Original Research Article

Generations of gardeners regenerating the soil of sovereignty in Moose Cree First Nation: An account of community and research collaboration

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Abstract

The challenges northern remote communities in Canada face acquiring regular access to affordable and healthy food have been well documented. Our Indigenous Health Research Group, made up of an informal network of researchers from universities across Canada, has partnered with northern communities, Tribal Councils, and Political organizations (Assembly of First Nations, Nishnawbe Aski Nation) in Yukon, Northwest Territories, British Columbia, and Ontario since 2004 to document and support local land-based food strategies to increase local food capacity. While much of this work has focused on supporting traditional food harvesting efforts, many community partners are seeking to develop small-scale gardening to increase access to fresh fruit and vegetables. As part of a five-year project supporting local food initiatives in four communities in northern Canada (Northwest Territories and northern Ontario), we worked with the Moose Cree First Nation in Moose Factory, Ontario and their local Food Developer to support food sustainability planning. The research presented in this article describes collaborative efforts between Moose Cree First Nation Band Council leadership, community members, and our research group in support of local garden development as part of their local food sustainability strategy. With the guidance and engagement of community, we worked with families in Moose Factory to build and plant family-centered gardens. The article focuses on start-up engagement
strategies, garden uptake, garden construction and planting activities, garden yields, and individual feedback from gardeners describing their experiences with the project.

**Keywords:** Indigenous; First Nation; food security; food sovereignty; gardening; food sustainability; community-based participatory research; resurgence; community-based action research

Résumé

Les défis auxquels sont confrontées les communautés nordiques isolées du Canada pour obtenir un accès régulier à une alimentation abordable et saine ont été bien documentés. Depuis 2004, notre groupe de recherche sur la santé autochtone, composé d’un réseau informel de chercheurs et chercheuses universitaires de tout le Canada, s’est associé à des communautés nordiques, à des conseils tribaux et à des organisations politiques (Assemblée des Premières Nations, Nation Nishnawbe Aski) au Yukon, dans les Territoires du Nord-Ouest, en Colombie-Britannique et en Ontario pour documenter et soutenir des stratégies alimentaires locales axées sur le territoire afin d’accroître la capacité de production alimentaire locale. Bien qu’une grande partie de ce travail ait été consacrée au soutien à la récolte d’aliments traditionnels, de nombreux partenaires communautaires cherchent à développer le jardinage à petite échelle afin d’accroître l’accès aux fruits et légumes frais. Dans le cadre d’un projet quinquennal de soutien aux projets alimentaires locaux dans quatre communautés du nord du Canada (Territoires du Nord-Ouest et nord de l’Ontario), nous avons travaillé avec la Première Nation Moose Cree, à Moose Factory (Ontario), et son responsable du développement alimentaire pour soutenir la planification de la sécurité alimentaire. La recherche présentée dans cet article décrit les efforts de collaboration entre le conseil de bande de la Première Nation Moose Cree, les membres de la communauté et notre groupe de recherche pour soutenir le développement de jardins dans le cadre de leur stratégie de sécurité alimentaire locale. Avec les conseils et l’engagement de la communauté, nous avons travaillé avec les familles de Moose Factory pour aménager des jardins familiaux. L’article se concentre sur les stratégies d’engagement de départ, l’adhésion au jardin, les activités d’aménagement et de plantation, les récoltes et les commentaires des jardiniers décrivant leur expérience dans le cadre du projet.
Introduction

The challenges northern remote communities in Canada face acquiring regular access to affordable and healthy food have been well documented (Council of Canadian Academics, 2014; Willows et al., 2009). Research highlighting the impact of European colonialism and its disruption of local food systems, the impact of resource extraction, and the high cost of shipping market food items to the north is important to understand why food security remains so high throughout Indigenous communities in northern Canada (Daschuk, 2013; Kingston, 2015). There is also a growing body of research and activism documenting the resurgent work with and by Indigenous communities, supporting and/or improving their local food security and self-determining sovereignty (Ferreira et al., 2021; Settee & Shukla, 2020; Skinner et al., 2013; Thompson et al., 2011; Thompson et al., 2018). A resurgent research framework builds on Indigenous axiology of connection to land, connection to community and knowledge, and self-determination (Gaudry, 2015; Herman, 2018). This shifts from deficit-centered Indigenous health research towards placing attention on Indigenous peoples’ enactment of sovereignty, regenerative engagement, and long-standing resistance and resilience (McGuire-Adams, 2021; Smith, 1999). Our Indigenous Health Research Group (IHRG), made up of an informal network of researchers from universities across Canada, has partnered with northern communities, Tribal Councils, and political organizations (Assembly of First Nations, Nishnawbe Aski Nation) in the Yukon, Northwest Territories, British Columbia, and Ontario since 2004 to document and support local land-based food strategies to increase local food capacity (Robidoux & Mason, 2017). While much of this work has focused on supporting traditional food harvesting efforts, many community partners are seeking to develop small-scale gardening to increase access to fresh fruit and vegetables. Many Indigenous communities in Canada are developing strategies to increase traditional food harvesting capacity, while also exploring alternative food programming that involves traditional and alternative food procurement methods that look to increase control over local food systems (Barbeau et al., 2015; Fieldhouse & Thompson, 2012; Lombard et al., 2021; Loring & Gerlach, 2010; Thompson et al., 2018). Sumner et al. (2019) provided detailed reporting of Indigenous food initiatives across Canada, identifying the types of initiatives, those responsible for leading them, and the various funding mechanisms supporting them. The results highlight the importance of Indigenous-led, place-based programs that “build local capacity for exercising and establishing food sovereignty” (Sumner et al., 2019, p. 247). Examples of local capacity building are unsurprisingly diverse as they build on local knowledge, food systems, and resources (environmental, human, financial, etc.). Some examples include community freezer programs (Organ et al., 2014), land-based teaching programs (Ahmed et al., 2023), traditional and contemporary nutrition and cooking workshops (Murdoch-Flowers et al., 2019), restoration of local food species (Blanchet et al., 2021), large- and small-scale agriculture (Skinner et al., 2014), and local food markets drawing from traditional food sources and more economically feasible market food sourced from grocery wholesalers (Ferreira et al., 2021; Searles, 2016). As part of a five-year project supporting local food initiatives in four communities in northern Canada (Northwest Territories and northern Ontario), we worked with the Moose Cree First Nation (MCFN) in Moose Factory, Ontario and their local Food Developer to support food sustainability planning. This work focused on
supporting local food development in relation to their broader community food strategy and strengthening long-standing community initiatives. Community gardening was one of the local food development strategies determined by the MCFN, and it is the focus of this paper.

