14. Considering the Growth Expansion Plan for the North, are there any other strategies your school board would be willing to adopt to better promote Ontario's expanding agricultural opportunities in the North?

Interview questions – Municipalities

1. Has there been an interest in livestock production within your area (e.g. any movement of new farmers, the development of new farms, conversion to livestock farms, clearing of land, etc.)?
2. What groups of farmers are active in your area (e.g. young farmers, new immigrants, Mennonites, First Nations, etc.)?
3. Have you pursued or thought of pursuing any of the following actions to encourage livestock production within your municipality?
 - a) Assist with drainage
 - b) Assist with land clearing (approvals, etc.)
 - c) Promotion of agriculture
 - d) Development of an agricultural strategy
 - e) Strategy to attract and retain new farmers
 - f) Work with neighbouring municipalities
 - g) Open or establish roads to serve new farms
 - h) Encourage education in the schools or amongst your general population related to livestock production
 - i) Establish agricultural zoning
 - j) Establish an agricultural advisory committee
 - k) Partnerships with agriculture organizations
 - l) Other-please specify
4. Are there any impediments that have held you back from pursuing the items listed in question three (e.g. financial and staff resources, lack of information, etc.)?
5. Any other comments you want to provide regarding the perceived or actual difficulties associated with livestock production in the Clay Belt (e.g. youth retention, education, access to land, finances, lack of services, etc.)?

Interview questions – Mennonites

1. How many years have you farmed at this site and can you tell me about your farm (e.g. type of farming activities, number of acres farmed (owned and rented), number of livestock, crop patterns, crop types, etc.)?
2. How long have you lived in northern Ontario? If you are not from the north, where did you move from?
3. Out of the following, which best describes the nature of your farming operation?
 - a) Large scale production of crops
 - b) Large scale production of livestock
 - c) Medium scale production of crops
 - d) Medium scale production of livestock
 - e) Small scale production of crops
 - f) Small scale production of livestock
 - g) Mixed operations
 - h) Hobby farm (limited farm income with an interest in agriculture)
4. Approximately how large is your farm?
5. Approximately how many acres of your farm are workable?
6. Do you consider yourself to be:
 - a) Full-time farmer
 - b) Part-time farmer
7. Is farming your primary source of income?
 - a) Yes
 - b) No
8. If no, approximately what percentage of your income is derived from the farm?
 - a) 0% – 10%
 - b) 11% – 20%
 - c) 21% – 30%
 - d) 31% – 40%
 - e) 41% – 50%
9. What was your motivation to begin farming in northern Ontario?

10. What has been your experience with farming in northern Ontario?
11. The Growth Plan for Northern Ontario and the Ministry of Agriculture, Food and Rural Affairs (OMAFRA) are stimulating the growth of the agri-food industry in Northern Ontario. An important goal is to increase the number of livestock farms (+100 000 head over the next twenty years). Several strategies will be put in place (Beef Farmers of Ontario has contributed a model, the government is investing, a possible change in legislation regarding access to Crown lands, etc.)
 - a) What are your general thoughts on this?
12. To the best of your knowledge, is there an increasing interest in agriculture/livestock production within your area?
 - a) Any movement of new farmers,
 - b) The development of new farms, conversion to livestock farms,
 - c) Clearing of land
 - d) Other – please identify
13. What groups of farmers are active in your area (e.g. young farmers, new immigrants, Mennonites, First Nations, Other – please identify)?
14. What are the barriers to agriculture/livestock production in the Clay Belt in northern Ontario/Clay Belt?
15. What are the economic challenges to agriculture/livestock production in the Clay Belt, particularly between Hearst and Cochrane?
 - a) Grants/incentives
 - i. Federal
 - ii. Provincial
 - iii. Municipal
 - iv. Regional
 - b) Economic returns (e.g. cost of production versus returns)
 - c) Transport costs
 - d) Public services (electricity, heating, water)
 - e) Land cost
 - i. Land acquisition
 - i. Crown land
 - ii. Private land
 - ii. Land clearing
 - iii. Tile drainage

- iv. Buildings
 - i. New construction
 - ii. Existing infrastructure
 - v. Approvals (e.g. land clearing, building permits)
 - f) Financing (e.g. access to banks/credit unions to secure funding)
 - g) Market access (e.g. local retail, livestock sales, dairy sales)
 - h) Cost of feed and availability of local feed
16. What are the social or services challenges to agriculture/livestock production...
- a) Availability of skilled labour
 - b) Availability of programs to assist with
 - i. Youth retention
 - ii. Training in agriculture
 - c) Availability of technology (e.g. wifi)
 - d) Availability of equipment (machinery)
 - e) Availability of knowledge
 - i. Research
 - ii. Training programs
 - iii. Extension services from OMAFRA and private consultants
 - iv. Access to information
 - v. Experts
 - f) Availability of infrastructure (ex: value chain, transportation)
 - i. Transportation networks
 - ii. Roads
 - iii. Winter maintenance of roads
 - iv. Access to water
 - v. Access to hydro
 - g) Availability of related services
 - i. Abattoirs
 - ii. Vets
 - iii. Food processing
 - iv. Branding/packaging
 - v. Markets

- h) Community
 - i. Retail
 - ii. Recreation
 - iii. Medical
 - iv. Other, please specify
 - i) Emergency services
 - i. Fire
 - ii. Ambulance
 - iii. Policing
 - j) Off farm employment opportunities
 - i. Principal farmer and/or partner
 - k) Anything else?
17. What are the climate- and other environmentally-related challenges to agriculture/ livestock production in the Clay Belt, particularly between Hearst and Cochrane?
- a) Soil conditions
 - b) Shorter growing season
 - c) Colder weather
 - i. Calving
 - ii. Need for livestock housing
 - d) Ability to grow certain crops for livestock feed
 - e) Clearing of land
 - f) Drainage
18. Do you participate in any secondary on-farm activities (e.g. lumber, furniture, etc.)?
19. Have you considered an expansion of your farm?
- a) For what reasons have you decided not to expand?
20. In what ways do you think agriculture could be expanded in northern Ontario?
21. What opportunities do you think exist for farmers in northern Ontario?
22. In what ways has the community impacted your agricultural activities (e.g. supported through the purchase of food)?
23. From what you know, are there any programs that exist to promote local food production? Do you participate in any of these programs?
24. Do you feel the community supports agriculture and local food production?

25. How effective have local food strategies been to support farmers?
26. Do you see your children wanting to farm in the north?
27. What are the most important barriers preventing the Clay Belt area, particularly between Hearst and Cochrane, from attracting new farmers?
28. Considering all of your responses, what are the five most important barriers to agriculture/livestock production and how can each of them be overcome? (if no social barriers are identified, ask)
29. What should be done to help grow agriculture/livestock production in the Clay Belt, particularly between Hearst and Cochrane?
30. Any other comments you want to provide regarding opportunities for agriculture in northern Ontario? The perceived or actual economic or social barriers associated with agriculture/livestock production in the Clay Belt and/or the possible actions (e.g. youth retention, education, access to land, finances, lack of services, etc.)?

Appendix 2: Economic Barriers Identified by Research Participants

Participant	Profitability	Access to Land	Tile Drainage	Land Clearing	Access to equipment	Access to Markets	Training/ Knowledge	Labour	Access to Services	Availability of Grants
Existing Farmers										
Old Order Mennonites										
Former Farmers										
Prospective Farmers										
Farm Organizations and Other Stakeholders										
Municipalities										
Business Sector										
Health Sector										
Education Sector										

Appendix 3: Social Barriers Identified by Research Participants

Participant	Lack of employment opportunities	Isolation/remoteness	Language	Limited opportunities for youth	Access to healthcare	Lack of Mentorship	Access to commercial businesses/services	Low youth retention
Existing Farmers								
Old Order Mennonites								
Former Farmers								
Prospective Farmers								
Farm Organizations and Other Stakeholders								
Municipalities								
Business Sector								
Health Sector								
Education Sector								

Appendix 4: Environmental Barriers Identified by Research Participants

Participant	Soil Quality	Climate	Unpredictable Weather	Predators	Inability to grow certain crops/ feed	Pests/Weeds
Existing Farmers						
Old Order Mennonites						
Former Farmers						
Prospective Farmers						
Farm Organizations and Other Stakeholders						
Municipalities						
Business Sector						
Health Sector						
Education Sector						



Agriculture in Northern Ontario: Ten Myths

September 2019



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Photo Credits

Most photos provided by
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de Hearst Ltée).

Introduction

There are significant opportunities related to agricultural development within the Highway 11 corridor in the Clay Belt; however, economic, social and environmental barriers have limited the expansion of the agricultural sector. Through the study *Understanding the Barriers to Livestock Production in the Clay Belt: An Economic, Social and Environmental Analysis*, it has become evident that many of the barriers identified by participants were actually perceptions and not reality. In an effort to address these perceptions, the research team (Université de Hearst and Guelpf University) has identified 10 myths related to agriculture in northern Ontario. The full details on these myths, including a discussion on the realities of each are included in this document.

Overview of the Ten Myths

- 1) Language
- 2) Jobs
- 3) Social Activities/Recreational Opportunities
- 4) Weather
- 5) Healthcare
- 6) Post-secondary Opportunities
- 7) Nothing Grows in the North
- 8) No Agriculture Services in the North
- 9) Isolation/Remoteness
- 10) No Youth

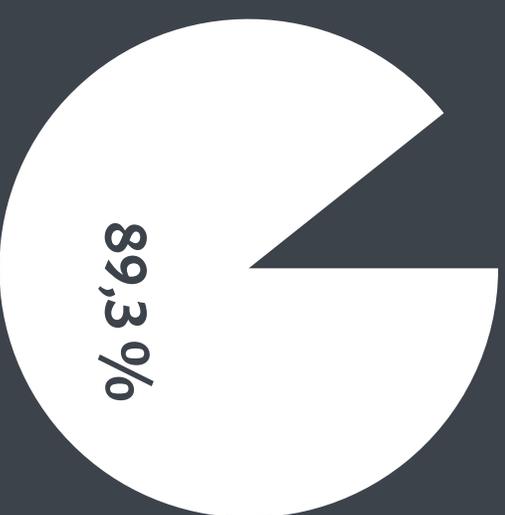


Myth:

Northern Ontario's population, including farmers, only speak French.

Reality:

While a large part of the Clay Belt's population is fluent in French, most of it is bilingual. In fact, a total of **89,3%** of the population in the Clay Belt considers themselves bilingual or speaks only English.



Source: Statistics Canada (2018). Census Profile, 2016 Census - Select from a list [online]. Retrieved July 12th, 2019 from <https://www12.statcan.gc.ca/census-recensement/2016/dp-pd/prof/search-recherche/list/results-resultats.cfm?Lang=F&TABID=1&G=1&Geo1=&Code1=&Geo2=&Code2=&GEOCODE=35&type=0>



Myth:

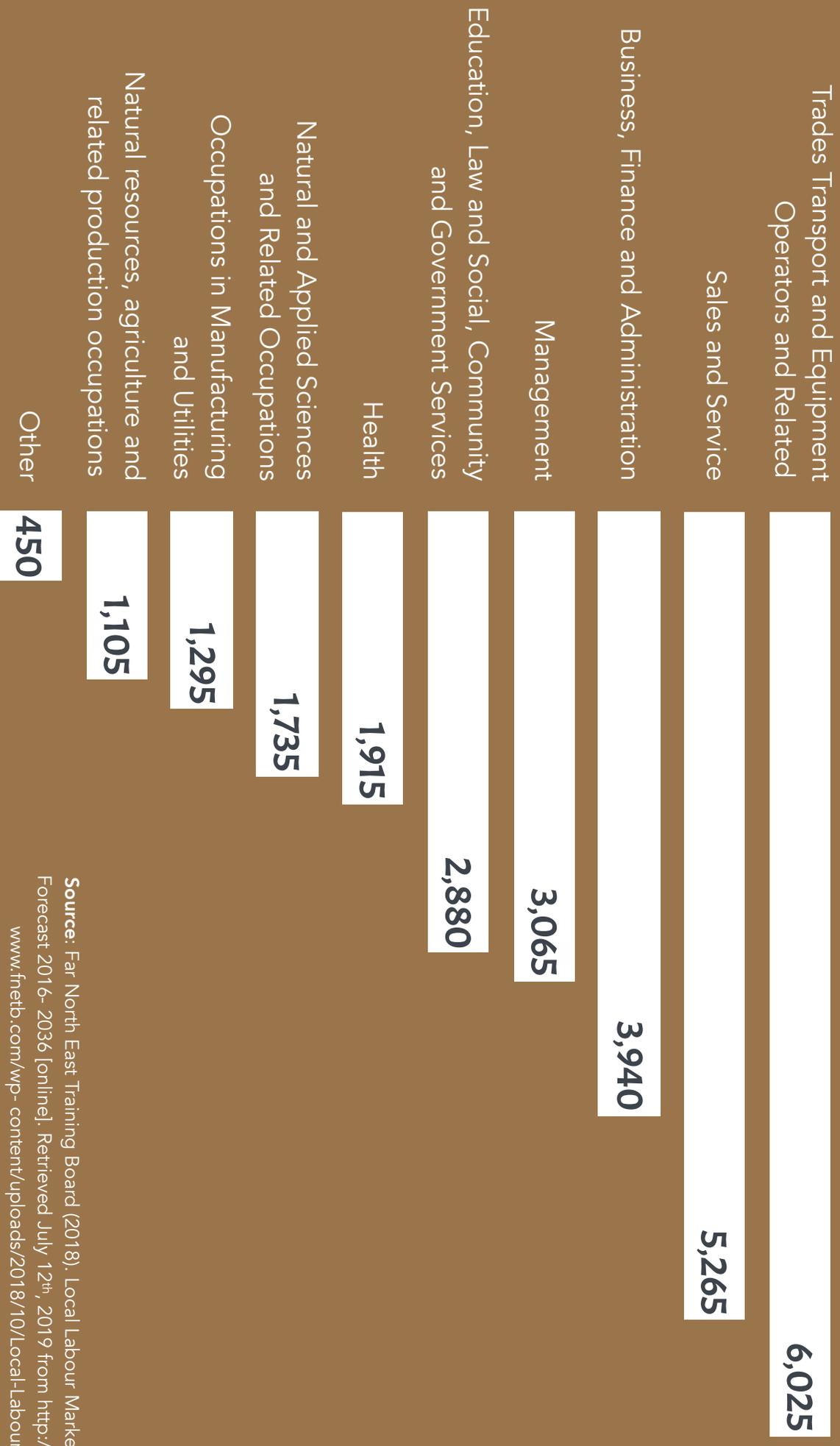
There are no job opportunities in northern Ontario.

Reality:

There are many and diverse jobs in northern Ontario including those in the service sector, tourism industry and mining, among others. In fact, a study conducted by the Far North East Training Board (FNETB) with data from Statistics Canada predicted that between 2016 and 2036, a total of **43,2%** of the region's employed labour force will retire. This represents a total of 27,675 retirements (these retirements will occur in the area serviced by the FNETB, which includes the communities along the Highway 11 Corridor from Hearst to Latchford, and also includes the communities of Timmins, Chapleau, Gogama, Elk Lake, Hornepayne and the James Bay area).

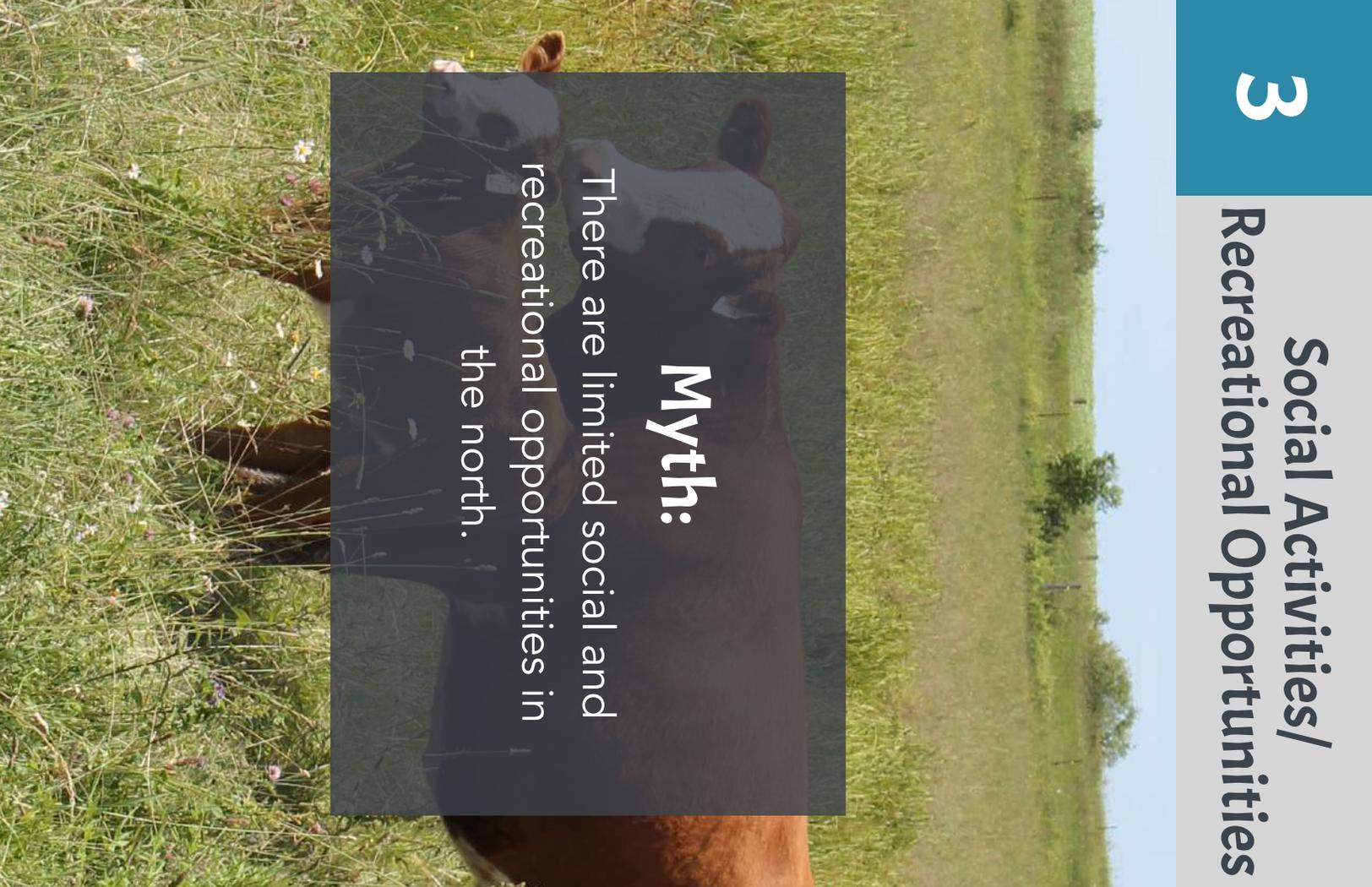
Reality:

The occupations that will be in demand with these retirements are in different sector, as listed below :



Source: Far North East Training Board (2018). Local Labour Market Forecast 2016- 2036 [online]. Retrieved July 12th, 2019 from <http://www.fnetb.com/wp-content/uploads/2018/10/Local-Labour-Market-Forecast-2016-2036-Part-One.pdf>

Social Activities/ Recreational Opportunities



Myth:
There are limited social and recreational opportunities in the north.

Reality:

Most communities in the Clay Belt offer a diverse range of social and recreational activities for a variety of age groups and interests. For more information, visit the following links:

- ✓ **Town of Hearst:**
<https://www.hearst.ca/en/visitors/100-things-to-do-in-hearst/>
- ✓ **Town of Kapuskasing:**
<http://www.kapuskasing.ca/en/playing/Activities-and-Sports.aspx>
- ✓ **Town of Smooth Rock Falls:**
<https://www.smoothrockfalls.ca/living-here/recreation-activities/>
- ✓ **Town of Cochrane:**
<http://www.cochraneontario.com/visitors/things-to-do/>



Myth:

It is always cold in northern Ontario.

