



Research Article

Food security, food sovereignty, and the neoliberal food system in Saskatchewan: Insights from an online survey

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Abstract

Disruptions due to the COVID-19 pandemic threatened to bring many local, regional, and global food systems to a standstill, as production capacity, supply chains, and distribution networks were all impacted. Researchers responded by documenting a wide range of consequences and reinforcing the importance of fostering food security based on local cultures. As the pandemic started to ease, we examined how cultural knowledge, stories, and other aspects of living heritage helped Canadian prairie producers and consumers navigate and recover from the crisis. As part of a larger Food, Culture, and Heritage project, we conducted a province-wide, anonymous survey that asked about

food-related concerns in Saskatchewan, policies that might alleviate these concerns, and steps that could be taken to enhance the resilience of local food systems. Based on 168 responses, with 36 percent coming from rural or peri-urban areas, affordability was a major concern, especially because of rising food prices, low incomes, and transportation costs. The ability to access safe and healthy food was another top issue, partly because of a lack of rural grocery stores and the sensitivity of food-related supply chains. A third concern involved the loss of local knowledge, precipitated by an overreliance on imported and processed foods, limited time, and the effects of colonization. Overall, the results

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DOI: [10.15353/cfs-rcea.v12i2.712](https://doi.org/10.15353/cfs-rcea.v12i2.712)

ISSN: 2292-3071

pointed to cultural norms and large-scale practices associated with neoliberalism, implying that localized

principles aimed at food sovereignty are important for building a sustainable food system.

Keywords: Food security; living heritage; rural food systems; Saskatchewan; urban food systems

Résumé

Les perturbations dues à la pandémie de COVID-19 ont menacé de paralyser de nombreux systèmes alimentaires locaux, régionaux et mondiaux, car les capacités de production, les chaînes d'approvisionnement et les réseaux de distribution ont tous été touchés. Le monde de la recherche a réagi en documentant un large éventail de conséquences et en insistant sur l'importance de favoriser la sécurité alimentaire sur la base des cultures locales. Lorsque la pandémie a commencé à s'atténuer, nous avons examiné comment les connaissances culturelles, les récits et d'autres aspects du patrimoine vivant ont aidé les producteurs et les consommateurs des Prairies canadiennes à faire face à la crise et à s'en remettre. Dans le cadre d'un projet plus vaste sur l'alimentation, la culture et le patrimoine, nous avons mené une enquête anonyme à l'échelle de la province sur les préoccupations liées à l'alimentation en Saskatchewan, les politiques susceptibles d'atténuer ces préoccupations et les mesures qui pourraient être prises pour améliorer

la résilience des systèmes alimentaires locaux. D'après les 168 réponses reçues, dont 36 % provenaient de zones rurales ou périurbaines, l'accessibilité financière est une préoccupation majeure, notamment en raison de la hausse des prix des denrées alimentaires, des faibles revenus et les coûts de transport. La capacité d'accéder à des aliments sains et sûrs est un autre problème majeur, en partie à cause du manque d'épiceries en milieu rural et de la vulnérabilité des chaînes d'approvisionnement dans le domaine de l'alimentation. Une troisième préoccupation concernait la perte des connaissances locales, accélérée par une dépendance excessive à l'égard des aliments importés et transformés, le manque de temps et les effets de la colonisation. Dans l'ensemble, les résultats ont mis en évidence des normes et des pratiques culturelles à grande échelle associées au néolibéralisme, ce qui implique que des principes locaux visant la souveraineté alimentaire sont importants pour la construction d'un système alimentaire durable.

Introduction

Every day, as millions work to grow, distribute, sell, and use agricultural and garden products, their activities create complex food systems that depend 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). These systems are also being impacted by climate change, with effects that may be less acute than the pandemic but are equally pervasive (Vermeulen et al., 2012). In western Canada, climate change is affecting the quality and quantity of water supplies and strategies used for hunting, gathering, and fishing (Spence et al., 2019).

Agricultural impacts include an increased risk of drought and changes in the seasonal timing of precipitation, which affects food crop production, and warmer winters that affect the abundance and distribution of damaging insects and disease vectors (Sauchyn et al., 2022).