Community context

The research for this project took place in the MCFN of Moose Factory, an island community located at the base of James Bay, between 51.264 latitude and −80.597 longitude (Louttit, 2006) (see Figure 1). There are 5,013 registered band members, with 1,843 people living on the reserve (Government of Canada, 2022). When the river is not frozen the community is accessible by boat taxi, and, during the colder winter months, it can be reached by winter road. Throughout the year helicopter service provides access to the Island, which is particularly important during freeze-up and breakup. MCFN is rich in its generations of knowledge keepers, languages, and a culture that is deeply rooted in traditional knowledge of the land, *pimatisiwin* (life) values, and kinship practices (Gaudet, 2017).

Figure 1: Map identifying the location of the Moose Cree First Nation, Moose Factory Ontario, Canada. Map created by University of Ottawa April 15, 2020.
In the spring and fall of 2019, our group assisted in re-establishing two community garden spaces, planting seeds, and harvesting what was grown. The results from this project (Ferreira et al., 2021) identified challenges and opportunities in community gardening, most notably the very universal challenge of sustained volunteer participation (Loopstra & Tarasuk, 2013) and the opportunity to support individual family gardens in parallel with community gardens. The arrival of the COVID-19 pandemic in 2020 prevented our research group from travelling to Moose Factory for two years. During this time, the community secured funding to develop family gardens in response to community desires and as part of their commitment to their independent, ongoing food development work. In the spring of 2022, our research team was able to return to assist with this new phase of family garden engagement and development. The collaborative efforts between MCFN Band Council leadership, community members, and our research group are described in the following section. With the leadership and engagement of community, we worked with families in Moose Factory to build and plant family-centered gardens. The article focuses on start-up engagement strategies, garden uptake, garden construction and planting activities, garden yields, and individual feedback from garden participants describing their experiences with the project. The project generated even greater interest for future garden development the following spring.

Methodology and methods

The research for this project builds off the community-based participatory research (CBPR) approach our group utilized when first working with the MCFN in 2019. To foster a research process that is collaborative in orientation, Indigenous perspectives, methodologies, and ways of knowing shape our guiding principles. Indigenous methodologies (IM) are informed by an Indigenous worldview that includes language, cultural practices, protocols, reciprocal obligations, song, stories, ceremonies, and place-based ways of doing and being (Kovach, 2005, 2009, 2019). It calls for research that is relevant, reciprocal, respectful, and regenerative. With respect to being on Treaty Nine with the intent to work in relation with the MCFN, we recognize that we are visitors on this land and therefore respect the ethics and responsibility of being good guests. While a CBPR approach involves researchers and participants in all aspects of the research process, IM goes further than this (Absolon, 2011; Gaudet, 2017; Kovach, 2009; Smith, 1999). Given that none of the research team members are Cree and we are therefore limited in accessing a worldview informed by their language, we acknowledge our limitations in fully adopting an IM. We also recognize our relational obligation and responsibility to be critical of our privilege, power, and positions, as well as the systemic inequities we benefit from, and that we have a responsibility to interrupt western hierarchies, to advocate for community-centered priorities, and to privilege Indigenous knowledge systems (Willows, 2013, 2019). We also come to this work: a) knowing, to some degree, the extensive labour of gardening; b) appreciating the benefits of the process and the harvest; and c) willing to learn with and from community.

In learning from our previous research working with northern Indigenous communities, these partners...
contribute their expertise and knowledge to address community-defined issues and to contribute to the strengths of existing local food procurement initiatives. Our learnings have shaped the research process and project implementation plans. IM and other participatory community-based methodologies highlight the challenges posed by inequitable power relationships, and leading Indigenous scholars acknowledge the strength of this approach (Alfred & Corntassel, 2005; Bishop, 1998; Kovach, 2009; Smith, 1999). As such, the centering of community interests and leadership asserts an approach that builds on community needs grounded in a place-based context. In conducting CBPR, we share what Israel et al., (2003) put forth as nine guiding principles that “will vary depending on the context, purpose, and participants involved in the process” (p. 55). Given the collaborative approach undertaken for this research, four of these principles were especially pertinent: “CBPR builds on strengths and resources within the community”; “CBPR facilitates collaborative, equitable partnership in all phases of the research”; CPPR promotes co-learning and capacity building among all partners”; and “CBPR integrates and achieves a balance between research and action for the mutual benefit of all partners” (Israel et al., 2003, p. 56; emphasis in original). Our research approach highlights a collaborative gathering and sharing of knowledge where both community and researchers experience an ongoing participatory exchange, and seeks to develop knowledge with practical applications to community (Kidwai & Iyengar, 2017). As outlined below, project design, implementation, outcomes, and communications were created collaboratively with the MCFN leadership and staff associated with the project.

