



SUPPORTING COW HERD EXPANSION IN ONTARIO

How can the beef sector grow using best management practices to support cow herd expansion on existing agricultural grasslands in Ontario?



**ARRELL
FOOD INSTITUTE**

AT THE UNIVERSITY of GUELPH



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Prepared for

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About the Research Project

The Arrell Food Institute's UNIV*6050 class is a highly competitive program run by Arrell Food Institute and supported by OMAFRA, Highly Qualified Personnel (HQP) and Food From Thought. It brings together 20-30 high-achieving Masters and PhD students studying food and agriculture from all disciplines at the University of Guelph. The unique program provides students with the opportunity to practice collaborating with non-academic partners and other students in the program from different disciplines, and to work on real-life, contemporary challenges facing various sectors.

As part of the project, a group of four students from the program in collaboration with Beef Farmers of Ontario (BFO) are gathering data to characterize grassland use in Ontario. Information collected through this survey will be utilized to understand the landscape of grassland use in the province and identify areas of potential expansion of grasslands.



FOOD FROM THOUGHT



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Executive Summary

In 2023, BFO partnered with the Arrell Food Institute Graduate Research Program to analyze possible solutions that could help maintain and spur expansion of Ontario's beef sector.

One solution that has been investigated is the value of agricultural grasslands and pasture systems, including the concept of community pastures, and how they play a pivotal role in providing stability to Ontario's cow herd, mitigating climate change, improving soil health and supporting environmental and economic sustainability.

This report explores the use of community pastures in surrounding provinces and within other countries to evaluate potential options for expansion in Ontario. Through the collection of survey data from 38 producers and from speaking with 7 community pastures in Ontario a summary of information was created. The consensus of data showed that community pastures could have a substantial influence in expanding cow herd numbers within Ontario. Approximately 68% of producers noted that expanded land access and shared lands would help them to expand their cow herd. Community pasture feedback showed that most of the community pastures interviewed require more land to keep up with local demand, and that government funding and assistance to buy more land would greatly assist their ability to expand.

Introduction

How can grasslands and community pastures contribute to maintaining cow-calf operations in Ontario and fulfilling expectations of the Canadian Beef Goals 2030?

Beef Farmers of Ontario (BFO) confronts a multitude of challenges, particularly in the context of environmental sustainability, climate change, and public perception of livestock production. Ontario's beef industry faces an immediate need to maintain sustainable practices, given the increasing examination of the environmental impact of agriculture. Climate change has disrupted weather patterns, leading to concerns about water scarcity, extreme weather events, and the suitability of pastures for livestock. Simultaneously, public perception of livestock production has become progressively influenced by sustainability concerns, compelling BFO to emphasize environmental benefits of beef cattle production in Canada and engage in transparent communication with the public. To face these challenges BFO and other organizations recently published the Canadian Beef Goals 2030 as a target for beef farmers and industry. The decline in cow herd numbers and grasslands further exacerbates these challenges, impacting the industry's ability to provide a consistent supply of high-quality beef while preserving valuable ecosystems. This last challenge will be the focus of this report. Overall, BFO must navigate these multifaceted issues to ensure a thriving, sustainable, and well-regarded beef industry in Ontario.

Identification of the Problem

In North America there has been a decline in beef cow numbers. Canada's herd declined by over 600,000 head over the past 13 years (Statistic Canada, 2023). Ontario makes no exception from the trend and lost 40,000 head from the provincial cowherd in the past 4 years (Statistic Canada, 2023). Recent declines to Canada's cow herd are, in part, due to periods of severe drought during the spring and summer over these past years (Saba, 2023). While beef cattle production relies on grassland systems, these grassland areas have been reduced by 80% since 1970's in Canada (Nature Conservancy of Canada, 2024). This trend is also observed in Ontario, where domestic grassland acres declined by 23% and the number of farms with hay or livestock retreated 31-43% between 1991 and 2011. In the same period the acres of annual crop expanded, corn, soybean, and wheat acres (the common annual crop rotation in Ontario) grew about 7, 47 and 63%, respectively. As a result, livestock consuming hay and grass-based forages have declined by 38% in Ontario between 1991 and 2011 (Corry, 2013). Declining grassland area in Ontario and throughout Canada is largely a result of the conversion of grasslands to annual cropping systems and encroachment from urban development (Pittman and Ayambire, 2022).