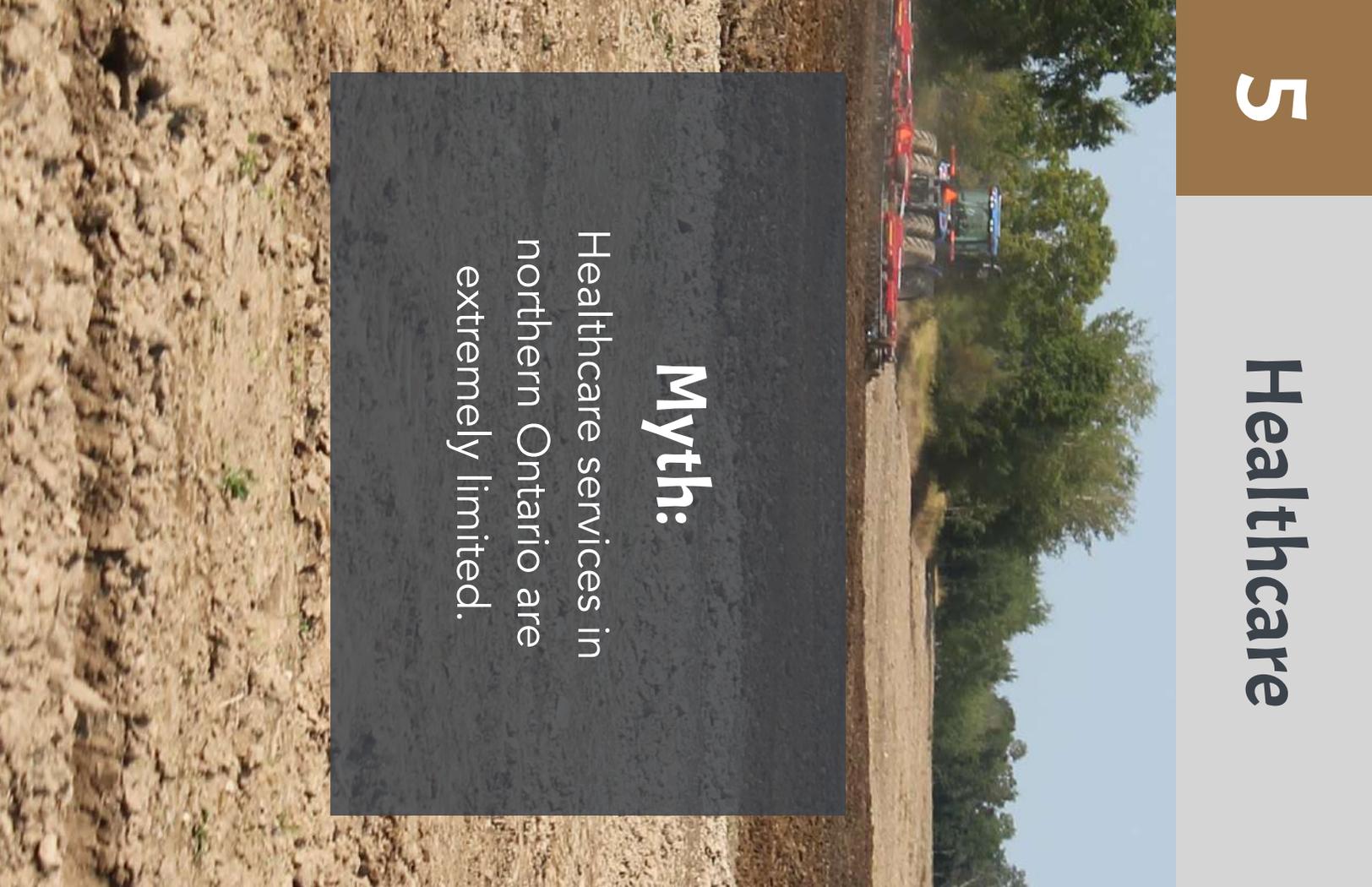
Reality:

While winters may be longer in the north, summer temperatures are not so different than those in Southern Ontario. In fact, if we compare average summer temperatures between Kapuskasing and Guelph, the difference is only two or three degrees Celsius.

Daily mean temperature per month, in degrees Celsius

	May	June	July	August	September
Kapuskasing	9.1	14.6	17.4	16.0	11.1
Guelph	12.2	17.1	19.7	17.6	14.1

Source: Environment Canada (2019). Historical Data [online]. Retrieved July 12th, 2019 from http://climate.weather.gc.ca/historical_data/search_historic_data_e.html



Myth:
Healthcare services in
northern Ontario are
extremely limited.

Reality:

While access to specialists is limited in northern Ontario, most communities have access to doctors, dentists and nurse practitioners.

For a list of all health services across northern Ontario, visit the following link:

<https://www.northeasthealthline.ca>.

Post-secondary Opportunities

Myth:

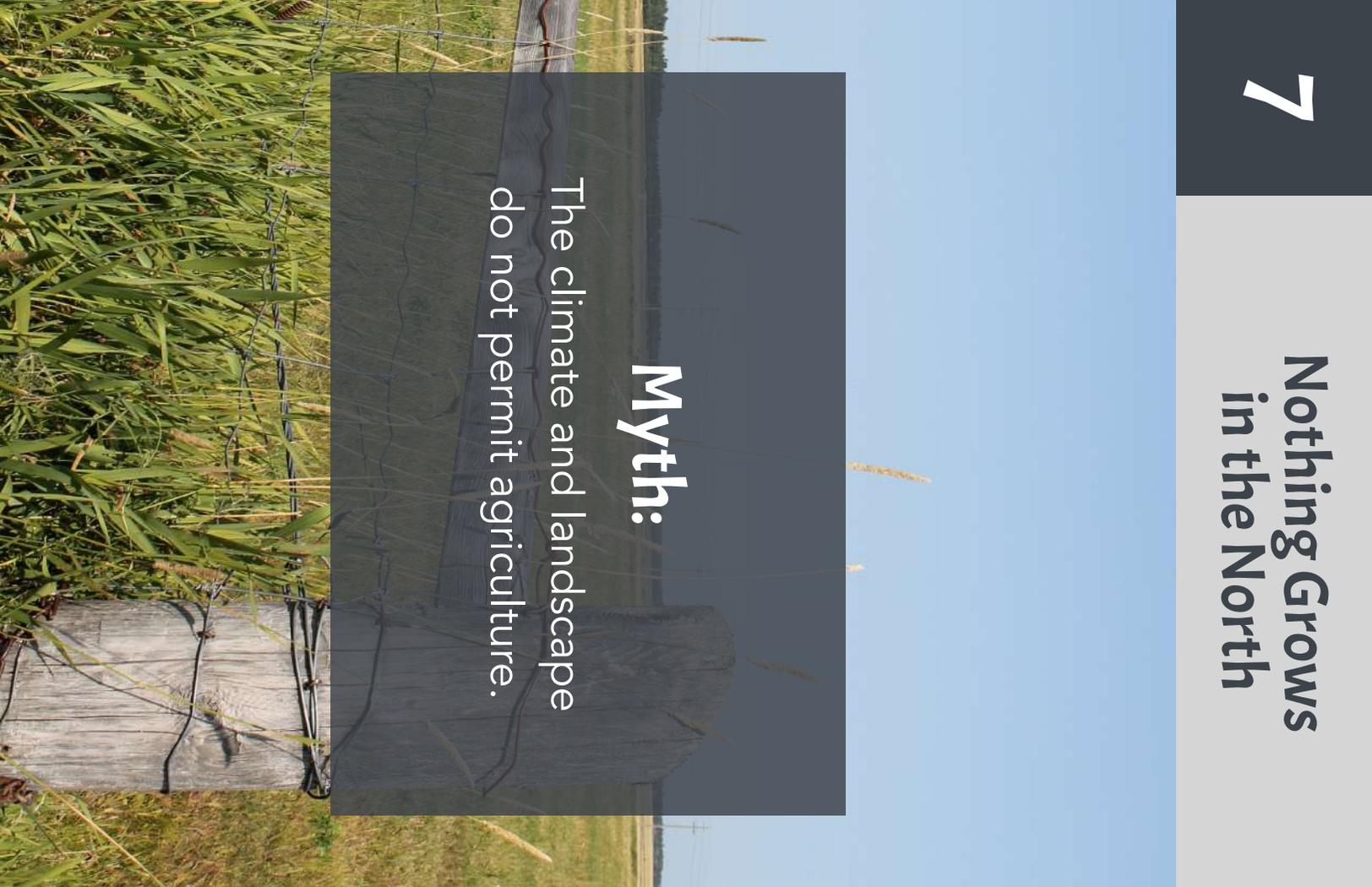
There are no post-secondary opportunities in northern Ontario.

Reality:

Across northern Ontario, there are numerous universities, colleges and technical institutions. Here is a list of some post-secondary institutions in northern Ontario.

- ✓ Algoma University (Sault Ste Marie)
- ✓ Cambrian College of Applied Arts and Technology (Sudbury)
- ✓ Canadore College of Applied Arts and Technology (North Bay)
- ✓ Collège Boréal (Sudbury and several other campuses across northern Ontario)
- ✓ Confederation College of Applied Arts and Technology (Thunder Bay)
- ✓ Lakehead University (Thunder Bay)
- ✓ Laurentian University (Sudbury)
- ✓ Nipissing University (North Bay)
- ✓ Northern College of Applied Arts and Technology (Timmins)
- ✓ Université de Hearst (Hearst, Kapuskasing and Timmins)
- ✓ University of Sudbury (Sudbury)

Nothing Grows in the North

A photograph of a field with a wooden fence and a dark overlay containing text. The background shows a field with tall grasses and a wooden fence. A dark, semi-transparent rectangular box is overlaid on the image, containing white text. The text reads: "Myth: The climate and landscape do not permit agriculture."

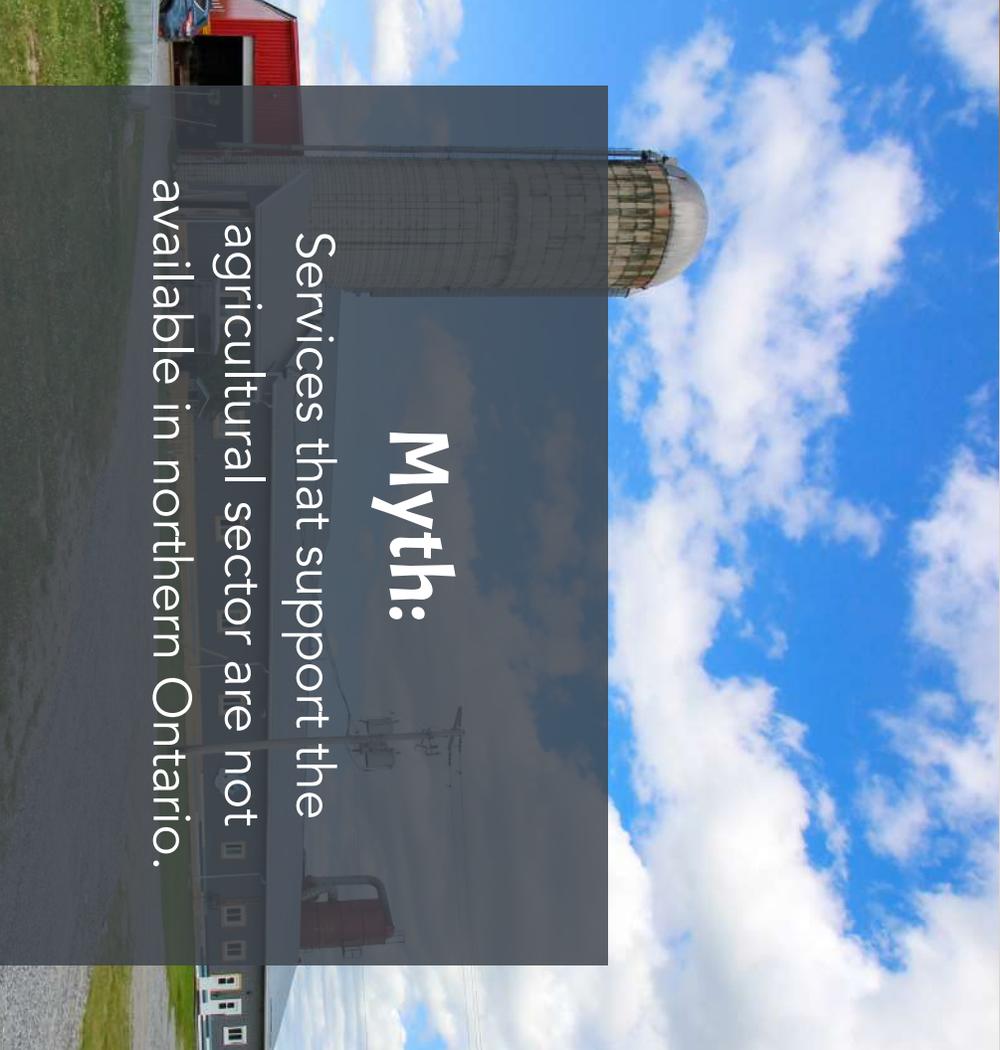
Myth:
The climate and landscape
do not permit agriculture.

Reality:

There are vast regions in northern Ontario with suitable soils and climate to produce a range of crops and livestock. This range is widening, as mentioned in the Literature Review and Jurisdictional Scan:

“With new technologies and a warming climate, crop yields are improving and the range of crops that can be grown in northern Ontario is also increasing”(Caldwell et al., 2018). As the average number of heat units has increased so has the number of crops available because of the increasingly favourable conditions (Northeast Community Network (NECN), 2018). For example, corn silage, soybeans, winter wheat and rich pastures that can support cattle farmers are becoming increasingly common in the region.” (Understand the Barriers to Livestock Production in the Clay Belt: An Economic, Social and Political Analysis. Literature Review and Jurisdictional Scan, p. 6)

No Agriculture Services in the North



Myth:
Services that support the
agricultural sector are not
available in northern Ontario.

Reality:

There are concentrations of agricultural services in a number of communities, that service broader areas. A few examples include abattoirs, veterinarians, farmer's markets, farm equipment sales and rentals, feed and seed, livestock sales and transport, certified crop advisors, value-added services and hardware, and building supplies. A map of these services is available at this following link:

<https://www.enhancinglocalfood.com/farm-services>.

Isolation/Remoteness

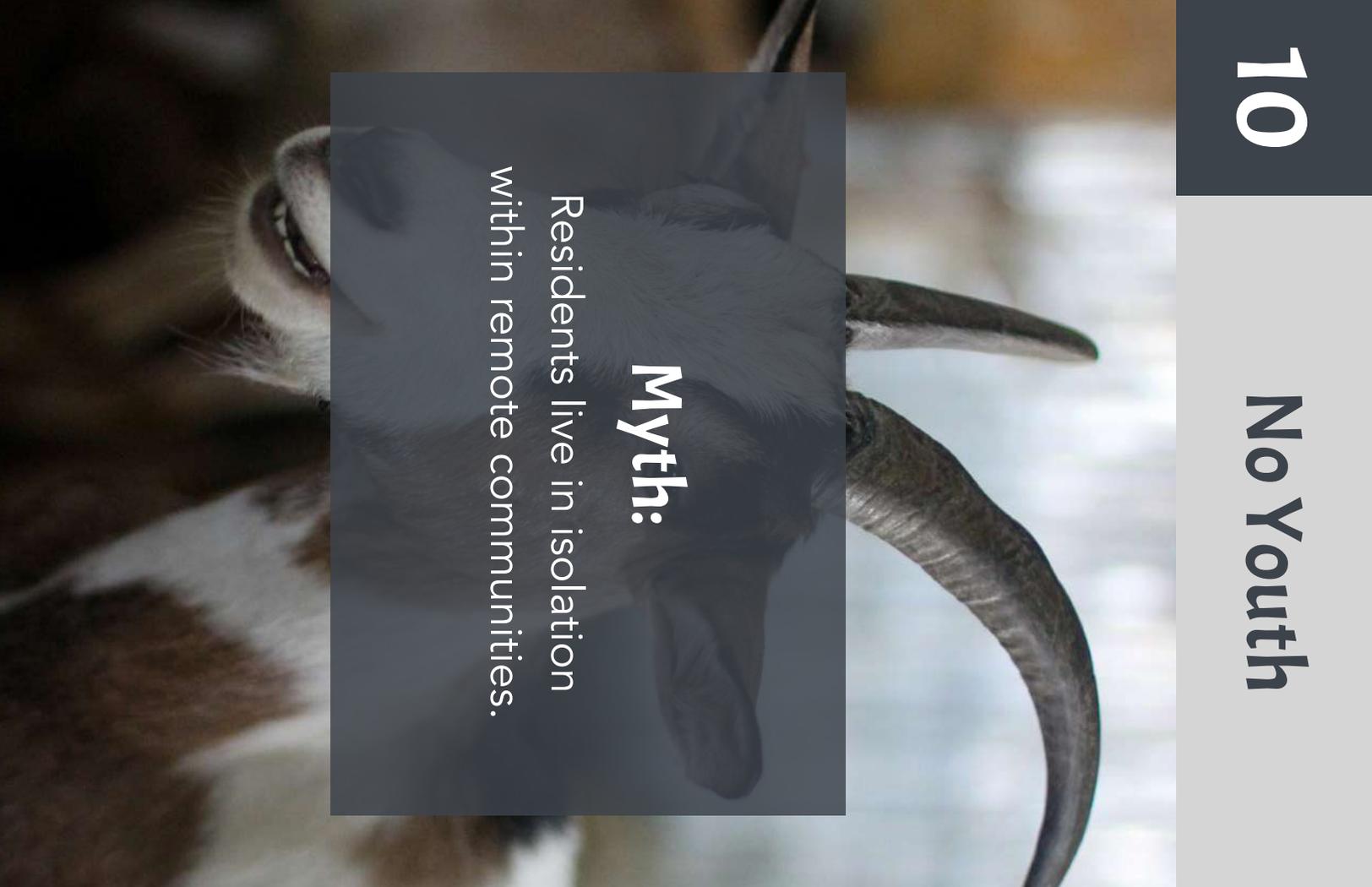


Myth:

Residents live in isolation within remote communities.

Reality:

Many communities in northern Ontario have a strong sense of community with well-developed social networks to support area residents.



Myth:

Residents live in isolation within remote communities.

Reality:

Many youth choose to pursue their education in the north and choose to work in the north. In the last few years, an entrepreneurial movement has been observed in the Clay Belt, where young entrepreneurs moved back into the region to launch various businesses and initiatives. For example, la cordonnerie Francoeur de Kapuskasing, La Chèvre laitière de Hearst Ltée and la Fromagerie Kapuskoise.



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Municipal Toolkit

Ten strategies municipalities in the Clay Belt can utilize to develop, support and enhance the livestock sector.



Authors

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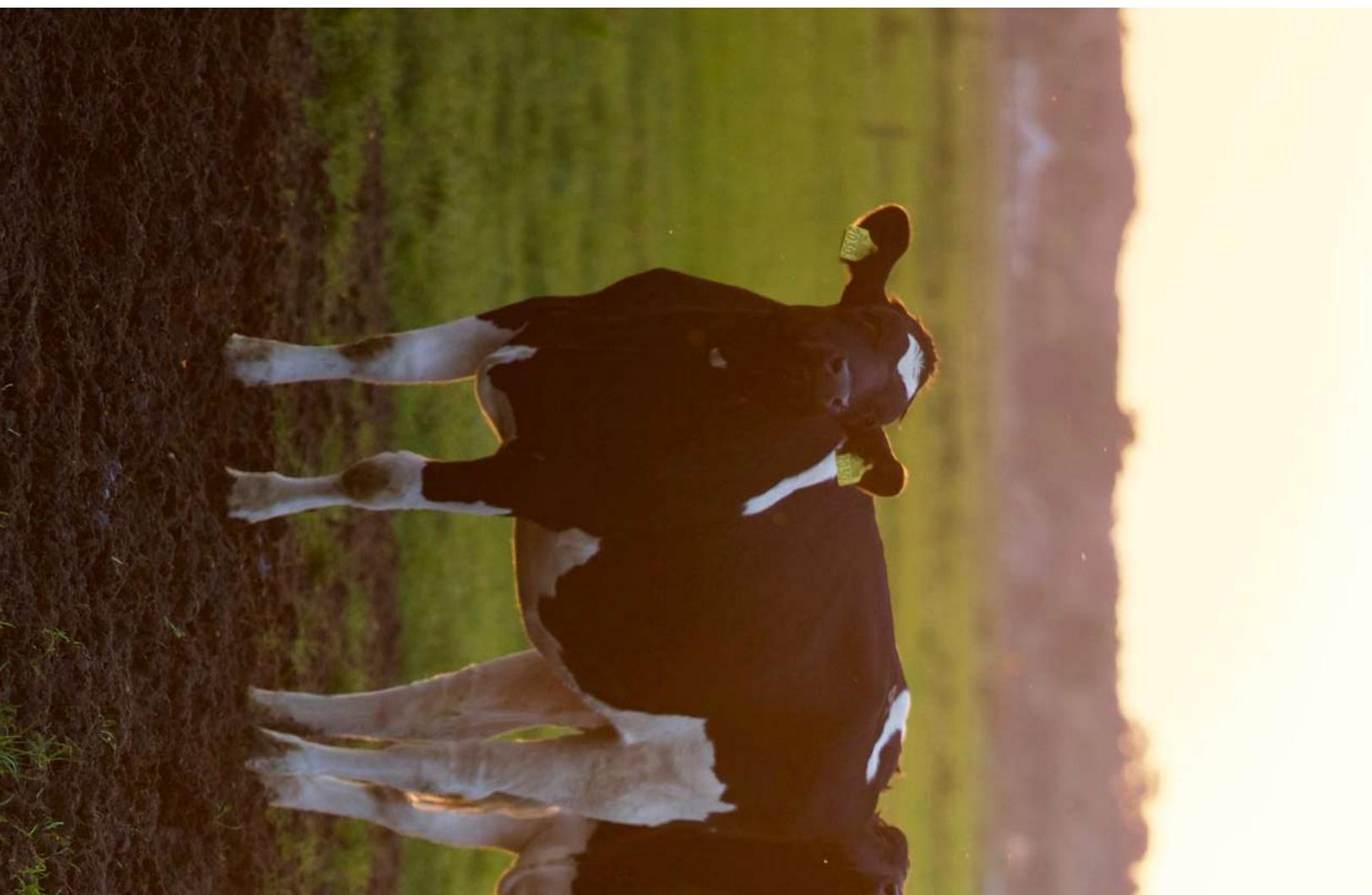
Gabriella Miron, B.A.A.

Acknowledgements

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Photo Credits

Most photos provided by Marie-Pier Drolet (taken at La Chèvre laitière de Hearst Ltée) and Farmnorth.com.



Overview of the Ten Strategies

- 1) Promote a sense of community
- 2) Build support for agriculture
- 3) Encourage localization in the agriculture sector
- 4) Create a mapping of agricultural assets
- 5) Build knowledge within the municipality
- 6) Get to know your farm organizations and appropriate provincial staff
- 7) Maintain and enhance regional perspective within the Clay Belt
- 8) Understand and support drainage and land clearing initiatives
- 9) Understand the challenges/limitations of livestock production
- 10) Create policies in support of agriculture



1

Promote a sense of community



What is it?

