

General Information:**Grant name:** Mitacs Accelerate Grant 2021**Total Funding:** \$15,000**Project duration:** 6 months**Start date:** January, 2021**End date:** April 2021**Title:** Identifying Opportunities and Barriers for Local Food Infrastructure in Yellowknife, NT**Abstract:**

Communities throughout Canada's North are turning to small-scale agriculture in hopes of solving food security issues, fostering economic growth and adapting to climate change. The City of Yellowknife adopted GROW, an Agriculture Strategy, to foster a resilient local food system. One of the goals of this Strategy is to identify infrastructure needs to support and incubate local food production through a food hub as stated in GROW (Goal 4 / Objective 4:1). Building on outreach undertaken for the development of the City of Yellowknife Food and Agriculture Strategy (City of Yellowknife, 2019), the City of Yellowknife and Participatory Action Researchers at Wilfrid Laurier University will further engage community members and local food actors in Yellowknife to identify how potential infrastructure, can foster opportunities and address community-defined needs to enhance the local food economy. Through interviews and focus groups, targeted participants will envision a sustainable food system in Yellowknife and provide input and local context to how infrastructure can improve access to healthy, locally produced food and support the emerging local food economy. This research will result in recommendations to the City staff on infrastructure, programming and policy needs to further the dialog of local and sustainable food systems in Yellowknife.

Background:

Investments in transportation infrastructure across the Northwest Territories has opened up the region to new economic opportunities and provided northern citizens with improved, year-round access to perishable food. This opening up of food supply chains to southern food supplies has stimulated competition for local producers, contributing to a decline in local food enterprises (Government of the Northwest Territories, 2017). While national and international food supply chains can potentially improve food abundance and food choice, climate change creates vulnerabilities within food supply when key agriculture regions around the world experience climate extremes and the impacts of the global COVID-19 pandemic. Uncertainty in the global food supply chain can result in temporary price spikes and shortages which create vulnerability within the local food system. This uncertainty combined with high transportation costs, food spoilage, and limited competition through distribution and retail options means that much of the food shipped into NWT remains inaccessible to a large portion of the population resulting in spring rates of moderate or severe food insecurity (Council of Canadian Academies, 2014; Tarasuk, 2016; FSC, 2016). One solution to these challenges is to bolster local food production, thereby addressing northern food insecurity while also improving socio-economic conditions, livelihoods, and well-being initiatives.

The City of Yellowknife has made small-scale agriculture development a strategic priority and has developed a Food and Agriculture Strategy and cited agriculture and food as a priority within the City's Economic Development Strategy 2020 – 2024 (Goal #5). This Strategy identifies objectives and actions that support building "a just and sustainable food system...rooted in a healthy community, where everyone has access to adequate and affordable nutritious food; more food [is] grown and harvested locally; and food production policies and infrastructure are in place to support an economically viable, diverse, and ecologically sustainable local food

system” (p 3). GROW lays out five goals: 1.) support sustainable growth of urban agriculture and related activities; 2.) enhance access to urban agriculture basics; 3.) support community learning opportunities around food and agriculture; 4.) encourage the growth of the Yellowknife food and agriculture economy; and 5.) build internal capacity for successful implementation (City of Yellowknife, 2019). The Strategy is complete, but community participation and engagement is needed to implement these actions and transform the local food system in Yellowknife.

Since 2016, Wilfrid Laurier University (Laurier) has played an active role in the development of a more sustainable food system in Yellowknife through important partnerships with Ecology North, the Yellowknife Food Charter Coalition, and the Yellowknife Farmer’s Market (YKFM). This work has supported a broad network of individuals and organizations that have been working to build local policy based on the Yellowknife Food Charter and drive action to address issues of food security (Johnston and Williams 2017). This community-led research has been supported through the SSHRC Partnership Grant Food: Locally Embedded, Globally Engaged (FLEdGE) which aims to foster food systems that are socially just, ecologically regenerative, economically localized and that engage citizens. Some of the actions FLEdGE researchers have supported in Yellowknife include planning and implementing food-related initiatives across the city, including the popular Fall Harvest Fair, Community Supported Agriculture Supper Clubs, community consultation as part of the Food Policy for Canada and an evaluation of the Yellowknife Farmers Market (Radcliffe et al. in press). More recently, Laurier has been instrumental in building the Territorial Agri-Food Association and plays an active role in supporting local food production and climate change adaptation planning and action plans in communities across the Northwest Territories (Spring et al. 2020). Recently, the City of Yellowknife approached Laurier researcher, Dr. Andrew Spring, to form a partnership to assist in the implementation of one of GROW’s objectives.