The project underwent a full ethics review and was approved by the University of Ottawa’s Research Ethics Board. The research for this project involved two stages of fieldwork conducted in Moose Factory in May and June of 2022 and in September and October that same year. Project plans were developed in the spring of 2022 with project collaborator Stan Kapashesit, who is the MCFN Director of Economic Development, and the MCFN Local Food Developer. Phase one of the fieldwork involved meeting with local residents interested in having a personal garden and helping to construct raised gardens boxes for their families. This phase of fieldwork also involved preparing the soil in the existing community garden across from the Elders’ Complex. During this three-week period, community leadership and our accommodation host introduced our research team to community members who had gardening knowledge and experience on the Island. We also had several conversations with local residents (either people we already knew in the community or people we were introduced to) in more social settings, where conversations often gravitated towards gardening as a result of inquiries around what we were doing on the Island. These informal conversations offered opportunities for our team to learn from community members about gardening involvement in the past and present and the types of fruits and vegetables that were typically planted, and to explore what other growing options already existed. To increase knowledge exchange, Stan advised us and assisted us to communicate with community members through the MCFN Facebook page. It is a popular social media platform on the Island that was useful for communicating about project activities and seeking involvement from potential gardeners. This led to a Moose Factory Island Gardeners Facebook page being created, which enabled project participants and members of our group to communicate about project activities—its development is discussed in greater detail below. Information that was shared did inform the content of this paper, but information was not cited.
unless written permission was received (for example, see Figure 3.) As both new and returning visitors to the region with varying experience gardening in northern climates, this learning was a vital part of our methods and allowed us to tailor our work to the community.

The second phase of fieldwork was similarly coordinated with the MCFN economic development team prior to arriving in late September. During this phase, the purpose was to visit with all individuals and families who participated in the garden project and had gardens built at their homes. Being mindful of not wanting to appear as though evaluating “success”, the intention was to create an informal conversation while working with participants in the garden spaces, or simply while walking through the garden spaces and seeing what people had grown. This informal conversational approach provided a relaxed atmosphere to learn about each gardener’s experience growing over the course of the summer, what worked well, what did not, what they would have done differently (e.g., making the garden larger, planting different seeds, starting earlier, etc.), if they were planning to plant a garden the following year, and how this program could support their growing efforts if they wanted to continue. Conversations lasted between thirty minutes and two hours. At least two members of the research team were present in each conversational setting. Fieldnotes describing our reflections, learnings, and main themes were written by each team member at the earliest time possible following each conversation. In order to effectively convey the outcomes of this collaborative garden project in Moose Factory, we opted to provide a narrative account describing the various stages of project implementation that can best be described as fluid and evolving. Draft versions of the paper were submitted to project partners Stan Kapashesit, Kim Cheechoo, and Alice Gunner for their review and feedback. All project partners and participants were given the option to be identified or to remain anonymous in the paper. Those who wished to be identified provided written permission to have their name or photographic image used. What follows are detailed descriptions of the two phases of fieldwork that emphasize the process and outcomes of a collaborative approach.

Fieldwork phase 1

When COVID-19 restrictions were gradually lifted in the winter of 2022, our group began making plans to resume fieldwork activities to support partnering communities in northern Ontario with their development of local food initiatives. Part of these plans involved recruiting a horticultural student (TK) from Thompson Rivers University in Kamloops, British Columbia to support garden development, which we had done with three of the four communities prior to the pandemic. Accompanying this student was EV, who was involved with our previous fieldwork in another partner community in the Northwest Territories, where she worked with community members on ongoing local food initiatives in this region (Ross & Mason, 2020a, 2020b). Our team met with the newly recruited students—who, in addition to being formally trained in horticulture, had extensive commercial vegetable farming experience—to discuss...
the potential activities to be offered in Moose Factory. We then organized a virtual meeting with the MCFN Local Food Developer to discuss what project activities the community wanted implemented and how we could best support the activities they were planning for the spring. The conversation focused on four main activities: 1) provide gardening workshops for families interested in developing personal gardens; 2) assist families in constructing personal gardens; 3) help prepare and plant the community garden; and 4) help assemble a community greenhouse that the MCFN purchased in 2021. There were also discussions around possibly offering food preservation workshops as well as basic soil sampling to learn if different types of soil amendments might optimize growing on the Island.

With a mutually agreeable plan in place, which everyone understood to be flexible and adaptive, travel dates were established to align with the planting season that typically occurs from late May to mid-June.

**Collaborative planning process**

Research team members TK, EV, KL, and MR arrived in Moose Factory the last week of May. Once we arrived and got settled into our guesthouse accommodations, we took the first day to settle in, to get organized, and to set a time to meet with Stan. We had been informed just prior to our arrival that the Local Food Developer took a leave of absence from his position and would not be available to assist during our visit as originally planned. We were able to visit with him and provide updates about the project, but, without a Local Food Developer in place, it was important to work more closely with Stan to go over project activities and determine who would carry them out. Kim Cheechoo, the Tourism Officer for MCFN and administrator of the Cree Cultural Interpretive Centre (CCIC), took on the leadership role of coordinating and guiding the efforts. Stan also suggested that we meet with Alice Gunner, an experienced gardener on the Island with formal horticultural training. She was hired to work on a large garden complex managed by the MoCreebec (an independent Cree First Nation Association and community located in Moose Factory). She has years of experience growing in this space and is a valuable source of local knowledge for garden timing, crop varieties, and logistics. We were able to walk to the MoCreebec garden complex, and, while discussing the extensive gardening projects she was managing, we helped with some of the weeding and preparing the land for planting. With our hands in the soil, together we talked about the home-garden initiative planned by MCFN, and she was highly supportive of the idea, recalling when MoCreebec planned and executed a similar project in 2019. She stressed that, based on her experience working with new gardeners, it was imperative that people build, plant, and harvest their own gardens in order to encourage uptake, ensure agency, build capacity, and ultimately sustain the initiative. We also talked about our original garden project that began in 2019 and asked her thoughts on the personal garden direction currently being planned. She was appreciative of this approach and explained that the MoCreebec had also supported personal garden development two years earlier. She explained that there was some uptake, but she believed a more hands-on approach would have been more effective, not only for uptake, but also for sustainability.

