Niagara Region

Grown in Niagara

→ Agriculture Economic Development Action Plan for the Niagara Region

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1.0 Introduction

Agriculture has long been a cornerstone of the Niagara region, being one of the largest employment sectors in the Region, a consistent leading sector in Regional GDP contribution, and a champion of environmental stewardship. With input from a diverse array of sector partners, ranging from operators to research institutes, the following Grown in Niagara Agriculture Action Plan ("the Plan") has been developed to set out a bold vision for the future of this vital sector. Through a comprehensive industry analysis and extensive engagement, five key Success Factors that will guide efforts over the next five years have been developed. This Plan is a roadmap for actionable initiatives that will drive the Region's agriculture sector forward in a unified, coordinated, and impactful way. With a focus on innovation, collaboration, and sustainability, this Plan will help to ensure a bright and prosperous future for all agriculture and agri-related businesses in the Niagara region.

At the heart of the Plan is a commitment to strengthening the connections between all members of the agriculture community. While the agriculture sector has a history of sub-sectors working together to pursue specific goals, it is recognized that future success for all in this sector relies on a collaborative approach, one that brings together the diverse perspectives and experiences of operators, researchers, policymakers, and consumers. By working together, we can harness the potential of new technologies and practices, explore new market opportunities, and address the complex challenges currently facing the sector. As the Region and partners move forward with the implementation of this Plan, communication, inclusivity, and community-building will continue to be prioritized knowing that these values are essential to achieving the shared vision for a thriving and sustainable agriculture sector in the Region.

2.0 Executive Summary

The Grown in Niagara Agriculture Action Plan is a comprehensive blueprint for the future of agriculture in the region. Developed with input from a range of sector partners, including operators, municipal leaders, research institutes, marketing boards/associations, and other organizations, the Plan sets out five key Success Factors that organizes our work over the next five years.

The five Success Factors of the Plan are:

1. Building a Unified Identity for Agriculture in Niagara
2. Working Together to Reduce Red Tape
3. Protecting Agriculture Talent and Inspiring the Next Generation
4. Attracting High Value Agri-Based Investment
5. Proactively Embracing a Changing Climate

Under each of these Success Factors, actions have been developed that are realistic to achieve and will drive progress in the agriculture sector. These include strengthening relationships between partners, attracting new market opportunities, promoting sustainable practices, supporting innovation and technology adoption, and enhancing the Region's competitiveness across Ontario, Canadian, and other countries in the global marketplace.

Central to the success of this Plan is a commitment to collaboration and inclusivity. For this reason, the Plan was developed with extensive engagement from the agriculture community. By working together, the region's agriculture sector can overcome challenges, seize new opportunities, and can continue to be a primary economic driver for the Region.

Also highlighted is insight into the current state of the agriculture landscape in the region. Through a comprehensive industry analysis, key challenges and opportunities facing the sector in Niagara were identified. This information was then used to inform consultations and ultimately to inform the development of the Plan. Lastly, this document provides an overview of the strategic planning process that has led to the development of the Plan and its Success Factors.

Over the next five years, the Niagara Region, along with its partners, will spearhead the implementation of the Plan to ensure the agriculture sector in Niagara region continues to be thriving and sustainable, while providing the supports necessary to structure growth effectively. This Plan will build on the Region's strengths, capitalize on the opportunities at our fingertips, and ensure that the agriculture sector remains a vital part of the Region's economy and community for years to come.

3.0 Action Planning Process

To develop the Strategic Framework and Action Plan, a variety of research and engagement activities were conducted. Figure 1 below illustrates the approach used for this engagement:

Figure 1: Project Methodology

As illustrated above, the approach included:

- **Reviewed data and documents** to develop a thorough understanding of the Region's operating environment. Documents and sources that informed the Industry Analysis include most recent Statistics Canada Agriculture Census, the Niagara Agriculture Profile, the Niagara Official Plan and the 10-Year Niagara Region Economic Development Strategy.
- **Engaged community partners** to obtain input on the strengths, challenges, gaps and constraints of agriculture in the Region. Perspectives were gathered from a wide range of sources including Local Area Municipalities (LAMs), industry organizations, marketing boards, farm owners/operators, research insitutions and community organizations.
- **Facilitated strategic direction workshops** with the Niagara Economic Development team and other key partners to identify the Strategic Framework and corresponding actions.

4.0 Strategic Framework

In 2022, a 10-year Economic Development Strategy for Niagara Region was ratified after a year long development in collaboration with municipal economic development professionals across the Region. The Strategy sets clear goals and strategies to build the Region, and outlines a Vision for the Region:

Niagara is where innovative businesses grow and community-minded individuals stay – coming together to build a more prosperous future.

This Vision continues to be at the heart of everything Niagara Region does and is the broader Vision to which all of this Plan's activities will align. The story of the Grown in Niagara Agriculture Plan begins with a determination to achieve a shared vision for the region's agriculture sector. The core items identified include creating a shared understanding of what constitutes "agriculture" from a core, adjacent, and supporting perspective, building a shared identity among community partners, and leveraging natural assets to gain a competitive edge.

The overarching goal of the plan is to structure activities and raise the profile of the sector as a whole, rather than focusing on individual sub-sectors. The agriculture sector and the Region both recognize that now is the opportunity to enhance our leadership status in the agriculture sector for Ontario, Canada, and internationally.

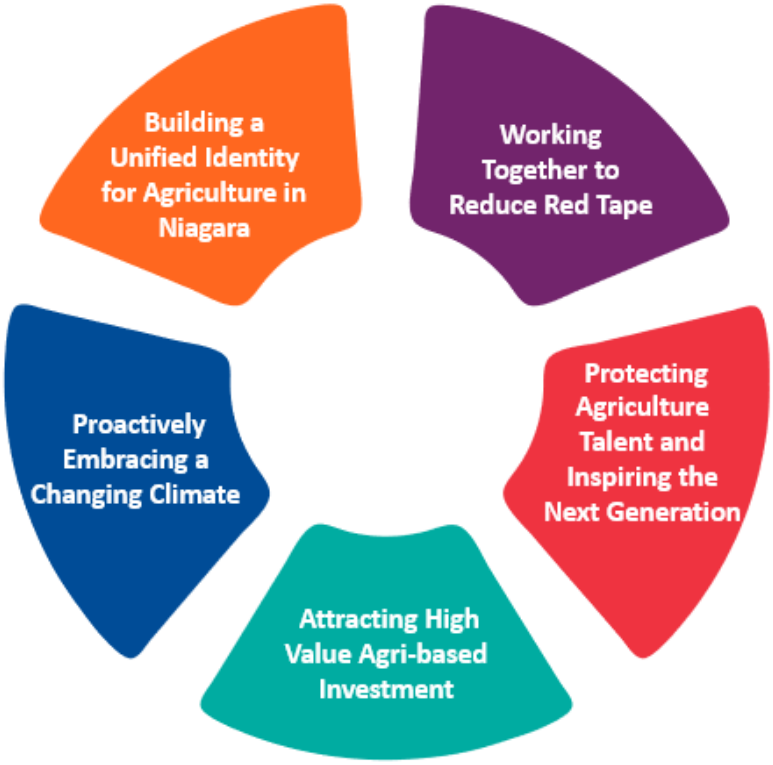
With this vision and these goals identified early on, the Region engaged partners from across the agriculture sector to gain a better sense of information such as:

- What is the mission we should achieve as a Region?
- What should we focus on to achieve this?
- How are we going to achieve our vision? What actions will we prioritize?
- How do we stay on track as a Region? How do we know if we've achieved our goals?

In collaboration with the Region, it was determined that a key objective of this Action Plan is to create a shared understanding of the various components of the agriculture sector and demonstrate the value of the sector to the overall Niagara economy and broader story of the region. This includes recognizing the core, adjacent, and supporting businesses that make up the broader ecosystem. Furthermore, community partners recognized the importance of building a shared identity for the sector and leveraging the Region's natural assets to establish a competitive edge. It was also agreed that a comprehensive plan needs to promote the sector as a whole, rather than focusing on specific sub-sectors. The overall goal is to enhance the vibrancy and resilience of the agriculture sector in the Niagara region, while also fostering collaboration and innovation among partners.

The Strategic Framework is broken down into two components – the Mission, which communicates the purpose and primary objectives of the Plan, and the Success Factors, that help form the strategic objectives.

Mission: Unifying Niagara region's agriculture sector to jointly capitalize on opportunities, address challenges, and drive the sector into the future.



The mission statement was crafted to complement the overall vision and goals for the future of the Region. The mission focuses on bringing the sector together, challenging engrained ways of thinking that focused on the needs of sub-sectors compared to the needs of the broader sector. It is designed to act as our guiding light – through this mission we can always remind ourselves what we want to achieve, and we can actively determine if the activities undertaken align with our goal.

The Plan is structured around five Success Factors that support the overall mission:

1. **Building a Unified Identity for Agriculture in Niagara:** aims to create a shared understanding of what constitutes "agriculture" from a core, adjacent, and supporting perspective, and to build a shared identity among community partners.
2. **Working Together to Reduce Red Tape:** aims to streamline regulations and reduce barriers to entry and expansion in the agriculture sector.
3. **Protecting Agriculture Talent and Inspiring the Next Generation:** focuses on protecting and developing a skilled and diverse workforce in the sector.
4. **Attracting High Value Agri-Based Investment:** aims to attract new investment and promote innovation in the sector.

5. **Proactively Embracing a Changing Climate:** seeks to address the impacts of climate change on the agriculture sector and promote sustainability through adoption of emerging technologies.

Together, these Success Factors form a comprehensive approach to promoting the growth and development of the agriculture sector in the Niagara region, and to ensuring the long-term prosperity of the Region.

To ensure the Region can achieve the goals of the Success Factors, the Plan includes specific initiatives that will be implemented over the five-year period. These initiatives were developed in consultation with many community partners. By engaging with community partners in the development of these initiatives, the Plan seeks to ensure that they are practical, achievable, and aligned with the needs and priorities of the sector.

The development of the Strategic Framework reflects a comprehensive and evidence-based approach to driving economic growth and fostering sustainable development in the agriculture sector.

5.0 Current Landscape

5.1 Introduction

The Niagara region has a rich agricultural heritage, with a diverse range of crops and products produced throughout the area, including wine grapes, tender fruits, greenhouses, poultry, cash crops, oilseeds and other grains, and other forms of agriculture. The region's agricultural foundation is built on a range of components including physical assets, transportation infrastructure, local institutions, and the labour force.

The Niagara region's land base is a key asset for the agricultural sector, with over 8,000 hectares of prime agricultural land. This land is supported by a range of soil types and microclimates, providing opportunities for farmers to grow a diverse range of crops. The Region's location also provides access to both the Great Lakes, the Niagara River, the Welland Canal, and major transportation networks, making it easy for local producers to transport their products to markets across the province and beyond.

Farmers in the region include a wide range of multi-generational family farms, larger-scale industrial farms, and new entrants who bring fresh ideas and innovation into the sector. The Niagara region has a strong network of local institutions, including research organizations, educational institutions, and industry associations, that provide resources, expertise, and networking opportunities critical to the success of the agriculture industry. These institutions work together with local farmers to find new ways to solve longstanding problems that ensure the sector remains competitive and sustainable for years to come. To better understand the current state of agriculture in the Niagara region and identify opportunities for growth and development, a Strengths, Weaknesses, Opportunities, and Threats (SWOT) analysis was conducted. This SWOT was used as a basis to understand where the Plan should focus.