GROW recognizes local food networks and infrastructure as an incubator for the growing local food economy. Action 4.1.1 of the strategy calls to “support and participate in exploring the viability of a Yellowknife commercial food incubator and community food hub” (p. 26). Food hubs embody this objective as they act as connectors between producers and consumers within a local food system (Maston, Sullins & Cook, 2012; Maston & Thayer, 2013). They provide a centralized space for trade and they support marketing and distribution of local and regionally grown food to meet consumer needs (Maston, Sullins & Cook, 2012). Various food hub models that have been developed to address issues within local food systems. At its most basic level, a food hub acts as warehouses to improve distribution from producers to wholesale, retail and institutional consumers (Ibid.) Food hub models that are rooted in sustainability and community development practices take on a more wholistic approach, supporting local, small- and medium-scale food production, processing and distribution (Berti and Mulligan 2016). While the consumer desire to purchase and consume locally grown food is a key driver in the proliferation of food hubs, they certainly play an essential role in building community food resilience by improving logistics and marketing local products (Maston & Thayer, 2013). In isolated communities such as Yellowknife, a food hub can overcome some of the challenges in high transportation costs, scarce access to perishable foods and foster the development of diverse local production. Since there is no set model for a food hub, Yellowknife has the opportunity to learn from other examples and initiatives, and to engage innovative ideas from its own producers and local food actors, to create a made-in-the-NWT solution to support emerging local food economies.

Immediate context for the study:

- A prevalence of food insecurity experienced across the North
- The high costs associated with importing market foods and limitations of federal policies/subsidies aimed at meeting food security needs
- The vulnerability communities face when dependent on imported food
- Growing interest in local food production (greenhouses, gardens, farms, chicken coops, etc.) in the northern communities
- Lack of policy and infrastructure to support local food production in the Northwest Territories
- The imperative to undertake research on food security using a community-based participatory research methodology
- The need for programs, initiatives and research to respond to the needs of Yellowknife community members (Ellis et. al. 2017).

Objectives:

To understand how infrastructure such as a food hub can support local food and agriculture business development and distribution in the City of Yellowknife;

To identify factors that the City of Yellowknife should consider when designing supportive food system infrastructure that will stimulate commercial food production, build upon local strengths, and address the barriers that local residents experience in accessing affordable, nutritious and culturally appropriate local food.

To reach these objectives, we will undertake the following **activities**:

1. Perform an environmental scan including a review of grey and academic literature, programs and policies being implemented by northern and remote communities similar to Yellowknife to support the local food economy. This environmental scan will provide an understanding of how different models of food hubs and local food incubator models could be implemented in Yellowknife.
2. Work with City of Yellowknife partners to map local food assets, including existing producers, food-related organizations, retailers and other relevant food-actors.
3. Undertake scoping interviews and focus groups with local food actors in Yellowknife (from Step 2) to determine the infrastructure, capacity and programming needs to foster a thriving local food economy. These interviews and focus groups will be used to identify needs, barriers and opportunities for local food infrastructure in Yellowknife.
4. Work with the City of Yellowknife to cooperatively develop recommendations and plans for local food programming and support future feasibility studies of a food hub or local food infrastructure.

Details of Internship Work

Intern: Jennifer Temmer

Project overview:

This research is grounded in a Participatory Action Research (PAR) methodological approach that is the basis of climate change adaptation research in NWT communities (Spring et al., 2018; Spring et al. 2020). PAR ensures research is community-driven and responds to the practical concerns of the community through active collaboration of researchers and participants in co-learning (Gilmore et al., 1986). With origins in community empowerment, social action and community health and development (Wallerstein and Bernstein, 1994, McTaggart, 1999, Altrichter et al., 2002), PAR strives to achieve community-driven/defined social change and transformation (McTaggart 1999). Consistent with other work in the North which utilizes Community Based Research (CBR) approaches (Berkes & Jolly, 2001; Pearce et al., 2009; McGregor, Bayha and Simmons, 2010; Armitage et al., 2011; Tondu et al., 2014), this research will be conducted alongside community members and will foster opportunities for community engagement and participation (Minkler and Wallerstein, 2011) to help build trust and open and transparent communications to benefit the community (Angell and Parkins, 2010, Tondu et al., 2014).

