

Fostering Food Security Through Local Cultures

Final Project Report

November 6, 2023







Table of Contents

EXECUTIVE SUMMARY	2
LAND ACKNOWLEDGEMENT	2
ETHICS APPROVAL	2
INTRODUCTION	3
PROJECT ACTIVITIES AND METHODS	4
OVERVIEW OF SURVEY RESULTS	6
KEY FINDINGS FROM THE INTERVIEWS AND CASE STUDIES	9
CLIMATE CHANGE AND RELATED ISSUES	9
Drought	9
Environmental Change	10
IMPACT OF COVID ON FOOD PRACTICES	12
ISSUES IN FOOD SECURITY	13
Limited Business	13
Loss of Local Knowledge	14
Disproportionate Impacts on Certain Groups	15
Help and Assistance	16
ISSUES IN FOOD PRODUCTION	16
Overreliance on The Global Food System	16
Organics	17
Quality of Food	19
COMMENTS ON MITIGATING FOOD INSECURITY	19
Farmers Markets	19
Community Cohesion	20
CASE STUDIES	21
Val Marie: The Farmers' Market and Heritage Grain Elevator	22
The Muskeg Lake Food Forest	22
CONCLUSION	23
REFERENCES	25

EXECUTIVE SUMMARY

While much is known about food security in Canada, there remain several gaps in our knowledge, especially where rural communities and local cultures are concerned (Canadian Rural Revitalization Foundation 2019). For example, it is not clear whether concerns about food security are widespread in rural places and, if so, what policies might address these concerns and how circumstances might affect the implementation of these policies. Through a province-wide survey, interviews, and case studies, this project explored all these questions with focus on settler and Indigenous communities in Saskatchewan and the organizational networks that support them.

Given impacts due to the COVID-19 pandemic and emerging effects of climate change, our objectives were: 1) to document current opinions and views about food security in selected rural Saskatchewan communities, 2) to document and draw insights from local stories about food-related experiences, challenges, and opportunities, and 3) to mobilize knowledge and identify steps that could foster resilient food systems. To this end, we asked:

- Are you concerned about food security and, if so, why?
- What actions and policies might alleviate your concerns?
- What steps can individuals, communities, and organizations take to make your local food systems more resilient?

Project participants identified two primary issues affecting food security: accessibility and affordability. These issues are related to several other challenges that came to light through this project, including limited businesses in the food industry and loss of local knowledge.

This report begins with a brief overview of the project context, activities, and methods, followed by an overview of the survey results. After that, key findings from the interviews are presented around the primary topics covered in this research: climate change and related issues, issues in food security, issues in food production, and how people mitigate these challenges in current practices and initiatives. The report ends with a brief overview of two cases that address some of these issues and features, in practice, how communities are actively addressing food insecurity.

LAND ACKNOWLEDGEMENT

This project was designed, planned, and carried out in Treaty 4 Territory, with interviewees from both Treaty 4 and Treaty 6 territories. Treaty 4 land is the Indigenous territory of the Anihšināpēk [uh-nish-inaa-payk (Saulteaux)], Dakota, Lakota, Nakoda, Nêhiyawak [nay-hi-yuh-wuk (Cree)], and traditional homeland of the Metis/Michif Nation. The project investigators recognize and respect the traditional territory of these Indigenous Peoples and the relationship between society and all of creation in both ecological and social dynamics. We are all treaty people.

FTHICS APPROVAL

Ethics approval for this project was provided by the University of Regina Research Ethics Board (REB# 2021-204 and 2022-051).

INTRODUCTION

Every day, as millions of people work to grow, distribute, sell, and use agricultural products, their activities create and respond to complex food systems that are dependent on fossil fuel energy, organic or chemical inputs, and distribution networks that link farms to distant markets. During the COVID-19 pandemic, many of these systems proved to be highly sensitive, with some falling dormant and others being propped up as essential services (Béné 2020). All local, regional, and global food systems are also threatened by climate change, with effects that may be less acute than the pandemic but equally pervasive (Vermeulen et al. 2012). In Saskatchewan, climate change is already impacting the quality and quantity of southern water supplies and strategies used for hunting, gathering, and fishing in northern areas (Spence et al. 2019).

This project examines the role that cultural or living heritage plays in local food systems, with an emphasis on challenges and opportunities associated with food security in rural Saskatchewan. The aim is to shed light on the cultural underpinnings of food production, procurement, and preparation strategies that can be developed or revitalized in the wake of the pandemic and future disruptions due to climate change. Living heritage refers to the stories, beliefs, knowledge, and actions that support and arise from local cultures (Massey 2019), and food security requires that "all people, at all times, have physical, social, and economic access to sufficient, safe, and nutritious food that meets their dietary needs and food preferences for an active and healthy life" (FAO et al. 2020, p 254). Living heritage and food security are clearly connected, and both have been studied in Saskatchewan for many years, but this is the first time that local food-related challenges and opportunities have been examined through a living heritage lens.

Saskatchewan is an ideal place to study the connections between living heritage and food security, given the major role that agriculture has played, and continues to play, in the provincial economy and rural communities (Müller 2008). As industrialized farming has become the dominant mode of production, for example, the image of a successful farmer has moved away from someone who is part of a collective in favour of rugged individualism (Fletcher 2013, Dibden et al. 2013). This has reduced the number and influence of farming cooperatives on the prairies (McCollom 2018) and contributed to high levels of producer stress, depression, and anxiety in Canada (Western Opinion Research 2005) and the USA (Newman 2019). Another recent trend involves Slow Food, a growing global movement where groups of small-scale producers and vendors are united by a mutual interest in food that is good (fresh, flavourful), clean (minimal environmental impact), and fair (affordable, reasonable return). Local signs of this movement include a Slow Food node in Saskatoon, grocery stores like The Wandering Market in Moose Jaw, and enterprising producers who provide vegetables and meat directly to their customers through community-supported agriculture (Devlin and Davis 2016). These and other recent changes suggest that people can be personally affected, highly motivated, and quick to act when food is involved. They also underscore the need for research to examine cultural processes that shape our food systems and to identify steps that might foster increased resilience and sovereignty.

Co-led by Dr. Glenn Sutter (Royal Saskatchewan Museum and Department of Geography and Environmental Studies) and Dr. Amber Fletcher and (Department of Sociology & Social Studies), the team behind this project includes Kristin Catherwood and Ingrid Cazakoff (Heritage Saskatchewan), Ebube Ogie (Graduate Student, Department of Sociology & Social Studies), and Katie Bird and Nick Antonini (Research Assistants). Our intention was to document and mobilize knowledge about local food security challenges and opportunities, providing information that will guide advocacy and influence decisions made by governments, local decision-makers, and the private sector. We focused on the

following research questions, with emphasis on food security issues facing rural and Indigenous communities:

- Are Saskatchewan producers, consumers, and agricultural organizations concerned about food security issues and, if so, why?
- What policies would help to alleviate their concerns?
- What tangible steps could individuals, communities, organizations, and municipal authorities take to enhance the resilience of local food systems?