A “sense of community” is a feeling of belonging that many people associate with the place where they live.

Why does it matter?

If people have a strong sense of community, they are more likely to embrace the community as home and be committed to living, contributing, and supporting activity within their locale.

What can municipalities do?

Municipalities can help to promote a sense of community through a number of activities. Examples include:

- ✓ Community Branding. Create a brand that helps people to recognize and acknowledge the community where they live. Promote and profile the quality of life in your community. This can include sharing success stories and publicizing agricultural forums and fairs. The community branding could include a partnership between municipalities or a broader regional approach (for example the Northeast Community Network, or from southern Ontario, an example is the Golden Horseshoe Food and Farming Alliance).
- ✓ Attracting and retaining newcomers. Promote your community as dynamic and inclusive. This can help with recruitment efforts and can help to encourage new and beginning farmers and their families.



Build support for agriculture



What is it?

Building support for agriculture is developing an awareness and sharing the potential importance for agriculture in your community.

Why does it matter?

Awareness can help to develop markets, encourage people to get engaged in agriculture and support local farms.

What can municipalities do?

Municipalities can work with local agencies and farm groups to promote an awareness of agriculture throughout the community. Examples include:

- ✓ Agriculture can be promoted and profiled through municipal websites and economic development materials (e.g. local markets and road side stands).
- ✓ Municipalities can provide linkages between individual farms and schools for the purpose of education and promotion of agri-food activities to an impressionable younger audience.
- ✓ Some municipalities work with farm operators to organize regional tours that invite residents to visit local farms. Examples include Farm Connections Open House in Durham Region and Alberta Open Farm Days.



3

Encourage localization in the agricultural sector

What is it?

Localization is the production and consumption of local food and other agricultural products. It also includes farmers purchasing goods and services locally.

Why does it matter?

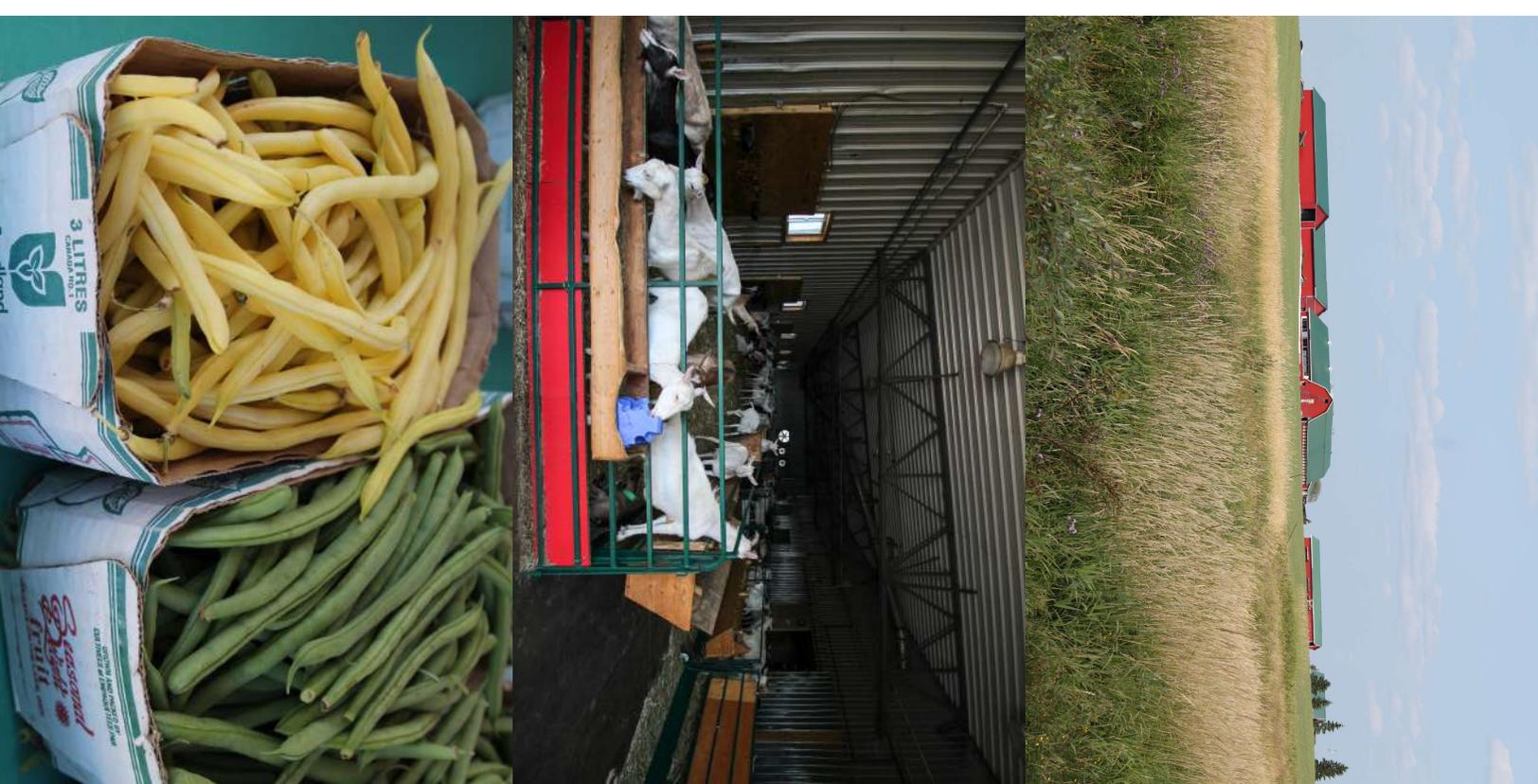
Agriculture is an important economic activity. Local markets are important to the agricultural sector and keep dollars within the community.



What can municipalities do?

Municipalities can help to promote the local agricultural sector. Specific examples include:

- ✓ Create an inventory of local products. Across the province various municipalities have created maps profiling local products (ranging from farmers markets to a butter tart trail).
- ✓ Help farmer-led initiatives. Farmers often pursue value added and diversified activities such as the production of cheese or local woodworking. Ensure that your policies are supportive of this type of activity and be sure to profile this activity on your municipal website.
- ✓ Encourage the service sector (local processing). Agriculture requires a range of services, from veterinarians to grain elevators, in order to prosper. Municipalities need to recognize the importance of these services and promote and encourage this activity within your community.



4

Create a mapping of agricultural assets



What is it?

Mapping provides a visual representation of key agricultural resources.

Why does it matter?

Mapping provides a foundational understanding of existing farmland, land availability and suitability that are important to new and existing farmers.

What can municipalities do?

Municipalities have access to information that can help to create certain maps and in other instances, they may need to work with the province to generate the required information.

- ✓ Municipalities should be able to develop maps that identify existing farms and privately-owned lands that are suitable for new agricultural endeavours.
- ✓ It is understood that the province is updating soil maps for the Clay Belt region and as this information becomes available, municipalities can work to promote these maps.
- ✓ Mapping of agricultural assets (e.g. businesses and services that support agriculture) can benefit new and existing farmers by providing a clear understanding of existing infrastructure. Sample mapping exists at Enhancinglocalfood.com.



5

Build knowledge within the municipality



What is it?

Helping to ensure that municipal staff and elected officials have a sound understanding of agriculture and its needs.

Why does it matter?

Municipalities make many decisions that directly and indirectly impact agriculture, it is important that officials making these decisions have a clear understanding of the agriculture sector.

What can municipalities do?

Municipalities can build agricultural knowledge through the following examples:

- ✓ Work to ensure that staff have an appreciation for agricultural issues and needs within your area.
- ✓ Agricultural organizations can be invited to speak with council regarding current issues, needs and opportunities within the local agriculture sector.
- ✓ An Agricultural Advisory Committee (AAC) can enhance a municipality's understanding of agriculture issues and provide an agriculture lens to new policies and initiatives. A guiding document on AACs can be found at foodandfarming.ca.
- ✓ Municipalities could enhance internal knowledge of the agriculture sector through the appointment of an existing or new staff member with a dedicated agriculture portfolio (e.g. agricultural liaison, economic development officer). This individual should take on the responsibility for being a contact for prospective new farmers and have appropriate information, such as funding opportunities, available.



6

Get to know your farm organizations and appropriate provincial staff



What is it?

Farm organizations include provincial, regional and local groups that represent and advocate for specific commodities and general farm interests.

Why does it matter?

These organizations provide a conduit into the specific needs of individual farmers and farm interests more generally. They serve as a helpful point of contact between the community and individual farmers.

What can municipalities do?

Municipalities should develop relationships with local farm leaders who represent these organizations and agricultural interests.

- ✓ Most farmers are part of one of three provincially recognized general farm organizations (Ontario Federation of Agriculture, Christian Farmers Federation of Ontario and National Farmers Union). Municipalities should connect with their local representative.
- ✓ There are also farm organizations for specific commodities (e.g. Beef Farmers of Ontario, Dairy Farmers of Ontario, Grain Farmers of Ontario), municipalities should be aware of and connect with local representatives.
- ✓ Municipalities can help to build relationships between farm organizations and the population at large. For example, the International Plow Match is typically sponsored jointly by municipalities and farm organizations.
- ✓ The Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA) is the provincial government's representative for agriculture in the province. Staff are based throughout the province, with a dedicated staff in Temiskaming Shores, Cochrane, Verner and other locales. There are other provincial ministries with an interest in agriculture to connect with.

7

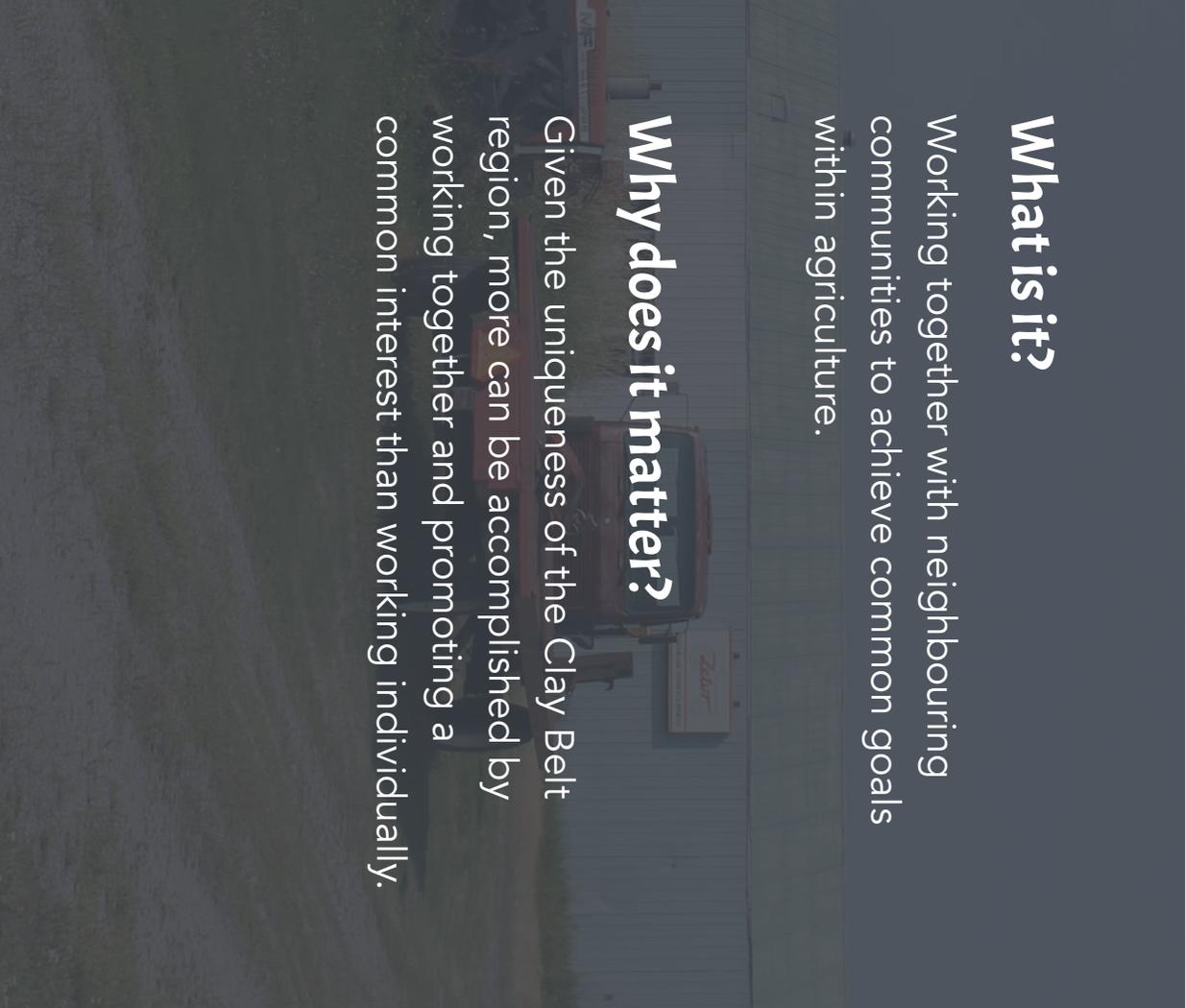
Maintain and enhance regional perspective within the Clay Belt

What is it?

Working together with neighbouring communities to achieve common goals within agriculture.

Why does it matter?

Given the uniqueness of the Clay Belt region, more can be accomplished by working together and promoting a common interest than working individually.



What can municipalities do?

Municipalities can work together with neighbouring communities within the Clay Belt region.

- ✓ For example, the Northeast Community Network has been focused on creating a regional economic strategy that recognizes the unique characteristics of each community within the Clay Belt.
- ✓ There are also opportunities to work with neighbouring municipalities to support social and economic activities (e.g. fairs, festivals and farm gate sales).



8

Understand and support drainage and land clearing initiatives



What is it?

Land drainage is critical to achieving optimal soil conditions for crop production and in some instances, land clearing must also be undertaken.

Why does it matter?

Cleared lands is a necessity for most agricultural activities (e.g. hay, crop and pasture production). Crop production requires appropriate drainage conditions to ensure optimal crop yields. It can also be important for the production of hay and pasture and is also beneficial for livestock.

What can municipalities do?

Municipalities can work to understand the role and importance of land clearing and drainage.

- ✓ Municipalities should understand what lands are drained/not drained within their municipality and potentially map this data.
- ✓ Municipalities should task a staff member with understanding drainage programs, funding sources and relevant legislation.
- ✓ Municipalities should identify best practices for land clearing.

9

Understand the challenges and limitations of livestock production

What is it?

There are unique challenges to livestock production in the North and municipalities can work with the farm sector to identify and address these challenges.

Why does it matter?

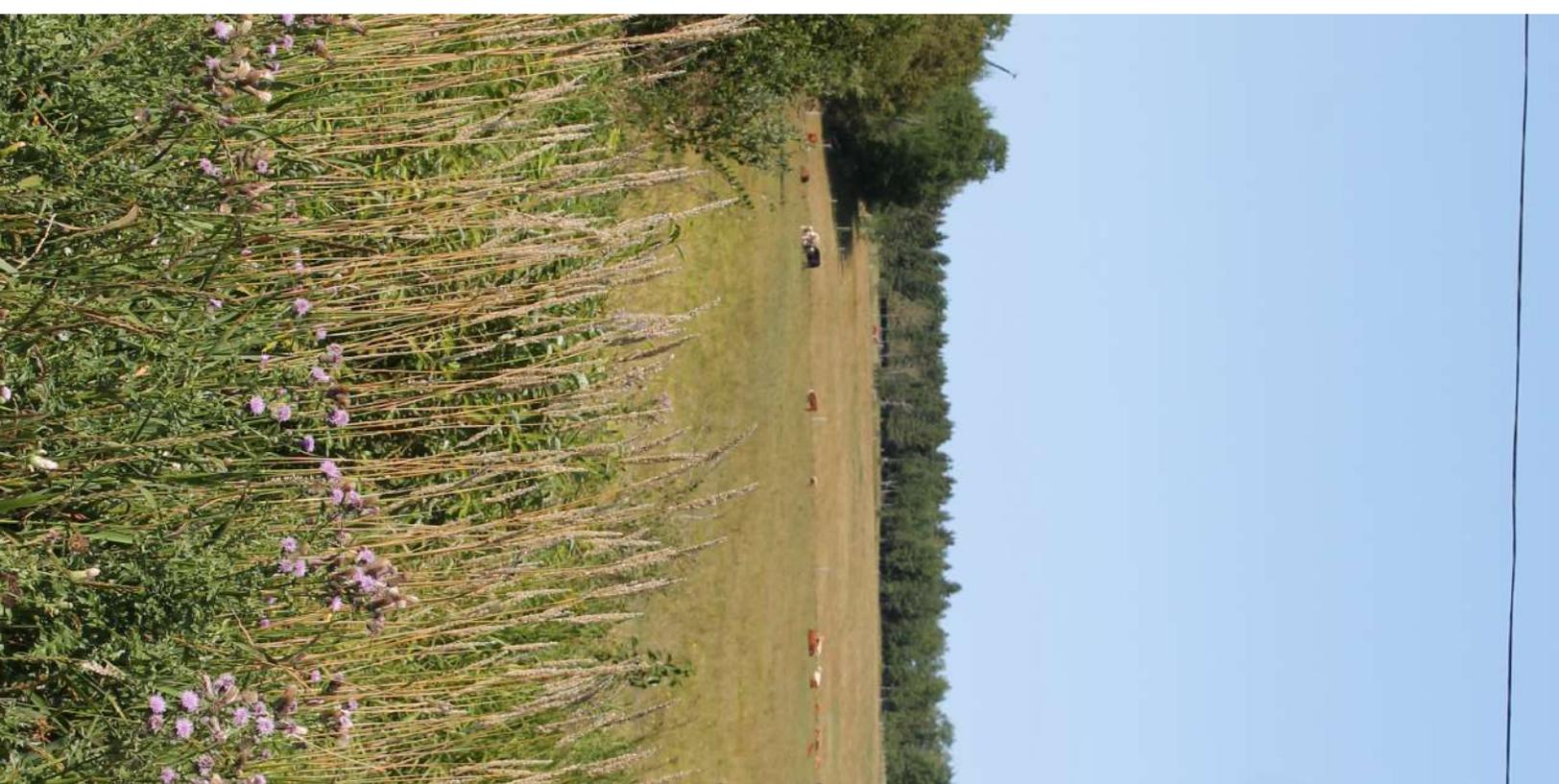
The viability of livestock production is enhanced by the resolution of certain key challenges.



What can municipalities do?

Municipalities can build an understanding of the challenges and work with the farm community to develop responses.

- ✓ A key issue for livestock farmers is the impact of certain predators (e.g. wolves, coyotes and bears).
- ✓ As proposed by a member of a First Nations community, there are opportunities to work with local First Nations to develop strategies for predator control.
- ✓ Municipalities should build knowledge on the variety of predator control options available, including hunting, fencing and best management practices.
- ✓ There are certain myths (e.g. social, economic and environmental) pertaining to livestock production in the North and municipalities should work with the farm sector to identify and dispel these myths.



Create policies in support of agriculture



What is it?

Developing policies that are supportive of the agricultural sector, including livestock and crop production.

Why does it matter?

Municipal policies, including official plan and zoning by-laws can hinder or help the farm sector.

What can municipalities do?

Municipalities can review their policies to ensure that they are supportive of agriculture and various agri-food related activities.

- ✓ For example, OMAFRA has released the Guidelines on Permitted Uses in Ontario's Prime Agricultural Areas, as a tool to help diversify the agricultural sector.
- ✓ Municipalities can develop an agricultural strategy to help support local farms.
- ✓ Municipalities should utilize an Agricultural Advisory Committee to review all municipal by-laws and expenditures that may impact agriculture.
- ✓ Municipalities should review and revise policies in their Official Plan and Zoning By-law to be more specific and supportive of the agriculture sector (e.g. an appropriate lot size, farm diversification policies, minimum distance separations and appropriate range of agricultural uses).
- ✓ As areas are opened to agriculture and farms, the municipality may need to revisit their policies for road creation and maintenance.



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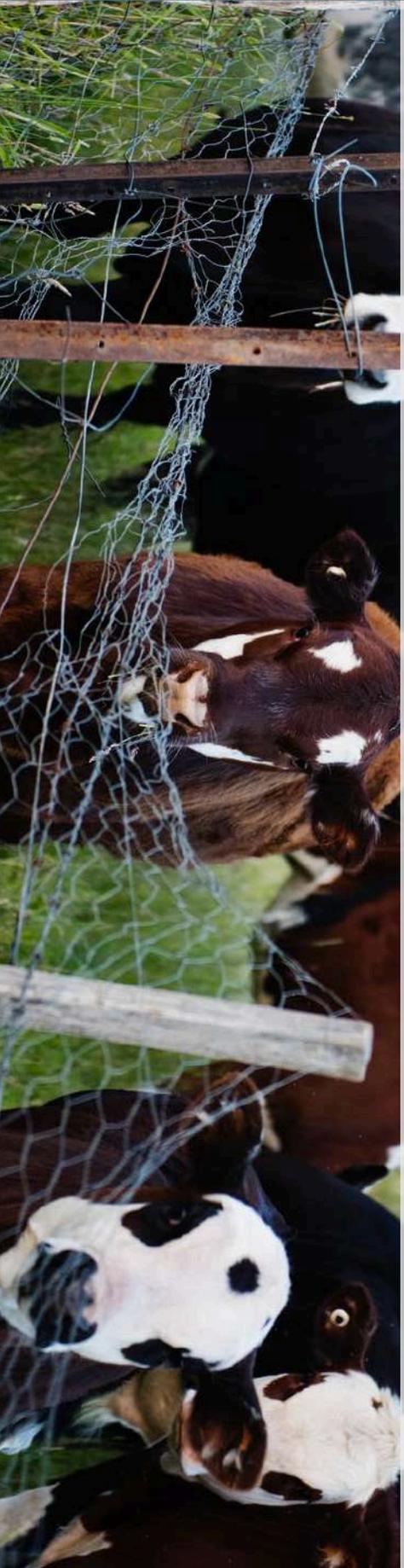
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Provincial Toolkit

Ten strategies the province can utilize to develop, support and enhance the livestock sector in the Clay Belt.