The next day, our team met with Stan at the Band Office to discuss project plans and create an action plan for our time on the Island and for when we left, to ensure gardeners were supported throughout this ongoing project. In learning more about the greenhouse that was currently in storage, it was apparent that it would require professional contractors to assemble it. The focus for this trip would therefore be on the
community garden preparations and initiating the individual family gardens. In the absence of a Local Food Developer Stan became more involved, not only in project planning but also in project implementation. As visitors, it would have been impossible to carry out the project without having strong leadership and guidance from our partnerships. Not only do our partners at MCFN epitomize this, but they also exuded generous warmth and hospitality, something that has long been characteristic of MCFN. Critical to the project was determining a means of informing people of the individual garden opportunity and a process to organize garden construction. We were uncertain how comfortable people would be to come forward and have our group build them a garden in their personal and private yard spaces. Stan believed the best approach would be to host an information session about the garden project with the assistance of Kim at the CCIC.

In the beautiful outdoor space at the CCIC, there is a long structure called a *shabatwan* as described and defined in the Cree language. The *shabatwan* has served and upheld the People’s kinship governance practices for centuries. For this reason, gatherings are common in this space, given it is an enactment of their sovereignty. With the help of the MCFN graphic design team, Stan asked us to develop an electronic poster to be displayed on the MCFN Facebook page giving notice of a meeting and pizza dinner to be held the following afternoon for any community members interested in starting a garden. He also suggested that we meet with Kim the following morning to discuss project plans and to get her feedback on what she believed would be a good approach moving forward. We concluded the meeting by briefly going over budgets, planning our group’s contribution to the information meeting, determining supplies required for garden construction, and organizing arrangements for the use of a truck and trailer the MCFN provided to carry out the work.

After the meeting with Kim, our next task was to locate the gardening tools and rototiller to begin working in the community garden. It had only been partially used over the past two years as a result of COVID-19 lockdowns and restrictions. We were uncertain if a community garden would be planted this spring, but, in anticipation of the probability and our interest to get to work, we decided to weed and till the soil in preparation for planting. The garden is located directly across from the Elders’ complex and overlooks the beautiful Moose River. At one time the community garden was approximately ten metres by 100 metres, but, since gardening activities resumed in 2019, about half of the space has been cleared and fenced off for a more gradual return to community gardening. The space is large enough that it required a considerable amount of time to dig out the deeply rooted brush that had grown over much of the space. We spent the better part of the day removing unwanted plants and roots and organized ourselves to spend a couple more half days in the garden to have the soil ready for planting. By late afternoon, we decided to break and get ready for the community meeting and pizza dinner at the CCIC.

**Prospective home gardener engagement**

Because this was a new project for both the MCFN and our research group, we were uncertain what to expect in terms of community interest for the project. The announcement for the information session event was advertised less than twenty-four hours prior to its occurrence, and it was taking place the same night as a MCFN membership meeting. Stan had purposely scheduled the information session so it would end prior to the membership meeting. He ordered fifteen pizzas and appeared confident that people would attend the meeting. We purchased bottled water, soft drinks, napkins, and paper plates and met at the *shabatwan* just...
before the meeting began. We were surprised and excited to see that within minutes people started arriving and mingling while we helped set up a table for the food and drinks. Shortly after the proposed start time, the space was filled with approximately twenty-five people eating and visiting.

As people settled with their food, Stan welcomed everyone to the information session, introduced our research team, and provided a brief description of the family garden project. He then asked MR to offer a few introductory words and explain how people could sign up for home gardens. This precipitated multiple interactions between those in attendance and our research team, including sharing information about gardening, booking times for the construction to take place, and distributing seeds. It cannot be overstated how important these interactions were, not only to share information about the project, but to introduce ourselves as visitors to the community. These relaxed exchanges were key to building relationships with interested community members and to establishing a comfortable co-learning dynamic as we discussed garden options in their personal spaces. People were keen to share their own gardening experiences with us, describing what they had previously grown and/or telling us about their memories of growing up with a garden. There appeared to be much enthusiasm for home gardening, and thirteen individuals and families immediately signed up for a date and time to meet and construct their raised beds with our team. Each individual and family picked out a variety of vegetable, fruit, and flower seeds that our team members brought to the Island. From our estimation, the event was highly beneficial, not just for learning about people’s interest in building personal gardens but also for sharing with the community information about the project. More people reached out to us via Facebook messenger or text message after the information session to request a personal garden. This might have been in response to the Facebook advertisement Stan had posted on the MCFN Facebook page, or information may have spread through word-of-mouth by people who were at the meeting.

Co-constructing gardens

In total, twenty-two garden boxes were built for seventeen households over a two-week period. Project team members KL, EV, and TK were involved in the process of purchasing lumber with funds provided by the MCFN and constructing the garden boxes. The garden box sizes were ultimately determined by the length and width of lumber available, taking into consideration a practical starting area to work with and an ergonomic design for reaching across the bed. We decided on two rectangular options, a one metre by two metre box and a one metre by three metre box, both with a twenty-five centimetre depth. The boxes rested above ground and were held in place by four corner stakes (see Figure 2). Upon arriving at each house, our team consulted with the gardener about the most appropriate location based on access to sunlight and water and the particular needs of the plants they were hoping to grow. Gardens were built by tilling an area just larger than the wooden garden box, removing the sod, weeds, and rocks, and raking and aerating the soil. Once the ground was prepared, the wooden structure was hammered into place and the soil was deposited evenly throughout the bed. Because of time constraints, it was not possible to remove all the weeds for each location, but the team was able to work with the gardeners to create a space as ready for planting as possible.
This process was important for a variety of reasons: we co-constructed a garden, relationships, and knowledge as we sat with our hands working in the soil, sharing labour, memories, and stories of food and life in general.

Figure 2: Garden boxes being set up in June 2022. Included in the photo are Summer Butterfly and son Sawyer, Tegan Keil, and Emalee Vandermale. Photo by Keira Loukes.