Guided by these questions, we worked to:

- i. Document current opinions, attitudes, and beliefs about food security in Saskatchewan communities, including strategies around co-operatives, localized markets, and traditional foods,
- ii. Record local stories and draw insights from them about food-related challenges and opportunities,
- iii. Highlight aspects of cultural and natural heritage that affect local food production, and
- iv. Mobilize knowledge about food security and local trends, policies, and activities that affect it.

This report is part of our knowledge mobilization goal. It describes what the project uncovered about food security in context of contemporary issues that are significant to Saskatchewan. Some of these issues include climate change, living heritage, built heritage, rural livelihoods, immigration experiences, and a world impacted by the COVID-19 pandemic. The facets of these issues are discussed at length in the "Key Findings" section.

PROJECT ACTIVITIES AND METHODS

Data collection for this project involved three key methods: (1) an anonymous province-wide survey; (2) interviews with key informants in four selected rural communities, and (3) analysis of two case studies associated with food security.

The survey involved 60 primarily quantitative questions and was administered online using Qualtrics software. The questions asked about food-related knowledge and traditions, food security concerns, and local socio-economic and environmental changes related to food. The survey was actively promoted through our professional networks and food-related organizations and was open from February to June 2022.

The qualitative interview component focused on four communities in rural Saskatchewan: Gravelbourg, Muskeg Lake Cree Nation, Val Marie, and White City. These communities were selected based on geographical location (e.g., rural or peri-urban) and dispersion (e.g., west, central, and eastern Prairie ecozone), existence of food-related initiatives or challenges, and connection to the project partner, Heritage Saskatchewan.

Interviews were conducted with key informants, such as community leaders or those active in food-related initiatives, within each community. Interview participant roles were assigned according to the capacity in which each person participated. For example, everyone is a consumer, but some participants were identified according to other roles in the food system, such as being a farmer. Key informants from each of the following groups were invited to participate:

- Producer (e.g., farmers, ranchers, gardeners)
- Consumer (e.g., community members and employees)
- Vendors (e.g. restaurateurs, etc.)

- Governance (e.g. town council, etc.)

Finally, there are two participants who, while speaking on their work which ties them to Muskeg Lake, are not representatives of Muskeg Lake Cree Nation. They are referred to in this report as 'Climate Change Coordinator' and 'Indigenous Sovereignty Advocate', respectively.

Interviews were transcribed by the interviewers and then coded using NVivo 12 coding software.

As the interviews progressed, researchers identified two case studies of particular interest: the Muskeg Lake Food Forest and the Val Marie Heritage Elevator and Farmers' Market. These case studies were further explored through interviews with key actors and observational site visits. Each case was analyzed for its connections to, and implications for, food security and living heritage in each community.

OVERVIEW OF SURVEY RESULTS

The survey attracted a total of 168 responses. Based on the postal codes provided, most of the responses were from Saskatoon, Regina, and surrounding areas (Fig. 1), with 36% from rural areas, which is slightly above the percentage of total rural residents in Saskatchewan. Twelve respondents did not provide postal codes.

Based on demographic questions, most survey respondents were 35-55 years of age (Fig. 2), with 81 people identifying as women, 21 as men, and 4 as non-binary. Over 100 respondents had post-secondary education, most (91) reported having European origins, 10 were Indigenous, and a few were of Asian or African ancestry.

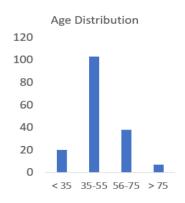


Figure 2. Age distribution of survey respondents.

The survey asked respondents how their personal views meshed with the UN definition of food security, which states that food security exists "when people have physical and economic access to sufficient, safe, and

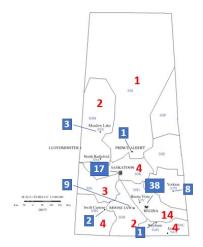


Figure 1. Geographic distribution of survey responses, based on postal codes.

nutritious food to meet their dietary needs and enable an active and healthy life" (http://www.fao.org). A large majority of respondents felt that this definition was somewhat or very close to their views (Fig. 3).

Responses from urban and rural residents showed both similarities and differences regarding food security concerns. Only about a quarter of urban and rural respondents reported being concerned about food security in their households, whereas large majorities were concerned about their communities, especially in urban areas (Fig. 4). The concerns

identified were similar, with cost being the most prevalent in both urban and rural settings, quality being a larger issue in rural areas, and access being a bigger concern for urban residents (Fig 5).

How Close is the UN Definition to Your Own Views about Food Security?

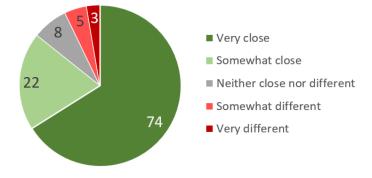
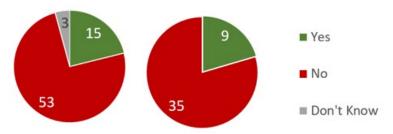


Figure 3. Responses to survey question about UN definition of food security.

Do You Have Concerns about Food Security in Your Household?



Do You Have Concerns about Food Security in Your Community?

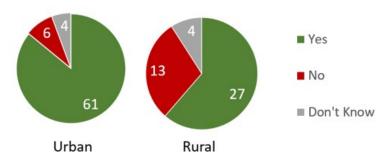


Figure 4. Responses to questions about food security concerns at household (top panel) and community levels (bottom panel).

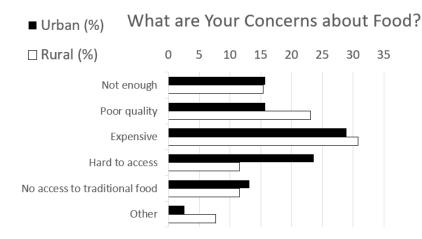


Figure 5. Food security concerns identified by survey respondents.

While the pandemic appeared to have significant impacts on urban and rural food availability, the percentage of people reporting impacts was much higher in urban areas (77%) compared to rural settings (55%). Similarly, while awareness of food-related environmental changes was comparable in urban and rural areas, the percentage of urban respondents who were not certain if changes had happened (36%) was almost twice as high as in rural areas (16%). The same pattern appeared when people were asked about changes in the abundance or distribution of wildlife and other food-related animals. A large majority of urban respondents (60%) said they did not know, compared to only 36% in rural areas.

In contrast, the responses of urban and rural residents were similar when asked about how much they relied on local or traditional knowledge about food (Often to Always = 42% in urban, 55% in rural), the importance of food that is locally sourced (Very to Extremely Important = 53% in urban =, 45%), food availability (Somewhat to Very Available = 87% in urban, 91% in rural), and food accessibility (Somewhat to Very Inaccessible = 27% in urban, 29% in rural).