Authors

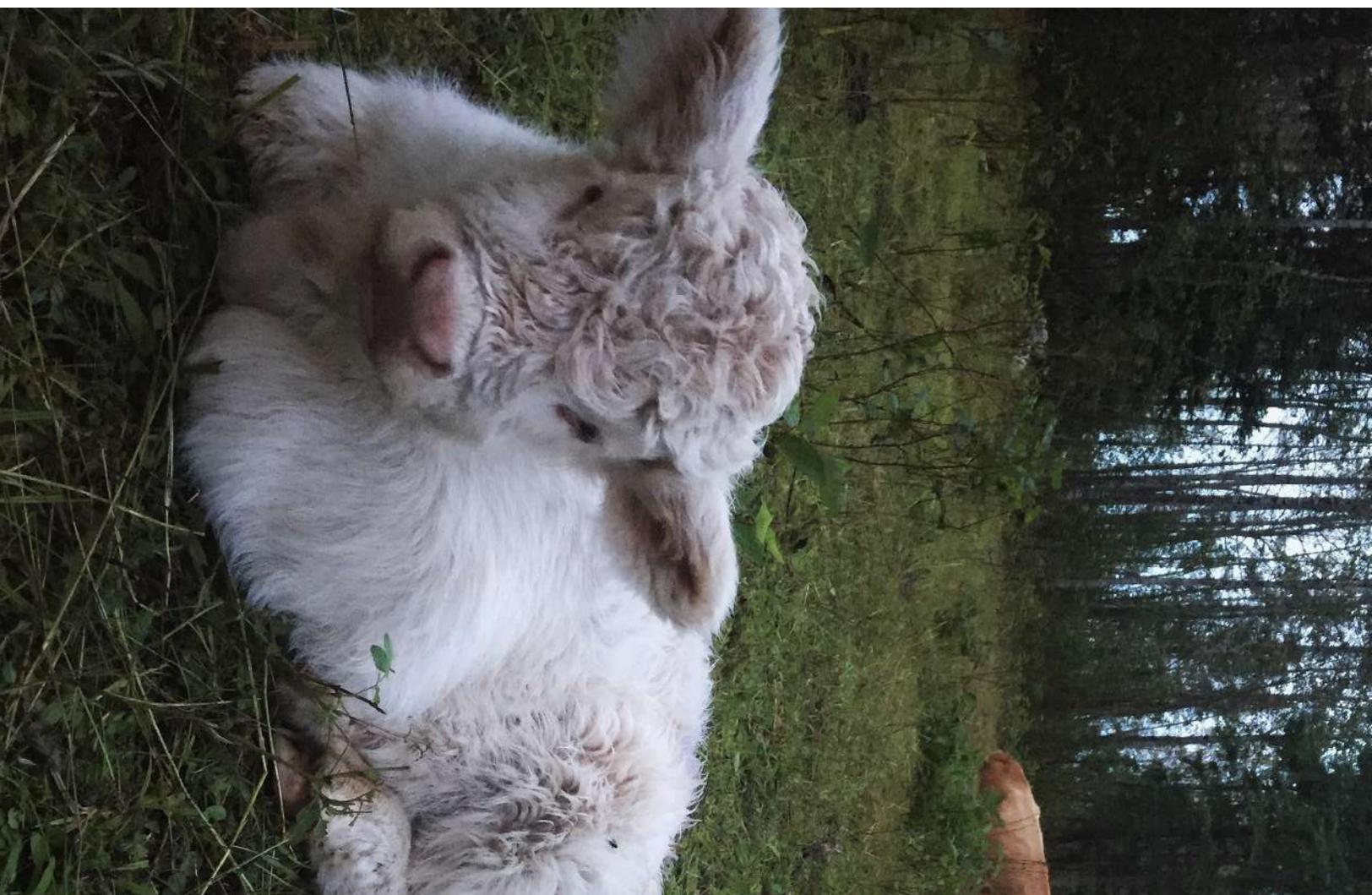
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Overview of the Ten Strategies

- 1) Map land availability
- 2) Create policies in support of Northern agriculture
- 3) Think of the North in regional context
- 4) Enhance provincial efforts to build agriculture in the North
- 5) Understand the challenges/limitations of livestock production
- 6) Assess agricultural opportunities for Crown land
- 7) Review and maintain funding and grants
- 8) Support research related to Northern Ontario
- 9) Support programs to assist new farmers
- 10) Encourage partnerships



Image courtesy of Ferme GG Farm

1

Map land availability

What is it?

Mapping provides a visual representation of key agricultural resources.

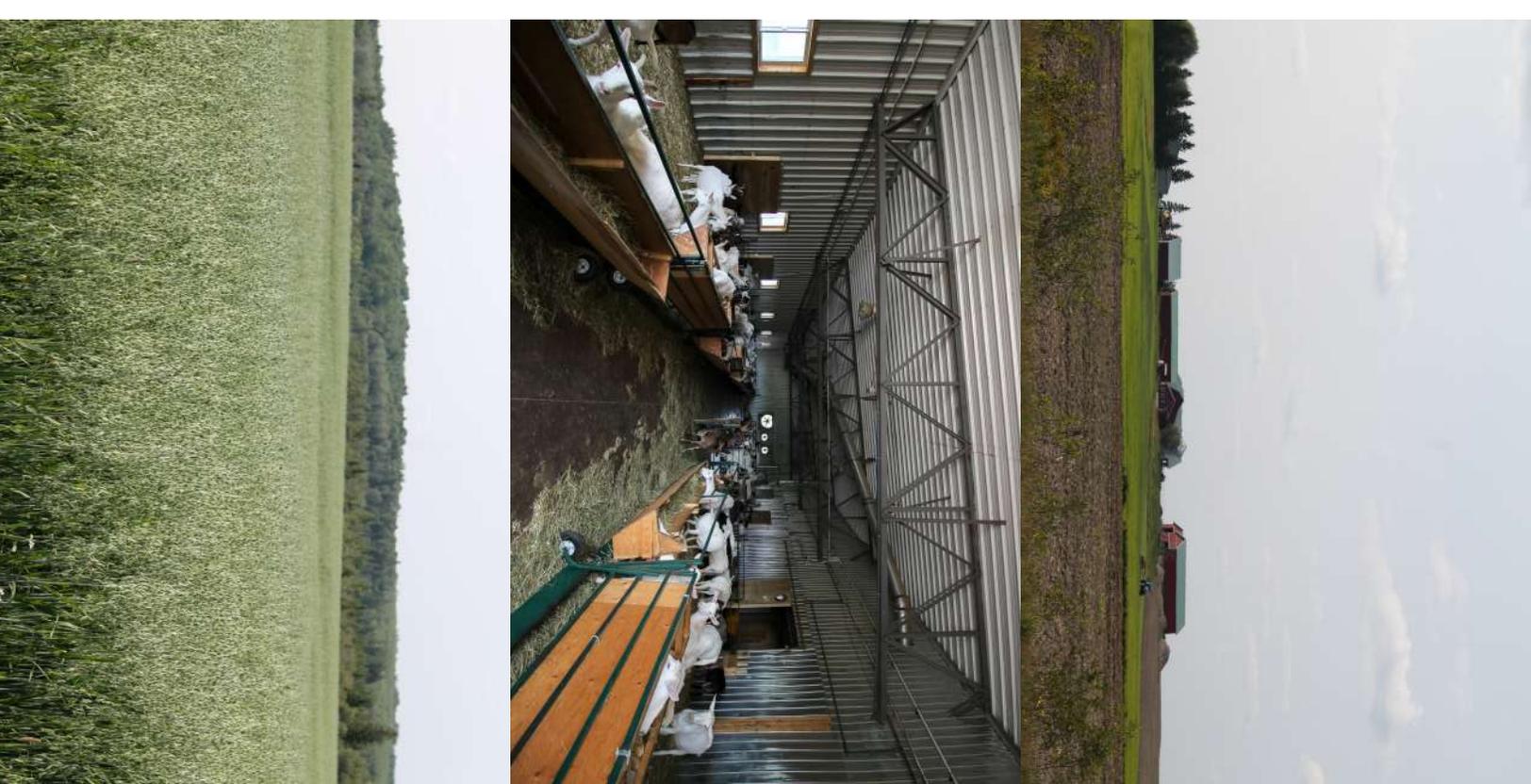
Why does it matter?

Mapping provides a foundational understanding of existing farmland, land availability and suitability that are important to new and existing farmers.

What can the province do?

The province can work independently and with municipalities and farm organizations to create maps that can help new and existing farmers:

- ✓ OMAFRA should continue to update soil classification maps within Northern Ontario to get a more complete understanding of soil capability.
- ✓ The province should work with and encourage municipalities to identify existing farms and privately-owned lands that are suitable for new agricultural endeavours.
- ✓ The province should encourage municipalities to develop mapping demonstrating the location of agricultural assets and infrastructure. An example of such mapping can be found at Enhancinglocalfood.com.



Create policies in support of Northern agriculture



What is it?

Agricultural stakeholders within the Clay Belt recognize the important role that the provincial government can have in building the agricultural sector in the North. The province is encouraged to continue to focus on this initiative.

Why does it matter?

The provincial government has an important role to play in policy and helping to direct agricultural development in the North.

What can the province do?

Examples of what the province can do include the following:

- ✓ Funding and grants are an important aspect of agricultural development (and are dealt with in more detail in Action 7).
- ✓ Farmers would be happy to see the province investigate the potential for livestock insurance.
- ✓ Farmers recognized that abattoirs are important for a local livestock sector and the province should investigate the potential to expand and enhance conventional and mobile abattoirs.
- ✓ There is potential for Crown land to be cleared for livestock production. Clarification and simplification of this process would be welcomed by the farm community.



3

Think of the North in regional context



What is it?

The agricultural landscape in Northern Ontario is unique and the regional variations should be recognized and responded to. It is important to note that variation also exists within the Clay Belt Region, as the agricultural landscape in Hearst is quite distinct from Cochrane.

Why does it matter?

Given the uniqueness of the Clay Belt Region, the province can provide leadership in helping to recognize and develop the agricultural potential of this area.

What can the province do?

The Clay Belt region has a variety of unique agricultural challenges (e.g. predators, climate, access to markets and transportation) and opportunities (e.g. soil quality, land availability, cost of land). The province should work to help address the challenges and build upon the opportunities.

- ✓ There are a number of Northern farm organizations that operate within the Clay Belt region (e.g. Northeastern Community Network [NeCN], Northern Ontario Farm Innovation Alliance [NOFIA], Ontario Federation of Agriculture [OFA]), and the province should build linkages with these organizations to understand and foster agricultural development in the Clay Belt.
- ✓ The Highway 11 corridor between Hearst and Cochrane has the potential to develop a robust agricultural sector. The province should recognize this potential and support local municipalities.



4

Enhance provincial efforts to build agriculture in the North



What is it?

The provincial government has an important role to play in supporting and encouraging agriculture in the Clay Belt.

Why does it matter?

Communities across the North have an economic opportunity connected to agriculture that is underdeveloped. These communities and the province benefit from agricultural development.

What can the province do?

The province can bring a strategic focus to their efforts and initiatives related to agricultural development.

- ✓ The farm community values the direct input of OMAFRA and other provincial ministries. As the farm sector grows, additional resources should be allocated to support the Clay Belt region.
- ✓ It may prove useful to have an advisory committee of knowledgeable Northern agricultural stakeholders to provide advice on decision making connected to Northern agriculture.
- ✓ OMAFRA should work to ensure that staff based in Southern Ontario have an appreciation for the potential for agriculture in the North and unique characteristics of the Clay Belt region.



5

Understand the challenges/limitations of livestock production



What is it?

There are unique challenges to livestock production in the North and the province can provide support to identify and address these challenges.

Why does it matter?

The viability of livestock production is enhanced by the resolution of certain key challenges.

What can the province do?

The province can provide support to Northern municipalities in understanding and addressing these challenges:

- ✓ The province should ensure that regulations regarding predator control are regionally specific.
- ✓ There are certain myths (e.g. social, economic and environmental) pertaining to livestock production generally within the province and specifically in Northern Ontario. The province should work to identify and dispel these myths.
- ✓ There are many success stories related to farming in the Clay Belt region. These success stories should be identified and profiled. This may address several needs, including dispelling myths and helping to attract new farmers to the North.



Assess agricultural opportunities for Crown land



What is it?

Crown land is generally undeveloped land that is held by the provincial and federal governments.

Why does it matter?

According to the provincial government, within Northern Ontario, more than 95% of the land base is Crown land¹ and within the Clay Belt, much of the Crown land has potential for agricultural development.

¹ Ontario (2019, April 9th). A guide to cottage lot development on Crown land [online]. Retrieved June 28th, 2019 from <https://www.ontario.ca/page/guide-cottage-lot-development-crown-land>

What can the province do?

Crown land in Ontario is managed by the Ministry of Natural Resources and Forestry. All applications for access to Crown land must align with appropriate land use planning directions.

- ✓ Farmers observed that the process for developing an application to access Crown land could be simplified and expedited to improve agricultural development of the Clay Belt region.
- ✓ The province should develop a guide for developing Crown land for agriculture, similar to the existing *A Guide to Cottage Lot Development on Crown Land*. Partners in this endeavour would include farm groups, municipalities, First Nations and other stakeholders.



Review and maintain funding and grants

What is it?

The province provides a variety of grant and funding opportunities for agricultural activities, infrastructure and economic development.

Why does it matter?

Across Ontario, farmers have access to a variety of provincial and federal grants and funding programs. Some of these resources benefit agriculture across the province, while other specific needs exist for development in the North.



What can the province do?

Farmers have expressed support for a number of existing programs and have made suggestions for new or enhanced programs.

- ✓ Information regarding funding programs should continue to be profiled and shared with farmers at the earliest possible opportunity. The province should continue to support Northern organizations, such as NOFIA, that work directly with the farm community to guide farmers through the application process.
- ✓ Existing tile drainage and land clearing programs were highly valued by the farm community and should be maintained and enhanced where possible. Funding for other infrastructure required for agriculture is also valued by the farm community.
- ✓ Farmers noted challenges with securing and affording certain required agricultural equipment. An existing federally funded program, the Sustainable New Agri-food Products and Productivity (SNAPP), is a good example of a funding program that assists with the purchase, modification and installation of a variety of agri-food equipment. Opportunities to offer similar provincial programs should be explored in order to further enhance economic development and on-farm diversification activities.
- ✓ The Farm Property Class Tax Rate Program continues to be supported by the farm community and should be maintained across the province. The province should help municipalities to understand the value of this program for the agricultural sector.

Support research related to Northern Ontario



What is it?

Research provides information that helps to address the specific needs of Northern agriculture.

Why does it matter?

Research seeks to address issues of productivity, profitability and sustainability, in order to enhance agriculture in Northern Ontario. There are perceived social, economic and environmental barriers to agricultural production in the Clay Belt and research can help to address these issues.

What can the province do?

The province can continue to support research projects that focus on Northern Ontario generally and the Clay Belt region specifically.

- ✓ The province can utilize their funding models to encourage research that would benefit Northern agriculture. For example, research regarding crops, livestock and rural communities has proven beneficial and should be encouraged.
- ✓ An inventory of existing research related to Northern agriculture would be helpful.

Support programs to assist new farmers

What is it?

Programs to assist new and beginning farmers should be established to ease the complexity of establishing an agricultural operation.

Why does it matter?

New and beginning farmers have specific needs that are different than existing farmers. These include high capital costs for land acquisition and drainage, knowledge barriers and adapting to life in the North.



What can the province do?

The province can create a variety of toolkits and information packages related to farming in the North (e.g. cost expectations, climate limitations, profitability and social dynamics).

- ✓ Prospective farmers will benefit from clear information regarding the uniqueness of Northern agriculture, including both barriers and opportunities. Beef Farmers of Ontario has created a guide through Beef North to assist new entrants into beef farming in Northern Ontario. The province has also established Farm North, which provides an excellent resource for both existing and new farm entrants. Farm North should be maintained.
- ✓ Any grants available to new and beginning farmers should be profiled to the farm sector and Northern municipalities.



Encourage partnerships

What is it?

Partnerships provide opportunities for collaboration and help to achieve more with limited resources.

Why does it matter?

Given the geographic area of Northern Ontario, partnerships provide an opportunity to share resources and utilize expertise to accomplish enhanced agricultural development.



Image courtesy of Ferme GG Farm

What can the province do?

The province has established relationships with a variety of diverse stakeholders and can provide a leadership role in developing these further.

- ✓ The farm community noted opportunities for enhanced partnerships with farm organizations, the province of Quebec, Indigenous communities and Old Order Mennonites. The province should work with the farm community and municipalities to help develop these relationships and establish partnerships.
- ✓ The educational system has the potential to profile agriculture and related employment opportunities in rural communities. Examples include field trips to local farms, promotion of co-op placements and entrepreneurship courses with a focus on agricultural opportunities.



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Farmers' Toolkit

Ten strategies farmers in the Clay Belt can utilize to develop, support and enhance the livestock sector.



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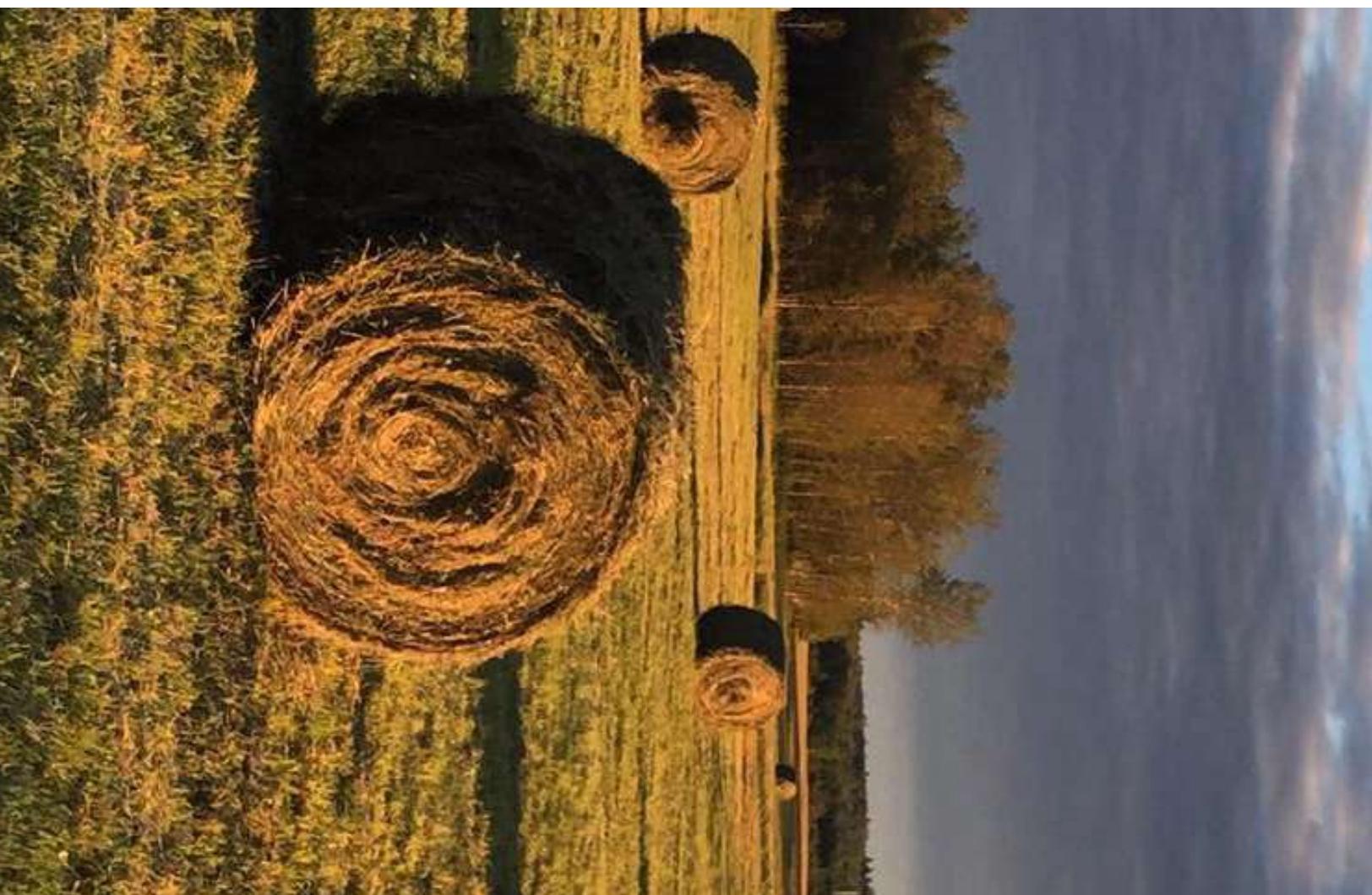
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Overview of the Ten Strategies

Prospective Farmers

- 1) Know and understand the perceived social barriers
- 2) Know and understand the realities of Northern Ontario's agriculture
- 3) Be on the lookout for mentorship opportunities in the Clay Belt

New and Existing Farmers

- 4) Become an ambassador for Northern Ontario
- 5) Create partnerships with other farmers
- 6) Create partnerships with agricultural stakeholders
- 7) Become a mentor
- 8) Get involved in the community
- 9) Work towards the diversification of agricultural activities
- 10) Seek local market opportunities



Image courtesy of Ferme GG Farm

Prospective Farmers

Know and understand the perceived social barriers



What is it?