Despite generally good soil across the Island, some gardeners’ boxes required additional fill. Not wanting to dig up more yard than was necessary, we texted Stan for some ideas, and he asked us to pick him up during his lunch break so he could show us the location of a local soil source. When we arrived, with Stan fully dressed in office work clothes, the four of us stood shoulder to shoulder chatting and laughing over updates on the gardens, while shoveling a full truck-bed of soil. This moment was one of many that solidified the importance of strong partnerships and relationships in community-based research. It works better when we enjoy each other’s company—when we can work and laugh beside each other. We share this story to point to the imperative of community-led research partnerships—without Stan and Kim’s dedicated involvement and the enthusiasm of community, the project would not have had such a positive start and definitely would not have been able to pivot when necessary. For example, halfway through our time in
Moose Factory, the weather turned to rain, saturating the ground to a point where it became too wet to till. Despite the wet conditions, we were able to continue to prepare garden beds by removing sod and installing box frames. However, there was not enough soil on the Island to set the gardeners up to plant in a timely manner. At this time Stan was away at a Business Development course at Harvard University, yet within a few quick text exchanges we managed to order soil from Cochrane, Ontario to be sent to Moose Factory on the next train. Since it arrived late in the evening the day before our departure, we were not able to distribute it to community members by truck as planned. Kim offered to organize a place to store the soil at the CCIC and helped to coordinate distribution to families who came to pick up this soil. The process of co-constructing gardens at the community level demonstrates the multi-tiered layers of labour required.

**Planting seeds**

The timing of this fieldwork was intentionally planned to precede the last frost when gardeners begin planting outdoors, allowing time to build gardens and acquire seeds as needed. When meeting with local gardeners during our first week, we learned that most would plant cold-hardy crops outdoors as early as the first week of June, so we quickly worked to acquire the seeds that gardeners requested. While we arrived with a large variety of common vegetable, flower, and fruit seeds, we did not yet have seed potatoes, assuming based on past experience that they would be available at local stores. Potatoes were the most commonly requested crop, but, unfortunately, seed potatoes were on backorder at both local stores, prompting us to order them online to be delivered by train to Moosonee. Towards the end of the trip, MCFN Health Centre staff that we met with to discuss other gardening projects shared extra seed potatoes with us from their own project, which we later delivered to each gardener. We offered to help planting whenever possible, but for the most part people planted on their own. To support the planting process, we were able to help plan garden spacing and provide each gardener, in writing, with a planting schedule. Knowledge exchanges in a learn-by-doing approach, listening, and responding to each gardener’s experience and requirements were of utmost importance.

To avoid overwhelming new gardeners with information during our time co-constructing garden beds, the team developed a “next-steps” document based on common questions and knowledge shared by experienced gardeners on the Island. This document was then shared with each participant via email. In discussions with Kim and Stan, we decided to create a Facebook group open to all gardeners; Facebook is a widely used social media platform that we believed would be a fun and accessible means of sharing information. We invited all the gardeners we worked with, as well as a few widely known experienced gardeners from the Island, to join the Facebook group as a way for everyone to ask and share knowledge with each other. Right from the outset community members began using the page to ask and answer questions, share resources, encourage one another, and post photos of their gardens.
Fieldwork phase II

Throughout the summer months, we stayed virtually connected with individual gardeners through the Facebook page. People would often post images of plants being grown, either with questions attached or proudly displaying the stages of growth (see Figure 3).

Figure 3: Conrad Rickard’s post on Moose Factory Island Gardeners Facebook page of carrots harvested in his garden, October 2022.

Staying virtually connected was useful for us as we began planning for the second stage of fieldwork to take place the last week of September and the first week of October. As was done for previous trips, we reached out to Stan and Kim to discuss potential trip dates, accommodation options, and suggested project activity plans. In discussion with Stan and Kim, we agreed on four primary objectives for this stage of fieldwork: 1) connect with the gardeners who participated in the MCFN home gardening initiative to learn about their experiences with the gardens, get input about future directions, and assist them with remaining harvesting and preparations for next spring; 2) assist in the community garden harvest and help prepare the gardens for next spring; 3) help organize a feast to celebrate the great work from all the gardeners and acknowledge the collective involvement of collaborative food project initiatives over the past three years; and 4)
participate in any way possible in community events associated with the National Day of Truth and Reconciliation occurring on September 30th.

In making these plans, we were aware from previous fall garden fieldwork in Moose Factory and other northern community partners that the timing of meeting with people in early October was not ideal. End-of-season garden harvesting overlaps with the fall hunt, where many community members go out on the land and to their camps to hunt moose and waterfowl. Going earlier or later, however, would prevent us from seeing gardens at peak harvesting time, which ultimately guided our decision to book during these dates. The high costs of travelling to Moose Factory prevented EV and TK from attending and participating in this phase of the fieldwork in person, but they remained key members of the team who continued to provide their gardening expertise to us and to local gardeners via text message. Prior to this trip, they also provided us with information on how to help prepare gardens for spring. They remained accessible by phone throughout our time in Moose Factory and were repeatedly called upon to provide answers to questions about plant identification and harvesting techniques. Team member CG, who is co-investigator on this research grant, was able to attend this phase of the fieldwork. CG was responsible for our original partnership with the MCFN, having worked many years with the community documenting land-based practices for youth. She continues to have strong relationships with many people in the community, and these relationships were critical both for beginning the broader project in 2019 and for facilitating these second stages of fieldwork.