Larger differences between urban and rural were reported for food affordability. At the household level, food was only somewhat affordable for just over 50% of urban respondents, compared to less than 25% of rural respondents. This pattern was reversed where the survey asked about the community level, with only 14% of urban respondents saying that food was somewhat affordable, compared to 41% of rural respondents (Fig. 6).

How Affordable is Food for Your Household? 1 ■ Completely affordable 16 Somewhat affordable 19 ■ Neither affordable nor unaffordable Somewhat unaffordable 36 10 Completely unaffordable Urban Rural How Affordable is Food for Others in Your Community? 5 0 1 Completely affordable 10 ■ Somewhat affordable 18 17 ■ Neither affordable nor Somewhat unaffordable ■ Completely unaffordable Urban Rural

Figure 7. Responses to questions about food affordability at the household (upper panel) and community levels (lower panel).

Figure 6. Responses to questions about food affordability at the household (upper panel) and community levels (lower panel).

Overall, survey respondents were more concerned about food security in their communities than in their own households, especially in urban areas. They reported that their food security was affected by the pandemic, but less so in rural areas, and were evenly split in terms of their awareness about environmental and wildlife changes, with high levels of uncertainty in urban areas. Rural and urban respondents were also evenly split in terms of their reliance on local or traditional knowledge, with the use of this knowledge being slightly more prevalent in rural areas. Urban and rural respondents reported similar views about the importance of local food, and a few voiced concerns about food availability, but around 25% were concerned about food accessibility in both urban and rural areas. Food costs were also a concern in urban and rural areas, with around 20% of respondents reporting that food was somewhat or completely unaffordable in their households. This number more than doubled where the survey asked about communities, with over 50% voicing concerns about food affordability in urban areas.

KEY FINDINGS FROM THE INTERVIEWS AND CASE STUDIES

CLIMATE CHANGE AND RELATED ISSUES

Drought

"The number one impact of climate change here will be drought," a consumer from Val Marie stated. Others noted that drought is common since southern Saskatchewan is historically and geographically arid: "There was drought in 2021/22 but I don't think that is a change for this area. It was called the 'Palliser Triangle' for a reason. This area has experienced prolonged devastating droughts before." (Governance, White City). In any case, most participants working and living in these rural communities recognize drought as a challenge for farming and ranching in Saskatchewan. Food producers shared their experience of recurring drought:

"I started farming in the eighties. We were very dry. I would say drier than we are now. This past year we were dry, but 20 miles east of us had very good crops. Just this year, most of the province had abundant or over abundance of moisture, and we were just in a pocket, for some reason it stayed dry. So, you know. Have I seen anything? You know we're windy before, we're still windy, we're in an area that doesn't get a lot of hail and we haven't had hail, and probably 4 or 5 years. The kick to that is usually when you get rain you get hail, so if you don't get rain, you don't get hail. In our operation, I would say no. If it stays dry for another 5 years, I may change my opinion but you know we're in a cycle like [we were] in the mid-nineties we've got dry for a little bit, not as dry as we are now. I wouldn't say yet that there's been environmental change effect in our farm." (Producer, Gravelbourg)

"We've always had droughts, that doesn't mean they're not getting worse[...] (Producer, Val Marie)

"Well, on our honey crop, it's been huge actually, because the dryness doesn't produce nectar. So, our bees aren't making the honey that they used to. Well, last year we had about twenty-five [percent] of the crop that we would normally have. This year we had about ten percent of that

¹ The "Palliser Triangle" is the driest part of the Canadian Prairies, covering a large part of the southern Prairie region in Saskatchewan and Alberta. The name stems from the explorer John Palliser who, after visiting the region during a deep drought in the 1850s, declared the region to be unfit for agriculture.

twenty-five percent. That affects us, but it's not our only source of income. So, we're very fortunate that we have other sources." (Producer, Val Marie)

Other participants, who were not interviewed as producers, commented on the visibility of drought in the province:

"This year, there was dust blowing across the road before we got some more rain in June, and the horizon actually was turning brown from blowing dust. I heard that, in Climax [Saskatchewan], some ditches were actually filling up with dust, and again, this was just a couple of dry weeks." (Consumer, Val Marie)

"This year, this past fall, we were driving down the road we go down[...] and there's sloughs on either side, and I said, 'oh, My God!' I said, that's pretty bad when they're so cracked [...] you know, like even the cattails were dry" (Consumer, Muskeg Lake)

The latter participant went on to explain how changes in practice and living can also lead to differing impacts of drought:

"Well, the thing about today is we no longer rely on the ground water source, individually, like we used to. Each home had a well of which we would pump water and if it was a drought and we were still pumping water, then maybe we would see the effects. (Consumer, Muskeg Lake)

Environmental Change

Participants spoke about environmental changes they have observed over time. Some examples involve the impact of drought on ecosystems and the subsequent impact on farmers:

"Last year, because of the drought, all through our area, we had the canola blooming in October. All summer there was no rain, there was nothing. The canola just didn't grow or develop. We got some late rains in September and October and all the canola fields bloomed, they were totally useless, way too late, so they never came to seed. It was a total write-off. So, all these yellow fields which I associate with June and July, that was all happening at the same time that all the leaves were yellow." (Consumer, Val Marie)

Another participant described seasonal shifts, extremes, and impacts on vegetation:

"Yeah, well, drought and more flood. But I mean, it is cyclical. You talk to the people. I've been here for a while, and I think we go through periods of both. But, it's a bit more extreme now[...] we fluctuate between 20 degrees above and 20 below for like weeks and weeks. It's really hard on lots of the producing trees and shrubs, for late frost, they won't have the flowers, and then the yields[...] like the last drought years the Saskatoon [berries] are always very, very tiny. If we get lots of rain in the spring or lots of snow, then we'll be busy next year, so it's difficult to attribute what's climate change related[...] I mean, regular seasons starting and ending, that's not happening anymore -- it would seem like it's abnormal" (Climate Change Coordinator)

On the other hand, participants identified adaptive practices that can maintain the condition of the soil despite challenges and changes to the ecosystem:

"Our soil is actually in better shape now than it was 20 years ago and one of the biggest reasons for that is [because] we never till the soil. Back in the day when they were half and half, they did not have the options of herbicides to control weeds[...] so they'd let the land rest for a year and they till it 3 or 4 times. By the end of that third operation, there wasn't straw left. There was

nothing left. It was bare dirt so that was always at risk of blowing the following year. While our soil, the organic matter level in our soil is always going up." (Producer, Gravelbourg)

In contrast, other participants questioned the use of synthetic fertilizers and continuous cropping practices, noting concerns about strain on the land:

"Many years ago, when we were actively farming, we add[ed] minimal fertilizer. The fertilizer came from the horses and the cows [and] the pigs, right, and we spread that on the land. And we didn't need much, because every third year would be a fallow year: we would work the land and not put a crop in. Give the land time to rest. But now it's just continuous cropping, and I don't think - I don't think that's good." (Producer/Consumer, Muskeg Lake)

Some participants also observed changes affecting wild animals and access to food sources:

"I think with agriculture practices there are a lot more wild game around. We never used to have moose on my doorstep, basically never, never grew up like that. We would have a bit of deer but now we have 2 kinds of deer. We never used to have new deer there." (Consumer, Muskeg Lake)

"We only have from 8 or 20 yeah, like 8 to 20% of natural prairie habitat left in Saskatchewan. Yeah. So, 80 to 92% of the natural ecosystems have been altered in some way for whatever industry not just agriculture but mining, gas, you know campgrounds, cities, you know all for everything. But we vastly altered the landscape and so there, what that means is that there is no more room, so there's very little room for Indigenous food sovereignty practices, because we've lost so much of the natural intact ecosystem or we would go and hunt animals, gather plants, berries, medicines, roots." (Indigenous Sovereignty Advocate)

The same participant expanded on her observations regarding the changing range of animals and her concern with aerial spraying (the topic of organics and conventional farming is addressed later in this report):

"Let's see, if you're clearing [land] more and more, and probably forest fires are pushing them down. I don't know. We now have bears in our areas, like on my front step literally last year and we never had bears growing up. So, where I'm at I have berries around me, so maybe that's why the bear came. But I'm also concerned about aerial spraying, very concerned about aerial spraying, because the more land they put down, and farming practices evolving, that's concerning to me about the chemicals, the pesticides, whatever they're using[...] Do they harm the animals that come by and eat the straw[...] and did the berries get tinged with any of that through the aerial spraying; all of those raise a concern with me." (Indigenous Sovereignty Advocate, Muskeg Lake)

Relatedly, a producer also expressed a slightly different concern about spraying agrochemicals: "in terms of producing food [on] the farm, our biggest challenge other than it not raining, is [that] we are getting an increasing number of weeds that are becoming herbicide resistant." When asked why, he followed up with:

"Well, because we've been using them for so long...glyphosate, which you know RoundupTM, I'm gonna say 8 or 9 years ago[...] So, herbicide companies make a ton of money, and they bring farmers on trips sometimes, so I think it was BASF who brought a group of us to Georgia, to tour farms, and that was the first sort of introduction for me to herbicide resistance. There, they grow cotton, and they grow peanuts, and they're Roundup ReadyTM, which means you can spray RoundupTM a glyphosate on and they were spraying it like 4 times in a row, because it works

good, and it's cheap. Well, within 5 years they had a weed called paramount, which had built up a resistance to RoundupTM. It's similar to when the doctor tells you to take the prescription of antibiotics, you're supposed to finish prescription, because if you don't quite kill the germ or the weed, it starts to develop a resistance[...] The way we're combating that is with different groups of herbicides and one of the reasons is that we started seeing some resistance here... we're seeing resistance in kochia, which is a very big problem... we were ignorant, and we were using the same herbicide over and over. So now, we've learned, we've educated[...] say we go [with] glyphosate in the first operation we change group in the second operation, or we change group in the third operation, or we mix 2 groups together to make sure we're killing the weeds with different groups, so they don't develop that resistance but that is one of the challenges facing us right now." (Producer, Gravelbourg)

IMPACT OF COVID ON FOOD PRACTICES

In addition to environmental challenges, interviewers inquired about the impact of the COVID-19 pandemic on everyday life in the study communities, with particular attention to food issues and practices. The most commonly reported pandemic challenge was the inability to get together, and how many cultural events, such as rodeos, fall suppers, and food festivals, had been forced into hiatus.

Some participants felt that the pandemic had very minimal to no impact on their day-to-day lives. In fact, when asked whether or not COVID-19 affected food security in the community, one respondent simply said, "Not one bit... out in the middle of no man's land here, it's like it didn't exist". This participant did explain further, however, that the impact on a global level was different:

"Yeah. Yeah. You know, I should, that's on a personal level, but then when it came to, let's say on more of a global level, then I would say yes, because it affected the parts that we could get because there was other businesses that didn't have people in place for that. So yeah, parts [...] were hard to come by, but boy, you know, we've been self-isolating for decades out here." (Producer, Gravelbourg)

Rural people reported high preparedness for the pandemic, largely due to bulk purchasing habits or having sufficient skills to make needed items:

"They always said they got short of this, or they got short of that. But [...] for me, it was no problem, because I have everything I need like, I make my own butter, even" (Consumer, Val Marie)

"I think rural people can handle shocks to the food system. Most of us have a couple deep freezes full of food and have the basics on hand – in bulk – at all times. Urban people will find it more catastrophic because they don't shop more than one week ahead." (Consumer, Val Marie)

Other participants discussed how the pandemic led people to engage more with food practices such as gardening or canning. They commented on how COVID set certain conditions that allowed for people to get back into these practices:

"I think that the knowledge is there. It's been awakened through this pandemic. You know, we've taught each other and traded food the way we used to. And it showed people [that] it's not just the 'how to preserve food' [but] how to plan for next week, next month. Yeah, I think in that respect we've[...] we're slowly equipping our families for the next big deal, right?" (Consumer, Muskeg Lake)

ISSUES IN FOOD SECURITY

Limited Business

In terms of accessibility and affordability, some participants noted that the limited number of businesses in rural communities can affect the cost and availability of food. For example, in the Regina bedroom community of White City, the opening of a grocery store has made a major difference for residents who would previously have commuted into Regina for groceries:

"I know that before we had a grocery store here, it was really needed, so it's a good thing that they did come... or else if you needed an egg, or if you needed some sugar like on the fly, you'd have to again drive all the way to Regina... or maybe there is a gas station that would sell you with very extreme prices" (Governance, White City)

This is an important point because not only were the participants from this community quick to mention the benefit of having the local grocer, but participants from other, more rural communities similarly commented on the lack of grocery stores as a barrier:

"And so most First Nations communities don't have a grocery store, don't have a place to buy food, so first of all, we're traveling in our vehicles, so the access, it's not even present in our communities. If we're talking about the mainstream food system, right? (Consumer, Muskeg Lake)

This participant continued by contextualizing the issue of limited groceries as not just one of accessibility and affordability, but one of sovereignty, too:

"That's why sovereignty is important, because the animals are at the reserve, the berries, and the plants, you know, might be in some of those areas, but not beef and chicken and macaroni... So, we're having to travel further for grocery store food but also for Indigenous food or Indigenous food systems, because, you know, they're not just all coming to the reserve. We have to access the plants and medicines and animals." (Indigenous Sovereignty Advocate)

Participants also discussed the difficulty of maintaining restaurants and cafés in small towns:

"Well, we can't keep a cafe open in this town. But that's more economics. Again, I think that's related to our workforce. It does mean that we are missing out on a very traditional Saskatchewan activity, which is all the farmers in town coming in at 7am" (Consumer, Val Marie)

Another participant suggested the need for:

"A coffee shop with sandwiches. There's a wonderful opportunity here for someone that is willing to be committed to being in town and open up at seven in the morning. The number of visitors that come to ask, 'where can I get breakfast?' Well, nowhere right now. Our one little coffee shop was open just the year that COVID came, and it was open for about six weeks before COVID started." (Producer, Val Marie)