Throughout the settlement period of the late 1800s and early 1900s, agriculture in the western Canadian province of Saskatchewan featured cooperation and communitarianism amongst farmer-settlers (Müller, 2008), as illustrated by its political history of agrarian protest and cooperative movements (Fowke, 1957). Saskatchewan communities often engaged in collective food processing and distribution practices, such as chicken processing teams and beef-sharing rings (Widdis, 2006). At the same time, however, agricultural settlement was also premised on violent acts of colonization that dispossessed Indigenous nations of their land, undermining their own food production practices (Tang, 2003).

The 1980s brought a shift toward more large-scale, industrialized, and financialized agriculture, driven in part by the onset of neoliberal agricultural policies (Beingessner et al., 2023; Fletcher 2013). As industrialized farming became the dominant mode of production on the Great Plains, farms have grown ever larger, with the average farm size increasing from 952 acres in the 1981 Census of Agriculture to 1766 acres in 2021 (Statistics Canada, 2022). With this shift, the image of a successful farmer also shifted from someone who is part of a collective towards rugged individualism (Dibden et al., 2013; Fletcher, 2013). This has reduced the number and influence of farming cooperatives (McCullom, 2018) and contributed to high levels of producer stress, depression, and anxiety seen both in Canada (Canadian Agricultural Safety Association [CASA], 2005) and in the U.S. (Newman, 2019). Many food producers are also concerned about the growing

concentration of farmland in the hands of a small number of large-scale investors (Magnan et al., 2022).

Recently, other ventures have brought small-scale producers and vendors together around a mutual interest in food that is good (fresh, flavorful), clean (minimal environmental impact), and fair (affordable, reasonable return). Examples include a Slow Food node in the city of Saskatoon, grocery stores that feature local products, and producers who provide vegetables and meat directly to their customers through community-supported agriculture (Devlin & Davis, 2016). These practices show that people can be innovative and proactive where food is concerned. They also suggest that policies and actions aimed at alternative agriculture may lead to more resilient food systems and enhanced food sovereignty.

Food sovereignty is a political paradigm that supports local people's control over their food system, emphasizing the wellbeing of food producers, consumers, and the environment (Wittman, 2011). Sustainability and equity are at the heart of food sovereignty movements, which challenge the neoliberal values of productivism and deregulation in food markets while simultaneously supporting localization, culture, and heritage as pathways to democratizing food systems (Wittman et al., 2010). As such, the food sovereignty concept facilitates structural critique of the dominant neoliberal food system (hereafter NFS).

Food sovereignty is distinct from food security, as the latter focuses mostly on ensuring people's access to safe and healthy food (Food and Agriculture Organization of the United [FAO] et al., 2020), regardless of the nature of the food system or source. With its focus on equity, food sovereignty may facilitate and enhance food security, especially for those currently marginalized or disadvantaged within the dominant system, but the concept of food security can also undermine food sovereignty movements. As McMahon (2014) notes, food security is a limited concept that may manifest as

“an individualist, consumer-focussed, and administrative discourse of food redistribution and safety, even when conjoined with the more recent strategy of food localization” (p. 113). Food security may be deployed by large agri-food corporations as part of a “feed the world” discourse, thereby facilitating the neoliberal political-economic structure that undermines food sovereignty (McMahon, 2014).

This article draws on the results of an anonymous, province-wide survey, which aimed to examine Saskatchewan residents’ views and experiences of food (in)security in their households and communities, and their involvement with local food-related traditions—like canning, gathering (e.g., berries, mushrooms), and hunting—that can help support household and community food security. The purpose was to identify current concerns about food insecurity, the role of local

food-related practices in relation to food security, and the meaning ascribed to such practices.

The survey was part of a broader Food, Culture, and Heritage (FCH) project, which was designed to identify food-security concerns, policies that would help alleviate these concerns, and steps that individuals, communities, organizations, and municipal authorities could take to enhance the resilience of local food systems. The survey results were used as a springboard for separate in-depth interviews and rural case studies, which are presented elsewhere (Ogie, 2023). While food sovereignty was not a guiding concept for the FCH, it emerged as a particularly salient concern as the results were analyzed (Antonini et al. 2023). Here, we examine the survey findings by drawing connections to the deeper and more complex food sovereignty paradigm.