Therefore, BFO firmly believes that preserving grassland systems and best management practices will support Ontario's cow herd. For that they have recently finalized their Strategic Plan for 2023-2027, with one of the key pillars being Sector Growth. Some of the key objectives under this pillar include:

- Enable community pasture expansion, improvement, revitalization, and access for new entrants in collaboration with local community pasture associations,
- Help develop new community pastures in collaboration with conservation authorities, Indigenous communities and/or others, and
- Promote pasture development on private land, including farmland trusts and other mechanisms.



Methodology

In order to fulfill project objectives, the work for this project was divided into different phases. An anonymous online survey was first created using Qualtrix for producers to fill out and share their operation details as well as their experiences with utilizing pasture area. This survey aimed to understand grassland and pasture use in Ontario and how producers currently utilize grazing practices or plans moving forward. Community pasture managers or representatives were then interviewed to better understand the management of such associations. The potential of community pastures to offer support was also explored. A total of 38 producers answered this survey and a total of 7 out of the 11 community pastures under the Ontario Association of Community Pastures were interviewed. The following results are a synthesis of their response.

Producer Survey Results

A total of 38 producers coming from 26 different counties of Ontario responded to our online survey. Farms were operated by either one (14), two (11), or three or more (13) persons.

The diversity of our pool was reflected by the surface of acres cultivated by each farm as well as the number of head they possess. Overall, 21% of the producers have less than 100 acres, 55% on between 100 and 500 acres, and 24% on more than 500 acres (**Figure 1**). As for the herd size, 68% of the producers have less than 100 head of cattle, while 8% have 500 head or more (**Figure 2**). Most of them were cow-calf producers (22). The predominant breed was Angus (14), followed by Charolais and Simmental cattle (7).

Grazing System

The type of land used for grazing varies farm to farm, but permanent and non-permanent pasture are the two most common types of land used for cattle to graze on (**Figure 3**). Only three producers mentioned using a community pasture for their cattle.

Water supplied to cattle on pasture was typically outlined as water trough or valved waterers (well or solar powered from a natural source). Of the 38 producers surveyed, 31 were outlined as water trough or valved waterers, two were outlined as a dugout, and five were described as a natural source (creek, stream, pond, etc.).

Total surface (acres)

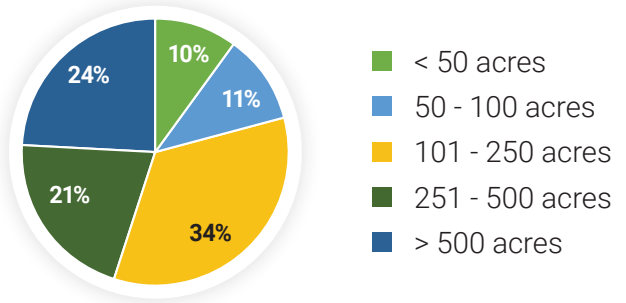


Figure 1: Total surface in acres of the farms of the producers surveyed

Herd size (number of head)

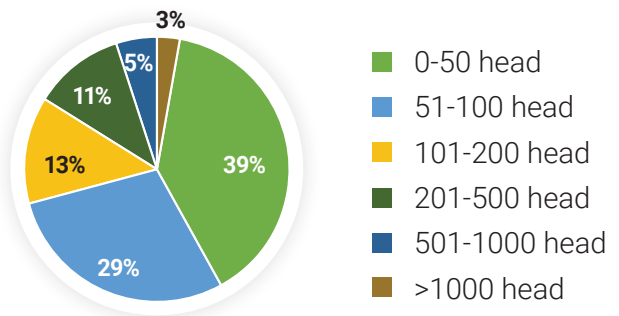


Figure 2: Producer responses for their herd size (number of head)