There are several perceived social barriers held by prospective farmers living outside of Northern Ontario in regards to living in the Clay Belt. These include a perceived lack of social activities and job opportunities, isolation and language barriers.

Why does it matter?

Dispelling the myths about Northern Ontario, and particularly the Clay Belt, will help to play a key part in the development of agricultural activities and also help with the attraction and retention of newcomers in the region.

What can farmers do?

Prospective farmers can take a proactive approach in seeking information about living in the Clay Belt. A few examples include:

- ✓ Obtain information from municipalities and farm organizations on social and recreational activities that are organized in the Clay Belt area.
- ✓ Seek information from employment centres and community organizations such as the Far Northeast Training Board (FNETB) on employment opportunities in the Clay Belt.
- ✓ Take the initiative to attend presentations and conferences on topics related to Northern Ontario.
- ✓ Visit the region and meet with different stakeholders working in the agriculture sector (farm organizations, farmers, representatives from municipalities).
- ✓ Take the course How to start a farm in Northern Ontario, offered by Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA). It outlines social and recreational opportunities by district.
- ✓ Contact local OMAFRA Agriculture Development Advisor and be informed on the potential funding opportunities and support.



Prospective Farmers

2

Know and understand the realities of Northern Ontario's agriculture



Image courtesy of Ferme GG Farm



What is it?

Agriculture in Northern Ontario is unique: it is important to recognize differences from agricultural activities in Southern Ontario, such as challenges, opportunities, and what farming practices need to be adjusted.

Why does it matter?

It is important to have realistic expectations when establishing farms in Northern Ontario. This will help farmers face challenges and take full advantage of the agricultural opportunities in the Clay Belt.



What can farmers do?

To better understand the realities of agricultural activities in the Clay Belt, the prospective farmers can:

- ✓ Consult research that has been conducted in the region by (but not limited to): Guelph University, Beef Farmers of Ontario (BFO), New Liskeard Agricultural Research Station, Northern Ontario Farm Innovation Alliance (NOFIA), and Northeast Community Network (NeCN).
- ✓ Conduct market research before establishing agricultural activities to better understand the needs of the region and have a more accurate idea of the sources of income.
- ✓ Make small-scale experiments in the North (e.g. how do different crops react on different soils).
- ✓ Be aware of the necessity of tile drainage and the opportunities related to the region's climate.
- ✓ Understand the soil type and its quality by consulting OMAFRA soil maps.
- ✓ Take the online course: How to start a farm in Northern Ontario, offered by OMAFRA.
- ✓ Discover web sites such as Farmnorth.com and Beefnorth.com.

Prospective Farmers

Be on the lookout for mentorship opportunities in the Clay Belt



What is it?

It could be highly beneficial for prospective farmers to connect with existing farmers in the Clay Belt and seek mentorship opportunities in the region.

Why does it matter?

Prospective farmers should look for mentorship opportunities in the Clay Belt to learn the trade from a local perspective and develop a sense of belonging to the community.

What can farmers do?

Prospective farmers can:

- ✓ Communicate with municipalities and farm organizations to help find knowledgeable and well-established farmers who would be interested in working with them and providing hands-on experience.
- ✓ Look for opportunities to work with an established farmer in the Clay Belt.



New and Existing Farmers

Become an ambassador for Northern Ontario



What is it?

Existing farmers should become ambassadors for the North and properly inform the general population and agricultural stakeholders from all over the province about the region's assets and opportunities.

Why does it matter?

Prospective farmers, agricultural stakeholders and the general population often share perceived barriers regarding agricultural activities in Northern Ontario. Leadership from existing farmers in Northern Ontario could assist dispelling some of these myths. Conveying the realities of agricultural activities in the Clay Belt could also help on the local level, for example, communicating the importance of agriculture for the municipalities and the region as a whole.

What can farmers do?

Northern Ontario's ambassadors can do some of the following:

- ✓ Represent and sell Northern Ontario in regional and provincial initiatives related to agriculture (e.g. farm shows and conferences) by participating and sharing success stories.
- ✓ Write out success stories to be posted on websites like Farmnorth.com.
- ✓ Use social media to demonstrate and promote agricultural activities in Northern Ontario.
- ✓ Take the time to answer questions from new and prospective farmers.
- ✓ Establish a matching site for mentors/mentees to match up prospective new farmers with established ones.



New and Existing Farmers

5

Create partnerships with other farmers

What is it?

Farmers in the region should work more closely together and create partnerships with each other to better share knowledge and resources (material, human and financial).

Why does it matter?

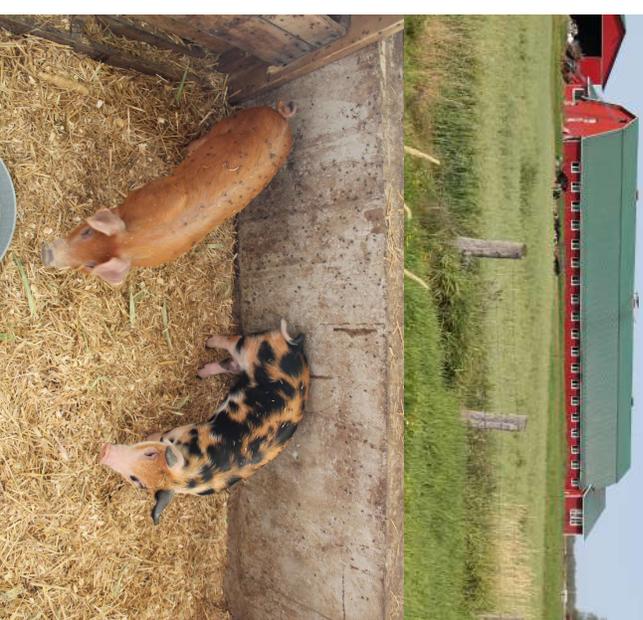
Agricultural activities have significant costs and learning the trade can be time consuming. Thus, partnerships can lead to better time and resource management, while also building bridges between farmers.



What can farmers do?

Sharing resources can take different forms. Here are a few examples:

- ✓ Grow and sell hay and grain to allow other farmers to purchase them locally, and thus save on transportation costs.
- ✓ A social media page or a website could be put in place to match local demand to local production.
- ✓ Purchase equipment in partnership with other farmers and then share this equipment.
- ✓ Work closely with one another in regards to transportation
 - ✓ As livestock or equipment is moved from Northern to Southern Ontario, and vice versa, there is an opportunity to create partnerships and share transportation costs
 - ✓ A social media page or a website could be created to coordinate the sharing of transportation
- ✓ Encourage and develop co-operative movements to facilitate the sharing of information and resources, and also potentially share and save on the cost of services.



New and Existing Farmers

Create partnerships with agricultural stakeholders

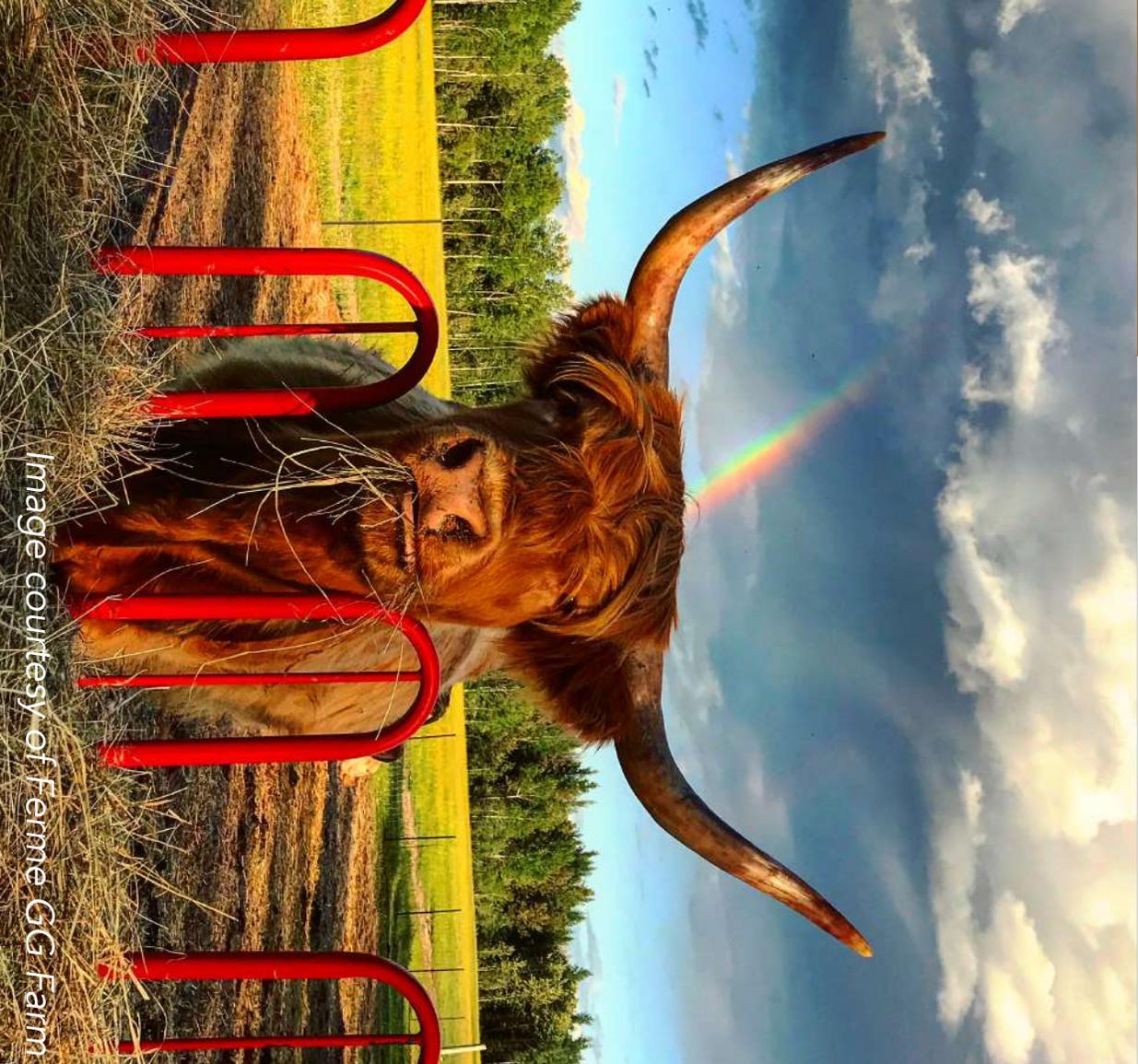


Image courtesy of Ferme GG Farm

What is it?

Farmers should create partnerships with agricultural stakeholders and collaborate community members to encourage the development of agriculture in the region.

Why does it matter?

Working together and in the same direction at the local, regional and provincial level helps develop stronger agricultural activities in Northern Ontario.

What can farmers do?

Several partnerships can be developed, including the following examples:

- ✓ Explore opportunities to partner with Indigenous communities for the sale of local agricultural products (e.g. organize a farmer's market).
- ✓ Collaborate with trappers to work on solutions regarding predator management.
- ✓ Reach out to farm organizations and farmers in Northwestern Québec to explore partnership opportunities for knowledge and resource sharing.

New and Existing Farmers

Become a mentor

What is it?

Farmers should explore mentorship opportunities for new and prospective farmers.

Why does it matter?

Farm succession is often generational but is more limited in Northern Ontario. Mentorship programs would help with the attraction and retention of newcomers in the region.



What can farmers do?

To become active mentors, farmers can:

- ✓ Offer internship to local high school and university students on their farm.
- ✓ Allow agriculture students to work on the farm as part of a co-op or apprenticeship program to provide experiential learning. There are federal funding programs that subsidize youth work placements that could be sought.
- ✓ Offer mentorship opportunities for new farmers by sharing local experiences and knowledge.



New and Existing Farmers

8

Get involved in the community



What is it?

Farmers should be involved in their community and participate in community initiatives to make themselves known.

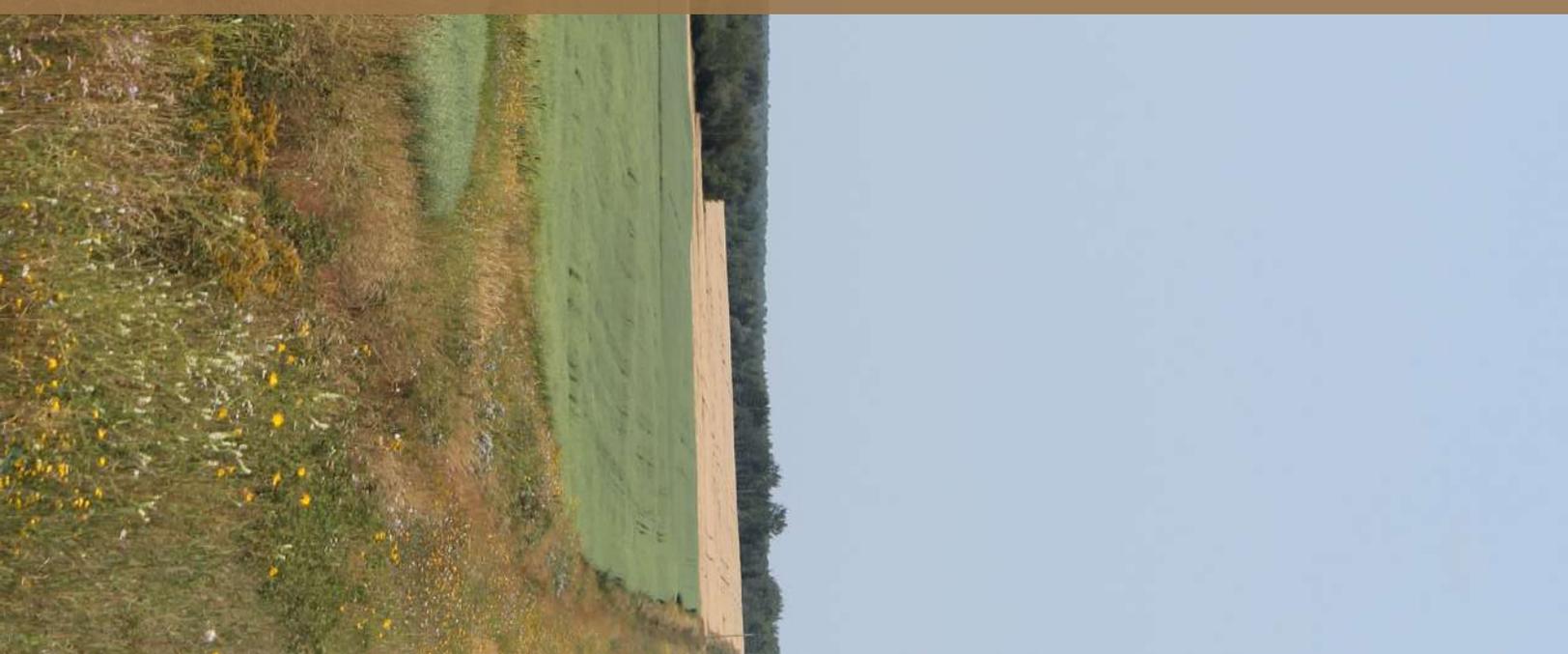
Why does it matter?

The community residents and municipalities in the region have limited knowledge about local farmers and the importance of agricultural activities in the North. As a result, several opportunities related to agriculture are missed.

What can farmers do?

To get involved in their community and have a positive impact, farmers can:

- ✓ Organize and participate in events (e.g. workshops and conferences) that promote agriculture and educate Northern residents on local agricultural production in the region (e.g. importance of buying locally, selling land to farmers, local investments and economic development).
- ✓ Organize farm visits for the general population.
- ✓ Participate in school-related initiatives to expose the younger generation to the farming lifestyle and its opportunities (e.g. farm visits and in-class presentations).
- ✓ Participate in networking and promotional events both locally and regionally and share success stories with media outlets.
- ✓ Continue to participate in agricultural studies, research and demonstrations.
- ✓ Participate in a community Agriculture Economic Development committee.



9

New and Existing Farmers

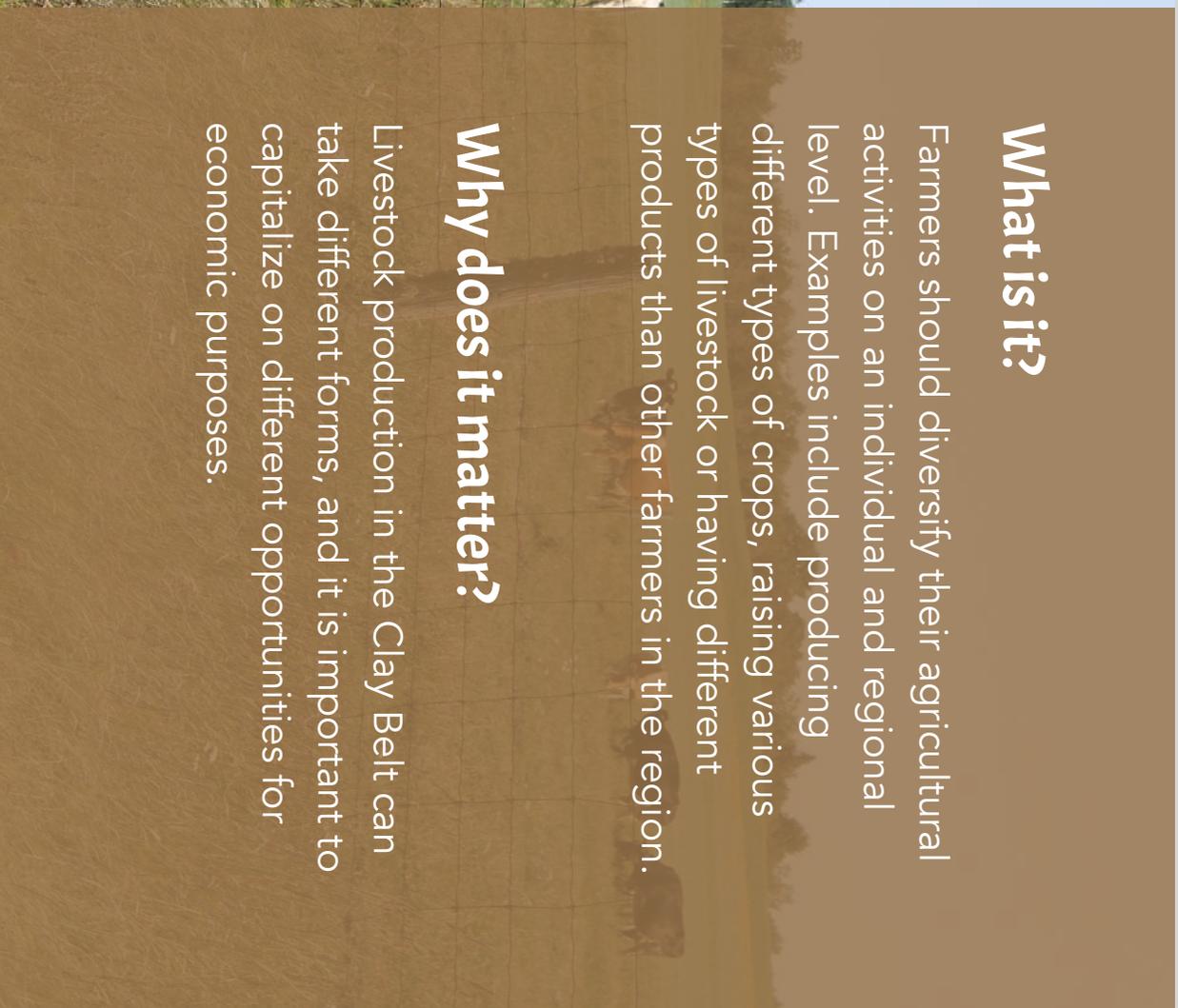
Work towards the diversification of agricultural activities

What is it?

Farmers should diversify their agricultural activities on an individual and regional level. Examples include producing different types of crops, raising various types of livestock or having different products than other farmers in the region.

Why does it matter?

Livestock production in the Clay Belt can take different forms, and it is important to capitalize on different opportunities for economic purposes.



What can farmers do?

To diversify their agricultural activities, farmers can:

- ✓ Establish small-scale farms as well as large-scale or industrial farms. Each farm size offers a variety of benefits and challenges, but a balanced mix of these options would be optimal for the region.
- ✓ Develop value chains and value-added products with the help of workshops and technology transfer.
- ✓ Research and experiment with different crops to see if they are viable in the North.
- ✓ Raise a diversity of livestock (e.g. chickens, goats, cows).



New and Existing Farmers

Seek local market opportunities



What is it?
Farmers should work with agricultural stakeholders in the region to sell their products locally and expand their agricultural activities.

Why does it matter?
In addition to potentially saving costs, selling products locally can raise awareness on the importance of agricultural activities in the North, provide fresh products and contribute to the economic development of the region.

What can farmers do?

To pursue local market opportunities, farmers can:

- ✓ Create partnerships with Indigenous and smaller communities to sell products (for example, a farmer's market could be organized once a month in those communities).
- ✓ Promote their products to local grocery stores and restaurants.
- ✓ Participate in community initiatives, for example, farmer's markets, local festivals and other events that already exist.