5.2 Strengths, Weaknesses, Opportunities, and Threats

As part of the process to develop the Grown in Niagara Agriculture Plan for the Region, a SWOT (Strengths, Weaknesses, Opportunities, and Threats) analysis was conducted. This analysis provides an overview of the current state of the agriculture sector in the Region and identifies key areas of focus for the development of the Plan.

Table 1: SWOT Summary

Strengths	• Natural Assets • Engaged Sector • Value Chains in Place • Name Recognition
Weaknesses	• Irrigation Continues to be a Challenge • Lack of Cohesion Creating Red Tape • Fragmented Sector • Recognition of Sector Impact is Low
Opportunities	• Embrace agriculture as a premier economic driver • Acknowledging Agri-Tourism as an opportunity for increased investment • Climate change can create unique opportunities for the Region • Consumer trends align with government priorities
Threats	• Other jurisdictions have strategic and action plans in place • Population Growth Targets • Labour Force • Lack of Broadband Connectivity

5.2.1 Strengths

- **Natural Assets:** the region boasts over 8,000 hectares of prime agricultural land with diverse soil types and microclimates, as well as multiple fresh water sources, creating optimal conditions and an impossible to be replicated microclimate that enables growing.
- **Engaged Sector:** the region has a strong and engaged agriculture sector with a wide range of operators, industry associations, research organizations, and educational institutions interested in driving the work forward, together.
- **Value Chains in Place:** the region has multiple value chains in place that drive the various sub-sectors forward by connecting producers with processors, distributors, and retailers, creating strong and integrated supply chains.
- **Name Recognition:** Niagara is a name known around the world and has leveraged this to create a reputation for quality agricultural products that has resulted in strong name recognition and a loyal customer base, both domestically and internationally.

5.2.2 Weaknesses

- **Irrigation Continues to be a Challenge:** despite being situated between two Great Lakes, the Niagara River, and the Welland Canal, there is limited access to irrigation systems, negatively impacting operators across the region. However, it is recognized that this is something the Region and governments are working on addressing.

- **Lack of Cohesion Creating Red Tape:** multiple municipal bodies, as well as other provincial and federal groups all impose their own requirements on operators within the region, which results in confusion about what activities are required and for what purposes, creates long timelines for resolution, and unnecessary obstacles for those looking to expand their operations.
- **Fragmented Sector:** the agriculture sector has a history of working within its own silos to address challenges specific to each sub-sector, which has negatively impacted the broader sector's ability to coordinate and drive broader, systematic change.
- **Recognition of Sector Impact is Low:** despite the fact that agriculture is 64% of the land-base and the tremendous impact it has on the Regional GDP, the full extent of the impact and importance of the agriculture sector in the region is not widely recognized, and agriculture may not always be prioritized by various bodies.

5.2.3 Opportunities

- **Embrace agriculture as a premier economic driver:** the creation of this Action Plan creates the opportunity to refocus the Region's, province's, and country's leadership to the impacts that agriculture has for the Region and beyond.
- **Enabling Agri-tourism a Priority:** ensuring that those bodies already involved in the creation and expansion of agri-tourism and on farm diversified usage are empowered to do more, without unnecessary hurdles or red tape.
- **Climate change can create unique opportunities for the region:** the region's natural assets will mean that while other growing regions in Canada and internationally are increasingly affected by extreme weather events, the Niagara's climate will change over time in a more gradual, less extreme manner, creating an opportunity for Niagara Region to gain market share from other competitor regions.
- **Consumer trends align with government priorities:** consumers are increasingly interested in where their food comes from, understanding supply chains, and supporting local businesses, all of which are areas of focus for provincial and federal governments as industries emerge from the COVID pandemic. The Region and the agriculture sector can leverage this to gain government investment in the operations of the Region, and to highlight the great work undertaken by local operators.

5.2.4 Threats

- **Other jurisdictions have plans in place:** while Niagara Region is now adding greater precision to the activities and growth of the agriculture sector, other jurisdictions in the province, country, and internationally have had plans and strategies in place for a longer period of time, forcing Niagara Region to play catch-up before it can overtake its competitors.
- **Population Growth Targets and Bill 23:** driven by federal immigration policies and provincial housing policies, there is increasing pressure on the Region to increase its housing stock, which is often seen as a direct blow to the ability to maximize the use of agricultural lands. This situation is further exacerbated by the unknown impacts of Bill 23 and how it will change the Region's land planning activities.

- **Labour Force:** the average age of an operator in the region is over 57 years old, and the majority of farms do not have formal succession plans, with younger generations not taking over family farms. This creates a unique challenge in retaining the base of the entrepreneurs and operators in the region, and in the retainment of a skilled labour force for the future.
- **Lack of Broadband Connectivity:** while the region has seen improvement through the provincial SWIFT Program, municipalities in the region continue to have poor access to high-speed and reliable broadband connectivity, which negatively impacts the uptake of technology adoption in the region.

5.3 Infrastructure and Assets

The Infrastructure and Assets review focused on understanding the Region's systems and structures that could support future growth. The review consisted of analyzing four sub-components:

1. Physical and Digital Infrastructure
2. Land Assets
3. Local Institutions
4. Labour Force

5.3.1 Physical and Digital Infrastructure

Transportation is a crucial component of the agriculture sector in the Niagara region, connecting local producers with markets across the province and beyond. The region benefits from a range of transportation infrastructure, including highways, rail lines, airports, and ports that can connect local products to markets across two provinces and nine states within 24 hours of travel. In addition, the region is home to the Welland Canal, which provides access to the Great Lakes and St. Lawrence Seaway, opening up markets across North America and beyond. Despite these options, the Region continues to try to work with other partners to identify ways to reduce long travel times between Niagara region and Toronto, as highways are often crowded and move slowly at peak times.

As discussed in the SWOT above, the Region continues to improve its Broadband connectivity, and there have been ongoing efforts to gain provincial and federal support to build a Regional irrigation system. This is a known, longstanding challenge that is being addressed, and will be addressed through this Action Plan.

The region sees approximately 13 million visitors a year, primarily driven by Niagara Falls. There is an opportunity to build on this existing tourism success to enhance the agri-sector. Building on this tourism brand and combining it with the local wineries, farms, and other agriculture businesses creates massive opportunity to further increase the economic impact of the agriculture sector on the local and provincial GDP.

5.3.2 Land Assets

As noted above, 64% of the region's land base is agriculture in nature, with over 8,000 hectares of prime agriculture land. Included in the region is a large swath of the Greenbelt, which ensures that the land is protected from residential or commercial development and creates excellent opportunities to maximize this land for agricultural purposes. The Niagara Peninsula Conservation Authority (NPCA) also protects a large portion of the region's land, particularly the watershed land base close to the Niagara Peninsula. While the protection of this land is important and does support agricultural activities, it can create some confusion and challenges for operators as they navigate multiple oversight bodies.

5.3.3 Local Institutions

Local institutions play an important role in supporting the agriculture sector in the Niagara region. These institutions include research organizations, educational institutions, and industry associations. While each has their own unique areas of focus, they all provide critical resources, expertise, and networking opportunities that are critical to the success of the agriculture sector. Post-secondary and research institutions regularly partner directly with industry to develop creative solutions to longstanding challenges, developing new technologies and supporting operators in a collaborative manner. Other groups, such as non-governmental organizations (NGOs) and other associations, provide valuable research that can help individual operators, or can provide macro views into future realities, such as a changing climate.

The success of the agriculture sector in region and its progress depends on the vital breadth, depth, and relationships that local institutions have with the industry in the area. There are opportunities to further cement and strengthen these relationships, and all bodies will need to work together for this Action Plan to be successful.

5.3.4 Labour Force

The agriculture sector is powered by the talented and skilled individuals who work in, are adjacent to, or support the sector. Within the region, agriculture and agri-related industries provide thousands of jobs, acting as a significant employer and driver for economic growth. The industry is powered by individual entrepreneurs, those who want to have careers in the industry, other skilled professions that drive businesses forward (e.g., accountants), and temporary foreign workers who are the primary base of on-farm workers.

The sector faces challenges in attracting and retaining skilled workers, particularly in areas such as farm management, agricultural technology, and value-added processing. A lack of succession planning related to an aging labour force is a quiet crisis that will impact the long-term activities and success of the sector moving forward also creating future challenges.

These four areas, in addition to the SWOT, served as a base of information to drive the development of the Action Plan.

5.4 Niagara's Agriculture Sector and the Opportunity to Promote Food Security

5.4.1 Food Insecurity in Niagara and How the Agriculture Sector Can Help

In Niagara, food insecurity is a significant issue affecting almost 75,000 or just over 15% of Niagara's 484,840 residents. Food insecurity is the opposite of food security, defined broadly as "the condition when all people, at all times, have physical and economic access to sufficient, safe, and nutritious food to meet their dietary needs for an active and healthy life."[1]

In recent years, food bank usage has surged, with Niagara-on-the-Lake seeing a 118% increase from 2021 to 2023, St. Catharines and Thorold an 82% increase, and Niagara Falls a 65% increase.[2] Over 40% of the recipients of food from food banks are children, who face increased risks of hyperactivity, inattention, lower academic performance, and mental health issues due to inadequate nutrition and increased stress during critical stages of their growth and development.[3] There has also been a dramatic rise in employed individuals accessing food banks for the first time, driven by stagnant wages and rising living costs.[4]

Niagara's agriculture sector has a role to play in promoting food security. As outlined in the research report in Appendix B – Research Report: Opportunities for Niagara's Agriculture to Promote Food Security in the Region, a robust local agriculture sector can positively impact food security, but its success in doing so relies on the implementation of supportive policies and practices that promote sustainability and resilience.

5.4.2 Present Challenges in Linking the Agriculture Sector and Improved Food Security

Based on published literature on the topic and engaging with experts in both the agriculture and social services sectors, it is evident that significant structural gaps and challenges must be addressed to establish a more direct relationship between the agri-food sector and improved food security for the Region's residents. Specifically, within the Region, there are three major challenges that must be overcome to foster progress toward a more causal relationship:

- **A lack of communication and networking.** The Region has a relatively fractured agricultural sector, with divides among and between agriculture sub-sectors. There is also

[1] Food and Agriculture Organization of the United Nations. (1996). *Rome Declaration on World Food Security and World Food Summit Plan of Action.* [online]. Available from: https://www.fao.org/4/w3548e/w3548e00.htm [Accessed 26 September 2024].
[2] Niagara Community Observatory. (2024). *Sustaining food security in Niagara (Policy brief No. 58)* [pdf]. Brock University. Available from: https://brocku.ca/niagara-community-observatory/wp-content/uploads/sites/117/NCO-Policy-Brief-58-Sustaining-Food-Security-in-Niagara-April-2024-FINAL.pdf [Accessed 26 September 2024].
[3] Davis, B., & Tarasuk, V. (2014). Food insecurity and mental health: A review of the literature. *Current Psychiatry Reports*, 16(12), 1-10. https://doi.org/10.1007/s11920-014-0510-3 [Accessed 26 September 2024].
[4] Niagara Community Observatory. (2024). *Sustaining food security in Niagara (Policy brief No. 58)* [pdf]. Brock University. Available from: https://brocku.ca/niagara-community-observatory/wp-content/uploads/sites/117/NCO-Policy-Brief-58-Sustaining-Food-Security-in-Niagara-April-2024-FINAL.pdf [Accessed 26 September 2024].

no formal group that links producers and others in the agri-food value chain to individuals, social enterprises, for profit businesses, and food banks who aim to distribute excess or unsold products to those in need. This results in a situation where any excess product that may exist is not used to its fullest potential, as it is unknown who could use the food product for a greater good.