Types of grazing area used in the system

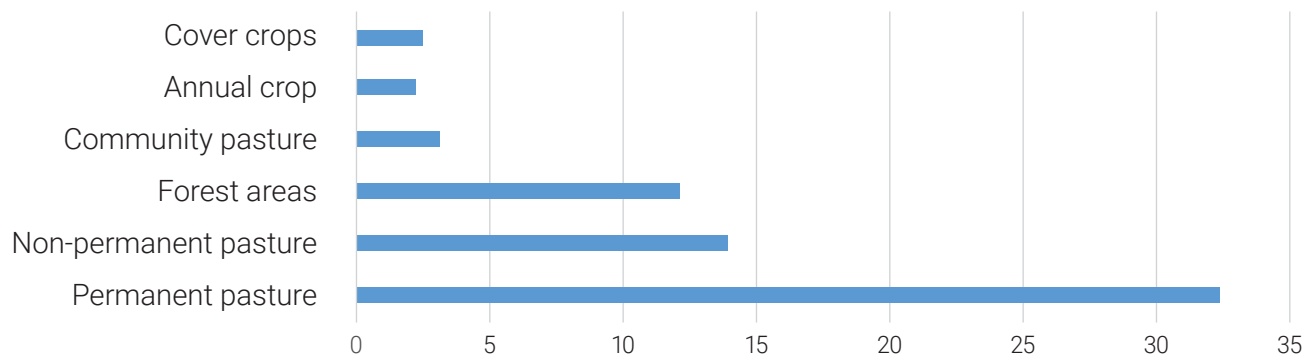


Figure 3: Type of grazing area used by the producers surveyed

Grazing Experiences and Pasture Area

From the survey results a strong relation was noted between the ability to expand cow herd based on access to additional grassland space. Approximately 68% of producers agreed or strongly agreed that access to more grassland would allow them to expand their cow herd size as shown in **Figure 4**.

Many producers also recognize the benefits of utilizing grassland for cattle and have recorded positive experiences with grazing. All producers surveyed rated their experiences with grazing 5 and above on a scale of 1-10, where 10 was described as a very good experience. The outline of all responses is shown in **Figure 5**, where the most common ratings were 8 and 10 out of 10.

In addition, an overwhelming 94% of producers saw the benefits of using grassland area for their cattle. As a result of the benefits of grazing that producers have seen for their cattle, many of the participants surveyed would be interested or are neutral to the idea of utilizing a community pasture if one was available to them, as shown in **Figure 6**.



I would be able to increase my herd size if I was able to use more grassland area

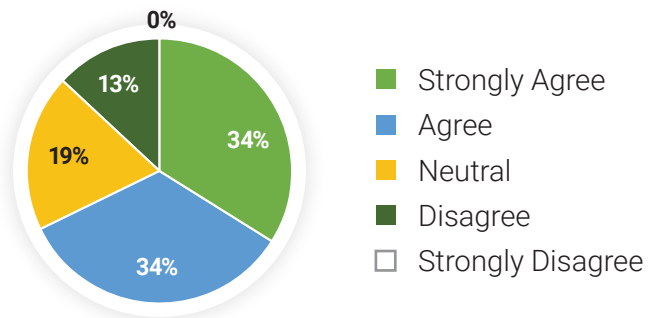


Figure 4: Survey responses on increasing herd size with access to more grassland

Rate your experience in using grazing from 1-10

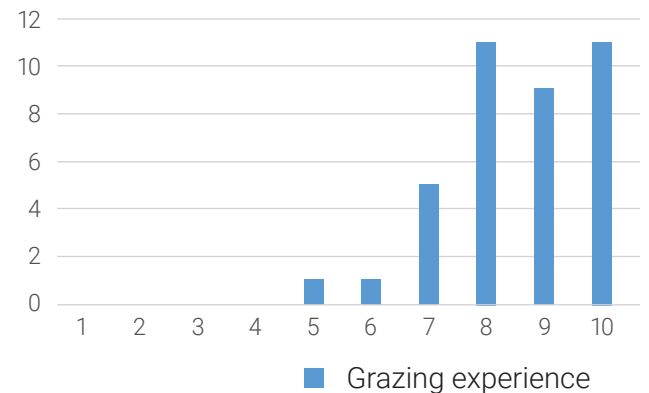


Figure 5: Survey responses on grazing experiences on a scale of 1-10 with 10 being a very good experience