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*Understanding the Barriers to Livestock
Production in the Clay Belt: An Economic,
Social and Political Analysis*

Literature Review and Jurisdictional Scan

September 2018

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DE HEARST

Ontario 

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Introduction



Northern Ontario has an abundance of viable agricultural land, however, much of this land is underutilized, with fallow fields and in some instances, decaying infrastructure. There is significant potential for the expansion of agriculture within the Clay Belt, but this expansion is dependent on existing farmers, as well as new and young farmers. *Understanding the Barriers to Livestock Production in the Clay Belt: An Economic, Social and Political Analysis* seeks to understand the socio-economic barriers regarding agricultural expansion in Northern Ontario. This research is part of the Northern Livestock Pilot Project focussed on an area of the Great Clay Belt along Highway 11 between Hearst and Cochrane in northeastern Ontario (Ontario Ministry of Agriculture Food and Rural Affairs (OMAFRA), 2017).

The expansion of agriculture in Northern Ontario is dependent on new and young farmers; however, many social and economic barriers exist, resulting in the loss of Northern youth and limited migration of new farmers. In order to enhance the growth of the agricultural sector, the barriers to establishing new farms and expanding existing farms must be understood, but research regarding agriculture in Northern Ontario is quite limited and has been largely scientific in nature. Research regarding local food has typically focused on the consumer and improving access to local food through food hubs and farmers' markets (Ballamingie & Walker, 2014; Nelson, C.H. and Stroink, 2012; Stroink, 2013). Little research has been conducted on the role of the producer, including economic and social barriers to agricultural production and expansion.

This literature review will begin by reviewing the great potential for agricultural growth in the Clay Belt region of northeastern Ontario, the importance of local food and the economic, social, political and environmental barriers faced by farmers in remote and rural locales. Sources will include literature drawn from a variety of academic, government, industry and non-profit sources pertaining to northeastern Ontario and other similar regions. The jurisdictional scan will review the organizations that work with new and existing farmers in Northern Ontario to address barriers. Three brief case studies will be presented to illustrate how barriers have been addressed in other rural regions. Finally, a variety of national and international initiatives addressing barriers to new and existing farmers will be described.

This literature review and jurisdictional scan can help l'Université de Hearst, University of Guelph, farmers, Northern youth and other stakeholders involved in the collaborative action research project, *Understanding the Barriers to Livestock Production in the Clay Belt: An Economic, Social and Political Analysis* identify the barriers that prevent individuals and communities from engaging in livestock production in Northern Ontario and propose concrete solutions, both on the institutional/political level and on the individual level, in order to reduce or eliminate these barriers. The identification of barriers and best practices will help engage new and young farmers within the agricultural sector, thus strengthening Northern economies and the agricultural sector.

Potential in the Clay Belt Region of Northeastern Ontario



An expanding global middle class, as well as renewed interest in local food, is driving demand for livestock products such as beef and lamb. Northern Ontario is well positioned to take advantage of these opportunities. Northern Ontario has great potential to expand its agri-food economy because of its vast, affordable land base. Climate change, demographic opportunities and the growing importance of local food support this potential.

The Clay Belt area in northeastern Ontario shown in Figure 1 consists of 10.2 million acres of land, 35% of which is covered in coniferous forest and 28% in mixed forest. Potentially fertile glaciolacustrine and morainal calcareous clays and silts make up 66% of the area (Ontario Ministry of Agriculture Food and Rural Affairs, 2017). The area of the Great Clay Belt is equal to the total area under crops in the province in 2016. Much of northeastern Ontario is located within the Ontario Shield Ecozone (OMNR, 2009). The climate in this area is characterized by long, cold winters and short, warm summers, with the mean daily temperature in January being around -15 degrees Celsius and the mean daily temperature in July being around 17 degrees Celsius (OMNR, 2009). Precipitation in this ecozone varies from 500mm per year to about 850mm per year (OMNR, 2009).

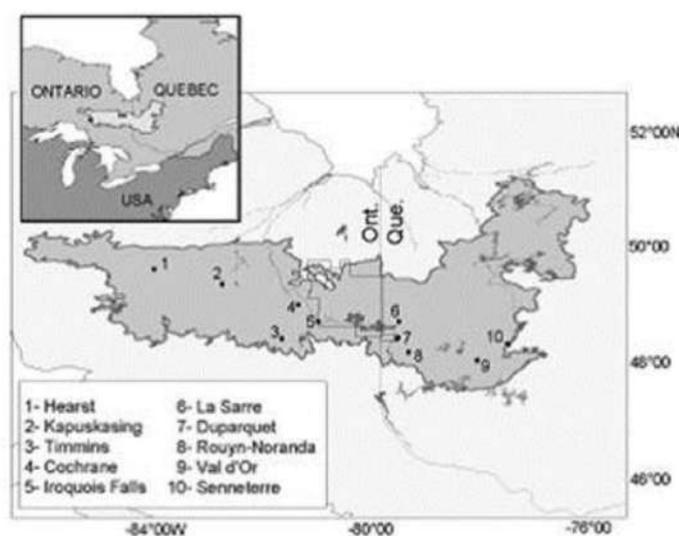


Figure 1. The Clay Belt (Ontario Ministry of Agriculture Food and Rural Affairs, 2017)

Key facts about the state of agriculture in the region are:

- Only about 1.4 per cent of the Clay Belt has been developed for agriculture.
- The region extends into Northwestern Quebec, which contains another 13 million acres.
- The Canada Land Inventory has identified ~4.4 million acres of Ontario's Clay Belt as Class 2, 3 or 4, which are suitable for cultivation. The remainder has either not been classified or is unsuitable for agriculture.
- The central limitations to productivity in the Clay Belt and Northern Ontario are drainage and climate.
- This warming trend goes back at least 30 years and is exemplified by the increase in annual crop heat units (CHU).
- The region is suitable for forage production and the land is capable of supporting large herds of ruminant animals (Ontario Ministry of Agriculture Food and Rural Affairs, 2017).

The Clay Belt's development potential becomes obvious when the level of agricultural development is compared across provinces. Figure 2. shows the agricultural development differences between northeastern Ontario (west or left of border) and northwestern Quebec (right or east of the line) in the Great Clay Belt (Ontario Ministry of Agriculture Food and Rural Affairs, 2017).



Figure 2. Development differences in the Great Clay Belt (Ontario Ministry of Agriculture Food and Rural Affairs, 2017)

The Clay Belt region has experienced multiple cycles of growth and decline, due to environmental, economic, social and political issues. In fact, the level of improved (cleared) farmland in the area peaked in 1951 with 50,400 hectares at which time it steadily declined to only 14,421 hectares in 2006" (Manseau, 2008). The reason for this steep decline in agriculture is difficult to pinpoint. The fieldwork for Caldwell and Marr's (2011) *Current and Future Opportunities for Agricultural Development in Northeast Ontario: A Regional Development Perspective - Northeast Community Network (NeCN) Agriculture Study* identified several possibilities such as "an increase in competition from international markets or a cultural and economic shift in the region away from agriculture towards more profitable ventures in mining and forestry." The decline does not seem to be attributable to environmental conditions, but "rather obstacles tend to lie in socio-economic factors which suggests that agriculture could return and expand given the appropriate socio- economic conditions" (Caldwell & Marr, 2011a, p. 9).

Beef production is declining in Northern Ontario as shown in Table 1. *Livestock Inventories 2016 & 2011* (Ontario Ministry of Agriculture, 2017). However, there are indications that changes that are currently well underway have the potential to transform certain areas of northeastern Ontario and the agricultural industry are experiencing growth. The *2016 Census of Agriculture Farm and Food Operator Data* release for Northern Ontario from Statistics Canada shows that the \$209 million in gross farm cash receipts generated by Northern Ontario farms in 2016 is 9% higher than gross farm cash receipts in 2011 and there has been an increase of 8% in small farms (under 10 acres in size) over the same period (Caldwell, Howes, & Epp, 2018; Ontario Ministry of Agriculture, 2017).

Item	2016 Census				2011 Census		
	Northern Ontario	Province	Percent of province	Percent from 2011 Census	Northern Ontario	Province	Percent of province
Total cattle and calves	84,456	1,623,710	5.20	-8.45	92,248	1,741,381	5.30
Steers	7,309	305,514	2.39	8.35	6,746	291,263	2.32
Beef cows	26,698	236,253	11.30	-13.27	30,783	282,062	10.91
Dairy cows	9,265	311,960	2.97	-6.72	9,932		3.12
Total pigs	6,683	3,534,104	0.19	9.43	6,107	3,088,646	0.20
Total sheep and lambs	13,833	321,495	4.30	-4.21	14,441	352,807	4.09

Table 1. Livestock Inventories, 2016 & 2011 Census (number) (Ontario Ministry of Agriculture Food & Rural Affairs (OMAFRA), 2017)

Along with the lack of available, affordable agricultural land in Ontario’s southern regions, changing climactic and environmental conditions have increased interest in the development of agriculture. While climate change is expected to have negative impacts on many southern and coastal regions, it is hypothesized that agriculture in high-latitude developed countries may benefit (Graves, M, Deen, B., Fraser, E., Martin, 2015; Hanna, E. G., Bell, E., King, D., & Woodruff, 2011). “With new technologies and a warming climate, crop yields are improving and the range of crops that can be grown in Northern Ontario is also increasing”(Caldwell et al., 2018). As the average number of heat units has increased so has the number of crops available because of the increasingly favourable conditions (Northeast Community Network (NECN), 2018). For example, corn silage, soybeans, winter wheat and rich pastures that can support cattle farmers are becoming increasingly common in the region. There are “16 million underutilized acres that could support beef cow-calf production in the Great Clay Belt alone” (Beef North - Beef Farmers of Ontario, 2018).

The Importance of Local Food Systems

Food systems are understood as dynamic webs of people and other elements of living food systems connected and interdependent in a multiplicity of complex ways (Wiebe, Nettie & Wipf, 2011). Local food systems are central to the concept of food sovereignty. Food sovereignty, defined as “the right of peoples to healthy and culturally appropriate food produced through ecologically sound and sustainable methods, and their right to define *their own food and agriculture system*” (La Via Campesina, 2018) challenges the dominant conceptualization of food chains that control production inputs through commodity production, processing, packaging, transporting, marketing and retailing to consumption (Wiebe, Nettie & Wipf, 2011). Shifting to a food sovereignty paradigm necessitates reorienting agricultural production to domestic consumption, safeguarding adequate incomes for food producers and environmental sustainability (Wiebe, Nettie & Wipf, 2011). Food sovereignty addresses distribution questions through its consideration of access to productive resources (Edelman et al., 2014). To be food sovereign necessitates access to land, seeds, resources, markets and policy supports and durable interactions of citizens, governments, markets and nature.

Export-oriented agricultural policies, such as those reflected in international trade agreements, have eroded food sovereignty in rural Canada. While large, transnational corporations maximize profits through controlling food supply chains, rural communities experience lower farm incomes, fewer family owned farms, depopulation and higher store-bought food costs (National Farmers Union (NFU), 2017; Wiebe, Nettie & Wipf, 2011). While yields and gross farm revenue increased over the past three decades, farmers’ share of that value has decreased significantly (Qualman, 2011) and farmers are increasingly pressured to enlarge and corporatize. Food manufacturers can tap into a range of options to source cheap inputs on a global scale. With this leverage they can increase competition and lower prices paid for these commodities, and such actions often undermine the livelihoods of smallholder farmers (Scrinis, 2016). The pressure to increase exports continues to accelerate. For example, the 2017 federal budget’s *Innovation and Skills Plan* aims to increase agri-food exports by 33% by 2025 to \$75 billion annually, yet the “very infrastructure that would be needed to supersize our exports would create roadblocks for the development of more localized food systems” (National Farmers Union (NFU), 2017, pp. 2–3). As a result, Canada’s food system loses diversity, becomes more export dependent, and loses lucrative opportunities to contribute value-added activities (National Farmers Union (NFU), 2017). In addition, the pressure to maximize production under this model creates dependencies on technology and chemicals which degrade the natural environment (Qualman, 2011).

While rural and urban communities all play essential roles in forging food systems that foster health and well-being for the planet and its people, rural communities make significant contributions to Canadian food sovereignty and face numerous distinct challenges (Food Secure Canada, 2015; Levkoe, 2013). Northern Ontario's Agri-Food Strategy identified increasing Northern consumption of food produced in the north as one of its key strategic priorities (Ontario Ministry of Agriculture Food and Rural Affairs, 2011). Healthy, local food is not equally available across Ontario. Poverty is higher and food more expensive in rural and remote communities, making it more difficult for residents to afford nutritious store-bought food. Increased distances to stores and a lack of public transportation can exacerbate the effect of poverty on rural communities (Lauzon, 2017). Indigenous and remote communities in Northeast Ontario are often lacking in fresh and affordable food products, while area farmers have the ability to produce quality meats and vegetables but often lack a market or find it difficult to compete when shipping to markets in the south, so there is room to improve the linkages between farmers and Indigenous and remote communities (Caldwell & Marr, 2011b, p. 15).

In Northern Ontario, many communities do not yet control their food systems and do not have sufficient access to locally produced healthy and safe food, but the potential is there that expanding agricultural production in the Clay Belt will support local food systems. The strong trend in recent years towards the consumption of fresh food products near production sites is expanding the potential for market gardening and livestock production (Martinez, 2010). The increasing popularity for niche markets such as grass-fed, organic, or locally produced food creates several opportunities for agriculture in the Clay Belt. The area's ability to produce quality hay and pastures presents an opportunity for grass-fed beef production (Caldwell & Marr, 2011a). Also, "there may be some comparative advantages in supplying local markets because of their proximity and existing infrastructure, such as the Polar Bear Express allowing products to be shipped to communities along the James Bay coast" (Caldwell & Marr, 2011a, p. 25). Considering the importance of local food for health and the impacts of a strong agricultural sector on economic development, Northern communities can benefit significantly from the expansion of agriculture. This growth will result in a stable population base, youth retention and attraction of new farmers but is dependent on an examination and keen understanding of social and economic barriers unique to Northern Ontario.

Barriers Faced by new and Existing Farmers in Rural and Remote Regions



Farming in the 21st century comes with a variety of challenges. In Northern communities, economic, social, political and environmental barriers are heightened due to the vast geographic area, low population densities and limited access to appropriate services (Fuller, Edwards, Procter, & Moss, 2000; Hossain, Eley, Coutts, & Gorman, 2008; Kennedy, Maple, McKay, & Brumby, 2014; MacLeod, Browne, & Leipert, 1998; Stain, Kelly, Lewin, Higginbotham, Beard, & Hourihan, 2008).

Rural youth out-migration and population aging are two of the most significant trends shaping communities in the 21st century. Between 1851 and 2011, the rural population in Canada dropped from 90% to 18.9% of the total population (Statistics Canada, 2017a). Between the years 2001-2011 in Ontario specifically, urban centers experienced population growth while rural communities experienced population decline (Moazzami, 2015). The average age of a farm operator in Northern Ontario is 55 (Statistics Canada, 2017b). Many rural communities struggle to retain their youth (Alston, 2004; Jamieson, 2000). As a result, these communities experience aging populations, the closure of businesses and a declining population base, resulting in low levels of social capital (Ball & Wiley, 2005; Dale & Onyx, 2010; Stain, et al., 2008).

Rural youth out-migration and population decline deprive “communities of badly needed tax revenue, threatening the viability of local schools, depressing local and regional economies, as well as stripping fraying towns and regions of hope for the future (BC Rural Centre, 2017, p. 8). However, changes that are currently well underway including trends in counter urbanization (Stockdale & Laoire, 2016) are transforming certain areas of northeastern Ontario and the agricultural industry are experiencing growth; however, this movement is concentrated in only a few areas and growth is not equal across the north. According to Statistics Canada, 1 in 4 rural youth who leave their community return to the same community within 10 years (McDonald, 2011). There are opportunities to build on that 25% success rate to identify what would help attract and retain the other 75%. Rural and remote communities require robust economic initiatives that encourage youth retention and inbound migration (Alston, 2004; Caldwell & Marr, 2013; Caldwell & Marr, 2011a; Flora, Flora, & Gasteyer, 2015).

Maximizing the agricultural potential of Northern Ontario requires a better understanding of the barriers that prevent individuals and communities from engaging in livestock production in Northern Ontario. The barriers are presented here under the categories of economic, social, political and environmental for ease of communication, but there are overlaps and intersections between the categories. For example, limited access to farm financing creates economic barriers, but is the result of political and social barriers. Likewise, the weaknesses in local food systems in the Clay Belt stem from economic, social, political and environmental conditions and have economic, social, political and environmental impacts.

Economic Barriers

Farmers in rural and remote regions face challenges to business profitability in the following strategic areas.

Transportation

Transportation takes longer, costs more and is more complicated in rural and remote areas (Caldwell et al., 2018, p. 28). This affects farmers' access to service, supplies and markets. For example, the logistics and cost of trucking up special orders or small quantities can be prohibitive. Distribution costs are also higher as agri-food products must travel further to reach their market. Access to services, such as abattoirs, can involve long distance so that is a related challenge (Caldwell et al., 2018). Distance to large markets is a major obstacle to profitability, "particularly when attempting an agriculture model based upon exports to markets in the south, such as cash crops or cow-calf operations, the long distances are a considerable obstacle. With a rising cost of fuel, the added cost of transportation reduces the margins of producers and thereby provides a competitive disadvantage for area producers" (Caldwell & Marr, 2011a, p. 18).

Competition for Labour

"Competition for labour with other, often higher paying, industries such as mining and forestry is a common barrier for farm businesses. It is compounded by the fact that overall Canada faces a labour force challenge as "the demographic replacement of the non-metro workforce in Canada fell below 100%" (Lauzon, Bollman, & Ashton, 2015). There are fewer young potential entrants to the workforce, compared to potential retirees from the workforce. Producers and processors have difficulty finding labour for their operations while the long hours and

comparably lower wage can be difficult to justify for prospective farmers (Caldwell & Marr, 2011a, p. 26). “The shortfall of skilled farm labor is affecting young farmers as well as the general farm community” (National Young Farmers Coalition (USA), 2018).

Value of Commodities

Uncertainty about commodity values is an issue for farming across northeastern Ontario, and beyond. Even when commodity prices are on the rise, the value may still be too low to be profitable, especially considering the consistent rise of input costs. Commodity value volatility is a particular risk for farmers in the Clay Belt who may have fewer crop options than other farmers in Ontario (Caldwell & Marr, 2011a, p. 26).

Limited Access to Farm Financing

Although investments in on- farm infrastructure such as housing for livestock and machinery for cash cropping would help farmers increase their efficiency, effectiveness, and competitiveness, many farmers in remote rural regions cannot afford the expense of obtaining or installing this infrastructure (Caldwell & Marr, 2011b). A common issue faced by farmers in rural areas is difficulty obtaining loans and financing. This creates a serious limitation to expansion and upkeep and improvements such as housing facilities, tiling, and equipment. Poor access to loans and financing results from a variety of factors including limited access to agricultural specialists in area banks and no Farm Credit Canada office located within the region (Caldwell & Marr, 2011b, p. 21). Another possible reason for the difficulty obtaining financing “may be the lack of equity that these operations hold. For instance, due to much higher land prices in southern Ontario the inherent value of farming operations may provide adequate collateral whereas the very low land prices in the NeCN catchment area will not. Nevertheless, it should be noted that farmers across the province are experiencing similar difficulties with obtaining financing apparently as a result of a shift of focus to cash-flow” (Caldwell & Marr, 2011a, p. 19). Furthermore, financing is essential for new farmers, but again acquiring the loans and financing necessary to start such operations is a significant obstacle (National Young Farmers Coalition (USA), 2018).

Limited Agricultural Infrastructure, Suppliers, Product Handling, and Other Services

Local infrastructure and equipment are lacking, making rural communities and smaller growers dependent upon highly centralized infrastructure for food production such as abattoirs and grain storage (Food Secure Canada, 2015). In order to sustain day to day operations on a farm and to remain economically viable, farmers require off the farm support from businesses and individuals in their area who provide a specialized service as well as support from local governments who should maintain infrastructure and the provincial government who builds capacity through grant provision, research initiatives and pilot projects. Farmers in Northern Ontario are subject to losses of necessary services such large-animal veterinarians and farm equipment repair businesses and specialized personnel (Miller, 2013). In addition to this, farm supply outlets and feed depots are also disappearing from the rural landscape. For example, “the NeCN catchment area has limited agriculture infrastructure and product handling such as the lack of a grain elevator and rail depot as well as limited storage for grains or vegetables. The area also has a limited number of agricultural product suppliers and it was indicated by almost every producer interviewed that they must obtain all feed; seed; fertilizer; chemicals; machinery and parts; and other associated products from southern suppliers. This represents an added cost and significant inconvenience to area farmers. It also represents a weakness from an economic development perspective as resources are leaked out of the area into Timiskaming District with limited opportunity to capture the corresponding benefits of increased agriculture production in the area. As it stands now it does not appear that these services will return through market devices, nevertheless it is possible that they would arise on their own following an increase in farming in the area” (Caldwell & Marr, 2011a, p. 18).

Land Access

Land access is frequently identified as the most significant barrier to new farmers in other regions, (Food Secure Canada, 2017b; National Young Farmers Coalition (USA), 2018; Serkoukou, 2014) but in this respect the Clay Belt situation is unique and advantageous since land is comparatively affordable. While the lower cost of land is an advantage for the region; the challenge will be ensuring that agricultural land remains accessible (Miller, 2013). Land prices in Southern Ontario have dramatically increased since 2008, which one may view as a positive prospect for the agricultural industry in Northern Ontario. However, if farm land prices continue to rise exponentially in Southern Ontario, the likelihood of farm land price inflations in the north are quite high. Another concern is that while housing costs tend to be lower in rural communities, rural incomes are also lower which can present a significant challenge for new

farm owners during the earlier phases of establishing and growing their businesses (National Young Farmers Coalition (USA), 2018).