- **A lack of broader value chain infrastructure.** The agri-food value chain is an area of focus for the Region and its Local Area Municipalities. In this context, the lack of infrastructure, specifically transportation and warehousing, creates a second unique challenge of how excess food product could be moved from a producer to a venue for the local population to access, including the full journey in between.
- **A lack of accessibility.** The Region is a relatively large land mass, with many locations that are virtually inaccessible without private transportation. The physical location of where nutritious, culturally appropriate, and low-cost foods exists for those who need it is a critical factor to consider. Two additional sub-considerations exist as well: how accessible the physical location is via public transportation/walking and the cost of the product. If products are in remote locations with no transportation options servicing these, and cost roughly as much as a major grocer, then, for all intents and purposes, there is no local product to be enjoyed by those in need.

That said, there are several opportunities to improve on these challenges by improving networks, further developing partnerships, encouraging business participation, and the potential to work with transit authorities that are woven into the Action Plan that follows under Success Factor 1: Building a Unified Identity for Agriculture in Niagara. Improving food security is also a part of that unified identity.

6.0 Building the Action Plan

The Grown in Niagara Agriculture Action Plan is a comprehensive roadmap for the development of the region's agriculture sector over the next five years. The Plan is structured around five key Success Factors, each with a detailed description and expected outcomes. To achieve these outcomes, the Plan outlines a series of strategic initiatives, which are bigger, multifaceted objectives that are then broken down into tactical activities to be carried out over the course of the next five years. The Plan identifies specific facilitators and partners for each initiative, ensuring accountability and collaboration across the region's agriculture community. By leveraging the strengths of the region and addressing key challenges facing the sector, the Plan aims to promote innovation, sustainability, and competitiveness in the Niagara Region's agriculture sector.

The Plan breaks down initiatives into three timeframes: Years 1 and 2, Years 3 and 4, and Years 5+. This approach ensures that initiatives are prioritized based on their potential impact, feasibility, and resource requirements. Also included are expected outcomes for each of the initiatives, allowing for progress tracking and accountability towards achieving the overall goals of the Plan. These are complemented by broader performance measures for the Success Factor as a whole. By taking this structured and strategic approach, the Plan seeks to create a clear roadmap for the development of the Niagara region's agriculture sector, ensuring that it remains competitive, sustainable, and prosperous for years to come.

The final component of the action plan is defining the various “roles.” For each strategic initiative, the role of facilitator and/or partner has been identified. They can be defined as the following:

- **Facilitator**: Intermediaries assisting in the coordination of activities, promoting dialogue, providing guidance and facilitating the exchange of information to achieve the strategic initiative.
- **Partner**: Actively engaging in the ecosystem and with other partners to achieve the strategic initiative. This is done by contributing resources, expertise and networks and may involved shared ownership, decision-making and collaboration.

7.0 The Action Plan

The purpose of the Grown in Niagara Agriculture Plan is to support the Niagara region's agriculture sector by leveraging its strengths, addressing its challenges, and ensuring its long-term sustainability and competitiveness. The Plan was developed in consultation with partners (See Appendix A – Partners Engaged for the full list of partners engaged) from across the agriculture community and is based on the Strategic Framework laid out on the previous pages of this document.

In this section, the specific initiatives and tactical activities that will be implemented over a five-year period to achieve these Success Factors, as well as the expected outcomes, are identified and expanded upon. The Plan reflects the Region's commitment to supporting its agriculture sector and ensuring its long-term success.

Success Factor 1: Building a Unified Identity for Agriculture in Niagara	**Description of Success Factor** Building a collective consciousness among partners in the agriculture sector to ensure that activities undertaken push the sector forward as a whole and elevates the brand of Niagara's agricultural sector and products.				
Expected Outcomes	Strategic Initiatives	Tactical Activities Years 1-2	Tactical Activities Years 3-4	Tactical Activities Years 5+	Roles
• A collective consciousness and understanding of the role all the sub-sectors play in broader sector success • Creation of a singular body to highlight the varied offerings of the agriculture sector to the public • Increased public awareness of the importance and stories of the agriculture sector • Increased awareness inside and outside of the sector of its current and potential contributions to improving food security in the Region	**1.1 Support the development and organization of the Niagara Agriculture Association (NAA) or other, to be a unified voice for the sector in the region**	• Publicize the intention to establish a new body to support agri-business and tourism initiatives in the region. • Engage key partners to assess their interest, support, and potential roles in the new body's development and operations. Determine how the establishment of this body may impact the operations of existing bodies (e.g., the Niagara Federation of Agriculture). • Define the membership structure of the new body, including core members and supporting members, and identify if there will be any required sub-committee structures to facilitate decision-making. • NED to facilitate the inaugural meetings of the new body, convening key partners and providing guidance in the establishment of governance structures that enable effective decision-making. • Define core common issues (e.g., irrigation) and identify areas of advocacy to communicate with upper levels of government.	• Foster the development of a shared vision and collective consciousness among the members of the new body, emphasizing the importance of collaboration, inclusivity, and shared goals. • Support the new body in setting its priorities and identifying areas of focus that align with its overall vision and objectives, while respecting its autonomy and encouraging member-driven decision-making. • Re-evaluate the membership of the new body to ensure that it reflects a diverse range of perspectives, experiences, and interests, and explore strategies for engaging additional community partners to broaden participation and maximize impact. • Begin transition of responsibilities from NED to NAA or other.	• Support Strategic Planning Development • Promote effective delegation of responsibilities and decision-making to appropriate sub-committees or individuals within the group. • Continuous review of governance and strategy of the NAA or other. • Complete transition of responsibilities from NED to NAA or other.	• **Facilitator:** Niagara Region Economic Development (initially) • **Facilitator:** Niagara Agriculture Association or other (increasingly, eventually taking over and replacing Niagara Region Economic Development)

• Greater alignment of marketing and promotional efforts for Niagara's agriculture sector • Increased uptake of on-farm diversified usage to support agri-tourism and enhance GDP outputs of the sector. **Measures of Success** • Niagara Agriculture Association or other, and supporting governance structure established within defined period • Campaign specific metrics for the "Grown in Niagara" media campaign (based on marketing tactics used) • Number of international inquiries or requests for information about Niagara's agriculture sector • Project completion for Farm Fresh Niagara Model • Scheduled and repeated meetings between diverse members of the agriculture sector to discuss common challenges and opportunities	**1.2 Develop and launch a "Grown in Niagara" media campaign to tell the story of agriculture and agri-businesses in the region**	• Build on the work completed with the Region's marketing team to develop an overarching storyline that aligns with the Action Plan. • Take stock of partners who have been interviewed/engaged to help capture unique stories that will tell the Niagara story. • Determine how the stories will be published and shared out (i.e., short clips shared via specific sources, written publications, ad campaigns in nearby markets, etc.). • Test content produced to date to see how it resonates with specific/target audiences.	• Fully launch the media campaign, targeting specific Regions, audiences, and community partners. • Roll out media content in a manner that keeps the region top of mind for an extended period of time (e.g., 3 – 6 months). • Test reactions and use metrics (e.g., Google Analytics) to understand uptake and impressions from target audiences. • Identify potential changes that may be required and action these as appropriate. • Develop new campaign content and continue to share this out to maintain relevance and knowledge of the sector.	• Review the media campaign to determine if/how it has achieved the intended goals. • Determine if a new campaign is required to align with a future iteration of the Action Plan.	• **Facilitator:** Niagara Region Economic Development – Marketing Team
	1.3 Building a Farm Fresh Niagara model	• Conduct a needs assessment with local farmers and food producers to determine their needs and preferences for selling their products directly to consumers. • Conduct a high-level comparator scan of other farm fresh models in Ontario to understand leading practices (e.g., York Region and Durham Region). • Create a "Niagara Made" local directory of local farmers' markets, roadside stands, restaurants and other venues where consumers can purchase local products. • Organize a series of farm-to-table events to showcase local products and increase consumer awareness.	• Expand the Farm Fresh Niagara directory to include online sales options for local producers. • Develop a certification program for participating farmers and food producers, that highlights their commitment to sustainability and local sourcing. • Host a business-to-business matchmaking event to connect producers, processors, distributors, and retailers within the sub-sectors. •	• Conduct a consumer survey to gather feedback on the Farm Fresh Niagara model and identify areas for improvement. • Expand the certification program to include additional criteria related to environmental stewardship and social responsibility. • Work with local government and community organizations to advocate for policies that support local agriculture and value chain.	• **Facilitator**: Niagara Region Economic Development • **Facilitator**: Niagara Agriculture Association or other (when operational) • **Partner**: Farm operators
	1.4 Help remove barriers to enable Marketing Boards, Associations, and other partners to promote and support agri-tourism in the region	• Conduct a comprehensive review of existing regulations and policies that may be hindering the growth of agri-tourism in the region. • Develop a working group consisting of representatives from Marketing Boards, economic development officers, municipal planners, and other relevant partners to collaboratively address specific barriers to agri-tourism growth. • Conduct market research to identify gaps in the agri-tourism market and develop a Plan for new agri-tourism products and experiences.	• Collaborate with local tourism organizations to integrate agri-tourism into broader tourism campaigns and initiatives. • Partner with local universities and colleges to develop training and educational programs for agri-tourism businesses to improve their marketing and customer service skills.	• Establish an ongoing dialogue with the provincial and federal governments to advocate for policies and programs that support the growth of agri-tourism in the region.	• **Facilitator:** Niagara Region Economic Development • **Facilitator:** Niagara Agriculture Association or other (when operational) • **Partner**: Marketing Boards

	1.5 Promote improved food security by improving communication, networks, value chain infrastructure, and accessibility	• Build base level awareness amongst sector members and related businesses of the role the sector can play in improving food security • Partner with local businesses or social enterprises to explore innovation solutions, such as the feasibility of mobile markets—trucks or vans that regularly bring fresh produce directly to underserved neighborhoods, making it easier for residents to access nutritious food without having to travel long distances.	• Foster partnerships with businesses that specialize in transportation, warehousing, and distribution to explore mutually beneficial solutions, such as leveraging existing infrastructure or creating public-private partnerships. • To improve food security, enhance existing networks within the agricultural sector by establishing an online platform that facilitates connections among farmers, social enterprises, non-profits, and other community organizations. • Support the development of an online directory or mobile app that lists available local produce and nearby food distribution centers.	• Encourage business participation through incentives such as public recognition, streamlined regulatory processes, or financial support through tax breaks or grants for specific projects. • Assess existing public transit routes and consider adjustments, such as rerouting or increasing service frequency to connect residential areas with food access points. • Work with local transit authorities and explore partnerships with private transportation companies to link residents with food distribution hubs, without requiring large-scale transit overhauls. • Offer incentives such as discounted transit passes for food-insecure individuals to remove cost barriers.	• **Facilitator:** Niagara Region Economic Development • **Facilitator:** Niagara Agriculture Association or other (when operational) • **Partner**: Niagara Region Transit