I would be interested in using shared community pastureland if available

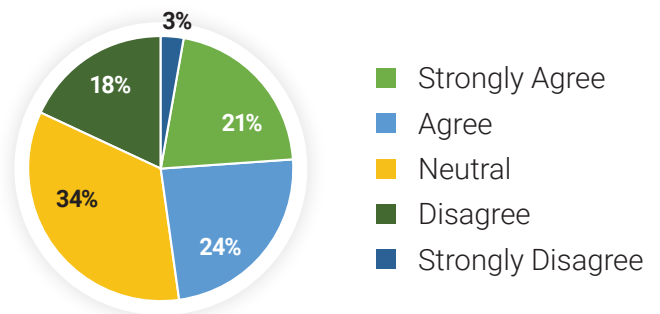


Figure 6: Interest of producers in a shared community pasture if available

Community Pastures

Data was also collected on current uses of community pastures and general perceptions on community pastures by producers.

Analysis shown in **Figure 7** indicated that 16% were already part of community pastures (grazing backgrounding cattle, bred heifers, cows and calves) with Leeds, Quinte, Grey Dufferin and Victoria community pastures while 84% of producers were not a member of a community pasture. Among these farmers who were not part of the community pastures, half of the farmers had no interest to join.

Furthermore, as shown in **Figure 8**, from those who had no interest, 32% expressed worry over the long distance and transportation to their closest community pasture. About 26% noted lack of information on community pastures. The other 16%, 11% and 5% indicated their worries on either health, safety, distance or a combination of them respectively.

About 50% of producers acknowledged the gain of cost-effective grazing, others highlighted equal percentages on better resource mobilization, co-mingling, health and security of the animals (see **Figure 9**). Despite the importance associated with the use of community pastures, farmers stressed the need for improved facility fencing, trespassing and predation control policies. Funding support through incentives, access to loans, or overdrafts, improved knowledge sharing and manpower, were vital components mentioned for proper maximization of a community pasture.

Association with Community Pastures (CP)

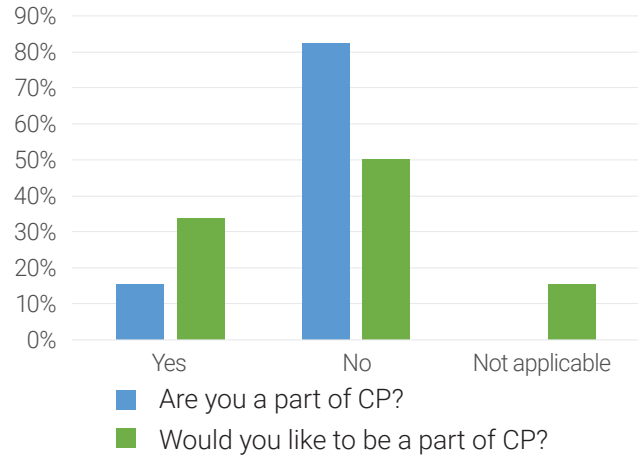


Figure 7: Collected data on the percentage of association with community pastures

Discouraging factors to join Community Pastures (CPs)

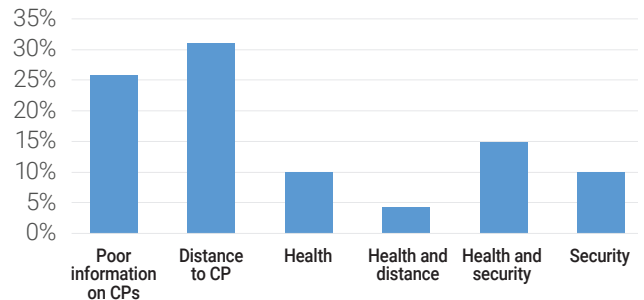


Figure 8: Collected data on the percentage of producers on discouraging factors to join community pastures