We arrived during the final week of September and, with the assistance of Kim, got settled into our accommodations on the second floor of the Hudson Bay Staff house, which housed Hudson Bay employees in the late 1800s and early 1900s. The historic site has since been taken over by the MCFN and converted into an accommodation building for visitors—including tourists, business guests, health service providers, and, as we were fortunate to experience, honorary guests. On arrival, we learned of the passing of Stan’s uncle, which meant he was off on bereavement leave for the duration of our stay. We were therefore much more dependent on Kim, who generously guided the next steps, community engagement, and organization. Kim’s leadership was invaluable to the project from the start, especially during our second trip. To initiate the first objective of meeting garden participants, KL created a post on the Moose Factory Island Gardeners Facebook page as well as individual text messages to each gardener communicating our arrival and the intent of our visit. We asked to meet with anyone interested in speaking with us about their growing experiences and offered support for winterizing their gardens and planning for next spring. While waiting for responses and to make the best use of our limited time in community, we then turned our attention to our second objective, the community garden that had been planted and led by the husband-and-wife team who steered the original community garden prior to our arrival in 2019.

When we arrived at the community garden, at first glance, it appeared as though it had simply grown over and planting had not been possible this year. On closer inspection, it was apparent that potatoes had been planted, but weeds about a meter in height had grown over the plants. Later we learned that the couple who

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2 In 2021, the Canadian federal government responded to a direct call to action from the Truth and Reconciliation Commission to create a statutory holiday to honour “the children who never returned home and Survivors of residential schools, as well as their families and communities. Public commemoration of the tragic and painful history and ongoing impacts of residential schools is a vital component of the reconciliation process” (https://www.canada.ca/en/canadian-heritage/campaigns/national-day-truth-reconciliation.html).
planted the potato plants had become seriously ill in the summer, which required them to prioritize their health and step away from taking an active role in the garden. Kim connected us with their son, to whom we spoke about next steps for the garden and offered help to his parents with the harvesting, which they were happy to receive. We began the laborious process of removing the plants that had overgrown the potatoes and started digging up the tubers (see Figure 4). Even with minimal light from a crowded environment, the potatoes had grown better than our team expected, with each plant producing between one and five potatoes ranging in size (from golf ball to softball sized). Within a couple of hours, we harvested enough potatoes to fill the four milk crates the son had provided for us. We estimate that each crate held approximately twenty kilograms of potatoes. We then delivered the filled crates to the couple’s home and picked up some additional empty ones. As we were unloading the potatoes, the couple came out to greet us—MR and CG had met the father in 2019 when the community garden was being restored. He explained to us then how the garden started, and how he had been working with the MCFN Health Centre and had distributed garden yields to Health Centre program participants. In discussion with the couple, they explained to us what had transpired over the summer, including how they planted potatoes in two sections, one within the fenced area and another section of rows beyond the fence. They involved their granddaughter and some of her friends to help with the planting. We invited the children to be involved in the harvesting and to continue to support generations of gardeners. In total, we harvested nine crates (approximately 180 kg) of potatoes over a three-day span, which we dropped off at the couple’s house, other than a half crate which was donated to individual gardeners at the celebratory feast described below.

Figure 4: Overgrown potato plants being harvested and placed in milk crates. Photo by Michael Robidoux.
Work in the community garden was interspersed with visits to individual gardeners who responded to KL’s text messages. Other community members stopped by to visit and to help out in the community space. As mentioned earlier, seventeen households participated in the garden project, and fourteen of these participants responded via text message, ten of whom we met with to see their garden and have a conversation about their experiences. Of the four who responded that we did not meet, one had moved away from the Island, two were unable to plant gardens because of busier than expected schedules, and one was not available. Three individuals did not reply to the post. It is important to note that two of the respondents who were unable to plant gardens this past summer participated in the celebratory feast and indicated that they were keen to garden the following year.

For the ten gardeners we were able to reconnect with, we organized times to meet via text message and travelled to each gardener’s home at their convenience. Most people who responded were excited to show off their garden’s bounty. Some had questions about how and what to harvest, how to preserve food, and whether we knew of recipes that could incorporate their produce. Some talked about the support they received from family and friends who were long-time gardeners on the Island, and others were learning from the Facebook group and other social media platforms. The gardens on Moose Factory Island produced predominantly potatoes, as well as kale, lettuce, cauliflower, broccoli, carrots, tomatoes, peas, beans, pumpkins, and sunflowers. We noticed some differences between these ten gardeners—of the ten, three had built infrastructure around the garden, including fencing (to keep out dogs). Of these three, two built greenhouse structures using sheets of polyethylene to add warmth and protection—one in a hoop-house fashion from willows around their property, and the other with lumber that framed their bed. The gardener with the hoop-house structure also gained some fame for growing massive sunflowers and a sprawling pumpkin patch that produced a whopping thirty-six pumpkins, all of which they gave away as jack-o-lanterns around Halloween. Broccoli, carrots, and potatoes were grown in the other enclosed garden. While the pumpkin patch gardener had previous experience growing plants and added some nutrients to the soil, the broccoli gardener did not, and experimented with new ideas as they heard of them. For example, when we shared that rainwater is better for plants than chlorinated tap water, this gardener obtained a large rain barrel and only watered the plants from this source. This gardener attributed their productive harvest to using rainwater.

While many visits felt more like a tour of what had been grown, others required more support. For example, one gardener whose garden was full of green lettuce, kale, and beans accepted our offer to help in harvesting and preparing for fall. MR, CG, and KL sat and worked in the soil with the gardener and their young child, harvesting what they had nurtured and produced. Given the bounty of the kale harvest, with her permission, we brought some home to share with friends and to enjoy in our meals. While we worked we also visited, sharing stories about the summer, gardening, future plans, and recipes that incorporated vegetables they grew. During this visit, we also noticed and talked about medicinal plants growing nearby and some of their potential uses. For some of this identification, we relied on TK and EV via text message, who would respond to various pictures of plants we could not identify. Kim expressed an interest in learning more about the traditional medicinal plants that were abundant on the Island, such as rose hips, dandelions, and burdock. We made tea with the rose hips and
shared it with those visiting or staying at the Hudson Bay house.

