

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

September 2019

Authors

Wayne Caldwell, PhD, RPP, MCIP

Sara Epp, PhD

Isabelle Chouinard-Roy, M.A.

Anthony Miron, B.A.A.

Gabriella Miron, B.A.A.

Acknowledgements

We would like to express our appreciation to everyone who contributed to this project, including the Community Advisory Board members.

Photo Credits

Photo on the cover page provided by Ferme GG Farm.

Table of Contents

Project Overview	1
Methods	3
Summary of Barriers	4
Economic Barriers	5
Social Barriers	8
Environmental Barriers.....	11
Solutions	13
Economic Solutions.....	14
Social Solutions	18
Environmental Solutions	21
Additional Research Resources.....	22
Agriculture in Northern Ontario: Ten Myths.....	22
Conclusion	25

Appendices

Appendix 1: Interview Grids

Appendix 2: Economic Barriers Identified by Research Participants

Appendix 3: Social Barriers Identified by Research Participants

Appendix 4: Environmental Barriers Identified by Research Participants

Appendix 5: Agriculture in Northern Ontario: Ten Myths

Appendix 6: Municipal Toolkit

Appendix 7: Provincial Toolkit

Appendix 8: Farmers' Toolkit

Appendix 9: Literature Review and Jurisdictional Scan

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.

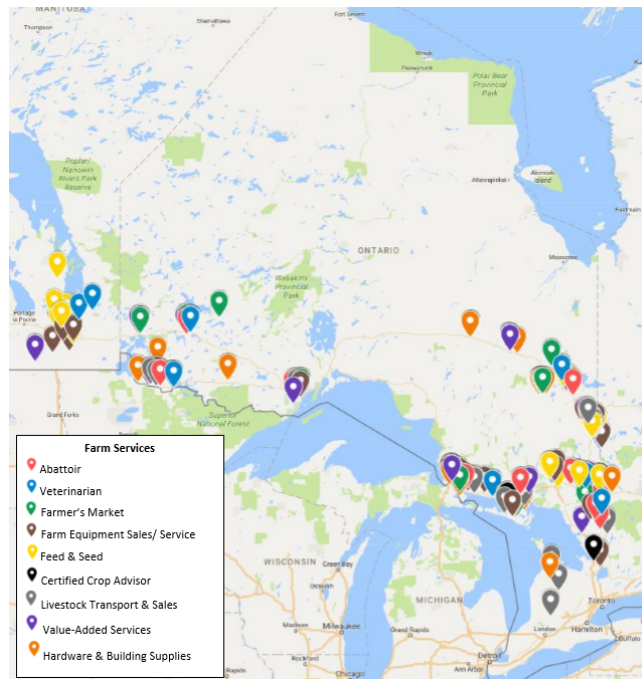


Figure 1: Location of agricultural services in northern Ontario (Caldwell, Epp and Howes, 2018)

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
Access to Land/Land Clearing	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.	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.
	Lots already containing farm infrastructure (barn, drainage tiles) should be identified and easily accessible to farmers wanting to establish themselves in the region.	
	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.	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.

Profitability	<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>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>Financial institutions should promote lower interest rates as well as their agriculture programs to farmers.</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>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>

Availability of Grants	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.	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.
	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.	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.
Labour	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.	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.

Access to Markets	<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>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>
Access to Services	<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
Lack of Mentorship	Older, well-established farmers could create partnerships with new farmers.	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.
	Agricultural studies, research and demonstrations should continue to be conducted in the region and made available to the population.	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.
	A database containing research related to agriculture in northern Ontario should be established.	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.

Low Youth Retention	Agriculture-related school activities and school visits to farms should be encouraged to expose young people to the farming lifestyle.	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.
	Farming courses should be offered in school as early as the first school year to expose young people to farming.	
Limited Opportunities for Youth	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.	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.

Lack of Farming Community	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.	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.
Sense of Community	Fresh local products should be promoted and sold in more local grocery stores and restaurants.	

Environmental Solutions

Barrier	Solution	Discussion
Climate	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.	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.
Soil Quality	Soil quality in the Clay Belt region needs to be promoted as a strength.	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.
Predators	Grants for perimeter fencing should be maintained and promoted.	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.
	Trappers should be trained to manage predators for farmers.	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.

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.