Success Factor 2: Working Together to Reduce Red Tape	**Description of Success Factor** Partner with municipalities in the region to address issues through a coordinated approach and assess the feasibility of standardizing and implementing leading practices.				
Expected Outcomes	**Strategic Initiatives**	**Tactical Activities Year 1-2**	**Tactical Activities Year 3-4**	**Tactical Activities Years 5+**	**Roles**
• Recruitment of a "sector specialist" to act as a concierge and conduit to the agricultural community • Enhanced collaboration and coordination among different levels of government • Standardized processes implemented to reduce administrative burden **Measures of Success** • Reduction in the number of complaints or negative feedback regarding permitting processes in the region • Average completion time for building/expansion permit • Number of successful knowledge-sharing events or initiatives between planners, developers, policy advisors, and government officials in the region	**2.1 Develop an agriculture concierge model that will support agri-businesses as they try to open or expand in the region**	• Conduct research and analysis to identify the needs of agri-businesses looking to operate in the region, including challenges they face and the resources they require. • Clarify the types of uses for specific land types. • Conduct a review of the current concierge model in place to understand typical use cases, general awareness, and areas for improvement. • Create plain-language fact sheet to help agri-food partners interpret policies.	• Leverage Niagara Agriculture Association or other once established (Strategic Initiative 1.1). • Establish partnerships with key entities, including government agencies, business associations, and industry groups, to expand the network of resources available to businesses. • Develop a system for tracking and measuring the effectiveness of the concierge model, including key performance indicators such as response times, customer satisfaction, and business success rates.	• Continuously review and evaluate the concierge model to identify areas for improvement and ensure that it continues to meet the changing needs of businesses in the region.	• **Facilitator:** Niagara Region Economic Development • **Facilitator:** Niagara Agriculture Association or other (when operational)
	2.2 Create a culture of knowledge-sharing and innovation between Planners, developers, policy advisors, and government	• Facilitate knowledge sharing for Planners, developers, policy advisors, and government staff in the Niagara Region that focuses on knowledge-sharing and innovation best practices specific to the agriculture sector. • Establish regular meetings between agriculture partners and government representatives to foster collaboration and knowledge-sharing. These should include government representatives being open to hearing challenges being faced, and agriculture partners being open to hearing how government is trying to support.	• Evaluate the effectiveness of the knowledge-sharing and innovation strategy and make adjustments as needed to ensure that it is meeting the needs of the agriculture sector in the Niagara region. • Hold annual leading practice workshop amongst municipalities to accelerate learning and adoption of innovative process.	• Continue knowledge-sharing activities as required.	• **Facilitator**: Niagara Economic Development • **Facilitator**: key partners identified (developed over time)
	2.3 Identify and streamline leading practices for building/expansion permitting processes across the region	• Conduct a comprehensive review of existing regulations that impact the agriculture sector in Niagara and identify opportunities to streamline or eliminate duplicative requirements. • Engage with local businesses, developers, and residents to understand their	• Implement changes to the permitting process, such as consolidating applications and reducing redundant steps. • Continuous identification of opportunities to streamline processes.	• Monitor and evaluate effectiveness of changes. • Continue to explore opportunities for greater collaboration and coordination across LAMs.	• **Facilitator:** Niagara Region Planning

		experiences with the permitting process and gather feedback on areas for improvement. • Create a guide and/or information package to help operators navigate the building/expansion permitting process.	• Automate steps in the permitting submission process across LAMs. • As necessary, update the guide/information package.		

Success Factor 3: Protecting Agriculture Talent and Inspiring the Next Generation	**Description of Success Factor** Aimed at promoting and showcasing the opportunities and benefits of the agricultural sector to students and youth, in order to attract and develop a talented and diverse workforce for the future, while providing support for the existing agriculture workforce.				
Expected Outcome	**Strategic Initiatives**	**Tactical Activities Years 1-2**	**Tactical Activities Years 3-4**	**Tactical Activities Years 5+**	**Roles**
• Increased availability of skilled labor in the agriculture sector • Increased pool of talent available to the industry • More innovative practices and better alignment of skills with the needs of the industry • Smooth transition of ownership and management of agriculture businesses • Growth and sustainability of the agriculture sector in the region • A more collaborative relationship with post-secondary institutions in building upon existing programming and developing new programming and supports around the agriculture sector **<u>Measures of Success</u>** • Participation rate of students in agriculture-focused education programs • Number of schools in the region that have embedded education	**3.1 Create a coordinated effort where the Region and operators advocate to the Federal Government the benefits of the Temporary Foreign Worker Program (TFWP).**	• Engage with local agri-businesses and organizations to identify key benefits and challenges of the TFWP to better understand its impact on the region. • Engage Region and local Councils to share benefits, challenges, and the importance of engaging the Federal Government on the issue. • Develop a Communication Plans to guide advocacy efforts for key decision-makers at the Federal level. • Plan and execute a series of meetings and events with Federal government officials and key decision-makers to advocate for the TFWP and highlight its benefits for the Niagara region's agriculture sector.	• Monitor and report on any policy changes related to the TFWP at the Federal level and assess how they may impact the region's agriculture sector. • Collaborate with other regions and organizations across Canada who are also advocating for the TFWP to share knowledge and leading practices.		• **Facilitator:** Niagara Migrant Workers Interest Group (NMWIG) • **Partner:** Niagara Region Economic Development (acting as initial facilitator, supporting NMWIG to get audiences with key stakeholders, and coordinating with operators, as required to provide additional support) • **Partner:** Niagara Agriculture Association or other (when operational)
	3.2 Develop regional education programs at the elementary and secondary school levels to garner interest in the agriculture sector at a young age	• Work with local industry associations, educators, and other community partners to identify where there are opportunities to embed real life agriculture experiences in existing school curriculums. • Establish partnerships with local agri-businesses to provide experiential learning opportunities for students, such as farm tours, hackathons, science experiments & career exploration events while actively including guidance counsellors to ensure they are aware of sector opportunities available. • Host a "STEM in Agriculture" day for local schools to showcase how science, technology, engineering, and math play a	• Review the existing partnerships with post-secondary institutions to understand if there are any existing pathways or methods to support increased enrollment in agriculture programs that are currently being underutilized or may need alterations to be more successful. • If and as necessary, bring industry and post-secondary institutions together to continue to develop innovative scholarship programs for students pursuing degrees in agriculture technology or related fields. • Develop a mentorship program that pairs students with local agriculture professionals to provide hands-on learning opportunities.	• Continuously review, refresh, and inform Council and local schoolboard officials about the importance of agriculture, the types of careers it affords, and the linkages to existing curriculum, ensuring students receive information about agriculture from guidance counsellors and others as they think about their life after secondary school.	• **Facilitator:** Niagara Region Economic Development • **Facilitator:** Niagara Agriculture Association or other (when operational) • **Partner**: Local school boards • **Partner**: Ministry of Education • **Partner**: Farm operators

about the agriculture sector • Enrolment in agriculture-based programs in Niagara post-secondary institutions • Succession planning adoption rate among farm operators		critical role in modern agriculture practices.	• Shift language of agriculture to towards food, nutrition, genetics, technology, precision machinery to appeal to next generation learners and workers.		
	3.3 Work with the Ministry of Education and other provincial bodies to agree on the value and necessity of updating/embedding education about the agriculture sector in schools	• Assemble a working group (e.g., with the NAA or other, if organized, or other groups of marketing boards, operators, and research/education partners) to create a proposal to advocate the Ministry of Education and Ministry of Training, Colleges, and Universities, incorporate agriculture into education curriculums. • Identify the main areas and topics that the agri-industry feel are important aspects to teach students. • Identify other complementary career fields (e.g., the skilled trades) or Regions and see if there are opportunities to partner together to jointly advocate for greater inclusion of agriculture or agri-adjacent career paths in the school curriculum.	• Develop a proposal to the Ministry of Education to advocate for greater inclusion of agriculture awareness and activities into the primary and secondary school curriculum. • Meet with Ministry of Education officials to demonstrate the benefits of having greater inclusion of the agricultural sector in the curriculum (if completed, use outputs from the Regional Education Programs as evidence). • Continue to advocate for the inclusion of more agriculture-related topics, field trips, and information to inform youth about the diverse career paths available to them in the agriculture sector.	• Continue to advocate for the inclusion of more agriculture-related topics, field trips, and information to inform youth about the diverse career paths available to them in the agriculture sector.	• **Facilitator:** Post-secondary institutions and research networks • **Facilitator:** Local school boards • **Partner:** Ministry of Education
	3.4 Map and further develop collaboration and internship opportunities between post-secondary/research bodies and industry in the region to continue increasing skilled labour	• Conduct a needs assessment with local agriculture businesses and post-secondary/research institutions to identify skills gaps and areas of need for collaboration and internship opportunities. • Develop a database of potential collaboration and internship opportunities, including those offered by local businesses and those available through post-secondary/research institutions. • Host an annual conference for industry leaders and post-secondary/research bodies to share best practices and identify opportunities for collaboration and internships.	• Establish partnerships with industry associations and businesses to develop and deliver specialized training programs to students, such as in precision agriculture, agri-tech, and sustainable farming practices. • Work with local high schools to deliver presentations on the benefits of pursuing a career in agriculture and highlight internship opportunities available through partnerships with post-secondary/research bodies.	• Expand and diversify the range of collaboration and internship opportunities available to students in the Niagara region, including by partnering with industry associations and businesses in adjacent sectors such as food processing, logistics, and tourism. • Develop mentorship programs to connect students with industry professionals in the agriculture sector, including alumni of post-secondary/research institutions in the Niagara region.	• **Facilitator:** Post-secondary institutions and research networks • **Facilitator:** Local school boards • **Partner:** Niagara Agriculture Association or other (when operational)
	3.5 Build a succession planning toolkit to support operators across the region	• Research and compile leading practices, case studies, and resources on succession planning from relevant sources, such as industry associations and government agencies.	• Host workshops and training sessions for agriculture operators to learn how to use the succession planning toolkit and develop effective succession plans.	• Refine and expand the succession planning toolkit based on feedback from operators and industry experts. • Develop a mentorship program to connect operators with experienced	• **Facilitator:** Niagara Region Economic Development • **Facilitator:** Niagara Agriculture

		• Establish relationship between Brock University and Café (Canadian Association of Family Enterprise) to bring courses, templates, toolkits, and peer networks to the Niagara region.		industry professionals who can provide guidance and support on succession planning.	Association or other (when operational) • **Partner:** LAMs • **Partner:** Marketing Boards