While all the gardens we visited were productive, some places experienced higher yields than others. Yet, regardless of yield, all gardeners expressed that they thoroughly enjoyed their experiences and wanted to continue next year. Gardeners specifically noted how much they enjoyed the routine of tending to the garden in the morning, whether on their own or with a young child or older parent. One person mentioned that it was a way to connect with the land and food without having to travel far or needing a car. Another mentioned how this time acted as a meditative experience. Others referred to gardening as part of community healing and important for mental health. All gardeners mentioned the superior taste of their foods compared to the produce available in the grocery store. For example, gardeners who had harvested and eaten their potatoes claimed that they tasted much better than the “nearly rotted” and expensive potatoes available in the store. As the garden beds were quite small, even the largest yields were relatively modest compared to the average volume of produce consumed in each household, yet all gardeners commented on the economic benefits of growing even a small portion of their own food. After harvesting their broccoli, one gardener posted on the Facebook group: “It doesn’t matter that the store is out of broccoli, I have my own.” It is clear that agency over food choices and availability was a motivator and positive outcome of the home gardening initiative.

The issue of ownership is an important component of the home gardening initiative and distinguishes it from community garden programs that our research group and others (Seguin et al., 2022; Skinner et al., 2014; Stroink et al., 2009) have documented in Indigenous communities throughout Canada. For example, Skinner et al. (2014) reported on a communal greenhouse initiative that was developed in the Fort Albany First Nation, a sub-arctic community up the coast from Moose Factory. While there were tremendous outcomes from the project, the authors explain that community members “were not clear about who the greenhouse belonged to” (Skinner et al., 2014, p. 8), which impacted participation in the space. In a scoping review of community garden initiatives by Emmanuel et al. (2023), the authors identify multiple positive impacts of community garden programs, but also identify challenges, including sustained involvement and support for community gardens, that are not unique to Indigenous community gardening efforts (see also Loopstra & Tarasuk, 2013). In our initial garden support work in Moose Factory (Ferreira et al., 2021), community garden participation was one of the biggest challenges identified, which prompted the MCFN to explore a personal garden development program. The considerable uptake of the current program can be attributed to many factors, but ownership and agency over the space appear to have been important. This is not to suggest that community gardening is not worth pursuing, but, instead, that there is an important opportunity for personal garden development as another level of local food capacity building.

There was one gardener we met up with who was not able to grow in their space this year. They had minimal space in their backyard, and, although they had already built a raised garden bed which we helped fill with soil and transplant seedlings into in the spring, the wet summer, minimal drainage in the bed, and shaded location culminated in no harvest. During the fall visit we met up a few times, once at a family birthday party and another time for a walk along the Moose River to scout out suitable places for a garden the following year. Even without a harvest, strong interest in the potential
for yields, perhaps motivated by what others had grown, kept this gardener motivated.

While these meetings were important to maintain connections and collective learning, they were also intended to receive feedback from gardeners to direct future programming for MCFN’s food sustainability strategy. Many gardeners suggested that more materials, such as willow or lumber to construct hoop house style green houses, or, alternatively, funding to purchase a pre-made greenhouse, would be helpful to increase vegetable yields and diversity in this northern climate. There was a large interest in growing vegetables that need to be started indoors, such as corn, jalapeño peppers, and tomatoes. Gardeners also urged that seeds, especially potato seeds, should be more readily available in time for planting. There were suggestions for tools to be provided, such as garden forks, gloves, small shovels, and hand rakes, as well as soil and rain barrels. Some suggested creating higher raised garden beds or elevated planters, especially for Elders. One community member (who did not have a garden built this year) was especially interested in having the soil tested. They explained that many years ago they had heard that the soil around the landfill on the Island was contaminated—they were reluctant to start a garden without reassurance that the soil was safe to grow food in. We wondered how widespread this perspective was in the community, as this was the first time someone had brought up soil contamination to us. Other suggestions included having experienced gardeners from MCFN engage as mentors for the newer gardeners.

**Participating in community events**

Another important part of our stay in Moose Factory was to participate however possible in events commemorating the National Day for Truth and Reconciliation. We were informed of a public commemoration that was being held at the Delores D. Echum Composite School on Friday, September 30th, where community leaders and honorary guests offered personal reflections on the significance of the day and, in some cases, spoke about their experiences attending residential schools. There were musical artists from a diverse range of genres from the region who performed for the audience, and meals were provided by the First Nation following the memorial event. This moving event had an even greater impact on us because we were privileged to be staying with two of the honorary guests at the Hudson Bay Staff House. The two men came from the Cree community Kashechewan, which is approximately 130 km north of Moose Factory, located along the west coast of James Bay. These men were asked to take part in the service held on the 30th and to participate in a three-day culture camp that was being offered on a small island beside Moose Factory. The night prior to the event, the two men shared with us stories from their lives that had been dramatically influenced by the residential school system, the struggles they endured, and their ongoing journeys of healing, reclamation, and wellness. When the two men spoke and performed the following day at the school, their words and music touched us deeply as a result of this intimate sharing.

The final stage of the fieldwork involved organizing a community feast to help celebrate the gardening activities and to share our appreciation for welcoming us and making the project possible. When we approached Stan and Kim about the possibility of hosting such an event, we were hesitant to call it a “feast” at risk of disrespecting the cultural connotations and significance of the term. We wanted to offer food and gratitude given our project funding was ending, but as visitors we did not want to overstate the gesture or our capabilities of making such an offer. We made this
clear to Stan and Kim up front and relied on their guidance. As was so often the case, Kim guided us in putting the event together by making the CCIC available for us to host the event in the shabatwan and by arranging for traditional food to be shared for the meal. She suggested that we ask each invited guest to bring a dish of their choice to complement the fresh moose meat, geese, and fish offered by the CCIC. We originally posted about the final gathering on the gardeners’ Facebook page, but we also extended the invitation in person to each gardener we visited. Kim also made it clear that we were going to be preparing the wild meat that was donated with techniques she would teach us throughout the day.