Supporting local businesses can be challenging with the centralizing of resources in city spaces. One participant explained the desire to support the local grocer:

"And it's like we just lost one of our—quite a staple business in our community—a hardware store and a lumber yard. So that's been huge, the fellow that owned it passed away and we still don't have a buyer. So, you're going to go to the city for those things so you're going to stop and

you're going to pick up groceries at the same time. I try not to do that because I want my local grocery store to stay open, but sometimes you just can't help it." (Producer, Gravelbourg)

Yet, in the absence of some of these immediately accessible resources, some rural communities are finding ways to provide access to quality foods locally:

"We don't have a grocery store. We have a junk food store and gas and cigarettes, but in that store we have a fridge for the Kokum's Cupboard. Okay, so say somebody phones me out Saturday morning and I can't get a hold of the lady who holds the keys for the Kokum's Cupboard, I can go to the store and give them like 4 gallons of milk, a dozen eggs, so we have a supply of immediate food." (Consumer, Muskeg Lake)

Loss of Local Knowledge

Some participants expressed concern regarding the loss of local knowledges and traditions. For example, one participant described the decline of the local fowl supper in the area:

"I think there's some traditions falling by the wayside because times change, customs change. But also, there's just less people, right? It used to be when you had a fowl supper, and there's a tradition of traveling to other communities for fowl suppers. I didn't so much. But if the Catholic Women's League, for instance, had a fowl supper, there'd be folks coming from neighboring communities to participate in that supper. And that tradition is kind of falling away. But that was a former tradition, I guess, and it's just lack of people mostly, I think. And the modern conveniences, right? You can be entertained right in your own home looking at your iPhoneTM. We don't get it out as much, I don't think, or some of us do." (Producer, Val Marie)

Despite a resurgence of some traditional food-related activities during the pandemic, participants still perceived an overall decline in land-based knowledge and practices:

"Yeah, I guess COVID [,] created resurgence and people wanting to garden but if you compare it to say when I was young with my mother, her garden was even that much bigger than ours is now especially when I was quite young before. You know my parents achieved a certain level of success, there was lots of gardening, lots of preserving because money wasn't abundant and I think you know that's solely been diluted to the point now where, and I'm going to talk like an old man for a second here, but the younger generation until COVID hit, perhaps and even with Covid, it's box gardens², which is more of a hobby than actually producing food, you know, and I'm sure it's fun to have some fresh vegetables, but it's not on the scale of perhaps I'll say my wife, where you know she'll have 15 tomato plants, and 24 jars of tomatoes[...] So, I do think that is changing for sure. Again, gardening is definitely work and I think, as we've gained affluence, we buy vegetables instead of growing them." (Producer, Gravelbourg)

Another participant noticed an absence of local knowledges in urban places, specifically knowledge about the origin and production of food:

"I don't think a lot of people have that knowledge, especially in the city. It's what they buy off the shelf that has to sustain them, cause I, when I was in the city, I lived in the apartment building. We didn't have our own yards, and so like we couldn't grow on food. We couldn't process our own

14

² Box gardens are small portable gardens usually in wooden boxes raised above ground.

food, but what we ate had to come from the store and if the stores are empty[...]" (Consumer, Muskeg Lake)

Declining food knowledge was linked to broader economic trends and the dominant global food system. For example, a participant described how it was once common for people to have the skills and knowledge necessary to process food:

"Because we used to make everything. And we're in a society where it's not feasible anymore. I mean when we're working full-time jobs, like nobody is grinding their wheat to make their homemade flour to make bread. Like I mean, you know, unless you can, and have that but that's a privileged place to be now. So, we all used to be food producers. All of us were food producers as Indigenous people: we would take a large animal, and we would skin it and gut it, and you know, quarter it, and we would, we were the producers, so we would butcher it up, and we would take that, or and we would boil the bones, and, you know, make the bone drops and use the[...] we took raw materials and produced food, clothing, shelter out of it all, and so did pioneers and settlers, and all of those to raw materials, and produce them. And along the way, the global food system outsourced that and said, 'we'll produce it for you and you'll have more free time'. And now we're all buying jam instead of making it, you know that kind of thing. There is a movement towards people becoming producers again and sharing that food knowledge, because we also [...] food sovereignty and security is tied to food knowledge. So we have to know where it grows, how to can food, how to preserve foods, how to freeze foods. You know, in a way that will preserve them long term especially if there's energy concerns in the future." (Indigenous Sovereignty Advocate)

Disproportionate Impacts on Certain Groups

Participants noted how food security issues impact people differently, with some groups disproportionately affected. None of the study participants self-identified as having personally experienced crises in food security, but many did mention that that there are families or individuals who likely experience food insecurity in their communities. Socioeconomic class and age were identified as particular determinants of food insecurity:

"You know, again, for the most part, we can live relatively cheaply in a small community. I think there's definitely low-income families that might have issues [...]" (Producer, Gravelbourg)

"So, there's a few households in town that seem to look low income. I gather that there are some single parents with large families, some people who are known to not have any clear source of income, but what is their actual material condition, that's [intimate] knowledge. It's not proper to talk about casually. I don't know the full details, but I do notice that there are some. There are some social issues in this community that are almost totally analogous to stuff you'd find in any urban center that is not commonly talked about" (Consumer, Val Marie)

"Seniors and low-income families. They don't have any room in their small budget for food increases." (Consumer, Val Marie)

"Well, one thing we were talking about is aging people leaving in our community just for availability and accessibility of streets, or maybe meals prepared for them like Meals On Wheels, some communities have that kind of thing. We, you know we see a lot of people when they get to into that eighty, that old range, they'll tend to move to Swift Current [...]" (Producer, Val Marie)

"Well, anyone on a fixed income, especially now, because they do have to pay for their bills and like the cost of operating their house. So, as those costs go up, and then the cost of food they're often coming to the Band for assistance to get purchase orders for food for groceries." (Climate Change Coordinator)

"In my experience I see the poorer families, those with the circumstances whose socioeconomic conditions are not as well as others, tend to have poor choices in food and in poor nutritional value like the Pizza PopsTM for supper or you know, packed food, food that comes from a food processing plant rather than a plant." (Consumer, Muskeg Lake)

And, in other cases, other social determinants such as addiction can lead to vulnerabilities:

"So, I see that those ones that are struggling mostly are those who are in active addiction... Well, I guess I shouldn't say necessarily addiction issues, because there's many other issues that can plague a family when we are living in an area where there's low employment rates, and you know. So, if they don't have employment, they don't have a vehicle, they can't go hunting and berry picking and you know, so it becomes a barrier. So, I try to help in those areas. I tried like, I can't get them a vehicle, but I can arrange for rides. I can get gas for if their neighbour wants to go berry picking, and they're jumping in. If they're having it, you know, rough or whatever, or in the summertime, if they want to go to the lake, I will get groceries and take a couple of families to the lake. Just try and find opportunities to make food available." (Consumer, Muskeg Lake)