This research will follow these steps:

1. Environmental scan - This will include a review of grey and academic literature, programs and policies being implemented by northern and remote communities similar to Yellowknife to support the local food economy. The environmental scan will identify different models of food hubs and local food incubator models could be implemented in Yellowknife.
2. Asset Mapping - This will include digitally mapping locations of local food infrastructure and actors in the City of Yellowknife. Data will be collected through scans of local food vendors, retailers and actors in Yellowknife through websites and existing network of partners.
3. Qualitative Research - 10-15 interviews and focus groups (approximately 30 participants in total) with local food actors in Yellowknife identified in Step 2, thorough consultation with City of Yellowknife contacts and by snowball sampling. Interview and focus group questions will be co-created with research partners and focus on infrastructure, programming and capacity needs and barriers. These interviews and focus groups will take approximately one hour and will be conducted virtually through Microsoft Teams, or other platforms, recorded, transcribed and thematically analyzed using NVivo 12 software.
4. Collaborative recommendations- bi-monthly meetings with City of Yellowknife officials responsible for the Food and Agriculture Strategy will occur throughout the duration of the research process to ensure the partner organization is fully informed. The final report and recommendations will be written by the intern with revision support from City officials and will include discussions on how to operationalize the Food and Agriculture Strategy.

Methodological step	Timeframe
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1) Environmental scan	Months 1-2
2) Asset Mapping	Months 2-3
3) Scoping interviews and focus groups	Months 3-5
4) Report writing and presentation of recommendations	Month 5-6

The expected deliverables from this project are:

- a) Environmental Scan of northern food hubs and food initiatives to be posted to FLEdGE website
- b) Report and Presentation to City of Yellowknife Council on community-defined priorities for food infrastructure and programming.
- c) Contributions to Jennifer Temmer's thesis, as well as a peer-reviewed journal article in Canadian Food Studies and conference presentation at Canadian Association of Food Studies.

Benefit to the intern

Jennifer Temmer has just started her PhD in Geography and Environmental Studies at Wilfrid Laurier University. She is an exceptional student with a long and diverse experience in community development and sustainability projects. This project will serve several purposes for Jennifer, first, being that it will be her first experience working with partners in the NWT. As the foundation of our research program is building long term relationships with partners, it is very important for her to begin to make these connections. Second, Jennifer's thesis will examine innovative ways communities in the NWT can distribute food using different tools and economies, such as the social and informal economies of food that exist in the North. Food hubs have therefore emerged in conversation across a broad spectrum of community partners, from larger urban centres (such as Yellowknife) to small Indigenous communities. This project will offer valuable experience for Jennifer as she begins to develop research questions to support the development of different models of food hubs in the NWT.

Intern On-Site Interaction:

Due to COVID-19 restrictions, no on-site activities or work will be required. This project has been designed to be conducted remotely. Under current Government of Northwest Territories Covid-19 travel restrictions, all travellers to NWT are required to provide a 2-week self-isolation plan in order to limit the spread of the virus. In June 2020, the territorial government relaxed health restrictions to Phase 2, where up to 25 people can gather in indoor spaces however this research will be conducted virtually to limit potential exposure to participants. If the opportunity arises to have participants congregate in one space, it will be the responsibility of the host organization to ensure that all government, group size limits, social distancing and sanitation protocols are followed.

This project has been designed to be conducted remotely. No office space or resources from the City of Yellowknife are needed due to the remote nature of this work. Local expertise and experience will be required to help identify potential research participants as well as other guidance

The intern will work remotely using video conferencing software such as zoom and teleconferencing where necessary. Bi-monthly virtual meetings will be held between the intern and the partner organization to build relationships, report on research progress and to provide support connecting the intern to community stakeholders and government officials involved in implementing the Yellowknife Food and Agriculture Strategy. The intern will also attend virtually, any meetings called by the partner organization deemed relevant to this research.

Richard McIntosh will act as the intern's supervisor for the duration of the research project.

Relevance to the partner organization and to Canada:

Our partner, the City of Yellowknife, is now at the stage of implementing recommendations from its commissioned food strategy (GROW: Yellowknife Food and Agriculture Strategy). Our partner will provide on-going support and guidance for the project and link the student to local food actors. The City has a vested interest in supporting the local economy and well-being of its residents, and this partnership will bring additional capacity to achieve its 2019-2022 goals of diversifying the economy and improving the quality of life of all residents (City of Yellowknife, 2019). The project will support the City in meeting its obligations to Yellowknife residents who, in turn, benefit from opportunities to enhance food security. By exploring and defining possibilities for infrastructure to support the local food economy, this project will support improved local resiliency to system shocks, due to COVID-19 or ongoing impacts of climate change that may disrupt food distribution. Furthermore, by supporting a more ecologically sustainable local system, this project supports Canadian and global health

through the integration of climate-informed policy and reducing the amount of food transported from the South.

References:

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