Limited Extension, Outreach, and Knowledge Transfer Services

Existing farmers need regionally-based extension services on topics like “low-input agriculture, adaptation to climate change, integrated pest management, alternative fertility techniques, energy efficiency, and a range of innovative, cost-reducing practices that are not available from the companies that supply them with seeds and fertilizers” (FarmStart Ontario, 2016). More opportunities for learning within the agricultural community through the use of peer-learning, extension, and outreach are also required (Caldwell & Marr, 2011a). There is also a risk of losing prospective new farmers at the outset if there are not affordable, accessible ways for those from non-farm backgrounds explore a career in agriculture, therefore, new farmer training programs are needed in urban as well as rural communities to engage potential new farmers “where they live, before expecting them to take the leap and ‘buy the farm’” (FarmStart Ontario, 2016).

While the lack of extension, outreach, and knowledge transfer services is a common weakness in rural areas, agricultural outreach in Northern Ontario is favourably viewed. As of 2011, the Ontario Ministry of Agriculture, Food, and Rural Affairs (OMAFRA) do not have a representative based in Cochrane District but the unit responsible for this area based in New Liskeard, an adjacent Northern district does; this is, however, a huge geographic area for Northern OMAFRA staff (Caldwell & Marr, 2011a). Although the OMAFRA website includes a sidebar link to Northern Agriculture Development Advisors, the link appears broke (Ontario Ministry of Agriculture Food and Rural Affairs (OMAFRA), 2018a).

Succession Planning

The fact that aging farm operators often have done limited succession planning is a barrier to agricultural growth because proper succession planning is required for sound business decisions and smooth transitions to successors (MNP, 2018). Farmer-to-farmer mentoring and the transfer of knowledge and skills is critical for the next generation, but Caldwell and Marr found aging farmers often had not planned “for their operations once they could no longer farm. In many cases aging farmers had no interested children to pass the farm on to and no intention (or little expectation) of selling the operation” (FarmStart Ontario, 2016). This suggests that as farmers age many farm operations will be left unutilized and the knowledge and wisdom built through a lifetime of farming experience will be lost. Debt barriers from the

current model of debt-financed intergenerational transfer also negatively affect the chances of success for new generations of farmers (FarmStart Ontario, 2016).

Social Barriers

Amenities and Services

The quality of life in rural communities is closely linked with a variety of factors including; cultural and recreational amenities and access to a variety of services. From health care, to schools, to shops, to churches, amenities and services in rural communities meet basic needs and bring residents together, enhance social cohesion and create a sense of belonging among residents (Oncescu & Giles, 2013). Attracting a variety of farming and non-farming residents is needed to create the population base required to support the services and amenities that improve quality of life. When these services and amenities are limited rural communities struggle to retain and attract residents which then further exacerbates the challenges of providing amenities and services.

Rural schools are particularly noted for how their role goes beyond that of formal education, and are a major consideration in the attraction and retention of farming families. From an economic perspective, rural schools are arguably one of the larger employers in rural areas and as a result, may assist in the retention of young families where parents are working in the education sector. As such, when a rural school is closed, it may give rise to a trickle effect as a result of young families relocating due to job losses and extremely long commutes to and from school for their young children. Although these population changes vary between communities, rural school closures are directly correlated with the loss of other services due to the regionalization of public services (Oncescu & Giles, 2013). In addition to being a place for socialization, rural schools contribute to the development and strength of a community's identity. Rural schools play an integral role in a community's development and sustainability by fostering social capital, social networks, partnerships and leadership. In response to declining populations in rural areas, school boards are closing and amalgamating rural schools across the country. In addition to this, many rural communities are facing major declines in resources productions, high unemployment rates, and offer residents very limited services and amenities, thus forcing younger adults to relocate to larger urban centres. Aging populations coupled with the out-migration of young adults and families have caused the government to make significant reductions in funding for educational services, leaving rural communities vulnerable to school closures (Oncescu & Giles, 2013).

Another critical service emphasized in the literature is high speed internet. Weaknesses in broadband connectivity in rural Canada have serious impacts on rural economic development and social vibrancy (CRRF, 2017; CRRF, RPLC, & Rural Development Institute University of Brandon, 2017). This issue is timely given the federal governments consideration of changes to its commitment to Rural Broadband that might limit expansion of 5G service into rural areas and the availability of high speed for some advanced internet service providers and their rural customers (Rural Ontario Insitute, 2018).

Equity

Systemic racism creates obstacles for Indigenous participation in agriculture. Indigenous farmers have faced disproportionate rates of land loss, and the decline in numbers of their farms over the last century has been partly attributed to decades of discriminatory practices by government (National Young Farmers Coalition (USA), 2018). Rural development must address the needs of the Indigenous People as they continue to affirm their treaty and land rights and advance the quality of life for their people, addressing the historic injustices (Lauzon et al., 2015). Barriers to farming are also intensified for women, visible minorities and other groups who have been historically marginalized.

Political Barriers

A rural perspective on policy that attends to the consequences of rurality (density and/or distance to density) for public policies and programs is often neglected in policy decision making (Lauzon, Bollman, & Ashton, 2015). The major policy barrier is that policy is geared to larger producers, so the scale of the policy is inappropriate to smaller producers. This undermines the ability of smaller local growers to sustainably produce food for local consumers by favouring industrial, large-scale food production businesses (Food Secure Canada, 2015). For example, the federal government's AgriCompetitiveness funding stream disadvantages smaller scale operators because the regulations to promote farm safety are often inappropriate to smaller farms (Food Secure Canada, 2017a).

FarmStart Ontario (2016) notes that new farmers and small farms do not qualify for many support programs and supply-managed systems are often prohibitively expensive (FarmStart Ontario, 2016). Related to the issue of policy being at an inappropriate scale for many farmers in the Clay Belt, the expectations for SMEs to comply with rules and regulations which are complex and involved lots of paperwork made available programs inaccessible (Caldwell &

Marr, 2011a). Small farmers often feel “unfairly subjected to rules and regulations designed for large scale operators. This is frequently cited in the area of food safety regulations that can create high costs for small farmers and abattoirs with limited financial support to adhere to them”(Caldwell & Marr, 2011b). For example, Bison du Nord and Burt Farm Country Meats in the Timiskaming and Mantoulin Districts respectively, note the challenges of negotiating a regulatory system designed for large companies: “to make a cultured pepperettes, a \$1,000 pH meter and a \$900 water activity meter are required to test the product, even if it’s only 1 lb worth. Larger companies who are producing 3,000 lbs require the same two tools. Small scale producers do not have the economies of scale to take on this burden of cost” (Caldwell et al., 2018, p. 35). There is also a common opinion among Clay Belt area farmers that farmers on the Quebec side of the border have a “competitive advantage resulting from an increased number of service and subsidies from their provincial government” (Caldwell & Marr, 2011b, p. 25).

Finally, despite evidence that Canadian farm women make significant contributions by providing labour, capital and decision making, the significant influence women have in family decisions to farm in the North is underappreciated in policy. Women’s influence has yet to be fully recognized in agricultural organizations and government policy consultations (Martz, 2006; Roppel, Martz, Desmarais, & Martz, 2006).

Environmental Barriers

Although climate change is thought to be a positive aspect for farmers in northeastern Ontario, it is crucial that farmers in this area build the capacity that will enable them to be adaptable to the impending changes associated with climate change (Caldwell et al., 2018). It is widely agreed that while crops are expected to positively respond to elevated levels of carbon dioxide, impacts of increased temperatures and precipitation and the predicted increases of extreme weather events such as drought and flood, will likely combine and result in a decrease in yields and an increase in production risks (Fischer & Shah, 2005).

Climate change has the potential to affect livestock both directly and indirectly. By many, climate change is thought to be characterized by an increase in mean global temperatures as a result of anthropogenic activity. More recently, it has become accepted that climate change will manifest itself through extreme weather events ranging from floods and drought to extreme temperatures. As the threat of heatwaves increases, it is imperative that farmers consider what heat stress may do to an animal (United States Environmental Protection Agency, 2017). Heat stress may reduce fertility as well as an animal’s milk production as many animals will eat less

due to heat. When considering Northern agriculture, even a slight increase in temperature may enable foreign bodies to live in traditionally cooler Northern climates, thus increasing an animal's vulnerability to disease as well. This is because an earlier onset of spring or a warmer winter may allow pathogens or parasites to survive. This may lead to changes in veterinary practices, which would involve increases in the use of parasiticides and vaccinations, possibly leading to drug-resistant strains of parasites and pathogens. Lastly, drought may threaten foliage and feed pastures that livestock graze on (United States Environmental Protection Agency, 2017).

A comprehensive discussion of the growing research body concerning the effects of climate change and its variability on agricultural production is outside the scope of this literature review's focus on economic and social barriers to the attraction and retention to new and existing farmers. However, the issue of climate change is pressing because it is unpredictable and it involves interactions between climatic, environmental, economic, health, political, institutional, and technological processes (Fischer & Shah, 2005). The climactic variability that is associated with climate change and its effects on agricultural production raises a sense of profound uncertainty among farmers worldwide and "young farmers are on the front lines of climate change, experiencing unpredictable weather, severe storms, drought, pests, and disease" (National Young Farmers Coalition (USA), 2018).

Final Observations of Barriers: Interconnections and Perceptions

Economic, social, political and environmental barriers are interconnected and therefore cannot be addressed in isolation. For example, economic barriers to profitability for new and existing farmers in rural and remote regions such as transportation costs require policy changes to infrastructure funding and also relate to social barriers like isolation or limited services. In addition, all of this happens within an environmental context, so consideration of sustainability, conservation and climate change also need to be part of economic, social and political solutions.

The power of negative perceptions is another key theme which intersects economic, social, political and environmental barriers. For example, a "common perception held by interview participants was that the federal and provincial governments were indifferent to, or even opposed, the expansion of agriculture in the North. This can present threats in two key ways. For one, when attempting to work with other levels of government to expand this sector it may be difficult to establish a good working relationship. As well, assuming that this perception is

accurate, it may prove difficult to obtain much needed support from the federal or provincial governments” (Caldwell & Marr, 2011a, p. 27). Regardless of whether governments are actually indifferent to issues affecting farmers in the Clay Belt, the perception of indifference is enough to act as a barrier. Another example is the perception many producers have of a limited market for local production regardless of the fact that “those that geared their operations towards local markets appeared to be quite successful. In fact, one operator mentioned his initial scepticism and abrupt change of heart following the great success he had selling beef locally. This common scepticism could pose a threat to efforts attempting to expand local production/consumption in the area” (Caldwell & Marr, 2011a, p. 27). Similarly, the perception of limited opportunities for rural youth is a barrier regardless of how limited actual opportunities happen to be, (Corbett & Forsey, 2017; Davies, 2008).

The perception of a limited farming culture in the Clay Belt is a barrier to attracting new farmers to the community. The Clay Belt region is commonly perceived not for its agricultural potential, but rather as a region based on mining and forestry (Caldwell & Marr, 2011b). Furthermore, “the dominant culture of the area would seem to reinforce this expectation where local residents see their own communities as based on mining and forestry with little expectations from agriculture” (Caldwell & Marr, 2011b).

The importance of perception points to the value of appropriately communicating opportunities and supports and the dangers to taking a deficit approach to agricultural expansion and rural revitalization in the Clay Belt.

Support for New and Existing Farmers in Northern Ontario



The expansion of agriculture in the north has been supported by the municipal, provincial and federal governments through funding programs, policy direction and educational outreach.

The **Growth Plan for Northern Ontario** was developed in 2011 by the Ministry of Northern Development and Mines through extensive consultation with Northerners to guide the development of a strong, diversified and resilient Northern economy. The Growth Plan identified 11 existing and emerging sectors for economic growth which included food processing, aquaculture and agriculture (Ontario Ministry of Agriculture Food and Rural Affairs, 2011). The priorities outlined in the Growth Plan coupled with further research and feedback from a diversity of stakeholders including representatives of agri-food businesses and associations to First Nations and Metis communities informed the 2017 **Northern Ontario Agri-Food Strategy**. The strategy identified five strategic directions to drive growth which include: 1-Foster a culture of innovation; 2- Strengthen Northern primary agriculture and aquaculture production; 3- Strengthen Northern food processing; 4-Increase Northern consumption of food produced in the North; and 5- Increase opportunities for Indigenous people and communities to participate in economic development in the agri-food sector in Northern Ontario (Ontario Ministry of Agriculture Food and Rural Affairs (OMAFRA), 2017).

There are a number of organizations and initiatives committed to supporting and growing agriculture and local food in Northern Ontario (Caldwell et al., 2018). There are also provincial and federal organizations active in supporting the attraction and retention of Northern farmers. Key organizations are briefly summarized below.

The **Northeast Community Network (NeCN)** is an incorporated, regional non-profit organization that “promotes collaborative economic development, applied research and support for forestry, mining, agriculture and tourism and business development.” It is an excellent example of collaboration among municipalities, First Nations, the private sector and local economic development organizations in supporting regional initiatives (Northeast Community Network, 2018).

Farm Credit Canada (FCC) lends billions of dollars through a variety of financing products and services. They also build awareness and understanding of sustainable agriculture and food systems through Canadian Ag Literacy Week, agriculture in the classroom programs and FCC on campus. Farm management tips and the latest agricultural news are available with a subscription to AgriSuccess, and the weekly e-newsletter FCC Express (Farm Credit Canada, 2018).

FarmStart grew from the recognition that farming communities are aging, and structural, economic, and practical challenges are preventing new and young farmers from getting into the sector. FarmStart has developed and piloted various programs in response to the needs of prospective and current start-up farmers in Ontario, working primarily with New Canadians, young people from non-farm backgrounds and second career farmers. Important FarmStart resources include policy recommendations developed from the National Farm Renewal Initiative with Food Secure Canada <http://www.farmstart.ca/farm-renewal/> and *The Rural Landowner Stewardship Guide* <http://www.farmstart.ca/new-and-improved-rural-landowner-stewardship-guide/> (FarmStart, 2018).

The **Northern Ontario Heritage Fund Corporation (NOHFC)** was established in 1988 to “promote and stimulate economic development initiatives in Northern Ontario by providing financial assistance to projects that stabilize, diversify and foster the economic growth and diversification of the region. The NOHFC provides economic development funding to approved projects for all ten of the Northern districts. Agriculture, aquaculture and food processing are a few of the existing and emerging sectors in which the NOHFC provides funding. It was announced in April of 2018, that the NOHFC was investing \$15.6 million in 27 agricultural projects in Northern Ontario. These investments include funding studies that will support the agricultural sector; land clearing and tile drainage; and agricultural facility expansion”(Northern Ontario Heritage Fund Corporation (NOHFC), 2018).

The **Northern Food Network (NFN)** is “co-hosted by the Arctic Institute of Community-Based Research (AICBR) and Food Secure Canada (FSC) as a space for people working in and interested in Northern food security to share, learn about best practices across the North and advance collective action on food security” (Arctic Institute of Community-based Research, 2018).

The **Northern Ontario Farm Innovation Alliance (NOFIA)** is a non-profit organization created “to develop strategies and partnerships to ensure the advancement of agricultural research and innovation in Northern Ontario.” NOFIA works to promote local food and agriculture in the north through research projects such as the Dairy Processing Strategy and by facilitating

events such as the Northeast Bites, and A Day in Farm Country. NOFIA also administers funding from the NOHFC for tile drainage and land clearing projects. NOFIA also received funding to create **farmnorth.com**, which is a website that hosts Northern Ontario agricultural information and research for all the Northern Ontario districts (Northern Ontario Farm Innovation Alliance, 2018).

BeefNorth is a Beef Farmers of Ontario initiative focused on cow herd expansion in Northern Ontario by creating affordable pathways “for beginning and existing farmers to establish economically viable farm businesses of scale that will be sustainable for decades.” The BeefNorth website provides information about beef farming in Northern Ontario including details about the different districts (Beef North - Beef Farmers of Ontario, 2018).

The **Starting a Farm in Northern Ontario Online Course** was developed by Beef Farmers of Ontario, College Boreal and the Ontario Ministry of Agriculture, Food and Rural Affairs. The course containing eight modules and is intended to take the user through the steps that require consideration prior to starting a farm in Northern Ontario. There are also a variety of additional resources to support the Starting a Farm in Northern Ontario Course (Ontario Ministry of Agriculture Food and Rural Affairs (OMAFRA), 2018b).

FedNor is the Government of Canada’s economic development organization for Northern Ontario. It supports a network of 24 Community Futures Development Corporations (CFDCs) in Northern Ontario. CFDCs are non-profit organizations that assist local businesses with financing, and financial and business planning. Through its Northern Ontario Development Program (NODP), FedNor invests in projects that foster community economic development, innovation, and business growth. To date, FedNor has invested \$235 million through 838 projects in various sectors in Northern Ontario (Government of Canada, 2018).

The **Rural Agri-Innovation Network (RAIN)** is a non-profit organization dedicated to building “a resilient farm and food sector in Northern Ontario through innovative research and agriculture development projects.” RAIN achieves its vision by providing support for farmers and food businesses while also collaborating with industry, government and communities to create initiatives that support farmers and agri-food businesses including micro-grants to farmers through the SNAPP program (Rural Agri-Innovation Network (RAIN), 2018).

The municipal toolkit, ***Facilitating the Agriculture and Local Food Sector in Northern Ontario*** is intended to help Northern Ontario municipalities improve agriculture and access to local food. The toolkit suggests 10 actions that Northern Ontario municipalities can implement to encourage Northern food production:

1. Develop an Agricultural Advisory Committee
2. Create an Agriculture and Agri-Food Sector Strategy
3. Map your Agricultural Assets
4. Create Policies that are Supportive of Agriculture and Agricultural-Related Activities
5. Build Agricultural Knowledge of Municipal Staff
6. Encourage Innovation with New and Established Farm Businesses
7. Encourage New Farmers
8. Build Partnerships with Other Municipalities
9. Invest in Local Infrastructure
10. Get to Know your Farm Organizations (Caldwell et al., 2018, p. 9)

In addition, the local food guide for municipalities (Association of Municipalities Ontario., 2013) and the Agri-Food Initiatives Ontario Directory (AFIO) (Ontario Federation of Agriculture, 2018) are also valuable resources.

Case Studies Addressing the Barriers for New and Existing Farmers in Other Rural Regions



Three case examples, the Kimberley Region in Western Australia, the Peace River Regional District British Columbia and the Squamish-Lillooet Regional District British Columbia illustrate how the activities of organizations in different jurisdictions with similar social, economic and geographic conditions can highlight recent developments and offer key lessons in promoting agricultural expansion in rural and remote regions (LBCG, 2018).

Kimberley Region in Western Australia

Similar to Northern Ontario, the Kimberley Region in northwestern Australia is seeing increases in diversity in the regional economy. More specifically, the region is capitalizing on opportunities in mining, construction, tourism, retail, agriculture, and rangelands. As with any regional economy, there are also some factors that hinder the growth and diversity of the area's economy. These include; housing, health and well-being, and education and training. The Kimberley Region is characterized as a remote and sparsely populated area in the northwestern region of Australia with an estimated residential population of about 39, 000. The Region experiences a sub-tropical climate and has distinct wet and dry seasons. The dry season occurs between May to October and the wet season occurs between November to April (Department of Primary Industries and Regional Development - Government of Western Australia, n.d.; Department of Regional Development - Government of Western Australia., 2014; Kimberley Development Commission, 2016).

The rangelands of Western Australia are divided into five regions, with the largest populations of cattle in the Kimberley and Pilbara Regions. The Kimberley Region is home to 93 pastoral stations (a large landholding used for the production of livestock) with an average station area of about 230 406 hectares. Although agriculture is not necessarily new to the Kimberley Region, the industry does have potential for future growth. The region has all of the key natural resources that are necessary in the development of a strong agricultural industry; climate, water and soil but the government has identified opportunities and areas in which to improve (Department of Primary Industries and Regional Development - Government of Western

Australia, n.d.; Department of Regional Development - Government of Western Australia., 2014; Kimberley Development Commission, 2016).

In 2010, the Kimberley Development Commission began working on the Kimberley Regional Investment Blueprint that aims to guide and promote regional development until 2016, and beyond. This blueprint recognizes a number of aspects that are unique to the Kimberley Region, which include its people, landscapes and heritage. The blueprint is grounded in three fundamental concepts that provide both logic and intent. These concepts include: the belief that many of the solutions to the region's most pressing social challenges are likely found in the development opportunities enjoyed by the region, regional governance will play an integral role in achieving the potential of the region, and that a clear strategy with a transparent purpose will play a vital role in delivering the best regional development outcomes. The blueprint draws on a wide range of supporting information from a variety of sources, which include planning documents, stakeholder engagement sessions as well as expert position papers and public comment on draft versions of the blueprint. Identified within the blueprint are six agendas that will contribute to the achievement of the regional development objectives within the blueprint. These agendas are: regional leadership and development readiness, enhancing the capability of the services sector, aboriginal advancement, industry and resources development, developing our regional centres and infrastructure for driving growth (Department of Primary Industries and Regional Development - Government of Western Australia, n.d.; Department of Regional Development - Government of Western Australia., 2014; Kimberley Development Commission, 2016).

The blueprint addresses a number of factors that have and are still shaping the regional economy today. Similar to many areas in Northern Ontario, the Kimberley Region is home to a large number of Indigenous people, who account for approximately 44% of the region's total population. In both Northern Ontario and in the Kimberley Region, the experiences and outcomes for Indigenous people are dramatically different from that of others. The blueprint brings attention to the socio-economic characteristics that are exhibited by many indigenous populations, which heavily impact public policy and service provision due to high demands on health, education, training and justice, community development and industry.