Help and Assistance

Help, in its various forms, emerged several times in the study. Producers noted that there has been difficulty finding help for farming and other food production operations. For example, one producer described:

"Another issue we're having is finding help, you know. There's my son and I, [we] farm every day. We usually have one hired man. That's where the right number of people we need for the farm and we had our men leave us to go to haul timber up north, where you can make really big money and we put an ad and typically there's sort of 3 big Facebook groups for SK 306 farm, and I can't remember the others right now, and in the past you put an ad on there that you're looking for help, and you get lots of responses. But we had none. So, yeah, finding help on the farm is a challenge right now, just like it is in the trucking industry and the medical industry and everywhere." (Producer, Gravelbourg)

Participants noted the forms of help they provide to less food-secure families in their community:

"So I seek out those people who are having the challenges here in the community with food, with just living a basic life. If they don't have proper beds, I'll help them with that, if they don't have...If they live on just income assistance, it's, you know, and family allowance, that's not enough to feed a family for the month. So I go, and I talk with the families, and I find out when their struggle days are, and stuff like that. Then we have things in our community called Kokum's cupboard." (Consumer, Muskeg Lake)

ISSUES IN FOOD PRODUCTION

Overreliance on The Global Food System

Food issues in Saskatchewan are shaped by the province's role and position in the global food system. Participants remarked on Saskatchewan's overreliance on export and trade; however, they also noted

Saskatchewan's global responsibility as a food producer. As an example of this discourse, one participant questioned the ability of organic agriculture to feed the world:

"I struggle to understand, with food shortages that we have, that we would be able to feed the world organically." (Producer, Val Marie)

Some participants felt that Saskatchewan's place in the global food system relies too much on export of raw materials and not enough on processing food in-province: "all our produce is exported unclean and unprocessed" (Consumer, Val Marie). Others also noted this export reliance, saying:

"I do realize we are in Saskatchewan and for a good 6 months of the year we are depending on fresh food to be brought from other parts of the world. I realize this is unavoidable." (Governance, White City)

"I think, especially with some of the supply chain issues, because we are so dependent on food imported from other places. If those other places are shut down, or maybe California decides to keep their own food for their own people and not send to Canada. Canada as a result is sort of, okay, well, what do we do? We've depended on Southern American imported food for so long, do we even have the capacity to grow our own food? Do we even have the capacity to kind of sustain ourselves in the long term?" (Governance, White City)

"And often, if you look at the global food system, it's not that we don't have enough food to feed the world. It's often a distribution issue. So much of it is ending up in the landfill which is turning into methane, which is becoming a major driver of climate change, which is also impacting our ability to grow food and I find it so fascinating, and I can't fathom why, we're not talking more about the global food system when we talk about addressing climate change as well. When we look at the role that soil plays in carbon sequestration in healthy food production in drought resistant crops and making sure that when the rain does fall, it stays in the ground and doesn't just run off so much." (Indigenous Sovereignty Advocate)

"With COVID, it made us more aware. You know, that we shouldn't be so dependent on other countries. We should grow our own food. We should have greenhouses here. We have so much sun, you know we need to do more in that direction... to be more sustainable ourselves, instead of being depend on Californian (produce)." (Vendor, Val Marie)

Organics

Generally, producers we spoke to felt on-the-fence about organic food production versus conventional food production. Broadly speaking, there was a feeling that the use of pesticides and herbicides are well regulated and under control, and that the market calls for organic farming. In this sense, producers feel there is room for both forms of food production:

"Organic versus conventional. That's a very good question because organic is such an ambiguous word. I don't like a lot of sprays on my apples and pears and things fresh off the tree. At the same time, I don't like worms, either. I think there's a need for certain controls. You can have natural means of controlling pests in your crops but not using harmful sprays, harmful to the environment or to pollinators, and that kind of thing. I think there's a fine line between growing things naturally and sort of just fitting the bill of organic labeling." (Producer, Val Marie)

"Well, I have friends who are organic farmers. I don't want to give you an idea that I'm against organic because I'm not. I just believe a blend is probably the best. Personally, I don't believe

there's any issues with the herbicides we use in our crops, and of course, the people who there's people that have other opinions, as long as we can both farm side by side and make it work. I have no problem with that." (Producer, Gravelbourg)

Another point of view comes from those who are not producers, who feel that organic food production is not actually enough:

"Well, I live in the middle of a field, so I deal with sprayers all the time, and I don't like it. I don't think that they should be doing it. I can't see that it can be good for our children or anybody like, pregnant women, are making children and absorbing the food, and whatever's in that food, whether they it's been picked and processed and manufactured, and turned into something totally different than what it came out as, I believe that the properties and the whatever it is that they're spraying, must have an effect on the people and so that's one thing that I see that's current, and today that is not good." (Consumer, Muskeg Lake)

"For the people organic is 100% ideal, however, like just to try to expect that we can do what we're doing now but organically, it doesn't make sense, like you can't fix a broken system. I don't know. Like you need to have different expectations of organic, anyway and like the term 'regenerative farming'[...] It's a lot more appealing to me than just simply organic, because organic doesn't talk about the land." (Climate Change Advocate)

Some participants were skeptical of the organic label itself. For example, when asked about their thoughts on organic versus conventional, one participant replied: "Do you really believe the organic foods in the grocery store? That should be the first question" (Consumer, Muskeg Lake).

Others also commented on the marketing of organic foods:

"I don't personally give a lot of merit to organic for itself. Obviously, if it's sort of a prepackaged food, and if it's like, this is like cookies that are made specially with a special type of flour, and they're organic in that sense, and that's one thing. But if it's like organic bananas versus regular bananas? Are they really organic? Or is it just because they're flown up from Guatemala and someone slaps the organic label on them as they're getting out the warehouse, so I take organic food, especially fruits and veggies very, very light[ly]." (Governance, White City)

"This whole media campaign about organic I think is just a marketing ploy, I deal with farm chemicals all the time, I have been for the last 40 years. We cannot grow food without them, we would return to the dirty '30s, or the dirty '80s in fact, and as long as they are used the right way because the poison is in the dose. I... We have in our area, we have one of the best organic farmers I know that does some of the best work, he went back to conventional farming last year, he cannot control the[...] the perennial weeds that are just absolutely taking over. He can't grow anything, so he had no choice but to go back to conventional farming. So, I think as long as farmers follow the rules, most of them, all of them do[...] I don't wanna spend any more money on any more farm chemicals what a waste of money, what a waste[...] I don't wanna make things unhealthy for people. And they are hearing from the media that organic is more healthy and it's not[...] as long as those that are using the conventional tools at hand are using them properly, which we all are." (Producer, Gravelbourg)

In some cases, the greater concern is with respect to food freshness than organic versus conventional production:

"Obviously, you know, if you just grow it in the ground and there's no pesticides around, and all that kind of stuff. I mean that's optimal. That's the best. But growing your food is still better than buying processed food out of the store or food that comes from California that was, you know, ready like a month ago, and by the time it gets up here it's already, you know, 3 weeks old, or whatever." (Consumer, Muskeg Lake)