Importance of considering CPs

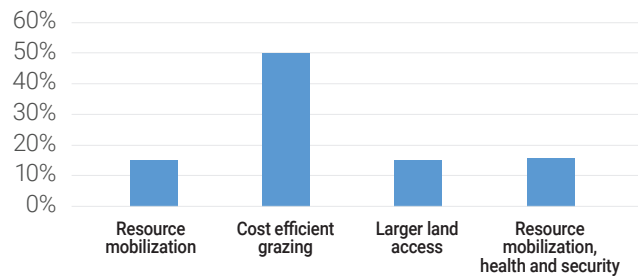


Figure 9: Collected data on the percentage of importance of considering the use of community pastures (CPs)

Community Pastures within Ontario

Within Ontario there are 11 functioning community pastures. To better understand how each community pasture functions, interviews were conducted with 7 out of the 11 members under the Ontario Association of Community Pastures (OACP). Each community pasture was asked a series of questions related to how the pasture operates economically, current usage or number of producers using the pasture, as well as thoughts on the future of community pastures.



Days on pasture ranged from 100 to 180 days from the seven (7) community pastures interviewed. The number of producers on each community pasture spanned from 5 to 50 farmers with differing management styles. Some of the pastures had a maximum number of head per producer in order to share space, while others had consistent members each year with more availability once a current member left the community pasture. The total number of head on each pasture ranged from 75 to 1050, with most

of the pastures running near their maximum capacity in the 2023 season. The economics of each community pasture also varied, with some pastures charging per animal unit for the season with others charging on a per day basis. The data from the interviews showed that most community pastures charge per animal for the season (per head or per cow-calf pair).



Overall, the interviews revealed that most community pastures are at full operating capacity, with at least two noting that they turn away applications from producers each year due to their capacity. With the capacity limitations, most community pastures only gain new members when a producer is choosing to leave the pasture. One community pasture noted that pasture productivity was a large issue, with large costs associated with reseeding and fertilizing the pasture, limiting the capacity of the pasture itself.

The interviews clarified the current state of community pastures in Ontario and how they operate. From the interviews it appears that many of the community pastures are at full capacity, with little room for growth without more land or more productive pastures.

Improvements of Community Pastures

Within the survey there was a set of questions to better understand how community pastures should be improved. One of such questions was how far they are willing to travel for a community pasture.

Most responses showed producers are willing to travel more than 45 km for a community pasture, with many producers willing to travel up to 100 km. In addition to distance, we asked what the ideal number of farmers would be using the community pasture, with the responses shown in **Figure 10**.

Around 63% of farmers agreed that the ideal number of farmers using a community pasture should be 1-5 for better management. When asked what kind of incentives would best allow producers to expand their cow herd, the response of the majority of farmers was government incentives and shared community pasture areas. Moreover, they specifically mentioned interest free fencing loans.

The majority of the farmers like community pastures as it could allow them to expand their herd without buying additional land. In addition to that, some of them are attracted by the potential for cost savings and the allowance of a higher number of cattle. Some of the concerns mentioned pertained to the transmission of diseases, the desire for better protocols and adherence to regulations across all the community pastures.

Producers currently using a community pasture provided their recommendations for improvement. The areas mentioned where a new community pasture may be helpful were in the area of Grey/Bruce, conservation land, Pickering airport lands, local county, southern Ontario, or any area with usable crown land.