In response to the global demand for high quality food products, the blueprint addresses a number of challenges to the growth of the agricultural and rangeland industries. The blueprint distinguishes between the two industries because the rangelands industry is significantly larger than the rest of the region's agriculture sector. Furthermore, the term rangelands is used to describe a large and distinct land form in the region, which is leased under a specific and

narrow set of conditions. This plan highlights challenges in both sectors that are similar to the challenges faced by Northern Ontario while trying to strengthen and develop the region's livestock agriculture sector.

Some of these common challenges include:

- access to a reliable source of skilled labour within the region,
- limited funding available to invest in the land and water infrastructure needed to strengthen the region's potential,
- the constraints associated with natural resource and environmental management, climate change and access to transport,
- identification and protection of prime agricultural land,
- and the need to bring that prime agricultural land into sustainable production (Department of Primary Industries and Regional Development - Government of Western Australia, n.d.; Department of Regional Development - Government of Western Australia., 2014; Kimberley Development Commission, 2016).

The blueprint highlights a number of mitigation measures that enable the growth of the agricultural and rangeland industries. Similar to the challenges identified within the blueprint, many of these enablers may assist in the mitigation of challenges experienced in Northern Ontario.

Some of these enablers include:

- develop greater certainty in land availability and access to water resources;
- make careers in agriculture accessible by changing or improving land acquisition process to broaden the economic and social base of the agricultural industry;
- identify the need for future research where applicable – this may involve the creation of maps to identify current and future infrastructure needs, including water, transportation, energy, communications and processing;
- invest in and develop meat processing capacity;
- invest in sufficient road infrastructure;
- create partnerships with aboriginal groups who will support a reliable labour force.

Peace River Regional District British Columbia

The Peace River Regional District is located in North–East British Columbia, on the Prairie side of the Rocky Mountains. The regional boundaries contain approximately twelve million hectares

of land, 11% of which is within the Province's Agricultural Land Reserve (Don Cameron Associates, 2013). In 2013, the Peace River Regional District undertook the development of a Regional Agricultural Plan to be adopted by the Regional District Board (Peace River Regional District, 2017). The Regional Agricultural Plan was developed through consultation with the community and under the guidance of the Regional District's Agricultural Advisory Committee. Identified within the plan are guiding principles, priorities and directions, and key strategies and actions. Due to similarities in the economy, topography, climate and demography of Northern Ontario and the Peace River Regional District, many of the principles, priorities, and key strategies and actions could potentially be applied to the region in Northern Ontario along the Highway 11 Corridor.

Prior to the development of the Regional Agricultural Plan, a set of guiding principles were identified to provide guidance to the Regional District to both encourage and support agricultural activity. Developing a set of guiding principles prior to creating the plan itself, identified various components that the plan will contain, and also set the scope for the plan. Some of the guiding principles in the Peace River Regional District's Agricultural Plan that could be used to guide the development of a Regional Agricultural Strategy in Northern Ontario include:

- a vision for the future of agriculture in the area that will identify a permanent role for agriculture as an essential component of the physical, ecological, social, and economic well-being of Northern Ontario;
- identify changes in farm business management which could be implemented by farmers or farm organizations;
- identify strategies to enhance agriculture in the context of competition with other land uses such as oil and gas and forestry and mining;
- address current policy issues that may hinder the expansion and support of agriculture;
- identify best practices for farm business to enable the industry to flourish (Don Cameron Associates, 2013).

Through consultation with local stakeholders, meeting with the Agricultural Advisory Committee and a review of relevant documents and legislation, a draft vision that identified key strategies and action items was developed. The key strategies and action items identified were:

- the protection of agricultural land;
- providing appropriate infrastructure;
- encouraging progressive and sustainable farming practices;
- providing a welcoming business environment for those in agriculture (Don Cameron Associates, 2013).

Squamish-Lillooet Regional District British Columbia

The Squamish-Lillooet Regional District (SLRD) is located in southwestern British Columbia. The SLRD is a local government federation consisting of four-member municipalities and four unincorporated rural Electoral Areas. The total population for the SLRD is approximately 42, 665 (Statistics Canada, 2017c). In addition to being a significant part of the regional landscape and history, agriculture is a main economic driver in the SLRD. Due to the region's highly productive and available lands, the potential for further development in the region's agricultural sector is high (Squamish-Lillooet Regional District, 2014). The SLRD has developed Agricultural Area Plans (AAPs) for the Area B and Area C Electoral Areas. The purpose of these plans is to encourage the sustainable growth of the agricultural sector through policy documents that aim to guide the agriculture-related planning processes in these areas (Squamish-Lillooet Regional District, 2014).

The Agricultural Area Plans for Areas B and C have many similarities and some differences as well. Given that these areas are in the same regional jurisdiction, there are some common themes in the documents as well. Area B involved their local Indigenous population in the development of their AAP from the beginning stages through stakeholder engagement. The plan emphasizes the need for continued collaboration between these two groups. Similar to the Kimberley Region, the community is exploring opportunities for their Indigenous population to obtain jobs in the agricultural sector.

These case studies suggest that challenges in community economic development occur at both the regional and local levels. Regional Agricultural Plans similar to that of the Kimberley Regional Investment Blueprint or the Peace River Regional District in British Columbia aid in development, support and expansion of the agricultural industry at a macro level. The development of an Agricultural Area Plan similar to those in Electoral Areas B and C in the Squamish-Lillooet Regional District allow governments and municipalities to address challenges and priorities or goals and objectives at a local level.

<p>Economic - Transportation</p>	<p>farms, local food retailers and restaurants... These 38 businesses reported the creation of 148 full-time and 110 part-time jobs since receiving their FarmWorks loans"(BC Rural Centre/FarmWorks, 2017).</p> <p>Local Foods, Local Places</p> <p>This partnership among the Environmental Protection Agency (EPA), the US Department of Agriculture (USDA), the Department of Transportation (DOT), Centers for Disease Control and Prevention, Appalachian Regional Commission, and Delta Regional Authority helps create more livable places by promoting local food enterprises such as farmers' markets, food hubs, community gardens, and community kitchens on main streets in downtowns and existing neighborhoods (US EPA, n.d.-a).</p> <p>The Réseau National des Espaces Tests Agricoles (RENETA) "encourages new entrants to set up farms by allowing them to practice in an incubator setting and learn through trial and error. The program is especially targeted to newcomers with no family farming background, as they comprise 30% of new farmers under age 40 and the majority of those over age 40 (RENETA, 2014). The test activity consists of developing an agricultural activity in a responsible and autonomous manner on a real scale, for a limited time and within a framework that limits risk, in order to evaluate the project and oneself and to decide whether to pursue, adjust or abandon the project (RENETA, 2014). Participants benefit from a legal framework for the activity being tested, access to the necessary elements of production (land, equipment, buildings, working capital, related services, etc.) and a support and monitoring system (RENETA, 2012). This greatly reduces a new farmer's start-up risks, while allowing them to build a socio-professional network and receive assistance from experienced farmers with marketing and distribution (RENETA, 2012).. Working among other new farmers allows them to complement each other's production, trade services and mutual assistance, add value to their product through another's processing activity and share equipment and marketing channels (RENETA, 2014)" (Serkoukou, 2014, p. 16).</p>	<p>USA</p>	<p>https://www.epa.gov/smartgrow/th/local-foods-local-places</p>
<p>Economic - Extension & Knowledge Exchange</p>	<p>The Réseau National des Espaces Tests Agricoles (RENETA) "encourages new entrants to set up farms by allowing them to practice in an incubator setting and learn through trial and error. The program is especially targeted to newcomers with no family farming background, as they comprise 30% of new farmers under age 40 and the majority of those over age 40 (RENETA, 2014). The test activity consists of developing an agricultural activity in a responsible and autonomous manner on a real scale, for a limited time and within a framework that limits risk, in order to evaluate the project and oneself and to decide whether to pursue, adjust or abandon the project (RENETA, 2014). Participants benefit from a legal framework for the activity being tested, access to the necessary elements of production (land, equipment, buildings, working capital, related services, etc.) and a support and monitoring system (RENETA, 2012). This greatly reduces a new farmer's start-up risks, while allowing them to build a socio-professional network and receive assistance from experienced farmers with marketing and distribution (RENETA, 2012).. Working among other new farmers allows them to complement each other's production, trade services and mutual assistance, add value to their product through another's processing activity and share equipment and marketing channels (RENETA, 2014)" (Serkoukou, 2014, p. 16).</p>	<p>France</p>	<p>https://reneta.fr/</p>

	<p>CIVAM Bretagne The Centres d'Initiatives pour Valoriser l'Agriculture et le Milieu Rural (CIVAM)</p> <p>"CIVAM Bretagne developed in the 1990s to tackle six key themes: sustainable agriculture, local food systems, farm tours, concerted initiatives in rural areas, the creation and implementation of rural activities and energy (CIVAM Bretagne, 2005)." CIVAM offers many services for new and existing farmers, such as informal discussions on various agricultural topics (access to land, marketing, procedures, women in farming, small-scale farming), individual consulting in preparation for farm sale and accompaniment through the selling process, internships, networking for experienced farmers, and arranging mentoring for new farmers. CIVAM Bretagne also organizes open farms, farm markets, farms tours, farm visits and debates to involve local communities. De l'Idée au Projet is a CIVAM program specially tailored to new entrants from non-farming backgrounds, that accompanies new farmers through the start-up process. It consists of a ten to twelve-day training spanning over four to six months for groups of up to ten farmers (CIVAM, 2013). Every New Farmer Programs training is animated by one or two experienced farmers, who follow each intern's progress over time. In Bretagne, the project has accommodated 80 to 100 new farmers every year, for over five years (CIVAM, 2013). De l'Idée au Projet helps new farmers form a business plan by defining the values that guide their project, reflecting on their goals, determining the necessary skills and how to develop them, organizing a workload, knowing where to find land and learning about the territory in relation to their project's needs (CIVAM, 2013). It also develops business skills such as specifying a product offering and services to anticipate demand and estimate revenues, defining a marketing strategy, considering financing methods, legal status and being able to pitch their business concept (CIVAM, 2013)" (Serkoukou, 2014, p. 18).</p>	France	http://www.civam.org/index.php/e-reseau-civam/presentation
	<p>Projecte Gripia</p> <p>Projecte Gripia is a farming school for aspiring shepherds located three hours from Barcelona, in the Catalan Pyrenees. Since 2009, the goal of the project has been to ensure continued interest in mountain farming and ranching and</p>	Spain	https://projectegripia.wordpress.com/

<p>Economic - Extension & Knowledge Exchange</p>	<p>encourage the transition of farms from older to younger generations. The program targets young people from non-farming backgrounds in particular. It is committed to an agricultural model in favor of small-scale family or cooperative farms, direct sales from producers to consumers in the context of a local economy and the protection of the environment and natural resources (Projecte Gripia, 2013). Above all, the program promotes the normalization and dignity of the shepherding profession (Projecte Gripia, 2013). The curriculum emphasizes sustainable techniques and practices in order to preserve the mountainous region that is already threatened by climate change. The cost of the program is only €500 and food and accommodation are included (Projecte Gripia, 2013). The project gives students access to a land bank, consulting services, a job board and organizes youth education initiatives (Projecte Gripia, 2013). In recent years, 67% of graduates have gone on to carry out their own project (Projecte Gripia, 2013) (Serkoukou, 2014, p. 19).</p>		
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Barrier	Initiatives addressing this barrier	Location	More Info
<p>Social - Amenities and Services</p>	<p>Municipal or community-controlled internet Sandy, Oregon in the United States and Kaslo in the Kootenay region of British Columbia have brought high speed fibre optic connectivity to their rural towns by creating their own municipal (in Sandy's case), or community (in Kaslo's case) controlled internet service providers. (BC Rural Centre, 2017) The Cool & Connected pilot program has the United States Department of Agriculture (USDA) and Environmental Protection Agency (EPA) fund teams of experts to help members of selected communities develop strategies and an action plan for using planned or existing broadband service to promote smart, sustainable community development (US EPA, n.d.-b).</p>	<p>BC USA</p>	<p>https://www.bcruralcentre.org/focus/rural-technology/successful-community-broadband-initiatives/kaslo-internet/ https://www.ci.sandy.or.us/sandyne/ https://www.epa.gov/smartgrowth/cool-connected</p>

<p>Social - Amenities and Services</p>	<p>Youth</p> <p>"An increasing number of rural communities across North America have come to realize the potential importance of "an active cultural scene" in enticing Millennials to take up residency. Rosebud, Alberta, through its renowned theatre and the Rosebud School of the Arts, Sechelt, BC and its Sunshine Coast Festival of the Written Arts, Kaslo, BC and the Kaslo Jazz Festival, Burlington, Newfoundland and The Gathering, and Lanesboro, Minnesota and Lanesboro Arts are all examples of small, rural towns that have effectively used culture as a population attractant"(Andresen, 2009; BC Rural Centre, 2017).</p> <p>In the rural North Kootenay Lake region of British Columbia, Project Comeback focused on strengthening youth retention through their rural revival school project. "The Rural Revival School taught young people skills for utilizing energy, harvesting forest edibles, and preserving food and demonstrated how young people can successfully sustain their rural life. All of the workshops were developed to teach young people how to live in their rural community, save money, and be creative and resourceful at making a living in a rural area" (North Kootenay Lake Community Services Society, 2015).</p> <p>Women</p> <p>Gender is an important consideration since it affects the practices and aspirations of farmers and prospective farmers. (Connell, 2016) A growing number of well-educated, business-minded women are becoming farmers. (Best Health, 2015; Moyles, 2018) The study <i>Farm Women and Canadian Agriculture Policy</i> (Roppel et al., 2006) serves as a useful model for participatory process that better reflect women's contributions to agriculture and major role in agri-family household decisions. Organizations like Rural Women New Zealand (RWNZ) are considered an authoritative voice on rural health services, education, rural environment and social issues that aims to help their members develop leadership skills.</p>	<p>Alberta BC NFLD Minnesota</p>	<p>https://www.bcruralcentre.org/wp-content/uploads/2017/09/Attracting-Young-People-case-study.pdf</p> <p>http://www.nklcss.org/home/article/project-comeback</p> <p>https://www.ruralwomen.org.nz/about_us/index.html</p>
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<p>Social - Amenities and Services</p>	<p>Immigrants A number of rural communities have successfully welcomed immigrants. Manitoba has some of the highest rates of immigrants moving into rural communities and is frequently given as a positive example because of their settlement and integration continuum. Other promising practices to integrate newcomers include regional immigration partnerships that include municipal councils, employers and local service providers (Brandon University, n.d.; Lauzon et al., 2015).</p> <p>Indigenous People Yukon Indigenous Community Climate Change Champions (YIC4) is a two-year project that is focused on building the capacity of Yukon Indigenous youth, aged 18-30 years, to respond to complex issues related to climate change and its effects on food and water security. Youth receive training on climate change and leadership skills for gathering and mobilizing new and existing knowledge, from global, local and Indigenous perspectives (Food Secure Canada, 2018).</p> <p>Community-Based Looking at best practices in rural attraction and retention in other sectors such as rural health care providers in Australia, offers constructive ideas about how to develop at the community level and may have application to the attraction and retention of farmers. (Wakerman, Pashen, & Buykx, n.d.) Another very useful resource is the 2017 <i>Population Attraction and Retention Strategies for Rural Victorian Communities Report</i> which reviewed population attraction and retention strategies being undertaken in Australia, the USA, Canada and Scotland.</p> <p>Initiatives, such as those described below approach rural revitalization from a holistic perspective that encompasses health, education, business, etc.</p>	<p>Manitoba</p> <p>Yukon</p> <p>Australia</p>	<p>https://www.brandonu.ca/rdi/rural-immigrationrural-migration/</p> <p>https://www.aicbr.ca/yic4</p> <p>http://www.ruralcouncilsvictoria.org.au/wp-content/uploads/Population-Attraction-and-Retention-Strategies-FINAL-REPORT.pdf</p>
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	<p>Healthy Places for Healthy People</p> <p>This program helps communities create walkable, healthy, economically vibrant places by engaging with their health care facility partners such as community health centers (including Federally Qualified Health Centers), non-profit hospitals, and other health care facilities (US EPA, n.d.-b).</p> <p>Livable Communities in Appalachia</p> <p>The Livable Communities in Appalachia Program helps towns explore ways to integrate smart growth approaches to restore their downtowns and neighborhoods, making them healthy, walkable, and economically vibrant (US EPA, n.d.-b).</p> <p>Quebec</p> <p>As noted throughout, the rural agricultural economy in Quebec appears more developed than that of northeastern Ontario. Although regional development disparities remain in remote areas of Quebec, various economic indicators show that overall rural Quebecers incomes, unemployment levels and labour market participation levels are getting closer to urban Quebecers (Guimond & Jean, 2015). Likely a variety of interconnected social, economic and political conditions support this situation, therefore, a holistic examination of how the Clay Belt region in Quebec attracts and retains farmers would be worthwhile to help identify potential best practices.</p>	USA	https://www.epa.gov/smartgrowth/healthy-places-healthy-people https://www.epa.gov/smartgrowth/livable-communities-appalachia
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Barrier	Initiatives addressing this barrier	Location	More Info
Political Barriers	<p>Minnesota's tax credit bill</p> <p>Policy presents one of the most effect ways to help young farmers. (National Young Farmers Coalition (USA), 2018) For example, in 2017, the Minnesota's state legislature passed a new tax credit bill to incentivize the transition of farmland to beginning farmers setting a powerful precedent for other states to follow (National Young Farmers Coalition (USA), 2017).</p>	USA	https://www.cornucopia.org/2017/08/minnesota-offers-tax-credit-farmers-selling-land-beginning-farmers/

	<p>Farm Service Agency's (FSA) microloan program</p> <p>This program adapts an existing FSA loan program to a more appropriate scale. Its success shows that “reaching young farmers doesn’t always require creating new programs, but instead scaling down existing ones. Some of the biggest barriers revealed in our survey—unfamiliarity, burdensome paperwork, not enough time to apply—are also the most solvable” (National Young Farmers Coalition (USA), 2018).</p>	USA	<p>https://www.fsa.usda.gov/progr-ams-and-services/farm-loan-programs/microloans/index</p>
	<p>The Rural Education Enhancement Fund (REEF)</p> <p>This grant acknowledges the value of preserving schools in small rural communities and is designed to assist rural and remote schools in British Columbia that are not able to take advantage of the economies of scale available in larger population centres (“Rural Education Enhancement Fund (REEF) - Province of British Columbia,” n.d.).</p>	BC	<p>https://www2.gov.bc.ca/gov/content/education-training/administration/resource-management/k-12-funding-and-allocation/reef</p>
	<p>Canadian policy approaches to strengthening local sustainable food systems</p> <p>Four types of federal and provincial-territorial policy approaches to strengthening local sustainable food systems were identified by Food Secure Canada/FLEDGE:</p> <ol style="list-style-type: none"> 1. Promoting local food to consumers by stimulating demand and increasing local food presence and local food literacy. 2. Localizing public procurement by leveraging government procurement practices to strength local and sustainable food economies. For example, Newfoundland and Labrador’s current upgrades to its procurement policies to reflect factors beyond lowest cost such as health and social value (Newfoundland Labrador, 2018) demonstrate growing consideration of issues of distribution at the provincial policy level. 3. Emphasizing sustainable diets and particularly increasing plant-rich lifestyles (Mason & Lang, 2017; Tallman & Ruscigno, 2015). 4. Opening up access to regional markets by diversifying market opportunities for small and mid-sized business and differentiated products (Food Secure Canada, 2017b; Martorell, 2017a, 2017b). 	Canada	<p>https://foodsecurecanada.org/sites/foodsecurecanada.org/files/discussion_paper_canadian_policy_landscape_for_local_sustainable_food_systems_final2017.pdf</p>

Conclusion



This literature review identified issues related to farming in rural communities and also included a jurisdictional scan of policies and programs related to agriculture and youth retention, social issues and economic barriers across Canada, the United States and other developed nations with similar geographic challenges. This background information will help identify potential best practices which can be explored during the next stages of the *Understanding the Barriers to Livestock Production in the Clay Belt: An Economic, Social and Political Analysis* project.

First the great potential for agricultural growth in the Clay Belt region of northeastern Ontario was explored with an emphasis on the importance of local food systems. Next common barriers faced by new and existing farmers in rural and remote regions were presented. Economic barriers included challenges related to transportation, competition for labour, value of commodities, limited access to farm financing, limited agricultural infrastructure, suppliers, product handling, and other services, land access and limited extension, outreach, and knowledge transfer services and succession planning. Social barriers related to amenities and services and equity. Political barriers were created by policies at inappropriate scales. Environmental barriers concerned the need to be prepared for climate change. The interconnections between economic, social, political and environmental barriers were noted and the importance of perceptions was emphasised.

The jurisdictional scan began with a review of existing organizations that work with new and existing farmers in Northern Ontario to address barriers. Next, three brief case studies, the Kimberley Region in Western Australia and the Peace River and Squamish-Lillooet Regional Districts in British Columbia, were given to illustrate how barriers for new and existing farmers have been addressed in other rural regions. This was followed by a table describing a variety of other initiatives the Clay Belt might consider as it plans ways to support new and existing farmers.

In closing, while the focus of this literature review and jurisdictional scan was on barriers, it is important to recognize the perseverance, determination and resiliency of farmers in this geographically, socially and economically challenging area. Despite the barriers, Clay Belt farmers continue to work to improve agriculture and new farmers “continue to enter the sector

with an energetic entrepreneurial spirit, respect for the environment, innovative ideas and new ways of doing business.”(CYFF, n.d.) Understanding this resilience through interviews, surveys and workshops with farmers, Northern youth and other stakeholders during subsequent research stages will result in insights into the future of agriculture in Northern Ontario. Results will be used to identify and implement best practices to support the growth of agriculture and thriving rural communities in the Clay Belt.

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