Methods

As an exploratory tool, the survey was designed to identify food-related issues inductively. However, we drew upon the United Nations Food and Agriculture Organization’s (FAO) definition of food security to organize the survey into broad thematic sections, addressing food availability, access, utilization, and stability (FAO et al. 2020). The survey was divided into sections exploring: the respondents’ household food-related activities (e.g., practices like gardening, beekeeping, and fishing); community-level food activities (e.g., processing, distribution); traditions related to obtaining, processing, and preparing food; views and experiences of food security at household and community levels; and effects of the pandemic and environmental change on food availability. The survey also collected demographic information about the

respondents, including their postal code, age, gender, ethnic affiliation, and level of education. There were 38 closed questions with yes/no or multiple-choice answers, many with room for elaboration, and 22 open-ended questions, also with room for people to elaborate. The survey questions were reviewed and pre-tested by the project partners at Heritage Saskatchewan.

The survey, administered with Qualtrics, was open from February to June 2022. To distribute the survey, the FCH team developed a list of individuals and groups to whom invitations could be sent, including food banks, charities, municipal governments, farmers, and producers. The survey link was emailed to these people and organizations, along with details about the project, and many were telephoned to encourage their participation. The survey was also actively promoted

through our professional contacts and food-related networks in the province.

After the survey closed, we used descriptive statistics to identify trends from the fixed-response questions. As part of the broader FCH project, we used a hybrid thematic coding approach to analyze qualitative survey and interview data together (Fereday & Muir-Cochrane, 2006). The current paper focuses on the survey findings specifically; therefore, only qualitative

data from the survey are included in the current analysis. Seeing many responses from urban centers or their satellite communities, we classified respondents as urban or peri-urban/rural based on postal codes and used this to examine urban-rural differences.

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

Results

The Sample

The survey received a total of 167 responses. Based on postal codes, at least 57 percent were from large urban centers (Saskatoon and Regina) and their satellite communities, with at least 36 percent from peri-urban or rural areas. These percentages are approximate since 12 respondents (7 percent) did not provide postal codes, but they suggest that the survey respondents constitute a reasonable reflection of the provincial population, where the percentage of rural residents in 2016 was 33.2 percent (Statista, 2016).

Based on demographic questions, respondents ranged from 25-84 years of age, with the largest group being 41-55 years old (30 percent), followed by 25-40 years old (28 percent), 56-69 years old (26 percent), and people over 70 (16 percent). There were no respondents between the ages of 18 and 24, so we are unable to comment on young people's interest and understanding of food security issues. This group merits further study, since interview data collected for the larger FCH project suggests that local food systems could be strengthened by raising awareness in the younger generation.

Most (89) respondents self-identified as women, with 21 identifying as men, 4 as non-binary/non-conforming, 3 preferring not to answer, and 50 giving no answer. The over-representation of women may reflect historically engrained gender roles associated with certain food-related practices such as cooking. Alternatively, as noted in Krajewski's (2022) study on community gardens, women may be more engaged in subsistence food production to fill financial gaps as part of the "social reproduction regime of unpaid labor" (p. 67). Where this occurs, food insecurity issues may affect women more, enough for them to lend a voice to end food insecurity.

A large majority of respondents (89) identified as people of European descent, with 10 identifying as Indigenous, 3 as Asian, 2 as African, 10 as an ancestry that was not listed, and 53 giving no answer. This distribution means that we are unable to say much about the food concerns and challenges facing Indigenous or racialized communities. Respondents generally reported high levels of education, with over 100 having post-secondary education, including 26 with a graduate university degree.