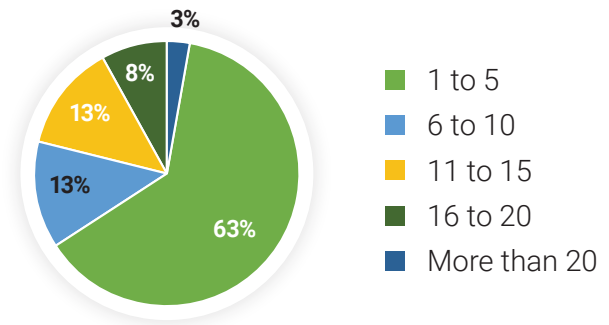


Figure 10: Data on the ideal number of farmers using the community pastures



General Information

To better understand the beef farming sector in Ontario we investigated how long these farmers have been managing their farms. The results showed that the majority of them have been running it for more than 30 years. The second prominent response was 11-20 years.

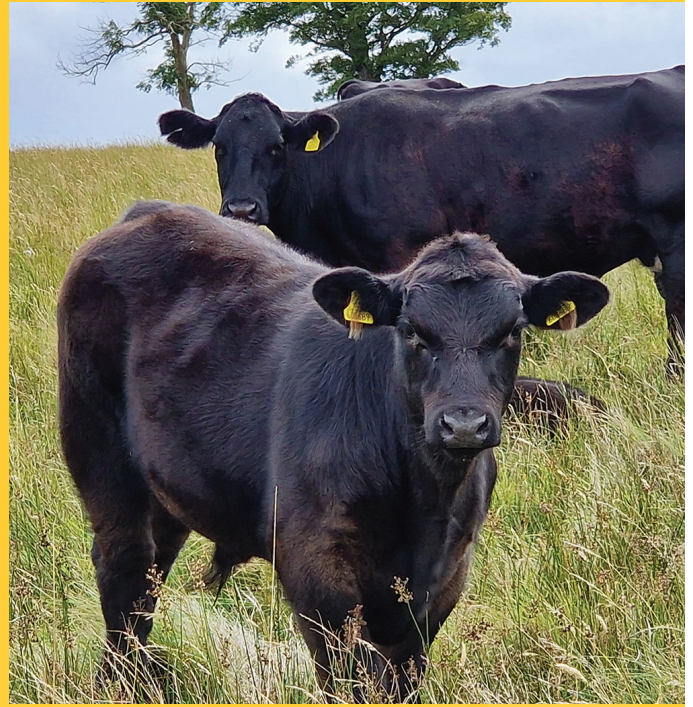
Most farmers fall in to 60-71 years old category and then 24-35 years old category. In terms of other activities most of the farmers have cash crops and pigs/swine in addition to beef cattle. Also, many of the producers surveyed are working a job that is off farm.

Conclusions

The comprehensive survey conducted among beef producers in Ontario provides valuable insights into the current landscape of beef farming practices, particularly focusing on farm systems, grazing systems, community pasture usage, and general information about the producers. The gathered data describe a wide diversity within the beef farming community, their practices, challenges, and aspirations.

The survey encompassed 38 producers from 26 different counties of Ontario. The majority of farms were operated by one or two individuals, indicating a significant reliance on small-scale operations within the industry. However, the scale of operations varied widely, with a broad range of acres and herd sizes observed among respondents.

The data also shed light on producers' attitudes towards pasture conservation and expansion. A notable majority expressed intentions to increase grassland area in the coming years, citing benefits such as improved cattle health, cost savings, and enhanced soil health. This indicates a positive outlook towards sustainable land stewardship and environmental conservation within the beef farming community.



address logistical barriers and enhance the viability of community pasture initiatives. Community pasture interviews also showed that most community pastures within Ontario are operating at near or maximum capacity, with little allowance for expansion. The need for more land or more productive pasture was a comment made by most of the seven community pastures interviewed.



Regarding community pasture usage, the survey revealed both opportunities and challenges. While a significant percentage of producers expressed interest in utilizing community pastures, concerns regarding distance, infrastructure, and disease transmission were also noted. This underscores the need for collaborative efforts to

Furthermore, the survey highlighted the importance of government incentives and support programs in facilitating herd expansion and sustainable land management practices. Producers expressed a preference for initiatives such as interest-free fencing loans and financial incentives for pasture conservation, indicating a willingness to engage with governmental support mechanisms to drive industry growth and sustainability.

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