Quality of Food

Indeed, the issue of food quality was another theme that came up in discussion of these various topics. Participants living rurally note a stark difference in the selection in urban setting grocery stores as opposed to availability in rural areas. There was also criticism of processed food opposed to fresh food. These comments below illustrate how participants felt about the issue of food quality:

"We are in-between three centers. It's a hundred kilometers between North Battleford and Saskatoon and Prince Albert. Major Centers, and then we have small grocery stores close by. I don't really know how to answer that, because people have lots of food, but it's not good food, you know. I think processed food is not good food." (Consumer, Muskeg Lake)

"It's the quality, sometimes it's the quality, but it's also the variety [...] When I go to a city grocery store, I am just in awe of what you guys have to choose from and the fresh produce. And I know that our local stores do the best that they can. But because of where they are, the logistics, everything else, sometimes it's really hard." (Producer, Gravelbourg)

COMMENTS ON MITIGATING FOOD INSECURITY

Farmers Markets

Farmers Markets are becoming increasingly popular and are "a trend that's sweeping through a lot of small towns" (Governance, White City).

Aside from COVID-19, participants identified several operational challenges to the success of the farmers markets in their respective communities. The primary challenge identified included attracting both vendors and customers:

"It is almost like what came first, the chicken or the egg, where, like the there's low number of vendors, so they're like, 'why isn't there a lot of customers?' and then the customers came, and they're like oh,' there's not a lot of vendors', so it was a little bit disappointing. So, you know, as a customer, and there's only like 5 little tables, you know it, just it loses its attractiveness." (Governance, White City)

"We decided to go all in and try to hold a weekly farmers market, but the weekly market was a little bit of a failure. [W]e made a couple of mistakes. We picked a bad time at first, and we didn't think enough about who our regular vendors would be. And so, our event kind of spun out by the middle of the summer." (Consumer, Val Marie)

Indeed, participants have noted that changes in the organization of farmers markets will be necessary moving forward:

"I think, in the future we're going to see [...] that it's going to help subsidize the vendors' cost to be at the farmer's market. I can't speak for the committee, but it is doing that. It's making it more attractive for us to make it more affordable, so that the fees to the vendors would be less. We've already lowered it once from what it was, and to make it very attractive to a vendor, to almost to

the point, you could say, well, you make a donation to the elevator for being here." (Producer, Val Marie)

"So, originally it was twenty dollars, and now we have reduced it to ten. Yeah. So, ten dollars, just to have a spot for a vendor, and you don't have to book ahead, you just pay that when you come around, and what that does is commitment. Commitment, on the vendors part, to show up. I think. We're not limited by space at all. So yeah, you know, typically a booth would be like ten feet, but because of our vast open space, you know, you could have a table twenty feet long, and it [would] only cost you ten dollars." (Producer, Val Marie)

Community Cohesion

Participants also discussed the meaning of the term 'community' – emphasizing family units supporting family units, and other practices of building resiliency and strength in the community through a community identity opposed to individualism:

"I find a lot of people [in cities and towns] are very much about me, only me and who is in my household, you know? Don't look out through the window, you might have to help somebody. We're not like that. We're very much about making sure that the neighbours have enough [...] food...you know, just checking it on people like that. I know that a lot of that goes on in this community." (Consumer, Muskeg Lake)

"Getting people out and having them communicate with one another, [it] renews your family, your sense of belonging [...] Some of us that would just rather stay home and read a book or something than get out and communicate and speak with people, and get ideas" (Producer/Consumer, Val Marie)

Relatedly, some participants stressed the importance of self-sufficiency in context of a community, citing Hutterite communities for this:

"It's something like the Hutterite colonies, and how self-sufficient they are. They are kind of the example of what every community should be like in some ways, where everything is supplied within and shared amongst all the people. So, you know, if I grow a whole lot of pumpkins, and then somebody else grows, or supplies sort of milk and butter kind of thing, and we supply the honey, and we've got your pumpkin pie. Basically, so coming together and sharing what each person is able to produce depending on their actual location and availability for water cause water is essential..." (Producer, Gravelbourg)

"Beyond the traditional thing that we spoke [about] earlier, and perhaps the [Hutterite] colony may be doing better, if they see somebody in need, they might be helping. But again, because I know they're that type of people. They're generous like that. But if there are any organization, and how many I wouldn't know, I don't think there's a lot in in town like we're folk, you know it's different to be poor in a small community. Sometimes I think in the city, there is always someone and people can look out for you. It's also a food security issue, I guess when you think about it." (Producer/Consumer, Val Marie)

Community cohesion can also refer to some of the events or particular cultural practices that bring the community together. One example of this is 'the branding' in Val Marie, as described by the participants below:

"They have local brandings, which is our local community, is coming together in a local people in the community come together, so we'll brand all your cattle, your calves today, and tag them and inoculate them and castrate them" (Producer, Val Marie)

"The brandings are a community event where everybody would come together. And you know, if you go to this person's branding, you know they'll go to yours, kind of thing, and they'll help you get the work done and some brandings when they're right. You know the large herds that are, you know, 900 to 1000 at a time it'd be different. There' be two or three days of branding, but everybody brings their potluck dish." (Producer, Val Marie)

One such example of the importance of community and communal sharing is in the goods that are provided by Kokum's Cupboard in Muskeg Lake:

"Kokum's cupboard is stocked with all the dry goods, the macaroni, stuffs for the bathroom like shampoos and pads or stuff for the babies like [diapers] and milk products... we got dry goods... and then they have like 3, or maybe 4, freezers. And so somebody manages those and me as a prevention worker, if I see a family struggling in there, you know, like they're having a hard time with food right now, I'll make a request, and I get to go to Kokum's cupboard with them and go and get to what they need, go to the freezers and get enough, for you know, 10 meals, or however many meals" (Consumer, Muskeg Lake)

However, community cohesion does not just lie in the social supports that a community is able to provide, but also lies in food practices themselves:

"The other thing is that Indigenous food sovereignty practices like hunting, gathering. They're communal and them, or for trading with local settler, farmer societies like people who are raising hunting, raising bees and making honey or local chickens or big garden, the more we have a local trade food trade system, so like I have wild game in my freezer right now and it's illegal for me to sell it. I don't sell it, I mean I would never cause it because it's such a valuable thing to me, but I have, you know, given my friend like, 'here's a roast', and she's giving me some honey, you know and so the more you start to engage in the food practices that are ancestral that are rooted in our cultural heritage, the more you'll protect what [you] produce. You know, what enables us to grow and access those foods. But then you're also strengthening kind of that social fabric around food because a problem with the global food system is that it took us out of that process, and all cultures around the world are rooted in food." (Indigenous Sovereignty Advocate)

CASE STUDIES

The research team focused on two case studies, which address many of the issues raised in this report. These case studies are The Val Marie Heritage Grain Elevator and Farmers Market and the Muskeg Lake Food Forest. Both cases address issues of food security, but they also speak to food sovereignty and living heritage. In this section we present these two cases as exemplars of innovations that help mitigate the risk of food insecurity, bolster food sovereignty, and promote living (natural and cultural) heritage. When we discuss food sovereignty, we accept the six pillars of food sovereignty as described by Nyéléni 2007. The six pillars include: 1) focusing on food for people, 2) valuing food providers, 3) localizing food systems, 4) localizing control, 5) building knowledge and skills, and 6) working with nature (Nyéléni 2007 via FNU-UNF).