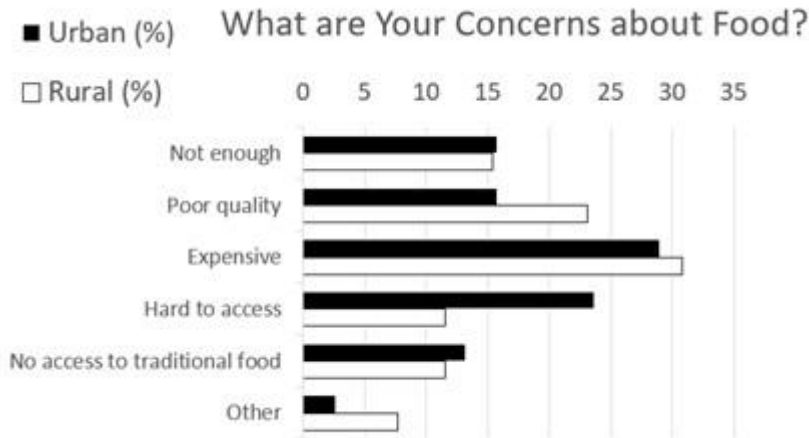
Perspectives on food security

An early question in the survey asked whether participants agreed with the United Nations (UN) definition of food security, where “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). A large majority of respondents felt that this perspective was somewhat (21 percent) or very close (66 percent) to their views. Only 7 percent were neutral or held a somewhat (4 percent) or very different perspective (2 percent). An open-ended question asking about the UN definition also sparked dozens of long and thoughtful comments, with calls for food to be nutritional and locally produced, for policies and actions aimed at self-sufficiency, and for people to have control over the kinds of food available to them. These assertions are clearly aligned with a food sovereignty perspective, showing how questions about food security provoke thoughts about the broader, cultural challenge of food sovereignty. Responses from 5 different participants reflect the breadth and nature of these challenges and their links to the community. One noted that “I volunteer on the board of a community garden and also have a community garden plot that I tend for our own consumption and to give away to family and friends. I have raspberry bush in my yard and also pick berries when I find them in nature on camping and hiking trips. My spouse does a lot of fishing in summer and winter and keeps some of the meat for our own consumption. Our household doesn’t hunt, but friends do, and they share some of the meat with us.” Another mentioned that “Our organization started and maintained a community garden for the past 4 years for our Food Bank, which distributes the vegetables in our

food hampers. Although we grow just regular vegetables, they are all named in 3 Indigenous languages: Cree, Salteaux, and Dakota.” A third said “We raise beef for a local online market serving customers from Regina-Saskatoon-Yorkton and places in between. I have also milled flour and processed garden vegetables for the same market.” A fourth commented that “My husband hunts in deer season annually, elk and moose when drawn. We [also] have a relatively young fruit orchard and grow our own produce. We sold those products through our on-the-farm summer kitchen. We changed over to greenhouse production and now sell garden starts and pot/basket vegetables. At the end of the greenhouse season, I donate extra garden starts to a local community garden.” And a fifth noted that “We own our own restaurant and catering company that sources 90 percent of our product from local producers and suppliers. We have catered events large and small and helped to get a farmers market off the ground in our local area, we also help connect our producers with other restaurants and chefs throughout the province.”

While most survey respondents (77 percent) did not have concerns about food security in their own households, a similar proportion (75 percent) were concerned about food security in their community. Overall views about food security were mostly similar between urban and rural respondents, except that the percentage of respondents voicing concern about their communities was much higher in urban areas (85 percent for urban compared to 61 percent for rural areas). The specific concerns were mostly similar, with cost of food being the most prevalent in both urban and rural settings, but quality was a larger issue in rural areas, and access was a bigger concern for urban residents (Fig 1).

Figure 1: Food security concerns identified by survey respondents.



The fact that respondents tended to be more concerned about their communities than their households is likely due to the demographics of our sample. As noted, a larger proportion of survey responses came from well-educated people of European descent, a group that tends to enjoy high levels of food security. By comparison, several studies (Batal, 2022; Batal et al., 2021; Tarasuk et al., 2016) have shown that low-income earners and people on social assistance are likely to experience food insecurity, with Indigenous populations and newcomers being overrepresented in low-income categories. This is reflected in survey responses from people who were facing challenges at the household level. One Indigenous participant described not eating for five days so she could feed her children, stating that “we are literally starving.” Others said, “I had to rely on food bank when out of work,” and “I have often made the decision to not go to the grocery store, despite needing supplies, because I did not want to spend that much money on food.” These comments confirm that some Saskatchewan households are facing periodic, possibly daily concerns about food security, despite the province being a wealthy, agricultural region, often viewed as Canada’s

breadbasket. When the survey asked what actions might be taken to address these concerns, some responses focussed on policies, like providing a livable minimum wage, food supplements, grants aimed at household gardening, and pricing guidelines that require bulk purchases of fruit and vegetables to be cheaper than pre-cut, pre-packaged or frozen options. Other suggestions were more cultural, from helping people grow more food locally and creating seed programs and places where young people can learn to prepare healthy food, to providing foodbank access on reserves and making it easier for farmers to sell food directly to customers.