Success Factor 4: Attracting High Value Agri-based Investment	**Description of Success Factor** Identify specific segments of the agriculture value chain that the Region wants to further expand to support industry and working with municipal partners to jointly pursue targets to help further build the value chain in the region.				
Expected Outcome	**Strategic Initiatives**	**Tactical Activities Years 1-2**	**Tactical Activities Years 3-4**	**Tactical Activities Years 5+**	**Roles**
• Improved understanding of available land and potential uses • Increased competitiveness, productivity, and profitability of the agriculture value chain • Increased flow of new agriculture investment to the Region • Improved ease of doing business in the Region to attract more investment **<u>Measures of Success</u>** • Percentage increase in the number of high of agri-based investments in the Region • Percentage increase in Niagara-based agri-businesses engaged in site selection, market intelligence, export readiness, capital access, and permitting assistance	**4.1 Map land base uses in the region**	• Enhance Niagara Navigator by adding more data layers to include zoning, CIP areas, and other incentives. • Work with municipal planners and other community partners to develop a shared vision for land use in the Region, including goals for sustainable development, conservation, and economic growth.	• Develop tools and resources for businesses and investors to use the land use data to support site selection, market analysis, and other strategic decisions.	• Work with industry and academic partners to develop new technologies and tools for land use mapping and analysis and incorporate these tools into ongoing data collection and analysis efforts. • Continue to expand land use mapping tools to include more detailed data.	• **Facilitator:** Niagara Region Planning
	4.2 Work with industry to identify value chain gaps, and identify usable land based on available mapping	• Conduct a gap analysis of the current agriculture value chains in the region, and work with industry to identify areas for improvement and growth. • Promote and communicate Regional/LAM resource support for industry through various channels, such as social media, newsletters, and industry events. • Develop a database of available land and its potential uses, highlighting key features such as proximity to transportation hubs and infrastructure availability.	• Use the value chain gap analysis to develop targeted programs and initiatives aimed at improving the efficiency and sustainability of the region's agriculture sector. • Build relationships with key industry associations and other relevant organizations to strengthen the region's position as a hub for agri-based businesses. • Engage in targeted outreach to potential investors, highlighting the region's strengths and investment opportunities.	• Evaluate the success of the various programs and initiatives implemented and identify areas for continued improvement. • Conduct regular reviews of the available land and update the database with new information or changes.	• **Facilitator:** Niagara Region Economic Development
	4.3 Build investment attraction collateral for Ag Technology & Equipment, Value-Added Processing, Indoor Farming, and Sustainable Ag Production sectors.	• Develop individual sector strategies inclusive of value chain opportunities and targeted company lists for investment and research attraction. • Develop targeted marketing program to build the Niagara Agriculture brand at specific industry events aligned to priority sector strategies.	• Link sector strategies with Ontario's clean production value proposition in energy, water, carbon offsets, etc. • Work with OMAFRA on incentive program for investment attraction of specific sectors to the region.	• Link investment attraction strategy to Vineland Research & Innovation Centre and Brock University capabilities. • Build pipeline of capital availability for commercialized technologies and talent attraction in emerging areas of AgTech and FoodTech.	• **Facilitator:** Niagara Region Economic Development

• A report on the impact that new investments have on the Region's value chain		• Enhance the website to include additional information on the region's agriculture industry including available land, incentives and support services.	• Start positioning Niagara at the core of Invest in Canada's marketing materials for agriculture and AgTech.		
	4.4 Establish mid-market BR&E campaign to support production and export expansion opportunities – support services for highest potential businesses in site selection, market intelligence, export readiness, capital access, and permitting assistance to help business owners accelerate through requirements of expanding their operations in the region.	• Identify partners in the $20M-$75M revenue range with the potential of 3x revenue growth within five years. • Interview to identify goals and limitations that match to IRAP and other funding or advisory programs to accelerate growth and expansion. • Separate proactive and reactive concierge services to support this initiative. • Leverage recently announced Grow Ontario Market Initiative, led by the Ontario Government, to help processors and agri-businesses take action to reach new markets.[5]	• Facilitate connections between investors and suppliers, distributors, and other members of the agri-food value chain. • Provide guidance and support to investors throughout the site selection and permitting process, which includes helping them navigate regulatory requirements, facilitating meetings with local officials and providing information on available incentives and support programs. • Leverage marketing activities listed Strategic Initiative 1.2 to highlight the unique strengths and advantages of Niagara.	• Establish peer-to-peer forums for those in the BR&E accelerator program and match with the next cohort of high potential growth businesses. • Share stories of individual businesses and the pro-business expansion culture of the Niagara region as part of the greater Niagara Agriculture narrative.	• **Facilitator:** Niagara Region Economic Development • **Facilitator:** LAMs

[5] Ministry of Agriculture, Food and Rural Affairs (2023). Governments Helping Ontario Agri-Food Products Reach New Markets. (online: web) URL: https://news.ontario.ca/en/release/1002940/governments-helping-ontario-agri-food-products-reach-new-markets

Success Factor 5: Proactively Embracing a Changing Climate	**Description of Success Factor** Leading efforts to secure support from provincial and federal partners to establish a Regional irrigation system. This success factor also entails developing a better understanding of the anticipated effects of a changing climate by partnering with associations and building specific strategies. Our approach involves education and information dissemination, funding and advocacy, and promoting the use of climate adaptive technology.				
Expected Outcomes	**Strategic Initiatives**	**Tactical Activities Years 1-2**	**Tactical Activities Years 3-4**	**Tactical Activities Years 5+**	**Roles**
• Policies that reflect market conditions • Increased sustainable business opportunities • Investment into supporting infrastructure (irrigation and waste management) • Adoption of renewable energy • Attraction of climate change organizations **Measures of Success** • Percentage increase in number of farms that has access to irrigation • Percentage increase in the number of farms in the region that have adopted sustainable innovation practices • Percentage increase in the number of farms in the region that have adopted emerging technologies • Overall reduction in the carbon footprint of the agriculture sector	**5.1. Moving Regional irrigation forward as a sector.**	• Advocate for recognition of irrigation as municipal infrastructure. • Make irrigation a stated priority for the Region and let all orders of government know this will be a major ask. • Update LAM Regional policies to permit GIS mapping for irrigation. • Use GIS mapping to help determine and prioritize where irrigation should be built first. • Apply for funding to Fed Dev to hire an agriculture sector specialist whose focus can include improving irrigation systems in the region.	• Establish collaborations between different industries in the region to explore the adoption of new technologies that can help improve irrigation efficiency and effectiveness. • Leverage the Niagara Agriculture Association (NAA) or other, to help with advocacy to upper levels of governments, as noted in Strategic Initiative 1.1.	• Explore introducing a community improvement Plan (CIP) for agriculture and climate change.	• **Facilitator:** Niagara Region Planning • **Partner:** Niagara Region Economic Development • **Partner:** Niagara Agriculture Association or other (when operational) • **Partner**: Farm operators
	5.2. Consolidate ecological impact studies on Niagara Region	• Collaborate with institutions such as the Greenbelt Foundation, Vineland, Brock University, Niagara College, LAMs, and other NGOs to establish a unified approach to ecological impact assessments in the region and enhance research capabilities. • Identify and engage with funding sources to support the consolidation of ecological impact studies. • Work with the Ontario Government to advance the Grow Ontario Strategy by leveraging recent investment to improve soil data mapping and soil evaluation and monitoring.[6]	• Develop a database or repository of ecological impact studies that can be accessed and shared by partners.	• Conduct regular reviews of the ecological impact study database or repository to ensure it remains up-to-date and relevant. • Develop and deliver training programs to partners on the use of the ecological impact study database or repository and best practices for ecological impact assessments. • Facilitate bi-annual conferences to provide updates to key partners and share best practices.	• **Facilitator:** Niagara Region Economic Development • **Facilitator:** Niagara Agriculture Association or other (when operational) • **Partner:** Greenbelt Foundation
	5.3. Promote technology adoption and breakthroughs	• Develop an inventory of existing agri-tech being used in the region and the needs of current farm operators. • Host an event/technology showcase that allows for demonstrations to local farmers and sector partners, highlighting	• Advocate for additional funding from upper levels of government for programs that can support the adoption of new technologies. • Support agri-businesses by providing letters of support and streamlining	• Build on previous events and host an annual technology summit to showcase emerging technologies and promote collaboration between technologists and farm operators.	• **Facilitator:** Niagara Region Economic Development • **Partner:** Brock University – Niagara Community Observatory

[6] Ministry of Agriculture, Food and Rural Affairs (2023). Ontario Investing In Improved Soil Health. (online: web) URL: https://news.ontario.ca/en/release/1003033/ontario-investing-in-improved-soil-health

• LAMs reach broadband service benchmarks for both upload and download speeds		the various technologies that have been developed throughout the year. • Establish a technology adoption support program to assist farmers and businesses in the implementation and use of new technologies. • Develop a communication plan to promote the benefits of technology adoption to the wider community.	processes related to technology adoption. • Build a network of technology leaders in the region to encourage collaboration and knowledge sharing.	• Foster international partnerships to bring innovative technologies from other Regions to the Niagara Region. • Continuously promote the benefits of technology adoption to the wider community and ensure ongoing engagement with community partners.	• **Partner:** Niagara Agriculture Association or other (when operational)
	5.4. Continue to advocate for/improve access to broadband services in the Region	• Develop a Regional broadband strategy that outlines how the Region will improve access to broadband services. • Leverage recent $1.6M investment from provincial and federal governments to bring high-speed internet to the Niagara region.[7] • Continue to advocate for more SWIFT funding in the near term, using the real challenges of a changing climate and broadband's impact on technology adoption for farms as evidence/rationale. • Promote digital literacy and provide training programs to help farm operators and agri-businesses take full advantage of broadband services.	• Partner with broadband providers to design and develop customized packages that cater to the needs of farmers in the region. • Advocate for government policies that promote investment in rural broadband infrastructure.	• Develop a long-term Plan for maintaining and upgrading the broadband network to meet evolving needs and technology.	• **Facilitator:** Niagara Region Economic Development • **Facilitator:** Niagara Agriculture Association or other (when operational)

[7] Ministry of Agriculture, Food and Rural Affairs (2023). Canada and Ontario Increasing Access to High-Speed Internet Service in Niagara Region. (online: web) URL: https://news.ontario.ca/en/release/1002952/canada-and-ontario-increasing-access-to-high-speed-internet-service-in-niagara-region

8.0 Next Steps

The next steps for the Grown in Niagara Agriculture Plan include the implementation of the initiatives outlined in the Plan. This will involve collaboration among various partners including government, industry, and the community. The Plan will be monitored and evaluated regularly to ensure progress is being made towards achieving the goals and objectives set out in the plan.

Additionally, ongoing consultation with the agriculture sector and broader community will be important to ensure the plan remains relevant and responsive to the changing needs and priorities of the region. The Plan will also require ongoing support to ensure its success.

To achieve the desired outcomes of the Grown in Niagara Agriculture Plan, there must be a continued commitment to the goals and objectives of the plan from all partners. Continued efforts to build partnerships, foster innovation, and promote sustainability will be critical in realizing the full potential of the agriculture sector in the Niagara region.

9.0 Appendix

9.1 Appendix A – Partners Engaged

The below is a list of partner bodies engaged throughout the process at least one time, with many being engaged multiple times:

Note: Niagara Economic Development endeavored to engage with Six Nations of the Grand River for comment/feedback on the Agricultural Action Plan on several occasions during the development stage but were unsuccessful. Niagara Economic Development will continue efforts for engagement during the implementation stage.

Partner Group	Participants
Local Area Municipalities	• City of St. Catharines • City of Niagara Falls • City of Welland • City of Fort Erie • City of Port Colborne • City of Thorold • Township of Wainfleet • Town of Pelham • Town of Lincoln (note: the Town also acted as a member of the Project Team with the Region) • Township of West Lincoln • Town of Niagara-on-the-Lake
APAC	• Regional Councillor – St Catharines • Regional Councillor – Mayor of Lincoln • Regional Councillor – West Lincoln
Post-Secondary and Innovation	• Brock University • Niagara College • Niagara College Greenhouse Technology Network • Vineland Research
Indigenous Rightsholder Organizations	• Mississaugas of the Credit First Nation
Migrant Worker Groups	• Niagara Agriculture Migrant Workers
Farming Federations	• Niagara Federation of Agriculture
Environmental Organizations	• Landscape Ontario
Commodity groups	• Grape Growers of Ontario • Ontario Tender Fruit

	• Wineries • Poultry Farms • Not-for-profit Organizations
Project Partners	• Niagara Economic Development Team

9.2 Appendix B – Research Report: Opportunities for Niagara's Agriculture to Promote Food Security in the Region

Niagara Region

Opportunities for Niagara's Agriculture to Improve Food Security in the Region

→ Research Report for the Agriculture Economic Development Action Plan for the Niagara

October 21, 2024

optimus sbr

Table of Contents

1.0 Introduction

This research paper has been prepared by Optimus SBR on behalf of Niagara Region (the Region) to explore links between a strong agri-food sector and regional rates of food insecurity. The paper examines them in the context of the Region, and examines challenges associated with and the potential for the Region's agri-food sector to reduce food insecurity. It does so by evaluating the challenges and opportunities for the local agricultural sector, identifying success stories that demonstrate the sector's potential to support food security, and providing strategic recommendations for the Region's Agriculture Economic Development Action Plan. The findings are based on a review of published literature, local data, and insights from industry experts.