We met at 9:00 that morning at the shabatwan, where Kim laid out the goose that needed to be gutted and prepared to be hung and spun over a fire for several hours. The Cree term for this unique style of cooking geese is sugabon, where a goose is suspended by a string from scaffolding above a central fire pit that runs the length of the shabatwan (see Figure 5). Kim guided KL as she removed the internal organs from the previously plucked and washed goose. Once the goose was suspended just above the reach of the fire, one person needed to remain close by to keep the goose spinning to ensure even cooking. She instructed us, as the knowledge keeper she is, with an ethics of learning by doing by tasking us with specific roles. While the goose was spinning over the fire, Kim brought out the moose meat, and she once again instructed KL on how the meat should be cut and made ready for cooking. Kim then instructed MR to retrieve nine fish (walleye/Sander vitreus) that were donated by Kim’s son and clean them so they would be ready to fry in a pan over the fire. The final dish that needed to be prepared was the bannock that was to be cooked by rolling it onto small wooden stakes that are inserted into the ground and slowly cooked at the edge of the fire (see Figure 5). Once again, Kim provided the ingredients of flour, baking powder, salt, and water, guiding us with proportions and how to prepare the dough. While the food was being prepared, we engaged in warm conversations and laughter with Kim, making for a fun morning and afternoon. We were so grateful for the opportunity to be sharing and learning while having the opportunity to contribute in this small way to this celebratory occasion.

Figure 5: Sugabon (cooking geese over fire) with bannock on sticks in the shabatwan. Photo by Michael Robidoux.
As the feast was about to begin around 4:00 pm, we brought out the pot of chili we prepared as our contribution and put it on the fire to reheat. People began arriving and placing their dishes on a table that was set up with drinks, paper plates, bowls, utensils, and napkins, along with the assortment of traditional food items that were already set out in serving dishes. Some of the community members brought dishes containing items they had grown in their gardens, such as potato dishes and salads. The event was attended by twenty-four guests, with garden participants accompanied by friends and family who were also invited to attend.

Prior to the meal starting, we discussed with Kim how best to welcome everyone since Stan was not able to attend. She suggested that MR say a few words to welcome everyone, thank people for their involvement, and provide a brief summary of project outcomes. After doing so, MR then directed people’s attention to a laptop computer that was set up, displaying a slide show of photos KL assembled for people to see the various stages of community and individual garden development that took place over the course of spring and summer. As per community protocols, Elders were first to be asked to come help themselves to the food, and, once they were served, the rest of us began lining up to eat. As people ate, we walked around serving tea for those who wanted it and shared in the many conversations that were taking place—some were garden related, but more were made up of general social banter that made for a fun evening. In our conversations, we talked about how we were often approached by individuals and families telling us they would have signed up for a garden if they had known about the garden program. Many told us that they would definitely sign up for a garden the following year if the program was still running. This clearly demonstrated that there is interest in the MCFN gardening program, and that investing in the program is not only worthwhile but needed. Many people took in the photo presentation that was running on the laptop, commenting on the images that were displayed. One of the biggest focal points was the amazing crop of pumpkins that grew, despite our team’s doubts that the growing season was long enough for them to fully mature from seed. In addition to the high number of pumpkins, many were large in size, which prompted more conversations about the growing potential of other plant species on the Island. The evening was joyous, with delicious food and social interactions. Once we helped Kim with all the cleaning, the night concluded with us helping one of the women, who was unable to start a garden that year because of her busy summer schedule, load her truck with leftover bags of enriched soil that was ordered for garden participants earlier in the summer. She said she would be better able to manage a garden the following summer and wanted to make sure she had all of her supplies ready for when we returned the following spring for the next phase of the project.
Conclusion

The objective of this paper was to describe ongoing collaborative efforts between the MCFN and our research group that center generations of gardeners. Local food initiatives, such as garden development, give voice to sovereignty as a vital form of cultural resurgence bound to land, people, and place. Collaborative research then becomes a mutual enactment that strengthens community-centered and-led priorities. This descriptive account of the fieldwork emphasized the layered stages of project conceptualization, development, and implementation. In our concluding reflections, we highlight multiple factors that contributed to the outcomes of the project so as to invite regenerative approaches to community-centered participatory research. First, this was a project developed and led by the community as part of their local food sustainability planning. The high level of engagement and participation in the project would not have been possible without community ownership, which also fosters a greater likelihood of project sustainability. Second, there was a strong collaborative relationship from the outset of the project that had been previously established. Our research group worked with the newly hired Local Food Developer in 2019 to support his role in developing local food sustainability planning; gardening became an important component of this, which we were able to support through physically assisting in garden development and offering gardening expertise that complemented the strong history of local gardening knowledge. As co-learners in the project, it was clear how important project flexibility was to build on collaborative strengths and adapt to multiple circumstances that presented themselves. Third, the project built on a clear interest in local garden development. The project facilitated garden start up for those who were interested in building gardens, and benefitted from additional support—i.e., construction materials, planting advice, soil amendments, and gardening tools. To build on this support, the MCFN and our group collaboratively wrote a successful application for funding through Indigenous Services Canada’s “Climate Change Adapt Program” to provide two more years of support to existing and potential new gardeners. This funding program will also provide funds for greenhouse construction, soil sampling, and staff to support the Local Food Developer with gardening activities and with the Local Farmer’s market. The high cost of food and limited availability of fresh fruits and vegetables are well understood challenges in remote northern communities; having the ability to offset these costs and get access to fresh food from the garden, even for a short period, was an important motivating factor and a deeply valued outcome for all participants. Lastly, research in service to the resurgence of Indigenous peoples is regenerative, like the soil itself. The labour of gardening is part of the emergent social, political, and intellectual movement of reclaiming and redefining the strength of connection to land, kinship, and life itself. It is active, embodied, and life affirming within a contemporary context.
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