When asked about food security concerns at the community level, respondents mentioned a range of economic, societal, and infrastructure issues. These included: high food prices, low incomes, high rates of poverty, homelessness, addiction, poor access to healthy food, limited mobility, especially for seniors, and a lack of knowledge and garden spaces. Other responses reflected high levels of cultural awareness and caring, with one person noting that “the loss of cultural transmission means many families are now eating primarily highly processed and pre-made foods with no cultural value and little tradition.” Another remarked,

“I am aware of the privilege I have, to be able to afford most things we want/need, and to provide healthy choices for my young kids. I feel sad for the mothers who cannot provide the same.”

Some participants underscored the potential of community gardens as a positive cultural response to community-level food insecurity. One respondent noted that “We are encouraging our community to ‘Grow an Extra Row’ to help others out who are facing food insecurity,” while another envisioned “a community initiative to harvest waste heat...and make community gardens covered so as to create a longer-period for garden growth, if not a full-year operation.”

In the qualitative results, several respondents called for more localized and subsistence-oriented production. One commenter urged communities to “stop relying on importing our food from other countries and concentrate more on food production here.” Others echoed this statement but were clear about how challenging that would be, including one respondent who outlined the following personal situation:

When I said I wanted to start a renewable-energy-powered greenhouse operation that capitalized on the abundant sunshine, wind, and easily accessible geothermal resource of our local aquifer, I may as well have been laughed at.... There is only financial assistance for businesses that export massive volumes of industrially produced staple crops, yet these staples make up so little of our local diet. I am three years into my venture ... and have matched typical commercial yields per unit acre of every crop I grow without using any chemicals and using less water. I had hoped to have long-since proven this model and to share it with young agrarians, but this province has made its bed and chosen to invest in corporate farms over local food security.

This comment demonstrates the potential of localized, environmentally responsible production to help address food security. However, as the participant notes, the Saskatchewan food system is heavily oriented toward large-scale export production, leaving relatively few supports for alternative and small-scale food producers (Beingessner & Fletcher, 2020). Indeed, in 2023, Saskatchewan exported more goods per capita than any other province, at double the national average, and agri-food exports comprised 41 percent of these exports (Saskatchewan Trade and Export Partnership [STEP], 2023).