2.0 The Broader Landscape of Food Insecurity

2.1 What is Food Insecurity?

There is no single, all encompassing, or fully embraced definition of food insecurity – rather, there are many that have overlapping themes and concepts included.

For instance, the Dietitians of Canada describe food insecurity as "the inadequate or insecure access to food due to financial constraints."[8] This definition emphasizes income as a key factor in determining an individual's ability to access food.

However, a growing body of academic research, along with conversations the Optimus SBR team had with those versed in food production and distribution, suggests that food insecurity encompasses more than just income-related challenges.

The definition of food insecurity from the 1996 World Food Summit previously introduced additional dimensions to the concept, has gained wide international acceptance, and will be the one adopted to guide this research paper. It describes food security as "the condition when all people, at all times, have physical and economic access to sufficient, safe, and nutritious food to meet their dietary needs for an active and healthy life."[9]

It is based on the notion that there are four dimensions to food security:

- *Availability* – The supply of food, determined by the level of food production, distribution, and trade.

[8] Dietitians of Canada. (2024). *Household food insecurity position statement* [pdf]. Available from: https://www.dietitians.ca/DietitiansOfCanada/media/Images/DC-Household-Food-Insecurity-Position-Statement_2024_ENG.pdf [Accessed 26 September 2024].
[9] Food and Agriculture Organization of the United Nations. (1996). *Rome Declaration on World Food Security and World Food Summit Plan of Action.* [online]. Available from: https://www.fao.org/4/w3548e/w3548e00.htm [Accessed 26 September 2024].

- *Access* – The ability to obtain food, which can be influenced by income, prices, and distribution systems.
- *Utilization* – The nutritional quality of food and how it is used by the body; it encompasses food preparation and consumption practices.
- *Stability* – The consistency of food availability, access, and utilization overtime.[10]

It is important to note that the dimensions are interrelated; disruptions in one can affect the overall stability of the food security system.[11]

2.2 Global Trends and Local Struggles

This section outlines how food insecurity is measured at the global, Ontario, and local Niagara levels.

Monitoring food insecurity globally relies on various tools, one of the most significant being the Food and Agriculture Organization's (FAO) Food Price Index (FPI). The FPI measures international prices of a basket of food commodities, where a lower score indicates more stable and affordable food prices, and a higher score reflects increased price volatility and greater food insecurity risks.[12] After remaining stable between 2015 and 2020, the FPI spiked to record levels in 2022, indicating that nearly one billion people, or 11% of the global population, are severely food-insecure.[13] By 2022, an estimated 783 million people were dangerously hungry, a state where a lack of consistent access to food puts an individual's health and life at serious risk, often resulting in malnutrition, starvation, and heightened vulnerability to diseases.

Key reasons for the surge in hunger include a combination of factors such as the COVID-19 pandemic's disruption of global food systems, ongoing geopolitical conflicts disrupting global food supply chains, rising food prices, and climate change-related events such as droughts and floods that affect agricultural production. Projections suggest that this figure could exceed 840 million by 2030 if trends continue. Since 2019, the number of those suffering from acute food insecurity has more than doubled from 135 million to 345 million, with over 40 million people across 51 countries facing emergency levels of hunger.[14]

Food insecurity is not only a global issue but also a significant challenge within Canada. PROOF, an interdisciplinary research program at the University of Toronto that examines effective policy interventions to reduce household food insecurity in Canada, released a 2022 report on

[10] Food and Agriculture Organization of the United Nations. (1996). *Rome Declaration on World Food Security and World Food Summit Plan of Action.* [online]. Available from: https://www.fao.org/4/w3548e/w3548e00.htm [Accessed 26 September 2024].
[11] Food and Agriculture Organization of the United Nations. (2014). *Global strategic framework for food security and nutrition* [pdf]. Available from: https://www.fao.org/fileadmin/templates/cfs/Docs1314/GSF/GSF_Version_3_EN.pdf [Accessed 26 September 2024].
[12] Food and Agriculture Organization of the United Nations. (2024). *FAO Food Price Index* [online]. Available from: https://www.fao.org/worldfoodsituation/foodpricesindex/en/ [Accessed 26 September 2024].
[13] Food and Agriculture Organization of the United Nations. (2024). *FAO Food Price Index* [online]. Available from: https://www.fao.org/worldfoodsituation/foodpricesindex/en/ [Accessed 26 September 2024].
[14] World Vision Canada. (2023). *The basics of food security* [online]. Available from: https://www.worldvision.ca/stories/food/the-basics-of-food-security [Accessed 26 September 2024].

Household Food Insecurity in Canada which estimated that Ontario has reached its highest-ever recorded rate of food insecurity since data collection began in 2005.[15] The study found that 18.7% of households in Ontario were food-insecure in 2022, up from 16.1% in 2021. This percentage translates to approximately 2.8 million people, including around 700,000 children who are unable to obtain sufficient and nutritious food due to financial constraints.[16] Some communities are more at risk of food insecurity than others. As of 2022, Statistics Canada reported that Indigenous and Black households, lone-parent families (women-headed families, in particular), and people living with disabilities were disproportionately affected by food insecurity.[17]

In Niagara, food insecurity is a significant issue affecting almost 75,000 or just over 15% of Niagara's 484,840 residents. Food bank usage has surged, with Niagara-on-the-Lake seeing a 118% increase from 2021 to 2023, St. Catharines and Thorold an 82% increase, and Niagara Falls a 65% increase.[18] Over 40% of the recipients of food from food banks are children, who face increased risks of hyperactivity, inattention, lower academic performance, and mental health issues due to inadequate nutrition and increased stress during critical stages of their growth and development.[19] There has also been a dramatic rise in employed individuals accessing food banks for the first time, driven by stagnant wages and rising living costs.[20]

3.0 Niagara's Agri-Food Economy

Agriculture is a fundamental pillar of the Region's economy, benefiting from its favorable climate, diverse land base, and skilled workforce. The Niagara Agricultural Profile published by Niagara Economic Development states that as of 2021, the region is home to 1,651 farms, averaging 126.2 acres each and encompassing a total farmland area of 208,414 acres. Farm types consist of greenhouses, fruit, and poultry farms, which bring in $492 million, $218 million, and $124 million in revenue, respectively. The land used for crops spans 179,404 acres, with a significant portion dedicated to greenhouse operations. Niagara houses 163 greenhouses covering 21.4 million

[15] PROOF. (2023). *Household food insecurity in Canada, 2022* [pdf]. University of Toronto. Available from: https://proof.utoronto.ca/wp-content/uploads/2023/11/Household-Food-Insecurity-in-Canada-2022-PROOF.pdf [Accessed 26 September 2024].
[16] CP24. (2023). *Households in Ontario are more food insecure than ever before, finds new U of T report* [online]. Available from: https://www.cp24.com/news/households-in-ontario-are-more-food-insecure-than-ever-before-finds-new-u-of-t-report-1.6666435#:~:text=These%20latest%20figures%20roughly%20translate,assistance%20are%20experiencing%20food%20insecurity [Accessed 26 September 2024].
[17] Statistics Canada. (2024). *Food insecurity in Canada, 2022* [online]. Available from: https://www150.statcan.gc.ca/n1/daily-quotidien/240426/dq240426a-eng.htm [Accessed 26 September 2024].
[18] Niagara Community Observatory. (2024). *Sustaining food security in Niagara (Policy brief No. 58)* [pdf]. Brock University. Available from: https://brocku.ca/niagara-community-observatory/wp-content/uploads/sites/117/NCO-Policy-Brief-58-Sustaining-Food-Security-in-Niagara-April-2024-FINAL.pdf [Accessed 26 September 2024].
[19] Davis, B., & Tarasuk, V. (2014). Food insecurity and mental health: A review of the literature. *Current Psychiatry Reports*, 16(12), 1-10. https://doi.org/10.1007/s11920-014-0510-3 [Accessed 26 September 2024].
[20] Niagara Community Observatory. (2024). *Sustaining food security in Niagara (Policy brief No. 58)* [pdf]. Brock University. Available from: https://brocku.ca/niagara-community-observatory/wp-content/uploads/sites/117/NCO-Policy-Brief-58-Sustaining-Food-Security-in-Niagara-April-2024-FINAL.pdf [Accessed 26 September 2024].

square feet. These facilities focus on potted plants (63%), fruit and vegetable production (22%), other greenhouse products (11%), and cut flowers (5%).[21]

The region's agricultural assets are bolstered by over 8,000 hectares of prime land, supported by a range of soil types and microclimates. Its location near the Great Lakes, Niagara River, and major transportation networks facilitates efficient distribution to markets across the province and beyond. Additionally, Niagara's horticultural sector has seen significant growth, with advances in technology and automation improving yields and productivity.

The economic impact of agriculture in Niagara is substantial, contributing $1.71 billion to the regional GDP in 2021, marking a 21% increase from 2016. The sector supports approximately 24,073 jobs, reflecting its expanding role in the local economy.[22]

Local institutions, including research organizations, educational institutions, and industry associations, play a critical role in supporting the agriculture sector. They provide essential resources, expertise, and networking opportunities, driving innovation and addressing industry challenges. Despite its strengths, the sector faces challenges such as irrigation issues, fragmented operations, and a need for greater recognition of its economic impact. Opportunities include enhancing agriculture's role as an economic driver, expanding agri-tourism, and leveraging climate change for new agricultural possibilities. However, threats such as competing jurisdictions, labor force concerns, and limited broadband connectivity pose risks to future growth. For more context on the Region's current landscape, please refer to the Agriculture Economic Development Action Plan for the Region.

4.0 Key Findings

As was outlined in the Introduction section above, the findings of this research paper are structured around several core questions aimed at understanding the relationship between the agricultural sector and food security in Niagara:

- Does a strong local agriculture sector impact rates of food security within a local population? For the purposes of this research paper, the region in question is Niagara, and the local population are those who live in the local area municipalities of the Region.
- What are the challenges to the agricultural sector contributing to food security in the Region?
- Are there any success stories in Niagara that the Region can build on as it contemplates ways to improve food security?

[21] Niagara Economic Development. (2022). *Niagara Agriculture Profile – December 2022* [pdf]. Available from: https://niagaracanada.com/data/reports/ [Accessed 26 September 2024].
[22] Niagara Economic Development. (2021). *Agri-business in Niagara* [online]. Available from: https://niagaracanada.com/key-sectors/agri-business/#:~:text=In%202021%2C%20agriculture%20in%20Niagara,23%25%20of%20its%20total%20farmland [Accessed 26 September 2024].

- What initiatives should the Region focus on to develop a more resilient agricultural sector that better supports individuals who struggle with food insecurity?