Val Marie: The Farmers' Market and Heritage Grain Elevator

To begin the discussion on Val Marie we must note that the farmers market in Val Marie was intended to be a fundraiser for the Grain Elevator Project:

"So, it was going to be a bit of a fundraiser for the elevator. So the vendors that came to the market would be paying a fee for their space to the elevator to help sort of support it, and that kind of thing. And I think the first year, we had four farmers markets. So it was the long weekend, each long weekend through the summer, and then we also tied in the movies on the elevator, which was like a drive-in theater type thing." (Producer, Val Marie)

"Yes, our farmers market, you know, not that we sort of planned it that way, but it did really promote our heritage elevator. In that, people would come to the market, do their little bit of shopping, and then stay on for another hour to do a tour of the elevator. So, I think because of that, we ended up doing a lot more elevator tours than we ever imagined, which was, you know a real sort of plus that we maybe hadn't anticipated in, but just having a presence at the base of the elevator, and being available for that four or five hours on a Saturday morning, did kind of open it up to people where they didn't have to maybe book an appointment to actually view it. So it was a nice surprise..." (Producer, Val Marie)

Val Marie is an interesting case that demonstrates how mutually supportive projects in the community can capture cultural and living heritage simultaneously. The Val Marie Grain Elevator project allows for the community to share its history and its role in the provincial history of the global food system. The Farmer's Market is a contemporary showcase of the work people are doing in food production. We turn from the issue of food security to food sovereignty here because there is at least some presence of the six pillars of food sovereignty, on the surface. While we started the project with the issue of food security in mind, our discussions with the community revealed that the issues they are responding to in their own work extend beyond food security and actually address issues of food sovereignty. Specifically, these issues involve fostering local knowledge and skills and cooperation with the environment. That being said, farmer's markets alone do not address issues in either food security or food sovereignty – we feel, however, that the organization of Val Marie's farmer's market does address these issues even if just theoretically.

The Muskeg Lake Food Forest

The Food Forest in Muskeg Lake is a self-sufficient community resource that provides food for Muskeg Lake. The Food Forest addresses several root causes of some of the issues addressed in this report, such as loss of local knowledge and issues in food quality. For example, one participant described how the best thing she had taken away from working in the food forest was knowledge:

"Knowledge, knowledge of the community and knowledge of the community. Our past. It's people... of how to process those foods [and] like storing them" (Consumer, Muskeg Lake)

In fact, the Food Forest engages education in its operation and provides produce for the community's Meals on Wheels program:

"The kids are about to plant in there and to reap their whatever they planted and so yeah, they are teaching stuff like that. They are very involved in the food forest right from like all the way through other than the fact that schools closed from June to September." (Consumer, Muskeg Lake)

The Food Forest provides other significant forms of social support as well:

"The food forest program is now supplying a lot of the food and vegetables for the day care for the school, because the school has a lunch program. The Kokum's Cupboard when in the season. They'll bring us a load of carrots or a load of whatever, you know, and so they're helping us in that way. We do bring the youth on a regular [basis] and they help plant the trees, They help do all kinds of things... They help all kinds of different activities to create the food forest and the green house. I don't know exactly how many different kinds of like trees and stuff like that that he has each year, I think, is different. I know he did get a grant for... trees. So, we're going to be having trees of all kinds." (Consumer, Muskeg Lake)

Beyond service and education, the Muskeg Lake Food Forest also captures those aspects of self-sufficiency and community cohesion addressed in this report. For example:

"I think young and old appreciate it. I mean, I think the young get a chance to be out on the land in the spring, and then the fall, the elders know that the (Community Coordinator) is growing things that (the Elders) remember growing when they were in residential school, and you know it was. I got, I can't say yes or no, [if] [their past] was a bad experience [or] good experience, but they would remember the food. you know. I'm hoping it was a good experience. Their relationship with food is what I get, but not the other stuff. so. Yeah, so far as I know, we and myself included, there's a pride that this is our own, we can do this, and I guess I neglected to mention earlier. We do have our proximity to a local Hutterite colony, and I don't know if you're familiar with Hutterite colonies, but they're very self-sufficient, and what the things that they have are acres of garden. So we would always go there. When I was health director we would go to the Hutterites, get the potatoes, the seed, and we give it to whoever wanted to plant to garden, you know" (Indigenous Sovereignty Advocate)

As this participant explains, the Food Forest has value to those, young and old, through the fostering of the natural heritage that it supports. It also provides the resources for practices in cultural heritage:

"The other thing is that Indigenous food sovereignty practices like hunting, gathering. They're communal and them, or for trading with local settler, farmer societies like people who are raising hunting, raising bees and making honey or local chickens or big garden, the more we have a local trade food trade system, so like I have wild game in my freezer right now and it's illegal for me to sell it. I don't sell it, I mean I would never cause it because it's such a valuable thing to me, but I have, you know, given my friend like, 'here's a roast', and she's giving me some honey, you know and so the more you start to engage in the food practices that are ancestral that are rooted in our cultural heritage, the more you'll protect what [you] produce. You know what enables us to grow and access those foods. But then you're also strengthening kind of that social fabric around food because a problem with the global food system is that it took us out of that process, and all cultures around the world are rooted in food." (Indigenous Sovereignty Advocate)

CONCLUSION

Ultimately, the case studies suggest the need to focus on food sovereignty, a broader approach than food security. Although the issues discussed in this report are raised on the question of food security, the research demonstrates that these issues are independently concerned with food insecurity, but, when they are addressed as multiple parts of a complex social issue, they become a larger problem of food sovereignty. Innovative solutions such as the Val Marie Grain Elevator and the Muskeg Lake Food Forest demonstrate practical projects that provide access and the ability to practice and share local knowledge

and skills and address the noted issues with respect to the global food system. Both cases are inextricably linked to both cultural and natural heritage and demonstrate the tie that binds food and living heritage:

"Put food in the center of society, everything comes from that. Language comes from the food and the way it's produced, because it's how we interact with the land. Our economies, our education, our health system, everything comes because there is no sovereign nation worldwide that can't feed itself. It's no longer sovereign, because it's dependent on other nations. It has to find a way to become food sovereignty and I mentioned we have to be food sovereign to be food secure. And so, the more we participate in our local food systems, then we'll start to protect, you know, rural, you know anything that affects the laws at a local level, municipal level, but provincial to food, and we protect that" (Indigenous Sovereignty Advocate).

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