Affordability

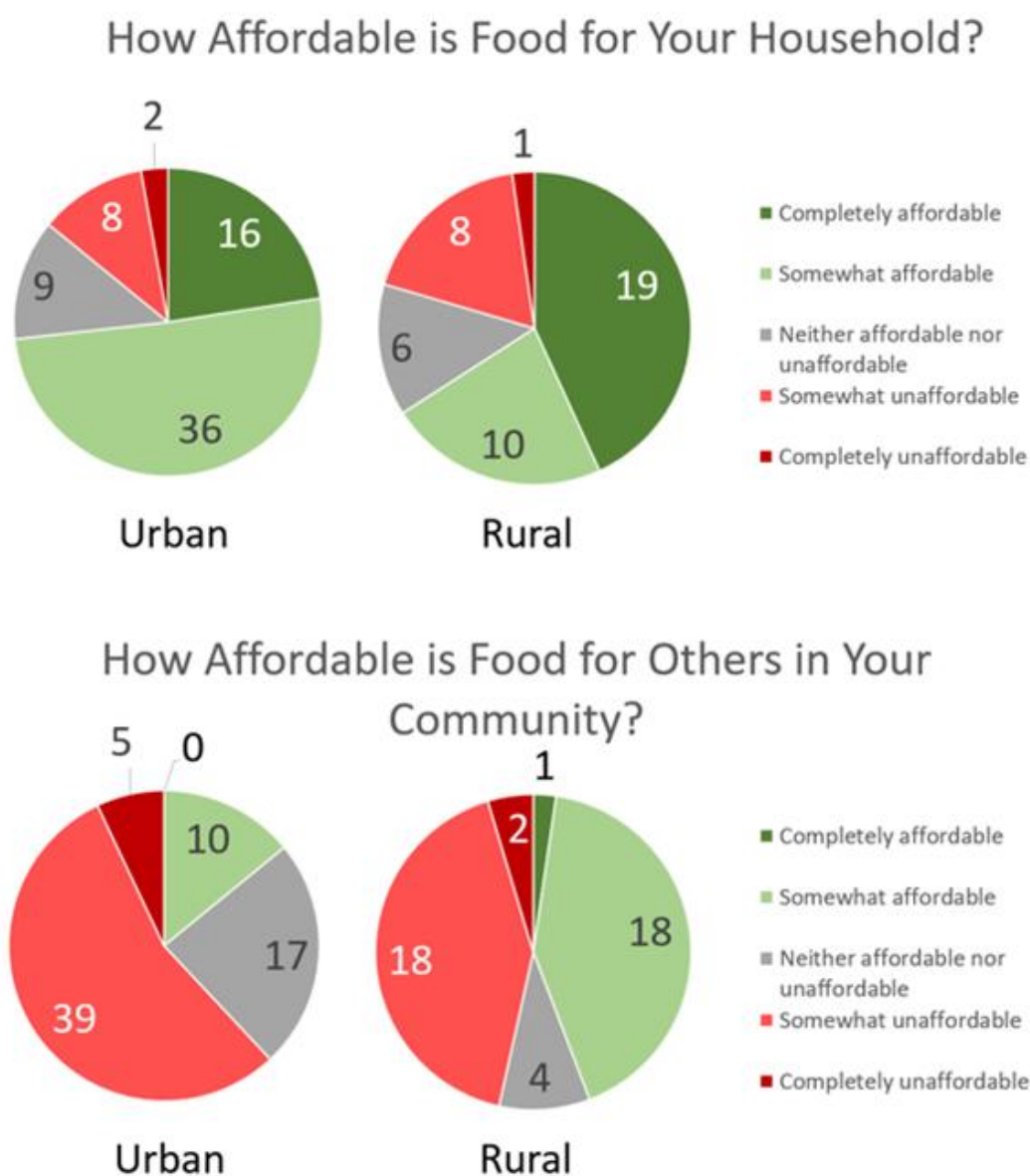
Food affordability was a deep concern in the survey, with many respondents pointing to rising food prices, low income, and low minimum wage as factors affecting the food security of their households or communities. One respondent, who identified as a senior, noted that “supper is leftovers from a restaurant lunch. Prices have greatly increased lately, so I must cut back on what I eat.” Another, who claimed to have a good income, observed that “if the prices and availability keep going in the direction that they are going now, there will be a lot more people learning to make soup instead of throwing out the leftovers.” This supports other studies (Batal et al., 2021; Bitto et al., 2003; Tarasuk et al., 2016) where seniors and low-income earners are the main groups vulnerable to food affordability issues. One respondent summed up the situation by noting that “People on social assistance are forced to choose between shelter and food because the amount given for shelter is not enough.... You get a pittance extra on social assistance but not even enough to buy a week’s worth of groceries.”

Levels of concern about food affordability were similar between urban and rural respondents at the

household level, with 14-20 percent reporting that food was somewhat or completely unaffordable for their household (Figure 2). Responses differed when people were asked about their broader communities, where

reports of food being somewhat or completely unaffordable were much higher in urban areas (62 percent for urban vs. 47 percent for rural, Figure 2).

Figure 2: Responses to questions about food affordability at the household (upper panel) and community levels (lower panel).



Accessibility and availability

Given that accessibility partly depends on affordability, it was not surprising that food accessibility was the next most common concern in this survey. Accessibility concerns included issues with grocery stores, such as the limited availability of healthy and cultural foods, the difficulty in getting fresh and traditional foods due to store locations, and transportation issues, especially for people without cars. One rural respondent reported that they could not access some foods locally, noting that “our grocery store is more convenient, [but] if we need to buy more food generally, we have to go to the city.” Another commented, “There is only one grocery store in our town and not many market gardens in summer. If you do not grow your own, you might not get it.”