4.1 Summary of Findings

Published literature highlights that a strong local agriculture sector can increase food security within a local population, provided certain conditions are met. In a study presented at the European Conference on Innovation and Entrepreneurship, stakeholders emphasized that integrating sustainable practices into local agriculture not only boosts food production but also enhances the overall quality of life in rural areas, which is critical for food security. Sustainable practices help ensure long-term food availability by maintaining soil health, water resources, and biodiversity. Additionally, they improve rural livelihoods by increasing income and access to essential services such as healthcare and education. The study suggests that this combination of environmental sustainability and improved living conditions strengthens communities' ability to access and afford nutritious food, making food security more attainable.[23]

Moreover, the Green Climate Fund outlines that agriculture is central to food security, livelihoods, and economic development around the world. However, the effectiveness of a strong agricultural sector in alleviating food insecurity is contingent on the resilience and sustainability of food systems. Its "Agriculture and food security" sectorial guide indicates that addressing challenges such as climate change, market access, and supply chain vulnerabilities is crucial for maximizing the benefits of local agriculture on food security.[24] Therefore, while a robust local agriculture sector can positively impact food security, its success relies on the implementation of supportive policies and practices that promote sustainability and resilience.

In the context of Niagara, after reviewing published literature on the topic and engaging with experts in both the agriculture and social services sectors, it is evident that significant structural gaps and challenges must be addressed to establish a more direct relationship between the agri-food sector and improved food security for the Region's residents. Specifically, within the Region, we have identified three major challenges that must be overcome to foster progress toward a more causal relationship:

- **A lack of communication and networking.** The Region has a relatively fractured agricultural sector, with divides among and between agriculture sub-sectors. There is also no formal group that links producers and others in the agri-food value chain to individuals, social enterprises, for profit businesses, and food banks who aim to distribute excess or unsold products to those in need. This results in a situation where any excess product that may exist is not used to its fullest potential, as it is unknown who could use the food product for a greater good.

[23] European Conference on Innovation and Entrepreneurship. (2023). *Aligning agri-food business with sustainable development and quality of life in rural areas: Stakeholders' perspectives from Greece* [online]. Academic Conferences International Limited. Available from: https://papers.academic-conferences.org/index.php/ecie/article/view/1383 [Accessed 26 September 2024].
[24] Green Climate Fund. (2021). *Agriculture and food security sectoral guide* [pdf]. Available from: https://www.greenclimate.fund/sites/default/files/document/agriculture-and-food-security-sectoral-guide.pdf [Accessed 26 September 2024].

- **A lack of broader value chain infrastructure.** The agri-food value chain is an area of focus for the Region and its Local Area Municipalities. In this context, the lack of infrastructure, specifically transportation and warehousing, creates a second unique challenge of how excess food product could be moved from a producer to a venue for the local population to access, including the full journey in between.
- **A lack of accessibility.** The Region is a relatively large land mass, with many locations that are virtually inaccessible without private transportation. The physical location of where nutritious, culturally appropriate, and low-cost foods exists for those who need it is a critical factor to consider. Two additional sub-considerations exist as well: how accessible the physical location is via public transportation/walking and the cost of the product. If products are in remote locations with no transportation options servicing these, and cost roughly as much as a major grocer, then, for all intents and purposes, there is no local product to be enjoyed by those in need.

4.2 Illustrative Scenario: Maria's Struggle with Food Insecurity in Niagara

To contextualize the gaps of the current state and demonstrate their real-world impacts, we present below an illustrative example of how the challenges listed above actively hinder an individual living in Niagara from accessing local, nutritious, and affordable food.

Meet Maria: Maria is a 45-year-old resident of St. Catharines, living on a modest income. She holds two part-time jobs, one of which she walks to, the other requiring two buses to reach as Maria has no car. With the increased cost of living, Maria finds that her wages are being increasingly stretched, and as such she is inching closer to having to decide between paying her bills and having enough to eat every day. Maria has started to look at options where she can find cheaper, local, and nutritious food.

4.2.1 Challenge 1: Lack of Communication and Networking

The first core challenge identified by our research is a lack of networks, which creates significant communication gaps. Most individuals in the agriculture sector operate independently, rather than as part of organized groups or networks, which makes it difficult for communities to connect with local food resources. Outside of farm gate stands or roadside markets, individuals need to know where to look for nutritious, affordable food options. The current lack of strong networks makes it difficult for individuals to find out where they can obtain local, nutritious food at an affordable price.

- **Fragmented Connections Between Farmers, Non-Profits, and Community Organizations.** Farmers in the Region often have surplus produce, especially items that do not meet the strict aesthetic standards required by commercial retailers. These blemished or irregularly shaped products are still nutritious and perfectly edible, but without a market, they often go to waste. Many farmers are likely willing to sell excess produce at a reduced price compared to what they sell on their first harvest crops.

However, working to create the produce leaves little time to look for new partnerships with non-profits and community organizations that are eager to address food insecurity. When Optimus SBR engaged with local producers in developing Niagara's Agriculture Economic Development Action Plan, most farmers noted that while they had to join associations such as the local chapter of the Ontario Federation of Agriculture or the Christian Farmers Association for tax purposes, these groups did not offer strong networks or linkages beyond helping with administrative issues. This left farmers unsure of who to talk to when it comes to making broader community connections. While the potential exists for these associations to reenergize their base and facilitate active meetings that bring people together, these efforts remain largely untapped. As a result, valuable resources are underutilized, and collaboration opportunities are missed.

- **Limited Outreach and Public Awareness.** Due to the lack of communication networks and structures in place to spread information about the available food resources in the community, the general public remains largely unaware of the options available to them. Difficulties in discovering where to find affordable, healthy alternatives deepen the challenge of food insecurity for many.

4.2.1.1 Proposed Solutions to Address Challenge 1

To bridge these communication gaps, the Region should aim to create a centralized space where members can share information, resources, and opportunities. This can be done through the following:

- Focusing on enhancing existing networks within the agricultural sector by establishing an online platform that facilitates connections among farmers, social enterprises, non-profits, and other community organizations. The platform could also serve as a topic of discussion within current associations, encouraging them to host regular networking events such as mixers where farmers and social enterprises can meet, identify mutual needs, and explore opportunities for partnerships.
- Supporting the development of an online directory or mobile app that lists available local produce and nearby food distribution centers.

Implications for Maria: When Maria is looking for local, nutritious, less costly food, she will be unable to find much of it in downtown St. Catharines. Unlike those living near farms with direct farm gate sales or food stands, Maria is far removed from these sources. With only a small portion of produce reaching urban areas, the food she needs is essentially out of reach.

By creating a centralized space for information sharing, the Region can help individuals like Maria locate affordable, nutritious food options within her community, making it easier for her to make healthier choices without straining her budget.

4.2.2 Challenge 2: Lack of Value Chain Infrastructure

Another barrier that exists is the lack of a robust value chain infrastructure. Value chain vulnerabilities involved in the distribution and storage of produce prevent producers from getting

their products to market or to non-profits and social enterprises. The value chain infrastructure encompasses several critical components, including transportation, warehousing, and distribution systems. Each of these elements play a vital role in ensuring that food can be efficiently moved from where it is grown to where it is needed most.

- **Transportation Challenges.** Many small-scale farmers in the Region lack the resources to transport their produce to distant markets or distribution centers. This issue is compounded by the fact that social enterprises and non-profits often operate on limited budgets and may not have the means to pick up food donations or purchase transportation services. Without a reliable and cost-effective transportation network, even the best-intentioned efforts to connect surplus food with those in need can fall short. For example, a farmer might have an excess of second harvest vegetables that are perfectly edible. Without transportation, these vegetables might go to waste instead of reaching food-insecure individuals.
- **Warehousing and Storage Limitations.** Perishable goods such as fruits, vegetables, and dairy products require proper storage conditions to maintain their quality. Unfortunately, there is often a lack of adequate cold storage facilities in close proximity to both farms and distribution points. This gap means that even if food can be transported, it may spoil before it reaches those in need. Social enterprises and non-profits that do manage to secure food donations often cannot secure sufficient storage space, which limits the amount of food they can accept and distribute. This situation not only leads to food waste but also reduces the availability of nutritious food.
- **Distribution System Inefficiencies.** The distribution of food involves more than just getting products from point A to point B; it also requires a well-coordinated system that ensures timely delivery to multiple locations, including food banks, shelters, and community centers. Regions with fragmented or underdeveloped distribution systems make it more challenging for food to reach its intended destination in a timely manner. This inefficiency can result in supply gaps, leaving food-insecure individuals without access to the products they need when they need them. Additionally, the lack of a coordinated distribution network makes it difficult to scale efforts to address food insecurity, as each organization must rely on its own limited resources.

4.2.2.1 Proposed Solutions to Address Challenge 2

To address these issues, the Region should focus on building partnerships and optimizing existing resources. This can be done through the following:

- Fostering partnerships with businesses that specialize in transportation, warehousing, and distribution to explore mutually beneficial solutions, such as leveraging existing infrastructure or creating public-private partnerships.
- Encouraging business participation through incentives such as public recognition, streamlined regulatory processes, or financial support through tax breaks or grants for specific projects.

- Utilizing existing public infrastructure, such as regional transit services, for food distribution.

Implications for Maria: Without a strong value chain infrastructure, the connection between farmers and those in need is disrupted, and the potential impact of any partnerships or networking efforts is diminished. Even when local food is available, it remains out of reach for food-insecure individuals like Maria, who struggle to access it due to logistical challenges.

By fostering partnerships with businesses and utilizing existing public infrastructure for food distribution, the Region can create beneficial solutions that enhance food accessibility and ensure that fresh, local produce reaches Maria and others in her community.

4.2.3 Challenge 3: Lack of Accessibility

The third challenge that exists is a lack of accessibility, which refers to the ease with which food-insecure individuals can physically reach and afford nutritious food. In the Region, several factors contribute to this challenge, making it difficult for individuals to obtain the healthy, local produce they need.

- **Location Challenges.** The first barrier is the physical location of food distribution points. In today's current landscape, there are not many centrally located, easy to access food distribution hubs for each of the communities of the Region. This gets exacerbated the more rural you are in the region. Rural residents or those living in food deserts—urban areas with limited access to affordable, nutritious food—may find it especially challenging to reach these locations. Even within urban areas, distribution points might be concentrated in certain neighborhoods, leaving others underserved, which further limits market access for vulnerable populations.
- **Transportation Limitations.** Many food-insecure individuals do not own a car and must rely on public transit, which may not always be convenient or affordable. Limited bus routes, infrequent service, or long travel times can all contribute to the difficulty of accessing food. For individuals who are caretakers to family members or work multiple jobs, spending hours on public transit to buy groceries is not always a viable option.
- **Cost Barriers.** Locally sourced, organic, or fresh produce often comes with a higher price tag than processed or less nutritious options. For someone living on a tight budget, the higher cost of healthy food can make it an unrealistic choice, even if it is available nearby. The dilemma then becomes one of prioritizing affordability over nutritional value, which perpetuates the cycle of food insecurity and poor health outcomes. This issue is particularly pressing in regions where economic disparities are pronounced, and the cost of living is high.

4.2.3.1 Proposed Solutions to Address Challenge 3

To improve food accessibility, the Region could explore innovative partnerships and transportation solutions. This can be done through the following:

- Partnering with local businesses or social enterprises to explore innovation solutions, such as the feasibility of mobile markets—trucks or vans that regularly bring fresh produce directly to underserved neighborhoods, making it easier for residents to access nutritious food without having to travel long distances.
- Assessing existing public transit routes and considering adjustments, such as rerouting or increasing service frequency to connect residential areas with food access points.
- Working with local transit authorities and exploring partnerships with private transportation companies to link residents with food distribution hubs, without requiring large-scale transit overhauls.
- Offering incentives such as discounted transit passes for food-insecure individuals to remove cost barriers.

Implications for Maria: If the nearest source of healthy food is miles away, and public transit options are relatively scarce, it becomes nearly impossible for Maria to access the food she needs regularly. Even if Maria lives relatively close to a food distribution point, transportation can be a major hurdle.

Enhancing food accessibility through mobile markets, improved public transit routes, and partnerships with local transportation services would significantly reduce barriers for individuals like Maria. These initiatives would ensure that nutritious food is more readily available, enabling her to access healthy options without the challenges of distance or transportation.

5.0 Seeds of Success

While challenges in the agricultural sector present significant barriers to food security, there are also inspiring examples within the Region where innovative agricultural practices have made a tangible difference in local communities. The following success stories demonstrate how collaboration, creativity, and commitment can lead to positive outcomes, improving access to nutritious food and enhancing the overall well-being of residents.

By examining these real world examples, we can better understand the strategies that have proven effective in bolstering food security and explore how these practices can be scaled or adapted to address broader challenges across the Region.

5.1 Start Me Up Niagara

Start Me Up Niagara (SMUN) offers services and programs to support people facing significant challenges such as poverty, homelessness, unemployment, disabilities, addictions and mental

health issues.[25] Established on land donated by the Vineland Research and Innovation Center, SMUN's "From Our Garden-Feeding the Community" program is designed to address food insecurity in the Region by providing fresh, nutritious produce to those in need.

In addition to distributing local, organically grown fruits and vegetables to schools, senior homes, and community meal programs, SMUN runs a twice weekly vegetable stand during the summer months that offers pay-what-you-can pricing for low-income community members.

Due to the increasing demand for nutritious food and a lack of funding, the organization has recently introduced the "Adopt a Row" sponsorship program. Individuals and local business owners can sponsor a row at the community garden for $500, which allows SMUN to fund the upkeep and delivery of the food grown and harvested by a dedicated group of volunteers. [26]

SMUN also uses its two-acre community farm space for social enterprise activities. Initiatives include cultivating various heirloom beans, which are sold as seeds and for cooking purposes. Additionally, SMUN collaborates with community members to grow specific herbs, flowers, and vegetables which are harvested and used in a kitchen program to create unique products for sale at the farmer's market. These activities sustain the farm and its programs, while offering financial support to the participants involved.[27]

5.2 Small Scale Farms

Small Scale Farms, located in Allanburg, encompasses over 19 acres of farmland containing plants, vegetables, livestock and bees. The farm's founder, Renee Delaney, works with dozens of volunteers and local farmers to create a sustainable food chain that ensures healthy produce reaches those in need.

Using a subscription-based delivery service, customers who pay full price for a box of produce help subsidize a pay-what-you-can program. [28] For every box of produce sold, the farm donates a box to someone in the community facing food insecurity. Customers are encouraged to bring their free box, assembled with the leftover produce donated by small-scale farms, to individuals struggling with food insecurity themselves to see their social impact firsthand.[29]

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[25] Start Me Up Niagara. (2024). *Home* [online]. Available from: https://www.startmeupniagara.ca/site/home [Accessed 26 September 2024].
[26] My Niagara Online. (2024). *Start Me Up Niagara offering sponsorships to increase access to affordable food* [online]. Available from: https://myniagaraonline.com/blog/start-me-up-niagara-offering-sponsorships-to-increase-access-to-affordable-food/ [Accessed 26 September 2024].
[27] Start Me Up Niagara. (2024). *From our garden* [online]. Available from: https://www.startmeupniagara.ca/site/from-our-garden [Accessed 26 September 2024].
[28] Pelham Today. (2024). *Food insecurity affects 50,000 in Niagara* [online]. Available from: https://www.pelhamtoday.ca/local-news/food-insecurity-affects-50000-in-niagara-6347938 [Accessed 26 September 2024].
[29] Niagara This Week. (2024). *Everyone has a responsibility to help: Thorold farm tackles food insecurity one box at a time* [online]. Available from: https://www.niagarathisweek.com/life/everyone-has-a-responsibility-to-help-thorold-farm-tackles-food-insecurity-one-box-at-a/article_cd1c6dcc-47f2-5ccf-8ede-96c3df9f6d62.html [Accessed 26 September 2024].

To further its mission, Small Scale Farms launched the Red Maple Farm School in late April 2024, offering courses on farming, homesteading, beekeeping, and making natural medicine.[30] This initiative, along with the farm's produce donation program, emphasizes the organization's commitment to creating an ecosystem essential to human welfare while actively addressing food insecurity in the region.

5.3 The Good Food Box

The Niagara-on-the-Lake Rotary Club has assisted in combating food insecurity in the region by delivering fresh produce through the Good Food Boxes program and organizing food drives to support local food banks.[31] The Good Food Box (GFB) program aims to improve community health by providing fresh, affordable produce sourced from local farmers and wholesalers. The produce varies each month to ensure the highest quality of food is available to families who might otherwise struggle to afford it. Boxes are delivered to host sites on a monthly basis, which are central and easy to access areas of the Region.[32]

5.4 Feed Niagara

A coalition of ten regional food banks, Feed Niagara coordinates efforts across the Region to provide essential food supplies to those facing hunger. Member organizations such as Community Care of West Niagara, Project SHARE, and The Hope Centre offer food assistance programs, deliver fresh produce, and run community outreach initiatives to ensure food reaches those who need it most.[33] Part of the coalition is also Community Care of St. Catherines and Thorold, the largest food bank in the Region, which assists approximately 10% of the local population.[34] Through Feed Niagara, regional food banks gain access to provincial food supplies and operational support that strengthens their capacity to meet the rising demand. The pooling of resources such as warehousing, transportation, and staff support ensures that the Region's food banks do not duplicate efforts but rather complement each other's strengths, allowing them to serve a wider population.

[30] Thorold Today. (2024). *Small-scale farms looking to grow to new heights* [online]. Available from: https://www.thoroldtoday.ca/local-news/small-scale-farms-looking-to-grow-to-new-heights-8680981 [Accessed 26 September 2024].
[31] Niagara-on-the-Lake Rotary. (2024). *Bulletin* [online]. Available from: https://niagaraonthelakerotary.ca/bulletin/View/aff0dc51-c8c4-4a52-9e6f-86b65c1d7fee [Accessed 26 September 2024].
[32] Links for Greener Learning. (2021). *Good Food Box pop-up market* [online]. Available from: https://linksforgreenerlearning.org/programs/good-food-box-pop-up-market/ [Accessed 26 September 2024].
[33] Feed Niagara. (2024). *Home* [online]. Available from: https://feedniagara.ca/ [Accessed 26 September 2024].
[34] My Niagara Online. (2024). *Niagara food banks come together as Feed Niagara to meet alarming need for emergency services as food bank usage climbs across the province* [online]. Available from: https://myniagaraonline.com/blog/niagara-food-banks-come-together-as-feed-niagara-to-meet-alarming-need-for-emergency-services-as-food-bank-usage-climbs-across-the-province/ [Accessed 26 September 2024].

In September 2023, Feed Niagara received a $1 million pledge through CAA, which will be distributed in $100,000 increments annually.[35] It has also attracted generous offers from farmers and individuals within the community, such as access to their own perishable food hub.

6.0 Implications for Niagara's Agriculture Action Plan

The Region's Agriculture Economic Development Action Plan aims to unify the Region's agriculture sector to jointly capitalize on opportunities, address challenges, and drive the sector into the future. This plan outlines several success factors and accompanying strategic initiatives to drive the Region's agriculture sector forward in a unified, coordinated, and impactful way to enhance its leadership status in the agriculture sector for Ontario, Canada, and internationally.

The Region can address the three major gaps identified in Niagara's agricultural sector—communication and networking, value chain infrastructure, and access—through initiatives within the Action Plan. By aligning these challenges with the Region's strategic focus areas, Niagara can develop a more resilient agricultural sector that better supports individuals who struggle with food insecurity.

6.1 Increasing Communication and Networking

The lack of communication and networking within the agricultural sector can be addressed by building stronger relationships between farmers, non-profits, and social enterprises. The solution proposed—establishing a centralized platform for collaboration—ties directly into **Strategic Initiative 1.1** of the Action Plan, which calls for supporting the development of the Niagara Agriculture Association (NAA) as a unified voice for the Region. This platform could facilitate communication and resource-sharing among stakeholders, promoting partnerships and ensuring that surplus produce reaches those who need it. Additionally, the solution supports **Strategic Initiative 1.2**, the "Grown in Niagara" media campaign, which could be used to promote this platform and increase awareness of the food distribution programs available.

6.2 Strengthening Value Chain Infrastructure

Addressing the lack of value chain infrastructure involves improving transportation, storage, and distribution systems. This directly aligns with **Strategic Initiative 4.2**, which focuses on working with industry to identify gaps in the value chain and usable land. By mapping out areas where infrastructure is lacking, the Region can focus investments on the most critical points in the distribution process, ensuring excess food can move from farms to consumers. Furthermore, **Strategic Initiative 4.4**, which establishes a mid-market BR&E campaign to support production and export opportunities, could be expanded to include local distribution solutions that ensure

[35] CAA Niagara. (2023). *CAA Niagara caps big food boost with $1M multi-year pledge to Feed Niagara* [online]. Available from: https://caaniagara.ca/news/caa-niagara-caps-big-food-boost-1m-multi-year-pledge-feed-niagara [Accessed 26 September 2024].

surplus produce is efficiently stored and transported to non-profits and markets that serve low-income individuals.

6.3 Increasing Accessibility

Access to local, nutritious food due to issues related to location, transportation, and cost, can be tackled through a combination of strategic initiatives. **Strategic Initiative 4.2**, which focuses on identifying value chain gaps, provides an opportunity to assess and improve distribution points to ensure they are strategically located and accessible to food insecure individuals. Additionally, **Strategic Initiative 5.4** which involves improving access to broadband services could support the creation of an online directory or mobile app that lists food distribution locations and public transit routes, making it easier for food insecure individuals to find affordable, nutritious food.

6.4 Streamlining Inclusion of Food Security as a Priority

Above, it is clear that the proposed solutions are consistent with the Grown in Niagara plan already. In the updated version, these considerations above have been added as **Strategic Initative 1.5**, so that they are cohesive and their underlying motivation is clear as the plan gets implemented.

7.0 Conclusion

Food insecurity has many dimensions, and minimizing requires many conditions to be present, and conscious efforts to bring them about. This research paper has outlined several challenges, opportunities, and actions aligned with the Region's Agriculture Economic Development Action Plan that the Region can work with to take on this challenge for many of its residents.

8.0 Appendix

8.1 Stakeholders Engaged

The following table outlines a list of individuals interviewed during the stakeholder engagement portion of this project, as well as the purpose of these interviews:

#	Role/Person(s)	Organization	Purpose
1	Rita Sterne, GTN Project Manager	Greenhouse Technology Network	To gain a better understanding of food security and related issues throughout the Region.
2	Amanda Ali, Food Security & Market Projects Manager	United Way Niagara	To gain a better understanding of the Food Security Network and Niagara landscape.
3	Renee Delaney, Owner	Small Scale Farms	To gain a better understanding of the Small Scale Farm's operating model and food security issues.
4	Betty Lou Souter, CEO	Community Care St. Catherines and Thorold	To gain a better understanding of food security and related issues throughout the Region.