Concerns about food availability are likely to become especially acute during a crisis or emergency, with one respondent noting the “shelves [are] empty on certain days; no cereal, no milk, etc. – different things on different days.” The fear in this case was exacerbated by events around the COVID-19 pandemic, where store shelves were emptied and consumers scrambled to get basic food and groceries, a situation that exposed the fragility of the global food system (Clapp & Moseley, 2020; van Ginkel & Biradar, 2021). Even with the effects of the pandemic subsiding (Deaton & Deaton, 2021), our study suggests that some consumers were shaken by the impacts it had on food availability. While the pandemic appeared to have significant impacts in both urban and rural areas, the percentage of people reporting impacts was much higher in urban areas (77 percent for urban compared to 55 percent for rural).

Accessibility was also affected by distance and a lack of traditional food. Several respondents talked about living in a “food desert,” where “the grocery stores are at the edge of the city. For families without reliable

transportation, it is another \$20 for a cab to go to the store and back with their groceries. It is not feasible to shop for a family of five and walk with those groceries four kilometres across the city.” On traditional food, one respondent noted that “we used to live in an Indigenous community in [another province] and learned to can, fish, gather and prepare food traditionally. Not much opportunity for that in Southern Saskatchewan.”

Views about accessibility and availability were similar between urban and rural, with 29 percent of rural respondents reporting that food was somewhat-to-very inaccessible, compared to 27 percent for urban, and 91 percent of rural respondents saying that food was somewhat-to-very available, compared to 87 percent for urban residents. Where urban and rural responses differed was around culture. Several respondents pointed to a shift in rural attitudes, in which people have come to depend on grocery stores and lost connections to traditional ways of growing food, perhaps because of a lack of time and a lack of knowledge. One noted that people have “abdicated the task of cooking and preserving food. They allow foreign companies to prepare their food and make their food choices for them.” Another respondent focussed on cultural challenges in urban areas, noting that “our Métis culture and diets are based on the land and animals in the areas, [but] for many urban people, they are not able to go hunt, fish, pick berries, or take medicines.”

Knowledge, local food, and environmental changes

The survey questions about reliance on local or traditional knowledge and the importance of local food uncovered similar patterns in rural and urban areas, with some notable exceptions. While roughly a third of

rural (33 percent) and urban (31 percent) respondents indicated they often depend on local or traditional knowledge about food, the percentage who always rely on it was twice as high in rural areas (21 percent rural vs 10 percent urban). At the same time, the number of rural respondents who rarely (33 percent rural vs 40 percent urban) or never rely on this sort of knowledge (12 percent rural vs. 19 percent urban) was relatively low. Similarly, when asked about the importance of locally sourced food, comparable percentages of rural and urban respondents deemed it very (29 percent rural vs 33 percent urban) or extremely important (19 percent rural vs. 21 percent urban), with only a few seeing it as not or slightly important (7 percent for rural vs. 8 percent for urban). The largest group of respondents saw local food as moderately important, especially in rural areas (45 percent rural vs. 37 percent urban).

The qualitative comments elaborated on local and traditional food practices. Respondents described practices associated with hunting, berry- and mushroom-picking, subsistence animal production (e.g., chickens), canning and preserving, and gardening. Traditional practices included reading weather signs

and animal behaviour and giving thanks to the earth with tobacco. In many cases, respondents had learned effective practices and locations from older family members, such as parents, grandparents, or Elders, and several emphasized the importance of giving thanks and respect. For example, one Indigenous participant wrote, “hunting and harvesting—always offering tobacco. Use all of the animal.”

When asked about food-related environmental changes, a comparable percentage of urban (30 percent) and rural (36 percent) residents reported having no experience with them. The percentage of respondents who had experienced such changes was higher in rural areas (47 percent vs 33 percent for urban), while the percentage who were not certain if changes had happened was over twice as high in urban areas (37 percent vs 17 percent for rural). Similarly, 60 percent of urban respondents were not aware of recent changes in the abundance or distribution of wildlife and other food-related animals, compared to only 36 percent in rural areas. These results suggest that education about environmental changes and wildlife populations should be aimed mostly at urban centres, where experiential knowledge of environmental changes is relatively low.

Discussion

This project focussed on Saskatchewan food security as it relates to contemporary issues, including impacts associated with the COVID-19 pandemic and environmental change. Our findings show that the respondents, the majority of whom were well-educated people of European descent, tend to be more concerned about food security in their communities than in their own households, particularly in urban areas. The survey confirmed affordability as a major concern, especially because of rising food prices, low incomes, and

transportation costs. Accessing safe and healthy food was also an issue because of the need for more grocery stores in rural communities, and the sensitivity of global, regional, and local supply chains. The loss of local knowledge was another recurring theme, precipitated by an overreliance on foreign and processed foods, limited time and busy schedules, and the effects of colonization. Urban respondents reported less awareness of environmental changes than their rural

counterparts, perhaps due to the former's relative disconnection from the land and natural environment.

Some of these concerns can be linked to the dominance of the NFS in Saskatchewan. The rising cost of food, for example, is partly associated with food commodification for profit maximization, combined with the loss of local knowledge due to industrialized modes of production, and an over-reliance on global supply chains (Friesen, 2017). At the same time, some of the ways that the Saskatchewan agri-food system responds to economic pressures may be maladaptive. The drive toward farm size expansion, economies of scale, and export production may shift both production and consumption away from local and cultural foodways, cementing the dominance of the NFS and potentially rendering the food system vulnerable to global market shocks. As one illustration of the export emphasis, in 2023, more than \$20 billion of agri-food products were exported from the province, setting a new record (STEP, 2023).

Maladaptive practices are central to what evolutionists have identified as Anthropocene “traps” where, like moths being attracted to a flame, people engage in cultural activities or economic strategies that seem beneficial but are actually restrictive or damaging (Søgaard Jørgensen et al., 2024). Examples in the NFS include the use of high-tech specialized machinery to grow massive monoculture crops solely for export, which can reinforce traps associated with complex infrastructure and specialization. No respondent talked about food-related challenges in these terms, but several voiced concerns about dependence on export markets, and others alluded to traps associated with complex chemical inputs, physical and psychological disconnections from nature, and the loss of local knowledge and social capital (Søgaard Jørgensen et al., 2024). Further research is required to clarify how these

and other traps might be operating within local Indigenous and non-Indigenous food systems, and what might be done to minimize their effects.

Some rural and food studies scholars have posited the food sovereignty paradigm as an alternative to the neoliberal, industrialized food system (Desmarais, 2007; Wittman, 2011). For example, Desmarais and Wittman (2015) promoted fundamental transformations that would have food sovereignty principles playing a central role in Canadian food policy agendas, including those that apply to Indigenous food systems. Other studies (Batal et al., 2021; Beingessner & Fletcher, 2020; Coté, 2016; Fletcher, 2013; Lucantoni, 2020; Seminar et al., 2017) have shown that the NFS has failed to curb food insecurity in Canada and has instead created concerns and challenges for rural community dwellers, in part because local food-related knowledge is considered archaic or irrelevant from a neoliberal standpoint. Hence, the NFS can be at odds with local food initiatives such as community gardens, holistic management, agroecology, or farmers' markets.

Our results suggest that local food systems should be given attention and that food sovereignty principles, such as the active participation of local farmers, and the rights of people to consume culturally appropriate food, are important in building a sustainable food system that can meet the needs of Indigenous and non-Indigenous people. While the NFS has facilitated the import of products that cannot be produced in Saskatchewan due to climatic limitations, our findings show that local production, processing and procurement are critical and meaningful activities, adding substantial social, economic, and cultural value to food systems. To enhance this value, food policies and support programs need to strike a balance between local and global food systems rather than focussing mostly on export markets.

Acknowledgements: This project was funded through a Partnership Engage Grant (892-2021-0009) from the Social Science and Humanities Research Council of Canada. We thank all the respondents and organizations who helped distribute the survey.

Conflicts of Interest: The authors confirm that they have no conflicts of interest associated with this study.

Positionality: The members of the team behind this project are all researchers and administrators interested in sustainability, food security, and heritage conservation. Ogie is a recent immigrant from Nigeria, who contributed to and built on this project as part of her graduate research program. The others are Canadians who can trace their ancestry to waves of Eurasian settlement that occurred on the North American prairies. We recognize and have worked to limit the assumptions and bias we bring to this work based on our cultural backgrounds, e.g., by getting colleagues to provide independent assessments of the survey questions.

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